



NOTICE INVITING TENDER
(INVITATION FOR BIDS)

Online bids are invited from approved and eligible contractors/vendors of the Central Public Works Department (CPWD) and Central Public Sector Units/Enterprises (CPSUs/CPSEs). Contractors working in Central Universities, other IITs, NITs, and IIMs, as well as those empaneled with Railways, Military Engineering Services (MES), and Uttar Pradesh PWD, shall also be eligible to participate in Smart Laboratory on Clean Rivers (SLCR), Department of Civil Engineering, IIT (BHU) tenders for the following works:

S. No.	Tender No.	Specifications & quantity of the item	Earnest Money Deposit (EMD)
1.	IIT(BHU)/CE/SEC-SLCR/NMCG/26-27/04, Dated 28.04.2026	Name of the Project: Construction of Rainwater Harvesting System in Yugal Bihari inter Collage Rameshwar and Panchayat Bhawan Esarwar, Varanasi Estimated Cost Rs. 15,67,255.08 1. Eligibility Criteria (Cover-1) 2. Financial Bid (Cover-2)	Rs. 31,345.00

1. Interested eligible Bidders may obtain further information from IIT(BHU) website: www.iitbhu.ac.in/iitnotifications/purchase_enquiries/ or from Central Public Procurement Portal (CPPP) <https://eprocure.gov.in/eprocure/app>.
2. Intending bidders are advised to visit IIT (BHU) website www.iitbhu.ac.in/iitnotifications/purchase_enquiries/ and CPPP website <https://eprocure.gov.in/eprocure/app> regularly till closing date of BID submission of tender for any corrigendum / addendum/ amendment.
3. Earnest Money Deposit is to be submitted in the form of DD/FDR as per details mentioned in the critical data sheet. Bidders are required to submit the scan copy of payment receipt details of Tender fees and EMD at the time of Bid uploading.

CRITICAL DATA SHEET

Name of Organization	Indian Institute of Technology (BHU), Varanasi
निविदा प्रकार (खुला/सीमित/ईओआई/नीलामी/एकल) Tender Type (Open/Limited/EOI/Auction/Single)	खुला / Open
निविदा श्रेणी (सेवाएँ/सामान/कार्य) Tender Category (Services/Goods/Works)	कार्य / Works
अनुबंध का प्रकार/प्रारूप (कार्य/आपूर्ति/नीलामी/सेवा/खरीद/पैनल में शामिल करना/बेचना) Type/Form of Contract (Work/Supply/ Auction/ Service/ Buy/ Empanelment/ Sell)	कार्य / Works
उत्पाद श्रेणी (सिविल कार्य/इलेक्ट्रिकल कार्य/फ्लीट प्रबंधन/कंप्यूटर सिस्टम) Product Category (Civil Works/Electrical Works/Fleet Management/ Computer Systems)	सिविल कार्य / Civil Works
निविदा जारी करने/प्रकाशित करने की तिथि Date of Issue/Publishing Original Tender	01.06.2026 (4:00 P.M.)
निविदा दस्तावेज़ डाउनलोड प्रारंभ तिथि Document Download Start Date	01.06.2026 (4:00 P.M.)
दस्तावेज़ डाउनलोड समाप्ति तिथि Document Download End Date	10.06.2026 (4:00 P.M.)
निविदा अपलोड करने की अंतिम तिथि और समय Last Date and Time for Uploading of Bids	10.06.2026 (4:00 P.M.)
निविदा खोलने की तिथि और समय Date and Time of Opening of Bids	11.06.2026 (4:00 P.M.)
निविदा प्रसंस्करण शुल्क (कृपया ध्यान दें: निविदा प्रसंस्करण शुल्क केवल RTGS/NEFT के माध्यम से भुगतान किया जाना चाहिए। किसी अन्य भुगतान विधि को स्वीकार नहीं किया जाएगा।) Tender Processing Fee (Please Note: The Tender Processing Fees must be paid through RTGS/NEFT only. No other mode of payment will be acceptable.)	रुपये 1000.00 + रुपये 180.00 (जीएसटी @ 18%) = रुपये 1180.00 (RTGS/NEFT के माध्यम से भुगतान किया जाना है) निम्नलिखित विवरण के अनुसार: खाते का नाम - रजिस्ट्रार, IIT(BHU) बैंक का नाम - स्टेट बैंक ऑफ इंडिया शाखा का नाम - IT, BHU, वाराणसी खाता नंबर - 32778803937 IFSC कोड - SBIN0011445 (भुगतान का प्रमाण कवर-1 में अपलोड किया जाना चाहिए) Rs. 1000.00 + Rs. 180.00 (GST @ 18%) = Rs. 1180.00 (To be paid through RTGS/NEFT) as per the following details: Name of Account - Registrar, IIT(BHU) Name of the Bank - State Bank of India Name of Branch - IT, BHU, Varanasi Account No. - 32778803937 IFSC Code - SBIN0011445 (The proof of payment must be uploaded in cover-1)
ईएमडी / EMD	Rs. 31,345.00 to be paid in the form of DD/FDR in the name of Registrar, IIT(BHU), Varanasi, payable at VARANASI. (Scanned copy of DD/FDR to be uploaded in cover-1) (Original to be submitted in cover-1 along with eligibility criteria documents) रुपये 31,345.00 को रजिस्ट्रार, IIT(BHU), वाराणसी के नाम पर डीडी/एफडीआर के रूप में भुगतान किया जाएगा, जो वाराणसी में देय होगा। (डीडी/एफडीआर की स्कैन की गई प्रति कवर-1 में अपलोड की जानी चाहिए) (मूल डीडी/एफडीआर कवर-1 में पात्रता मानदंड दस्तावेजों के साथ प्रस्तुत किया जाना चाहिए)

कवरों की संख्या (1/2/3/4) No. of Covers (1/2/3/4)	02
वैधता दिनों की संख्या (180/120/90/60/30) Bid Validity days (180/120/90/60/30)	180 दिन (निविदा खोलने की अंतिम तिथि से) 180 days (From last date of opening of tender)
कार्य समाप्ति अवधि Work Completion Period	60 Days/दिन
संचार के लिए पता Address for Communication	Principal Investigator, SLCR, Geoinformatics Lab, Department of Civil Engineering, IIT(BHU), Varanasi
ईमेल पता / Email Address	slcr@itbhu.ac.in

INSTRUCTIONS FOR ONLINE BID SUBMISSION

As per the directives of Department of Expenditure, this tender document has been published on the Central Public Procurement Portal ([URL:http://eprocure.gov.in/eprocure/app](http://eprocure.gov.in/eprocure/app)). The bidders are required to submit soft copies of their bids electronically on the CPP Portal, using valid Digital Signature Certificates. The instructions given below are meant to assist the bidders in registering on the CPP Portal, prepare their bids in accordance with the requirements and submitting their bids online on the CPP Portal.

More information useful for submitting online bids on the CPP Portal may be obtained at: <http://eprocure.gov.in/eprocure/app>.

1. Registration & Login

- Bidders must be registered on CPP Portal using valid email and mobile number.
- A valid Class II/III DSC issued by an authorized Certifying Authority recognized by CA India is mandatory.
- Bidders shall be responsible for confidentiality and proper use of their DSC.

2. Submission of Bids

- Bids shall be submitted online only before the prescribed deadline.
- Technical and Financial bids shall be uploaded in respective covers as specified.
- EMD and tender fee shall be paid as per instructions given in the tender document.

3. Financial Bid (BOQ)

- Financial bid shall be submitted only in the prescribed BOQ format.
- No modification in BOQ format is permitted; otherwise, the bid shall be rejected.

4. Documents Upload

- All required documents shall be uploaded in PDF format.
- Bidders shall ensure completeness of documents; incomplete submissions may lead to rejection.

5. Important Instructions

- Bidders shall consider corrigendum/addendum (if any) before submission.
- Server time on CPP Portal shall be treated as final for submission deadlines.
- Late submissions due to any reason shall not be accepted.

6. Assistance

- For tender-related queries, contact the Tender Inviting Authority.
- For technical issues related to CPP Portal, bidders may contact CPPP 24x7 Helpdesk (Toll Free: 1800-233-7315).

**INFORMATION AND INSTRUCTIONS TO BIDDERS FOR TENDERING FORMING PART OF BID
DOCUMENT AND TO BE POSTED ON WEBSITE**

NIT

1. SLCR, Department of Civil Engineering, IIT(BHU) invites the online percentage rate/Item rate Bids from eligible contractors/vendors of the Central Public Works Department (CPWD) and Central Public Sector Units/Enterprises (CPSUs/CPSEs). Contractors working in Central Universities, other IITs, NITs, and IIMs, as well as those empanelled with Railways, Military Engineering Services (MES), and Uttar Pradesh PWD, shall also be eligible to participate in SLCR, Department of Civil Engineering, IIT(BHU) tenders for the following works: **“Construction of Rain water Harvesting System in Yugal Bihari inter Collage Rameshwar and Panchayat bhawan Esarwar, Varanasi”**.

The enlistment of the contractors should be valid on the last date of submission of bids. (Self-Certified copy of currently valid enlistment certificate to be uploaded as proof along with other eligibility criteria)

- 1.1 The work is estimated to cost Rs. **15,67,255.08**. The estimate, however, is given merely as a rough guide).
- 1.2 Intending bidder is eligible to submit the bid provided, if he has definite proof from the appropriate authority, which shall be to the satisfaction of the competent authority, of having satisfactorily completed similar works of magnitude specified below:

1.2.1 Criteria of eligibility for submission of bid documents:

- (a) Intending bidder should not be a joint venture. **(Self-Certified copy of relevant documents clearly establishing the status of bidder to be uploaded)**
- (b) Should have satisfactorily completed Three similar works each of value not less than **Rs 6.27** Lacs or Two similar works each of value not less than **Rs 9.40** Lacs or One similar work of value not less than **Rs 12.54** Lacs during last five years ending 31st March 2026. **(Self-Certified photocopy of work order along with work completion certificate to be uploaded as proof of eligibility criteria)**

Explanation:

The value of completed works shall be updated to current cost by applying **7% simple annual escalation** from the date of completion to the last date of bid submission.

Similar work means **“Water supply / drainage / RWH / civil works related to water structures/ Construction Work etc.”**

- (c) The bidder should have **average annual financial turnover of Rs. 5.00 lakh** during the last three financial years, duly certified by a Chartered Accountant.
- (d) Should not have incurred any loss (**profit after tax should be positive**) in more than three years during the last five years ending 31st March, 2025. **(Self-Certified photocopy of certificate from CA to be uploaded along with certified copy of last five years Profit & Loss Account)**

1.2.2 To become eligible for tender, the contractor shall have to furnish an affidavit on a non-judicial stamp paper of Rs. 10.00 as under:

I/We undertake and confirm that eligible similar works(s) has/have not been got executed through another bidder on back-to-back basis. Further that, if such a violation comes to the notice of Indian Institute of Technology (BHU), then I/we shall be debarred for tendering in SLCR, Department of Civil Engineering, IIT(BHU) in future forever. Also, if such a violation comes to the notice of Indian Institute of Technology (BHU) before the date of start of work, the Principal Investigator, SLCR, Department of Civil Engineering, IIT(BHU) shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee. **(Scanned copy of affidavit to be uploaded in cover-1). The date of issuing affidavit after the tender publishing date. The affidavit must exist tender number also.**

2. Agreement shall be drawn with the successful bidder on prescribed Format.
3. **Completion Period:** The work shall be completed within **60 days** from the date of start or handing over of site, whichever is later.
4. The site is **available for commencement of work**.
5. The tender documents including **drawings, specifications, BOQ and terms & conditions** can be downloaded from CPP Portal (www.eprocure.gov.in) or institute website.
6. The bidder may **revise/modify the bid** any time before the deadline; however, **only the last submitted bid** shall be considered.

7. **EMD: Rs.31,345/-** shall be submitted in the form of DD/FDR/Banker's Cheque in favour of **Registrar, IIT (BHU), Varanasi**. Scanned copy shall be uploaded in **Cover-1** and original submitted as per tender conditions.
8. **Tender Fee: Rs.1180 (₹1000 + 18% GST)** shall be paid online. Proof of payment (UTR number) shall be uploaded in **Cover-1**.
9. All supporting documents including **EMD proof, tender fee, eligibility documents (work experience, turnover, etc.)** shall be uploaded under **Cover-1** on the e-tendering portal.
10. The bid shall be **rejected** if the bidder is found ineligible or fails to submit required documents. Tender fee shall **not be refunded**.
11. The successful bidder shall submit a **Performance Guarantee of 5%** of the contract value within **15 days** of issue of Letter of Acceptance, failing which the **EMD shall be forfeited**.
12. The bidder is advised to **inspect the site before applying/bidding**, at his **own cost**, and shall be fully responsible for understanding the site conditions. For the purpose of site inspection, the bidder may contact the **Principal Investigator/concerned official** of the department. No claim on this account shall be entertained at any stage. All arrangements for materials, labour, tools, plant, water, electricity, etc. shall be made by the contractor at his own cost.
13. The Institute reserves the right to **accept or reject any or all bids** without assigning any reason. Conditional bids shall be rejected.
14. **Canvassing is prohibited** and shall lead to rejection of bid.
15. The Institute may **accept full or part of the work**, and the bidder shall be bound to execute the same at quoted rates.
16. The bidder shall not participate if any **near relative is posted in SLCR/IIT (BHU)** in relevant engineering positions.
17. Retired Government engineers shall not participate within **one year of retirement** without prior approval of Government of India.
18. The bid shall remain **valid for 180 days**. Withdrawal or modification during this period shall lead to **forfeiture of EMD** and disqualification.
19. The **NIT and tender documents shall form part of the contract**, and the successful bidder shall sign the agreement within stipulated time.
20. **Composite Tender:**
 - a) This is a **composite work**, and the EMD is based on the **total estimated cost** of all components.
 - b) The tender document includes:
 - Part A:** Main contract (Form, Conditions, Schedule A–F)
 - Part B:** Specifications & approved makes
 - Part C:** Minor components (if any)
 - Part D:** BOQ (Schedule of Quantities)
 - Part E:** Drawings & Designs
 - c) The bidder shall **quote rates for all items** in the BOQ.
 - d) The work shall be executed under a **single agreement**, and the **Letter of Award (LOA)** shall be issued by the Principal Investigator (PI), SLCR.
 - e) The bidder may engage **specialized agencies for minor components** with prior approval of PI. Any change in such agencies shall also require prior approval. The performance of all agencies shall be the **responsibility of the main contractor**.
 - f) The work shall be treated as **complete only after completion of all components**, and final bill shall be processed by SLCR.
 - g) The bidder shall sign all relevant contract documents **before release of first payment**.

Sd-

Principal Investigator (PI)

SLCR, Department of Civil Engineering
Indian Institute of Technology (BHU), Varanasi

List of Documents to be scanned, uploaded and submitted under Cover-1 (Technical Bid) on e-tendering website up to the last date and time of e-tender.

1. Documents indicating the bidder's registration/enlistment status with CPWD, CPSUs/CPSEs, Central Universities, IITs, NITs, IIMs, or empanelment with Railways, MES, or UPPWD.).
2. Documents regarding the legal status of the firm, along with Power of Attorney of the authorized signatory.
3. Self-certified copies of work orders along with corresponding work completion certificates as per eligibility criteria.
4. Details of qualifications and experience of key technical personnel proposed for the work.
5. Scanned copy of EMD (DD/FDR/Banker's Cheque).
6. Affidavit as per 1.2.2 and proof of submission of tender processing fee **only in online mode**. The date of issuing affidavit after the tender publishing date. The affidavit must exist tender number also.
7. Proof of payment of tender processing fee (online mode only).
8. Chartered Accountant certificate for turnover and no-loss certificate, along with Profit & Loss statements for the last five financial years.
9. GST Registration Certificate, PAN Card, and ESI/EPF registration (as applicable).

List of documents to be uploaded upto the last date & time mentioned below in Cover-2 (Financial Bid):

1. GST Registration Certificate, PAN Card, and ESI/EPF registration (as applicable).

(Kindly note that no physical submission of duly filled in BoQ is required and it is to be uploaded only on e-tendering website).

Sd-
Principal Investigator (PI)
SLCR, Department of Civil Engineering
Indian Institute of Technology (BHU), Varanasi

A: GENERAL INSTRUCTIONS

1.0 Scope of Tender:

1.1 Indian Institute of Technology (BHU) (referred to as Owner in these documents) invites Tenders for **“Construction of Rain water Harvesting System in Yugal Bihari inter Collage Rameshwar and Panchayat bhawan Esarwar, Varanasi.”**

(As defined in these documents and referred to as “the works”) detailed in the table given in the Notice Inviting Tenders (NIT).

1.2 The successful Bidder shall complete the works within the completion date specified in the Notice Inviting Tenders (NIT).

2.0 Non-Association / Relation:

2.1 All Bidders shall provide in the bid tender and Qualification Information, a statement that the Bidder is not associated, nor has been associated in the past, directly or indirectly, with the IIT(BHU) or any other entity that has prepared the design, specifications, and other documents for the Project.

3.0 Qualification of the Bidder

3.1 All Bidders shall provide tender qualification information.

3.2 All Bidders shall include the following information by submitting relevant documents and certificate with their tenders:

The Bidder must be registered with the GST Department and should submit the registration certificate of PAN, GST, ESI, PF, labour license etc.

4.0 Cost of tendering:

4.1 The Bidder shall bear all costs associated with the preparation and submission of his tender, and the Owner will in no case be responsible and liable for those costs.

5.0 Site Visit:

The Bidder, at its **own responsibility and risk** is encouraged to visit and examine the Site of Work and its surroundings and obtain all information that may be necessary for preparing the tender. The costs of visiting the Site shall be at the Bidder’s own expense.

B: DOCUMENTS INVITING TENDERS

6.0 Invitation: Tenders are hereby invited on behalf of Indian Institute of Technology (BHU).

7.0 Contents of documents as mentioned in the relevant clauses mentioned:

The tender documents shall comprise all items listed in the relevant clauses of the Notice Inviting Tender (NIT).

The bidder shall be deemed to have carefully examined all the tender documents, including instructions, specifications, drawings, and terms & conditions.

Submission of an incomplete or non-responsive bid may lead to rejection at the bidder’s risk.

All contract documents shall be mutually explanatory. In case of any discrepancy, the following shall prevail:

- Figured dimensions shall prevail over scaled dimensions
- Detailed drawings shall prevail over small-scale drawings
- Special Conditions shall prevail over General Conditions

In case of conflict among the documents, the following order of precedence shall apply:

1. Schedule of Quantities (BOQ)
2. Particular Specifications and Special Conditions, if any
3. Drawings
4. CPWD/SLCR Specifications
5. Latest edition of relevant Indian Standard Specifications (BIS)

8.0 Amendment of Tendering Documents:

8.1 Before the deadline for submission of bids, IIT (BHU) may modify the tender documents by issuing addenda/corrigenda.

8.2 Any addendum/corrigendum so issued shall form part of the tender documents and shall be uploaded on the CPP Portal (www.eprocure.gov.in) and the Institute website (www.iitbhu.ac.in).

- 8.3 To provide prospective bidders reasonable time to take such addenda into account while preparing their bids, the Institute may, if necessary, extend the deadline for submission of bids.

C: PREPARATION OF DOCUMENT

9.0 Earnest Money Deposit (EMD):

EMD shall be submitted as per provisions mentioned in the NIT. Non-compliance shall lead to rejection of bid.

10.0 Period of validity of bid

10.1 The bid shall remain valid for **180 days** from the date of opening.

10.2 Bids with shorter validity shall be **rejected**.

11.0 Language of Bid:

The document shall be written in English language. The total amount should be written in the same language.

12.0 Document comprising the E-Tender: The complete tender document shall be submitted without alteration, duly signed and stamped on all pages by the authorized signatory.

13.0 Tender Prices:

13.1 The contract shall be based on the **BOQ (Schedule of Quantities)**.

13.2 The bidder shall **quote rates for all items**, failing which the bid shall be **rejected**.

13.3 Rates shall be **inclusive of all taxes, duties, GST, cess, labour, materials, transportation, tools, water, electricity and all incidental costs**.

13.4 No extra payment or tax claim shall be entertained.

13.5 Quantities in BOQ are **tentative** and may vary; payment shall be made on **actual work done**.

13.6 In case of discrepancy:

- Rates in words shall prevail over figures
- Arithmetic errors shall be corrected accordingly

NOTE: ALL RATES QUOTED BY THE BIDDER ARE INCLUSIVE OF ALL TAXES LIKE GST CESS AS PER BUILDING & OTHER CONSTRUCTION WORKERS CESS ACT.

14.0 OR ANY STATUTORY TAX APPLICABLE AS PER STATE GOVERNMENT:

14.1 The contractor shall comply with all local laws, by-laws and statutory requirements.

14.2 Necessary approvals/certificates shall be arranged by the contractor.

14.3 The contractor shall arrange insurance for workers and site risks at his own cost.

15.0 Format and signing of Tender document:

15.1 The bid shall be **properly signed by authorized person**.

15.2 Any **unsigned, incomplete or conditional bid** shall be **rejected**.

D: TENDER OPENING AND EVALUATION

16.0 Tender opening: Bids shall be opened on the **date and time specified in NIT**. in case of any unforeseen circumstances, opening shall be done on the **next working day**.

17.0 Clarification of Tenders: The Owner may seek **written clarification** from bidders during evaluation. no change in **price or substance of bid** shall be permitted.

18.0 Examination of Bids and Determination of Responsiveness

18.1 Bids shall be checked for **eligibility, completeness, required documents, and compliance** with tender conditions.

18.2 Only **substantially responsive bids** shall be considered.

18.3 non-responsive bids shall be **rejected**.

18. Correction of Errors:

18.1 **Rates in words shall prevail over figures**.

18.2 Arithmetic errors shall be corrected by the Owner, and the **corrected amount shall be binding**.

18.3 If not accepted, the bid shall be **rejected****20. Evaluation and Comparison of Bids**

19.0 Evaluation of Bids:

19.1 Only responsive bids shall be **evaluated and compared**.

- 19.2 Evaluation shall consider **corrected bid price and applicable adjustments/discounts**.
- 20.0 **The Owner reserves the right to accept or reject any variation, deviation, or alternative offer and other factors which are in excess of the requirement of the tender.**

E: AWARD OF TENDER

21.0 Award criteria:

- 21.1 The Owner reserves the right to **accept or reject any bid** (fully/partially) without assigning any reason.
- 21.2 The Owner may award **full or part of the work**, and the bidder shall execute the same at quoted rates.
- 21.3 Any item of work may be **omitted and assigned to another agency** during execution.

- 22.0 Notification of award:** The successful bidder shall be issued a Letter of Intent (LOI). The LOI shall not constitute the final award of work.

The award of work shall be deemed to have been made only upon issuance of the Letter of Acceptance (LOA).

- 23.0 Performance security/Performance Guarantee:** The successful bidder shall submit a Performance Guarantee @ 5% of the contract value within 15 days of issue of LOA. The Performance Guarantee shall be released after successful completion of the work and issuance of the completion certificate, as per contract conditions.

- 24.0 Signing of contract form:** After submission of the Performance Guarantee, the successful bidder shall execute and sign the contract agreement with IIT (BHU), incorporating all terms and conditions of the tender documents.

F: DURING EXECUTION

25.0 During Execution:

- 25.1 The contractor shall execute the work **strictly as per drawings, specifications and instructions of the Owner/PI**. Any modifications shall be binding and decisions of the Owner/PI shall be **final**.
- 25.2 The contractor shall execute all **necessary items for completion of work**, even if not included in BOQ. Rates for such items shall be determined based on **market rates with reasonable overhead & profit**, as approved by the Owner/PI.
- 25.3 The Owner/PI may call for **rate analysis** of any item. In case of unjustified rates, the same may be **revised**, and the decision shall be final.
- 25.4 The contractor shall ensure **quality of materials and workmanship**. Any substandard work/material shall be **rejected**.
- 25.5 The Owner/PI may conduct **random testing of materials**, and all testing costs shall be borne by the contractor.
- 25.6 The contractor shall submit **invoices and manufacturer certificates** for materials used.
- 25.7 No compensation shall be payable for **delays**; however, **time extension may be granted** if delay is not attributable to the contractor.

III. ARTICLES OF AGREEMENT

Articles of Agreement shall be as per Indian Institute of Technology (BHU), Varanasi.

FORM 'A'
FINANCIAL INFORMATION

1. Financial analysis – Details to be furnished duly supported by figures in balance sheet/ profit & loss account for the last three years duly certified by the Chartered Accountant, as submitted by the applicant to the Income Tax AUTHORITIES

YEARS

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- (i) Gross Annual Turnover on construction works
(ii) Profit/Loss
2. Financial arrangements for carrying out the proposed work.
3. The following certificates are enclosed:
- (a) Audited Balance sheet.
(b) Solvency certificate from Bankers of Applicant

Signature with Seal & Date

FORM 'B'

PROFORMA FOR LIST OF CIVIL WORKS EXECUTED BY THE BIDDER DURING THE LAST 5 YEARS AND ABOVE

Sl. No	Name of work/ project with address	Name & postal address of the owner & contact person	Contract Value	Date of Start	Date of Completion	Actual Date of Completi on

Note: Bidder may furnish the above information in separate sheet if the space is not sufficient.

FORM 'C'

PROFORMA FOR LIST OF WORKS IN HAND

Sl. No	Name of work/ project with address	Name & postal address of the owner & contact person	Published Value	Date of Start	Stipulated date of completion	Present Progress

Note: Bidder may furnish the above information in separate sheet if the space is not sufficient.

FORM 'D'
DETAILS OF KEY PERSONNEL

Sl. No	Name & Designation	Qualification	Experience	Nature of Works Handled	Date from which employed in your organisation

Note: Bidder may furnish the above information in separate sheet if the space is not sufficient.

GENERAL CONDITIONS OF CONTRACT

A: GENERAL

- 1.0 Definitions:** Contract, Work, Owner, Bidder, Site, Value, GCC/SCC as defined in tender; all include materials, labour, services & obligations.
- 2.0 Interpretation and Application:** Contract documents are mutually explanatory; Owner's decision final in case of ambiguity.
- 3.0 Standards & Quality:** Work shall follow specifications, approved materials & Owner's instructions; testing at bidder's cost.
- 4.0 Use of Contract Documents and Information:** Tender documents/information cannot be disclosed or used without Owner's approval.
- 5.0 Owner's Decisions:** Owner's decisions on contract matters, changes, and disputes shall be final and binding.
- 6.0 Performance Security:** Bidder must submit performance guarantee as per contract; recoverable on failure.
- 7.0 Programme and Reporting:** Bidder to submit work schedule & regular progress reports.
- 8.0 Assignment and Sub-contracting:** No assignment/subcontracting without prior written approval; bidder remains fully responsible.
- 9.0 Bidder Execution Responsibility:** Bidder shall provide all materials, labour, tools, water, electricity & execute complete work at no other extra cost
- 10.0 Infrastructure:** For storage of materials, bidder has to provide at his own cost sufficient fenced and covered appropriate area on site for storage of above materials with lock and key arrangement. For arranging meetings suitable sized table and chairs shall be provided by Bidder.
- 11.0 Site Establishment:**
The bidder shall arrange all materials, labour, tools, and proper storage with adequate protection. Safety and security of materials, equipment, and site shall be the sole responsibility of the bidder. All materials (including those issued by Owner) shall be properly maintained; any loss/damage shall be borne by the bidder. Site shall be kept clean, organized, and free from debris with disposal at approved locations.
The bidder shall ensure restricted site access, proper supervision, and safe working conditions at all times. All drawings and documents shall be securely maintained. Tools and equipment shall not be removed without permission. The bidder shall follow discipline, prevent misconduct, and comply with all safety instructions; failure may lead to removal of personnel or recovery of costs by Owner.
- 12.0 Messing & Accommodation:** The bidder will make his own arrangements for messing and accommodation. No accommodation and messing shall be provided by the Owner.
- 13.0 Procurement, Consumption and Storage of Materials:**
- 13.1** The bidder shall arrange all materials (including cement & steel) at his own cost and maintain adequate stock at site. All materials must conform to contract specifications and be approved by the Owner before use. Samples shall be submitted for approval as required.
Any substandard or unapproved material shall be rejected and removed by the bidder at his own cost. The bidder is fully responsible for procurement of materials, and no delay due to non-availability will be accepted.
- 14.0 Method of storing the materials**
- 14.1** The bidder shall at his own cost, provide for all necessary storage on the site in specified areas for all materials such as steel, cement and such other materials which are likely to deteriorate by the action of sun, wind, rain, dampness or other natural causes due to exposure in the compounds or in stores in such a manner that all materials, tool etc. shall be duly protected from damage by weather or any other cause. Storage and safe custody of materials shall be the responsibility of the bidder.
- 15.0 Shuttering and Scaffolding Materials:** It shall be desirable to have adequate amount of shuttering and scaffolding materials to complete the work speedily and Owner decision so as to the quantum of these desirable/ resources of the site shall be final and binding.
- 16.0 Completion of Work:** Before finally leaving site, all the Bidders stores, plant, tools and rubbish shall be removed and the site left clean and tidy. The space allocated by Owner shall be vacated and handed over to the Owner.
- 17.0 Water and Electricity for Construction work:** Water & Electricity as per relevant section's mentioned above
- 18.0 Employment of Labour:**
- 18.1** The Bidder shall comply with all applicable labour laws and statutory requirements and shall be solely responsible for payment of wages, PF, ESI, insurance, labour cess, and other dues. Any liability arising due to non-compliance shall be borne by the Bidder and recoverable by the Owner. No labour shall be allowed to stay at site.
- 18.2** Only skilled and experienced workers shall be engaged. No child labour (below 18 years) shall be employed and all workers shall be paid as per Minimum Wages Act. The Bidder shall arrange all logistics including transport and accommodation for labour.
- 18.3** All traveling expenses including provision of all necessary transport to and from site, lodging allowances and other payments to the bidder's employees are his own responsibility.
The hours of work on the site shall be decided by the Owner and bidder shall adhere to the same.
All bidders employees shall wear safety helmet and such identifications marks as may be provided by bidder on work site and duly approved by Owner.

All notices displayed on the site and any instructions issued by the Owner shall be strictly adhered to by the Bidder's and/or his sub-bidders employees.

The bidder shall be required to maintain employment records as covered in relevant Acts and produce documentary evidence to the effect that he has discharged his obligations under the Employees Provident Fund Act 1952, and ESI Act, 1948 Group Insurance and other Acts for the workmen working at site.

- 18.4 It is the sole responsibility of the Contractor to comply with the rules and regulations of the Labour and Employment Department and deposit of the due amount of concerned Labour cess to the Department. It is also the responsibility of the contractor to submit Labour License at the time of the submission of final bill, if applicable. Also, provisions of the Child Labour (Prohibition and Regulation Act 1986) must be complied by all the contractor at all time.

19.0 Working and Safety Regulations

- 19.1 The bidder shall observe all statutory safety and legal requirements regulations issued by Central and State Governments applicable to the work as well as any local regulations applicable to the site issued by the Owner or any other authority.

20.0 Particular attention is drawn to the following:

In case of accident, the Owner shall be informed in writing forthwith and First-Aid, Hospitalisation shall be provided by the Bidder. The bidder shall strictly follow regulations laid down by Govt. and State authorities in this regard and all cases are to be defended by the bidder. The Owner shall not refund any insurance claims. Bidder shall fence his plant, platforms, excavations etc.

Compliance with all electricity regulations.

Compliance with statutory requirements for inspection and test of all lifting appliances and auxiliary lifting gear.

Staircase, doors or gangways shall not be obstructed in any way that will interfere with means of access of escape.

Where it is necessary to provide and/or store petroleum products or petroleum mixtures and explosive, the bidder shall be responsible for carrying out such provision and/or storage in accordance with the rules and regulation laid down in Petroleum Act 1934. Explosive Act 1948 and Petroleum and Carbide of Calcium Manual Published by the Chief Inspector of Explosive of India. All such storage shall have prior approvals of the Owner. In case any approval or clearance from Chief Inspector of Explosive or any statutory authorities is required, the bidder shall be responsible for obtaining the same.

The bidder shall have his own Fire Fighting Extinguishers and Equipment.

The bidder shall be responsible for the provision of all safety notices safety equipments including the safety gadgets for his workmen required by both the relevant legislation and such as the Owner may deem necessary. While working at heights, safety belts and safety helmets shall necessarily be used.

21.0 Owner's and Bidder's Risks

The Owner carries the risks, which this Contract states are The Owner risks, and the Bidder carries the risk, which this Contract states are The Bidder's risks.

- 21.1 Owner's Risks- The Owner is responsible for the excepted risks which are (a) insofar as they directly affect the execution of the Works. These include war, hostilities, invasion, act of foreign enemies, rebellion, revolution, insurrection of military or usurped power, civil war, riot commotion or disorder (unless restricted to the Bidder's Employees), and contamination from any nuclear fuel or nuclear waste or radioactive toxic explosive, or (b) a cause due solely to the design of the Works, other than the Bidder's design.

- 21.2 Bidder's Risks- All risks of loss or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract other than the excepted risks are the responsibility of the Bidder.

- 21.3 The Bidder shall be responsible for all injury to persons, animals or things, and for all damages to the structural and/or decorative part of property which may arise from the operations or neglect of himself or of any sub-bidder or of any of his or sub-bidder's employees whether such injury or damage arises from carelessness accident or any other causes whatsoever in any way connected with the carrying out to the Contract. This clause shall be held to include inter alia any damage to buildings, whether immediately adjacent or otherwise and any damage to roads, footpaths, or ways as well as all damage caused to the buildings and the work forming the subject to this Contract by frost, rain or other inclemency of the weather. The Bidder shall indemnify the Owner and hold him harmless in respect of all and any expenses arising from any such injury or damage to persons or property as aforesaid and also in respect of any claim made in respect of injury or damage under any acts of Government or otherwise and also in respect of an award of compensation or damages consequent upon such claim.

The bidder shall make good all damages of every sort mentioned in the Clause, as to deliver up the whole of the Contract works complete and perfect in every respect and so as to make good or otherwise satisfy all claims for damage to the property of third parties.

22.0 Insurance

- 22.1 The Bidder shall provide, in the joint names of the Owner and the Bidder, insurance cover from the Start Date to the end of the Defects Liability Period, in the amounts and deductibles stated in the Contracted Data for the following events which are due to the Bidder's risks and shall be covered under respective policies as under:

- (a) Workmen Compensation Policy;

- (b) Bidder's All Risk Policy;
 - (c) Third Party Insurance.
- 22.2 Policies and certificates for insurance shall be delivered by the Bidder to the Owner for the Owner' approval before the Date of Start of work i.e. date of execution of the contract. All such insurance shall provide for compensation to be payable in the types and proportions of currencies required to rectify the loss or damage incurred.
- 22.3 If the Bidder does not provide any of the policies and certificates required, the Owner may affect the insurance which the Bidder should have provided and recover the premiums the Owner has paid from payments otherwise due to the Bidder or if no payment is due, the payment of the premiums shall be a debt due.
- 22.4 Alterations to the terms of the insurance shall not be made without the approval of the Owner or Owner.
- 22.5 Both parties shall comply with the conditions in the insurance policy.
- 23.0 Setting out Works:**
- 23.1 The bidder shall set out the works and responsible for the true and perfect setting out of the same and for the correctness of the positions, levels, dimensions and alignment of all parts thereof, if at any time any error shall appear during the progress of any part of works the bidder shall at his own expenses rectify such error, if called upon to the satisfaction of the Owner.
- 24.0 Bidder to remove all offensive matter, non-suitable material etc. immediately:**
- 24.1 All debris, excavated soil, filth or other matter or an offensive nature taken out of any trench, sewer, drain cesspool or other place shall not be deposited on the surface but shall be at once carted away by the bidder out of the premises/ site under intimation to concerned authorities.
- 24.2 Any material brought on site if found unsuitable shall be removed from site at once by the Bidder under intimation to the concerned authorities.
- 24.0 Inspections by Owner:**
- 24.1 The representative of the Owner at all times have free access to the works and /or to the workshops, factories or other places where materials are being prepared or constructed for the Contract and also to any place where materials are lying or from which they are being obtained. No person except the representatives of Public authorities shall be allowed on the work at any time without the written permission of the Owner. If any work is to be done at a place other than the site of the works, the Bidder shall obtain written permission of the Owner for doing so.
- 24.2 The Owner and their representatives shall have the right to test and/ or inspect the works to confirm their conformity to the contract, at all times, whenever in progress either on the site on the Bidder's premises wherever situated or any firm or company where work in connection with this contract may be in hand. All records, registers or documents relating to the works including materials used on works shall be kept open to the inspection of the Owner or his Authorized representative when so called for in writing.
- 24.3 The Bidder shall get the quality of work done inspected for material and workmanship at different stages of execution as per instructions given by the Owner or their representative time to time. Any item of work done which is found not conforming to the Contract shall be rejected by the Owner. The decision of the Owner in such cases shall be final.
- 24.4 The inspections and tests may be conducted on the premises of the Bidder or at the Project site. When carried out on the premises of the Bidder or its sub-Bidder(s), all reasonable facilities and assistance including access to drawings and production data shall be furnished to the inspectors at no charge to the Owner.
- 24.5 Should any inspected items of work fail to conform to the specifications, the Owner shall communicate them and the Bidder shall either replace them or make all alterations necessary to meet specification requirements free of cost to the Owner.
- 24.6 The Bidder shall permit the Owner/Architect to inspect the Bidder's accounts and records relating to the performance of the Bidder and to have them audited by auditors appointed by the Owner, if so required.
- 25.0 Covering Up/Uncovering of Works:**
- 25.1 No part of the works shall be covered up without the approval of Owner/Architect and the Bidder shall afford full opportunity for examination and inspection by the Owner/Architect. The bidder shall give due notice to the Engineers of Institute about the work to be covered up for its measurements and examination. The Engineer shall within a reasonable time attend for the purpose of examining such work, unless the Engineer specifically advises the Bidder in writing of his unwillingness not to attend for such examination in which case the Bidder may proceed further with the Contract work.
- 25.2 Should the Owner consider it necessary in order to satisfy himself as to the quality of the work, the Bidder shall at any time during the continuance of the contract pull down or cut into any part of the work and make such opening into and to such an extent through the same, as the Engineer may direct and the Bidder shall make good the whole to the satisfaction of the Engineer, should the work prove to be faulty or in any respect not in accordance with the terms of the contract documents, the Engineer shall be at liberty to order such further removal as he may consider necessary and the whole of the expenses incurred shall be borne by the bidder. If, however, the work proves to be sound and in accordance with the contract document, the actual expenses incurred in such examination will be borne by the Owner.
- 25.3 Rates charged by the Bidder for works performed under the contract shall not vary from the rates quoted by the Bidder in its Publish, with the exception of any price adjustments authorized in SCC or in the Owner's request for Publish validity extension, as the case may be.

- 25.4 If requested by the Owner, the Bidder shall provide the Owner with a detailed cost breakdown of any rate in the Schedule of Quantities.
- 25.5 The Owner may at any time / stage of execution demand for the Analysis of Rates for any item / items of work which in their opinion is / are abnormally high / low rates or required for the Analysis of Rates of other Publish / extra item / items. The Bidder is bound to present the same and if the Bidder is unable to present a justified Analysis of Rates for any item / items, the rate / rates for such item may be adjusted accordingly and the decision of the Owner in such cases shall be final.
- 26.0 Change in the order/ Extra items of work:**
- 26.1 The Owner may at any time, by written order given to the Bidder, make alterations in, omissions from, additions to, or substitutions for, in drawings, designs or specifications or quantities of the items of work
- 26.2 IIT(BHU) reserves to itself the right of omission of any item of work from the awarded Publish at any time / stage during the execution of work and award the same to another agency / bidder.
- 26.3 The Owner may at any time, by written order given to the Bidder, increase the scope of work or include any new item of work. The Bidder shall be bound to carry out such works, the rates for which shall be arrived at on the basis of the CPWD Schedule of Rates or if the Schedule is silent by standard methods of rate analysis as derived by the Owner/Architect.
- 26.4 If any such changes cause an increase or decrease in the cost of, or the time required for the Bidder's performance of any part of the work under the contract, whether changed or not changed by the order, an equitable adjustment shall be made in the contract value or work schedule, or both, and the contract shall accordingly be amended. Any claims by the Bidder for adjustment under this clause must be asserted within seven (7) days from the date of the Bidder's receipt of the Owner's change order. Escalation shall be payable as per Clause 10 CC of CPWD Works Manual.
- 27.0 Payment:**
- 27.1 The method and conditions of payment to be made to the Bidder under the contract shall be specified in SCC.
- 27.2 Payments shall be made by the Owner within a reasonable time after certification of the bill, subject to availability of funds.
- 28.0 Variations and Provisional Cost:**
- 28.1 Where work cannot be measured and valued properly, the Bidder shall be allowed day work rates on the prices prevailing when such work is carried out (unless otherwise provided in the contract):
- a. At the rates if any inserted by the Bidder in the priced Schedule of Quantities or
 - b. If no such rates have been inserted then at the rates prevailing in the market for material and labour and at the control rates for the controlled materials including in all cases the rate for delivery of the material at the work.
- 29.2 Provided that in any case voucher specifying the time daily spent upon the work (and if required by the Owner the workman's names) and the materials used shall be delivered for verification to the Owner, or his authorised representative not later than the end of the week following that in which the work has been executed. Effect shall be given to the measurement and valuation of variations in interim Certificates and by adjustment of the total Contract Value.
- 29.0 Material Advances on Unfixed Material:**
- 75% percent of the assessed rate of materials at 90% of the assessed quantity of material brought to site for incorporation except for perishable materials like glass and chinaware. This advance shall be adjusted in the subsequent running bill.
- 30.0 Claims for Extra or for Deductions:**
- 30.1 The Owner shall not be responsible for the payment of any claim for extra work not included in the contract nor the Bidder shall be entitled to claim any addition to the contract sum in respect of any changes or alterations in the materials used unless the same shall have been ordered or sanctioned, as the case may be, in writing by the Owner.
- 30.2 The Bidder has to submit a monthly return by 10th of the ensuing month for any extra work which in his opinion is not covered by the contract agreement through the Owner's/ Owner's representatives and obtain a receipt from the authorized signatory of the Owner. Failing this, he shall have no right to any such claim, whatsoever may be the circumstances, later on.
- 30.3 In the event of any dispute arising either as to validity of the claim or as to the account to be paid or allowed in respect thereof, the decision of the Owner shall be final and binding on the bidder. In the meantime, the Bidder may either proceed with the work in question or suspend the same as may be determined by the Owner.
- 30.4 All extra works (those permitted by Owner) of every description shall be executed by bidder on site of work in pursuance of any of the provision of the contract, shall be measured up, and shall be paid according to actual quantities ascertained by such measurements and the prices as finalized by the Owner based on the priced schedule of quantities so that such priced schedule of quantities shall include all such operations and accessories as appear in the said schedule of prices or specification to be or shall in the opinion of the Owner the contingencies upon the works mentioned in such schedule of prices or required to make such works perfect and fit for use.
- 30.5 Provided also that if any work shall be ordered by the Owner and executed by the Bidder for the payment of which no provision in the opinion of the Owner have been made in the priced schedule of quantities or the specifications, the Owner shall fix and determine such prices for the same based on the prices appearing in

- the priced schedule of quantities, such allowance being made as may seem to the Owner sufficient for any difference in the character of conditions of the work. However, rates for extra items shall be fixed on the basis of actual rate analysis.
- 30.6 The Owner may at any time / stage of execution demand for the analysis of rates for any item / items of work which in their opinion is / are with abnormally high / low rates or required for the analysis of rates of other Publish / extra item / items. The Bidder is bound to present the same and if the Bidder is unable to present a justified analysis of rates for any item / items, the rate / rates for such item may be adjusted accordingly and the decision of the Owner in such cases shall be final and binding.
- 30.7 Removal of Imperfect Work:**
- 30.7 If, it shall appear that the work has been executed with unsound, imperfect or unskilled workmanship, or with material of any imperfect or any inferior quantity or otherwise not in accordance with the contract documents the Bidder shall at his own cost rectify, reform, remove, or reconstruct the same, wither in the whole or in part, as may be directed by the Institute Engineer, whether or not the value of any such work or materials shall have been included in any payment made to the Bidder.
- 30.8 The Bidder shall remove all malba etc., wash and clean the floors and hand over the site quite clean on the completion of the work.
- 31.0 Delay in the Bidder's performance:**
- 31.1 Execution of the work and performance of the services shall be done by the Bidder in accordance with the time schedule specified by the Owner in the Notice for Invitation of Publish s.
- 31.2 If, at any time during performance of the contract, the Bidder should encounter conditions impeding timely execution of the works and performance of services, the Bidder shall promptly notify the Owner in writing of the fact of the delay, its likely duration and its cause(s). As soon as possible, after receipt of the Bidder's notice, the Owner shall evaluate the situation and may, entirely at its discretion, extend the Bidder's time for performance with or without liquidated damages.
- 32.0 Liquidated Damages:**
- 32.0 If the Bidder fails to execute any or all of the works or to perform the services within the period(s) specified in the contract, the Owner shall deduct from the contract value, as liquidated damages, a sum specified in the SCC for each week or part thereof delay until actual completion or performance, up to a maximum deduction of the percentage specified in SCC. Once the maximum is reached, the Owner may consider termination of the contract. The pro-rata progress envisaged and expected from the bidder shall maintained, time being the essence of the contract.
- 33.0 Termination by Default:**
- 33.1 The Owner may without prejudice to any other right or remedy, by written notice (of fifteen days) of default sent to the Bidder, terminate the contract in whole or part:
- a) if the Bidder fails to complete any or all of the works within the period(s) specified in the NIT or any amendment thereof, or within any extension thereof granted by the Owner,
- or
- b) if the Bidder fails to perform any other obligation(s) under the contract,
- 33.2 In the event, the Owner terminates the contract in whole or in part, the Owner may procure, upon such terms and in such manner as it deems appropriate, works or services similar to those unexecuted and the Bidder shall be liable to the Owner for any excess costs for such similar work or services. However, the Bidder shall continue the performance of the contract to the extent not terminated.
- 34.0 Force Majeure:**
- 34.1 The Bidder shall not be liable for forfeiture of its performance security, liquidated damages or termination by default, if and to the extent that, its delay in performance or other failure to perform its obligations under the contract is the result of an event of Force Majeure.
- 34.2 For purposes of this clause, "Force Majeure" means an unforeseeable event beyond the control of the Bidder and is not because of the Bidder's fault or negligence. Such events may include acts of the Owner either in its sovereign or contractual capacity, wars or revolutions, fires, floods, epidemics.
- 34.3 If a Force Majeure situation arises, the Bidder shall promptly notify the Owner in writing of such conditions and the cause thereof. Unless otherwise directed by the Owner in writing, the Bidder shall continue to perform its obligations under the contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
- 35.0 Termination for Insolvency:**
- 35.1 The Owner may at any time terminate the contract by giving written notice to the Bidder, if the Bidder becomes bankrupt or otherwise insolvent. In this event, termination will be without compensation to the Bidder, provided such termination will not prejudice or affect any right of action or remedy which has accrued or will accrue thereafter to the Owner.
- 36.0 Termination for Convenience:**
- 36.0 The Owner, by written 30 days prior notice sent to the Bidder, may terminate the contract, in whole or in part, at any time for its convenience. The notice shall specify that the termination is for Owner's convenience, the extent to which performance of the Bidder under the contract is terminated, and the date upon which such termination becomes effective.

The items of work that are complete and ready within (1) month after the Bidder's receipt of notice of termination shall be accepted by the Owner at the contract terms and values. For the remaining works, the Owner may elect;

- a) to have any portion completed at the contract terms and value and/or
- b) to cancel the remainder and pay to the Bidder an amount, finalized by the Owner, for partially completed works and for materials and parts previously procured by the Bidder.

37.0 Resolution of Disputes:

37.1 The Owner and the Bidder shall make every effort to resolve amicably by direct informal negotiations any disagreement or dispute arising between them under or in connection with the contract.

If, after thirty (30) days from the commencement of such informal negotiations, the Owner and the Bidder have been unable to resolve amicably a contract dispute, either party may require that the dispute be referred for resolutions to the formal mechanisms specified in the SCC. These mechanisms may include but are not limited to, Arbitration in accordance with rules of Arbitration Act and award made in pursuance thereof shall be binding on both the parties.

37.2 All disputes should be under the Jurisdiction of civil court Varanasi.

38.0 Governing language:

38.1 The contract shall be written in English language. All correspondence and other documents pertaining to the contract that are exchanged by the parties shall be written in the same language.

39.0 Governing law:

39.1 The contract shall be governed by the laws of The Union of India for the time being in force. All disputes arising out of or in any way connected with this agreement shall be deemed to have arisen in New Delhi and only the courts in New Delhi alone shall have exclusive jurisdiction to determine the same.

40.0 Notices:

40.1 Any notice given by one party to the other pursuant to this contract shall be sent to other party in writing or by cable, telex, or facsimile and confirmed in writing to the other party's address specified in SCC.

A notice shall be effective on the date on which it is delivered, or on the notice's effective date, whichever is later.

41.0 Discoveries:

41.1 Anything of historical or other interest or of significant value unexpectedly discovered on the Site is the property of the Owner. The Bidder is to notify the Owner of such discoveries and carry out the Owner's instructions for dealing with them.

42.0 Dismissal of workmen:

42.1 The bidder on request from the Owner, immediately dismiss from the works any person employed by him who may be found in the opinion of the client to be unsuitable or incompetent or who has shown misconduct.

43.0 Working Hours:

43.1 Normal working hours shall be from 9.00 a.m. to 6.00 p.m. No construction work of important structural nature shall be carried out on Sundays, Holidays and during nights. However, permission to work beyond normal working hours can be granted by the Owner/ Owner in exceptional circumstances to achieve the target schedule of completion.

B. TIME CONTROL

44.0 Programme: The Bidder shall submit a detailed work programme with methodology, schedule, and weekly cash flow within the stipulated time for approval. Regular updates showing actual progress and impact on remaining work shall be submitted periodically.

Failure to submit updated programme may lead to withholding of payments until compliance. Approval of the programme does not relieve the Bidder of contractual obligations.

The Owner reserves the right to get any delayed work executed through other agencies, and the cost shall be deducted from the Bidder's payments.

45.0 Delay and Extension of time:

If work is delayed due to reasons beyond the Bidder's control—such as force majeure, adverse weather, disputes, delays by other agencies, Owner's instructions, strikes/lockouts, or non-payment—the Owner may grant a reasonable extension of time.

The Bidder shall promptly inform the Owner in writing of such delays and make all reasonable efforts to minimize the impact and continue the work.

C. QUALITY CONTROL

46.0 Identifying Defects:

46.1 The Owner/Architect shall check the Bidder's work and notify the Bidder of any Defects that are found. Such checking shall not affect the Bidder's responsibilities. The Owner may instruct the Bidder to search for a Defect and to uncover and test any work that the Owner/Architect consider may have a Defect.

47.0 Correction of Defects:

- 47.1 The Owner shall give notice to the Bidder of any Defects before the end of Defects Liability Period, which begins at Completion and is defined in the Contract Data. The Defects Liability period shall be extended for as long as Defects remain to be corrected.
- 47.2 Every time notice of Defect is given; the Bidder shall correct the notified Defect within the length of time specified by the Owner' notice.
- 47.3 All materials must pertain to single manufacturer for water proofing work to make the company responsible & accountable for any defect during defect liability period.

48.0 Uncorrected Defects:

- 48.1 If the Bidder has not corrected a Defect within the time specified in the Owner' notice, the Owner will assess the cost of having the Defect corrected, and the Bidder will pay this amount.

D. COST CONTROL

49.0 Schedule of Quantities:

- 49.1 The Schedule of Quantities shall contain items for the construction work, installation, testing, and commissioning work to be done by the Bidder.
- 49.2 The Schedule of Quantities is used to calculate the Contract Price. The Bidder is paid for the quantity of the work done at the rate in the priced Schedule of Quantities for each item.

50.0 Variations:

- 50.1 All variations shall be incorporated in the updated work programme submitted by the Contractor.

51.0 Payments for Variations:

- 51.1 The Bidder shall provide the Owner with a quotation (with breakdown of unit rates) for carrying out the Variation when requested to do so by the Owner. The Owner with recommendations from Architect shall assess and finalise the quotation, which shall be given within seven days of the request or within any longer period stated by the Owner and before the Variation is ordered.
- 51.2 If the Bidder's quotation is unreasonable, the Owner/Architect may order the Variation and make a change to the Contract Price which shall be based on Owner' own forecast of the effects of the Variation on the Bidder's costs.
- 51.3 If the Owner 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 shall be treated as a Variation.
- 51.4 The Bidder shall not be entitled to additional payment for costs, which could have been avoided by giving early warning.
- 51.5 Escalation shall be payable as per Clause 10 CC of CPWD Works Manual.

E: FINISHING THE CONTRACT

52.0 Completion Certificate

- 52.1 The Bidder shall request the Owner to issue a Certificate of Completion of the Works and the Architect will do so upon deciding that the Work is completed.

53.0 Taking Over

- 53.1 The Owner shall take over the Site and the Works within seven days of the Owner issuing a certificate of Completion. Before handing over the site, the bidder must obtain a site clearance certificate from the Owner/Architect.

54.0 Final Account

- 54.1 The Bidder shall supply to the Owner a detailed account of the total amount that the Bidder considers payable under the Contract before the end of the Defects Liability Period. The Architect shall issue a Defect Liability Certificate and certify any final payment that is due to the Bidder within 5-6 days of receiving the Bidder's account if it is correct and complete. If it is not, the Owner shall issue within 5-6 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 Owner shall decide on the amount payable to the Bidder and issue a payment certificate within 5-6 days of receiving the Bidder's revised account.

SPECIAL CONDITIONS OF CONTRACT

The following Special Conditions of Contract are supplementary, to the General Conditions of Contract. Whenever there is a conflict, the provisions herein shall prevail over those in the General Conditions of Contract. The corresponding clause number of the General Conditions of Contract is indicated in parentheses.

1.0 Definition (GCC clause 1.0)

(A) Owner means:

**The Principal Investigator (PI)
Smart Laboratory on Clean Rivers (SLCR)
Department of Civil Engineering
Indian Institute of Technology (BHU)
Varanasi**

(B) Site means the project site situated at outside BHU, Main campus

2.0 (i) Total Security Deposit:

- The Earnest Money Deposit (EMD) of the successful bidder shall be returned after submission of the Performance Security.
- The successful bidder shall submit a Performance Security (Performance Bank Guarantee) @ 5% of the contract value within 15 days of issue of Letter of Acceptance (LOA).
- The Performance Security shall remain valid up to the completion of the Defect Liability Period (12 months) and shall be released after satisfactory completion of the Defect Liability Period.

3.0 Payments: Following terms of payment shall be applicable –

3.1 Payment against Running Bills: Payment shall be made based on work executed and verified by the Owner.

3.3 Basis of Payment:

Payment shall be made on actual quantities executed and approved by the Owner. The Owner may allow part/reduced rates for incomplete or unsatisfactory work with recorded reasons.

3.4 Disallowance of payment:

If any defect is observed in work for which payment has already been made in earlier RA bills, the Owner/Architect shall have the right to withhold or recover such payments in subsequent bills until the defects are duly rectified..

3.5 Final bill:

The Contractor shall submit the final bill within **60 days** of completion of the work.

Final payment shall be made only after submission of the following documents:

- Completion Certificate
- Site Clearance Certificate
- No Claim Certificate
- Valid Labour License under the Contract Labour (Regulation and Abolition) Act, 1970 and Rules, 1971 (if applicable)

No claim shall be entertained after submission of the final bill.

4.0 Liquidated Damages:

1% per week upto a maximum of 10% (Ten percent) of the Contract value from the stipulated date of completion.

5.0 Resolution of Disputes : In case the parties cannot agree to the advice of IIT(BHU), then the Director, INDIAN INSTITUTE OF TECHNOLOGY(BHU) shall appoint a sole arbitrator within 30 days of receipt of request forthwith. The arbitration shall be governed by Arbitration and Reconciliation Act 1956.

6.0 Notices: For the purpose of all notices, the following shall be the address of the Owner and the Bidder.

Owner: **The Principal Investigator (PI)
Smart Laboratory on Clean Rivers (SLCR)
Department of Civil Engineering
Indian Institute of Technology (BHU)
Varanasi**

Bidder: _____
(To be filled in at the time of Signing of the Contract)

7.0 Resolution of Disputes & Arbitration:

Except where otherwise provided in the contract all questions and disputes relating to the meaning of the specifications, design, drawings and instructions here in before mentioned and as to the quality of workmanship or materials used on the work or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders or these conditions or otherwise concerning the works or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, terminations, completion or abandonment thereof shall be dealt with as mentioned hereinafter.

If the bidder considers any work demanded of him to be outside the requirements of the contract or disputes any drawings, record or decision given in writing in connection with or arising out of the contract or carrying out of the work, he shall promptly within 15 days request the Owner in writing for written instruction or decision.

If the Bidder is dissatisfied with this decision, the Bidder shall within a period of 30 days from receipt of the decision, give written notice to the Indian Institute of Technology (BHU) for appointment of Arbitrator failing which the said decision shall be final binding and conclusive and not referable to adjudication by the Arbitrator.

Except where the decision has become final, binding and conclusive in terms of Sub Para (i) above disputes or difference shall be referred for adjudication through arbitration by a sole arbitrator appointed by The Director, Indian Institute of Technology (BHU). If the arbitrator so appointed is unable or unwilling to act or resign his appointment or vacates his office due to any reason whatsoever another sole arbitrator shall be appointed in the manner aforesaid. Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor.

It is a term of this contract that the party invoking arbitration shall give a list of disputes with amounts claimed in respect of each dispute along with the notice for appointment of arbitrator.

It is also a term of this contract that no person other than a person appointed by such Indian Institute of Technology (BHU) as aforesaid should act as arbitrator and if for any reason that is not possible, the matter shall not be referred to arbitration at all.

It is also a term of this contract that if the contractor does not make any demand for appointment of arbitrator in respect of any claims in writing as aforesaid within 30 days of receiving the intimation from the Owner that the final bill is ready for payment, the claim of the bidder shall be deemed to have been waived and absolutely barred and IIT(BHU) shall be discharged and released of all liabilities under the contract in respect of these claims.

The arbitration shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996 (26 of 1996) or any statutory modifications or reenactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceedings under this clause.

8.0 Protection of environment:

8.1 The Bidder shall 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.

8.2 During continuance of the contract, the Bidder and his sub-bidders shall at all times abide by all existing enactment on environmental protection and rules made there under, regulations, notifications and bye-law of the State or Central Government, or local authorities and any other law, by-law, regulations that may be passed or notification that may be issued in this respect in future by the State or Central Government or the local authority.

8.3 Salient features of some of the major laws that are applicable are given below:

The Water (Prevention and Control of Pollution) Act, 1974 This provides for the prevention and control of water pollution and the maintaining and restoring of wholesomeness of water. 'Pollution' means such contamination of water or such alteration of the physical, chemical or biological properties of water or such discharge of any sewage or trade effluent or of any other liquid, gaseous or solid substance into water (whether directly or indirectly) as may, or is likely to create a nuisance or render such water harmful or injurious to public health or safety, or to domestic, commercial, industrial agricultural or other legitimate uses, or to the life and health of animals or plants or of aquatic organisms.

The Air (Prevention and Control of Pollution) Act, 1981. This provides for prevention, control and abatement of air pollution, 'Air Pollution' means the presence in the atmosphere of any air pollutant', which

means any solid, liquid or gaseous substance (including noise) present in the atmosphere in such concentration as may be or tend to be injurious to human beings or other living creatures or plants or property or environment.

The Environment (Prevention and Control of Pollution) Act, 1986 This provides for the protection and improvement of environment and for matters connected to herewith, and the prevention of hazards to human beings. Other living creatures, plants and property, 'Environment' includes water, air and land and the interrelationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property.

The Public Liability Insurance ACT 1991. This provides for public liability insurance for the purpose of providing immediate relief to the persons affected by accident occurring while handling hazardous substance means any substance or preparation which is defined as hazardous substance under the Environment (Protection) Act 1986, and exceeding such quantity as may be specified by notification by the Central Government.

INDIAN INSTITUTE OF TECHNOLOGY(BHU)
DEPARTMENT OF CIVIL ENGINEERING
(SLCR) FORM-1

TENDER FOR WORKS

Tender for the work: *Construction of Rain water Harvesting System in Yugal Bihari inter Collage Rameshwar and Panchayat bhawan Esarwar, Varanasi*

- (i) To be submitted by **10.06.2026 (4:00 P.M.)** to the Principal Investigator (PI), SLCR, Department of Civil Engineering, IIT(BHU), Varanasi.
- (ii) To be opened in presence of bidders who may be present at **11.06.2026 (4:00 P.M.)** in the office of the Principal Investigator (PI), SLCR, Department of Civil Engineering, IIT(BHU), Varanasi.

BID

I/We have read and examined the Notice Inviting Tender, Schedules A to F, Specifications, Drawings & Designs, General Rules and Directions, Conditions of Contract, Special Conditions, Schedule of Rates, and all other documents forming part of the tender.

I/We hereby submit bid for the execution of the work specified for the Institute within the time specified in Schedule 'F' viz., schedule of quantities and in accordance in all respect with the specifications, designs, drawing and instructions in writing referred to in Rule-1 of General Rules and Directions and all Clauses of the Conditions of contract and with such materials as are provided for, by, and in respect of accordance with, such conditions so far as applicable.

We agree to keep the Bid open for **180** days from the due date of its opening and not to make any modification in its terms and conditions.

A sum of **Rs. 31,345.00** is hereby forwarded in fixed deposit receipt of scheduled bank/demand draft of a scheduled bank as earnest money. If I/We, fail to furnish the prescribed performance guarantee within prescribed period. I/We agree that the Institute has to right to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/We agree that the Institute has to right to forfeit the said performance guarantee absolutely. The said performance guarantee shall be a guarantee to execute all the works referred to in the Tender documents upon the terms and conditions contained or referred to those in excess of that limit at the rates to be determined in accordance with the provision contained in Clauses of the Tender form. Further, I/We agree that in case of forfeiture of Earnest Money or Performance Guarantee as aforesaid, I/We shall be debarred for participation in the re-Tendering process of the work.

I/We undertake and confirm that eligible similar work(s) has/have not been got executed through another bidder on back-to-back basis. Further that, if such a violation comes to the notice of COMMITTEE, then I/We shall be debarred for tendering in SLCR in future forever. Also, if such a violation comes to the notice of COMMITTEE before date of start of work, the Principal Investigator (PI) shall be free to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.

I/We hereby declare that I/We shall treat the tender documents drawings and other records connected with the work as secret/confidential documents and shall not communicate information/derived there from to any person other than a person to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

Dated:

Signature of Bidder

Witness:

Postal Address

Occupation:

ACCEPTANCE

The above Tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for an on behalf of the Indian Institute of Technology (BHU) for a sum of
(Rupees.....
.....)

The letters referred to below shall form part of this contract agreement: (a)

(b)

(c)

For & on behalf of Indian Institute of Technology (BHU).....

Dated:

Designation

SALIENT / MANDATORY REQUIREMENTS FOR THE TENDER

Name of Work:

Construction of Rainwater Harvesting System in Yugal Bihari Inter College, Rameshwar and Panchayat Bhawan, Esarwar, Varanasi.

1. The bidder is advised to read and examine the tender documents, drawings, and specifications available with the Principal Investigator (PI) and on the Institute website (www.iitbhu.ac.in). The bidder shall inspect and examine the site and its surroundings before submitting the **bid**.
2. The Schedule of Quantities (BOQ) included in this tender covers all components of the work. Any unconditional rebate offered by the bidder shall be clearly indicated in the bid.
3. The time allowed for execution of the work is **60 days**.
4. The successful bidder shall submit a detailed work programme, including milestones, within **7 days** from the date of issue of the Letter of Acceptance (LOA).
5. The bidder shall arrange and deploy all necessary plant, machinery, tools, equipment, and other resources required for execution of the work. No extra payment shall be made on this account.
6. Quality of work is of utmost importance and shall be maintained strictly in accordance with the tender specifications and relevant guidelines.
7. All materials, including cement and steel reinforcement, shall be arranged by the contractor at his own cost.
8. The contractor shall deploy adequate plant and machinery in sufficient quantity to ensure timely completion of the work.
9. The contractor shall submit running account (RA) bills in the form of computerized Measurement Books (MB) in A-4 size, as per the prescribed format of IIT (BHU).
10. The contractor shall comply with the provisions of the **Apprentices Act, 1961** and the rules made thereunder. In case of non-compliance, the same shall be treated as a breach of contract, and the Principal Investigator (PI) shall have the right to take appropriate action, including cancellation of the contract, without prejudice to other legal remedies. The contractor shall also be liable for any financial implications arising out of such non-compliance.

ADDITIONAL TERMS AND CONDITIONS

1. The Contractor shall utilize all payments strictly for execution of the contracted work and shall submit proof of expenditure, if required by the Principal Investigator (PI).
2. The quoted rates shall be all-inclusive, covering materials, labour, leads, lifts, tools and plant, taxes, and all other incidental charges. No extra payment shall be made unless specifically approved in writing.
3. The Contractor shall coordinate with other agencies, if any, and provide necessary openings, sleeves, supports, etc., without any additional cost.
4. The Contractor shall comply with all site restrictions, local authority requirements, and statutory regulations at his own cost.
5. All works (including water supply, sanitary, drainage, etc.) shall conform to relevant bylaws, codes, and specifications. The Contractor shall obtain all required approvals and completion certificates from concerned authorities.
6. Only approved materials and qualified/licensed personnel (wherever required) shall be deployed. All testing, inspections, and approvals shall be arranged by the Contractor at his own cost.
7. The Contractor shall carry out all necessary testing and commissioning of systems before final acceptance of the work, without any additional cost.
8. No labour accommodation shall be permitted at site unless specifically approved. The Contractor shall make alternative arrangements at his own cost.
9. In case of any discrepancy, the Schedule of Quantities (BOQ) shall prevail over drawings, unless otherwise directed in writing by the Engineer-in-Charge.
10. Measurements and billing shall be carried out as per standard nomenclature and specifications. Complete details shall be submitted along with the final bill.
11. Proper stacking, storage, and site cleanliness shall be maintained at all times. No obstruction to site activities shall be permitted.
12. The Contractor shall ensure all necessary safety measures, including protection against electrical hazards and safe construction practices.
13. The Contractor shall be responsible for the custody, protection, and maintenance of all materials and executed works until completion and handing over.
14. All taxes, royalties, duties, and statutory charges shall be borne by the Contractor.
15. Materials such as bricks, aggregates, sand, reinforcement steel, etc., shall conform to relevant specifications and approved sources.
16. The final bill shall be submitted along with all required documents and shall be processed by the Principal Investigator (PI) as per contract provisions.

PERFORMANCE GUARANTEE BOND

In consideration of the Indian Institute of Technology (BHU) having agreed under the terms and conditions of agreement No..... dated..... made between and

.....(hereinafter called “the contractor(s)”)..... for the work.....(hereinafter called “the said agreement”) having agreed to production of a irrevocable Bank Guarantee for..... (Rupees.....only) as a security/guarantee from the contractor(s) for compliance of his obligations in accordance with the terms and conditions in the said agreement,

1. We.....hereinafter referred to as “the Bank”) hereby undertake to pay to IIT(BHU)

(Indicate the name of the bank)

Institute an amount not exceeding Rs..... (.....only) on demand by the Indian Institute of Technology(BHU).

2. Wedo hereby undertake to pay the amounts due..... and payable

(Indicate the name of the Bank) under this Guarantee without any demur, merely on a demand from the Indian Institute of Technology (BHU) stating that the amount claimed is required to meet the recoveries due or likely to be due from the said contractor(s). Any such demand made on the bank shall be conclusive as regards the amount due and payable by the bank under this guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding (Rupees.....only).

3. We, the said bank further undertake to pay to the Institute any money so demanded notwithstanding any dispute or disputes raised by the contractor(s) in any suit or proceeding pending before any court or tribunal relating thereto, our liability under this present being absolute and unequivocal.

The payment so made by us under this bond shall be a valid discharge of our liability for payment there under and the contractor(s) shall have no claim against us for making such payment.

4. Wefurther agree that the guarantee herein contained shall (Indicate the name of the Bank) remain in full force and effect during the period that would be taken for performance of the said agreement, and it shall continue to be enforceable till all the dues of the Indian Institute of Technology(BHU) under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Principal Investigator (PI) on behalf of the Institute certified that the terms and conditions of the said agreement have been fully and properly carried out by the said contractor(s) and accordingly discharges this guarantee.

5. We(indicate the name of bank) further agree with the Indian Institute of Technology (BHU) that Indian Institute of Technology(BHU) shall have the fullest liberty without our consent and without effecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor(s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Indian Institute of Technology(BHU) against the said contractor(s) and to forebear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation, or extension being granted to the said contractor(s) or for any forbearance, act of omission on the part of the Institute or any indulgence by the Indian Institute of Technology(BHU) to the said contractor(s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6. This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor(s).

7. We (Indicate the name of the Bank) lastly undertake not to revoke this guarantee except with the previous consent of the Indian Institute of Technology (BHU) in writing.

8. This guarantee shall be valid up to..... unless extended on demand by Indian Institute of Technology (BHU). Notwithstanding anything mentioned above, our liability against this guarantee is restricted to (Rupees.....only) and unless a claim in writing is lodged with us within six months of the date of expiry or the extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharged. Dated theday of..... for (Indicate the name of the Bank)

TECHNICAL SPECIFICATIONS

QUALITY ASSURANCE OF THE WORK

1. The Contractor shall ensure that all materials and workmanship conform to **CPWD Specifications (latest edition)** and relevant BIS codes.
2. All materials shall be got approved from the **Principal Investigator (PI)** before use and shall be from approved sources only.
3. The Contractor shall submit samples and details of makes/brands for approval prior to procurement and shall use only approved materials.
4. Necessary tests on materials (cement, aggregates, concrete, steel, etc.) shall be carried out **as per CPWD Specifications and BIS standards**, through approved laboratories as directed by the PI.
5. Minimum essential field tests such as **slump test and cube test** shall be conducted during execution, wherever applicable.
6. The cost of all testing, including sampling and transportation, shall be borne by the Contractor.
7. The PI or authorized representative shall have the right to inspect materials, works, and test records at any stage and conduct random checks.
8. Any material or work not conforming to specifications shall be rejected and replaced by the Contractor at his own cost, as per CPWD norms.
9. The Contractor shall maintain basic records of tests and materials at site and produce the same for inspection when required.
10. The Contractor shall ensure proper planning, timely execution, and quality control of work in accordance with **CPWD guidelines and standard engineering practices**.

SPECIAL CONDITION FOR MATERIAL

1. The Contractor shall, at his own cost, procure and provide all materials required for the execution of the work, unless otherwise specified in the contract.
2. All materials shall conform to **CPWD Specifications (latest edition)** and relevant BIS codes and shall be of approved quality.
3. The Contractor shall procure materials sufficiently in advance to allow adequate time for **testing, inspection, and approval** before their use in the work.
4. All materials brought to site shall be **got approved by the Principal Investigator (PI)** or his authorized representative before use.
5. The Contractor shall submit **samples, make/brand details, and test certificates (wherever required)** for approval prior to procurement and use.
6. Only approved makes and sources shall be used. Any change in source or brand shall require **prior written approval** of the PI.
7. The Contractor shall ensure proper **stacking, storage, and protection** of materials at site to prevent damage, deterioration, or loss.
8. The Contractor shall be fully responsible for the **safe custody of all materials**, whether issued or procured, and shall employ necessary watch and ward arrangements at his own cost.
9. Any material found to be **substandard, damaged, or not conforming** to specifications shall be rejected and removed from site immediately at the Contractor's cost.
10. The Contractor shall maintain proper **records of material receipts, consumption, and balance** at site and produce the same for inspection as and when required.
11. No material shall be used in the work without approval, and any work executed with unapproved materials shall be liable for rejection.
12. All incidental costs such as **loading, unloading, transportation, royalties, taxes, and duties** related to materials shall be deemed included in the quoted rates.

ADDITIONAL CONDITIONS FOR CEMENT

1. The contractor shall use Portland Pozzolana Cement (conforming to IS: 1489 -Part-I), as required in the work, if issued by SLCR, otherwise procure the same from reputed manufacturers of cement, having a production capacity of one million tones or more, such as A.C.C., J.P., Birla Jute, Cement Corporation of India and Prism and Mycem etc. i.e. agencies approved by Ministry of Industry, Government of India and holding license to use ISI certification mark for their product. The Publishers may also submit a list of names of cement manufacturers which they propose to use in the work. The Publish accepting authority reserves right to accept or reject name(s) of cement manufacturer(s) which the Publisher proposes to use in the work. No change in the Published rates will be accepted if the e-tender accepting authority does not accept the list of cement manufacturers, given by the Publisher, fully or partially. Supply of cement shall be made in 50 kg. bags bearing manufacturer's name and ISI marking. Samples of cement arranged by the contractor shall be taken by the PI and got tested in accordance with provisions of the relevant BIS codes. In case the test results indicate that the cement arranged by the contractor does not confirm to the relevant BIS code the same shall stand rejected and shall be removed from the site by the contractor at his own cost within a week's time of written order from the PI to do so. The cost of tests shall be borne by the contractor/COMMITTEE in the manner indicated below:
 - a) By the contractor, if the results show that the test does not conform to relevant CPWD Specifications / BIS code or specification mentioned elsewhere in the documents.
 - b) By the committee, if the results conform to relevant CPWD Specifications / BIS code or specification mentioned elsewhere in the documents.
2. The cement shall be brought at site in bulk supply of approximately 50 tonnes or as directed by the Principal Investigator (PI).
3. The cement godown of the capacity to store a minimum of 500 bags of cement shall be constructed by the contractor at site of work for which no extra payment shall be made. Double lock provision shall be made to lock the door of the cement godown. The keys of one lock shall remain with the Principal Investigator (PI) or his authorized representative and the key of the other lock shall remain with the contractor. The contractor shall facilitate the inspection of the cement godown by the Principal Investigator (PI) at any time.
4. The contractor shall supply free of charge the cement required for testing.
5. The actual issue and consumption of cement on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical consumption of cement also shall be worked out as per procedure prescribed in clause 42 of the contract and shall be governed by the conditions laid therein.
6. Wet curing period shall be enhanced to a minimum of 10 days or its equivalent. In hot & arid regions, the minimum curing period shall be 14 days or its equivalent.
7. Till the time, BIS makes it mandatory to print the %age of fly ash on each bag of cement, the certificate from the PPC manufacturer indicating the same shall be obtained and permission obtained from Principal Investigator (PI) before use of such cements in works.
8. The contractor may use OPC in place of PPC only after written permission of Principal Investigator (PI). In such case, no extra payment shall be made in any form to the contractor by the committee.

ADDITIONAL CONDITIONS FOR STEEL REINFORCEMENT

1. The contractor shall procure TMT bars of Fe 500D grade from primary producers such as SAIL / TATA / Jindal or equivalent approved make.
2. All reinforcement steel shall conform to IS 1786:2008 specifications.
3. The contractor shall submit manufacturer's test certificates and relevant vouchers for all steel brought to site.
4. Steel shall be got checked and approved by the Principal Investigator (PI) or authorized representative before use.
5. Random samples of steel shall be taken and tested as per relevant BIS codes. In case test results do not conform, the material shall be rejected and removed from site at contractor's cost.
6. Steel shall be stored properly at site to prevent corrosion, damage, and distortion. Different diameters shall be stored separately.
7. The contractor shall supply required samples for testing free of cost including transportation to testing laboratory.
8. The cost of testing shall be borne by:
 - Contractor, if test results fail
 - Institute, if test results pass
9. Reinforcement shall be measured as per standard CPWD specifications based on actual length used (excluding wastage and unauthorized overlaps).
10. Mixing of different grades of steel in structural members shall not be permitted.
11. Any surplus material shall be removed from site after completion with prior approval of PI.

ADDITIONAL CONDITIONS FOR RCC WORK

1. If the quantity of cement actually used in the work is found to be more than the theoretical quantity of cement including authorized variation, nothing extra shall be payable to the contractor on this account. In the event of it being discovered that after the completion of the work, the quantity of cement used is less than the quantity ascertained as herein before provided (allowing variation on the minus side as stipulated in clause 42, the cost of quantity of cement so less used shall be recovered from the contractor at the rate as specified in schedule 'F'. Decision of the Principal Investigator (PI) in regard to the quantity of cement which should have been actually used as per the schedule and recovery at the rate specified shall be final and binding on the contractor.
2. For non-scheduled items, the decision of the Principal Investigator (PI) regarding theoretical quantity of the cement which should have been actually used shall be final and binding on the contractor.
3. Cement brought to site and cement remaining unused after completion of work shall not be removed from site without written permission of the Principal Investigator (PI).
4. In case the contractor brings surplus quantity of cement the same after completion of the work will be removed from the site by the contractor at his own cost after approval of the Principal Investigator (PI).
5. Cement register for the cement shall be maintained at site. Specimen form of register is as per Para 25.3.1 & Appendix 28 of CPWD works manual.
6. The account of daily receipts and issue of cement shall be maintained in the register by the authorized representative of the Principal Investigator (PI) and signed daily by the contractor or his authorized agent.
7. The RCC work shall be carried out with Design Mix concrete unless otherwise specified. Wherever "M" is indicated in nomenclature, it shall refer to Design Mix Concrete. Nominal mix, if specified, shall be as per CPWD Specifications.
Design mix shall be based on relevant provisions of IS: 456, IS: 10262 & SP 23. Contractor shall design mixes to meet specified strength requirements. Use of admixture/white cement, if any, shall be incorporated in mix design.
8. **DESIGN MIX CONCRETE:**
The contractor shall be required to submit two separate design mix of concrete with and without using plasticizers, separately. The decision of the engineer-in-charge to specify the design mix of concrete based on above shall be final.
 - 8.1 Coarse aggregate: As per CPWD Specifications
 - 8.2 Fine Aggregate: As per CPWD Specifications.
 - 8.3 Water: It shall conform to requirements laid down in IS:456: 2000 and CPWD specifications.

- 8.4 Cement: Cement arranged by the contractor will be PPC (in bags) conforming to IS: 1489-Part-I. If for any reasons, cement other than that specified in this para for example OPC of grade 43 or higher grade is brought to site by contractor, the issue, payments rate as well as the quantity to be used in the design mix concrete will remain unchanged.
- 8.5 Slump: Design slump should be clearly specified in the mix design.
- 8.6 The record of white cement shall be kept in the same proforma and same manner as applicable for gray cement.
- 8.7 **Admixture:** -- Admixtures shall not be used without approval of Engineer-in-charge. Wherever required, admixtures of approved quality shall be mixed with concrete as specified. The admixtures shall conform to IS: 9103. The chlorides content in the admixture shall satisfy the requirements of BS: 5075. The total amount of chlorides admixture mixed concrete shall also satisfy the requirements of IS: 456. The contractor shall not be paid anything extra for admixture required for achieving desired workability without any change in specified water cement ratio for RCC/CC work.
- 8.8 Grade of Concrete: The compressive strength of various grades of concrete shall to be given as below:

	Grade designation	Compressive strength on 15 cm cubes min. 7 days (N/mm ²)	Specified characteristic compressive strength at 28 days (N/mm ²)	Minimum cement quantity (Kg. per cum. Mtr.)	Maximum water cement ratio
i	M 25	As per design	25	330	0.50
ii	M 30	As per design	30	340	0.45
iii	M 35	As per design	35	350	0.45
iv	M 40	As per design	40	360	0.40

Note

- (i) In the designation of a concrete mix letter M refers to the mix and number to the specified characteristic compressive strength of 15 cm x 15 cm x 15 cm – cube 28 days expressed in N/mm²
- (ii) It is specifically highlighted that in addition to the above requirement the maximum cement content for any grade shall be limited to 500 kg/ cum.
- (iii) The minimum/maximum cement content for design mix concrete shall be maintained as per the quantity mentioned above. In case where the quantity of cement required is higher than the minimum specified above to achieve desired strength based on an approved mix design extra shall become payable to the contractor.
- (iv) Design slump has to be constantly monitored and maintained during placing of concrete through slump tests carried out as per CPWD specification 2009 Vol. 1 for Mortar, Concrete and RCC works, and records maintained accordingly.

8.9 The concrete mix design and laboratory tests shall be carried out by the contractor at his own cost through:

- Approved Government Laboratory / Engineering Institution, OR
- Any other laboratory approved by the Principal Investigator (PI)

8.10 Contractor shall submit mix design report within 15 days of award. No concreting shall be done without approval of PI.

8.11 In case of change of source or characteristic properties of the ingredients used in the concrete mix during the work, a revised laboratory mix design report conducted at laboratory established at site shall be submitted by the contractor as per the direction of the Principal Investigator (PI).

8.12 APPROVAL OF DESIGN MIX

The mix design for a specified grade of concrete shall be done for a target mean compressive strength $T_{ck} = F_{ck} + 1.65 s$.

Where F_{ck} = Characteristic compressive strength of 28 days

s = Standard deviation which depends on degree of quality control

The degree of quality control for this work is “good” for which the standard deviation (s) obtained for different grades of concrete shall be as bellows:

Grade of Concrete	For “Good” quality of control
M 25	4.00
M 30	5.00
M 35	5.00
M 40	5.00

Of the six specimen of each set three shall be tested at seven days and remaining three at 28 days. The preliminary tests at seven days are intended only to indicate the strength to be attained at 28 days.

8.13 All cost of mix designing and testing connected therewith including charges payable to the laboratory shall be borne by the contractor.

8.14 **BATCHING:** Concrete shall be mixed using mechanical mixer or batching plant, as approved by PI.

8.15 All other operations in concreting work like Mixing, Slump, Laying Placing of concrete, compaction curing etc. not mentioned in this particular specification for Design Mix of concrete shall be as per CPWD specification.

8.16 STRENGTH TEST SPECIMEN

Work strength test shall be conducted in accordance with IS: 456 on random sampling. Each test shall be conducted on six specimens, three of which shall be tested at 7 days and remaining three at 28 days.

TEST RESULTS OF SAMPLE

The test result of the sample shall be the average of the strength of three specimens. The individual variation shall not be more than 15 percent of the average. If more the test results of the sample are invalid. 90% of the total test shall be done at the laboratory established at site by contractor and remaining 10% in the approved laboratory of SLCR or in any other laboratory as directed by the Principal Investigator (PI).

Lot size

The minimum frequency of sampling of concrete of each grade shall be according to the following:-

Quantity of Concrete (cum per day)	Number of Samples
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1 – 5	1
6 – 15	2
16 – 30	3
31 – 50	4
51 & above	4 + one additional sample for every additional 50 cum or part thereof

Note: At least one sample shall be taken from each shift.

8.17 STANDARDS OF ACCEPTANCE

- (i) In case the test result of all the samples is above the characteristic compressive strength, the concrete shall be accepted.
- (ii) In case the test result of one or more samples fails to meet the requirement (i) above it shall be accepted if both the following conditions are met:
 - a) Any individual test result is not less than $(F_{ck} - 4)$ N/mm²
 - b) The mean of test result from any grade of four consecutive samples is more than $(F_{ck} + 4)$ N/mm².
- (iii) Concrete of each grade shall be assessed separately
- (iv) Concrete is liable to be rejected if it is porous or honeycombed, its placing has been interrupted without providing a proper construction joint the reinforcement has been displaced beyond the tolerances specified, or construction tolerances have not been met. However, the hardened concrete may be accepted after carrying out suitable remedial measures to the satisfaction of the Principal Investigator (PI) for which nothing extra is payable to the contractor

8.18 Only MS centering/shuttering and scaffolding material unless & otherwise specified shall be used for all RCC. Work to give an even finish of concrete surface. However marine ply shuttering in exceptional cases as per site requirement may be used on specific request from contractor on approval by the Principal Investigator (PI).

8.19 Nothing extra shall be paid for the centering and shuttering circular in shape wherever the form work is having a mean radius exceeding 6 m in plan

8.20 In order to keep the floor finish as per architectural drawings and to provide required thickness of the flooring as per specifications the level of top surface of RCC shall be accordingly adjusted at the time, of its centering shuttering and casting for which nothing extra shall be paid to the contractor.

8.21 Measurement – As per SLCR specifications.

8.22 Tolerances – As per SLCR specifications

8.23 Rate

8.23.1 The rate includes the cost of materials and labour involved in all the operations described above except for the cost of centering, shuttering & reinforcement which will be paid separately

8.24 In case of actual average compressive strength being less than specified strength which shall be governed by para “Standard of Acceptance” as above the rate payable shall be worked out accordingly on prorata basis.

In case of rejection of concrete on account of unacceptable compressive strength governed by para “Standard of Acceptance” as above the work for which samples have failed shall be redone at the cost of contractors. However, the Principal Investigator (PI) may order for additional test (like cutting cores, ultrasonic pulse velocity test, load tests on structure or part of structure etc.) to be carried out at the cost of contractor to ascertain if the portion of structure wherein concrete represented by the sample has been used, can be retained on the basis of results of individual or combination of these tests. The contractor shall take remedial measures necessary to retain the structure as approved by the Principal Investigator (PI) without any extra cost. However, for payment the basis of rate payable to contractor shall be governed by the 28 days cube test results and reduced rates shall be regulated in accordance with para 3.24.2.

8.25 Necessary arrangements shall be made for field tests and all required equipment’s shall be arrange by establishing field lab by the Agency for mandatory tests of the materials as specified in SLCR specifications or as per direction of Principal Investigator (PI) no extra shall be paid on this account.

9. RCC WORK (ORDINARY):

9.1 Water cement ratio for ordinary RCC work shall not be more than 0.50.

Contractor shall use concrete mixture of proper design and arrangement for measuring water for mixing of concrete.

9.2 In respect of all projected slabs at all levels including cantilever canopy the payment for the RCC work shall be made under the item RCC slabs. The payment for shuttering at the edges shall be made under item of centering and shuttering of RCC slabs. Nothing extra shall be paid for the side shuttering at the edge of these projected balconies and projected verandah slabs.

10.0 PRE-CAST RCC WORK

10.1 Pre-cast reinforced concrete units shall be of grade or mix as specified. Provision shall be made in the mould to accommodate fixing devices such as hooks, flats etc. And forming of notches and holes. Each unit shall be cast in one operation. A sample of the unit shall be got approved from Principal Investigator (PI) before taking up the work.

10.2 Pre-cast units shall be clearly marked to indicate the top of member and its locations.

10.3 Pre-cast units shall be stored, transported and placed in position in such a manner that these are not damaged.

10.4 The compaction of the concrete shall be done by vibrating table or external vibrator, as approved by Principal Investigator (PI). The rate quoted for the item shall include the element for framework and mechanical vibration.

10.5 Rate for item includes cost of all materials labour and all operations involved cost of MS frames lugs including their welding, lifting hooks is also included.

11. REINFORCEMENT:

The rate of reinforcement in RCC work includes all operations including straightening cutting, welding, binding with annealed steel wire or welding and placing in position at all the floors with all leads and lift complete.

ADDITIONAL CONDITIONS FOR CIVIL WORKS

- 1 a) *The contractor(s) shall inspect the site of work before submission/publishing of the bid and acquaint himself with all site conditions, accessibility, availability of resources and other relevant factors at his own cost. No claim whatsoever on this account shall be entertained by the COMMITTEE at any stage.*

For the purpose of site visit, the contractor may, if required, take assistance/guidance from SLCR officials; however, all expenses in this regard shall be borne by the contractor himself.

- b) The contractor (s) shall get himself acquainted with nature and extent of the work and satisfy himself about the availability of materials from kiln or approved quarries for collection and conveyance of materials required for construction.
2. The contractor (s) shall study the soil investigation report for the site, available in the office of the Principal Investigator (PI) and satisfy himself about complete characteristics of soil and other parameters of site. However, no claim on the alleged inadequacy or incorrectness of the soil data supplied by the COMMITTEE shall be entertained.
3. The Publisher shall see the approaches to the site. In case any approach from main road is required by the contractor, the same shall be provided, improved and maintained by the contractor at his own cost. No payment shall be made on this account.
4. The contractor (s) shall give to the Municipality, Police and other authorities all necessary notices etc. that may be required by law and obtain all requisite Licenses for temporary obstructions, enclosures etc. and pay all fee, taxes and charges which may be leviable on account of these operations in executing the contract. He shall make good any damage to the adjoining property whether public or private and shall supply and maintain light and other illumination on for cautioning the public at night.
5. The contractor shall take all precautions to avoid accidents by exhibiting necessary caution boards day and night speed limit boards red flags, red lights and providing barriers. He shall be responsible for all dangers and incidents caused to existing / new work due to negligence on his part. No hindrances shall be caused to traffic during the execution of the work.
6. The contractor shall provide at his own cost suitable weighing surveying and leveling and measuring arrangements as may be necessary at site for checking. All such equipments shall be got calibrated in advance from laboratory, approved by the Principal Investigator (PI). Nothing extra shall be payable on this account.
7. Contractor shall provide permanent bench marks and other reference points for the proper execution of work and these shall be preserved till the end of work. All such reference points shall be in relation to the levels and locations, given in the Architectural and plumbing drawings
8. On completion of work, the contractor shall submit at his own cost four prints of “as built” drawings to the Principal Investigator (PI) within 30 days of completion of work. These drawings shall have the following information:
- a) Run of all piping and their diameters including soil waste pipes & vertical stacks.
- b) Ground and invert levels of all drainage pipes together with locations of all manholes and connections upto outfall.
- c) Run of all water supply lines with diameters, location of control valves, access panels etc.
- If above said drawings are not submitted by the contractor with in the above specified time then final bill will not be paid and Security Deposit shall not be released.
9. Any cement slurry added over base surface for continuation of concreting for better bond is deemed to have been built in the items and nothing extra shall be payable for extra cement considered in consumption on this account.
10. The contractor shall bear all incidental charges for cartage, storage and safe custody of materials issued by COMMITTEE.

11. The contractor shall submit for the approval of Principal Investigator (PI) names of specialized agencies of repute along with their technical capacity proposed to be engaged by him, who must have executed satisfactorily works of value as specified in mandatory conditions.

12. The works shall be carried out in accordance with the Architectural drawings and structural drawings, to be issued from time to time by the Principal Investigator (PI). Before commencement of any item of work, the contractor shall correlate all the relevant architectural and structural drawings issued for the work and satisfy himself that the information available thereof is complete and unambiguous. The discrepancy, if any shall be brought to the notice of the Principal Investigator (PI) before execution of the work. The contractor alone shall be responsible for any loss or damage executing by the commencement of work on the basis of any erroneous and or incomplete information.

13. The contractor shall take all precautions to avoid accidents by, exhibiting caution boards day and night, speed limit boards, red flags, red light and providing necessary barriers and other measures required from time to time. The contractor shall be responsible for all damages and accidents due to negligence on his part.

14. Other agencies will also simultaneously execute and install the works of electrification, air conditioning, lifts, fire-fighting etc. for this work and the contractor shall provide necessary facilities for the same. The contractor shall leave such recesses, holes openings etc. as may be required for the electric, air- conditioning and other related works (for which inserts, sleeves, brackets, conduits base pinion, clamps etc. shall be supplied free of cost by the COMMITTEE unless otherwise specifically mentioned) and the contractor shall fix the same at time of casting of concrete, stone work & brick work, if required and nothing extra shall be payable on this account.

15. All materials obtained from Govt. stores or otherwise shall be get checked by the Principal Investigator (PI) or his any authorized supervisor staff on receipt of the same at site before use.

16. The contractor shall conduct work so as not to interfere with or hinder the progress or completion of the work being performed by other contractor(s) or by the Principal Investigator (PI) and shall as far as possible arrange his work and shall place and dispose of the materials being used or removed so as not to interfere with the operations of other contractor or he shall arrange his work with that of the others in an acceptable and coordinated manner and shall perform it in proper sequence to the complete satisfaction of others.

17. All Architectural drawings given in the Publish other than those indicated in nomenclature of items are only indicative of the nature of the work and materials/fixings involved unless and otherwise specifically mentioned. However, the work shall be executed in accordance with the drawings duly approved by the Principal Investigator (PI).

18. **PROGRAMME CHART**

i) The contractor shall prepare an integrated programme chart for the execution of work, showing clearly all activities from the start of work to completion, with details of manpower, equipment and machinery required for the fulfillment of the programme within the stipulated period or earlier as indicated in the mile stones under clause 5 of the contract and submit the same for approval to the Principal Investigator (PI) within ten days of the award of the contract.

ii) The programmes chart should include the following:-

- a) Descriptive note explaining sequence of various activities.
- b) Network (PERT/CPM/BAR CHART)
- c) Programme for procurement of materials by the contractor
- d) Programme of procurement of machinery/equipment's having adequate capacity commensurate with the quantum of work to be done within the stipulated period by the contractor.

19. If appears to the Principal Investigator (PI) that the actual progress of work does not conform to the approved programme referred above the contractor shall produce a revised programme showing the modifications to the approved programme to ensure completion of the work within the stipulated time for completion.

20. The submission for approval by the Principal Investigator (PI) of such programme or the furnishing of such particulars shall not relieve the contractor of any of his duties or responsibilities under the contract. This is without prejudice to the right of Principal Investigator (PI) to take action against the contractor as per terms and conditions of the agreement.

21. If the work is carried out in more than one shift or during night no claim on these accounts shall be entertained.

22. Existing drains, pipes, cables, over-head wires, sewer lines, water lines and similar services encountered in the course of the execution of work shall be protected against the damage by the contractor at his own expense. The contractor shall not store materials or otherwise occupy any part of the site in a manner likely to hinder the operation of such services.

23. The contractor shall be responsible for the watch and ward/guard of the buildings, safety of all fittings and fixtures including sanitary and water supply fittings and fixtures provided by him against pilferage and breakage during the period of installations and thereafter till the building is physically handed over to the COMMITTEE. No extra payment shall be made on this account.

24. The day-to-day receipt and issue accounts of different grade/brand of cement shall be maintained separately in the standard proforma by the Principal Investigator (PI) of work and which shall be duly signed by the contractor or his authorized representative.

25. The contractor shall render all help and assistance in documenting the total sequence of this project by way of photography, slides, audio-video recording etc. Nothing extra shall be payable to the contractor on this account. However, cost of photographs, slides, audio/videography etc shall be borne by the COMMITTEE.

26. The contractor shall be fully responsible for the safe custody of materials brought by him issued to him even though the materials are under double lock key system.

27. The rate of items of flooring is inclusive of providing sunk flooring at bath room's kitchen etc. and nothing extra on these accounts is admissible.

28. No payment shall be made to the contractor for any damage caused by rain, snowfall, floods, earthquake or any other natural causes whatsoever during execution of work. The damages of the work will be made good by the contractor at his own cost and no claim on this account shall be entertained.

29. For construction works which are likely to generate malba/rubbish to the tune of more than a tempo/truck load, contractor shall dispose of malba, rubbish & other unserviceable materials and wastes at their own cost to the notified/specified dumping ground and under no circumstances these shall be stacked/dumped, even temporarily outside the construction premises.

30. The Plinth Level of Building is to be kept as per Architectural drawings. All the items of works such as PCC, RCC, Brickwork and shuttering etc. in foundation upto this plinth level will be measured and paid as the work done upto plinth level. Nothing extra due to higher plinth will be paid and contractor's rates quoted for all these items shall, therefore, be deemed to cater for extra height of plinth.

31. The Belgium glass work including its frame work shall be executed as per detailed Arch. Drawing through specialized authorized Agencies approved by Principal Investigator (PI) and Guarantee bond against this work shall be furnished.

32. Publisher shall submit the detail design with calculation for structural glazing considering the wind pressure as per IS-875 Part-III. The design should satisfy the adopted aluminium sections which will support structure glazing and having sufficient strength to with stand dead load of the structural glazing as well as other stresses due to wind pressure.

33. Aluminum sections used for fixed/openable doors, windows ventilators etc shall be suitable for to meet architectural drawing and subject to approval of Principal Investigator (PI). The aluminium extruded sections shall be as per IS 6477- 1983 and shall be such as not to impair the proper and smooth functioning/operation and appearance.

34. Heavy-duty aluminum extruded profile of Mahavir/Indal/Hindalco/Bhoruka or equivalent to be used.

35. Contractor shall first prepare shop drawing by using suitable sectioned based on Architectural drawings, adequate to meet the requirement/specification. The shop drawing shall show full size and sections of glazed windows ventilators, i/c details of fittings and joints. The frame work shall be aligned for entire height of each mullion and for the entire width of each transom by Laser beam equipment to ensure cent per cent X-Axis & Y-Axis alignment.

36. Powder Coating - The powder used for powder coating shall be polyester powder made by Berger or Jenson & Nicholson or equivalent.

Thickness - The thickness of finished powder coating shall not less than 50 microns at any point measured with micron meter.

37. EPDM. GASKET

EPDM (Ethyl propylene Diamine Monomer) Gasket of approved. Manufacturer shall be used for aluminium glazing. EPDM gasket shall be of size and profile as shown in drawing or as called for the render the glazing, door, window and ventilator etc to make air and water tight sample of gaskets shall be produces for approval. If required suitable silicon sealant should be used to ensure water/air tightness between frame and glass units nothing extra shall be payable on this account. The material specification for EPDM gasket shall be meet the following requirement.

Sl. No.	Description	Standard follow	Specification
1.	Tensile strength per sqm	ATM - D/0412	70 Min
2.	Elongation at break	ASTM - D/0412	250 Min.
3.	Modulus 100% per sqm	ASTM - D/0412	22 Min.
4.	Compression set % at 700C	ASTM - D/0395	50 Max
5.	Ozone resistance	ASTM - D/0114	No visible cracks

The anchoring/bracing of glazing system to RCC beams/columns shall be done with epoxy coated brackets of approved design. One brackets shall be designed for load bearing and other for expansion characteristic of mullion i/c PVC spacers between the aluminium mullion member and bracket for bi-metal corrosion separation. Wherever there is variation in the beam level, aluminium shim of various thickness shall be provided behind the brackets or extended brackets of required as per site requirement. Nothing extra shall be payable on this account. The contractor shall submit design calculation and get it approved by PI on the selection of suitable anchor fasteners to with stand the dead load of glazing as well as stresses due to wind pressure. All screws, nuts bolts used in structural glazing system shall be stainless steel as manufactured by Kundan/Puja/Steel or equivalent.

38. Spandrel Insulation - The spandrel area shall be insulated by providing 1mm thick G.I. sheet fabricated in tray form duly filled with 50mm thick glass wool of density not less than 48 kg per cum, as manufactured by UP Twig Fibre glass Ltd. with one side laminated with black tissue, fixed on to the glazing frame work by stainless steel P.II. screws of 8x25 and periphery gap between the G.I. sheet frame and aluminium frame work to be sealed by silicon weather sealant.

39. Flashing of soffit, to be done with 1mm thick aluminium sheet pure polyester powder coated 60 microns thick of approved colour. Detail drawings for spandrel insulation and soffit flushing to be submitted by contractor. The periphery gap and edges of flasing between the G.I. sheet frame work shall be sealed by silicon weather sealant.

40. Glass - Outside glass of glazing shall be of minimum 6mm thick tempered heat reflective Belgium (Clear Blue) duly tempered by Horizontal Tempering process as carried out by GSC glass, Noida or Allied glass Meerut or Gold plus glasses Sonapat. The sample shall be got approved from the Principal Investigator (PI) before use.

In side glass shall be min 5mm thick as manufactured by Gujarat Guardian Ltd/Float glass India Ltd. Saint Gobian or equivalent duly tempered by Horizontal tempering method.

Masking - All aluminum profile shall be provided with masking tapes of sun control or winder polymer to provide safety against external scratches at site (masking tape to be removed only at the time of handing over or as per direction of PI)

41. The PVDF coated aluminium composite paneling work shall be executed as per detailed Arch. drawings through specialized and authorized agencies approved by *PI* and guarantee bond against this work shall be furnished.

42. Publishers shall submit the detailed design for AC paneling work and accordingly the aluminium sections supporting the panels shall be selected.

GENERAL SPECIFICATION FOR CIVIL WORKS

1. Except for the items, for which particular specifications are given or where it is specifically mentioned otherwise in the description of items in the schedule of quantities the work shall generally be carried out in accordance with the “CPWD specifications 2009 Vol. 1 and Vol. 2 (with upto date corrections slips). (Hereinafter to be referred to as CPWD specifications) and instructions of Principal Investigator (PI). Wherever CPWD specifications are silent the latest IS codes/specification shall be followed.
2. The order of preference in case of any discrepancy as indicated in condition No. 8.1 under “Conditions of Contract” give in standard SLCR contract form may be read as the following:
 - i) Nomenclature of items as per schedule of quantities.
 - ii) Particular specification and special condition, if any.
 - iii) SLCR specifications.
 - iv) Architectural Drawings
 - v) Indian standard specifications of B.I.S.
 - vi) Sound Engineering Practice

A reference made to any Indian Standard specification in these documents, shall imply to the latest version of that standard. Including such revision/amendments as issued by the bureau of Indian standard upto last date of receipt of Publications. The contractor shall keep at his own cost all such publications of relevant Indian standard applicable to the work at site.

3. The proposed building is a prestigious project and quality of work is paramount importance. Contractor shall have to engage well experienced skilled labour and deploy modern T&P and other equipment to execute the work. Many items like stone masonry & stone cladding works, stone flooring, structural glazing, PVDF coating aluminium composite panel and other specialized flooring work, Wood work will specially require engagement of skilled workers having experience particularly in execution of such items.
4. Samples of all materials and fittings to be used in the work in respect of brand manufacturer and quality shall be got approved from the Principal Investigator (PI), well in advance of actual execution and shall be preserved till the completion of the work. Articles bearing BIS certifications mark shall only be used unless no manufacturer has got BIS mark for the particular material. Any material/fitting whose sample has not been approved in advance and any other unapproved material brought by the contractor shall be immediately removed as soon as directed.
5. The rates for all items of work shall unless clearly specialized otherwise include cost of all labour, material tools and plants and other inputs involved in the execution of the item.
6. The contractor (s) shall quote all-inclusive rates against the items in the schedule of quantities and nothing extra shall be payable for any of the conditions and specifications mentioned. In the Publish documents unless specifically specified otherwise.
7. Unless otherwise specified in the schedule of quantities the rates for all items shall be considered as inclusive of pumping/baling out water, if necessary, for which no extra payment shall be made. Those conditions shall be considered to include water from any source such as inflow of flood, surface and sub-soil water etc. and shall apply to the execution in any season.
8. The rate for all items in which the use of cement is involved is inclusive of charges for curing.
9. The foundation trenches shall be kept free from water while works below ground level are in progress.
10. The work shall be executed and measured as per metric dimensions given in the schedule of quantities, drawings etc. (FPS units wherever indicated are for guidelines only).
11. Payment for items of “RCC work”, brick work and concrete work above different floor shall be made at the rates provided for those items. For operation of these rates, the floor level shall be considered as top of the main structural slab in that floor viz. top of RCC slab in main room and not top of any sunk or depressed floor for lavatory slabs.
12. The rate of items of flooring is inclusive of providing sunk flooring in Bath- rooms, kitchen, etc. and nothing extra on this account shall be payable.

PARTICULAR SPECIFICATION AND SPECIAL CONDITION OF WORK

1. **EARTH WORK**

The work shall be done in accordance with CPWD specifications.

2. **CONCRETE WORK**

The concrete work shall be done in accordance with the CPWD specifications. All the works done upto plinth level will be measured and paid in foundation work upto plinth level. Nothing extra will be paid for higher plinth level.

3. **BRICK WORK**

The brick work shall be carried out with local first-class bricks of crushing strength not less than 75 kg/cm² and conforming to class designation 75 as per CPWD specifications or as specified. The rates shall also include for leaving chases/notches for dowels/cramps for all kinds of come over brick work. All the work done upto plinth level will be measured and paid as foundation work upto plinth level. Nothing extra will be paid for higher plinth level.

4. **SANITARY INSTALLATIONS, WATER SUPPLY AND DRAINAGE**

4.1 The work of water supply and sanitary installations shall be got executed by the agency as approved by Principal Investigator (PI).

(ii) The entire plumbing drawing and sanitary installation drawing/ details shall be submitted by the contractor and got approved by the Principal Investigator (PI) before the execution.

(iii) The entire responsibility for the quality of work will however rest with the building contractor only.

4.2 The work in general shall be carried out as per CPWD specifications. Rate includes all materials, labour and all the operations mentioned in the respective items unless and otherwise specifically mentioned.

4.3 Vitreous China sanitary fittings, procured from producer of firms Jaguar, Neycer, Hindustan, Cera, Parryware shall only be used subject to approval of samples by the Principal Investigator (PI) unless otherwise specified in the items.

4.4 CP Brass pillar taps, bib cocks, flush valves angle etc. shall be of make Jaguar / hindware/ player or equivalent as per sample approved by the Engineer-in- Charge. CP Brass bib cock/stop cock shall be fixed with heavy duty CP flange.

4.5 SCI, CI Pipes and it fittings shall conform to the BIS specification wherever required and making good the same for which nothing extra shall be paid.

4.6 The Published rates shall include the cost of cutting holes in walls, floors, RCC slabs etc. Wherever required and making good the same for which nothing extra shall be paid.

4.7 The SCI pipe wherever necessary shall be fixed to RCC columns, beams etc. with rawl plugs of approved quality and nothing extra shall paid for on this account.

4.8 The contractor shall give a satisfactory performance test of the entire installation (s) before the work is finally accepted and nothing extra shall be payable to the contractor on this account.

4.9 Sensor operated flush valves shall be of make "AOS" or "ASRA" or equivalent.

4.10 P or S and floor traps (long arm upto 90 cm length or more) in WCs shall be of deep seal type of RIF make or equivalent and shall have a minimum water seal of 75 mm. Floor traps (long arm upto 90 cm length or more) shall have a minimum water seal of 50 mm.

4.11 The contractor shall be responsible for all the protection of sanitary, water supply fittings and fixtures against pilferage and breakage during the period of installation until the completion / handing over of the work.

4.12 The pig lead to be used in jointing 100 mm, 75 mm, 50 mm SCI pipe joints shall not be less than 0.98 kg, 0.88 kg and 0.77 kg per joint respectively. A variation of 5% is allowed on higher side. However, in case of variation on lower side, the quantity of pig lead less used shall be recovered from the contractor at market rate to be determined by the Principal Investigator (PI) whose decision in the matter shall be final.

4.13 The contractor shall submit completion plans for water supply internal sanitary installations and building drainage work within thirty days of the date of completion. These plans are to be submitted on drawings prepared preferably through computers (1 original copy + 3 photocopies) on suitable scales to show the general arrangement and desired details in case the contractor fails to submit the completion plans as aforesaid security deposit shall not be released.

STONE WORK:

4.14 Guarantee Bond:

All types of Stone work shall carry five years guarantee to be reckoned from the date after the expiry of maintenance period prescribed in the contract of the work against faulty workmanship, finishing, unsound materials, structural un-stability and other related problems as per guarantee bond attached in this Publish document.

Five years guarantee in prescribed proforma attached must be given by the contractor in token of his overall responsibility. 10% (Ten Percent) of the cost of stone work would be retained as guarantee to the performance of the work done. The guarantee against this item of work shall be in addition to the security deposit mentioned elsewhere in the contract form. If any defects or deficiencies are noticed during the guarantee period, the same shall be rectified by the contractor within seven days of issue of the written notice by the Engineer-in-charge, failing which the defects/deficiencies would be got removed by the Principal Investigator (PI) from another agency at the risk and cost of the contractor. However, this amount of the guarantee can be released in full, if bank guarantee of equivalent amount for the required period is produced and deposited with the COMMITTEE.

**LIST OF MACHINERY, TOOLS & PLANTS TO BE DEPLOYED BY THE CONTRACTOR AT SITE
AS & WHEN REQUIRED**

Sl. No.	Name of Equipment	Minimum Requirement
1	Hoisting Equipment (Builder's hoist, if required)	As required
2	Concrete Mixer (Diesel/Electrical)	1 No.
3	Needle Vibrator (Electrical/Petrol)	1 No.
4	Table Vibrator (Desirable)	1 No.
5	Bar Bending Machine	1 No.
6	Bar Cutting Machine	1 No.
7	Drilling Machine	1 No.
8	Welding Machine	1 No.
9	M.S. Pipes / Staging / Scaffolding	1 Set
10	Steel Shuttering	1 Set
11	Grinding/Polishing Machine	1 No.
12	Dewatering Pump (Diesel/Electric, if required)	1 No.
13	Diesel Generator (if required)	1 No.

Note: The above list of T&P/equipment is indicative and minimum in nature. The contractor shall arrange and deploy all necessary tools, plants, machinery, and equipment as required for proper and timely execution of the work, irrespective of whether specifically mentioned above or not. No extra payment shall be made on this account, and the cost of all such arrangements shall be deemed to be included in the quoted rates.

<u>LIST OF PREFERRED MAKES FOR CIVIL WORKS</u>		
S.NO	Description	Manufacturer/ Brand Name
1	Cement (Grey) PPC/OPC	ACC/ BIRLA JUTE/ULTRA TECH
2	Cement (White)	J.K/ BIRLA ETC.
3	Reinforcement Steel	SAIL/TATA/RINL/JSW STEEL
4	Structural Steel	SAIL/TATA/RINL/JSW STEEL
5	Stainless Steel (Grade 304)	JINDAL/ SAIL/ SALEM
6	Aluminium Sections	HINDALCO/ JINDAL/ MAHAVIR/INDIAN ALUMINIUM CO.
7	Aluminium Door fittings	CLASSIC/ EVEREST/ ALUALPHA
8	Particle Board/Laminated Particle board	CENTURY/ MERINO/GREENLAM
9	Clear/ Float/Frosted/ Toughened/ Refractive Glass	SAINT GOBAIN/ MODI FLOAT/ AIS/MODI GUARD
10	Sun Control Film	3M/ GARWARE/ SAINT GOBAIN
11	Floor Spring and Door Closer	DORMA/ GODREJ/ OZONE
12	ACP Panel	ALSTRONG / ALUCOBOND / EUROBOND/ ALUDECOR
13	Commercial Board/ PLY	MERINO/ GREEN/ CENTURY
14	Flush doors	CENTURY/ MERINO/GREEN/ARCHID
15	Laminates	GREENLAM/ ARCHID/ MERINO/ CENTURY
16	SS Door and Window fittings	DORSET/ GODREJ/ OZONE
17	Stainless Steel Hinges	JOLLY/ GARG/ AMIT/ ASJ/ SUPREME
18	uPVC Window	FENESTA/ VEKA/ALUPLAST
19	HD MR Board	CENTURY/ GREEN/ ACTION TESSA

20	High Pressure Laminate [HPL]	CENTURY/ GREEN/ MERINO
21	WPC Board and Frame	ALSTONE/GREENPLY/AMULYA
22	Ceramic Glazed tiles/ Border tiles	1ST QUALITY KAJARIA/ NITCO/ JOHNSON/ ORIENT/ SOMANY/RAK/AGL
23	Vitrified Tiles	JOHNSON/ KAJARIA/ ORIENT/ SOMANY/RAK/AGL
24	Epoxy flooring	FOSROC/ SIKA/ BASF
25	Polyvinyl Flooring	ARMSTRONG/ POLY FLOR/ TARKETT
26	Laminate Wooden Flooring	VISTA/ ACTION TESA/ ARMSTRONG/ PERGO
27	GRC Wall Tile/ Jali	UNISTONE/ DALAL/ SWASTIK ALWAR/ ULTRA
28	Interlocking Precast paver blocks/ Kerb Stone	HINDUSTAN TILES/ SWASTIK/ DALAL
29	Tile Adhesive	PIDILITE/ FERROUSCRETE/ BALLENDURA/CICO
30	Paint/ primer/ oil bound distemper/ Acrylic paint/ plastic paint	1ST QUALITY PAINTS OF ASIAN/ BERGER/ NEROLAC/ DULUX
31	Water Proof Cement Paint/ Exterior Paint	1ST QUALITY PAINTS OF ASIAN PAINTS/ BERGER/NEROLAC/ DULUX
32	Sanitary ware (Vitreous China) (European Seats. Urinals, Wash Basins, etc.)	HINDWARE/ PARRYWARE/ CERA/ KEROVIT/ JAGUAR
33	C.P brass fittings/ Accessories	JAQUAR/ HINDWARE/ CERA /KEROVIT/PERRYWARE
34	G.I Pipes	TATA/ JINDAL(HISSAR/ BHUSHAN/ APL APPOLO
35	G.I Fittings	UNIK/ ZOLOTO/ AVAR
36	Stainless Steel Sink	NEELKANTH/ JAINA/ KINGSTON (COBRA)/ NIRALI
37	C.I Pipes/ Fittings	RIF/ NECO/ BENGAL IRON WORKS/ BC/ SKF
38	C.I Pipes	NICO/ KESORAM/ ELECTRO STEEL/ KAPILANSH
39	Mirror Glass	ATUL/ MODIGUARD / SAINT GOBAIN
40	False Ceiling	ARMSTRONG/ SAINT GOBAIN/ AEROLITE
41	Insulation (Mineral/ rock wool)	UP TIWAGA LTD/ ROCKWOOL IND./ F.G.P.
42	Water proofing compound	SIKA/ FOSROC/ PIDILITE/ ASIAN/ BASF/CICO
43	Wall Putty	BIRLA/JK/ ASIAN
44	Brass Ball Valve/ Gate Valve/ Float Valve/ Butterfly valve	ZOLOTO/ AM/ LEADER/ SANT
45	RCC Pipe	LAKSHMI/ SOOD & SOOD/ JAIN & Co./ DIWAN SPUN PIPES
46	PVC Pipe	PRAKASH/ PRINCE/ SUPREME
47	Sandwich Roof Panel (Puff Panel)	KAKTUS/ ZEP/ E- PACK/ LLOYD
48	Profile Steel Sheet (Precoated)	TATA/ JSW JINDAL/LLOYD SUPERDECK
49	Poly Carbonate Sheet	GE LEXAN/ POLYGAL/TUFLITE
50	Acoustic Wooden/Fabric Panelling	ARMSTRONG/ ANUTONE/ CREDENCE/ TOPAKUSTIK
51	Calcium silicate false ceiling	AEROLITE, RAMCO, HILUX
52	Gypsum Board	GYPROC BY SAINT GOBAIN, USG BORAL, ARMSTRONG

53	cPVC Pipe Fitting & Solvent	SUPREME/ ASTRAL/ ASHIRWAD / PRINCE/ PRAKASH
54	uPVC Pipes & Fittings	SFMC / SUPREME/ FINOLEX
55	M.S Pipes	JINDAL/ APPOLO/ SWASTIK/ TATA/ SURYA
56	Manhole cover /Grating	KK MANHOLE/ DALAL/ SWASTIK/ HINDUSTAN
57	SS Pipe (304 grade) FOR WATER SUPPLY	JINDAL/ TATA/ ALFA PRESS/ VIEGA

NOTE: The makes specified above are indicative of quality. The contractor may propose equivalent makes of similar or higher specifications, subject to prior approval of the Principal Investigator (PI). In case of non-availability of any listed make, the decision of the PI shall be final and binding.

BILL OF QUANTITY

PRINCIPAL INVESTIGATOR (SLCR)						
DEPARTMENT OF CIVIL ENGINEERING						
INDIAN INSTITUTE OF TECHNOLOGY (BHU)						
Name of work: - Construction of Rain water Harvesting System in Yugal Bihari inter Collage Rameshwar and Panchayat bhawan Esarwar, Varanasi						
Bill of Quantity						
S.No	Description of items	QTY	Unit	Rate		Amount
1	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge. Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix) (15.2.1)	2.00	cum	2434.25	cum	4,868.50
2	Demolishing brick work manually / by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge: In cement mortar (15.7.4)	4.00	cum	2060.20	cum	8,240.80
3	Surface dressing of the ground including removing vegetation and inequalities not exceeding 15 cm deep and disposal of rubbish, lead up to 50 m and lift up to 1.5 m. All kinds of soil (2.28.1)	120.00	Cum	34.15	Cum	4098.00
4	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50m All kinds of soil. (2.8.1)	178.00	Cum	260.30	Cum	46,333.40
5	Filling available excavated earth (excluding rock) in trenches, plinth,sides of foundations etc. in layers not exceeding 20cm in depth,consolidating each deposited layer by ramming and watering, lead upto 50 m and lift upto 1.5 m. (2.25)	76.00	cum	196.00	cum	14,896.00
6	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level 1:4:8 (1 Cement : 4 coarse sand (zone-III) derived from natural sources : 8 graded stone aggregate 40 mm nominal size derived from natural sources) (4.1.8)	5.00	cum	6812.00	cum	34,060.00
7	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering, shuttering, finishing and reinforcement - All work upto plinth level 1:1.5:3 (1 cement : 1.5 coarse sand (zone-III): 3 graded stone aggregate 20 mm nominal size) (5.1.2)	32.00	cum	9045.75	cum	2,89,464.00
8	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level. Thermo-Mechanically Treated bars of grade Fe-500D or more. (5.22.6)	3014.00	kg	107.85	kg	3,25,059.90
9	Centering and shuttering including strutting, propping etc. and removal of form for:Lintels, beams, plinth beams, girders, bressumers and cantilevers with water proof ply 12 mm thick (5.9.21)	222.00	sqm	841.95	sqm	1,86,912.90

10	Centering and shuttering including strutting, propping etc. and removal of form for: Suspended floors, roofs, landings, balconies and access platform with water proof ply 12 mm thick (5.9.20)	38.00	sqm	1028.40	sqm	39,079.20
11	Brick work with common burnt clay F.P.S. (non modular) bricks of class designation 7.5 in foundation and plinth in : Cement mortar 1:6 (1 cement : 6 coarse sand) (6.1.2)	15.00	cum	7132.25	cum	1,06,983.75
13	Providing and laying 75 mm thick compacted bed of dry brick aggregate of 40 mm thick nominal size including spreading, well ramming, consolidating and grouting with jamuna sand, including finishing smooth etc. complete as per direction of Engineer-in-charge. (16.64)	57.00	sqm	199.35	sqm	11,362.95
14	12 mm cement plaster of mix : 1:6 (1 cement: 6 coarse sand) (13.4.2)	77.00	sqm	343.65	sqm	26,461.05
15	15 mm cement plaster on rough side of single or half brick wall of mix : 1:6 (1 cement: 6 coarse sand) (13.5.2)	28.00	sqm	395.35	sqm	11,069.80
16	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes. 110 mm diameter (12.41.2)	100	Meter	377.40	Meter	37,740.00
17	Providing and fixing on wall face unplasticised -PVC moulded fittings/accessories for unplasticised - Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.					
	Bend 87.5° 110mm (12.42.5.2)	24	Nos.	150.35	Nos.	3608.4
18	Shoe (Plain) 110 mm Shoe (12.42.6.2)	12	Nos.	131.85	Nos.	1582.2
19	Coupler 110 mm (12.42.1.2)	12	Nos.	136.15	Nos.	1633.8
21	Excavating trenches of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, depth upto 1.5 m including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed , within a lead of 50m All kinds of soil Pipes, cables etc. exceeding 80mm dia. but not exceeding 300 mm dia. (2.10.1.2)	90.00	metre	352.15	metre	31,693.50
22	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :150 mm dia. R.C.C. pipe (19.6.2)	90.00	metre	556.45	metre	50,080.50
23	Providing and laying cement concrete 1:5:10 (1 cement : 5 coarse sand : 10 graded stone aggregate 40 mm nominal size) all round S.W. pipes including bed concrete as per standard design: 150 mm diameter S.W. pipe (19.2.2)	90.00	metre	1179.85	metre	1,06,186.50

24	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with 75 class designation bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455 x 610mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) R.C.C. top slab with 1:2:4 mix (1 cement :2 coarse sand : 4 graded stone aggregate 20 mm nominal size) foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design: Inside dimensions 455x610 mm and 45 cm deep for single pipe line- With F.P.S. bricks (19.30.1.1)	12	Nos	6937.90	Nos	83,254.80
25	Steel work welded in built up sections/ framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works (10.25.2)	214.00	kg	172.60	kg	36,936.40
26	Supplying and filling in plinth with sand under floors, including watering, ramming, consolidating and dressing complete. (2.27)	6.00	Cum	2123.75	Cum	12742.50
20	Finishing walls with Acrylic Smooth exterior paint of required shade : New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/10 sqm) (13.46.1)	34.00	sqm	160.60	sqm	5,460.40
27	Making plinth protection 50 mm thick of cement concrete 1:3:6 (1 cement : 3 coarse sand (zone-III) derived from natural sources : 6 graded stone aggregate 20 mm nominal size derived from natural sources) over 75 mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including necessary excavation, levelling & dressing & finishing the top smooth. (4.17)	40.00	sqm	749.30	sqm	29972.00
28	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level 1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources) (4.1.3)	2.00	cum	7878.50	cum	15,757.00
29	Supplying, assembling, lowering and fixing in vertical position in bore well unplasticized PVC medium well screen (RMS) pipes with ribs, conforming to IS: 12818, including hire & labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer-in-charge. 150 mm nominal size dia (23.4.2)	24.00	Mtrs	807.45	Mtrs	19,378.80
30	Supplying, filling, spreading & leveling stone boulders of size range 5 cm to 20 cm, in recharge pit, in the required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge. (23.5)	11.00	cum	1509.80	cum	16,607.80
31	Supplying, filling, spreading & leveling gravels of size range 5 mm to 10 mm, in the recharge pit, over the existing layer of boulders, in required thickness, for all leads & lifts, all complete as per direction of Engineerin-charge. (23.6)	11.00	cum	1538.25	cum	16,920.75
32	Gravel packing in tubewell construction in accordance with IS: 4097, including providing gravel fine/ medium/ coarse, in required grading & sizes as per actual requirement, all complete as per direction of Engineerin- charge. (23.8)	11.00	cum	2024.50	cum	22,269.50

33	Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads including all lifts involved. (15.60)	38.00	cum	263.95	cum	10,030.10
Total Rs						16,10,745.20
Modified Estimate Cost after using Multiplying factor on DSR 2023 on account of GST @ 0.973						15,67,255.08
Grand Total Rs.						15,67,255.08

Note: Time - 60 days

Note: 1. The quantities indicated in the Bill of Quantities (BOQ) are tentative and may vary during execution depending upon site requirements and directions of the Principal Investigator (PI). The actual quantities of work may increase or decrease up to $\pm 25\%$. The contractor shall have no claim whatsoever on account of such variation, and the rates quoted shall remain valid. Payment shall be made on the basis of actual quantities executed at site.

Sd-
Supervisor

Sd-
Co-PI, SLCR

FORWARDED/APPROVED/NOT APPROVED

Sd/-
Principal Investigator (PI), SLCR

Drawings & Designs

