



Government of Nepal  
Ministry of Health  
Department of Health Services  
Logistics Management Division (LMD)  
Teku, Kathmandu, Nepal

## **BIDDING DOCUMENT**

**for**

## **THE PROCUREMENT OF**

### **Construction of Warehouse at Pathalaiya Central Medical Store**

**National Competitive Bidding (NCB)**

**IFB No.: DOHS/W/NCB-4**

**Issued on:**

**Bid Document Issued to:**



## Abbreviations

BD .....	Bidding Document
BDF .....	Bidding Forms
BDS .....	Bid Data Sheet
BOQ .....	Bill of Quantities
COF .....	Contract Forms
DP .....	Development Partners
DoLIDAR .....	Department of Local Infrastructure Development and Agricultural Roads
ELI .....	Eligibility
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
PAN .....	Permanent Account Number
PPA .....	Public Procurement Act
PPMO .....	Public Procurement Monitoring Office
PPR .....	Public Procurement Regulations
SBD .....	Standard Bidding Document
SCC .....	Special Conditions of Contract
TS .....	Technical Specifications
VAT .....	Value Added Tax
WRQ .....	Works Requirements

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**Government of Nepal**  
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**Teku, Kathmandu**

## Invitation for Bids

**IFB No. : DOHS/W/NCB-4**

First Date of Publication: **March 14, 2017**

1. The Government of Nepal has allocated funds towards the cost of **Construction of Warehouse for Health Commodities** and intends to apply part of the funds to cover eligible payments under the Contract for **Construction of Warehouse at Pathalaiya Central Medical Store**. Bidding is open to all eligible Bidders.
2. The Ministry of Health, Department of Health Services, Logistic Management Division (LMD), invites sealed bids or electronic bids from eligible bidders for the construction of Warehouse at Pathalaiya Central Medical Store having Earth Work, RCC, Brick Masonry Works, Truss Works, CGI Sheet Roofing with Modular Ceiling and Electrification under National Competitive Bidding procedures.
3. The Estimated amount for the works is **NPR 14,614,333.00** including VAT and Contingency.
4. Eligible Bidders may obtain further information and inspect the Bidding Documents at the office of Logistics Management Division (LMD), Teku, Kathmandu on GoN official working days between 10:00 to 17:00 hours (Nepal Time) from **March 14, 2017** to **April 12, 2017**, at their own convenience, or may visit the LMD website ([www.dohslmd.gov.np](http://www.dohslmd.gov.np)) and PPMO website ([www.bolpatra.gov.np](http://www.bolpatra.gov.np)). Interested bidders must first register on the PPMO website to access the document and choose the electronic bidding procedure.
5. A complete set of Bidding Documents in English may be downloaded from the PPMO website or LMD website or may be purchased from the office at Teku 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 **NPR 3,000.00** till **17:00 hours of April 12, 2017**. The method of payment will be in the form of cash deposit certificate in **Revenue Title no 14227, Office code no. 27-370-11, Account No.1-1-001 of Rastriya Banijya Bank, Teku Branch**. If requested in writing and on payment of an additional non-refundable fee of **NPR 2,000.00**, documents shall be sent through a reliable courier service within Nepal. However, LMD will not be responsible for delay or non-delivery of the documents so sent.
6. For the purpose who choose to submit their bid electronically through e-procurement section of PPMO website: <http://www.bolpatra.gov.np>, the bidders may either purchase the hard copy of bidding documents or may choose to download the bidding document, prepare their bids and submit their electronic bids as specified in the Instructions to Bidders. In case of bidder who choose to download and submit bid electronically, the bidder shall be required to deposit the cost of bidding document as specified above in the above mentioned Account No. of LMD at Rastriya Banijya Bank, Teku Branch and electronic scanned copy (pdf format) of the Bank deposit voucher/tele transfer receipt shall also be submitted along with the electronic bid files.
7. Sealed or electronic bids must be submitted to the address below by hand/courier or through PPMO website <http://www.bolpatra.gov.np>. on or before **12:00 hours** on **April 13, 2017**. Bids received after this deadline will be rejected.
8. The bids will be opened in the presence of Bidders' representatives who choose to attend in



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person, at the address below at **13:00 hours on April 13, 2017.**

9. Bids must be valid for a period of **90 days** from the date of bid opening and must be accompanied by an original bid security (or electronic scanned copy of the bid security in pdf format in case of e-bid), amounting to a minimum of **NPR 350,000.00**, which shall be valid for 30 days beyond the validity period of the bid (i.e. **valid up to August 10, 2017**). The Bid Security must be in the name of the Bidder.
10. If the specified date for submission and opening of the bid falls on a government holiday, then the same time of the next working day shall be considered for such events. In such case the bid validity and validity of the bid security remain unchanged unless amended by another notice.
11. The address referred to above is:

**The Director**  
**Logistics Management Division**  
**Department of Health Services**  
**Teku, Pachali, Kathmandu.**  
**Telephone: +977 1 4261768 Telefax: +977 1 4261413**



**Part - I**

**BIDDING PROCEDURES**



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## SECTION - I

**Instructions to Bidders****A. General****1. Scope of Bid**

1.1 In connection with the Invitation for Bids indicated in the Bid Data Sheet (BDS), the Employer, as indicated in the BDS, issues this Bidding Document for the procurement of Works as specified in Section V (Works Requirements). The name, identification, and number of Contracts of the National Competitive Bidding (NCB) are provided in the BDS.

1.2 Throughout this Bidding Document:

- (a) the term “in writing” means communicated in written form and delivered against receipt;
- (b) except where the context requires otherwise, words indicating the singular also include the plural and words indicating the plural also include the singular; and
- (c) “day” means calendar day.

**2. Source of Funds**

2.1 GoN Funded: In accordance with its annual program and budget, approved by the GoN, the implementing agency indicated in the BDS plans to apply a portion of the allocated budget to eligible payments under the contract(s) for which this Bidding Document is issued.

Or

Public Entities' own Resource Funded: In accordance with its annual program and budget, approved by the public entity, the implementing agency indicated in the BDS plans to apply a portion of the allocated budget to eligible payments under the contract(s) for which this Bidding Document is issued.

Or

DP Funded: The GoN has applied for or received financing (hereinafter called “funds”) from the Development Partner (hereinafter called “the DP”) indicated in the BDS toward the cost of the project named in the BDS. The GoN intends to apply a portion of the funds to eligible payments under the contract(s) for which this Bidding Document is issued.

2.2 DP Funded: Payment by the DP will be made only at the request of the GoN and upon approval by the DP in accordance with the terms and conditions of the financing agreement between the GoN and the DP (hereinafter called the “Loan/Grant Agreement”), and will be subject in all respects to the terms and conditions of that Loan/Grant Agreement. No party other than the GoN shall derive any rights from the Loan Agreement or have any claim to the funds.



### 3. Fraud and Corruption

3.1 The Government of Nepal (GoN) requires that the Procuring Entities as well as bidders, suppliers and contractors and their sub-contractors under GoN/DP-financed contracts, shall adhere to the highest standard of ethics during the procurement and execution of such contracts. In this context, the Employer;

(a) defines, for the purposes of this provision, the terms set forth below as follows:

(i) “corrupt practice” means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;

(ii) “fraudulent practice” means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

(iii) “coercive practice” means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

(iv) “collusive practice” means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party.

(iv) “obstructive practice” means:

(aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a GoN/DP investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or

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

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

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

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

(b) distortion or misrepresentation of facts,

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

(d) interference in participation of other competing bidders,

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

- (f) collusive practice among bidders before or after submission of bids for distribution of works among bidders or fixing artificial/uncompetitive bid price with an intention to deprive the Employer the benefit of open competitive bid price,
- (g) contacting the Employer with an intention to influence the Employer with regards to the bids or interference of any kind in examination and evaluation of the bids during the period from the time of opening of the bids until the notification of award of contract.
- 3.3 PPMO, on the recommendation of the Procuring Entity may blacklist a Bidder for a period of one (1) to three (3) years for its conduct including on the following grounds and seriousness of the act committed by the bidder:
- (a) if convicted by a court of law in a criminal offence which disqualifies the Bidder from participating in the contract,
- (b) if it is established that the contract agreement signed by the Bidder was based on false or misrepresentation of Bidder's qualification information,
- (c) if it at any time determines that the firm has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for, or in executing, a GoN/DP-financed contract.
- (d) if the successful bidder fails to sign the contract.
- 3.4 A bidder declared blacklisted and ineligible by the GoN, Public Procurement Monitoring Office (PPMO) and/or the DP in case of DP funded project, shall be ineligible to bid for a contract during the period of time determined by the GoN, PPMO and/or the DP.
- 3.5 The Contractor shall permit the GoN/DP to inspect the Contractor's accounts and records relating to the performance of the Contractor and to have them audited by auditors appointed by the GoN/DP, if so required by the GoN/DP.
- 3.6 DP Funded: In pursuance of the fraud and corruption policy, the DP.
- (a) will reject a proposal if it determines that the bidder recommended for award has directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices in competing for the contract in question;
- (b) will cancel the portion of the loan/ credit/ grant allocated to a contract if it determines at any time that representative(s) of the GoN or of a beneficiary of the fund engaged in corrupt, fraudulent, collusive, or coercive practices during the procurement or the execution of that contract, without the GoN having taken timely and appropriate action satisfactory to the DP to remedy the situation.

#### 4. Eligible Bidders

- 4.1 A Bidder may be a natural person, private entity, or government - owned entity—subject to ITB 4.5—or any combination of them in the form of a Joint Venture (JV) under an existing agreement, or with the intent to



constitute a legally-enforceable joint venture. In the case of a JV:

- (a) all partners shall be jointly and severally liable for the execution of the Contract in accordance with the Contract terms. Maximum number of JV shall be as specified in the BDS. The 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.

4.3 A Bidder shall not have a conflict of interest. A Bidder found to have a conflict of interest shall be disqualified. A Bidder may be considered to be in a conflict of interest with one or more parties in this bidding process, if:

- (a) they have controlling partners in common; or
- (b) they receive or have received any direct or indirect subsidy from any of them; or
- (c) they have the same legal representative for purposes of this bid; or
- (d) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to information about or influence on the Bid of another Bidder, or influence the decisions of the Employer regarding this bidding process; or
- (e) a Bidder participates in more than one bid in this bidding process either individually or as a partner in a joint venture. Participation by a Bidder in more than one Bid will result in the disqualification of all Bids in which the party is involved. However, this does not limit the inclusion of the same sub-Contractor in more than one bid; or
- (f) a Bidder or any of its affiliates participated as a consultant in the preparation of the design or technical specifications of the Contract that is the subject of the Bid; or
- (g) a Bidder or any of its affiliates has been hired (or is proposed to be hired) by the Employer as Engineer for the Contract.

4.4 A firm that is under a declaration of ineligibility by the GoN/DP in accordance with ITB 3, at the date of the deadline for bid submission or thereafter, shall be disqualified.

4.5 Enterprises owned by Government shall be eligible only if they can



establish that they are legally and financially autonomous and operate under commercial law, and that they are not a dependent agency of the GoN.

- 4.6 Bidders shall provide such evidence of their continued eligibility satisfactory to the Employer, as the Employer shall reasonably request.
- 4.7 In case a prequalification process has been conducted prior to the bidding process, this bidding is open only to prequalified Bidders.
- 4.8 Firms shall be excluded in any of the cases, if
- (a) by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, Nepal prohibits any import of goods or Contracting of works or services from that country or any payments to persons or entities in that country.
  - (b) DP Funded: as a matter of law or official regulation, Nepal prohibits commercial relations with that country, provided that the DP is satisfied that such exclusion does not preclude effective competition for the supply of goods or related services required;
  - (c) DP Funded: a firm has been determined to be ineligible by the DP in relation to their guidelines or appropriate provisions on preventing and combating fraud and corruption in projects financed by them.
- 4.9 The bidder shall meet the eligibility criteria specified in section III (Evaluation and Eligibility Criteria) of bid document.

#### **5. Eligible Materials, Equipment and Services**

- 5.1 The materials, equipment and services to be supplied under the Contract shall have their origin in any source countries as defined in ITB 4.2 above and all expenditures under the Contract will be limited to such materials, equipment, and services. At the Employer's request, Bidders may be required to provide evidence of the origin of materials, equipment and services.
- 5.2 For purposes of ITB 5.1 above, "origin" means the place where the materials and equipment are mined, grown, produced or manufactured, and from which the services are provided. Materials and equipment are produced when, through manufacturing, processing, or substantial or major assembling of components, a commercially recognized product results that differs substantially in its basic characteristics or in purpose or utility from its components.

### **B. Contents of Bidding Documents**

#### **6. Sections of Bidding Document**

- 6.1 The Bidding Document consist of Parts I, II, and III, which include all the Sections indicated below, and should be read in conjunction with any Addenda issued in accordance with ITB 8.

#### **PART I Bidding Procedures**

- Section I Instructions to Bidders (ITB)
- Section II Bid Data Sheet (BDS)



Section III Evaluation and 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 issued by the Employer is not part of the Bidding Document.

6.3 The Employer is not responsible for the completeness of the Bidding Document and their Addenda, if they were not obtained directly from the source stated by the Employer in the Invitation for Bids.

6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Document. Failure to furnish all information or documentation required by the Bidding Document may result in the rejection of the bid.

**7. Clarification of Bidding Document, Site Visit, Pre-Bid Meeting**

7.1 A prospective Bidder requiring any clarification of the Bidding Document shall contact the Employer in writing at the Employer's address indicated in BDS or raise any question or curiosity during the pre-bid meeting if provided for in accordance with ITB 7.4. The Employer shall be required to make available as soon as possible the answer to such question or curiosity in writing to any request for clarification, provided that such request is received as mentioned in ITB 7.5. The Employer shall forward copies of its response to all Bidders who have acquired the Bidding Document in accordance with ITB 6.3, including a description of the inquiry but without identifying its source. Should the Employer deem it necessary to amend the Bidding Document as a result of a request for clarification, it shall do so following the procedure under ITB 8 and ITB 20.2.

7.2 The Bidder is advised to visit and examine the Site of Works and its surroundings and obtain for itself, on its own risk and responsibility, all information that may be necessary for preparing the bid and entering into a Contract for construction of the Works. The costs of visiting the Site shall be at the Bidder's own expense.

7.3 The Bidder and any of its personnel or agents will be granted permission by the Employer to enter upon its premises and lands for the purpose of such visit, but only upon the express condition that the Bidder, its personnel, and agents will release and indemnify the Employer and its personnel and agents from and against all liability in respect thereof, and will be responsible for death or personal injury, loss of or damage to property, and any other loss, damage, costs, and expenses incurred as a result of the inspection.



7.4 The Bidder's designated representative is invited to attend a pre-bid meeting, if provided for in the BDS. The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage.

7.5 The Bidder is requested, as far as possible, to submit any questions in writing, to reach the Employer as mentioned in BDS.

7.6 Minutes of the pre-bid meeting, including the text of the questions raised, without identifying the source, and the responses given, together with any responses prepared after the meeting, will be transmitted promptly to all Bidders who have acquired the Bidding Document in accordance with ITB 6.3. Any modification to the Bidding Document that may become necessary as a result of the pre-bid meeting shall be made by the Employer exclusively through the issue of an addendum pursuant to ITB 8 and not through the minutes of the pre-bid meeting.

7.7 Non attendance at the pre-bid meeting will not be a cause for disqualification of a Bidder.

#### **8. Amendment of Bidding Document**

8.1 At any time prior to the deadline for submission of bids, the Employer may amend the Bidding Document by issuing 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 20.2

### **C. Preparation of Bids**

#### **9. Cost of Bidding**

9.1 The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Employer shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process.

#### **10. Language of Bid**

10.1 The Bid, as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Employer, shall be written in the language specified in the BDS. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified in the BDS, in which case, for purposes of interpretation of the Bid, such translation shall govern.

#### **11. Documents Comprising the Bid**

11.1 The Bid shall comprise the following:

(a) Letter of Bid;

(b) Completed Schedules, in accordance with ITB 12 and 14, or as stipulated in the BDS;



- (c) Bid Security, in accordance with ITB 17;
- (d) alternative bids, at Bidder's option and if permissible, in accordance with ITB 13;
- (e) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 18.2;
- (f) In the case of a bid submitted by a JV, the JV agreement, or letter of intent to enter into a JV including a draft agreement, indicating at least the parts of the Works to be executed by the respective partners; and
- (g) Any other document required in the BDS.
- 11.2 The Bidder is solely responsible for the authenticity of the documents submitted by the Bidder.
- 12. Letter of Bid and Schedules**
- 12.1 The Letter of Bid, Schedules, and all documents listed under ITB 11, shall be prepared using the relevant forms in Section 4 (Bidding Forms), if so provided. The forms must be completed without any alterations to the text, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested.
- 13. Alternative Bids**
- 13.1 Unless otherwise indicated in the BDS, alternative bids shall not be considered.
- 13.2 When alternative times for completion are explicitly invited, a statement to that effect will be included in the BDS, as will the method of evaluating different times for completion.
- 13.3 When specified in the BDS pursuant to ITB 13.1, and subject to ITB 13.4 below, Bidders wishing to offer technical alternatives to the requirements of the Bidding Document must first price the Employer's design as described in the Bidding Document and shall further provide all information necessary for a complete evaluation of the alternative by the Employer, including drawings, design calculations, technical specifications, breakdown of prices, and proposed construction methodology and other relevant details. Only the technical alternatives, if any, of the lowest evaluated Bidder conforming to the basic technical requirements shall be considered by the Employer.
- 13.4 When specified in the BDS, Bidders are permitted to submit alternative technical solutions for specified parts of the Works. Such parts will be identified in the BDS and described in Section V (Works Requirements). The method for their evaluation will be stipulated in Section III (Evaluation and Qualification Criteria).
- 14. Bid Prices and Discounts**
- 14.1 The prices and discounts quoted by the Bidder in the Letter of Bid and in the Schedules shall conform to the requirements specified below.
- 14.2 The Bidder shall submit a bid for the whole of the works described in ITB 1.1 by filling in prices for all items of the Works, as identified in Section IV (Bidding Forms). In case of Unit Rate Contracts, the Bidder shall fill in rates and prices for all items of the Works described in the Bill of Quantities. Items against which no rate or price is entered by the Bidder will not be paid for by the Employer when



executed and shall be deemed covered by the rates for other items and prices in the Bill of Quantities.

14.3 The price to be quoted in the Letter of Bid shall be the total price of the Bid, excluding any discounts offered.

14.4 Unconditional discounts, if any, and the methodology for their application shall be quoted in the Letter of Bid, in accordance with ITB 12.1.

14.5 If so indicated in ITB 1.1, bids are invited for individual Contracts or for any combination of Contracts (packages). Bidders wishing to offer any price reduction for the award of more than one Contract shall specify in their bid the price reductions applicable to each package, or alternatively, to individual Contracts within the package. Price reductions or discounts shall be submitted in accordance with ITB 14.4, provided the bids for all Contracts are submitted and opened at the same time.

14.6 Unless otherwise provided in the BDS and the Conditions of Contract, the prices quoted by the Bidder shall be fixed. If the prices quoted by the Bidder are subject to adjustment during the performance of the Contract in accordance with the provisions of the Conditions of Contract, the Bidder shall furnish the indices and weightings for the price adjustment formulae in the Table of Adjustment Data in Section IV (Bidding Forms) and the Employer may require the Bidder to justify its proposed indices and weightings.

14.7 The bidder is subject to local taxes such as VAT, social charges or income taxes on nonresident international personnel, and also duties, fees, levies on amounts payable by the employer under the Contract.

All duties, taxes, and other levies payable by the Contractor under the Contract, or for any other cause, as of the date 30 days prior to the deadline for submission of bids, shall be included in the rates and prices and the total bid price submitted by the Bidder.

**15. Currency of Bid and Payment**

15.1 The currency of the bid and payment shall be in Nepalese Rupees.

**16. Period of Validity of Bids**

16.1 Bids shall remain valid for the period specified in the BDS after the bid submission deadline date prescribed by the Employer. A bid valid for a shorter period shall be rejected by the Employer as nonresponsive.

16.2 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 17, 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.

## 17. Bid Security

17.1 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.

17.2 The bid security shall be, at the Bidder's option, in any of the following forms:

- (a) an unconditional bank guarantee from "A" class commercial bank or;
- (b) a cash deposit voucher in the Employer's Account as specified in BDS.

In the case of a bank guarantee, the bid security shall be submitted either using the Bid Security Form included in Section IV (Bidding Forms) or in another Form acceptable to the employer. The form must include the complete name of the Bidder. The bid security shall be valid for minimum thirty (30) days beyond the original validity period of the bid, or beyond any period of extension if requested under ITB 16.2.

17.3 The bid security issued by any foreign Bank outside Nepal must be counter guaranteed by an "A" class commercial Bank in Nepal.

17.4 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.

17.5 The bid security of unsuccessful Bidders shall be returned within three days, once the successful bidder has furnished the required performance security and signed the Contract Agreement pursuant to ITB 36.1 and 37.1.

17.6 The bid security shall be forfeited if:

- (a) a Bidder requests for withdrawal or modification of its bid, except as provided in ITB 16.2:
  - (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 Technical Bid and Price Bid, in case of hard copy submission.
- (b) a Bidder changes the prices or substance of the bid while providing information pursuant to clause 25.1;
- (c) a Bidder involves in fraud and corruption pursuant to clause 3.1;
- (d) the successful Bidder fails to:

- (i) furnish a performance security in accordance with ITB 36.1; or
- (ii) sign the Contract in accordance with ITB 37.1
- (iii) accept the correction of arithmetical errors pursuant to clause 29.1;

17.7 The Bid Security of a JV shall be in the name of the JV that submits the bid. If the JV has not been legally constituted at the time of bidding, the Bid Security shall be in the names of all future partners as named in the letter of intent mentioned in ITB 4.1.

## 18. Format and Signing of Bid

18.1 The Bidder shall prepare one original of the documents comprising the bid as described in ITB 11 and clearly mark it ORIGINAL". Alternative bids, if permitted in accordance with ITB 13, shall be clearly marked "ALTERNATIVE". In addition, the Bidder shall submit copies of the bid in the number specified in the BDS, and clearly mark each of them "COPY." In the event of any discrepancy between the original and the copies, the original shall prevail.

In case of e-submission of bid, the Bidder shall submit his bid electronically in PDF or web forms files as specified in ITB Clause 19.1(b), If a Bidder submits both the electronic bid and a bid in hard copy within the bid submission deadline, then the submitted Bids shall be accepted for evaluation provided that the facts and figures in hard copy confirm to those in electronic bid. If there is any major discrepancy in fact and figures in the electronic bid and bid in hard copy, it shall be treated as two separate bids from one Bidder and both the Bids shall be disqualified, as per ITB Clause 4.3 (e).

18.2 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 an amended printed literature, shall be signed or initialed by the person signing the bid.

18.3 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

### 19. Sealing and Marking of Bids

19.1 Bidders may always submit their bids by mail or by hand or by courier. When so specified in the BDS, bidders shall have the option of submitting their bids electronically. Procedures for submission, sealing and marking are as follows:

- (a) Bidders submitting bids by mail, by hand or by courier
  - i. Bidders shall enclose the original and each copy of the Bid, including alternative bids, if permitted in accordance with ITB 13, in separate sealed envelopes, duly marking the envelopes as



“ORIGINAL”, “ALTERNATIVE” and “COPY.” These envelopes containing the original and the copies shall then be enclosed in one single envelope.

- ii. The inner and outer envelopes shall:
    - (aa) bear the name and address of the Bidder;
    - (bb) be addressed to the Employer as provided in BDS 20.1;
    - (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) Electronic Bid Submission Procedures : Bidders submitting Bids electronically shall follow the electronic bid submission procedure specified in this clause as follows:
- i. For e-submission, the bidder is required to register in the e-GP portal <https://www.bolpatra.gov.np>. for downloading and submitting the bid electronically.
  - ii. Interested bidders may either purchase the bidding documents from the employer's office as specified in the invitation for bid (IFB) or bidders registered in the e-GP portal of PPMO may download the bidding document from <http://www.bolpatra.gov.np> after login. If bidders choose to download the bidding document and submit the bid electronically, then the cost of the bidding document shall be deposited as specified in IFB. In addition, electronic scanned copy (.pdf format) of the bank deposit voucher/cash receipt should also be submitted along with the electronic bid files.
  - iii. The bidder shall then prepare/fill the documents and forms included in the issued bid documents or the downloaded bid documents from the e-GP portal of PPMO - <http://www.bolpatra.gov.np>. as applicable. The required documents and forms shall be prepared in PDF form and/or shall be filled in the web forms in the e-GP system as specified below.

S. N.	Document	Requirement	Remarks
1	Letter of Bid	Mandatory	PDF/Web Forms
2	Bid Security (Bank Guarantee)	Mandatory	PDF
3	Company/Form registration	Mandatory	PDF
4	VAT registration	Mandatory	PDF
5	Tax clearances certificate or evidence of tax return submission	Mandatory	PDF

6	Power of Attorney of Bid signatory	Mandatory	PDF
7	Business Registration Certificate (License)	Mandatory; If Required	PDF
8	Bank Voucher for cost of bid document	Mandatory	PDF
9	Joint venture agreement	Mandatory	PDF, Mandatory in case of JV Bids Only
10	Applicable Price Adjustment Table	Mandatory; If applicable	No price adjustment will be treated if the indices in the Price Adjustment Table are not provided.
11	Completed BOQ	Mandatory	Web Forms

*Note:*

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

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

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

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

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

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

bb) In addition to electronically submitted PDF files/web forms, the Bidder shall be required to submit original bid security letter/ documents and clarifications as specified in ITB Clause 25. If a bidder does not submit the original Bid security letter and requested documents and or clarifications within the specified time limit then the bid shall not be considered for further evaluation.

cc) If major discrepancy is found between the electronically submitted PDF bid files and the documents/ clarifications provided by the Bidder as per ITB Clause 25, then the bid shall not be considered for further evaluation.

dd) The facility for submission of bid electronically through e-submission is to promote transparency, non-discrimination, equality of access, and open competition in the bidding process.

The Bidders are fully responsible to use the e- submission facility properly in e-GP portal of PPMO- <http://www.bolpatra.gov.np> as per specified procedures and in no case the Employer shall be held liable for Bidder's inability to use this facility.

- ee) When a bidder submits electronic bid through the PPMO e-GP portal, it is assumed that the bidder has prepared the bid by studying and examining the complete set of the Bidding documents including specifications, drawings and conditions of contract.
- ff) Bidders who submit electronic bid should deposit the bidding document fee as specified in IFB and upload the scan copy (in pdf format) of the deposit voucher at the time of bid submission. The deposited amount shall be verified by the Employer during the bid evaluation process. The submitted Bid shall be non-responsive and shall not be evaluated if the cost for bidding document is not deposited as specified in the IFB.

**20. Deadline for Submission of Bids**

20.1 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 not allow the e-submission of bid after the deadline for submission of bid.

20.2 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.

**21. Late Bids**

21.1 The Employer shall not consider any bid that arrives after the deadline for submission of bids, in accordance with ITB 20. Any bid received by the Employer after the deadline for submission of bids shall be declared late, rejected, and returned unopened to the Bidder.

**22. Withdrawal, and Modification of Bids**

22.1 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 18.2 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 18 and ITB 19, and in addition, the respective envelopes shall be clearly marked "WITHDRAWAL", "MODIFICATION;" and



- (bb) received by the Employer twenty four hour hours prior to the deadline prescribed for submission of bids, in accordance with ITB 20.
- 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. Once a Bid is withdrawn, bidder will not be able to submit another bid for the same bid.
  - b) Withdrawal and modification of bids through hard copy shall not be considered in case of e-submitted bids
- 22.2 Bids requested to be withdrawn in accordance with ITB 22.1 shall be returned unopened to the Bidders after completion of the bid opening.
- 22.3 Bidder may submit request for withdrawal or modification only one time.
- 22.4 No bid may be withdrawn if the bid has already been modified.
- 22.5 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.
- 22.6 The following provisions apply for withdrawal or modification of the Bids:
- (i) In case of bids submitted in hard copy no bid shall be withdrawn or modified in the interval between 24 hours prior to the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Bid or any extension thereof.
  - (ii) In case of e-submitted bids no bids shall be withdrawn or modified in the interval between deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Letter of Bid or any extension thereof.

### 23. Bid Opening

- 23.1 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 and anyone who choose to attend.
- 23.2 The Employer shall download the e-submitted bid files. The e-procurement system allows the Employer to download the e-submitted bid files (report) only after bid opening date and time after login simultaneously by at least two members of the Bid opening committee.
- 23.3 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.

23.4 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.

23.5 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 21.1.

23.6 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**

### **24. Confidentiality**

24.1 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.

24.2 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.

24.3 Notwithstanding ITB 24.2, 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.

### **25. Clarification of Bids**

25.1 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 29. 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.

25.2 If a Bidder does not provide clarifications of its bid by the date and time set in the Employer's request for clarification, its bid may be rejected.

**26. Deviations, Reservations, and Omissions**

26.1 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.

**27. Determination of Responsiveness**

27.1 The Employer's determination of a bid's responsiveness is to be based on the contents of the bid itself, as defined in ITB11.

27.2 A substantially responsive bid is one that meets the requirements of the Bidding Document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that,

- (a) if accepted, would:
  - (i) affect in any substantial way the scope, quality, or performance of the Works specified in the Contract;
  - or
  - (ii) limit in any substantial way, inconsistent with the Bidding Document, the Employer's rights or the Bidder's obligations under the proposed Contract; or
- (b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive bids.

27.3 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.

27.4 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 25.1, the bid shall not be considered for further evaluation.

- 28. Nonconformities, Errors, and Omissions**
- 28.1 Provided that a bid is substantially responsive, the Employer may waive any non-conformities in the bid.
- 28.2 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.
- 28.3 Provided that a bid is substantially responsive, the Employer shall rectify quantifiable nonmaterial nonconformities related to the Bid Price. To this effect, the Bid Price may be adjusted, for comparison purposes only, to reflect the price of a missing or non-conforming item or component. The adjustment shall be made using the methods indicated in Section III (Evaluation and Eligibility Criteria).
- 28.4 If minor discrepancies are found such as in technical specification, description, feature which does not make the bid to be rejected, then the cost, which is calculated to the extent possible due to such differences, shall be included while evaluating the bid.
- 28.5 If the value of such non-conformities is found to be more than fifteen percent of the quoted amount of the bidder on account of minor discrepancies pursuant to ITB 28.4, such bid shall be considered ineffective in substance and shall not be involved in evaluation.
- 29. Correction of Arithmetical Errors**
- 29.1 Provided that the bid is substantially responsive, the Employer shall correct arithmetical errors on the following basis:
- (a) only for unit price Contracts, if there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Employer there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected;
  - (b) if there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected; and
  - (c) If there is a discrepancy between the bid price in the Summary of Bill of Quantities and the bid amount in item (c) of the Letter of Price Bid, the bid price in the Summary of Bill of Quantities will prevail and the bid amount in item (c) of the Letter of Price Bid will be corrected.
  - (d) if there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) ,(b) and (c) above.

29.2 If the Bidder that submitted the lowest evaluated bid does not accept the correction of errors, its bid shall be disqualified and its bid security shall be forfeited.

### 30. Evaluation of Bids

30.1 The Employer shall use the criteria and methodologies listed in this Clause. No other evaluation criteria or methodologies shall be permitted.

30.2 To evaluate a bid, the Employer shall consider the following:

- (a) the bid price, excluding Value Added Tax, Provisional Sums, and the provision, if any, for contingencies in the Summary Bill of Quantities, for Unit Rate Contracts, or Schedule of Prices for lump sum Contracts, but including Day work items, where priced competitively;
- (b) price adjustment for correction of arithmetic errors in accordance with ITB 29.1;
- (c) price adjustment due to discounts offered in accordance with ITB 14.4;
- (d) adjustment for nonconformities in accordance with ITB 28.3;
- (e) application of all the evaluation factors indicated in Section III (Evaluation and Eligibility Criteria);

30.3 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.

30.4 If this Bidding Document allows Bidders to quote separate prices for different Contracts, and to award multiple Contracts to a single Bidder, the methodology to determine the lowest evaluated price of the Contract combinations, including any discounts offered in the Letter of Bid, is specified in Section III (Evaluation and Qualification Criteria).

30.5 In case of special evaluation in civil works, if the bid for an Unit Rate Contract, which results in the lowest Evaluated Bid Price is seriously unbalanced or front loaded or substantially below updated estimates in the opinion of the Employer, the Employer may require the Bidder to produce detailed price analysis for any or all items of the Bill of Quantities, to demonstrate the internal consistency of those prices with the construction methods and schedule proposed. After evaluation of the price analysis, taking into consideration the schedule of estimated Contract payments, the Employer may require that the amount of the performance security be increased at the expense of the Bidder as mentioned in BDS to protect the Employer against financial loss in the event of default of the successful Bidder under the Contract.

30.6 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 25.1, the bid shall not be

considered for further evaluation.

- 31. Comparison of Bids** 31.1 The Employer shall compare all substantially responsive bids in accordance with ITB 31.2 to determine the lowest evaluated bid.
- 32. Employer's Right to Accept Any Bid, and to Reject Any or All Bids** 32.1 The Employer reserves the right to accept or reject any bid, and to annul the bidding process and reject all bids at any time prior to Contract award, without thereby incurring any liability to Bidders. In case of annulment, all bids submitted and specifically, bid securities, shall be promptly returned to the Bidders.

## F. Award of Contract

- 33. Award Criteria** 33.1 The Employer shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated bid and is substantially responsive to the Bidding Document, provided further that the Bidder is determined to be qualified to perform the Contract satisfactorily.
- 34. Letter of Intent to Award the Contract/Notification of Award** 34.1 The Employer shall notify the concerned Bidder whose bid has been selected in accordance with ITB 33.1 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.
- 34.2 If no bidder submits an application pursuant to ITB 39 within a period of seven days of the notice provided under ITB 34.1, the Employer shall, accept the bid selected in accordance with ITB 33.1 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.
- 35. Performance Security** 35.1 Within Fifteen (15) days of the receipt of Letter of Acceptance from the Employer, the successful Bidder shall furnish the performance security as under mentioned from A class Commercial Bank in accordance with the conditions of Contract using Sample Form for the Performance Security included in Section IX (Contract Forms), or another form acceptable to the Employer. The performance security issued by any foreign Bank outside Nepal must be counter guaranteed by an "A" class commercial Bank in Nepal.
- i) If bid price of the bidder selected for acceptance is up to 15 (fifteen) percent below the approved cost estimate, the performance security amount shall be 5 (five) percent of the bid price.
- ii) For the bid price of the bidder selected for acceptance is more than 15 (fifteen) percent below of the cost estimate, the performance security amount shall be determined as follows:
- Performance Security Amount = [(0.85 x Cost Estimate – Bid Price) x 0.5] + 5% of Bid Price.**
- The Bid Price and Cost Estimate shall be inclusive of Value Added Tax.
- 35.2 Failure of the successful Bidder to submit the above-mentioned Performance Security or to sign the Contract Agreement shall



constitute sufficient grounds for the annulment of the award and forfeiture of the bid security. In that event the Employer may award the Contract to the next lowest evaluated Bidder whose offer is substantially responsive and is determined by the Employer to be qualified to perform the Contract satisfactorily. The process shall be repeated according to ITB 34.

### **36. Signing of Contract**

36.1 The Employer and the successful Bidder shall sign the Contract Agreement within the period as stated ITB 35.1.

36.2 At the same time, the Employer shall affix a public notice on the result of the award on its notice board and make arrangement for causing such notice to be affixed on the notice board also of the District Development Committee, District Administration Office and District Treasury and Controller Office. The Employer may make arrangements to post the notice into its website, if it has; and if it does not have, into the website of the Public Procurement Monitoring Office, identifying the bid and lot numbers and the following information: (i) the result of evaluation of bid; (ii) date of publication of notice inviting bids; (iii) name of newspaper; (iv) reference number of notice; (v) item of procurement; (vi) name and address of bidder making contract and (viii) contract price

36.3 Within thirty (30) days from the date of issuance of notification pursuant to ITB 35.1 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.

36.4 If the bidder whose bid is accepted fails to sign the contract as stated ITB 36.1, the Public Procurement Monitoring Office shall blacklist the bidder on recommendation of the Public Entity.

### **37. Complaint and Review**

37.1 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 34.1 by the Public Entity, for review of the proceedings stating the factual and legal grounds.

37.2 Late application filed after the deadline pursuant to ITB 37.1 shall not be processed.

37.3 The chief of Public Entity shall, within five (5) days after receiving the application, give its decision with reasons, in writing pursuant to ITB 37.1:

- (a) whether to suspend the procurement proceeding and indicate the procedure to be adopted for further proceedings; or
- (b) to reject the application.

The decision of the chief of Public Entity shall be final for the Bid amount up to the value as stated in 37.4.



- 37.4 If the Bidder is not satisfied with the decision of the Public Entity in accordance with ITB 37.3, is not given within five (5) days of receipt of application pursuant to ITB 37.1, it can, within seven (7) days of receipt of such decision, file an application to the Review Committee of the GoN, stating the reason of its disagreement on the decision of the chief of Public Entity and furnishing the relevant documents, provided that its Bid amount is more than Rupees Twenty Million (Rs. 20,000,000). The application may be sent by hand, by post, by courier, or by electronic media at the risk of the Bidder itself.
- 37.5 Late application filed after the deadline pursuant to ITB 37.4 shall not be processed.
- 37.6 Within three (3) days of the receipt of application from the Bidder, pursuant to ITB 37.4, the Review Committee shall notify the concerning Public Entity to furnish its procurement proceedings, pursuant to ITB 37.3.
- 37.7 Within three (3) days of receipt of the notification pursuant to ITB 37.6, the Public Entity shall furnish the copy of the related documents to the Review Committee.
- 37.8 The Review Committee, after inquiring from the Bidder and the Public Entity, if needed, shall give its decision within one (1) month of the receipt of the application filed by the Bidder, pursuant to ITB 37.4.
- 37.9 The Bidder, filing application pursuant to ITB 37.4, shall have to furnish a cash amount or Bank guarantee from "A" class commercial bank equivalent to zero point five percent (0.15%) of its quoted Bid amount with the validity period of at least ninety (90) days from the date of the filing of application pursuant to ITB 37.4.
- 37.10 If the claim made by the Bidder pursuant to ITB 37.4 is justified, the Review Committee shall have to return the security deposit to the applicant, pursuant to ITB 37.9, within seven (7) days of such decision made.

SECTION - II  
**Bid Data Sheet**

<b>A. General</b>	
<b>ITB 1.1</b>	The number of the Invitation for Bids is : <b>DOHS/W/NCB-4</b>
<b>ITB 1.1</b>	The Employer is: <b>Ministry of Health Department of Health Services Logistics Management Division, Pachali Teku, Kathmandu, Nepal</b>
<b>ITB 1.1</b>	The number and identification of lots comprising this bidding process is: <b>Construction of Warehouse at Pathalaiya Central Medical Store, Single Lot</b>
<b>ITB 2.1</b>	The name of the Project is: <i>NA</i> The DP is: <i>NA</i> The implementing agency is: <b>Government of Nepal Department of Health Services Logistics Management Division</b> GoN Funded or DP Funded: <b>GoN Funded</b>
<b>ITB 4.1 (a)</b>	Maximum number of partner in a joint venture shall be : 3 (three)
<b>ITB 4.2</b>	Eligible countries: <b>Nepal</b>
<b>B. Bidding Document</b>	
<b>ITB 7.1</b>	For clarification purposes only, the Employer's address is: Attention: <b>The Director</b> Address: <b>Logistics Management Division Department of Health Services (DoHS) Teku, Kathmandu</b> Telephone: : <b>+977-1-4261768</b> Facsimile number: <b>+977-1-4261413</b> Electronic mail address: <b>dr tinkari@gmail.com</b>
<b>ITB 7.4</b>	A Pre-Bid meeting <b>shall not</b> be held. A site visit <b>shall not be</b> organized by the Employer.
<b>ITB 7.5</b>	Time for request: <b>Requests for clarification should be received by the Employer no later than 10 days prior to the deadline for submission of bids.</b>

<b>C. Preparation of Bids</b>	
<b>ITB 10.1</b>	The language of the bid is: <b>English / Nepali</b>
<b>ITB 11.1 (b)</b>	In accordance with ITB 12 and ITB 14, the following schedules shall be submitted with the bid: <b>Priced Bill of Quantities</b>
<b>ITB 11.1 (g)</b>	The Bidder shall submit with its bid the following additional documents: <ul style="list-style-type: none"> <li>a) Up to date Firm/Company Registration Certificate and in case of JV by all firms in the Joint Venture</li> <li>b) Business Registration License</li> <li>c) VAT, PAN registration certificate</li> <li>d) Tax clearance certificate up to FY 2072/073</li> <li>e) A written declaration made by the bidder stating that the bidder is not ineligible to participate in the bid; has no conflict of interest in the proposed bid procurement proceedings and has not been punished for the profession or business related offence.</li> <li>f) Joint Venture Authorization/Agreement (if any)</li> <li>g) Power of Attorney</li> </ul>
<b>ITB 13.1</b>	Alternative bids <b>shall not</b> be permitted.
<b>ITB 13.2</b>	Alternative times for completion <b>shall not</b> be permitted.
<b>ITB 13.4</b>	Alternative technical solutions <b>shall not</b> be permitted.
<b>ITB 14.6</b>	The prices quoted by the Bidder <b>shall not be</b> subject to adjustment during the performance of the Contract.
<b>ITB 16.1</b>	The bid validity period shall be: <b>90 days</b> from the date of bid opening (i.e, <b>valid till July 11, 2017</b> ).
<b>ITB 17.1</b>	The Bidder shall furnish a bid security, from "A" class commercial bank with a minimum of <b>NPR 350,000.00</b> , which shall be valid for 30 days beyond the validity period of the bid (i.e. <b>valid upto August 10, 2017</b> ).
<b>ITB 17.2 (b)</b>	Account Name: <i>Dharauti Khata</i> Bank Name: <b>Rastriya Banijya Bank</b> Bank Address: <b>Teku, Kathmandu</b> Account Number: <b>Ko. Le. Ni. Ka. 1700203</b>
<b>ITB 18.1</b>	In addition to the original of the bid, the number of copy is: <b>One Copy</b>
<b>ITB 18.2</b>	The written confirmation of authorization to sign on behalf of the Bidder shall indicate: <ul style="list-style-type: none"> <li>(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</li> <li>(b) In the case of Bids submitted by an existing or intended JV, an undertaking</li> </ul>



	signed by all parties (i) stating that all parties shall be jointly and severally liable, and (ii) nominating a Representative who shall have the authority to conduct all business for and on behalf of any and all the parties of the JV during the bidding process and, in the event the JV is awarded the Contract, during contract execution.
<b>D. Submission and Opening of Bids</b>	
<b>ITB 19.1</b>	Bidders <b>shall</b> have the option of submitting their bids electronically.
<b>ITB 20.1</b>	For bid submission purposes only, the Employer's address is : Attention : Address : <b>Logistics Management Division Department of Health Services (DoHS) Ministry of Health (MoH) Pachali, Teku, Kathmandu</b>  The deadline for bid submission is : Date : <b>April 13, 2017</b> Time : <b>12:00 hours (local time)</b>
<b>ITB 23.1</b>	The bid opening shall take place at :  Address : <b>Logistics Management Division Department of Health Services (DoHS) Ministry of Health (MoH) Pachali, Teku, Kathmandu</b>  Date : <b>April 13, 2017</b> Time : <b>13:00 hours (local time)</b>
<b>E. Evaluation and Comparison of Bids</b>	
<b>ITB 30.5</b>	The amount of the performance security be increased by Eight (8) percent of the quoted bid price.  Failure of the successful bidder to comply with this requirement of increased performance security shall constitute sufficient ground for cancellation of the award and forfeiture of the bid security.

## SECTION - III

# Evaluation and Eligibility Criteria

This Section contains all the criteria that the Employer shall use to evaluate bids and eligibal Bidders. GoN/DP requires bidders to be qualified by meeting predefined, precise minimum requirements. The method sets pass-fail criteria, which, if not met by the bidder, results in disqualification in accordance with ITB 30, 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 30.2 (a) - (e) the following criteria shall apply:

#### 1.1 Quantifiable Nonconformities, Errors and Omissions

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

### 2. Eligibility

Criteria		Compliance Requirements			Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
<i>2.1 Conflict of Interest</i>					
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
<i>2.2 Government-owned Entity</i>					
Bidder required to meet conditions of ITB Sub-Clause 4.5.	Must meet requirement	Existing or intended JV must meet requirement	Must meet requirement	Not applicable	Forms ELI - 1, ELI - 2, with attachments

2.3 UN Eligibility					
Not having been declared ineligible based on a United Nations resolution or Employer's country law, as described in ITB Sub-Clause 4.8.	Must meet requirement	Existing or intended JV must meet requirement	Must meet requirement	Not applicable	Letter of Bid
2.4 Other Eligibility					
Firm Registration Certificate	Must meet requirement	Not applicable	Must meet requirement	Not applicable	Document attachment
Business Registration Certificate (License)	Must meet requirement	Not applicable	Must meet requirement	Not applicable	Document attachment
VAT and PAN Registration certificate ( <i>only for domestic bidders</i> )	Must meet requirement	Not applicable	Must meet requirement	Not applicable	Document attachment
Tax Clearance Certificate/Tax return submission evidence for the F/Y 2072/073	Must meet requirement	Not applicable	Must meet requirement	Not applicable	Document attachment
Joint Venture Agreement ( <i>in case of JV</i> )	Not applicable	Must meet requirement	Not applicable	Not applicable	Document attachment
Power of Attorney ( <i>Authorized signature specimen of signing authority on all pages of the bid document</i> )	Must meet requirement	Must meet requirement	Not applicable	Not applicable	Document attachment

## SECTION - IV

**Bidding Forms**

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

## Letter of Bid

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

Date: .....

Name of the contract: **Construction of Warehouse at Pathalaiya Central Medical Store.**

Invitation for Bid No.: **DOHS/W/NCB-4**

To: .....

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Documents, including Addenda issued in accordance with Instructions to Bidders (ITB) Clause 8;
- (b) We offer to execute in conformity with the Bidding Documents the following Works:
- (c) The total price of our Bid, excluding any discounts offered in item (d) below is: \_\_\_\_\_
- (d) The discounts offered and the methodology for their application are:
- (e) Our bid shall be valid for a period of **90 days** from the date fixed for the bid submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period;
- (f) If our bid is accepted, we commit to obtain a performance security in accordance with the Bidding Document;
- (g) Our firm, including any subcontractors or suppliers for any part of the Contract, have nationalities from eligible countries or any countries *[insert the nationality of the Bidder, including that of all parties that comprise the Bidder if the Bidder is a consortium or association, and the nationality of each Subcontractor and Supplier]*;
- (h) We, including any subcontractors or suppliers for any part of the contract, do not have any conflict of interest in accordance with ITB 4.3;
- (i) We are not participating, as a Bidder or as a subcontractor, in more than one bid in this bidding process in accordance with ITB 4.3, other than alternative offers submitted in accordance with ITB 13;
- (j) Our firm, its affiliates or subsidiaries, including any Subcontractors or Suppliers for any part of the contract, has not been declared ineligible, under the Employer's country laws or official regulations or



by an act of compliance with a decision of the United Nations Security Council;

- (k) We are not a government owned entity/We are a government owned entity but meet the requirements of ITB 4.5;<sup>1</sup>
- (l) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed;
- (m) We declare that, we have not been black listed as per ITB 3.4 and no conflict of interest in the proposed procurement proceedings and we have not been punished for an offense relating to the concerned profession or business.
- (n) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive; and
- (o) If awarded the contract, the person named below shall act as Contractor's Representative:
- (p) We agree to permit the Employer/DP or its representative to inspect our accounts and records and other documents relating to the bid submission and to have them audited by auditors appointed by the Employer.

Name: .....

In the capacity of .....

Signed .....

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

Date .....

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<sup>1</sup> Use one of the two options as appropriate.



**Table of Price Adjustment Data**  
**[To be used if Price Adjustment is applicable as per GCC 45.1]**

**Not Applicable**

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)				
		<b>Total</b>			<b>1.00</b>

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

- (a) Labor: "National Salary and Wage Rate Index" - "Construction Labor" of Nepal Rastra Bank or rate fixed by District Rate Fixation Committee
- (b) Material: "National Wholesale Price Index" - Construction Materials" of Nepal Rastra Bank
- (c) Equipment usage: "National Wholesale Price Index" - "Transport Vehicles and Machinery Goods" of Nepal Rastra Bank or "Fuel" Price fixed by Nepal Oil Corporation.

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

**Table of Price Adjustment Data**  
**[To be used if Price Adjustment is applicable as per GCC 45.7]**

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

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

\*\* Base Price and source normally to be specified by Employer (or alternatively informed to be proposed by bidder) in column 4 and 5.

Note:

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



# Bid Security

## Bank Guarantee

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

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

Date: .....

Bid Security No.: .....

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

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee.

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

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

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

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

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

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

**Note:**

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



## **Bidder's Information Format**

**Site Organization**

**Method Statement**

**Mobilization Schedule**

**Construction Schedule**

**Others**



## Bidder's Information

### Form ELI - 1: Bidder's Information Sheet

Bidder's Information	
<b>Bidder's legal name</b>	
<b>In case of JV, legal name of each partner</b>	
<b>Bidder's country of constitution</b>	
<b>Bidder's year of constitution</b>	
<b>Bidder's legal address in country of constitution</b>	
<b>Bidder's authorized representative (name, address, telephone numbers, fax numbers, e-mail address)</b>	
<b>Attached are copies of the following original documents.</b>	
<ol style="list-style-type: none"> <li>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.</li> <li>2. Authorization to represent the firm or JV named in above, in accordance with ITB 18.2.</li> <li>3. In case of JV, letter of intent to form JV or JV agreement, in accordance with ITB 4.1.</li> <li>4. In case of a government-owned entity, any additional documents not covered under 1 above required to comply with ITB 4.5.</li> </ol>	

## Form ELI - 2: JV Information Sheet

Each member of a JV must fill in this form

<b>JV / Specialist Subcontractor Information</b>	
<b>Bidder's legal name</b>	
<b>JV Partner's or Subcontractor's legal name</b>	
<b>JV Partner's or Subcontractor's country of constitution</b>	
<b>JV Partner's or Subcontractor's year of constitution</b>	
<b>JV Partner's or Subcontractor's legal address in country of constitution</b>	
<b>JV Partner's or Subcontractor's authorized representative information (name, address, telephone numbers, fax numbers, e-mail address)</b>	
<b>Attached are copies of the following original documents.</b>	
<ol style="list-style-type: none"> <li>1. Articles of incorporation or constitution of the legal entity named above, in accordance with ITB 4.1 and 4.2.</li> <li>2. Authorization to represent the firm named above, in accordance with ITB 18.2.</li> <li>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.</li> </ol>	



**Part - II**

**REQUIREMENTS**



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SECTION - V  
**Works Requirements**

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

## Scope of Work

### 1. GENERAL

- 1.1. The scope of work covers general aspects relating to workmanship and materials required for construction and other facilities, in accordance to the provided approved drawings or as directed by the Engineer as per requirements. The specification is to be read in conjunction with the Conditions of Contract, Bill of Quantities, Drawings prepared and other supplementary drawings proposed and approved and any other document forming part of the Contract.
- 1.2. All materials supplied and all work executed shall conform with the latest British or Indian Standard and Codes of Practice unless included otherwise in the Specification or Bill of Quantities or otherwise ordered by the Engineer. The Contractor may propose other internationally accepted standards & codes but these may only be used after supplying the Engineer with full details and obtaining his approval, these standards and codes are hereinafter defined as Relevant Standards. When the materials specified are not available the Contractor may not substitute materials without the prior approval of the Engineer.

Wherever references are made in the contract to respective standards and codes in accordance with which work is to be performed or tested, the edition or revision of such standards and codes in effect on the date of Tender shall apply, unless otherwise expressly set forth in the contract.

The structural design and calculations if required, done by the Contractor shall be approved by the Engineer.

In case of conflict among any such referred standards and codes or between any such standard (s) or code (s) and the requirements of the contract, the Engineer will determine which shall govern; generally the standard shall not be less than that of the relevant British Standards (BS).

The Contractor shall have on site at all times all Relevant Standards and Codes available for use by the Engineer.

- 1.3. The rates in the offer to be paid to the Contractor for Works shall be inclusive of materials, its procurement, freight, insurance if any, overhead and profit as well as transport and unloading, storing, hire and use of the equipment and tools to be employer and cost of the wages of labor, tests and cost temporary works and site installation like stores and buildings, and other facilities, with profit, price escalation risk, loss, wastage, custom, duties, taxes, design, drawing if necessary etc., to fulfill all the duties and liabilities as out-laid in the contract.

These all cost make the unit price for the built-in position at site as per design, drawing and as per direction and approval of Engineer.

All works shall be carried out during normal working hours and the Contractor shall be responsible supervise all works, as any other work under the contract abiding the pertinent tests of the relevant specification. In special, if the works demand the continuous or further time requirements to execute and finish the work, even after it is late in the evening or unfavorable condition the Contractor shall continue or execute the work with approval and as direct by the Engineer even unto late or start at night in the Contractor's own risk and cost. This work implies in the special weather condition, heavy rain, dry or cold condition too for works like casting reinforced concrete structures. Fixing and on part of structures etc. as may be required and directed.





- 1.4. The specified dimensions shall be those dimensions shown on the drawing. No dimension shall be scaled from the drawings. If any discrepancies detected in the supplied or approved drawings, it should be brought to the notice of the Engineer who shall then rectify or change. But in no case the work is executed without rectified or changed or confirmed the discrepancies.
- 1.5. Tolerances shall be specified in accordance with relevant British Standards and Code of Practices or and as directed and approved by the Engineer.
- 1.6. Engineer will hand over on site to the Contractor the basic survey points or bench marks together with the surveying plot against a written confirmation of the Contractor. Should the Contractor have any objections to the basic survey points, plans etc. made available to him, he must inform the Engineer in writing, forthwith if no objection raised within, two weeks, the handing over shall be considered as effected. The site plan drawings if not found correct to the existing line, dimension, position and level, the Contractor shall do the survey works on his own cost to make the final master site plan which shall get approval from the Engineer.

Setting out required for construction of the works according to the approved site plan drawings shall be undertaken by the Contractor, who shall fix all survey lines, points and elevation. Survey basic points shall be durable protect during the construction time and handed over to the Engineer upon completion of the Works.

Method of survey, instruments etc. shall be approved by the Engineer.

The Contractor shall be fully responsible for the correctness of his survey work for total satisfaction to the Engineer.

The Contractor shall assist the Engineer at any time when checking bench marks or other points established by the Contractor. Any control by the Engineer shall not relieve the Contractor of his full responsibility for the accuracy of structures or parts of them regarding to their positions or dimensions, elevations etc.

- 1.7. The Contractor shall before the date or commence the construction works, prepare the detailed schedule of execution of the Works and produce the programme giving the information of all condition necessary for the continuous works progressing (Supply materials, equipment, labor etc.) within two weeks after signing the contract for the approval of Engineer. Programme and progress shall be in order to complete and fixtures.

The Contractor shall submit a detailed construction programme showing monthly progress including quarterly requirements of materials to be consumed within fourteen days of the date of notice to proceed with the work for approval. This programme may be reviewed and revised as per requirement with approval.

- 1.8. The Contractor shall be responsible to design the water supply unit for efficient water supply both for the constructions period and for water supply purpose as per this specification.
- 1.9. The Contractor shall carry out survey for the detail plan for the sanitary installation or drainage installation for approval of the Engineer.

The Contractor shall ascertain the Engineer about the approximate level of subsoil water and flood level in relation to the sewer system and condition.

The drainage system shall be designed and produced for approval to the Engineer.



Where on other method of disposal is possible foul water may be collected and dispersed into subsoil, the general subsoil water level and the subsoil conditions shall be ascertained including the absorptive capacity of the soil.

If the subsoil dispersed or soak pit system would be followed, the pit shall not be in the vicinity of water supply source at least by 50 m.

- 1.10. Selection, installation and maintenance of electrical appliances shall be done in accordance with good practice.

All electrical fittings and appliances shall be carefully examined for defects before they are installed and also in the completion of work. The Contractor shall give notice to the Engineer from time to time prior to installation and execution of work at least 7 days before fitting.

- 1.11 The Contractor shall submit a set of working drawing indicating al the installation and shall get approved.
- 1.12 The contractor has to take care of the employee and other personnel of the Employer during the works. The contractor has to take care of all environmental and safety measures.

## 2. TEMPORARY WORKS AND SITE TRANSPORTATION

- 2.1. Facilities to be provided

Temporary Works: The temporary works shall include supply, furnishing, transport, erection, maintenance and supplementing machinery, personnel, works, instruments, all temporary workshops & office, laboratories, stores, housing, temporary canteen, lavatories and all other such facilities required for or in connection with the construction of the works and for the fulfillment of the Contractor's obligation. Also included in site installation shall be such temporary works and maintenance as the internal roads on the site, car park area, storage area, power supply (electric standby), water supply, first aid facility, drainage etc. on the cost of the Contractor.

- 2.2. The Contractor shall maintain and keep the above mentioned sanitary facilities in a clean and decent condition free from any nuisance arising therefrom and remove and clear away when directed and shall clean, fill in and make good as required on his own cost. Sanitary facilities shall be provided with suitable temporary septic tank, soak pit and drainage.

The Contractor shall be responsible for all as aforesaid and shall pay all charges in connection therewith from his own cost.

- 2.3. The Contractor shall provide at his own expense all fire-fighting arrangements during construction and maintenance period of the Works under this contract.
- 2.4. The Contractor shall in connection with the works provide and maintain at his own cost all night guards, temporary fencing and watching when and where necessary or required by the owner, Engineer for the protection of the works and convenience on his own cost.
- 2.5. The Contractor shall supply and provide, install all the necessary test equipment in the site as directed at his own cost and provide access for the sole use of Engineer for the required test equipment all which will revert to the Contractor at the end of the contract. The detail of the equipment depend on the type and need of the test on materials, soil investigation etc. as per the proposal to be submitted by the Contractor as per the requirements if and when necessary during



execution as directed by the Engineer. If the test shall be required be carried outside in some reputable testing institute the Engineer presence shall be required for his satisfaction. The cost incurred for testing, travel of the Engineer shall be born by the Contractor.

- 2.6. The Contractor shall build and maintain where it may be necessary for construction all required drainage works to control and discharge water found in the worksite and to lower the subsurface water table to the designed depth, as directed by the Engineer on his own cost.

Furthermore the Contractor shall ensure that all drainage water will be eliminated without causing any interference to his own work and other contractors operating elsewhere on the construction site. The dewatering system shall be installed in such a way that alterations and extension of the system during operations are possible.

In order to remove the water the Contractor shall furnish, install, maintain and operate all pumps, including pump sump, electrical installations, and necessary accessories. In addition the Contractor shall at his disposal sufficient reserve pumps, with a capacity equal to that of the installed pumps. It is clearly understood, that, the removal of any amount of water that may be present at any moment and the permanent control of water and seepage in the entire responsibility of the Contractor on his own cost. The reserve units shall be kept ready for service when the failure of any of the installed occurs.

The Contractor shall consider of a temporary failure of the electric power service and shall install emergency power units with sufficient capacity to feed the necessary power to the installed units at the moment of failure in his own risk and cost.

There shall be no time extension and additional compensation because of failures or deficiencies of the drainage and pumping system, lack of supply of labor and material supply, failure or delay due to refusal or in process of approval and of supply of design drawings etc.

- 2.7. As soon as the work covered by these specification is completed and before the Contractor's final liquidation, the Contractor shall remove from the Employer's property all temporary building installations temporary facilities, all the debris, unused material (of course unpaid) fill the excavated for any purposes as per direction of Engineer.

### 3. TESTS

- 3.1. For ensuring the quality of the work, the materials and the workmanship shall be subjected to testing in accordance with procedures, sets of tests and frequencies as specified in respective Sections of these Specifications. The specified testing frequencies are not restrictive. The Engineer shall direct for the tests to be carried out as frequently as deemed necessary that the materials and workmanship comply with their Specifications.
- 3.2. Where no specific testing procedure is mentioned in the Specifications, the tests shall be carried out as per the prevalent accepted engineering practice or directions of the Engineer.
- 3.4. If in the opinions of the Engineer the structural concrete tested at site is not of the required standard, the Contractor shall perform core test on his own cost.
- 3.5. Load test if directed by the Engineer should be carried out by the Contractor as soon as possible after expiry of 28 days from the time of placing concrete.

If in any case the tests of compressive strength on the specimen from working concrete or the aforesaid tests, nondestructive tests fail to meet the required minimum compressive strength specified in the strength class the concrete structure shall be demolished, dismantled and replaced by the Contractor without the payment what so ever incurred in its concreting the work and its dismantling procedures. But the removal or demolish or dismantling procedure shall not affect other structure & its strength prepared from separate concrete and its class.

Any control by the Engineer shall not relieve the Contractor of his full responsibility for the accuracy of structures, dimensions or parts of them within regard to their positions or dimensions or strengths.

#### **4. INSURANCE OF WORKS**

##### **4.1 Insurance of Works**

The Contractor shall take out Insurance for the Works from approved agency/institution staff if provided in the contract.

Payments made to the agency/institution and stamp charges/duties incurred if any, by the contractor in compliance of the above work shall be paid from Provisional Sum included for the item in the BOQ after submission of the insurance document to the satisfaction of the Engineer.

##### **4.2 Third Party Insurance**

The Contractor shall take out Third Party Insurance from an approved agency/institution staff if provided in the contract

Payments made to the agency/institution and stamp charges/duties incurred if any, by the Contractor in compliance of the above work shall be paid from the Provisional Sum included for the item in the BOQ after submission of the documents to the satisfaction of the Engineer.

##### **4.3 Insurance of Contractor's Workmen and Employees**

The Contractor shall insure against such liability as stipulated in Conditions of Particular Application.

The cost for works under this Sub-Clause shall be covered by the Contractor's overhead included in unit rates of other items in the BOQ

#### **5. ENVIRONMENTAL PROTECTION WORKS**

5.1 The environment has been defined to mean surrounding area including human and natural resources to be affected by execution and after completion of works.

5.2 The Contractor shall take all precautions for safeguarding the environment during the course of the construction of the works. He shall abide by all prevalent laws, rules and regulations governing pollution and environmental protection.

5.3 The Contractor shall prohibit employees from unauthorized use of explosives, poaching wildlife and cutting trees. The Contractor shall be responsible for the action of his employees.

5.4 The Contractor is expected to arrange and execute the Works in such a way that existing environmental conditions are not deteriorated. Borrow pits and dumping sites used by the contractor shall be reinstated at his own cost by grass and/or tree plantation.



- 5.5 Written instruction/approval must be given to seek from the Engineer regarding protection and reinstatement of environment throughout the Contract period. Failure in compliance with Engineer's instructions in respect of overall standard will lead to reduction or withhold of payment. Further, any serious deterioration in the environment including pollution attributable to Contractor as determined by the Engineer, may result in deduction of actual expenditures incurred in their reinstatement done through separate agency, from any money due to the Contractor.

## 6. PROJECT SIGN BOARD

The Contractor shall provide a project sign board of size approximately 6'0" x 4'0" at a place approved by the Engineer on site. The board shall be painted in approved colors with name of:

- (a) The Project
- (b) The Employer
- (c) The Engineer
- (d) The Contractor and
- (e) Any other specialist consultants or contractors, as directed by the Engineer. The required cost shall be borne by the Contractor.

## 7. SCAFFOLDING WORKS

The scaffolding works required during the entire works in different stages like: brick masonry, roofing and ceiling works, plastering, painting etc.; as per requirements shall be provided by the Contractor at his own expense. The scaffolding shall be erected with steel section or pipes, or bamboo of adequate strength to safe for all operation. The Contractor shall test all measures to ensure the safety of the work and working people. Any instruction of the Engineer in this respect shall also be compiled with. The Contractor shall be entirely responsible for any damage to property or injury to persons resulting from ill erected scaffolding, defective ladders and materials or otherwise arising out of his default in this respect. Proper scaffolding shall be provided to allow easy approach to every part of the work. Overhead work shall not be allowed.

## 8. AS-BUILT DRAWINGS

- 8.1 Approved Working Drawings as have been selected by the Engineer shall be correctly modified for inclusion in the As-Built Drawings incorporating such variations to the Works as have been ordered and executed. Such drawings shall show the actual arrangement of all structures and items of equipment installed under the Contract. The Contractor shall submit 1 (one) reproducible copy and 3 (three) prints of all As-Built Drawings clearly named as such to the Engineer for approval before applying for the Taking-Over Certificate for the respective Section of the Works.
- 8.2 During the course of the Works, the Contractor shall maintain a fully detailed record of all changes from the approval to facilitate easy and accurate preparation of the As-Built Drawing. Irrespective of the other contractual prerequisites no Section of the Works will be considered substantially completed until the Engineer has approved the respective As-Built Drawings.

**9. TERMINOLOGY**

The term "the Specifications" shall be construed as the Standard Specification and the Special Specification all together.

**10. MEASUREMENT AND PAYMENT**

Unless otherwise provided in the contract, no separate measurement and/or payment shall be made for all materials and works required under this clause. All costs in connection with the work specified herein shall be considered to be included with other related items of the work in the BOQ. All provision of temporary services shall be covered by a provisional sum in the BOQ. The lump sum amounts indicated in BOQ shall be paid in pro-rata basis by dividing the total amounts by contract period in months. These payments will be incorporated in the interim certificates for payment.

## Specifications for Works

### 1. GENERAL

- 1.1 The general specifications of works are given on the BOQ and the Drawings. All the materials and workmanship must be as per the instruction provided by the Employer's Engineer at the time of commencement of the works. The standard material specifications and norms prescribed by the GoN, Department of Building Construction must be followed by the successful bidder.
- 1.2 The Work shall be carried out according to these Specifications whether specifically mentioned elsewhere or not. No extra in any form will be paid unless it is definitely stated as an item in the Bill of Quantities. Whenever the Specifications are not given or when the Specifications are ambiguous, the relevant Nepal Standards or Indian Standards and further amendments will be considered as final and binding.
- 1.3 The Work shall be related to the drawings which the Contractor is presumed to have studied. Nothing extra will be paid for any item because of its shape, location or other difficult circumstances, even if the schedule makes no distinction, as long as the item is shown in the drawings
- 1.4 The sources of materials stated in the Specifications are those from which materials are generally available. However, materials not conforming to Specifications shall be rejected even if they come from the stated sources. The Contractor should satisfy himself that sufficient quantity of materials of acceptable Specification is available from the stated or other sources.
- 1.5 The requirements of Specifications shall be fulfilled by the Contractor without extra charges i.e. the item rates quoted shall be deemed to have taken these Specifications into account. These are requirements the Contractor shall fulfil after the issue of Letter of Acceptance but before the Date of Commencement.

### 2. STANDARD CONSTRUCTION MATERIALS

#### 2.1 WATER

Water for construction work shall not be salty or blackish and shall be clean drinking water, reasonably and free from objectionable quantities of silt and traces of oils, acid and injurious alkali, salts, organic matter and other deleterious material which will weaken the concrete. Water shall be obtained from the sources approved by the Engineer. Sources of water shall be maintained at such a depth and the water shall be withdrawn in such a manner as to exclude silt, mud, grass or other foreign materials. Containers for transport, storage and handling of water shall be clean.

#### 2.2 BRICKS

Unless otherwise specified, burnt clay bricks shall conform to the requirement of I.S. 1077-1957. Specification for Common Burnt Clay Building Bricks and shall be first class quality. The bricks have been referred as local chimney made bricks. Bricks shall be of uniform deep red,



thoroughly burnt, regular in shape and size and shall have sharp and square edges and parallel faces to ensure uniformity in the thickness of the courses of brick work.

Bricks shall be free from cracks, chips, flaws, stones or lumps of any kind. They shall be free from salt which affect the mortar of the masonry. Bricks shall not show any sign of efflorescence either dry or subsequent to soaking in water. Bricks shall be sound, hard, homogeneous texture and emit a clear ringing sound on being struck and water absorption shall be minimum. All bricks shall have to be approved by the Engineer/Resident Engineer. Any bricks not up to the specification must be removed from the site immediately at Contractor's own cost. Representative samples of bricks to be used shall be submitted to the Engineer and his approval taken before bulk purchase. The samples shall be kept with the Engineer for future reference and comparison. All bricks supplied shall conform to these approved samples in all respects.

Bricks shall not be dumped at site. They shall be stacked in regular layers even as they are unloaded. The supply of bricks shall be arranged that at least two weeks requirement of bricks are available at site at any time.

### 2.3 CEMENT

Cement shall conform to I.S. 269-1976. The type of the cement as to whether it shall be ordinary Rapid Hardening or Low Heat shall be specified. When no type is specified, Ordinary Portland Cement shall be used.

The weight of Ordinary Portland Cement shall be taken as 1440 kg. per m<sup>3</sup> and Rapid hardening Portland Cement as 1210 kg. per m<sup>3</sup>. The measurement of proportion of cement should normally be on the bases of weight and whole bags each undisturbed and sealed 50 kg. When part bag is required. Cement shall be taken to see that each bag contain full quantity of cement.

Tests: When tests are considered necessary, they shall be carried out as indicated in I.S. 269-1958. The Contractor should ensure that the cement is of sound and required quality before using it.

### 2.4 SAND

Sand shall consist of siliceous material having hard, strong, durable, uncoated particles, free from undesirable amounts of dust, lumps, soft or flaky particles or other deleterious substances. The amount of different undesirable substances shall not exceed the percentage limits by weight as specified in relevant I.S. Codes but in no case, the total amount of all undesirable substances shall exceed five percent by weight.

All fine aggregate (sand) shall conform to I.S. 383-1970.

Sand for use in concrete shall be natural sand. Sand shall be clean, well graded, hard, strong, durable and gritty particles free from injurious amounts of dust, clay, soft or flaky particles, shale, salts, organic matter, loam, mica or other deleterious substances and shall be approved by the Engineer. When the quality of fine aggregate is doubtful, it shall be tested for clay, organic impurities and other deleterious substances as laid down in I.S. 383-1970.

The fine aggregate shall be of the sizes as specified below.





- |   |                                     |
|---|-------------------------------------|
| (a) Cement concrete topping of thickness 40 mm. and above | - fineness modules between 2 and 3. |
| (b) Cement concrete topping of thickness 10 mm. and above | - fineness modules between 4 and 6. |

## 2.5 COURSE AGGREGATE

Coarse aggregate shall consist of crushed or broken stone and be hard, strong, dense, durable, clean and of proper gradation and free from skin and coating likely to prevent proper adhesion to mortar. The aggregate shall generally be cubical in shape and as far as possible flaky, elongated pieces shall be avoided. It shall generally with the provision of I.S. 383-1970 and I.S. 515-1959. Unless special stones from particular quarries are mentioned in the special provision, aggregates shall be broken from the best granite/quartzite/gneiss stones in that order available in the region and approved by the Engineer. Stone shall have no deleterious reaction with cement.

The coarse aggregate shall be of the following sizes:

- |   |                               |
|---|-------------------------------|
| (a) Normal cement concrete of 100 mm. and above thickness | - graded 20 mm. and below     |
| (b) Cement concrete topping thickness 40 mm. and above    | - graded from 12 mm and below |
| (c) Mass cement concrete of 500 mm. and above             | - graded 38 mm. and below     |

Aggregate other than crushed stone conforming to the provisions of this Specification may be used under special conditions, if permitted by the Engineer.

Grading tests shall be taken in the beginning and at change of source or material. Where required, by the Engineer, tests indicated in I.S. 383 - 1970 and I.S. 456 - 1978 shall be carried out in an approved laboratory at the Contractor's cost to show the acceptability of the material.

Coarse aggregate of a porous nature where absorption of water after 24 hours immersion in water, is more than 5 percent by weight, shall not be used.

Limits of deleterious substances shall not exceed those prescribed in 2.3.1.1 and 2.3.1.2 of I.S. 515 - 1959.

The aggregates of different sizes shall be stored separately and handled in such a manner as to prevent intermixing of different sizes of aggregate required separately for grading purposes. No foreign matter shall be allowed to be mixed up with aggregates. If covered with dust etc. they shall be washed clean before use.

Sample of coarse aggregates required for the work shall be approved by the Engineer both regarding the quality and grading and shall be kept in the site office. The coarse aggregates to be used shall conform to these samples.

## 2.6 STONES

Stone shall be hard, sound, far from decay, durable, tough, free from cracks and decaying. Stones with process matter or with boulder skin shall be rejected. It should be gravels / quartzite / gneiss stone in that order a preferably of similar quality and strength. It should in no case shall have deleterious reaction with cement.

## 2.7 REINFORCING BARS

Reinforcing steel shall be clean and free from dust, loose rust and costs of paints, oil, grease or other coating, which may impair or reduce bond. It shall conform to the following I.S. specifications.

- (a) Mild steel Tor steel and medium tensile steel bars and hard-drawn steel wire conforming to IS: 432, IS: 456, - latest revision.
- (b) Deformed bars conforming to IS: 1139- latest revision.
- (c) Cold twisted steel bars ribbed Tor steel conforming to IS: 1786- latest revision.
- (d) Hard-drawn steel section conforming to IS: 226 - latest revision.

All steel reinforcement above 6 mm diameter shall necessarily be of tested quality.

## 2.8 TIMBER

Quality: Timber to be used for the work shall be from the heart of a sound tree of mature growth, the sapwood being entirely removed. It shall be uniform in substance, straight in fiber, free from large, loose, dead or cluster knots, flaws, shakes, warp, cup, spring, twist bends or defects of any kind. It should be free from spongy, brittle flaky or brushy condition.

All timber shall be seasoned and be free from decay, rot, harmful fungi and insect attacks and from any other damage or harmful nature which will effect the strength durability, appearance or its usefulness for the purpose for which it is required.

Color: The color shall be uniform as for as possible, the darkness of color amongst colored species of timber being generally a sign of strength and durability.

Kind: The timber shall be used of best quality timber as specified in the item. The samples of the approved timber to be used shall deposit in the office of the Engineer.

Moisture Content: The maximum permissible moisture content for timber shall be 12 percent of dry weight of timber.

Timber for the work shall not be brought until seen and approved by the Engineer, who may reject defective timber which shall be immediately removed from the site of work. Any effort like plugging painting, using any adhesives or resinous materials to hide defects shall render the pieces, rejectable by the Engineer. Timber prepared for inspection shall be clean and free from dust and paint or other material which may conceal the defects.

Sawing: All scantlings shall be sawn in straight lines and plains and of uniform thickness and of full measurement from end to end and shall be sawn in the direction of the grain. They shall be sawn with such sufficient margin as to secure specified dimensions, lines and planes after being wrought.

Maximum slope of grain shall range between 1 in 10 and 1 in 20. Any timber rejected shall at once be removed from site of work.

## 2.9 GLASS

All glass shall be of the best quality, free from specks, bubbles, smokes, veins, air holes, blisters and other defects. The kind of glass supplied by the Contractor shall be as mentioned in the item or in the special provision or as shown on the detailed drawings.



When plate glass is specified, it shall be "polished patent plate glass" of the best quality. It shall have both the surfaces ground flat and parallel and polished to obtain clear undistorted vision and reflection. The plate shall be of the thickness mentioned in the item, shown in the detailed drawings or specified in the special provisions. In the absence of any specified thickness of the plate glass to be supplied shall be 5.5 mm a tolerance of 0.55 to 0.80 mm shall be admissible on the nominal thickness of polished plate glass.

## 2.10 WOOD/VENEER

Ply wood/veneer shall be of or superior to Indian Standard, 3 or 5 or 7 ply. All such ply wood shall be pressed properly to the required degree and to the required uniformity. They shall be of approved pattern and shall conform to I.S. 1328-1959.

Defective ply wood/veneer either by the damaged corner or edge or be defective pressing shall not be used at all.

## 2.11 STEEL SECTIONS

Structural steel section shall be as per IS specification and steel tubes used in the truss shall be hotfinished tubes confirming to the requirements of specified in IS 1161 - 1968 and IS 807 - 1968. Tubes shall be of grade heavy or medium unless instructed.

## 2.12 PAINTING MATERIALS

Varnish, synthetic enamel paint, acrylic emulsion paint, waterproof cement paint, primers, distemper etc. shall be from new tins of reputed manufacturer like Asian Paints, Burger Jenson and Nicholson, Nerolac, Shalimar, Snowcem, or equivalent as approved by the engineer.

## 3. EARTH WORK

### 3.1 SCOPE

This specification covers the earth work in excavation for all types of foundation wet or dry.

### 3.2 CLEARING SITE

The site on which the structure is to be built as shown on the plan and the area required for setting out and other operations should be cleared and all obstructions, loose stones, materials and rubbish of all kinds, stumps, brush wood and trees removed as directed, roots being entirely grubbed up. The materials obtained will be the property of the Government and materials pronounced useful by the consultant will be conveyed and properly stacked as directed within the specified lead. Useless materials shall be burnt or otherwise disposed off as directed by the Engineer.

### 3.3 SETTING OUT

After clearing the site, the center lines shall be given by the Engineers and it will be the responsibility of the Contractor to install substantial reference marks; bench marks etc. and maintain them as long as required true to line, curve, slopes and level. The Contractor shall assume full responsibility for alignment, elevation and dimension of each and all parts of the work. Labor, material etc. required for setting out and establishing Bench Marks and other reference marks shall be arranged by the Contractor at his own cost.



### 3.4 EXCAVATION

Foundation excavation shall include removal of all materials of whatever nature and whether wet or dry, necessary for the construction of foundation and substructure exactly in accordance with the line, levels grades and curves as shown on the plans or as directed by the Engineer. It shall be taken to the exact width of the lowest step of the footing and the sides shall be left plumb where the nature of soil admits it. Unless there is a specific extra provision in the contract for shoring or for cutting side slopes, Contractor shall at his own cost do the necessary shoring or cutting of slopes to a safe angle or both as approved by the Engineers, when the strata need such treatment. The Contractor shall notify the Engineers before starting excavation to enable him to take cross sectional level for purposes or measurements before the ground is disturbed.

### 3.5 PREPARATION OF FOUNDATION FOR FOOTING

The bottom of foundation shall be leveled both longitudinally and transversely or stepped as directed by the Engineer. Before footing is laid final surface shall be slightly watered and rammed. If any soft patches come to light on inspection or ramming, these shall be dug out and dealt as directed by the Engineer. No filling shall be allowed to bring the foundation to level. If by Contractor's mistake, excavation is made deeper than shown on the plans or ordered by the Engineer, the extra depth shall be made up with concrete or masonry of the foundation grade as directed by the Engineers, and at the cost of the Contractor. All rock or other hard foundation shall be cleaned of all soft and loose material and out to a firm surface, either level, stepped or serrated as directed by the Engineer. The elevation of the bottom of foundation shown on the plan shall be considered as approximate only and the Engineer may order such changes in the dimensions and elevations of the foundation as may be deemed necessary to secure satisfactory foundation.

After each excavation is completed, the Contractor shall notify the Engineer to that effect and no footing shall be allowed to be laid until the Engineer has approved the depth and dimensions of excavation and nature of the foundation material and the levels and measurements are recorded.

### 3.6 SHORING

Unless separately provided for in the contract, excavation of slopes to prevent falling in of sides or providing, fixing, maintaining and removing shoring, bracing etc., shall not be paid for. The Contractor shall be responsible for the design of shoring shall be of sufficient strength to resist side pressure and ensure safety from steps and blows and to prevent damage to work and property and injury to persons. It shall be removed as directed after all the items for which it is required are completed.

### 3.7 PROTECTION

Near towns and all frequented places foundation pits, well pits and similar excavation shall be strongly fenced and marked with red lights at night in charge of watchman to avoid accidents. Adequate protective measures shall be taken to see that the foundation excavation does not affect or damage adjoining structures. All measures required for the safety of the excavation, the people working in and near the foundation trenches, property and the people in the vicinity shall be taken by the Contractor at his own cost, he being entirely responsible for any injury to life and damage to property caused by his negligence or accident due to his constructional operations.



### 3.8 DISPOSAL OF EXCAVATED MATERIALS

No materials excavated from the foundation trenches of whatever kind they may be, are to be placed even temporarily nearer than 1.5 meters or greater distance as directed by the Engineer from the outer edge of excavation. All materials excavated will remain the property of the Government. Rate for excavation includes sorting out of useful materials and stacking them separately as directed within the specified lead. Materials suitable and useful for back filling or other use shall be stacked in convenient places but not in such a way as to obstruct free movements of men, animals and vehicles or encroach on the area required for constructional purposes. It shall be used to the extent required to completely backfill the structure to original ground level or the elevation shown on the drawings or as directed by the Engineers. For backfilling, the materials shall be placed in 15 to 20 cm. layers, moistened and well compacted. Materials not useful in any way shall be wasted as directed by the Engineers. If useful excavated rubble is required by the Contractor for the use in other items, it shall be paid for at the rate fixed in the tender and if not so provided, at the rate at which both parties mutually agreed. The site shall be left clean of all debris on completion.

### 3.9 DEWATERING

Unless specially provided for as a separate item in the Contract, the excavation rate shall include pumping out all water which may accumulate in the excavation during the progress of the work either from seepage, springs, rain or any other cause and diverting surface flow if any, by bonds or other means. The bonds shall be removed after their purpose is served.

Pumping water from any foundation enclosure or trenches shall be generally in such a manner as to preclude the possibility of any damage to the foundation trenches, concrete or masonry or any adjacent structures. The excavation shall be kept free from water (i) during inspection and measurement, (ii) when concrete and/or masonry are in progress and till they come above the natural water level and (iii) till the consultant considers that the mortar is sufficiently set.

### 3.10 SLIPS AND BLOWS

If there are any slips or blows in the excavation, they shall be removed by the Contractor without any extra cost so as to provide correct dimensions required for the foundation.

### 3.11 BACK FILLING

All timber work and form work shall be removed after their necessity ceases and trash of any sort shall be cleaned out from the excavation. All space between foundation masonry or concrete and the sides of excavation must be refilled to the original surface with approved materials, in layers of 15 to 20 cm. in thickness, watered and rammed to compact.

The filling shall be done after concrete or masonry is fully set and done in such a way as not to cause undue thrust on any part of the structure. Where suitable excavated material is to be used for refilling, it shall be brought from the place where it was temporarily deposited and used in refilling.

### 3.12 TYPES OF EXCAVATION

Soils of all sorts, sand, gravel, soft clay, black soil and other similar soft or loose materials etc. shall include all materials of earthy or sandy nature which can be easily ploughed or small shingle or gravel which can be easily removed. Gravel mixed soil / hard soil which is to be



excavated by the help of pick, Jumper and lifted or removed by the help of shovel. Large boulder / stone or pebbles formally jointed / cemented which need chisel to brake / excavate. Removal of small boulders occurring in such strata shall be included in the rate for the excavation.

#### 4. CEMENT CONCRETE WORK FOR GENERAL USE

##### 4.1 SCOPE

This specification deals with the cement concrete, plain or reinforced for general use of specified proportion and flooring (I.S. Code of Practice I.S. 456 latest revision to be complied with unless permitted otherwise hereinafter).

##### 4.2 MATERIALS

All required materials shall be as specified in "STANDARD CONSTRUCTION MATERIALS".

Admixtures: The use of admixtures in concrete for promoting workability improving strength, entraining air or for any other purpose may be used only with the prior approval of the Engineer.

##### 4.3 GRADES OF CONCRETE

General: Structural concrete shall be either ordinary or controlled and in three grades designated as M150, M200 and M250, as specified in IS: 456 - latest provision.

Ordinary Concrete: Ordinary concrete is recommended only when accurate control is impracticable and not necessary. However, if ordinary concrete is allowed by the Engineer, it shall be used only in the concrete of Grades M150, M200 and M250. Ordinary concrete does not require preparation of trial mixes.

Concrete mix proportions for ordinary concrete shall be as per I.S.: 456- latest revision

##### 4.4 STRENGTH REQUIREMENTS

Where ordinary portland cement conforming to IS: 269 - latest revision or Portland cement-Furhance Slag cement conforming to IS: 455 - (latest revision) is used, the compressive strength requirements for various grades of concrete shall be as shown in Table and shall apply to both controlled concrete and ordinary concrete.

##### Strength Requirement of Concrete

Compressive strength of 15 cm. diameter and 30 cm. high cylinder or 15 cm. cube at 28 days after mixing, conducting in accordance with I.S. : 456 - latest revision.

Grade of Concrete	Preliminary tests kg / cm <sup>2</sup>	Work test kg / cm <sup>2</sup>
M 150	200	150
M 200	260	200
M 250	320	250

The acceptance of strength of concrete shall be as per clause 5.4 "Sample size and Acceptance Criteria" of IS: 456 - latest revision subject to the stipulations and/or modifications stated elsewhere in this specification.



Concrete work found unsuitable shall have to be dismantled and replacement to be done as per specification by the Contractor. No payment for the dismantled concrete, the relevant formwork and reinforcement embedded fixtures, etc. shall be made. In course of dismantling, if any damage is done to the embedded items or adjacent structures, the same shall be made good free of charge by the Contractor to the satisfaction of the Engineer.

Other requirements of concrete strength as may be desired by the Engineer shall be in accordance with IS:456 - (latest revision).

In exceptional circumstances, the Engineer may accept a concrete of lower strength than specified and which is otherwise unacceptable according to the "Acceptance Criteria" of IS:456 - (latest revision), provided the strength is never less than 80% of the specified strength. All concrete having a strength less than 80% of that specified shall always be rejected. Payment for concrete of lower strength than specified but accepted by the Engineer shall always be made at a reduced rate on prorata basis to the strength obtained.

#### 4.5 WORKABILITY

The workability of the concrete shall be checked at frequent intervals by slump test. Where facilities exist and if required by the Engineer, alternatively, the compacting factor test in accordance with I.S. 1199 - (latest revisions), shall be carried out. The degree of workability necessary to allow the concrete to be well consolidated and to be worked into the corners of formworks and around on the type and nature of structure and shall be based on experience and tests within the preferred limits of consistency as specified in Table below for various types of structures.

Limits of Consistency

Degree of Workability	Slump in mm		Use for which concrete is suitable
	Min.	Max.	
Low	20	40	Mass concrete foundations without vibrations, simple reinforced section with vibration.
Medium	50	100	Normal reinforced beams, columns, slabs without heavily reinforced section with vibration.
High	100	150	Section with congested reinforcement not normally suitable for vibration.

*Note:* However, the slump to be obtained for work in progress shall be as per direction of the Engineer.

#### 4.6. WORKMANSHIP

##### A. General

All workmanship shall be according to the latest and best possible standards.

##### Concrete:

- (i) Mixing of Concrete: The proportion of fine and coarse aggregate, cement and water shall be as determined by the preliminary tests or according to fixed proportions in case of ordinary concrete and shall always be approved by the Engineer. The quantities of fine and coarse aggregates shall be determined by weight. The water shall be measured accurately after giving proper allowance for surface water present in the aggregates for which regular check shall be made by the Contractor. Due



allowance shall be made for bulking in case of volume batching in accordance with I.S. 2386 (Part III) - (latest revision).

Concrete shall be always mixed in a mechanical mixer unless specifically approved by the Engineer for concrete to be used in unimportant structure. The water shall not be poured into the drum of the mixer until all the cement and aggregates constituting the batch are already in the drum and mixed for at least one minute. Mixing of each batch shall be continued until there is a uniform in color and consistency, but in on case shall mixing be done for less than two minutes and at least forty revolutions after all the materials and water are in the drum. When absorbent aggregates are used or when the mix is very dry, the mixing time shall be extended as may be directed by the Engineer. Mixer shall not be loaded above their rated capacity as this prevents thorough mixing.

The entire contents of the drum shall be discharged before the ingredient for the next batch is fed into the drum. No partly set or remixed or excessively wet concrete shall be used and it shall be immediately removed from site.

Each time the work stops, the mixer shall be thoroughly cleaned and when the next nixing commences, the first mix shall have 10% additional cement at no extra cost to the Employer to allow for loss in the drum.

When hand mixing is permitted by the Engineer for concrete to be used in unimportant structures, it shall be carried out on a water tight platform and care shall be taken to ensure that mixing is continued until the mass is uniform in color and consistency. In case of hand mixing, extra cement @ 10% shall be added to each batch with no extra cost to the owner.

- (ii) Conveying Concrete: Concrete shall be handled and conveyed from the place of mixing to the place of final deposit as rapidly as practicable by approved means before the initial setting of the cement starts. Concrete should be conveyed in such a way as will prevent segregation or loss of any of the ingredients. If segregation does occur during transport, the concrete shall be remixed. During very hot or cold weather, if directed by the Engineer concrete shall be transported in deep containers which will reduce the rate of loss of water by evaporation and loss of heat. Conveying equipment for concrete shall be well maintained and thoroughly cleaned before commencement of concrete mixing. Such equipment shall be kept free from set concrete.
- (iii) Placing Concrete: Formwork and reinforcement shall be approved in writing by the Engineer prior to placing of concrete. Concrete shall be placed in its final position without segregation. The forms shall be well wetted and all shavings, dirt and water that may have collected at the bottom shall be removed before concrete is placed. The interval between adding the water to the dry materials in the mixer and the completion of the final placing inclusive of compaction of the concrete shall be not more than initial setting time of the cement, normally 30 minutes for ordinary Portland cement. The concrete shall be well placed in the formwork by means approved by the Engineer and shall not be dropped from a height or handled in a manner which may cause segregation. Any drop above 180 cm shall have to be approved by the Engineer. Once the concrete is placed in its final position, it shall be



spread and thoroughly compacted by approved mechanical vibration to a maximum subsidence without segregation and thoroughly worked around reinforcement or other embedded fixtures into the correct form and shape. Vibration shall not be used for pushing and shoveling concrete. Vibration must be operated by experienced men and over vibration shall not be permitted. Hand tamping in some cases may be allowed subject to the approval of the Engineer.

No concrete shall be placed in open, while it rains. If there has been any sign of separation of cement and sand by washing, the concrete shall be entirely removed immediately. Suitable precautions shall be taken in advance to guard against rains before leaving the fresh concrete at site. No accumulation of water shall be permitted on freshly laid concrete. Slabs, beams and similar members shall be poured in one operation normally. Bleeding of under layer, if any shall be effectively removed. Molding, threading, drip course, etc. shall be poured as shown on the drawing or as directed by the Engineer. Holes shall be provided and bolts sleeves, anchors fastenings or other fixtures shall be embedded in concrete as shown on the approved drawings or as directed by the Engineer. Any deviation there from the drawing shall be set right by the Contractor at his own expense as instructed by the Engineer.

- (iv) Construction Joints: When the work is to be interrupted, the concrete shall be rebated at the joint to such shape and size as may be required by the Engineer or as shown on the drawing. All vertical construction joints shall be made with step boards, which are rigidly fixed and slotted to allow for the passage of the reinforcing steel. If desired by the Engineer keys and / or dowel bars shall be provided at the construction joints. In the case of water retaining structure water stops of approved material shall be provided if so specified in the drawings or desired by the Engineer. Construction joints shall be provided in positions as described, the joints shall be in accordance with the followings:

In a column, the joint shall be formed about 75mm below the lowest soffit of the beams framing into it.

Concrete in a beam shall be placed throughout without a joint, but if the provision of a joint is unavoidable, the joint shall be vertical and at the middle of the span. A joint in a suspended floor slab shall be vertical at the middle of the span at right angle to the principal reinforcement. The locations of construction joint shall be planned by the Contractor well in advance of pouring and will have to be approved by the Engineer.

Before fresh concrete is placed, the cement skin of the partially hardened concrete shall be thoroughly removed and surface made rough by hacking, sand blasting, water jetting, air jetting or any other method as directed by the Engineer. The rough surface shall be thoroughly wetted for about two hours and shall be dried and coated with 1:1 freshly mixed cement sand slurry before placing the new concrete. The new concrete shall be worked against the prepared surface before the slurry sets. Special care must always be taken to see that the first layer of concrete placed after a construction joint is cold. Joints during pour shall be treated with 1:1 freshly made cement sand slurry only after removing all loose materials.

- (v) Protection and Curing of Concrete: Newly placed concrete shall be protected by approved means from rain, sun and wind. As soon as the concrete has hardened sufficiently for the surface to be marked, it shall be covered either with sand, Hessian, canvas or similar materials and kept continuously wet for at least fourteen day after final setting. This period may be extended at the discretion of the Engineer.
- (vi) Control Tests on Concrete: Six test cylinders/cubes for each type of work shall be taken by the Contractor for each 8 hours or less of concreting. If the value of concrete poured is less than 20 M3 on any day per mixing plant, the Engineer may exempt or reduce the number of test cylinders. The samples of concrete shall be tested in an approved laboratory in presence of the Engineer and the test results shall be submitted in triplicate to the Engineer. The Contractor shall carry out the sampling and testing according to the provisions of this Specification at his own cost. No payment shall be made for the concrete used in specimens.

To control the consistency of concrete from every mixing plant, slump tests shall be carried out by the Contractor free of charge every two hours or as directed by the Engineer. The amount of mixing water shall not be changed without prior approval of the Engineer. Slumps corresponding to the test cylinders shall be recorded for reference. The Engineer if he so desires may order special tests to be carried out on cement, sand or coarse aggregates, water reinforcing steel, or traverse tests in accordance with I.S.I recommendations. If the material tested in found to be suitable for the intended use, the cost of these special tests shall be borne by the Owner. If the material is found to be suitable for the intended use, the cost of these special tests shall be borne by the Contractor. Further, during the progress of the work if the Engineer has doubt about the quality of any material in use he can instruct suspension of its use till the material is proved acceptable by test. Any consequent loss arising out of the suspension shall be borne by the Contractor.

## **B. Exposed Surface**

Imperfect surface, where strength is not required shall be patched and rubbed smooth with carborundum stone. Immediately the formwork is stripped off, fins and projections shall be removed and the concrete surface affected thereby shall be rubbed smooth to the satisfaction of the Engineer.

## **C. Anchor Bolts, Anchors, Openings, Sleeves, Insets and Other Built-in Fixtures**

The Contractor shall leave all openings, grooves, chases etc. in concrete work as shown on the drawings or as specified by the Engineer. He shall build into concrete work all the materials noted below and shall embed and secure the same as and when required. The materials to be supplied by the Contractor shall be of best quality available of approved manufacture and shall be unto the satisfaction of the Engineer.

Materials to be embedded:

- (i) Inserts, hangers, anchors, opening frames, manholes, covers, floor clips, sleeves and conduits.
- (ii) Anchor bolts and plates for machinery, equipment and for structural steel work.
- (iii) Dowels bars, etc. for concrete work falling under scope of future works.

- (iv) Lugs or plugs for door and window frames occurring in concrete work.
- (v) Flashing and jointing in concrete work.
- (vi) Any other built-in-fixtures as may be required.

Correct location, exact alignment, etc. of all these shall be entirely the responsibility of the Contractor.

#### **D. Joints etc.**

- (i) Expansion and Isolation Joints: Expansion joints in concrete structures shall be provided at specified places as indicated on the drawings. The materials and types of joints shall be as specified below. In case of liquid retaining structures, additional precaution shall be taken to prevent leakage of liquids as may be specified on the drawings or as directed by the Engineer. The Engineer may demand test certificates for the materials and/or get them tested.
- (ii) Bitumen Boards: Bitumen impregnated fiber of approved manufacture as per I.S.: 1838-latest revision shall be used as fillers for expansion joints. It must be durable and water proof. At the exposed end, the joint shall be sealed with approved sealing compound to a depth of 25mm after application of an approved primer. The sealing compound and the primer shall be applied as specified by the manufacturer.
- (iii) Bitumen Compound: The gap for expansion joints shall be thoroughly cleaned and the bitumen compound laid as per manufacture specifications. The compound to be used shall be of approved manufacture and shall conform to the requirements of I.S.: 1834-latest revision.
- (vi) Separation Joint: Strong and tough alkathene sheet or equivalent of about 1mm. in thickness as approved by the Engineer shall be used. It shall be stuck by an approved sticker to the cleaned surface of the already set concrete to cover it fully. Fresh concrete shall be laid against the sheet, care being taken not to damage the sheet in any way.
- (v) Rubber Pad: Hard foundation quality rubber pads of required thickness and shape are to be put below machine or other foundations where required as shown on the drawings or as directed by the Engineer. The rubber shall be of best quality of approved manufactures, durable, capable of observing vibration and must be chemically inert in contact with moist or dry earth under normal conditions.

#### **4.7 WATERPROOFING JOINTS**

The materials shall conform to the respective I.S. Code-latest revision, where applicable. The Engineer's approval to the materials shall be obtained by the Contractor before procurements. If desired by the Engineer, test certificates for the materials shall be submitted by the Contractor. The materials shall be of best quality available indigenously, fresh and thoroughly clean.

##### **A. Water Proofing Admixtures**

- (i) In Concrete: The admixture shall be of right variety and procured freshly. The admixture shall be approved by the Engineer. The method of application and other details shall exactly conform to the manufacturer's specification. The concrete shall



have the services of the manufacturer's supervision at no extra expense to the Employer to supervise the work if desired by the Engineer.

- (ii) In Plaster: The concrete surface to be plastered, to be hacked to the Engineer's satisfaction. The plaster shall be made of cement and sand as approved by the Engineer. If desired by the Engineer, the Contractor at no extra cost to the Owner.

#### **B. Other Admixtures in Concrete**

The Engineer may in his direction instruct the Contractor to use any admixture in the concrete.

### **5. REINFORCING FOR RCC WORKS**

#### **5.1 SCOPE**

This specification covers providing and fixing TMT, Tor steel and Mild steel reinforcement of various sizes in all type of R.C.C. works.

#### **5.2 MATERIAL**

The reinforcement shall be as specified in the STANDARD CONSTRUCTION MATERIAL and test certificate shall be submitted to the Engineer for approval. Each reinforcing bars shall be tested and any bar showing cracks of flaws or scales shall not be used.

#### **5.3 SHOP DRAWINGS: BAR BENDING SCHEDULES**

The Contractor shall furnish to the Engineer bar bending schedules for all R.C.C works in triplicate within one month of the receipt of the Letter of Intent or of the receipt of each design drawings whichever later. Upon receipt of the Engineer's final corrections as corrected six prints of the approved drawings / schedules with one reproducible (tracing paper) drawing. Approval of schedules / drawing by the Engineer shall not relieved the Contractor from responsibility for errors nor relieve him of any part of his obligation to meet the entire requirement of the Contractor or of the responsibility for the correctness of his drawings.

#### **5.4 CLEANING**

All steel for reinforcement shall be free from loose rust, oil grease, paint or other harmful matters.

#### **5.5 BENDING**

Unless otherwise specified, reinforcing steel shall be bent in accordance with procedure specified in I.S.: 2502-(latest revision) or as approved by the Engineer. Bends and shapes shall comply strictly with the dimensions in the approved Bar Bending Schedule. Contractor shall be entirely responsible for its correctness. Bars correctly bent shall only be used. No reinforcement shall be bent when in position in the work without approval of the Engineer, whether or not is partially embedded in concrete. Bars shall not be straightened in a manner that will injure the materials. Re-bending can be done only if approved by the Engineer. Reinforcement bars shall be bent by machine or other approved means producing a gradual and even motion. All the bars shall be cold bent unless otherwise approved.

## 5.6 PLACING IN POSITION

All reinforcement shall be accurately placed in position as shown on the drawings. Bars intended to be in contact, at crossing points shall be securely bound together at all such points by No. 20 BG annealed soft iron wire or by tack welding as may be directed by the Engineer.

Binders and the like shall be tightly embraced the bars with which they are intended to be in contact and shall be securely held. The vertical distance between successive layers of bars shall be placed by provision of mild steel spacer bars. They should be so spaced that the main bars do not sag perceptibly between adjacent spaces.

Welding by gas or electricity may be permitted by the Engineer under suitable conditions and with suitable safe guards in accordance with relevant I.S. But welding between ends of a bar in line whereby stress is transferred across the section may be allowed for mild steel bars only.

The placing of reinforcement bars shall be completed well in advance of concrete pouring. The reinforcement shall be checked by the Engineer for accuracy of placement and cleanliness and necessary corrections prior to pouring the cement. Concrete blocks shall be used for ensuring the cover and positioning of reinforcement, they shall be made of mortar of mix one part cement to two parts sand by volume and cured for at least seven days. The sizes and locations of concrete blocks shall be as approved by the Engineer. Laps and anchorage lengths of reinforcing bars shall be in accordance with I.S.: 456 - latest revision - unless otherwise specified. If the bars in a lap are of the different diameter the smaller will guide the lap length. The laps shall be staggered as far as practicable and as directed by the Engineer.

## 5.7 EXPOSED REINFORCEMENT

Reinforcement projecting from work being concreted or already concreted shall not bend out of its correct position for any reason unless they are protected from deformation or other damage. Reinforcement left projecting for bending with future extension shall be thoroughly coated with cement grout wash, encased in concrete or otherwise protected from corrosion as approved by the Engineer.

## 5.8 COVER TO THE REINFORCEMENT

Unless otherwise specifically stated anywhere in the contract, the following clear cover to the main reinforcement shall be strictly adhere to:

- Column - 25 mm or size of the main bar whichever is greater
- Beam - 25 mm or size of the main bar whichever is greater
- Slab - 15 mm or size of the main bar whichever is greater

## 6. SHUTTERING WORK FOR RCC WORK

### 6.1 SCOPE

This specification covers centering and shuttering works for RCC works of any size, shape etc. at only level including strutting, propping and removal thereof.

### 6.2 MATERIAL

Form work shall be composed of steel and/or best quality shuttering wood or shuttering plywood. Timber shall be free from knots and shall be of medium grain as far as possible. Hard



woods shall be used as caps and wedges under or over posts. Plywood or equivalent shall be used where specified to obtain smooth surface for exposed concrete work. Struts shall generally be mild steel tubes and strong Sal ballah 150 mm in diameter or above. Bamboo, small diameter ballah, etc. shall never be used unless specially approved by the Engineer in specified cases.

### 6.3 SHOP DRAWING

The Contractor shall prepare, design and drawings for formwork and centering before commencement of actual work and get them approved by the Engineer. The form work and centering shall conform to the shape, lines and dimensions as shown on the drawings.

### 6.4 CONSTRUCTION

The centering shall be true and rigid and thoroughly braced both horizontally and diagonally. The forms shall be sufficiently strong to carry without undue deformation, the dead weight of the concrete as a liquid and working load. Where the concrete is vibrated, the formwork shall be strong enough to withstand the effects of vibration without appreciable deflection, bulging distortion or shall be sufficiently tight to prevent any leakage of mortar. The formwork shall be such as to ensure the concrete a smooth uniform surface free from honeycombs, air bubbles, fines and other blemishes.

Any blemishes or defect found on the surface of the concrete must be brought to the notice of the Engineer and immediately rectified free of charge as directed or approved by the Engineer. Where there are chances of fixtures being embedded, only mild steel or concrete of adequate strength shall be used.

## 7. BRICK MASONRY WORK

### 7.1 SCOPE

This specification covers the construction of brick work in general and the erection of half brick, full brick and above thick walls in superstructure in particular.

### 7.2 MATERIALS

All required materials shall be as specified in the "STANDARD CONSTRUCTION MATERIALS".

### 7.3 MORTAR

Mortar shall be as specified in the drawing, Bills of quantities or schedule of items for the particular work which may differ from case to case and as per the size, shape and thickness of the wall.

- (a) Mix: Cement and sand (or any binding and supporting materials) shall be mixed dry thoroughly on clean approved platform or in a mechanical mixer and water shall then be added to obtain a mortar of the consistency of a stiff paste. Care being taken to add just sufficient water for the purpose.
- (b) Use of Mortar: Mortar shall be used as soon as possible, after mixing and within 1/2 hours after cement is mixed wet. Mortar unused for more than 1/2 hours shall be rejected and removed (mixes of lime putty and sand can be kept for a period of 72 hours, provided it is kept damp and not allowed to dry).
- (c) Transportation of Mortar: The well mixed mortar shall be transported from the mixing platform to the site of work in such a manner as to prevent formation of laitance or segregation.

#### 7.4 BOND

"English Bond" shall be used in the construction of full brick and thicker walls unless otherwise specified in the drawing. For half brick thick wall, "stretcher bond" shall be used throughout the length of the wall.

Quoin bricks shall be laid header and stretcher in alternative courses, bond being obtained by placing a closer next to the quoin header. The arrangement of quoin in a course shall generally be symmetrical. Holes for required size shall be left in the brick work during laying only, for fixing pipes, service lines, passage of water etc. After they are fixed, the extra hollow left in the holes shall be filled with 1:3 cement mortar or 1:3:6 cement concrete and the face neatly made up with bricks in cement mortar. When iron fixtures etc. are to be laid in the brick work, shall be entirely covered with not less than 10mm of 1:3 cement mortar.

#### 7.5 THICKNESS OF JOINTS

The thickness of the joints in the brickwork shall be 8mm unless otherwise specified and uniform throughout the work.

#### 7.6 SOAKING OF BRICKS

Bricks shall be soaked in water before use for a period that is sufficient for the water just to penetrate the whole depth of the bricks. Any dirt, sand and dust shall be removed from the surface of the bricks. Bricks shall not be too wet at the time of use, as they are likely to slip in the mortar bed and there will be difficulty in ensuring plumb of the wall. When bricks are soaked, they shall be removed from the tank sufficiently early so that at the time of laying they are skin dry. Such soaked bricks shall be stacked on a clean place, where they are not again spoilt by dirt, earth etc.

#### 7.7 LAYING OF BRICKS FOR MASONRY

Bricks shall be laid on a full bed of mortar evenly applied on the wetted surface of the old brick work. If any dirt or earth is on the wall they shall be cleaned by wire brush and washed down with water jet. When laying, the bricks shall be slightly pressed so that the mortar can get into all the pores of the brick surface to ensure proper adhesion. Cross joints and wall joints shall be properly flushed and packed with mortar so that no hollow spaces are left. All brick work shall be in plumb, square and true to dimensions as shown in drawings. All brickwork shall be built tightly against columns floor slabs or other structural parts around window and doorframes with proper distance to permit concealed joints.

#### 7.8 RAKING OUT JOINTS

Joints of brick work shall be raked out to a depth of 6mm at the time of laying. The face of the brickwork shall be kept clear of all mortar, the very day the brick work is laid.

#### 7.9 REINFORCING AND ANCHORAGE

For external walls, the anchors in the form of flats or rods from beams and columns and any other anchoring the reinforcement as shown on drawing shall be adequately embedded in the masonry.

#### 7.10 WORKMANSHIP

- (a) All loose materials, dirt, and set lump of mortars that may be laying over the surface over which the brick work is to be freshly started, shall be removed with a wire brush.
- (b) All the bricks shall be thoroughly soaked in clean water before use.
- (c) The surface over which the brick work is to be started shall be slightly wetted.

- (d) The first course itself shall be made horizontal by providing enough mortar in the bed joint to fill up any undulations in the bed course.
- (e) Required quantity of water is mixed in the mixing platform itself and not over the courses.
- (f) The joint should be of uniform thickness as specified.
- (g) There shall be no thorough joints and the lap shall not be less than half the width of the brick, and all the vertical joints are properly filled with mortar.
- (h) The verticality and horizontality of the courses shall be checked very often with plumb bob and spirit level respectively.
- (i) The courses of brick work shall be aligned and care shall be taken to keep in plumb.
- (j) The brick work shall be built in uniform layers, corners and other advanced works shall be racked back. No part of the wall during its construction shall rise more than 1 meter above the general construction level, to avoid unequal settlement, and also improper jointing. Where the masonry of one part has to be delayed the work shall be racked back suitably at an angle not exceeding 45 degrees according to bond and not toothed.

### 7.11 CURING AND PROTECTION

- (a) The brick work shall be kept wet for 7 days commencing from 24 hours after the course is laid.
- (b) At the end of the day's work the masonry construction shall be protected for harmful effects of rain, sun and frost by suitable coverings such as **tarpaulin** or any other suitable coverings.
- (c) Care shall be taken during construction that edges of jambs, sills, heads etc. are not damaged.

## 8. WOODEN DOORS AND WINDOWS

### 8.1 SCOPE

This specification covers the preparation, supply and fixing of door and window frames and shutters glazed, flywiremesh, fixed or openable with or without ventilator of best quality specified timber as mentioned in the item. The door or windows sizes shown in the drawings shall be the clear openings of the frame. The frames and shutters shall be finished as specified in the item.

### 8.2 MATERIALS

All required materials shall be as specified in the "STANDARD CONSTRUCTION MATERIALS".

### 8.3 FIXTURES AND FASTENINGS

All fixtures and fastenings shall be of brass or oxidized brass or stedler aluminum (as specified in the item) and shall be new sound and strong. They shall be sectional and of the best quality and workmanship. The size, shape, design and finish shall be as shown on drawings or as directed by the Engineer and deposited in his office for reference.

All fixtures shall be fixed to the joining in a secure and efficient manner. Any of the fixtures damaged during fixing shall be removed and new ones fixed in their place and the surface of joinery made good where affected at the Contractor's expense. When the type of fixing is not mentioned on the drawing or the item it shall be hung or swung as directed by the Engineer.



## 8.4 CHAUKOT OR FRAME

The quality of the timber shall be as specified in the drawing or first class salwood if not specified. The timber shall be of best quality from the heart of matured trees, with permissible gradient of in grain. The timber shall be either seasoned in a seasoning plant or naturally sun dried in a shed for a period of two (2) years.

The work shall be as per drawings. The timber shall be properly planed wrought and dressed in a workman like manner. Joints shall be true to fit properly and of the kind directed by the Engineer.

## 8.5 paneled shutter

Planned shutter shall be made in number of ways and can be of different varieties as enumerated in the specification for "paneling". The shutter may be paneled single, double, triple or so on. The design of panels and the number of panels to be used shall be as per the drawings and directed by the Engineer. The styles shall be continuous from the top to bottom.

## 9. GENERAL TIMBER WORK

### 9.1 SCOPE

This specification covers the wood work in general including carpentry and joinery work in roofs, floors etc.

### 9.2 MATERIALS

- (a) Timber: i) quality, ii) color, iii) kind, iv) moisture content, v) stacking, vi) approval, vii) sawing, viii) rejection, as per "STANDARD CONSTRUCTION MATERIALS".
- (b) Species of timber: The species of timber to be used shall be as mentioned in the item where such species are missed shall be best salwood or teak as approved by the Engineer. The Engineer may inspect all logs and scantlings previous to use and reject any which he considers defective in the requirement of specification.
- (c) Glue: Glue to be used shall comply with specification No, I.S. 852 - 1957 or 851 - 1957 in all respects.
- (d) Nails, screws etc.: Nails, screws, ties, straps, bolts, plates etc., shall be of the material, make and pattern specified in the item and detail drawing. These shall comply with ISI specification published and revised from time to time but all as approved by the Engineer.

### 9.3 PRECAUTIONS AGAINST DECAYING

- (a) The Contractor must in all cases get orders from the Engineer regarding time at which he shall do painting or oiling to wood work and obtain permission before he paints, oils or otherwise treats wood work.
- (b) All parts of wood work resting on or set in masonry shall be well painted with 2 coats of hot boiled tar approved by the Engineer. The tar shall be so applied as not to appear on exposed timber. No extra payment shall be made for such tarring. Timber buried in the ground shall be well coated with tar.

When the end of a beam or joint is embedded in masonry an air space of 6mm shall be left at the end and sides wherever practicable and necessary in the opinion of the Engineer.

### 9.4 WORKMANSHIP

All wood work shall be neatly and truly finished to the exact required dimensions. Unless otherwise required in the special provisions, wood work which will remain exposed to view



when the work is completed shall be accurately planned to the required dimensions perfectly smooth and to lines, planes or curves as required. Unless otherwise specified, all joints shall be simple tenon and mortice joint with the end of the tenon exposed to view. All mortices tenon and other types joints shall fit truly and fully without any wedging or filling, in a workman like manner. Only where specially required, the end of the tenon shall not show. All joints shall be of types shown in the drawings or specified for the item and as directed by the Engineer. Where no specific instruction is given to the Contractor, he shall observe the following principle in forming joints:

- (a) To cut the joint and arrange fastenings so as to weaken as little as possible the pieces of timber they transmit.
- (b) To place each abutting surface in a joint as nearly as possible perpendicular to the pressure it has to transmit.
- (c) To firm and fit accurately every pair of surface that comes in contact.

All framed joinery for external work shall be put together with white lead and joints plained with hard wood or bamboo pins. For internal works where joints are not likely to be affected by moisture, the joints may be glued and similarly pinned. Where ordered, the butt joints shall be cross tongued and the tongues cut at right angle or diagonally to the grain of the wood. All mouldings shall be cleaned and accurately finished and all miters etc. shall be properly met. Where turning is required it shall be done to the exact shape shown in the drawings.

## 9.5 FRAMING

Framed wood work includes all sawing, cutting, planing, joining, framing, supply and use of all straps, bolts, holdfasts, nails, trenails, spikes, screws etc., necessary for framing and fixing.

Framing and trussing are to be done in the best possible manner and all necessary ties, straps, bolts, screws etc., fitted as shown on the drawings or as directed by the Engineer.

Holes of correct size shall be drilled before inserting screws. Driving in or starting the screws with hammer is prohibited. All screws shall be dipped in oil before being inserted in the wood. The kind of nails and screws shall be subject to the approval of the Engineer. The heads of nails or screws shall be sunk or dealt with as the Engineer may desire.

## 9.6 IRON WORK

All iron work connected with the wood work and going to be embedded in masonry shall receive 2 coats of hot coal tar before erection. If it is to be painted, it shall be given the first two coats on the ground before being fixed in position and the third coat afterwards.

## 9.7 INSPECTION

All wood work shall be inspected and approved by Engineer before being put into the work. The Engineer shall not be barred from rejecting any wrought timber on account of defective quality be reason of his having previously passed the same before it had been worked upon. In on case the wood work shall be painted or otherwise treated before it is inspected and approved by Engineer.

All wood work in a building shall after it has been passed by the Engineer have the primary coat of paint put on or otherwise treated before being fitted in position. The subsequent coats of paint or other finish shall be applied after the wood work is fixed in position.

## 9.8 DEFECTIVE WORKS

If within three months after the work is completed any undue shrinkage or bad workmanship is discovered the Contractor shall forth with replace or refix the same to the satisfaction of the Engineer without extra charge.



## 9.9. ITEM TO INCLUDE

Supply of specified species of timber sawn to requisite sizes without any defect, wrought, framed and fixed in position with the required standard of workmanship including supply and fixing of fixtures, straps, bolts, holdfasts, spikes, nails, screws etc., applying glue or other joining materials, coal tarring embedded parts and painting joints.

All materials, laborers, scaffolding, use of equipment etc. for framing and fixing and completing the item as specified.

Applying two coats of double boiled linseed oil and two coats of black paint in the surface attached to walls wood work unless other types of finishing is specified in the special provisions.

## 10. TUBULAR TRUSS/METAL TRUSS

### 10.1 SCOPE

This specification covers providing, fabricating, assembling, erecting in position tubular truss / mild steel metal truss.

### 10.2 MATERIALS

Structural steel section shall be as per I.S. specification and steel tubes used in the truss shall be hot finished tubes confirming to the requirements of specified in I.S. 1161 - 1968 and I.S. 807 - 1968. Tubes shall be of grade heavy or medium unless instructed.

### 10.3 FABRICATION

The fabrication of truss using steel tubes shall be done in accordance with I.S. 800 - 1962. Welding shall be done with reference to the I.S. 820 and I.S. 816 - 1956.

### 10.4 BOLTING

Washers shall be specially shaped where necessary, or other means used, to give the nuts and the heads of bolts a satisfactory bearing.

### 10.5 SEALING OF TUBES

Where the end of a tube is not automatically sealed by virtue of its connection by welding to another member, the end shall be properly and completely sealed. Before sealing, the inside of the tube should be dried and free from loose scale.

### 10.6 FLATTENED ENDS

In tubular construction, the ends of tubes may be flattened or otherwise formed to provide for welded, riveted or bolted connections provided that the methods adopted for such flattening do not injure the material. The change of section shall be gradual.

### 10.7 PAINTING

All tubes and part thereof, shall, unless specified otherwise, be painted with two coats of red oxide paint before erection at site.

### 10.8 ASSEMBLING

After the members are cut into the required length, and welded to form a truss system by providing fish plate, anchor plates etc. fully butt welded, the fabricated members shall be assembled in ground to form a full scale truss for inspection by architect. The truss then is lifted to the required level and position where pre-fixed holding down bolts are prepared to receive

such truss in position and alignment. All the bolts and nuts including holding down bolts are well tightened using required washers.

## 10.9 SHOP DRAWING

Before manufacturing/fabrication truss and its member the manufacturer/Contractor shall produce shop drawing showing each components of member frame and joining detail. This drawing shall be backed by an appropriate calculation for taking into consideration the wind forces, earthquake force and appropriated static loadings.

## 11. SHEET ROOF COVERINGS

### 11.1 SCOPE

This specification covers fixing of various types of sheet roofs in general and corrugated galvanized iron sheets (CGI) (Plain/ Corrugated) over the purlins on the roofs in particular.

### 11.2 MATERIALS

The corrugated galvanized iron sheets shall be of the guage as specified. The sheets shall be of the best quality and of approved manufacture. The sheets shall be free from all sorts of defects. The sheets are produced from cold rolled steel sheets which confirm I.S. 1986 in annealed and unannealed qualities. The zinc use shall confirm to I.S. 209 - 1979.

### 11.3 LAYING

The corrugated GI sheets shall be laid on wooden or steel purlins as specified in the drawings. the maximum spacing of purlins shall be 1400mm in the case of 7mm thick sheet and 1250mm in the case of 6mm thick sheets. The spacing of purlins in the case of GCI sheets for 24 guage shall not be more than 900mm. The thickness of the sheets and their spacing shall be adopted as per drawing. The upper surfaces of purlins shall be in one plain so that the sheets shall rest on the purlins without forcing down. The sheets shall be laid with smooth side upward, with a minimum side lap of one corrugation and a minimum end lap of 15 cm to 20cm (Depending upon the roof pitch) or as specified in the drawing.

### 11.4 FIXING

The sheets shall be fixed to the purlins by means of 8mm diameter galvanized J or L hooks bolts and nuts providing a bitumen washer and a galvanized iron washer for each bolt and nut before the nut is screwed down from above. Each nut shall be screwed tightly first and when a number of sheets are laid, the nuts shall be tightened. The holes for hook bolts in case of corrugated galvanized iron sheets, holes for nails, screws, rivets etc. shall be punched on the ground, (before taking in roof) in the ridges with vary sharp punches from below upwards in such a manner that the hole will come on the ridge of the sheets.

Roof ladders of planks shall be use when laying and fixing, if any sheet gets damaged, this shall be rejected and replaced by another sheet. The finished surface shall be uniform and the lines of corrugation shall be straight and parallel.

### 11.5 SLOPE

Roof slope shall not be flatter than 1 in 5; the actual slope shall be according to the drawings. In case of roof slope flatter than 1 in 5, the end overlap shall be 25cm or more as directed or as shown in the drawing.

### 11.6 RIDGE AND VALLEY

Ridges shall be of the type specified in the drawing. Ridges shall be of the same manufacturer as for the corrugated sheets, and shall be free form cracks and damages. The ridges are usually in



pairs having the required overlap (for AC Sheet). The ridges shall be fixed with the same galvanized iron J or L bolts and nuts with bitumen washer and galvanized iron washer which fix the sheets with purlins. Hips if required shall be "Unserrated adjustable hips" of the same manufacturer. If specified in the drawing clay ridges set in cement/ lime mortar shall be provided instead of AC ridge.

### 11.7 WIND TIES

Wind ties shall be of 40mm x 6mm or as specified in the drawing and shall be fixed at the eave ends of the sheets. The fixing shall be done with the same hook bolts which secure the sheets to the purlins.

## 12. CEILING COVERING

### 12.1 SCOPE

This specification covers the construction of false ceilings of timber planks, plain asbestos sheets, insulation boards, decorative veneering etc. under flat roofs, slopped roofs, roof projections, and lead to different types of roofs or timber or steel or other metal trussed frames.

### 12.2 MATERIALS

- (a) The quality of timber for under framing and the covering material shall be as per standard construction materials. All timber under framing shall be preservative treated.
- (b) Panel Pins: Panel pins used for tacking ceiling coverings shall conform to I.S. 723 - 1961 specification for Mild Steel Wire Nails
- (c) Mild Steel Cleats: Mild steel cleats used for fixing together the cross and main members of the ceiling frame work shall be of such size as to accommodate at least two screws and bolts on each side for connection. Specially designed clip system may also be used to connect the cross and main members of the ceiling frame work or as shown on the detail drawings.
- (d) Bolts, Nuts and Washers: Bolts, nuts and washers used for fixing frame work shall be free from rust and shall be greased before use.
- (e) Suspenders: Suspenders shall be fabricated from mild steel flats or other metal sections as specified on the drawing. They shall be in two pieces so that the length of the suspender may be adjusted slightly during fixing the ceiling frame unless otherwise shown on the drawings. The shape at the top end shall facilitate a firm suspension from the structural slab with proper anchorage. Where mild steel flats are used as suspenders, they shall be of the size 36 to 40cm x 6mm or 45 to 60mm x 6mm or 60 to 65cm x 6mm unless otherwise specified on the drawing.

### 12.3 FINISHING

The visible surface of the ceilings, shall be filled with wood fillers painted with one coat of primer of approved quality and manufacture followed by two coats of varnish or stain as directed by the Engineer. The beading shall be varnished or painted as specified on the drawing or as directed by the Engineer.

### 13. CEMENT FLOOR FINISH

#### 13.1 SCOPE

This specification covers cement concrete floor neatly finished in general and ordinary or color certe floor finish with or without cement concrete wearing coat and dado and skirting without concrete wearing coat in particular.

#### 13.2 MATERIALS

Cement, sand, aggregates, water etc. as specified in plain cement concrete work.

Color pigment: Color pigment shall be of superior quality, confirming to BS or IS standards as approved by the Engineer.

#### 13.3 MIXING

Cement concrete and cement sand shall be mixed as specified in plain cement concrete work and plastering work. Color pigment with cement shall be mixed in an approved manner and the proportion shall be as directed by the Engineer but it should be between 1:3 to 1:12 (pigment and cement).

#### 13.4 PREPARING BASE

The base where such flooring is to be laid shall be cleaned, brushed and watered properly. In structural slab or concrete surfaces the screw shall be removed by chisel and wire brush and cleaned properly. Such surfaces shall be wire brushed and watered for 3 to 4 hours.

#### 13.5 LAYING OF CONCRETE

Form Work: Form work for concreting work shall be made in square or rectangular of suitable size but not exceeding 1.2m x 1.2m in any case. The ready finished form work shall then be coated with one coat of oiling before placing concrete. One layer of cement slurry shall be provided before placing concrete panels, alternatively. The alternate panels can be laid only after the final setting of the previous concrete work. Such concrete work shall be thoroughly tamped, struck off level and surface floated with a wooden float. The surface shall then be tested with a straight edge and mason's spirit level to detect any inequalities and undulations in surface which, if any, shall be made good immediately. The thickness of the concrete shall be 40mm unless otherwise specified. In case of integrated concrete work, the mix shall be as specified in bill of quantity, using light weight aggregate. The method of laying shall be as described above.

Joints: In the joints between concrete panels, coal tar shall be filled unto the half depth and rest shall be filled with cement sand mortar of weak proportion.

#### 13.6 FINISHING COAT

Neat cement finish: One layer of cement sand plaster of specified proportion shall be used, which shall be cut in pattern, the joints shall be just above the joints of the concrete. Such plaster shall be followed by a thin coat of cement punning of specified mix which shall be in the approved pattern, trowel led and finished neatly. However, the thickness of such film shall not be less than 3mm. Curing of the finished work shall be done by covering the whole surface with damp jute bags and kept wet for one week or as directed by the Engineer. Wherever color crete is specified, such work shall be applied only in the neat finish coat and finished similarly.

#### 13.7 FINISHING

After laying final coat and final curing is over, the surface shall be grinded with various grades of carborandum stones to the smooth and plain surface. Steel and iron fleets shall not be used in colored floors. The polishing and finishing shall be as mentioned hereunder.



When the finished surface is 3 to 4 days old, it shall be surfaced by hand or with a surface grinding machine, to remove laitance or loose materials and to produce smooth finish. The first grinding shall be done with a coarse corborandum stone, using water freely. All pores and holes are filled with cement mortar of the same as of floor surface. Second grinding shall be carried out after 5 days of first grinding with fixed grinding carborandum stone and patched if any shall similarly be filled and the 3rd grinding carried out. The floor is washed thoroughly after each grinding and in the final grinding washing should be done with hot water and pure soft soap. Final grinding is generally done after 10 days.

In the case of machine grinding, the first cut should not be made till colored surface layer is 14 days old. After the final grinding oxalic acid is dusted over the surface (2/3 lbs per 100 sft) which must be sprinkled with water and rubbed hand with numdah blocks.

The following day the floor is wiped with a moist rag and dried with a soft cloth. A hot mixture of turpentine and beeswax (4:1 or 3:1) is then applied to the surface and thoroughly rubbed in with hand and later again with clean cotton waste for four hours. The rubbing must be continued until the floor/ skirting ceases to be sticky. Best result is obtained with minimum of beeswax and a maximum of rubbing.

### 13.8 SLOPES

Unless shown in the drawing, all slopes of the floor shall be towards the outlet at the rate of 0.75 to 1.0%.

### 13.9 SKIRTING

Skirting shall be finished as finishing coat of the floor unless otherwise specified. The skirting work shall include racking and cleaning of base, watering, applying plaster work and neat finish. The level, line and corners shall be done carefully to get even, plumb and uniform surface through uniformity. The skirting work shall be done simultaneously with floor work or as directed by the Engineer. The top edge of the skirting shall be chamfered to prevent dust collection.

## 14. PLASTER WORK

### 14.1 SCOPE

This specification covers cement plaster finishes to walls, columns, ceilings and similar surfaces on background normally wet with, such as brick, or concrete (plain or reinforced).

### 14.2 MATERIALS

All required materials shall be as specified in "STANDARD CONSTRUCTION MATERIALS".

### 14.3 MORTARS

- (a) Cement Mortar: The mortar for cement plaster of specified proportion shall be mixed as specified in the specification for Brick Work.
- (b) Lime Mortar: The mortar shall consist of such proportions of slaked lime and sand as may be specified in the item measured by volume. If moist sand is used, necessary, allowance shall be made for bulking.

The lime mortar shall be prepared by wet process, in the power driven mill. The slaked lime is to be first placed in the mill in an even layer and ground for 180 revolutions with a sufficiency of water. Water shall be added as required during grinding, care being taken not to add more water than will bring the mixed material to a consistency of stiff paste. Thoroughly wetted sand in specified proportion and finely chopped jute fiber at the rate of



one pound of jute fiber for every 0.1 cum of lime sand mixture are then to be added evenly and the mixture ground for another 180 revolutions for each stone shall be 90 for each part of the grinding. The mortar shall be stirred continuously during the grinding process.

The hydraulic lime shall be ground second time. The mortar shall always be kept damp and protected from sun and rain till used up. All mortar shall be used as soon as after grinding and shall be used within the day on which it is prepared. In no case the mortar prepared earlier than 36 hours be permitted or remain at the site of work.

The mortar more than 36 hours old or damaged mortar or mortar which has once set or caked shall be condemned and removed from the site by the Contractor at his own expense. No retamping or rejected mortar shall be permitted.

- (c) Pure fat lime paste for finishing: Lime shall be slaked and mixed with sufficient water to form a thick paste. It shall be reduced to a fine paste by grinding. It shall then be passed through a fine sieve (3mm mesh) to remove all unslaked particles and foreign matters and allowed to mellow under water for at least 10 days in large slaking tanks. The surplus water on the top shall be allowed to run-off. The slaked lime paste thus formed shall be used for finishing.

#### 14.4 PRELIMINARY WORK

- (a) All materials for plastering shall be kept readily available at the site.
- (b) Plastering operation shall not be started until and necessary fixings such as doors, windows and fittings of light and services etc. are completed and all pipe and conduits to be embedded in the wall or plaster are installed.
- (c) A preliminary inspection shall be made to ensure that the surfaces are in a suitable condition for plastering, particularly as regards their plainness and dryness. If dubbing out is necessary, it should be done in advance, so that an adequate time interval may be permitted before the application of the first under coat.

#### 14.5 SEQUENCE OF OPERATIONS

- (a) For external plaster, the plastering operation shall be started from the top storey and carried downwards. For internal plaster, the plastering operation shall be started wherever the building frame and placing work are ready and the temporary supports of the ceiling resting of the wall or the storey have been removed.
- (b) The surfaces to be plastered shall first be prepared as follows :
- (i) Cleanliness: The loose layer of dust on masonry shall be brushed away before the plaster is applied. A stiff bristle brush or wire brush may be used or to be more effective brushing may be combined with blowing of compressed air. A freshly cast concrete surface is often covered by laitance and this shall be removed. A concrete surface may also often be contaminated by the soap which is formed by the reaction of resins with calcium hydrate or is derived from mould oils. The contaminated layer shall be removed by brush. Special care shall be taken in repairing for re-rendering an old plaster coat. Old layers of the plaster coats shall be completely removed and made good. Crumbled and frost-damaged parts shall be cut out and patched Any trace of algae or moss formation shall be removed. If the background contains soluble salts, particularly sulphates, the application of plaster shall be done only after the efflorescence of the salt is complete and efflorescence is thoroughly removed from the surface.
- (ii) The wall shall not be soaked but only damped before applying the plaster. If the surface becomes dry in the spot, such areas shall be moistened again to restore uniform suction. A fog-spray shall be used for this purpose.



- (iii) Evenness: The background shall be even in order to avoid variations in the thickness of the plaster. Any unevenness must be leveled before the plaster is applied. Local projections in brick work are serious from the point of view of plastering. For coat thick plaster work, the local projection shall not exceed 12mm of the general surface as determined by the periphery of the surface concerned and local depression shall not exceed 19mm. For two coats of plaster, a local projection shall not exceed 12mm and local depression 12mm.

#### 14.6 APPLICATION OF UNDERCOAT

- (a) The undercoat shall be approximately 12mm thick and carried to the full length of the wall or to the natural breaking points like doors or windows. Before the undercoat hardens, it shall be deeply worked to provide mechanical key for the finishing coat.

Masonry walls on which plaster is to be applied directly, shall be clean and dry with the joints raked to a depth of at least 10mm. Before applying the undercoat, the surface shall be damped evenly to control suction. The undercoat shall be trowelled, hard and tight, forcing it into surface depressions to obtain a permanent bond.

On monolithic walls, the undercoat shall be dashed on unless the surface is sufficiently rough to ensure adequate bond for it when applied with a trowel. Rough surfaces that permit successful application with the trowel are produced by mechanical roughening.

The dashing of the undercoat shall be done using a strong whipping motion at right angles to the face of the wall, or it may be applied with a plaster machine or cement gun.

The undercoat shall be kept damp for at least two days immediately following its application. It shall then be allowed to become thoroughly dry.

On metal reinforcements, the plaster shall be completed embedding the metal. This is easily accomplished with the large mesh type of reinforcement, the openings of which are large enough to permit plaster readily to pass through them.

#### 14.7 APPLICATION OF THE FINISHING COAT

- (a) Before starting to apply the finishing coat, the second coat shall be damped evenly. Whenever possible, textures shall be applied from top to bottom in one operation to eliminate joining marks. The finishing coat shall be applied with a trowel to a thickness of approximately 12mm and roughly leveled off.
- (b) When the surface has begun to harden, it shall be leveled off with a straight grained wood float. At a later period during drying out, when the face is quite stiff and there is no moisture on the surface, the float shall be worked with a circular movement bringing the sand in the plaster to the face and producing a uniform texture.

Alternatively the facing shall be tapped gently with a wood float after the setting has commenced but before the plaster is dry and care shall be taken that the tapping is even, uniform and is not overdue. As a final operation, to remove any float marks which may be left on the surface, a damp rubber sponge shall be applied with a circular motion on the face.

#### 14.8 SAMPLE TO BE APPROVED

Sample of about 1 sqm. of plaster of all types of plaster work shall be prepared for the approval of the Engineer prior to further execution.

When only one coat of plaster is specified, the base shall be prepared as specified for undercoat and directly apply one coat of plaster as finish coat.

## 14.9 CURING

Each coat shall be kept damp continuously for at least two days. Moistening shall commence as soon as the plaster has hardened sufficiently and is not susceptible to injury. The water shall be applied by using a fine fog-spray. Soaking of wall shall be avoided and only as much water as can be readily absorbed shall be used. Excessive evaporation on the sunny or windward sides of the building in hot dry weather, shall be prevented by hanging matt or gunny bags on the plaster and keeping them wet.

After the completion of the finishing coat, the plaster shall be kept wet for seven days and shall be protected during that period as mentioned above.

If the work perishes through the neglect of watering or any other default and if the work is not done as specified, the work shall be removed and redone at the Contractor's expense.

Curing of the plaster shall be so done as to avoid or minimize overflow or seepage to the existing surface below.

## 15. PAINTING WORKS

### 15.1 SCOPE

This specification covers different type of paintings in different surface in general and application of cement paint, enamel paint. Dry or oiled distemper, plastic emulsion paint etc. in wall/ceiling surface in particular with a petroleum base/ water base painted in roof.

### 15.2 MATERIALS

All required materials shall be as specified in the "STANDARD CONSTRUCTION MATERIALS".

### 15.3. PREPARATORY WORK

The surface to be painted shall be prepared as specified by the manufacturer of the paint. The surface shall be thoroughly sand papered and cleaned from dirt, dust etc. by brushing and washing down with clean water. Any grease, oil paint or any other foreign material shall be removed by approved method. Rough coat and pebble dash surface shall be thoroughly sand papered brushed and washed to remove dirt and dust.

### 15.4 CEMENT PAINT

Mixing: The dry cement paint shall be thoroughly mixed with clean fresh water so as to produce paint of required consistency which for normal work shall be that of ordinary paint. In mixing and application, the Contractor shall follow the manufacture instructions. Paint of application by brush shall be strained through paint strainer. The paint shall be kept stirred and used within the specified time of the manufacture. Hardened or damaged paint shall not be used.

Application of Cement Paint: The paint shall be applied by means of brushes and in the manner specified by the manufacturer. The number of coats shall be as mentioned in the item. The subsequent coats shall be applied after the preceding coat is properly cured and has thoroughly hardened, inspected and approved and as per manufacturer's specification.

Absorbent surface shall be evenly damped so as to give even suction. In dry weather, freshly painted surfaces shall be kept damp for at least two days and protected from direct sun.

### 15.5. ACRYLIC EMULSION PAINT

Paint and Primer: The acrylic emulsion paint shall be of British Paints India Ltd., Jenson and Nicholson, India or any other superior brand in sealed tins as approved by the Engineer.



Preparation of Surface: The surface where paint is to be applied shall be cleaned and smoothly sand papered, all dust being removed. If the paint is to be applied on a wooden surface a suitable filler material shall be applied and sanded off to achieve a clean and smooth surface. When painting a metal surface, all loose scales, rust, etc., shall be removed by the use of suitable sand paper.

Primer: Two coats of cement primer, wood primer or metal primer as required shall be applied. Each coat shall be approximately 20-30 microns when applied by brush. The primed surface shall be neatly and smoothly sand papered and cleaned.

Application of Paint: The paint of approved shade shall be applied as per manufacturer's printed instruction by suitable brush. A minimum of two (2) coats shall be applied to achieve a uniform painted surface

### 15.6 SYNTHETIC ENAMEL PAINT

Paint: The paint shall be of British Paints India Ltd., Jenson and Nicholson India or other superior brand approved by Engineer. It shall be in sealed tins and its type and use for exterior and interior surface shall be as per the manufacturer's printed instructions.

Preparation of Surface: Preparation of surface shall be as for Acrylic paints (clause 15.5).

Primer: When synthetic enamel paint is to be applied onto a cement plastered surface or concrete surface, two coats of suitable cement primer shall be applied to the clean prepared surface. When the paint is to be applied to a wooden surface two coats of wood primer shall be applied to the cleaned prepared surface.

Application of the Paint: Following the preparation of the surface and the application of the primer a top coat shall be applied. A second coat shall be applied after the first coat has dried. Care should be taken that dust or other foreign materials do not settle or otherwise disfigure the various coats.

The same brand and same batch of materials shall be used for all coats. The paint shall be used and applied as per manufacture's printed instruction. The paint shall be applied with bristle brushes. Once the paints shall be applied in the thinnest possible layers with parallel drawings, no flow shall be allowed.

### 15.7. OIL BOUND AND DRY DISTEMPER

Paint: The distemper shall be of British Paints India Ltd., Jenson and Nicholson, India or any other superior brand approved by the Engineer. It shall be in sealed tins. Generally synthetic washable distemper is available in paste form and dry distemper in powder form.

Preparation of Surface: The preparation of surface shall be as specified for Acrylic paints (clause 15.5). Oil bound distemper is not to be applied to freshly plastered surface.

Mixing: The paste of synthetic washable distemper shall be thinned by adding 700ml of cold water to every kg. of distemper paste. Water should be added gradually to mix them properly to get uniform consistency.

Application: As described for synthetic enamel paint (clause 15.6).

### 15.8 SAMPLE TO BE APPROVED

Sample of approximately 1 sqm. of painting work of all types of paint work shall be prepared, to be approved by the Engineer before further execution.



## **16. SPECIFICATION FOR ELECTRICAL WORKS**

### **16.1 GENERAL**

All electrical works related to this construction project both internal and external shall be carried out to the height degree of technical quality and workmanship required for this category of work. Special attention shall be given to rigorous application of safety codes and accepted practices. Installation of electrical services shall be undertaken in a safe, simple, systematic and orderly fashion giving attention to labeling of circuits, color codes and numbering of cables so that the complete installation can be effectively maintained. Beside these the contractor shall become familiar with parts of the Specifications affecting the part of this work and ensure co-ordination of works between other trades as required. The contractor shall in particular be aware of the requirements of Specification and ensure complete co-ordination of entire electrical works.

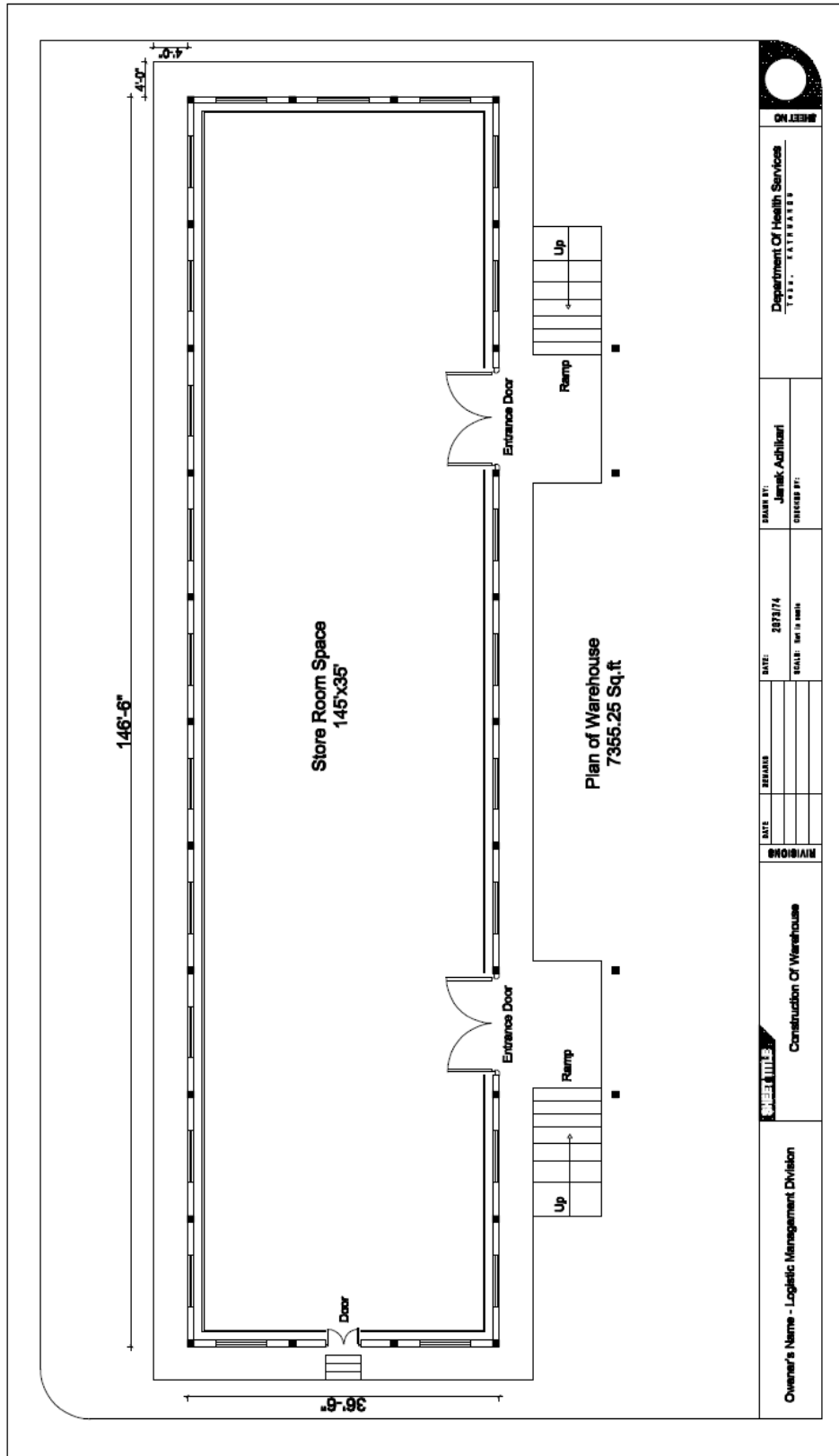
### **16.2 STANDARDS**

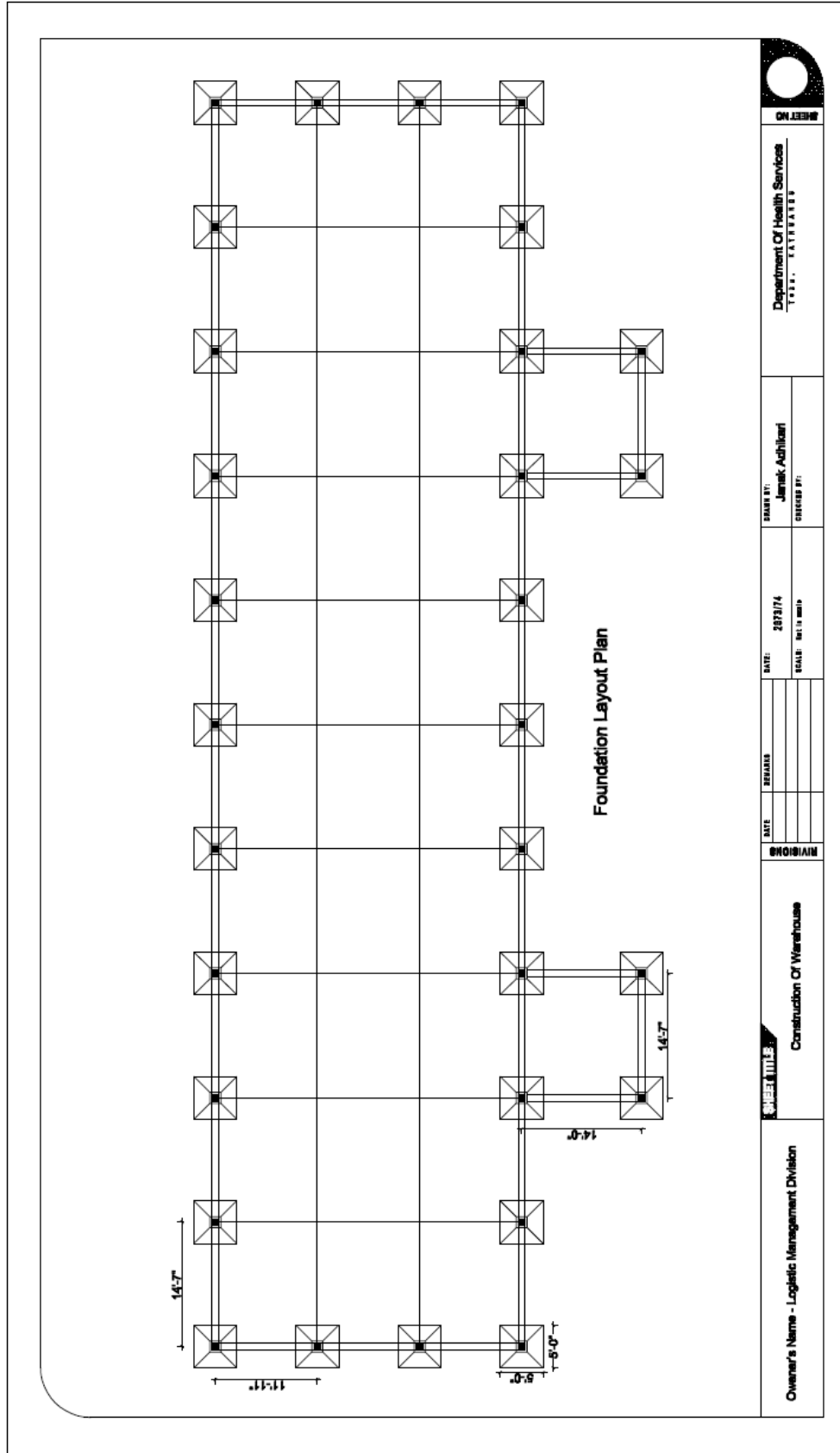
Where not specified within this specification all materials and workmanship applied in this installation shall be in accordance to the latest edition of the related Indian Standards Specification IS: 732 Code of Practice for Electrical Wiring Installation System Voltage not exceeding 650 Volt or equivalent. Notwithstanding the stipulation of above standards, NEA or local electrical services in buildings if exist, shall also be followed. Proper considerations shall also be given to compliance of the equipment and works with environment, geographical condition, altitude, humidity, dust, vermin, attitude and the types of personnel who will occupy the given services.

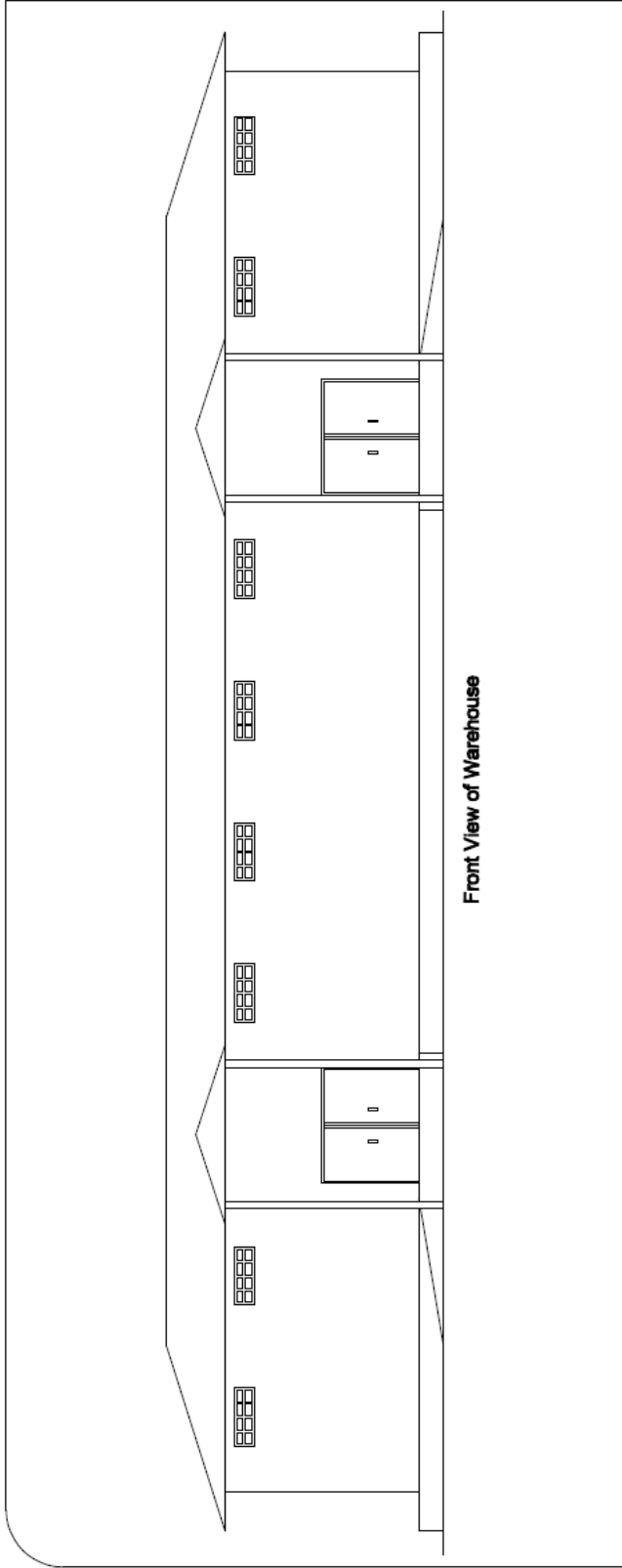
### **16.3 MATERIALS**

All materials, fixtures, equipment and appliances specified for this works shall be in accordance with standards and approved by consultant. The contractor shall submit the manufacturer's technical literature /catalogue and other information materials to consultant for the verification before the installation. All materials to be furnished and used that are not covered in this scope of works shall confirm to the applicable requirements of other trades scope of works. If not otherwise specified they shall be the best available and suitable in all respects for their intended purposes.

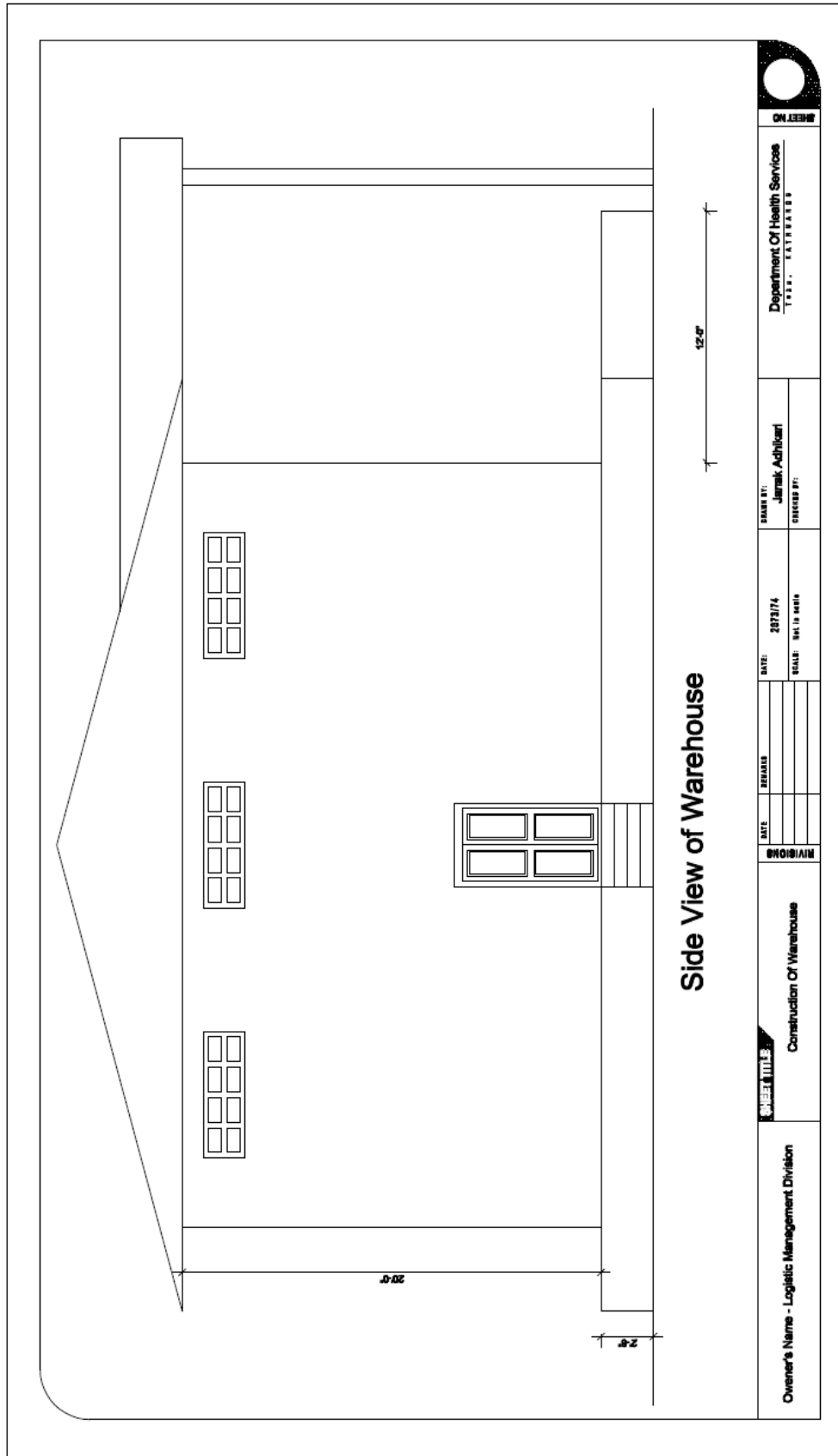
# Drawings





		<b>ON LEASE</b>	
		Department Of Health Services TOLA, KATHMANDU	
OWNER'S NAME - Logistic Management Division		DATE: 2073/74	SCALE: 1:400
ENGINEER TITLE Construction Of Warehouse		NAME BY: Janki Adhikari	CHECK BY:
OWNER'S NAME - Logistic Management Division		DATE: 2073/74	SCALE: 1:400
ENGINEER TITLE Construction Of Warehouse		NAME BY: Janki Adhikari	CHECK BY:
OWNER'S NAME - Logistic Management Division		DATE: 2073/74	SCALE: 1:400
ENGINEER TITLE Construction Of Warehouse		NAME BY: Janki Adhikari	CHECK BY:





<b>OWNER'S NAME</b> Owener's Name - Logistic Management Division	<b>PROJECT TITLE</b> Construction Of Warehouse	<b>DATE</b> DATE: 28/3/74 SCALE: 1/4" = 1'-0"	<b>DRAWN BY:</b> Jamaik, Adhikari <b>CHECKED BY:</b>
<b>REGION</b>		<b>DEPARTMENT</b> Department Of Health Services T.E.S., KATHMANDU	





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## Supplementary Information

The contractor must comply all the environmental management and safety measures described on the Environmental Guidelines of GoN.

### Technical Specification for Environmental works

The compliance and requirements that the contractor must look after the waste management, noise, dust, and other pollution and environmental disturbance by the construction materials and construction works during the construction period should be as per Environmental Protection Rule, 1997. Similarly, the precaution and management of sanitation, worker's health and safety, health and safety of Medical Store staff should be as per the applicable act and regulations of the GoN. The construction specification must comply with the environmental safety and measures of GoN environmental guideline, which the contractor must perform on his construction. The contractor should fence the construction area and should not disturb the mobility of the local people during the transportation of construction materials. Likewise, the contractor should put the project description board mentioning the name and address of Project, Contractor and Employer etc. for detail explanation.

## SECTION - VI

# Bill of Quantities

### Preamble of Bill of Quantities

#### A. General

1. The Bill of Quantities shall be read in conjunction with the Instructions to Bidders, General and Special Conditions of Contract, Technical Specifications, and Drawings.
2. The quantities given in the Bill of Quantities are estimated and provisional, and are given to provide a common basis for bidding. The basis of payment will be the actual quantities of work ordered and carried out, as measured by the Contractor and verified by the Project Manager and valued at the rates and prices bid in the priced Bill of Quantities, where applicable, and otherwise at such rates and prices as the Project Manager may fix within the terms of the Contract.
3. For any item for which measurement is based on records made before or during construction the records shall be prepared and agreed between the Engineer and the Contractor. Should the Contractor carry out such work without the prior agreement of the Engineer, the Engineer may request the Contractor to carry out investigations to confirm the extent of the work and the quantity of work certified for payment shall be solely at the Engineer's discretion. The cost of any such investigation shall be borne by the Contractor.
4. The rates and prices bid in the priced Bill of Quantities shall, except as otherwise provided under the Contract, include all construction equipment, labor, supervision, materials, erection, maintenance, insurance, profit, taxes, and duties, together with all general risks, liabilities, and obligations set out or implied in the Contract.
5. A rate or price shall be entered against each item in the priced Bill of Quantities, whether quantities are stated or not. The cost of items against which the Contractor has failed to enter a rate or price shall be deemed to be covered by other rates and prices entered in the Bill of Quantities.
6. The whole cost of complying with the provisions of the Contract shall be included in the Items provided in the priced Bill of Quantities, and where no Items are provided, the cost shall be deemed to be distributed among the rates and prices entered for the related Items of Work.
7. General directions and descriptions of work and materials are not necessarily repeated nor summarized in the Bill of Quantities. References to the relevant sections of the Contract documentation shall be made before entering prices against each item in the priced Bill of Quantities. The Specification Clause references where given in the item description of the Bills of Quantities are for the convenience of bidders and generally refer to the principal relevant-specification clause but do not necessarily represent the whole of the specification requirements for the work required within the item. The presence of a Specification clause reference shall not in any way reduce the Bidders obligation to complete work in accordance with all the requirements of the Specification.
8. Provisional Sums included and so designated in the Bill of Quantities shall be expended in whole or in part at the direction and discretion of the Project Manager in accordance with the Conditions of Contract.



9. The method of measurement of completed work for payment shall be in accordance with the Specifications.
10. The abbreviations and symbols used in this Bill of Quantities are:

Sqm	= Square meter
Cum	= Cubic meter
MT	= Metric Ton
Kg	= Kilogram
Pt	= Point
Nos	= Numbers
Rm	= Running meter
mm	= Millimeter
GI	= Galvanized Iron
PVC	= Poly Vinyl Chloride
LED	= Light Emitting Diode
"	= Inch
F	= Electric Insulation Class 'F'
Amp	= Ampere
SP	= Single Pole
MCB	= Miniature Circuit Breaker
TP	= Triple Pole
TPN	= Triple Pole and Neutral
DB	= Distribution Box
IS	= International Standard
G	= Grade

## B. Day work Schedule

### a) General

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

### b) Day work Labor

1. In calculating payments due to the Contractor for the execution of day works, the hours for labor will be reckoned from the time of arrival of the labor at the job site to execute the particular item of day work to the time of departure from the job site, but excluding meal breaks and rest periods. Only the time of classes of labor directly doing work ordered by the Project Manager and are competent to perform such work will be measured. The time of gangers (charge hands) actually doing work with the gangs will also be measured but not the time of foremen or other supervisory personnel.
2. The Contractor shall be entitled to payment in respect of the total time that labor is employed on day work, calculated at the basis rates entered by it in the " SCHEDULE OF DAY WORK RATES: 1.



LABOR". The rates for labor shall be deemed to cover all costs to the Contractor including (but not limited to) i) the amount of wages paid to such labor, transportation time, overtime, subsistence allowances, ii) any sums paid to or on behalf of such labor for social benefits in accordance with Nepal law, iii) Contractor's profit, overheads, superintendence, liabilities and insurance and iv) charges incidental to the foregoing.

**c) Day work Equipment**

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

**d) Day work Materials**

1. The Contractor shall be entitled to payment in respect of materials used for day work (except for materials for which the cost is included in the percentage addition to labor costs as detailed heretofore), at the rates entered by him in the "SCHEDULE OF DAY WORK RATES: 3 MATERIALS" and shall be deemed to include overhead charges and profit as follows;
  - (i) the rates for materials shall be calculated on the basis of the invoiced price, freight, insurance, handling expenses, damage, losses, etc. and shall provide for delivery to store for stockpiling at the Site.
  - (ii) the cost of hauling materials for use on work ordered to be carried out as day work, from the store or stockpile on the Site to the place where it is to be used also shall be include in the same rate.



### **Provisional Sums**

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

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

Department of Health Services, Logistic Management Division  
Teku, Kathmandu

## Bill of Quantities

**Project Name:** Construction of Warehouse at Pathalैया Central Medical Store.

**Project Site:** Pathalैया, Bara

**Name and address of Bidder:** \_\_\_\_\_

S.N.	Description	Unit	Quantity	Rate in figure NPR	Rate in words NPR	Amount NPR	Remarks
1	Site preparation work	Cum	1200.00				
2	Earthwork in excavation in all type of soils depth upto 5.00 m	Sqm	146.47				
3	Earth filling in 150 mm thick layer with watering and ramming	Sqm	211.95				
4	Earth filling in 150 mm thick layer with watering and ramming of available excavated soil	Sqm	146.47				
5	Plain cement Concrete (PCC) in 1:2:4 ratio for foundations, flooring and walls	Sqm	90.54				
6	Plain cement Concrete (PCC) for RCC works (1:1.5:3) for slab/lintels/beam/pillar	Sqm	75.63				
7	Formwork, shuttering, centering with 19mm thick waterproof ply board for beam	Sqm	180.43				
8	Formwork, shuttering, centering with 19mm thick waterproof ply board for column	Kg	274.32				



S.N.	Description	Unit	Quantity	Rate in figure NPR	Rate in words NPR	Amount NPR	Remarks
9	Tor steel reinforcement fe 415/500 of 7850 kg/m3 including straightning, cutting, binding and fixing in position as per drawing or instruction all complete	Kg	14.84				
10	Good quality local chimney made Brickwork in 1:4 C/S mortar up to ground floor .	Sqm	169.27				
11	Flat dry brick soling on flat in foundation and floor including sand filling in joints.	Sqm	933.77				
12	20mm thick cement sand plaster in (1:4) ratio on wall.	Sqm	673.47				
13	12.5mm thick cement sand plaster in (1:4) ratio on wall.	Sqm	523.36				
14	2 coats of apex paint(weather coat) of approved color with primer Painting over porperly cleaned surface all complete	Sqm	673.47				
15	Two coats of plastic emulsion paint of approved color with primer Painting over porperly cleaned surface all complete	Sqm	523.36				
16	2 coats of ready made enamel paint of approved color over one coats of primer.	Cum	321.66				
17	MS black iron pipe for truss work with primer painting	Sqm	3385.68				
18	MS black iron pipe for purlin work with primer painting	Sqm	10795.87				
19	0.5 mm thick colored CGI sheet for roof work	Pt.	731.09				
20	0.5 mm thick colored plain sheet for roof work	Pt.	68.09				

S.N.	Description	Unit	Quantity	Rate in figure NPR	Rate in words NPR	Amount NPR	Remarks
21	Supplying and fixing modular ceiling and all work complete as per instruction of site engineer	Set	479.71				
22	Supplying and fitting of 16 gauge iron sliding shutter gate in (50x50x5) mm frame with bearing support painting and all complete	Nos	22.56				
23	Supplying and fitting of 3x20 mm iron grill work with primer painting all complete	Nos	26.35				
24	Supplying and fitting of GI mosquito proof wiremesh in 38 mm thick salwood chaukath frame	Nos	26.35				
25	Supplying and fixing of salwood chaukath frame	Nos	0.01				
26	Supplying and fitting of readymade Teak wood door, special (Seasoned and poisoned treated, one side teak) with all necessary hardware complete	Nos	2.24				
27	3 mm thick cement sand punning on floor, skirting, dado etc.	Rm	791.74				
28	2x3/20, 7m PVC copper wiring of Nepal, Prakash or equivalent	Rm	35.00				
29	2x7/22 + 1x 3/22, 8m PVC copper wiring of Nepal, Prakash or equivalent	Set	15.00				
30	38 watt LED panel light	Set	25.00				
31	12" exhaust fan	Rm	12.00				
32	6 gang one way switch F	Cum	4.00				
33	16/6 Amp combined socket with safety shutter F	Sqm	15.00				



S.N.	Description	Unit	Quantity	Rate in figure NPR	Rate in words NPR	Amount NPR	Remarks
34	6 Amp SP MCB	Sqm	10.00				
35	32 Amp TP MCB	Sqm	2.00				
36	7/18 PVC copper wire of Nepal,Prakash or equivalent	Sqm	100.00				
37	3/20 PVC copper wiring Nepal,Prakash or equivalent	Sqm	100.00				
38	6 way TPN DB 16"x18"x5"	Sqm	1.00				
39	IS 3043 copper plate 65x65x3.15	Kg	1.00				
40	G.No. 8 plastic coated copper wire	Kg	50.00				
	<b>Total</b>						
	<b>VAT 13%</b>						
	<b>Grand total</b>						

Total amount in words: **NPR**.....

Signature of Authorized Person

Name :

Designation :

Official Seal:

Date :

Note: In case of discrepancy between unit price and total, the unit price shall prevail,  
In case of discrepancy between amount in figure and words, the amount in words shall prevail.



**Part - III**

**CONDITIONS OF CONTRACT  
AND CONTRACT FORMS**

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## SECTION - VII

**General Conditions of Contract****A. General****1. Definitions**

1.1 Boldface type is used to identify defined terms.

- (a) The **Accepted Contract Amount** means the amount accepted in the Letter of Acceptance for the execution and completion of the Works and the remedying of any defects.
- (b) The **Activity Schedule** is a schedule of the activities comprising the construction, installation, testing, and commissioning of the Works in a lump sum contract. It includes a lump sum price for each activity, which is used for valuations and for assessing the effects of Variations and Compensation Events.
- (c) The **Adjudicator** is the person appointed jointly by the Employer and the Contractor to resolve disputes in the first instance.
- (d) **Bill of Quantities** means the priced and completed Bill of Quantities forming part of the Bid.
- (e) **Compensation Events** are those defined in GCC 41 hereunder.
- (f) The **Completion Date** is the date of completion of the Works as certified by the Project Manager, in accordance with GCC 52.1.
- (g) The **Contract** is the Contract between the Employer and the Contractor to execute, complete, and maintain the Works. It consists of the documents listed in GCC 2.3 below.
- (h) The **Contractor** is the party whose Bid to carry out the Works has been accepted by the Employer.
- (i) The **Contractor's Bid** is the completed bidding document submitted by the Contractor to the Employer.
- (j) The **Contract Price** is the Accepted Contract Amount stated in the Letter of Acceptance and thereafter as adjusted in accordance with the Contract.
- (k) **Days** are calendar days; months are calendar-months.
- (l) **Day works** are varied work inputs subject to payment on a time basis for the Contractor's employees and Equipment, in addition to payments for associated Materials and Plant.
- (m) A **Defect** is any part of the Works not completed in accordance with the Contract.
- (n) The **Defects Liability Certificate** is the certificate issued by Project Manager upon correction of defects by the Contractor.
- (o) The **Defects Liability Period** is the period calculated from the Completion Date where the Contractor remains responsible for remedying defects.
- (p) **Drawings** include calculations and other information provided or

approved by the Project Manager for the execution of the Contract.

- (q) The **Employer** is the party who employs the Contractor to carry out the Works, as specified in the SCC.
- (r) **Equipment** is the Contractor's machinery and vehicles brought temporarily to the Site to construct the Works.
- (s) **Force Majeure** means an exceptional event or circumstance: which is beyond a Party's control; which such Party could not reasonably have provided against before entering into the Contract; which, having arisen, such Party could not reasonably have avoided or overcome; and, which is not substantially attributable to the other Party.
- (t) The **Initial Contract Price** is the Contract Price listed in the Employer's Letter of Acceptance.
- (u) The **Intended Completion Date** is the date on which it is intended that the Contractor shall complete the Works. The Intended Completion Date is specified in the SCC. The Intended Completion Date may be revised only by the Project Manager by issuing an extension of time or an acceleration order.
- (v) **Letter of Acceptance** means the formal acceptance by the Employer of the Bid and denotes the formation of the contract at the date of acceptance.
- (w) **Materials** are all supplies, including consumables, used by the Contractor for incorporation in the Works.
- (x) **Party** means the Employer or the Contractor, as the context requires.
- (y) **SCC** means Special Conditions of Contract
- (z) **Plant** is any integral part of the Works that shall have a mechanical, electrical, chemical, or biological function.
- (aa) The **Project Manager** is the person named in the SCC (or any other competent person appointed by the Employer and notified to the Contractor, to act in replacement of the Project Manager) who is responsible for supervising the execution of the Works and administering the Contract.
- (bb) **Retention Money** means the aggregate of all monies retained by the Employer pursuant to GCC 45.1.
- (cc) The **Site** is the area defined as such in the SCC.
- (dd) **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.
- (ee) **Specification** means the Specification of the Works included in the Contract and any modification or addition made or approved by the Project Manager.
- (ff) The **Start Date** is given in the SCC. It is the latest date when the

Contractor shall commence execution of the Works. It does not necessarily coincide with any of the Site Possession Dates.

- (gg) A **Subcontractor** is a person or corporate body who has a Contract with the Contractor to carry out a part of the work in the Contract, which includes work on the Site.
- (hh) **Temporary Works** are works designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the Works.
- (ii) A **Variation** is an instruction given by the Project Manager which varies the Works.
- (jj) The **Works** are what the Contract requires the Contractor to construct, install, and turn over to the Employer, as defined in the SCC.

## 2. Interpretation

- 2.1 In interpreting these GCC, singular also means plural, male also means female or neuter, and the other way around. Headings have no significance. Words have their normal meaning under the language of the Contract unless specifically defined. The Project Manager shall provide instructions clarifying queries about these GCC.
- 2.2 If sectional completion is specified in the SCC, references in the GCC to the Works, the Completion Date, and the Intended Completion Date apply to any Section of the Works (other than references to the Completion Date and Intended Completion Date for the whole of the Works).
- 2.3 The documents forming the Contract shall be interpreted in the following order of priority:
  - (a) Contract Agreement,
  - (b) Letter of Acceptance,
  - (c) 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.

## 4. Project Manager's Decisions

- 4.1 Except where otherwise specifically stated, the Project Manager shall decide contractual matters between the Employer and the Contractor in the role representing the Employer.

## 5. Delegation

- 5.1 The Project Manager may delegate any of his duties and responsibilities to other people, except to the Adjudicator, after notifying





- the Contractor, and may cancel any delegation after notifying the Contractor.
- 6. Communications** 6.1 Communications between parties that are referred to in the Conditions shall be effective only when in writing. A notice shall be effective only when it is delivered.
- 7. Subcontracting** 7.1 Not Allowed
- 8. Other Contractors** 8.1 The Contractor shall cooperate and share the Site with other contractors, public authorities, utilities, and the Employer between the dates given in the Schedule of Other Contractors, as referred to in the SCC. The Contractor shall also provide facilities and services for them as described in the Schedule. The Employer may modify the Schedule of Other Contractors, and shall notify the Contractor of any such modification
- 9. Personnel and Equipment** 9.1 The Contractor shall employ the key personnel and use the equipment identified in its Bid to carry out the Works, or other personnel and equipment approved by the Project Manager. The Project Manager shall approve any proposed replacement of key personnel and equipment only if their relevant qualifications or characteristics are substantially equal to or better than those proposed in the Bid.
- 9.2 If the Project Manager asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within seven days and has no further connection with the work in the Contract.
- 10. Employer's and Contractor's Risk** 10.1 The Employer carries the risks which this Contract states are Employer's risks, and the Contractor carries the risks which this Contract states are Contractor's risks.
- 11. Employer's Risks** 11.1 From the Start Date until the Defects Liability Certificate has been issued, the following are Employer's risks:
- (a) The risk of personal injury, death, or loss of or damage to property (excluding the Works, Plant, Materials, and Equipment), which are due to
- (i) use or occupation of the Site by the Works or for the purpose of the Works, which is the unavoidable result of the Works or
- (ii) negligence, breach of statutory duty, or interference with any legal right by the Employer or by any person employed by or contracted to him except the Contractor.
- (b) The risk of damage to the Works, Plant, Materials, and Equipment to the extent that it is due to a fault of the Employer or in the Employer's design, or due to war or radioactive contamination directly affecting the country where the Works are to be executed.
- 11.2 From the Completion Date until the Defects Liability Certificate has been issued, the risk of loss of or damage to the Works, Plant, and Materials is an Employer's risk except loss or damage due to

- (a) a Defect which existed on the Completion Date,
- (b) an event occurring before the Completion Date, which was not itself an Employer's risk, or
- (c) the activities of the Contractor on the Site after the Completion Date.
- 12. Contractor's Risks**
- 12.1 From the Starting Date until the Defects Liability Certificate has been issued, the risks of personal injury, death, and loss of or damage to property (including, without limitation, the Works, Plant, Materials, and Equipment) which are not Employer's risks are Contractor's risks.
- 13. Insurance**
- 13.1 The Contractor shall provide insurance in the joint names of the Employer and the Contractor from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the SCC for the following events which are due to the Contractor's risks:
- (a) loss of or damage to the Works, Plant, and Materials;
- (b) loss of or damage to Equipment;
- (c) loss of or damage to property (except the Works, Plant, Materials, and Equipment) in connection with the Contract; and
- (d) Personal injury or death.
- 13.2 Policies and certificates for insurance shall be delivered by the Contractor to the Project Manager for the Project Manager's approval before the Start Date. All such insurance shall provide for compensation to be payable in the proportions of Nepalese Rupees required to rectify the loss or damage incurred.
- 13.3 If the Contractor does not provide any of the policies and certificates required, the Employer may affect the insurance which the Contractor should have provided and recover the premiums the Employer has paid from payments otherwise due to the Contractor or, if no payment is due, the payment of the premiums shall be a debt due.
- 13.4 Alterations to the terms of insurance shall not be made without the approval of the Project Manager.
- 13.5 Both parties shall comply with any conditions of the insurance policies.
- 14. Site Investigation Reports**
- 14.1 The Contractor, in preparing the Bid, shall rely on any Site Investigation Reports referred to in the SCC, supplemented by any information available to the Bidder.
- 15. Contractor to Construct the Works**
- 15.1 The Contractor shall construct and install the Works in accordance with the Specifications and Drawings.
- 16. The Works to Be Completed within intended Completion Date**
- 16.1 The Contractor may commence execution of the Works on the Start Date and shall carry out the Works in accordance with the Program submitted by the Contractor, as updated with the approval of the Project Manager, and complete them within the intended Completion

Date.

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

discoveries and carry out the Project Manager's instructions for dealing with them.

- 20. Possession of the Site** 20.1 The Employer shall give possession of all parts of the Site to the Contractor. If possession of a part is not given by the date stated in the SCC, the Employer shall be deemed to have delayed the start of the relevant activities, and this shall be a Compensation Event.
- 21. Access to the Site** 21.1 The Contractor shall allow the Project Manager and any person authorized by the Project Manager access to the Site and to any place where work in connection with the Contract is being carried out or is intended to be carried out.
- 22. Instructions, Inspections and Audits** 22.1 The Contractor shall carry out all instructions of the Project Manager which comply with the applicable laws where the Site is located.
- 22.2 The Contractor shall permit the GoN/DP and/or persons appointed by the GoN/DP to inspect the Site and/or the accounts and records of the Contractor and its sub-contractors relating to the performance of the Contract, and to have such accounts and records audited by auditors appointed by the GoN/DP if required by the GoN/DP. The Contractor's attention is drawn to Sub-Clause 58.2 which provides, inter alia, that acts intended to materially impede the exercise of the GoN's/DP's inspection and audit rights provided for under this Sub-Clause constitute a obstructive practice subject to contract termination.
- 23. Dispute Settlement** 23.1 The Employer and the Contractor shall attempt to settle amicably by direct negotiation any disagreement or dispute arising between them under or in connection with the Contract.
- 23.2 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.
- 24 Procedures for Disputes** 24.1 In case of arbitration, the arbitration shall be conducted in accordance with the arbitration procedures published by the Nepal Council of Arbitration (NEPCA) at the place given in the SCC.

## B. B. Time Control

- 25. Program** 25.1 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.
- 25.2 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.

25.3 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.

25.4 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.

**26. Extension of the Intended Completion Date**

26.1 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.

26.2 The Project Manager shall decide whether and by how much to extend the Intended Completion Date within 21 days of the Contractor asking the Project Manager for a decision upon the effect of a Compensation Event or Variation and submitting full supporting information at least 7 days prior to the intended completion date. If the Contractor has failed to give early warning of a delay or has failed to cooperate in dealing with a delay, the delay by this failure shall not be considered in assessing the new Intended Completion Date.

**27. Acceleration**

27.1 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.

27.2 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.

**28. Delays Ordered by the Project Manager**

28.1 The Project Manager may instruct the Contractor to delay the start or progress of any activity within the Works.

**29. Management Meetings**

29.1 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.

29.2 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.

- 30. Early Warning**
- 30.1 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.
- 30.2 The Contractor shall cooperate with the Project Manager in making and considering proposals for how the effect of such an event or circumstance can be avoided or reduced by anyone involved in the work and in carrying out any resulting instruction of the Project Manager.

### C. Quality Control

- 31. Identifying Defects**
- 31.1 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.
- 32. Tests**
- 32.1 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.
- 33. Correction of Defects**
- 33.1 The Project Manager shall give notice to the Contractor of any Defects before the end of the Defects Liability Period, which begins at Completion, and is defined in the SCC. The Defects Liability Period shall be extended for as long as Defects remain to be corrected.
- 33.2 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.
- 34. Uncorrected Defects**
- 34.1 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

- 35. Contract Price**
- 35.1 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.
- 35.2 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.

### **36. Changes in the Contract Price**

36.1 In the case of an Unit Rate contract:

- (a) If the final quantity of the work done differs from the quantity in the Bill of Quantities for the particular item by more than 25 percent, provided the change exceeds 2 percent of the Initial Contract Price, the Project Manager shall adjust the rate to allow for the change.
- (b) The Project Manager shall not adjust rates from changes in quantities if thereby the Initial Contract Price is exceeded by more than 10 percent, except with the prior approval of the Employer.
- (c) If requested by the Project Manager, the Contractor shall provide the Project Manager with a detailed cost breakdown of any rate in the Bill of Quantities.

36.2 In the case of a lump sum contract, the Activity Schedule shall be amended by the Contractor to accommodate changes of Program or method of working made at the Contractor's own discretion. Prices in the Activity Schedule shall not be altered when the Contractor makes such changes to the Activity Schedule.

### **37. Variations**

37.1 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.

37.2 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.

37.3 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.

37.4 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.

37.5 The Contractor shall not be entitled to additional payment for costs that could have been avoided by giving early warning.

37.6 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 36.1 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.

**38. Cash Flow Forecasts**

38.1 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.

**39. Payment Certificates**

39.1 The Contractor shall submit to the Project Manager monthly statements of the estimated value of the work executed less the cumulative amount certified previously.

39.2 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.

39.3 The value of work executed shall be determined by the Project Manager.

39.4 The value of work executed shall comprise:

(a) In the case of an Unit Rate contract, the value of the quantities of work in the Bill of Quantities that have been completed; or

(b) In the case of a lump sum contract, the value of work executed shall comprise the value of completed activities in the Activity Schedule.

39.5 The value of work executed shall include the valuation of Variations and Compensation Events.

39.6 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.

**40. Payments**

40.1 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.

40.2 If an amount certified is increased in a later certificate or as a result of an award by the Adjudicator or an Arbitrator, the Contractor shall be paid interest upon the delayed payment as set out in this clause. Interest shall be calculated from the date upon which the increased amount would have been certified in the absence of dispute.

40.3 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.

**41. Compensation Events**

41.1 The following shall be Compensation Events:

(a) The Employer does not give access to a part of the Site by the Site Possession Date pursuant to GCC 20.1.

(b) The Employer modifies the Schedule of Other Contractors in a way





that affects the work of the Contractor under the Contract.

- (c) The Project Manager orders a delay or does not issue Drawings, Specifications, or instructions required for execution of the Works on time.
  - (d) The Project Manager instructs the Contractor to uncover or to carry out additional tests upon work, which is then found to have no Defects.
  - (e) The Project Manager unreasonably does not approve a subcontract to be let.
  - (f) Ground conditions are substantially more adverse than could reasonably have been assumed before issuance of the Letter of Acceptance from the information issued to bidders (including the Site Investigation Reports), from information available publicly and from a visual inspection of the Site.
  - (g) The Project Manager gives an instruction for dealing with an unforeseen condition, caused by the Employer, or additional work required for safety or other reasons.
  - (h) Other contractors, public authorities, utilities, or the Employer does not work within the dates and other constraints stated in the Contract, and they cause delay or extra cost to the Contractor.
  - (i) The advance payment is delayed.
  - (j) The effects on the Contractor of any of the Employer's Risks.
  - (k) The Project Manager unreasonably delays issuing a Certificate of Completion.
  - (l) Force majeure events as determined by the Project Manager.
- 41.2 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.
- 41.3 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.
- 41.4 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.

## 42. Tax

- 42.1 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 44.

#### 43. Currency

43.1 The currency of Contracts shall be Nepalese Rupees.

#### 44. Price Adjustment

44.1 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.

44.2 **Adjustment Formulae:** "The adjustment to the Interim Payment Certificates in respect of changes in cost and legislation shall be determined from separate formulae for each of the types of construction work to be performed and Plant to be supplied. The formulae will be of the following general type:

$$pn = A + b \frac{Ln}{Lo} + c \frac{Mn}{Mo} + d \frac{En}{Eo} + \text{etc.}$$

Where:

**pn** is a price adjustment factor to be applied to the amount for the payment of the work carried out in the subject month, determined in accordance with Sub-Clause 41;

**A** is a constant, specified in the Bidding Forms- Table of Price Adjustment data, representing the nonadjustable portion in contractual payments;

**b, c, d, etc.**, coefficients representing the estimated proportion of each cost element (labor, materials, equipment usage, etc.) in the Works or sections thereof, net of Provisional Sums, as specified in the SCC;

**Ln, Mn, En, etc.**, are the current cost indices or reference prices of the cost elements for month "n," determined pursuant to Sub-Clause 44.4, applicable to each cost element; and

**Lo, Mo, Eo, etc.**, are the base cost indices or reference prices corresponding to the above cost elements at the date specified in Sub-Clause 45.4

44.3 **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.

44.4 **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.

44.5 **Weightings:** The weightings for each of the factors of cost given in the Bidding Forms shall be adjusted if, in the opinion of the Project Manager, they have been rendered unreasonable, unbalanced or inapplicable as a result of varied or additional work already executed or instructed under Clause 38 or for any other reason.

44.6 **Subsequent Legislation:** If, after the date 30 days prior to the latest date for submission of bids for the Contract, there occur changes to any National Statute, Ordinance, Decree, or other Law or any regulation or by-law of any local or other duly constituted authority, or the introduction of any such Statute, Ordinance, Decree, Law, regulation or by-law which causes additional or reduced cost to the Contractor, other than under the preceding sub-clauses of this clause, in the execution of the Contract, such additional or reduced cost shall, after due consultation with the Employer and the Contractor, be determined by the Project Manager and shall be added to or deducted from the Contract Price and the Project Manager shall notify the Contractor accordingly, with a copy to the Employer. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same shall already have taken into account in the indexing of any inputs to the Price Adjustment Formulae in accordance with the provisions of Sub-Clauses 44.2

44.7 Where, price adjustment provision is not applicable pursuant to Sub-clause 45.1 then the Contract is subject to price adjustment only for construction material in accordance with this clause. If the prices of the construction materials stated in the contract is increased or decreased in an unexpected manner in excess of ten (10%) percent in comparison to the base price construction material stated in Section-IV, Bidding Forms-Table of Price Adjustment Data, then the price adjustment for the increase or decrease of price of the construction material beyond 10% shall be made by applying the following formulas:

For unexpected increase in price

$$P = [R_1 - (R_0 \times 1.10)] \times Q$$

For unexpected decrease in price  $P = [R_1 - (R_0 \times 0.90)] \times Q$

Where:

“P” is price adjustment amount

“R<sub>1</sub>” is the present price of the construction material (Source of indices shall be those listed in the Bidding forms)

“R<sub>0</sub>” 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..

44.8 The Price Adjustment amount shall be limited to a maximum of the initial Contract Amount as specified in the SCC.

44.9 The Price Adjustment provision shall not be applicable for delayed period if the contract is not completed in time due to the delay caused by the contractor or the contract is a Lump sum Contract or a Fixed Budget Contract.

#### **45. Retention**

45.1 The Employer shall retain from each payment due to the Contractor the proportion stated in the SCC until Completion of the whole of the Works.

45.2 Upon the issue of a Defects Liability Certificate by the Project Manager, in accordance with GCC 54.1, half the total amount retained shall be repaid to the Contractor and half when the Contractor has submitted the Tax evidence document issued by the concerned Internal Revenue Office that the contractor has submitted his Income Returns . On completion of the whole works, the Contractor may substitute retention money with an “on demand” bank guarantee.

#### **46. Liquidated Damages**

46.1 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.

46.2 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.40

#### **47. Bonus**

47.1 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.

#### **48. Advance Payment**

48.1 The Employer shall make advance payment to the Contractor of the amounts stated in the SCC by the date stated in the SCC, against provision by the Contractor of an unconditional bank guarantee from 'A' class commercial Bank in a form and by a bank acceptable to the Employer in amounts equal to the advance payment. The guarantee shall remain effective until the advance payment has been repaid, but the amount of the guarantee shall be progressively reduced by the amounts repaid by the Contractor. Interest shall not be charged on the advance

payment.

48.2 The Contractor is to use the advance payment only to pay for Equipment, Plant, Materials, and mobilization expenses required specifically for execution of the Contract. The Contractor shall demonstrate that advance payment has been used in this way by supplying copies of invoices or other documents to the Project Manager.

48.3 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.

#### 49. Securities

49.1 The Performance Security shall be provided to the Employer no later than the date specified in the Letter of Acceptance and shall be issued in an amount specified in the SCC, by a 'A' class commercial bank acceptable to the Employer, and denominated in Nepalese Rupees. The Performance Security shall be valid until a date 30 days from the date of issue of the Defect Liability Certificate in the case of a bank guarantee.

49.2 The performance security issued by any foreign Bank outside Nepal must be counter guaranteed by an "A" class commercial Bank in Nepal.

#### 50. Day works

50.1 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.

50.2 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.

50.3 The Contractor shall be paid for Day works subject to obtaining signed Day works forms.

#### 51. Cost of Repairs

51.1 Loss or damage to the Works or Materials to be incorporated in the Works between the Start Date and the end of the Defects Correction periods shall be remedied by the Contractor at the Contractor's cost if the loss or damage arises from the Contractor's acts or omissions.

### E. Finishing the Contract

#### 52. Completion

52.1 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.

#### 53. Taking Over

53.1 The Employer shall take over the Site and the Works within seven days of the Project Manager's issuing a certificate of Completion.

#### 54. Final Account

54.1 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.

**55. Operating and Maintenance Manuals**

55.1 If "as built" Drawings and/or operating and maintenance manuals are required, the Contractor shall supply them by the dates stated in the SCC.

55.2 If the Contractor does not supply the Drawings and/or manuals by the dates **stated in the SCC** pursuant to GCC 55.1, 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.

**56. Termination**

56.1 In no case, the Contractor shall terminate the Contract unilaterally without duly notifying the Employer.

56.2 The Employer may terminate the Contract at any time if the contractor;

- a. does not commence the work as per the Contract,
- b. abandons the work without completing,
- c. fails to achieve progress as per the Contract.

56.3 The Employer or the Contractor may terminate the Contract if the other party causes a fundamental breach of the Contract.

56.4 Fundamental breaches of Contract shall include, but shall not be limited to the following:

- (a) the Contractor uses the advance payment for matters other than the contractual obligations,
- (b) the Contractor stops work for 30 days when no stoppage of work is shown on the current Program and the stoppage has not been authorized by the Project Manager;
- (c) the Project Manager instructs the Contractor to delay the progress of the Works, and the instruction is not withdrawn within 30 days;
- (d) the Employer or the Contractor is made bankrupt or goes into liquidation other than for a reconstruction or amalgamation.
- (e) a payment certified by the Project Manager is not paid by the Employer to the Contractor within 90 days of the date of the Project Manager's certificate;
- (f) the Project Manager gives Notice that failure to correct a particular Defect is a fundamental breach of Contract and the Contractor fails to correct it within a reasonable period of time determined by the Project Manager;
- (g) the Contractor does not maintain a Security, which is required;
- (h) the Contractor has delayed the completion of the Works by the number of days for which the maximum amount of liquidated damages can be

paid, as defined in the SCC.

- (i) if the Contractor, in the judgment of the Employer has engaged in corrupt or fraudulent practices in competing for or in executing the Contract, pursuant to GCC 57.1.

56.5 When either party to the Contract gives notice of a breach of Contract to the Project Manager for a cause other than those listed under GCC 56.2 above, the Project Manager shall decide whether the breach is fundamental or not.

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

56.7 If the Contract is terminated, the Contractor shall stop work immediately, make the Site safe and secure, and leave the Site as soon as reasonably possible.

## **57. Fraud and Corruption**

57.1 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.

57.2 Should any employee of the Contractor be determined to have engaged in corrupt, fraudulent, collusive, coercive, or obstructive practice during the execution of the Works, then that employee shall be removed in accordance with Clause 9.

For the purposes of this Sub-Clause;

- (i) "corrupt practice" is the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party.
- (ii) "fraudulent practice"<sup>2</sup> 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"<sup>3</sup> is an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- (iv) "coercive practice"<sup>4</sup> 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;

<sup>2</sup> a "party" refers to a public official; the terms "benefit" and "obligation" relate to the procurement process or contract execution; and the "act or omission" is intended to influence the procurement process or contract execution

<sup>3</sup> "parties" refers to participants in the procurement process (including public officials) attempting to establish bid prices at artificial, non-competitive levels.

<sup>4</sup> a "party" refers to a participant in the procurement process or contract execution.



- (v) “obstructive practice” is
- (aa) deliberately destroying, falsifying, altering or concealing of evidence material to the investigation or making false statements to investigators in order to materially impede a investigation into allegations of a corrupt, fraudulent, coercive or collusive practice; and/or threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or
  - (bb) acts intended to materially impede the exercise of the GON’s/DP’s inspection and audit rights provided for under Sub-Clause 22.2.

**58. Black Listing**

58.1 Without prejudice to any other rights of the Employer under this Contract, GoN, Public Procurement Monitoring Office (PPMO), on the recommendation of procuring entity, may blacklist a Bidder for its conduct for a period of one (1) to three (3) years on the following grounds and seriousness of the act committed by the bidder.

- (a) if it is established that the Contractor has committed substantial defect in implementation of the contract or has not substantially fulfilled its obligations under the contract or the completed work is not of the specified quality as per the contract.

**59. Payment upon Termination**

59.1 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 and less the percentage to apply to the value of the work not completed, as indicated in the SCC. 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.

59.2 If the Contract is terminated because of fundamental breach of Contract or for any other fault by the Contractor, the performance security shall be forfeited by the Employer.

In such case, amount to complete the remaining works as per the Contract shall be recovered from the Contractor as Government dues.

**60. Property**

60.1 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.

**61. Release from Performance**

61.1 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.

**62. Suspension of DP Loan/Credit/Grant**

62.1 In the event that the Donor Agency suspends the loan/ credit/grant to the Employer from which part of the payments to the Contractor are being made:





- a. the Employer is obligated to notify the Contractor of such suspension within 7 days of having received the Donor Agency's suspension notice; and
- b. if the Contractor has not received sums due him within the 30 days for payment provided for in Sub-Clause 41.1, the Contractor may immediately issue a 15-day termination notice.
- 63. Project Manager's Duties and Authorities** 63.1 The Project Manager's duties and authorities are restricted to the extent as stated in the SCC.
- 64. Quarries and Spoil Dumps** 64.1 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.
- 65. Local Taxation** 65.1 The prices tendered by the Contractor shall include all taxes that may be levied in accordance to the laws and regulations in being in Nepal on the date 30 days prior to the closing date for submissions of Bids on the Contractor's equipment, plant and materials acquired for the purpose of the Contract and on the services performed under the Contract. Nothing in the Contract shall relieve the Contractor from his responsibility to pay any tax that may be levied in Nepal on profits made by him in respect of the Contract.
- 66. Value Added Tax** 66.1 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.
- 67. Income Taxes on Staff** 67.1 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.
- 67.2 The issue of the Final Account Certificate pursuant to clause 55 shall be made only upon submittal by the Contractor of a certificate of income tax clearance from the Government of Nepal.
- 68. Duties, Taxes and Royalties** 68.1 Any element of royalty, duty or tax in the price of any goods including fuel oil, and lubricating oil, cement, timber, iron and iron goods locally procured by the Contractor for the works shall be included in the Contract rates and prices and no reimbursement or payment in

- that respect shall be made to the Contractor.
- 68.2 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.
- 68.3 The Contractor shall pay and shall not be entitled to the reimbursement of cost of extracting construction materials such as sand, stone/boulder, gravel, etc. from the river beds or quarries. Such prices will be levied by the local District Development Committee (DDC) as may be in force at the time. The Contractor, sub-contractor(s) employed directly by him and for whom he is responsible, will not be exempted from payment of royalties, taxes or other kinds of surcharges on these construction materials so extracted and paid for to the DDC.
- 69. Member of Government, etc, not Personally Liable** 69.1 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.
- 70. Approval of Use of Explosives** 70.1 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.
- 71. Compliance with Regulations for Explosives** 71.1 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.
- 72. Permission for Blasting** 72.1 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.
- 73. Records of Explosives** 73.1 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.
- 74. Traffic Diversion** 74.1 The Contractor shall include the necessary safety procedures regarding and pedestrian traffic diversion that is needed in execution of the works. The Contractor shall include in his costing of works, any temporary works or diversion that are needed during the construction period. All traffic diversion should be designed for the safety of both the motoring public and the men at work. It shall ensure the uninterrupted flow of traffic and minimum inconvenience to the public during the period concerned.

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As such, adequate warning signs, flagmen and other relevant safety precautionary measures shall be provided to warn motorists and pedestrians well ahead of the intended diversion as directed by the Project Manager. All traffic devices used shall be designed in accordance with the instruction of Project Manager.

SECTION - VIII  
**Special Conditions of Contract**

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

<b>A. General</b>	
<b>GCC 1.1 (q)</b>	The Employer is <b>Department of Health Services Logistics Management Division Pachali, Teku, Kathmandu</b>
<b>GCC 1.1 (u)</b>	The Intended Completion Date for the whole of the Works shall be <b>within 6 months from the date of contract signing</b>
<b>GCCs 1.1 (aa) &amp; 4.1</b>	The Project Manager is ... The Project Manager and Engineer are synonyms.
<b>GCC 1.1 (cc)</b>	The Site is located at <b>Pathalaiya, Bara</b> and is defined in drawings No. NA
<b>GCC 1.1 (ff)</b>	The Start Date shall be <b>14 days after signing of contract</b>
<b>GCC 1.1 (jj)</b>	The Works consist of <b>Construction of Warehouse having Earth Work, RCC, Brick Masonry Works, Truss Works, CGI Sheet Roofing with Modular Ceiling and Electrification</b>
<b>GCC 2.2</b>	Sectional Completions are: <b>Not Applicable</b>
<b>GCC 2.3(i)</b>	The following documents also form part of the Contract: <b>Not Applicable</b>
<b>GCC 3.1</b>	The language of the contract is <b>English/Nepali</b> The law that applies to the Contract is the law of <b>Nepal</b>
<b>GCC 8.1</b>	Schedule of other contractors: <b>Not Applicable</b>
<b>GCC 13.1</b>	The minimum insurance amounts and deductibles shall be: <ol style="list-style-type: none"> <li>1. The minimum cover for loss of or damage to the Works, Plant and Materials is: <b>115%</b> of the Contract Amount.</li> <li>2. The maximum deductible for insurance of the Works and of Plant and Materials is: <b>NPR 5,00,000.00</b></li> <li>3. The minimum cover for loss or damage to Equipment is : <b>Full replacement cost of the equipment subject to minimum of NPR 25,00,000.00</b></li> <li>4. The maximum deductible for insurance of Equipment is: <b>NPR 50,000.00</b></li> <li>5. The minimum for insurance of other property is: <b>NPR 10,00,000.00</b> with unlimited number of occurrences</li> </ol>

	<p>6. The maximum deductible for insurance of other property is: <b>NPR 50,000.00</b></p> <p>7. The minimum cover for personal injury or death insurance</p> <p>i. for the Contractor's employees is that specified in the Labor act of Nepal and</p> <p>ii. for other people is : <b>NPR 5,00,000.00</b> with an unlimited number of occurrences</p>
<b>GCC 14.1</b>	Site Investigation Reports are: <b>The bidder shall make his own investigation, assessment and judgment with regards to the location and quality of suitable local construction materials. The employer shall take no liability for any conclusion inferred by the contractor.</b>
<b>GCC 17.1</b>	The following shall be designed by the Contractor: <b>Proposed temporary working drawing at site and work schedule.</b>
<b>GCC 20.1</b>	The Site Possession Date(s) shall be: <b>within two weeks from the date of contract agreement.</b>
<b>GCC 24.1</b>	The place of arbitration shall be: <b>Kathmandu, Nepal</b>
<b>B. Time Control</b>	
<b>GCC 25.1</b>	The Contractor shall submit for approval a Program for the Works within <b>15</b> days from the date of the Letter of Acceptance.
<b>GCC 25.3</b>	The period between Program updates is <b>30</b> days. The amount to be withheld for late submission of an updated Program is <b>NPR 200,000.00</b>
<b>C. Quality Control</b>	
<b>GCC 33.1</b>	The Defects Liability Period is: <b>365</b> days from the formal handover of the completed project.
<b>D. Cost Control</b>	
<b>GCC 40.1</b>	<b>4% of net payable amount of bill.</b>
<b>GCC 44.1</b>	The Contract <b>is not</b> subject to price adjustment, and the following information regarding coefficients <b>does not</b> apply.  The coefficients and indices for adjustment of prices in Nepalese Rupees shall be as specified in the Table of Adjustment Data submitted by bidder together with the Letter of Bid which is approved by the Project manager and attached as Annex-1.
<b>GCC 44.7</b>	Base Price of Construction Materials applicable for price adjustment shall be as per the Table of Adjustment Data submitted by Bidder together with the Letter of Bid which is approved by the Project manager and attached as Annex-1

<b>GCC 44.8</b>	The Price Adjustment amount shall be limited to a maximum <b>10</b> percentage of the initial Contract Amount
<b>GCC 45.1</b>	The proportion of payments retained is: <b>5%</b>
<b>GCC 46.1</b>	The liquidated damages for the whole of the Works are <b>0.05%</b> of the final Contract Price per day. The maximum amount of liquidated damages for the whole of the Works is <b>10%</b> of the final Contract Price.
<b>GCC 47.1</b>	The Bonus for the whole of the Works is <b>0.05%</b> per day. The maximum amount of Bonus for the whole of the Works is <b>5%</b> of the Contract Price.
<b>GCC 48.1</b>	The Advance Payments shall be: <b>10%</b> and shall be paid to the Contractor no later than <b>30 days</b> in two installments @5% each. Second instalment shall be paid based on the progress of mobilization made after first installment. The advance payment guarantee shall be valid until the intended completion date for whole of the works.
<b>GCC 48.3</b>	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 <b>20%</b> of the respective Monthly Interim Payment Certificate until such time as the advance payment has been repaid; provided that the advance payment shall be completely repaid prior to the end of 80 % of the approved contract period.
<b>GCC 49.1</b>	The Performance Security shall be provided is as per ITB 35.1
<b>E. Finishing the Contract</b>	
<b>GCC 55.1</b>	The date by which operating and maintenance manuals are required is <u>NA</u> The date by which “as built” drawings are required is <b>within 60 days of final bill submission.</b>
<b>GCC 55.2</b>	The amount to be withheld for failing to produce “as built” drawings and/or Operating and maintenance manuals is <b>NPR 5,00,000.00</b>
<b>GCC 56.4 (h)</b>	The maximum number of days is: <b>200 days</b>
<b>GCC 59.1</b>	The percentage to apply to the value of the work not completed, representing the Employer’s additional cost for completing the Works, is <b>25% at current market value based on District Rate</b>
<b>GCC 63</b>	The Project Manager has to obtain the specific approval of the Employer for taking any of the following actions : <ol style="list-style-type: none"> <li>a. Approving subcontracting of any part of the works under General Conditions of Contract Clause 7;</li> <li>b. Certifying additional costs determined under General Conditions of Contract Clause 42;</li> <li>c. Determining start date under General Conditions of Contract Clause 1;</li> <li>d. Determining the extension of the intended Completion Date under General</li> </ol>

	<p>Conditions of Contract Clause 27;</p> <p>e. Issuing a Variation under General Conditions of Contract Clause 1 and 38, except in an emergency situation, as reasonably determined by the Project Manager; emergency situation may be defined as the situation when protective measures must be taken for the safety of life or of the works or of adjoining property.</p> <p>f. Adjustment of rates under General Conditions of Contract Clause 37;</p>
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## Annex-1

### Table of Price Adjustment Data

[SCC 45.1]

Not Applicable

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)				
		<b>Total</b>			<b>1.00</b>

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

### Table of Price Adjustment Data

[SCC 45.7]

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

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

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





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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 Advance Payment Security, when required, shall only be completed by the successful Bidder after contract award.

# Letter of Intent

[on letterhead paper of the Employer]

Date: .....

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

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

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

Authorized Signature: .....

Name: .....

Title: .....

CC:

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



## Letter of Acceptance

[on letterhead paper of the Employer]

Date: .....

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

Subject: ..... *Notification of Award* .....

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

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

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

Authorized Signature: .....

Name and Title of Signatory: .....



## Contract Agreement

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

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

The Employer and the Contractor agree as follows:

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

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

Signed by .....  
for and on behalf the Contractor in the presence of

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

Witness, Name Signature, Address, Date

Witness, Name, Signature, Address, Date



## Performance Security

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

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

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

Date: .....

Performance Guarantee No.:.....

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

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

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

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

.....  
*Seal of Bank and Signature(s)*

### 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. In preparing this guarantee, the Employer might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months], in response to the Employer's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee".



## Advance Payment Security

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

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

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

Date:

Advance Payment Guarantee No.: .....

We have been informed that ... *name of the Contractor* ... (hereinafter called "the Contractor") has entered into Contract No. .... *reference number of the Contract* ... dated .....with you, for the execution of .... *name of contract and brief description of Works* ..(hereinafter called "the Contract").

Furthermore, we understand that, according to the Conditions of the Contract, an advance payment in the sum..... *name of the currency and amount in figures\**..... (.... *amount in words*.....) is to be made against an advance payment guarantee.

At the request of the Contractor, we ..... *name of the Bank* ..... hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of ..... *name of the currency and amount in figures\**..... (..... *amount in words* .....) upon receipt by us of your first demand in writing accompanied by a written statement stating that the Contractor is in breach of its obligation under the Contract because the Contractor used the advance payment for purposes other than the costs of mobilization in respect of the Works.

The maximum amount of this guarantee shall be progressively reduced by the amount of the advance payment repaid by the Contractor as indicated in copies of interim statements or payment certificates which shall be presented to us. This guarantee shall expire, at the latest, upon our receipt of a copy of the interim payment certificate indicating that eighty (80) percent of the Contract Price has been certified for payment, or on the ..... day of .....\*\*, whichever is earlier. Consequently, any demand for payment under this guarantee must be received by us at this office on or before that date.

Seal of Bank and Signature(s)

### Note:

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

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

