

## **TENDER DOCUMENT**

**Name of Work: Construction of fire escape staircase, lift well & room (G+10) storied for Studio apartment at IIT Kanpur (SH: Civil works)**

**Note-1:-** The intending bidder must read the terms and conditions carefully. He should submit his bid only if he considers himself eligible and he is in possession of all the documents as required.

**Note-2:-** The intending bidder must upload all the documents as detailed in **Para 26 on pages- 12 of** this document.

**Note-3:-** Applicants are advised to keep visiting [www.iitk.ac.in/iwd/tenderhall.htm](http://www.iitk.ac.in/iwd/tenderhall.htm), <https://eprocure.gov.in/eprocure/app> & from time to time (till the deadline for bid submission) for any updates in respect of the tender documents, if any. Failure to do so shall not absolve the applicant of his liabilities to submit the applications complete in all respect including updates thereof, if any. An incomplete application may be liable for rejection.

**Note-4:-** The EMD shall be prepared in favour of **The Director, IIT Kanpur payable at Kanpur** as detailed in the tender document. A part of EMD is acceptable in the form of bank guarantee as per the details in the tender document. This bank guarantee shall also be in favour of **The Director, IIT Kanpur**.

**Note-5:- The defect liability period is 36 months** from the date of handing over the completed building to the engineer in charge except for the items specifically mentioned in this tender document. Other related details are elaborated in the tender document.

**Note-6:-** Pre-bid meeting shall be held on **27.03.2025 at 12:00 PM** as detailed in this document.

**Note-7:-** The construction work is to be carried out at IIT Kanpur campus.

**Name of Work: Construction of fire escape staircase, lift well & room (G+10) storied for Studio apartment at IIT Kanpur (SH: Civil works)**

<b>Sl. No</b>	<b>Description</b>	<b><u>Page No</u></b>
<b>1</b>	Bid Abstract	1
<b>2</b>	Index	2-3
<b>3</b>	Press Notice	4
	SECTION – A	5
<b>4</b>	Technical Bid	5
<b>(i)</b>	Invitation for Bidder e-tendering	6-12
<b>(ii)</b>	Section-I: Brief Particulars of the work	13
<b>(iii)</b>	Section-II: Information and Instruction for bidders	14-19
<b>(iv)</b>	Section-III: Letter of Transmittal	20
<b>(v)</b>	Form A to E	21-29
<b>(vi)</b>	Form F to I	30-33
<b>(viii)</b>	Criteria of Evaluation	34-35
<b>5.</b>	SECTION – B	36
<b>6.</b>	PART – A – FINANCIAL BID	37
<b>(i)</b>	CPWD - 6 for e-Tendering	38-42
<b>(ii)</b>	CPWD - 7	43-44
<b>(iii)</b>	Acceptance	45
<b>(iv)</b>	Proforma of Schedule A – F	46-51
<b>(v)</b>	ANNEXURE-II: Milestone	42-53
<b>(vi)</b>	ANNEXURE-III: List of Machine, T&P to be deployed at site	54-55
<b>7.</b>	PART – B	56
	GENERAL CONDITIONS AND MATERIAL AND QUALITY ASSURANCE	

(i)	General requirement for the tender	57
	FOR CIVIL WORKS	
(i)	Material and quality assurance	59-62
(ii)	Additional Condition for Cement	63-64
(iii)	Additional Condition for Steel reinforcement	65-90
(iv)	General Terms and Condition	91-106
<b>8.</b>	PART – B1	107
(i)	General Conditions for work	108-115
<b>9.</b>	PART – B2	116
	List of Preferred Makes for Civil Works	117-121
<b>10.</b>	PART – B3	122
	Proforma (Water Proofing, Aluminium Works, Water Supply, Sanitary Installations and uPVC works, etc.) Form of Performance Security (Guarantee) Bank Guarantee Bond & Form of Earnest Money Deposit, Bank Guarantee Bond	123-129
<b>11</b>	Integrity pact	130
<b>12</b>	TESTING CHARGES	131

**This NIT amounting to Rs. 2,85,92,782/- contains 131 pages numbered from 01 to 131**

**Superintending Engineer**

**INDIAN INSTITUTE OF TECHNOLOGY KANPUR**  
**INSTITUTE WOPRKS DEPARTMENT**  
**CENTRAL OFFICE**  
**Notice Inviting e-Tender -57/Civil/D1/GSMST/2024-25**

The Superintending Engineer, IWD, IIT Kanpur on behalf of the Board of Governors of IIT Kanpur invites online percentage rate open bids on two envelope system form eligible firms/contractors of repute in two bid system (Eligible cum Technical & Financial Bid) for the following work:

Sl No.	Name of Work	Estimated Cost	Earnest money	Period of completion
1	<b>Construction of fire escape staircase, lift well &amp; room (G+10) storied for Studio apartment at IIT Kanpur (SH: Civil works)</b>	Rs. <b>2,85,92,782/-</b>	<b>5,72,000/-</b>	09 Months

Last date & time of submission of bid on **12.04.2025 upto 5.00 PM**. All details are available on website, <https://eprocure.gov.in/eprocure/app>, [www.tenderhome.com](http://www.tenderhome.com) & [www.iitk.ac.in/iwd/tenderhall.htm](http://www.iitk.ac.in/iwd/tenderhall.htm). The bids can only be submitted online at <https://eprocure.gov.in/eprocure/app>. Any corrigendum regarding this tender will be published only on above mentioned websites.

No. IWD/CO/2024-25/ 395

Dated: 21.03.2025

Superintending Engineer  
Phone No. 0512-259-7604

**Section-A**

**Technical BID**

**(Eligibility Bid)**

**Name of work: Construction of fire escape staircase, lift well & room (G+10) storied for Studio apartment at IIT Kanpur (SH: Civil works)**

**Note:-** The intending bidder must read the terms and conditions carefully. He should only submit his bid if he considers himself eligible and he is in possession of all the documents as required.

**INDIAN INSTITUTE OF TECHNOLOGY,  
KANPUR INSTITUTE WORKS DEPARTMENT  
Notice Inviting e-Tender**

The Superintending Engineer, IWD, IIT Kanpur on behalf of Board of Governors of IIT Kanpur invites online percentage rate open bids on two envelope system form eligible firms/contractors of repute in two bid system (Eligible cum Technical & Financial Bid) for the following work:

1	Name of organization	:	Indian Institute of Technology, Kanpur
2	NIT No.	:	<b>57/Civil/D1/GSMST/2024-25</b>
3	Location	:	Indian Institute of Technology, Kanpur
4	Tender / Quotation type (open / limited /EOI / Auction / Single	:	Open Tender
5	Tender / Quotation category (services / <b>works</b>	:	Works
6	Type of Contract (work / supply / auction/ service / buy / empanelment / sell	:	Works
7	Form of contract (CPWD-7/8)	:	CPWD-7
8	Work Category (civil / electrical / fleet / management / computer system	:	Civil Works
9	Is multi-currency allowed?	:	No
10	Date of publishing / issue / start	:	As per CPP portal

11	Document download start date	:	As per CPP portal
12	Document download end date	:	As per CPP portal
13	Date & time of pre-bid meeting	:	As per CPP portal
14	Venue of pre-bid meeting	:	As per CPP portal
15	Last date & time of uploading of bids	:	As per CPP portal
16	Date & time of opening of Technical bids	:	As per CPP portal
17	Bid Validity Days	:	90 days after opening of technical bid
18	Earnest Money Deposit (EMD)	:	<b>Rs. 5,72,000/-</b>
20	No. of Bids / Covers (1 / 2 / 3 / 4)	:	2
21	Address for communication	:	Office of Superintending Engineer, IWD, IIT Kanpur-208016 Contact no. 0512-259-7604
22	Email address	:	<a href="mailto:seiwd@iitk.ac.in">seiwd@iitk.ac.in</a>

**1. The bidder should carefully read the milestones (Annexure -II) and conditions.**

**2. Contractors who fulfil the following requirements shall be eligible to apply. Joint ventures and Special Purpose Vehicles are not accepted.**

Should have satisfactorily completed the works as mentioned below during the last Seven years ending previous day of last date of submission of tenders.

i. Three similar works each costing not less than Rs **114.00** lacs

OR

ii. Two similar works each costing not less than Rs.**172.00** lacs

OR

iii. One similar work costing not less than Rs. **229.00** lacs.

**Similar work shall mean works of "Construction of building in RCC framed structure having minimum one building of eight stories or completing balance construction work of one building (including structural work) minimum upto eight storey including Internal water supply, Sanitary installation, Drainage & fire fighting system all executed under single agreement". The eight-storied building should have a lift well executed under the said agreement.**

**Note:**

1. Basement/stilt, if any will be considered as storey. In case, if any RCC framed structure is having basement and stilt both, it will be considered two storey. Mumty and machine room will not be counted as storey for this purpose.
2. One building of the specified storeys, as mentioned in the definition of similar work constructed in each work of the financial magnitude as specified above.

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to the previous day of last date of submission of tenders.

- (a) Should have had average annual financial turnover of Rs. **86.00 lacs** on construction works during the last three years ending 31<sup>st</sup> March 2024.
  - (b) Should not have incurred any loss (profit after tax should be positive) in more than two years during the last five years ending 31<sup>st</sup> March, 2024
  - (c) Should have net worth certificate of minimum **10% of the estimated cost put to tender** issued by a certified Chartered Accountant with UDIN.  
OR  
Should have a Banker's certificate of the amount equal to **40% of the estimated cost put to tender** (ECPT).
  - (d) Should have the calculated bidding capacity equal to or more than the estimated cost of the work.
  - (e) The bidder should not have been barred /black-listed by the central/state government, or any entity controlled by it, from participating in any tender, and the bar subsists as on the bid due date, would not be eligible to submit the bid.
3. The intending bidder must read the terms and conditions carefully. He should submit his bid only if he considers himself eligible and he is in possession of all the documents required.
  4. Information and Instructions for bidders posted on website shall form part of bid document.
  5. The bid document consisting of Technical (eligibility) & the Financial bid i/c plans, specifications, the schedule of quantities of various types of items to be executed and the set of terms and conditions of the contract to be complied with contractor whose bid may be accepted and other necessary documents can be seen in the office of the Executive Engineer between hours of 11:00 AM and 4:00 PM **from date of**

**publicity of tender to date of submission of tender every day** except on Saturday & Sunday and public holidays or can be seen on website [www.iitk.ac.in/iwd/tenderhall.htm](http://www.iitk.ac.in/iwd/tenderhall.htm), <https://eprocure.gov.in/eprocure/app> & [www.tenderhome.com](http://www.tenderhome.com)

6. Applicant has to deposit earnest money of Rs **5,72,000.00** in the form of receipt/ Treasury Challan or Demand Draft or Pay order or Banker 's Cheque or Deposit at Call **Receipt or Fixed Deposit Receipt (drawn in favour of Director IIT Kanpur) along with tender document.**
7. Earnest Money in the form of Treasury Challan or Demand Draft or Pay order or Banker's Cheque or Deposit at Call Receipt or Fixed Deposit Receipt (drawn in favour of "Director IIT Kanpur") shall be scanned and uploaded to the e-Tendering website within the period of bid submission. The original EMD should be deposited in the office of Superintending Engineer in envelop mentioning "EMD for the work" on **12.04.2025 up to 3.00 PM.**

**A part of earnest money** is acceptable in the form of bank guarantee also. In such case, **minimum** 50% of earnest money or Rs. 20 lac, whichever is less, **shall** have to be deposited in shape prescribed above, and balance **may be deposited** in shape of Bank Guarantee of any scheduled bank **having validity for six months or more from the last date of receipt of bids** which also is to be scanned and uploaded by the intending bidders.

Copy of certificate of work experience and other documents as specified in the technical bid/eligibility bid document shall be scanned and uploaded to the e-Tendering website <https://eprocure.gov.in/eprocure/app>. within the period of bid submission. However, copy (original/self-certified as mentioned in para 25) of all the scanned and uploaded documents as specified in bid document shall have to be submitted by all bidders on **12.04.2025 up to 3.00 PM**, physically in the office of tender opening authority.

**Online technical bid documents** submitted by intending bidders shall be opened only of those bidders whose original EMD deposited and other documents scanned and uploaded are found in order.

Online financial bid document submitted by the bidders shall be opened only of those bidders who on the basis of pre-qualification documents uploaded by them within the period of bid submission, qualify in accordance with the provision of technical bid. The financial bid shall be opened at the notified time, date & place in presence of qualified bidders or their representative.

8. The intending bidder must have valid class-III **digital signature** to submit the bid.
9. On opening date, the contractor can login and see the bid opening process. After

- opening of bids, he will receive the competitor bid sheets.
10. Contractor can upload documents in the form of **JPG** format and **PDF** format.
  11. **Certificate of Financial Turn Over** : At the time of submission of bid, contractor has to upload Affidavit/Certificate from **CA** mentioning Financial Turnover on construction work of last 5 years or for the period as specified in the bid document and further details if required may be asked from the contractor after opening of technical bids containing pre-qualification documents. The balance sheet in case of private public limited company shall include its standalone finance statement and consolidated financial statement both. There is no need to upload entire voluminous balance sheet.
  12. If a tenderer does not quote any percentage above/ below on the total amount of the tender or any section/sub head in the percentage rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.
  13. The **Technical bid** shall be **opened first** on due date and time as mentioned above. The time and date of opening of financial bid of contractors qualifying the technical bid shall be communicated to them at a later date.
  14. **Pre Bid Meeting** shall be held either in the office of Superintending Engineer IWD, IIT Kanpur **at 12.00 PM on 27.03.2025** to clear the doubt of intending bidders/ associates, if any. For physical attendance in pre bid meeting only one representative of firm shall be allowed to maintain the physical distance. Bidders are advised to send their queries/ doubts by email to the Superintending Engineer on email id [seiwd@iitk.ac.in](mailto:seiwd@iitk.ac.in) at least one day prior to the pre-bid meeting. A bidder can send multiple mails with different queries/doubts in each mail. The bidder may also raise query on the date of pre-bid meeting. If found necessary, an addendum/corrigendum to the tender document and /or minutes of meeting shall be issued and same shall be uploaded on the website and no further queries after pre-bid meeting shall be entertained. Such addendum/corrigendum shall become part of tender.
  15. The department reserves the right to reject any prospective application without assigning any reason and to restrict the list of qualified contractors to any number deemed suitable by it, if too many bids are received satisfying the laid down criterion.
  16. After submission of the bid the contractor can re-submit revised bid any number of times but before last time and date of submission of bid as notified.
  17. The rates for all items of work, shall unless clearly specified otherwise, include cost of all operations and all inputs of labour, material, T&P, scaffolding at all heights irrespective of any location, wastages, watch and ward, other inputs, all incidental charges, all taxes, cess, duties, levies, etc. required for execution of the work. GST shall be paid extra along with the bills at prevailing rates.
  18. Copy of certificate of work experience and other documents as specified in the technical bid/eligibility bid document shall be scanned and uploaded to the e-Tendering website within the period of bid submission.
  19. Online technical bid documents submitted by intending bidders shall be opened only of those bidders who have deposited Earnest Money, proof of deposition of processing fee and duly signed Integrity pact with date and seal.
  20. Online financial bid document submitted by the bidders shall be opened only of those bidders who on the basis of pre-qualification documents uploaded by them within the period of bid submission, qualify in accordance with the provision of technical bid. The financial bid shall be opened at the notified time, date & place in presence of qualified

- bidders or their representative.
21. The bid submitted shall become invalid if:
- (i) The bidder is found ineligible.
  - (ii) The bidder does not deposit original EMD to the office of the Superintending Engineer, IWD IIT Kanpur.
  - (iii) The bidder does not upload scanned copies of all the documents stipulated in the bid document.
  - (iv) If a bidder quotes nil rates against each item in scheduled of quote of tender or does not quote any rate in any section/sub head in rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer.
22. Intending Bidders are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their bids as to the nature of the ground and sub- soil (so far as is practicable), the form and nature of the site, the means of access to the site, the accommodation they may require and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their bid. A bidders shall be deemed to have full knowledge of the site whether he inspects it or not and no extra charge consequent on any misunderstanding or otherwise shall be allowed. The bidders shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by a bidders implies that he has read this notice and all other contract documents and has made himself aware of the scope and specifications of the work to be done and of conditions and rates at which stores, tools and plant, etc. will be issued to him by the Government and local conditions and other factors having a bearing on the execution of the work.
23. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable for rejection.
24. The contractor shall not be permitted to bid for works in the IWD in which his near relative is posted as a Divisional Accountant or as an officer in any capacity between the grades of Superintending Engineer and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any officer in the Institute Works Department IIT Kanpur.
25. No Engineer of Gazetted Rank or other Gazetted Officer employed in Engineering or Administrative duties in an Engineering Department of the Government of India is allowed to work as a contractor for a period of one year after his retirement from Government service, without the prior permission of the Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found any time to be such a person who had not obtained the permission of the Government of India as aforesaid before submission of the bid or engagement in the contractor's service.

**26. List of Documents to be filled in by the bidders in various forms as indicated in Section III and other documents, to be scanned & uploaded within the period of bid submission and deposited in hard copy.**

1	Treasury challan /Demand draft/Pay order or Banker's Cheque/ Deposit at Call Receipt/Fixed Deposit Receipt of a Scheduled Bank/ Bank Guarantee of any Scheduled Bank against EMD (scan copy of the EMD is to be uploaded and original copy of EMD shall be deposited to the office of SE, IWD before the last date & time of opening of technical bid as specified in the bid document)
2	The scanned copy of duly signed Integrity Pact with date and seal
3	Letter of transmittal
4	Certificate of Financial Turnover for the last five years from Chartered Accountant <b>(Form 'A')</b> .
5	Banker's certificate of the amount equal to <b>40% of the estimated cost put to tender</b> (ECPT). <b>(Form 'B')</b> . OR Net worth certificate of minimum <b>10% of the estimated cost put to tender</b> issued by a certified Chartered Accountant with UDIN. <b>(Form 'B1')</b> .
6	Details of eligible similar nature of works completed during the last seven years ending previous day of last date of submission of tenders <b>(Form 'C')</b>
7	Details of Projects under execution <b>(Form 'C-1')</b> .
8	Performance report of works referred to in Form 'C' <b>(Form 'D')</b> .
9	Performance report of works referred to in Form 'C-1' <b>(Form 'D1')</b> .
10	Structure of Organisation <b>(Form 'E')</b> .
11	Details of works in progress or works awarded as on the last date of submission of tenders <b>(Form 'F')</b> .
12	Affidavit as per provision of CPWD-6 <b>(Form 'G')</b> .
13	GST Registration Certificate of the State in which the work is to be taken up, if already obtained by the bidder. If the bidder has not obtained GST registration in the State in which the work is to be taken up, Or as required by GST authorities then in such a case bidder shall furnish undertaking as given in <b>Form-'H'</b>
14	Declaration about site inspection (Form 'J')
15	Permanent Account Number (PAN) as issued by the Income Tax Department
16	Copy of Registration of the concern department.
17	Copy of EPF & ESIC registration.

**Superintending Engineer**

**SECTION- I**  
**BRIEF PARTICULARS OF THE WORK**

1. Salient details of the work for which bids are invited are as under

<b>Sl. No.</b>	<b>Name of work</b>	<b>Estimated Cost</b>	<b>Period of completion</b>
<b>1.</b>	<b>Construction of fire escape staircase, lift well &amp; room (G+10) storied for Studio apartment at IIT Kanpur (SH: Civil works)</b>	<b>Rs. 2,85,92,782/-</b>	<b>09 Months</b>

2. **The work is situated inside IIT Kanpur campus, Kalyanpur, Kanpur (UP) Pin: 208016.**
3. **General features and scope of the work is as under:**  
The scope covers construction of Ground floor + 10 floors RCC framed structure.  
The building consists of fire-fighting system.  
Above details and status are only indicative but not exhaustive. The intending bidder shall inspect the site and fully acquaint with nature of work and site condition and assess/ satisfy himself before quoting and submission of his bid. He is also advised to inspect the indicative drawings attached with this tender document to acquaint with other details about the building.
4. Work shall be executed according to General Conditions of Contract for Central P. W. D. Works with correction slips issued as specified in **Schedule F**.

## **SECTION- II**

### **INFORMATION & INSTRUCTIONS FOR BIDDERS**

#### **1.0 General:**

The Indian Institute of Technology, Kanpur, is an institution of premier repute, decided to construct "**Construction of fire escape staircase, lift well & room (G+10) storied for Studio apartment at IIT Kanpur (SH: Civil works)**

**1.1** It is a very prestigious and time-bound project being monitored by the highest authority.

**Important Note:** The construction conditions and milestones have been specifically drafted to complete the project in time.

**1.2** Letter of transmittal and forms for deciding eligibility are given in Section III.

**1.3** All information called for in the enclosed forms should be furnished against the relevant columns in the forms. If for any reason, information is furnished on a separate sheet, this fact should be mentioned against the relevant column. Even if no information is to be provided in a column, a "**nil**" or "**no such case**" entry should be made in that column. If any particulars/query is not applicable in case of the bidder, it should be stated as "**not applicable**". The bidders are cautioned that not giving complete information called for in the application forms or not giving it in clear terms or making any change in the prescribed forms or deliberately suppressing the information may result in the bid being summarily disqualified. Bids made by telegram or telex and those received late will not be entertained.

**1.4** The bid should be type- written. The bidder should sign each page of the application.

**1.5** Overwriting should be avoided. Correction, if any, should be made by neatly crossing out, initialing, dating and rewriting. Pages of the eligibility criteria document are numbered. Additional sheets, if any added by the contractor, should also be numbered by him. They should be submitted as a package with signed letter of transmittal.

**1.6** References, information and certificates from the respective clients certifying suitability, technical knowledge or capability of the bidder should be signed by an officer not below the rank of Executive Engineer or equivalent.

**1.7** The bidder may furnish any relevant additional information which he thinks is necessary to establish his capabilities to successfully complete the envisaged work. He is, however, advised not to furnish superfluous information. No information shall be entertained after submission of eligibility criteria document unless it is called for by the Employer.

#### **2.0 Definitions:**

**2.1** In this document the following words and expressions have the meaning hereby assigned to them.

**2.2 Employer:** Means the Board of Governors, IIT Kanpur, acting through the **Superintending Engineer, IWD IIT Kanpur.**

**2.3 Bidder and/or contractor:** Means the individual, proprietary firm, firm in partnership, limited company private or public or corporation.

**2.4 "Year"** means "Financial Year" unless stated otherwise.

**3.0 Method of application:**

**3.1** If the bidder is an individual, the application shall be signed by him above his full type written name and current address.

**3.2** If the bidder is a proprietary firm, the application shall be signed by the proprietor above his full type written name and the full name of his firm with its current address.

**3.3** If the bidder is a firm in partnership, the application shall be signed by all the partners of the firm above their full type written names and current addresses, or, alternatively, by a partner holding power of attorney for the firm. In the later case a certified copy of the power of attorney should accompany the application. In both cases a certified copy of the partnership deed and current address of all the partners of the firm should accompany the application.

**3.4** If the bidder is a limited company or a corporation, the application shall be signed by a duly authorized person holding power of attorney for signing the application accompanied by a copy of the power of attorney. The bidder should also furnish a copy of the Memorandum of Articles of Association duly attested by a Public Notary.

**4.0 Final decision making authority.**

The employer reserves the right to accept or reject any bid and to annul the process and reject all bids at any time, without assigning any reason or incurring any liability to the bidders.

**5. Particulars provisional**

The particulars of the work given in Section I are provisional. They are liable to change and must be considered only as advance information to assist the bidder.

**6. Site visit**

The bidder is advised to visit the site of work, at his own cost, and examine it and its surroundings to himself collect all information that he considers necessary for proper assessment of the prospective assignment.

**7.0 Initial criteria for eligibility**

**7.1** Bidder should have satisfactory completed works as mentioned below, during the last seven years ending previous day of last date of submission of tenders. For this

purpose cost of work shall mean gross value of the completed work. This should be certified by an officer not below the rank of Executive Engineer / Project Manager or equivalent. In case of works executed for private organizations, the certificate shall be signed by the chief consultant and countersigned by the owner of the project.

(i) Three similar works each costing not less than Rs. **114.00** lacs

OR

(ii) Two similar works each costing not less than Rs. **172.00** lacs

OR

(iii) One similar work costing not less than Rs. **229.00** lacs.

**Similar work shall mean works of "Construction of building in RCC framed structure having minimum one building of eight stories or completing balance construction work of one building (including structural work) minimum upto eight storey including Internal water supply, Sanitary installation, Drainage & fire fighting system all executed under single agreement". The eight-storied building should have a lift well executed under the said agreement.**

**Note:**

1. Basement/Stilt, if any will be considered as storey. In case, if any RCC framed structure is having basement and stilt both, it will be considered two story. Mumty and machine room will not be counted as storey for this purpose.
2. One building of the specified storeys, as mentioned in the definition of similar work constructed in each work of the financial magnitude as specified above.

The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to the previous day of last date of submission of tenders.

**7.2** The bidder should have had average annual financial turn over (Gross) of **Rs. 86.00 lacs** on Civil construction work during the last three consecutive years **balance sheets duly audited by Chartered Accountant**. Year in which no turnover is shown would also be considered for working out the average.

**7.3** The bidder should not have incurred any loss (**profit after tax should be positive**) in more than two years during **available last five consecutive balance sheets**, duly certified **and audited** by the Chartered Accountant.

**7.4** Net worth certificate of **minimum 10% of the estimated cost put to tender** issued by certified Chartered Accountant with UDIN.

OR

Banker's Certificate of the amount **equal to 40% of the estimated cost put to tender** (ECPT).

- 7.5** Should have the calculated bidding capacity equal to or more than the estimated cost of the work and shall provide the data required in soft copy for calculating the bidding capacity.

The bidding capacity shall be =  $(2*N*A-B)$ , where

A = maximum turnover in construction works executed in any one year during the last five years taking into account the completed as well as works in progress. The value of the completed work shall be brought to current costing level by enhancing at a simple rate of 7% per annum.

N = Number of years prescribed for the completion of the work for which the bids have been invited.

B = Value of the existing commitments and ongoing works.

- 7.6** The bidder should have sufficient number of Technical and Administrative employees for the proper execution of the contract. The bidder shall have to submit a list of these employees stating clearly how these would be involved in this work within **15 days of award of work**.

## **8.0 Evaluation criteria**

- 8.1** The detailed submitted by the bidders will be evaluated in the following manner:

- 8.1.1 The initial criteria prescribed in para **7.0** above in respect of experience of eligible similar works completed, loss (Profit after tax), solvency, financial turn over, bidding capacity, etc will first be scrutinized and the bidder's eligibility for the work be determined.
- 8.1.2 The bidders qualifying the initial criteria as set out in para **7.0** above will be evaluated for following criteria by scoring method on the basis of details furnished by them and on the basis of inspection of ongoing and completed work carried out by the scrutiny committee duly constituted the Director, IIT Kanpur.

(a)	Financial strength ( <b>Form 'A' &amp; 'B' or 'B1'</b> )	Maximum 20 marks
(b)	Experience in eligible similar nature of work during last <b>seven</b> years ( <b>Form 'C' &amp; 'C1'</b> )	Maximum 20 marks
(c)	Performance on works ( <b>Form 'D'</b> ) – <b>Time over run</b>	Maximum 20 marks
(d)	Performance on works ( <b>Form 'D' &amp; 'D-1'</b> ) – <b>Quality</b>	Maximum 40 marks
		<b>Total 100 marks</b>

To become eligible for short listing the bidder must **secure at least fifty percent marks in each (section a, b, c & d) and sixty percent marks in aggregate.**

The department, however, reserves the right to restrict the list of such qualified contractors to any number deemed suitable by it.

**Note-**

The average value of performance of works for time over run and quality for completed works shall be taken on the basis of performance report and on the basis of inspection of ongoing and completed work carried out by the scrutiny committee duly constituted by the Director, IIT Kanpur of the eligible similar works.

## **9.0 Evaluation of performance**

Evaluation of the performance of contractors for the eligibility shall be done by the scrutiny committee. All the eligible Similar Works executed and submitted by the bidders may be got inspected by the committee. The marks for the quality shall be given based on this inspection, if inspection is carried out. Scoring method of evaluation: The scoring for evaluation mentioned in these columns shall be done as given in Annexure-1.

## **10.0 Financial information**

Bidder should furnish the following financial information:

Annual financial statement for the last five year in **(Form "A")** and Banker's certificate in **(Form "B")** or Net worth certificate in **(Form- B1)**

## **11.0 Experience in works highlighting experience in similar works**

Bidder should furnish the following:

- (a) List of eligible similar nature of work successfully completed during the last seven years in **(Form "C")** and ongoing works as well in **(Form-C-1)**.
- (b) Performance report of works referred in form "C" (In **Form "D"**) signed by officer not below the rank of Executive Engineer /Project Manager or equivalent. The performance report should explicitly mention that the work includes —An RCC framed structure of eight storied (G+7) or more storied including water supply, sanitary installation in single agreement. It should also mention that the stories mentioned are excluding the Machine Room and Mumty. The detail shall also specify, whether or not the work contains HVAC or firefighting system or Lifts or fire alarm system in the said agreement and shall mention the services executed and included in the agreement.
- (c) Performance reports (corresponding to work mentioned in Form – C1) in Form-D1 (information in FORM-D should be complete & no completed work of

more than Rs 1000 lacs (as mentioned in FORM-C) should be left out).

**12.0 Organisation information**

Bidder is required to submit the information in respect of his organization in Form "E".

**13.0 Letter of transmittal**

The bidder should submit the letter of transmittal attached with the document.

**14.0 Opening of Price bid**

After evaluation of Pre-Qualification Documents, a list of short listed agencies will be prepared. Thereafter the financial bids of only the qualified and technically acceptable bidders shall be opened at the notified time, date and place in the presence of the qualified bidders or their representatives. The bid shall remain valid for **90 days from the date of opening of Technical (eligibility) bid.**

**15.0 Award criteria**

- 15.1** The employer reserves the right, without being liable for any damages or obligation to inform the bidder, to:
- (a) Amend the scope and value of contract to the bidder.
  - (b) Reject any or all the applications without assigning any reason.
- 15.2** Any effort on the part of the bidder or his agent to exercise influence or to pressurize the employer would result in rejection of his bid. Canvassing of any kind is prohibited.

**SECTION- III**  
**INFORMATION REGARDING ELIGIBILITY LETTER OF**  
**TRANSMITTAL**

**From**

**To,**

**The Superintending Engineer**

**IWD, IIT, Kanpur**

**Subject: Construction of fire escape staircase, lift well & room (G+10) storied for Studio apartment at IIT Kanpur (SH: Civil works)**

Sir,

Having examined the details given in press notice and bid document for the above work, I/we hereby submit the relevant information.

1. I/we hereby certify that all the statement made and information supplied in the **enclosed forms A to J** and accompanying statement are true and correct.
2. I/we have furnished all information and details necessary for eligibility and have no further pertinent information to supply.
3. I/we submit the requisite certified solvency certificate and authorize the **Superintending Engineer, IWD IIT Kanpur** to approach the Bank issuing the solvency certificate to confirm the correctness thereof. I/we also authorize **Superintending Engineer, IWD IIT Kanpur** to approach individuals, employers, firms and corporation to verify our competence and general reputation.
4. I/we submit the following certificates in support of our suitability, technical knowledge and capability for having successfully completed the following **eligible similar** works:

<i><b>Sl. No.</b></i>	<i><b>Name of work</b></i>	<i><b>Certificate from</b></i>
<i>1</i>		
<i>2</i>		
<i>3</i>		

**Certificate:**

It is certified that the information given in the enclosed eligibility bid of are correct. It is also certified that I/we shall be liable to be debarred, disqualified / cancellation of enlistment in case any information furnished by me/us found to be incorrect.

Date of submission:

Signature(s) of Bidder(s).  
Seal of bidder

Enclosures:

**FORM 'A'**

**FINANCIAL INFORMATION**

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

**(Copies to be attached).**

**Financial Year**

<b>Year</b>	<b>2019-20</b>	<b>2020-21</b>	<b>2021-22</b>	<b>2022-23</b>	<b>2023-24</b>
<b>Gross Annual turnover on construction works</b>					
<b>Profit (Afer tax) / Loss on construction works.</b>					

Note-1- The bidder should give information strictly in above format.

Note-2- The balance sheet in case of Private/Public limited company shall include its standalone finance statement and consolidated financial statement both.

*Signature of Chartered Accountant with Seal*      *Signature of Bidder(s).*

Name of Chartered Accountant

-----

Membership No. ICAI

**FORM "B"**

**Banker's Certificate from a scheduled Bank**

**Proforma of Banker's Certificate from a Scheduled Bank**

(To be printed in Bank's Letterhead)

(Scanned copy of the Certificate to be uploaded at the time of submission of bid)

This is to certify that to the best of our knowledge and information that M/s./Sh..... having marginally noted address, a customer of our bank are/is respectable and can be treated as good for any engagement up to a limit of Rs ..... (Rupees ..... ). This certificate is issued without any guarantee or responsibility on the bank or any of the officers.

.....  
(Signature for the Bank)

**NOTE:**

1. Bankers certificates should be on letter head of the Bank, addressed to tendering authority.
2. In case of partnership firm, certificate should include names of all partners as recorded with the Bank.
3. Solvency certificate should not be more than 6 months old.

**FORM "B1"**

**Net Worth Certificate by certified Chartered Accountant  
Proforma of Net Worth Certificate by certified Chartered Accountant**

(To be printed in Letterhead of Chartered Accountant)

(Scanned copy of the Certificate to be uploaded at the time of submission of bid)

This is to certify that as per the audited Balance Sheet and Profit & Loss statement of the account during the financial year ....., the net worth of M/s./Sh.....(Name & Registered Address of individual/firm/company) as on 01.04.2024 is Rs.....(Rupees.....) after considering all liabilities.. It is further certified that the net worth of the company has not eroded by more than 30% in the last three years ending on 01.04.2024.

.....  
(Signature of the Chartered Accountant)

.....  
(Name of the Chartered Accountant)

.....  
(Membership No. of ICAI)

.....  
(Date & Seal)

**FORM 'C'**

**DETAILS OF ELIGIBLE SIMILAR NATURE OF WORKS COMPLETED DURING THE  
LAST SEVEN YEARS ENDING PREVIOUS DAY OF LAST DATE OF SUBMISSION  
OF TENDERS**

S. No	Name of work/project and location	Owner of sponsoring organization	Cost of work	Date of commencement as per contract	Stipulated date of completion	Actual date of completion	Litigation/arbitration cases pending/in progress with details*	Name and address /telephone number of officer	Whether the work was done on back to back basis Yes/No
1	2	3	4	5	6	7	8	9	10

\* Indicate gross amount claimed and amount awarded by the Arbitrator.

Signature of Bidder(s)

**Note:** The agency should give list of only those eligible works which are of '**SIMILAR NATURE**'.

## FORM 'C-1'

### PROJECTS UNDER EXECUTION

*(Works with estimated cost put to tender more than Rs. 2.00 Crore)*

<b>S. No.</b>	<b>Details</b>	
1	Name of work / project and Locations	
2	Owner or sponsoring organization	
3	Cost of work in Crores of Rupees	
4	Date of commencement as per contract	
5	Stipulated date of completion	
6	Up to date percentage progress of work	
7	Slow progress if any and reasons there of	
8	Name and address (Postal address & E-mail) / Telephone Number / Mobile number of officer to whom reference may be made.	
9	Remarks	

Certificated that the above list of works is completed, and no work has been left out and that the information given is correct to my / our knowledge and belief.

Signature of bidders

## FORM 'D'

### PERFORMANCE REPORT OF WORKS REFERRED TO IN FORMS "C"

1. Name of work/project & location:
2. Agreement no.:
3. Estimated cost:
4. Tendered cost:
5. Value of work done
6. Date of start:
7. Date of completion:
8. Stipulated date of completion:
9. Actual date of completion:
10. Amount of compensation levied for delayed completion, if any:
11. Amount of reduced rate items, if any:
12. Performance Report:
  - (a) Quality of work: Outstanding / Very Good / Good /Poor
  - (b) Technical Proficiency: Outstanding / Very Good / Good /Poor
  - (c) Resourcefulness: Outstanding / Very Good / Good /Poor
  - (d) General Behavior: Outstanding / Very Good / Good /Poor

Executive Engineer or Equivalent

**Note: If Name of Work is not clearly defining scope of work as specified in the definition of similar work, bidders are advised to upload copy of Agreement/ final bill or any other relevant document in support of their proposed completed work conforming to the definition of similar work.**

## FORM 'D-1'

### Assessment of Quality for Completed as well as Ongoing Works

Name of work :  
 Date of Inspection :  
 Date of submission of report

<b>A General observations &amp; Operational Aspects</b>	<b>Yes/No</b>
.	
1. Availability of approval from local bodies in case of Construction of Private Buildings.	
2. Availability of approved structural drawings.	
3. Observation on seepage/leakage in the building.	
4. Whether Line & level maintained.	
5. In case of basement, observation on seepage, if any.	
6. Any Structural defects/ distress observed, if yes give details.	
7. Whether safety measures adopted at site as per CPWD safety code of Govt. guidelines are adequate or not.	
8. Whether the welfare facilities provided to labour as per Clause- 19H of GCC for CPWD works / and or Govt. guidelines are adequate or not	
9. Whether AHU getting automatically switched off and fire damps closed in case of fire signal	
10. Whether thimbles used for termination of wires in DBs, EBDs and panels	
<b>B Quality of work</b>	<b>Marks Assessed</b>
.	
1. Quality of plaster / finishing	
2. Quality of RCC / CC work	
3. Quality of Flooring	
4. Quality of Wood Work	
5. Quality of Steel work / Aluminium Work	
6. Quality of Plumbing and Sanitary Installation	
7. Quality of Workmanship	
8. Quality of Water Proofing	
9. If cladding done, observation on efficiency / quality of cladding / brick work	
10. Quality of internal electrification work	
11. Quality of DBs, EBDs & Panels	
12. Quality of E&M equipment's, panels & feeder pillar	
13. Quality of Fire alarm system / fire fighting system	
14. Quality of Air Conditioning work	
15. Any other aspect (To be elaborated)	

Average marks ( to be awarded out of 100 marks based on average of marks assessed on each attribute mentioned at B above).

**Note:-**

1. All the above parameters may be considered for assessing the overall quality of work executed by the contractor.
2. In case, any attribute is not applicable, the same may not be included in assessment and mentioned are not applicable (N/A)
3. The works as assessed above shall be converted on a scale of 25/15 marks for completed/ ongoing works respectively.
4. In case of eligible completed works as well as ongoing works being more than one the maximum marks assigned for completed works and ongoing works will be equally distributed among the work

## FORM "E"

### STRUCTURE & ORGANISATION

1. Name & address of the bidder
2. Telephone no./Telex no./Fax no.
3. Legal status of the bidder (attach copies of original document defining the legal status)
  - (a) An Individual
  - (b) A proprietary firm
  - (c) A firm in partnership
  - (d) A limited company or Corporation
4. Particulars of registration with various Government Bodies (attach attested photocopy)

Organisation/Place of registration

Registration No.

- 1.
- 2.
- 3.
5. Names and titles of Directors & Officers with designation to be concerned with this work.
6. Designation of individuals authorized to act for the organization
7. Has the bidder, or any constituent partner in case of partnership firm **Limited Company/Joint Venture**, ever been convicted by the court of law? If so, give details.
8. In which field of Civil Engineering construction, the bidder has specialization and interest?
9. Any other information considered necessary but not included above.

Signature of Bidder(s)

**FORM 'F'**

**LIST OF PROJECTS UNDER EXECUTION OR AWARDED**

Sl No.	Name of work/project and location	Owner of sponsoring organization	Cost of work in crore of rupees	Date of commencement as per contract	Stipulated date of completion	Upto date percentage progress of work	Slow progress if any and reasons thereof	Name and address /telephone number of officer to whom reference to be made	Remarks
1	2	3	4	5	6	7	8	9	10

Certificated that the above list of works is completed, and no work has been left out and that the information given is correct to my / our knowledge and belief.

Bidders signature

## **FORM "G"**

### **Affidavit**

I/we undertake and confirm that our firm/partnership firm has not been blacklisted and/or debarred by any state/Central Departments/PSUs/Autonomous bodies during the last 7 years of its operations. Further that, if such information comes to the notice of the department then I/we shall be debarred for bidding in IIT Kanpur in future forever. Also, if such information comes to the notice of department on any day before date of start of work, the Engineer-in-charge shall be free to cancel the agreement and to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.

I/We undertake and confirm that I/We have not abandoned any of the work entrusted to me /us nor any of the work entrusted to me/us have been rescinded by any of the Central /State Govt Departments, Undertakings, Autonomous institutions, Agencies, Societies, Enterprises and Companies during last 7 (seven) years ending previous day of last date of submission of bid. Further that, if such information comes to the notice of the department then I/we shall be debarred for bidding in IIT Kanpur in future forever. Also, if such information comes to the notice of department on any day before date of start of work, the Engineer-in-charge shall be free to cancel the agreement and to forfeit the entire amount of Earnest Money Deposit/Performance Guarantee.

***NOTE: Affidavit to be furnished on a 'non-judicial' stamp paper worth Rs.100/- (Scanned copy of this notarized affidavit to be uploaded at the time of submission of bid)***

**Signature of Bidder(s) or an authorized Officer of the firm  
with stamp**

**Signature of Notary with seal**

**FORM "H"**

**Undertaking regarding obtaining GST registration Certificate of The State, in which work is to be taken up**

If work is awarded to me, I/we shall obtain GST registration Certificate of the State, in which work is to be taken up within one month from the date of receipt of award letter or before release of any payment by IWD, IIT Kanpur whichever is earlier, failing which I/We shall be responsible for any delay in payments which will be due towards me/us on a/c of the work executed and/or for any action taken by Institute or GST department in this regard.

***NOTE: Affidavit to be furnished on a 'non-judicial' stamp paper worth Rs.100/-***

**Signature of Bidder(s) or an authorized Officer of the firm  
with stamp**

**Signature of Notary with seal**

## FORM ' I '

### Declaration about Site Inspection

(By Bidder)

To

The Executive Engineer,

IWD, IIT,

Kanpur

**Subject:** Construction of Type-II Apartments (G+10, 80 Nos) including Water supply, Sanitary installation, Internal Electrical installations, Fire Fighting, Fire Alarm system, Lifts and development works at IIT Kanpur.

Dear Sir/Madam,

It is hereby declared that as per terms and conditions of this tender document, I/ We the bidder inspected and examined the subject site and its surrounding and satisfy myself / ourselves as to the nature of the ground and sub-soil (so far as is practicable), the forms and nature of the site./ ourselves before submitting the bid, the accommodation which may require and all necessary information as to risks, contingencies and other circumstances which may influence or affect our bid have been obtained. I/We the bidder shall have full knowledge of the site and no extra charge consequent upon any misunderstanding or otherwise shall be claimed in later date. I /We bidder shall be responsible for arranging and maintaining at own cost all materials, tools & plants, water, electricity access, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a bid by me/us implies that I / We have read this notice and all other contract documents and has made myself /ourselves aware of the scope and specifications of the work to be done and local conditions and other factors having a bearing on the execution of the work.

Sincerely

(Duly authorized signatory of the Bidder)

## ANNEXURE- 1

### CRITERIA FOR EVALUATION OF THE PERFORMANCE OF CONTRACTORS FOR PRE-ELIGIBILITY

Attributes	Sub attributes	Marks	Evaluation Criteria		
Financial Strength		20 marks	60% marks for minimum eligibility criteria.		
	Average Annual Turnover	16 Marks			
	Banker's Certificate OR Net worth certificate	4 Marks	100% marks for twice the minimum eligibility criteria or more Pro-rata basis in between (i) & (ii)		
Experience in Similar Works	Experience in Similar Class of Works	20 Marks	60% marks for minimum eligibility criteria.  100% marks for twice the minimum eligibility criteria or more  Pro-rata basis in between (i) & (ii)		
Performance on Works	If TOR=	1	2	3	>3.5
	(i) Without levy of compensation	20	15	10	10
	(ii) With Levy of compensation	20	5	0	-5
	(iii) Levy of compensation not decided	20	10	0	0

TOR = AT/ST, where AT=Actual Time; ST=Stipulated Time (+) Justified Period of Extension of Time.

(d)	<b>Performance of works (quality) as per assessment in Form D-1:</b>		
	Maximum 40 Marks		
	Completed works (max. 25 marks)	Ongoing works (max. 15 marks)	Total marks assessed

**Note: 1. The contractor shall produce documents to ascertain the** Justified Period of Extension of Time given to him by the employer. If no such document is provided by him to ascertain his claim, the Justified Period of Extension of Time shall be treated as NIL. For the case where levy of compensation is not decided, the justified extension of time shall be considered only for the period for which the contractor produces supporting documents from the employer of the executed work, to establish his claim.

**2.** Marks for value in between the stages indicated above is to be determined by straight line variation basis.

# **SECTION-B**

# **PART-A**

## **FINANCIAL BID**

## CPWD-6 FOR e-Tendering

The Superintending Engineer, IWD IIT Kanpur invites on behalf of Board of Governors, online percentage rate open bids from eligible firms/contractors of repute in two bid system (Eligibility cum Technical bid & Financial Bid) for the work of - **Construction of fire escape staircase, lift well & room (G+10) storied for Studio apartment at IIT Kanpur (SH: Civil works)**

1. The work is estimated to cost **Rs. 2,85,92,782.00** This estimate, however, is given merely as a rough guide.
2. Contractors who fulfil the following requirements shall be eligible to apply. **Joint ventures and Special Purpose Vehicles are not accepted.**

Should have satisfactorily completed the works as mentioned below during the last seven years ending **previous day of last date of submission of tenders.**

- (i) Three similar works each costing not less than Rs**114.00** lacs  
OR
- (ii) Two similar works each costing not less than Rs. **172.00** lacs  
OR
- (iii) One similar work costing not less than Rs. **229.00** lacs.

**Similar work** shall mean works of “**Construction of building in RCC framed structure having minimum one building of eight storeys or completing balance construction work of one building (including structural work) minimum up to eight storey including Internal water supply, Sanitary installation, Drainage & fire fighting system all executed under single agreement**”. The eight-storied building should have a lift well executed under the said agreement.

### Note:

1. Basement/stilt, if any will be considered as storey. In case, if any RCC framed structure is having basement and stilt both, it will be considered two storey. Mumty and machine room will not be counted as storey for this purpose.
2. One building of the specified storeys, as mentioned in the definition of similar work constructed in each work of the financial magnitude as specified above.
  - a) The value of executed works shall be brought to current costing level by enhancing the actual value of work at simple rate of 7% per annum; calculated from the date of completion to the previous day of last date of submission of tenders.
  - b) Should have had average annual financial turnover of Rs.**86.00 lacs** on construction works during the last three years ending 31<sup>st</sup> March, 2024.

- c) Should not have incurred any loss (profit after tax should be positive) in more than two years during the last five years ending 31<sup>st</sup> March, 2024
- d) Should have net worth certificate of minimum **10% of the estimated cost put to tender** issued by a certified Chartered Accountant with UDIN.

OR

Should have a Banker's certificate of the amount equal to **40% of the estimated cost put to tender** (ECPT).

- e) Should have the calculated bidding capacity equal to or more than the estimated cost of the work.
  - f) The bidder should not have been barred /black listed by the central/state government, or any entity controlled by it, from participating in any tender, and the bar subsists as on the bid due date, would not be eligible to submit the bid.
3. Agreement shall be drawn with the successful bidders on prescribed Form No. **CPWD 7** which is available as a Govt. of India Publication and also available on website [www.iitk.ac.in/iwd/tenderhall.htm](http://www.iitk.ac.in/iwd/tenderhall.htm), <https://eprocure.gov.in/eprocure/app>, but the bids can only be submitted online through, <https://eprocure.gov.in/eprocure/app>. His rates including all applicable taxes but **excluding GST** as per various terms and conditions of the said modified form which will form part of the agreement.
4. The time allowed for carrying out the work will be **09 Months** from the date of start as defined in schedule 'F' or from the first date of handing over of the site, whichever is later, in accordance with the phasing, if any, indicated in the bid documents.
5.
  - i) The site for the work is available.
  - ii) The architectural, structural & Electrical drawings are available. Further details if any shall be made available in phased manner as per requirement of the same as per approved programme of completion submitted by the contractor after award of work.
6. The bid document consisting of plans, specifications to be executed and the set of terms and conditions of the contract to be complied with and other necessary documents except Standard General Conditions of Contract Form can be seen on website [www.iitk.ac.in/iwd/tenderhall.htm](http://www.iitk.ac.in/iwd/tenderhall.htm), <https://eprocure.gov.in/eprocure/app> free of cost but the bids can only be submitted online through, <https://eprocure.gov.in/eprocure/app>.
7. After submission of the bid the contractor can re-submit revised bid any number of times but before last time and date of submission of bid as notified.

8. While submitting the revised bid, contractor can revise the rate of one or more item(s) any number of times (he need not re-enter rate of all the items) but before last time and date of submission of bid as notified.
9. This bid is invited in two bid system.
10. a) Applicant has to deposit earnest money of Rs. 0000000.00 in the form of receipt/ Treasury Challan or Demand Draft or Pay order or Banker's Cheque or Deposit at Call Receipt or Fixed Deposit Receipt (drawn in favour of Director IIT Kanpur )along with tender document.

- i. Earnest Money in the form of Treasury Challan or Demand Draft or Pay order or Banker's Cheque or Deposit at Call Receipt or Fixed Deposit Receipt (drawn in favour of the Director, IIT Kanpur) shall be scanned and uploaded to the e-Tendering website within the period of bid submission.
- ii. **The original EMD shall be submitted in the hard copy to the office of the Superintending Engineer upto 3.00 PM on 12.04.2025.**
- iii. **A part of earnest money (EM)** is acceptable in the form of bank guarantee also. In such case, **minimum** 50% of earnest money or Rs. 20 lac, whichever is less, **shall** have to be deposited in shape prescribed above, and balance **may be deposited** in shape of Bank Guarantee of any scheduled bank **having validity for six months or more from the last date of receipt of bids** which also is to be scanned and uploaded by the intending bidders

**b)** Copy of certificate of work experience and other documents as specified in the technical bid/eligibility bid document shall be scanned and uploaded to the e-Tendering website within the period of bid submission.

Online qualification bid documents submitted by intending bidders shall be opened only of those bidders who have deposited Earnest Money, processing fee & Integrity pact.

Online financial bid document submitted by the bidders shall be opened only of those bidders who on the basis of pre-qualification documents uploaded by them within the period of bid submission, qualify in accordance with the provision of technical bid. The financial bid shall be opened at the notified time, date & place in presence of qualified bidders or their representative.

The technical (eligibility) bid submitted shall be **opened at 03.30 PM on 15.04.2025.**

11. The bid submitted shall become invalid if:
  - a) The bidder is found ineligible.
  - b) The bidder does not deposit original EMD to the office of the Superintending

Engineer, IWD IIT Kanpur.

c) The bidder does not upload scanned copies of all the documents stipulated in the bid document.

d) If a bidder quotes nil rates against each item in scheduled of quote of tender or does not quote any rate in any section/sub head in rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer

12. If a bidder quotes nil rates against each item in scheduled of quote of tender or does not quote any rate in any section/sub head in rate tender, the tender shall be treated as invalid and will not be considered as lowest tenderer. The contractor whose bid is accepted will be required to furnish **performance guarantee of 5% (Five Percent)** of the bid amount within the period specified in Schedule F. This guarantee shall be in the form of cash (in case guarantee amount is less than Rs. 0000/-) or Deposit at Call receipt of any scheduled bank/Banker's cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay order of any Scheduled Bank of any scheduled bank (in case guarantee amount is less than Rs. 0000/-) or Government Securities or Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F', including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor. **The earnest money deposited alongwith bid shall be returned after receiving the aforesaid performance guarantee.** The contractor whose bid is accepted will be also be required to furnish either copy of applicable licenses/registrations or proof of applying for obtaining labour licenses, registration with EPFO, ESIC and BOCW Welfare Board including provident fund code no. if applicable and also ensure the compliance of aforesaid provisions by the sub contractors, if any engaged by the contractor for the said work and Programme Chart (Time and Progress) within the period specified in Schedule F.
13. Description of the work is as follows:  
**Construction of fire escape staircase, lift well & room (G+10) storied for Studio apartment at IIT Kanpur (SH: Civil works)**
14. The competent authority on behalf of the Board of Governors, IIT Kanpur does not bind itself to accept the lowest or any other bid and reserves to itself the authority to reject any or all the bids received without the assignment of any reason. All bids in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the bidders shall be summarily rejected.
15. Canvassing whether directly or indirectly, in connection with bidders is strictly prohibited and the bids submitted by the contractors who resort to canvassing will be liable for rejection.
16. The competent authority on behalf of Board of Governors, IIT Kanpur reserves to himself the right of accepting the whole or any part of the bid and the bidders shall be

bound to perform the same at the rate quoted.

17. **The bid for the works shall remain open for acceptance for a period of Ninty (90) days from the date of opening of technical bid.** If any bidders withdraws his bid before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the bid which are not acceptable to the department, then the Government shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the bidders shall not be allowed to participate in the rebidding process of the work.
  
18. This notice inviting Bid shall form a part of the contract document. The successful bidders/contractor, on acceptance of his bid by the Accepting Authority shall **within 22 days from the stipulated date of start of the work, sign the contract** consisting of:-
  - a) The Notice Inviting Bid, all the documents including additional conditions, specifications and drawings, if any, forming part of the bid as uploaded at the time of invitation of bid and the rates quoted online at the time of submission of bid and acceptance thereof together with any correspondence leading thereto.
  - b) Standard C.P.W.D. Form 7 i/c upto date amendments and duly modified for Percentage rate contract work or other Standard C.P.W.D. Form as applicable.

Superintending Engineer

**INDIAN INSTITUTE OF TECHNOLOGY, KANPUR**  
**INSTITUTE WORKS DEPARTMENT**  
**CENTRAL OFFICE**

**Percentage Rate Tender & Contract for Works.**

Tender for the work of: **Construction of fire escape staircase, lift well & room (G+10) storied for Studio apartment at IIT Kanpur (SH: Civil works)**

- (i) Last date and time of technical and financial bid for online submission of e-tenders is up to **5.00 PM on 12.04.2025**
- (ii) Time and Date of opening of technical bid in presence of tenders who may be present on **3.30 PM on 15.04.2025** in the office of the Superintending Engineer, IWD, IIT Kanpur.
- (iii) The pre-qualification bids shall be opened first on due date and time as mentioned above. The time and date of opening of financial bid of contractors qualifying the technical bid shall be communicated to them at later date.

**TENDER**

I/We have read and examined the notice inviting tender, schedule, A, B, C, D, E & F Specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, Special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for the Board of Governor, IIT Kanpur 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 in Clause 11 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 tender open for **ninety (90) days** from the due date of its opening and not to make any modification in its terms and conditions.

A sum of **Rs. 5,72,000.00** is hereby forwarded in cash/receipt treasury challan/ deposit at call receipt of a scheduled bank/fixed deposit receipt of scheduled bank/demand draft of a

scheduled bank/bank guarantee issued by a scheduled bank as earnest money. If I/We, fail to furnish the prescribed performance guarantee within prescribed period. I/We agree that the said President of India or his successors, in office shall without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/We agree that Board of Governor, IIT Kanpur or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by him towards security deposit 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 Clause 12.2 and 12.3 of the tender form. Further, I/We agree that in case of forfeiture of Earnest Money & 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 contractor on back to back basis. Further that, if such a violation comes to the notice of Department, then I/We shall be debarred for tendering in IWD, IIT Kanpur in future forever. Also, if such a violation comes to the notice of Department before date of start of work, the Engineer-in-Charge 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 therefrom 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.

Signature of Contractor

Postal Address

Dated

Witness

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 Board of Governors, IIT Kanpur for a sum of Rs. .... (Rupees .....).

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

- (a)
- (b)
- (c)

For & on behalf of Board of Governors, IIT Kanpur

Signature.....

Dated:

Designation .....

## PROFORMA OF SCHEDULES

### SCHEDULE 'A'

Schedule of financial quote in Part E of NIT

### SCHEDULE 'B'

Schedule of materials to be issued to the contractor.

S. No.	Description of item	Quantity	Rates in figures & words at which the material will be charged to the contractor	Place of issue
1	2	3	4	5
-----NIL-----				

### SCHEDULE 'C'

Tools and plants to be hired to the contractor

S. No.	Description	Hire charges per day	Place of Issue
1	2	3	4
-----NIL-----			

### SCHEDULE 'D'

Extra schedule for specific requirements/document for the work, if any. **As attached in tender form**

### SCHEDULE 'E'

**Reference to General Conditions of contract :** General condition of contract for CPWD-23 for Construction works (with amendments up to previous date of last date of receipt of tender including extension, if any) .

<b>Name of Work: Construction of fire escape staircase, lift well &amp; room (G+10) storied for Studio apartment at IIT Kanpur (SH: Civil works)</b>		
<b>Estimated cost of the work:</b>	<b>Civil Items of Work-</b>	<b>Rs. 2,85,92,782.00</b>
<b>Earnest money</b>	<b>Rs. 5,72,000.00</b> (To be returned after receiving performance guarantee)	
<b>Performance Guarantee</b>	5% of the tendered value of the work	
<b>Security Deposit</b>	2.5% of the tendered value of the work	

### **SCHEDULE 'F' GENERAL RULES & DIRECTIONS**

Officer inviting tender	<b>Superintending Engineer, IWD, IIT Kanpur</b>
-------------------------	---

#### **Definitions:**

<b>2(v)</b>	Engineer-in-charge	
	For civil item works	<b>Executive Engineer, IWD, IIT Kanpur</b>
<b>2(vi)</b>	Accepting authority	<b>Superintending Engineer, IWD, IIT Kanpur</b>
<b>2(vii)</b>	Percentage on cost of materials and labour to cover all overheads and profits	15%
<b>2(viii)</b>	<b>Standard Schedule of Rates:</b> Civil Items of Work:	<b>D.S.R. 2023</b> (with up to date correction Slips) & Market Rates of Non DSR items
<b>2(ix)</b>	Department	IWD, IIT Kanpur
<b>2(x)</b>	Standard CPWD contract Form:	GCC 2023, CPWD <b>form-7</b> as modified & corrected up to date (Whether correction vide latest circulars are in corporate or not in this document). The following condition pertains to GST of clause 33 & 34 of General Condition of contract and corresponding Amendments should be read as



	date of issue of letter of acceptance for reckoning date of start	
<b>Authority to decide</b>	Extension of time (EOT)	<b>Superintending Engineer, IWD IIT Kanpur</b>
	Rescheduling of milestones	<b>Superintending Engineer, IWD IIT Kanpur</b>
	Shifting of start in case of delay in handing over of site	<b>Superintending Engineer, IWD IIT Kanpur</b>
<b>Clause 6A</b>	Computerized Measurement of bills	<b>APPLICABLE</b>
<b>Clause 7</b>	Gross work to be done together with net payment /Adjustment of advances for material collected, if any, since the last such payment for being eligible to interim payment.	<b>25 lacs</b>
<b>Clause 7A</b>	Whether clause 7A shall be applicable. No running account bill shall be paid for the work till the applicable labour licence, BOCW registration is submitted to the Engineer In charge.	<b>Yes</b>
<b>Clause 8A</b>	Authority to decide compensation on account if the contractor fails to submit completion plans	<b>Superintending Engineer, IWD IIT Kanpur</b>
<b>Clause 10A</b>	Material to be provided by the contractor	<b>APPLICABLE</b>
<b>Clause 10B (ii), (iii)</b>	Whether clause 10-B (ii) and 10-B (iii) shall be applicable.	<b>NOT APPLICABLE</b>
<b>Clause 10 C</b>	Component of labour expressed as percentage of value of work	<b>NOT APPLICABLE</b>

<b>Clause 10 CA</b>		<b>NOT APPLICABLE</b>			
<b>Clause 10 CC</b>	Increase/Decrease in Price of materials/wages	<b>NOT APPLICABLE</b>			
<b>Clause 11</b>		CPWD Specifications of all Civil items (CPWD Civil specification vol.1 and vol.2, 2019), with correction Slips issued up to the last date of receipt of tenders and as per NIT for Civil Works.			
<b>Clause 12:</b> Type of work		<b>New work</b>			
Clause 12.2 & 12.3: Deviation limit beyond which clause 12.2 & 12.3 shall apply for Building works		<b>100% for all items</b>			
<b>Clause 16</b> Competent Authority for deciding reduced rates		<b>Superintending Engineer, IWD IIT Kanpur</b>			
<b>Clause 17</b> - Defect liability period completion of contract whichever is later		<b>Three year from the date of virtual completion of work.</b>			
<b>Clause 32 : Requirement of Technical staff</b>					
Sl. No.	Qualification	Number	Minimum Experience in years	Designation	Rate at which the recovery shall be made from the contractor in the event of not fulfilling provision of Clause 32
1.	Graduate Engineer	1	10	Project Manager	Rs. 60000/- (Rupees Sixty Thousand only) per month, per person
2.	Graduate Diploma /	1+1+1	5	Project / Planning / construc	Rs. 40000/- (Rupees Twenty Five Thousand only) per month, per person

				tion / billing Engineer (Civil)	
3.	Graduate with one year full time advance safety diploma from Central Labour / Mumbai / NICMAR /Hyderabad / Mahatama Gandhi Labour Institute Ahmedabad or an equivalent Qualification	1	Ten Year in major Construc tion/ Infrastru cture Project	Safety Engineer	Rs 60000/- (Rupees Sixty Thousand only) per month, per person

Note: Assistant Engineers retired from Government services who are holding Diploma will be treated at par with Graduate Engineers. Diploma holder with minimum 10 years relevant experience with a reputed construction co. can be treated at par with Graduate Engineers for the purpose of such deployment subject to the condition that such diploma holders should not exceed 50% of requirement of degree engineer.

The details of appointed engineers/technical staffs have to be verified and approved by Engineer- in-charge

<b>Clause 38</b>	a) Schedule/ statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates 2023 printed by CPWD	D.S.R. 2023 (with up to date correction slips)
<b>i)</b>	Variations permissible on theoretical quantities	
<b>ii)</b>		
<b>a)</b>	Cement	±(plus/minus) 2% (Two percent)
<b>b)</b>	Steel reinforcement and structural steel Sections for diameter, section and category.	+ (plus) 2.0% (Two percent) only and nil on – (minus) side
<b>c)</b>	All other materials	NIL

**Annexure- II**

<b>Sl. No.</b>	<b>Description of mile stone</b>	<b>Period for completion from date of start</b>	<b>Withheld amount for non achievement of mile stone.</b>
1	<p><b>A- Activity Completion of Civil Work:</b>                      (a) RCC of Foundation upto plinth level  <b>or</b>                      Gross value of work done not less than 10 % of the accepted tendered value.</p>	1.5 months	0.5% of the accepted tendered value.
2	<p><b>A- Activity completion of Civil Work:</b>                      (a) RCC slab upto floor level 3                      (b) Brick work upto floor level 1  <b>or</b>                      Gross value of work done not less than 25 % of the accepted tendered value.</p>	03 months	0.5 % of the accepted tendered value.
3	<p><b>A- Activity completion of Civil Work:</b>                      (c) RCC slab upto floor level 6                      (d) Brick work upto floor level 4                      (e) Mock up at first floor i/c all complete  <b>or</b>                      Gross value of work done not less than 40 % of the accepted tendered value.</p>	4.5 months	0.5% of the accepted tendered value.
4	<p><b>A- Activity completion of Civil Work:</b>                      (a) RCC slab upto floor level 9                      (b) Brick work upto floor level 7                      (c) Internal work i/c flooring upto floor level 2  <b>or</b>                      Gross value of work done not less than 55% of the accepted</p>	6.0 months	0.5% of the accepted tendered value.

	tendered value.		
5	<p><b>A- Activity completion of Civil Work:</b></p> <p>(d) RCC slab upto floor level 11(terrace level) Machine room Complete</p> <p>(e) Brick work upto floor level 9</p> <p>(f) Internal work i/c flooring upto floor level 5</p> <p><b>or</b></p> <p>Gross value of work done not less than 70 % of the accepted tendered value.</p>	7.5 months	0.5% of the accepted tendered value.
6	<p><b>A- Activity completion of Civil Work:</b></p> <p>(a) Brick coba complete</p> <p>(b) Completion of Brick work</p> <p>(c) Completion of all Flooring work etc upto level 10</p> <p><b>Or</b></p> <p>Gross value of work done not less than 85% of the accepted tendered value.</p>	08 months	0.5% of the accepted tendered value.
7	<b>Completion of all works in all respect including testing and commissioning</b>	<b>09 Months</b>	

### Annexure-III

#### LIST OF BASIC MINIMUM REQUIRED MACHINERY, TOOLS & PLANTS TO BE DEPLOYED BY THE CONTRACTOR AT SITE

Sl. No.	Name of Equipment	Numbes
1	Excavators (various sizes)	1 Nos.
2	Builder's hoist	1 Nos.
<b>Equipment for Concrete work</b>		
3	Automatic weight batching plant	1 Nos.
4	Concrete mixer (electrical)	1 Nos.
5	Needle vibrator (electrical)	2 Nos.
6	Needle vibrator (petrol)	2 Nos.
7	Surface and Plate vibrator	1 Nos.
<b>Equipment for Building work</b>		
8	Bar bending Machine	1 Nos.
9	Bar cutting machine	1 Nos.
10	Drilling machine	1 No.
11	Welding machine i/c transformer	2 Nos.
12	Cube testing machines automatic (Digital 100 MT)	1 No.
13	Steel shuttering (Minimum)	500 sqm
14	M.S. pipes/telescopic props and other accessories.	As per requirement for the shuttering area given at s.no. 17 above.
15	Steel scaffolding system (cup lock type)	As per requirement of the project and milestones.
16	Grinding/polishing machines	2 Nos.
<b>Equipment for transportation</b>		
17	Tippers	As per requirement of the project and milestones.
18	Trucks	As per requirement of the project and milestones.
<b>Pneumatic equipment</b>		
19	Air compressors (diesel)	Nil
<b>Dewatering equipment</b>		
20	Pump (diesel)	As per requirement of project
21	Pump (electric) (Desirable)	As per requirement of project
<b>Power equipment</b>		

22	Diesel generator ( to meet requirement at site for uninterrupted work)	As per requirement of project
	<b>Survey equipments</b>	
23	Total Work Station	1 No.
24	Vernier Callipers	1 No.
25	Weighing Machine	1No.
26	Earth Compactor	1No.

**Note: The above list is only indicative and not exhaustive and contractor shall deploy plant and machinery as per actual requirement of the work so that the progress of the work is adequately maintained. However, No damages/compensation shall be payable on account of idle plant and equipment etc. for whatever reason.**

**Superintending Engineer**

# **PART—B**

## **GENERAL CONDITIONS AND MATERIAL AND QUALITY ASSURANCE**

## GENERAL REQUIREMENTS FOR THE TENDER

Name of Work: "**Construction of fire escape staircase, lift well & room (G+10) storied for Studio apartment at IIT Kanpur (SH: Civil works)**"

- 1 The tenderer is advised to read and examine the tender documents for the work and the set of drawings available with Engineer-in-charge. He should inspect and examine the site and its surroundings by himself before submitting his tender.
- 2 Separate conditions & specification and scope are included in this tender. The contractor shall quote the amount/rates lump-sum in figures and words accurately in schedule of financial quote so that there is no discrepancy in figures and words.
- 3 Time allowed for the execution of work is **09 months**.
- 4 The contractor(s) shall submit a detailed program of execution in accordance with the **master programme/milestone within fifteen days** from the date of start of the work.
- 5 Quality of the project is of utmost importance. This shall be adhered to in accordance with the provisions of CPWD specifications and guidelines given in the relevant paras.
- 6 Temporary Electric connection (Single/ Three phase) shall be provided by the Institute from its distribution network and the charges shall be realized prevalent commercial tariff of the institute presently recovery rate is Rs. 9.19 Per unit on the basis of actual consumption through the separate meter under the control of Engineer-In-Charge. If the rates are revised in future the same shall be applicable to the contractor. The contractor at his own cost shall arranged the cables for the service connection and the sub meter.
- 7 No labour huts/jhuggies shall be allowed to construct in the campus except for the security persons at work site with proper sanitation arrangements after due approval of Superintending Engineer.
- 8 The contractor has to appoint qualified safety officer for proper adhering safety requirements during the entire period of contract.
- 9 In case of any serious accident at work site, the Institute may cause an enquiry/ investigation into the accident and depending on the outcome of such enquiry/ investigation, the Institute may take such action against the contractor as may be deemed fit and appropriate in the discretion of the Director, which may also lead to termination of the contract, and/ or the contractor may be debarred from applying for further works in the campus for a specified period.
- 10 **Cement shall be arranged by the contractor himself.**
- 11 **Steel Reinforcement shall be arranged by the contractor himself.**
- 12 Contractor has to engage specialized agencies for specialized items of works such

as water proofing, aluminium & glazing works, fire doors and fittings, plumbing work, all type of false ceiling, expansion joint system and other specialized items as mentioned in the tender documents. Only those specialized agencies/firms who have satisfactorily executed works as per following criteria during last seven years are eligible for the specialized works-

- (a) Three works each costing not less than 40% of estimated cost for concerned sub head.

*Or*

- (b) Two works each costing not less than 60% of estimated cost for concerned sub head. **Or**
- (c) One work costing not less than 80% of estimated cost for concerned sub head.

- 13 Approval of the specialized agencies for each specialized work shall be obtained from the Engineer-in-Charge within one month of award of work. Even if, such specialized items of work shall be executed by the specialized agencies, the work shall be deemed to be executed by the tenderer for all purposes and the responsibility of the quality of items of works executed etc. shall continue to be that of the tenderer only.
- 14 Contractor has to deploy basic minimum required machinery on the project to complete the work in time as stipulated in the tender in annexure -III.
- 15 The contractor shall submit the running bills in the shape of the computerized MB in pages of A-4 size as per the standard format of department and shall act as per modified Clause 6 A of CPWD-7
- 16 Contractor has to provide reinforcement cover blocks made of approved proprietary pre packed free flowing mortars (Conbextra as manufactured by M/s Fosroc Chemical India Ltd. or approved equivalent) of high early strength.

## **MATERIAL AND QUALITY ASSURANCE**

1. The contractor shall ensure quality control measures on different aspects of construction including materials, workmanship and correct construction methodologies to be adopted. He shall have to submit quality assurance programme within two weeks of the award of work. The quality assurance programme should include method statement for various items of work to be executed along with check lists to enforce quality control.
2. The contractor shall get the source of all other materials, not specified else where in the document, approved from the Engineer-in-Charge. The contractor shall stick to the approved source unless it is absolutely unavoidable. Any change shall be done with the prior approval of the Engineer-in-Charge for which tests etc. shall be done by the contractor at his own cost. Similarly, the contractor shall submit brand/ make of various materials not specified in the agreement, to be used for the approval of the Engineer-in-Charge along with samples and once approved, he shall stick to it.
3. The contractor shall submit shop drawings of staging and shuttering arrangement, aluminum & glazing work, fire doors and fittings, plumbing work and other works as desired by Engineer In Charge for his approval before execution. The contractor shall also submit bar bending schedule for approval of Engineer-in-charge before execution.
4. Frequency and type of tests of various Materials/items/ article shall be conducted as per specifications and relevant BIS-Codes. The test results confirm to the specification/codes.

### **5. Test Laboratories :**

#### **A) Laboratory at site :**

The contractor shall establish a testing lab at site and provide testing equipment and materials for the field tests mentioned in the list of mandatory tests given in CPWD specifications 2009 Vol. 1 & 2. Nothing extra shall be payable to him on this account. **In case of delay in establishment of Lab at site, a non refundable recovery of Rs. 1000/- per day shall be made from Running account bill of the contractor for each delayed days.**

The representatives of the department shall be at liberty to inspect the testing facilities at site and conduct testing at random in consultation with Engineer in charge. The contractor shall provide all necessary facilities for the purpose. The laboratory shall be equipped, inter alia, with the following equipments:

#### **a) Balances:**

- i) 7 kg to 10 kg capacity, semi-self indicating type – Accuracy 10 gm.
- ii) 500 gm capacity, semi-self indicating type Accuracy 1 gm.
- iii) Pan Balance- 5 kg Capacity- Accuracy 10 gm.

#### **b) Ovens-** Electrically operated, thermostatically controlled upto 1100C-

Sensitivity 10C.

- c) **Sieves:** as per IS: 460
- i) IS Sieves – 450 mm internal dia of sizes 100 mm, 80 mm, 63 mm, 50 mm, 40 mm, 25 mm, 20 mm, 12.5 mm, 10 mm, 6.3 mm, 4.75 mm, complete with lid and pan.
  - ii) IS Sieves – 200 mm internal dia (brass frame) consisting of 2.36 mm, 1.18 mm, 500 microns, 425 microns, 300 microns, 212 microns, 150 microns, 90 microns, 75 microns with lid and pan.
- d) Sieve shaker capable of 200 mm and 300 mm dia sieves, manually operated with timing switch assembly.
- e) Equipment for slump test- slump cone, steel plate, taping rod, steel scale, scoop.
- f) Equipment for concrete testing
- i) Concrete cube moulds 15x15x15cm. 18 Nos.
  - ii) Pruning Rods 2Kg weight length 40cm and ramming face 25mm 2 No.
  - iii) Extra Bottom plates for 15cm cube mould 6 Nos.
  - iv) Standard Vibration table for cubes 1 No
  - v) Dial gauges 25 mm travel- 0.01 mm/division Least count- 1 No.
  - vi) Automatic compression testing machine of 100 tonne capacity. 1 No.

Not less than 90% tests for material be performed at site lab with above stated equipment's, however at least 10% testing of materials shall be got done from external laboratories. However, for the tests to be carried out through the Institute structure lab, the contractor shall supply free of charge all the materials required for testing, including transportation.

**The cost of all tests to be conducted shall be borne by the Contractor**

**B) Other Laboratories :**

The all such tests which are not available in the Institute lab but required to be carried out from outside Institute laboratories the cost of such tests shall be borne by the contractor i/c all arrangements for conducting such tests.

**C) Sampling of Materials :**

C1. Sample of building materials fittings and other articles required for execution of work shall be got approved from the Engineer-in-Charge. Articles manufactured by companies of repute and approved by the Engineer-in-Charge shall only be used. Articles bearing BIS certification mark shall be used in case the above are not available, the quality of samples brought by the contractor shall be judged by standards laid down in the relevant BIS

specifications. All materials and articles brought by the contractor to the site for use shall conform to the samples approved by the Engineer-in-Charge.

- C2. The contractor shall ensure quality construction in a planned and time bound manner. Any sub-standard material/work beyond set out tolerance limit shall be summarily rejected by the Engineer-in-Charge.
- C3. BIS marked materials except otherwise specified shall be subjected to quality test at the discretion of the Engineer-in-Charge besides testing of other materials as per the specifications described for the item/materials. Wherever BIS marked materials are brought to the site of work, the contractor shall if required, by the Engineer-in-Charge furnish manufacturers test certificate to establish that the material produced by the contractor for incorporation in the work satisfies the provisions of BIS codes relevant to the material and/or the work done.
- C4. The contractor shall procure all the materials in advance so that there is sufficient time to testing and approving of the materials and clearance of the same before use in work.
- C5. All materials brought by the contractor for use in the work shall be got checked from the Engineer-in-Charge or his authorized representative of the work on receipt of the same at site before use.
- C6. The contractor shall be fully responsible for the safe custody of the materials issued to him even if the materials are in double lock and key system.
- C7. The Stone aggregate/stone, sand shall be brought from any quarries subjected to the said materials confirm CPWD specifications.

- 5 The day to day receipt and issue accounts of different grade/brand of cement shall be maintained separately in the standard proforma by the Jr. Engineer/Assistant Engineer - in-Charge of work and which shall be duly signed by the contractor or his authorised representative.
- 6 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.
- 7 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.
- 8 Cement register showing the receipt of the PPC shall be maintained at site. The contractor shall construct godown for storage of PPC at site and nothing extra on this account shall be payable.
- 9 Cement issued shall be for consumption at site only. No cement for factory made items and those not manufactured at site shall be issued.
- 10 In case there is any discrepancy in frequency of testing as given in the list of mandatory test and that in the individual sub-head of work as per CPWD specification 2019 Vol. 1 & 2 the higher of the two frequencies of testing shall be adopted.

**11. Maintenance of Registers:**

- 1. All the register of tests to be carried out at construction site or in outside

laboratories shall be maintained by the contractor which shall be issued to the contractor by Engineer-in-Charge in the same manner as being issued to IWD field staff.

2. The test registers to be issued to the contractor are :
    - A) Materials at site account register such as steel, bricks, AAC blocks, coarse aggregates etc.
    - B) Cement register.
    - C) Master test registers.
    - D) Cube test register.
    - E) Paint register.
    - F) Any other test register as required.
  3. All the entries in the register will be made by the designated engineering staff of the contractor and same should be regularly reviewed by JE/AE/EE.
  4. Contractor shall be responsible for safe custody of all the test registers.
  5. Submission of copy of all test registers, material at site register along with each alternate running account bill and final bill shall be mandatory. These registers should be duly checked by Engineer-in-Charge.
12. Ultrasonic Pulse velocity Method of Test for RCC: Ultrasonic pulse velocity method of test for RCC shall be done as routine test for all the concrete beams and columns as per IS 13311 (Part-I): 1992, after 28 days of casting. Concrete quality grading shall be done and concrete having graded as good and excellent shall be accepted. Necessary testing equipment's and facilities shall be provided by the contractor. The record shall be maintained by the contractor and shall be verified by the engineer-in-charge or his authorized representative. This report shall be submitted with each bill. Nothing extra shall be paid for the same.
13. Third party quality control/assurance: Third part quality control/assurance may be conducted by IIT/NIT/Government Engineering College/Government Institutes or any other Empanelled agency, if directed by Engineer-in-Charge. The contractor has to provide all necessary assistance and has to submit compliance report within targeted time frame.

### **Additional Condition for cement**

1. The contractor shall procure 43 grade Portland Pozzolana Cement conforming to IS: 1489 (Part-I) as required in the work, from reputed manufacturers of cement, such as A.C.C., Ultratech, Vikram, Shree cement, Ambuja, Jaypee Cement, Century Cement & J.K. Cement. The tenderers may also submit a list of names of cement manufacturers which they propose to use in the work. The tender accepting authority reserves right to accept or reject name(s) of cement manufacturer(s) which the tenderer proposes to use in the work. No change in the tendered rates will be accepted if the tender accepting authority does not accept the list of cement manufacturers, given by the tenderer, 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 Engineer-in-Charge 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 conform 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 Engineer-in-Charge to do so.

2. The cement shall be brought at site in bulk supply of approximately 50 tonnes or as decided by the Engineer-in-Charge. The cement godown of the capacity to store a minimum of **1000** bags of cement shall be constructed by the contractor at site of work for which no extra payment shall be made.
3. Double lock provision shall be made to the door of the cement godown. The keys of one lock shall remain with the Engineer-in-charge or his authorized representative and the key of the other lock shall remain with the contractor. The contractor shall be responsible for the watch and ward and safety of the cement godown. The contractor shall facilitate the inspection of the cement godown by the Engineer-in-Charge at any time.
4. The cement shall be got tested by the Engineer-in-Charge and shall be used on the work only after satisfactory test results have been received. The contractor shall supply free of charge the cement required for testing including its transportation cost to test laboratories. The cost of tests shall be borne by the contractor/department in the manner indicated below :
  - a) By the contractor, if the results show that the cement does not conform to relevant CPWD Specifications / BIS code or specification mentioned else where in the documents.
  - b) By the department, if the results show that the cement conforms to relevant CPWD Specifications / BIS code or specification mentioned else where in the documents.

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 shall be worked out as per procedure prescribed in clause 42 of the contract and shall be governed by conditions laid therein. In case the cement consumption is less than theoretical consumption including permissible variation, recovery at the rate show prescribed shall be made. In case of excess consumption no adjustment need to made.

6. The cement brought to site and the cement remaining unused after completion of the work shall not be removed from site without the written permission of the Engineer-in- Charge.
7. The damaged cement shall be removed from the site immediately by the contractor on receipt of a notice in writing from the Engineer-in-Charge. If he does not do so within three days of receipt of such notice, the Engineer-in-Charge shall get it removed at the cost of the contractor.
8. 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.
9. 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 Engineer-in-Charge before use of such cements in works.
10. The contractor may use OPC in place of PPC only after written permission of Engineer-in- Charge. In such case, no extra payment shall be made in any form to the contractor by the Department.

## **ADDITIONAL CONDITIONS FOR STEEL REINFORCEMENT**

- 1 The contractor shall procure TMT bars of **Fe 500D/Fe 550D** grade (the grade to be procured is to be specified) from primary steel producers such as **SAIL, Tata Steel Ltd, RINL, Jindal Steel & power Ltd., and JSW Steel Ltd.** or any other producer as approved by CPWD who are using iron ore as the basic raw material/input and having crude steel capacity of 2.0 million tonnes per annum and above.
  - 1.1 The TMT bars procured from primary producers shall conform to manufacturer's specifications.
  - 1.2 TMT bars procured from primary producers, the specifications shall meet the provisions of IS 1786: 2008 pertaining to **Fe 500 D/Fe 550D** grade of steel.
2. The contractor shall have to obtain vouchers and furnish test certificates to the Engineer-in-charge in respect of all supplies of steel brought by him to the site of work.
3. Samples shall also be taken and got tested by the Engineer-in-charge as per the provisions in this regard in the relevant BIS codes. In case the test results indicate that the steel arranged by the contractor does not conform to the specifications as defined under para 1.1 and 1.2 above, the same shall stand rejected and it shall be removed from the site of work by the contractor at his cost within a week time of written orders from the Engineer-in-charge to do so.
4. The steel reinforcement shall be brought to the site in bulk supply of 50 tonnes or more or as directed by the Engineer-in-charge.
5. The steel reinforcement bars shall be stored by the contractor at site of work in such a way as to prevent distortion & corrosion, and nothing extra shall be paid on this account. Bars of different sizes and lengths shall be stored separately to facilitate easy counting and checking.
6. For checking nominal mass, tensile strength, bend test, re-bend test etc. specimens of sufficient length shall be cut from each size of the bar at random at frequency not less than that specified below:

<b>Size of bar</b>	<b>For consignment below 100 tonnes</b>	<b>For consignment over 100 tonnes</b>
Under 10 mm dia bars	One sample for each 25 tonnes or part thereof	One sample for each 40 tonnes or part thereof
10 mm to 16 mm dia bars	One sample for each 35 tonnes or part thereof	One sample for each 45 tonnes or part thereof

Over 16 mm dia bars	One sample for each 45 tonnes or part thereof	One sample for each 50 tonnes or part thereof
---------------------	---	---

7. The contractor shall supply free of charge the steel required for testing including its transportation to testing laboratories. The cost of the all passed tests conducted through the Institute labs shall be borne by the Institute & the cost of failed tests shall be borne by the contractor.
8. The actual issue and consumption of steel on work shall be regulated and proper accounts maintained as provided in clause 10 of the contract. The theoretical consumption of steel shall be worked out as per procedure prescribed in clause 38 of the contract and shall be governed by the conditions laid therein. In case the consumption is less than theoretical consumption including permissible variations recovery at the rate so prescribed shall be made. In case of excess consumption no adjustment need to be made.
9. The steel brought to the site and the steel remaining unused shall not be removed from site without the written permission of the Engineer-in-charge
10. Steel bars brought by the contractor for use in the work shall be got checked from the Engineer-in-Charge or his authorized representative of the work on receipt of the same at site before use. The contractor shall supply free of charge the steel required for testing including its transportation to testing laboratories. The cost of the all passed tests conducted through the Institute labs shall be borne by the Institute & the cost of failed tests shall be borne by the contractor.
11. If the quantity of steel actually used in the work is found to be more than the theoretical quantity of steel 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 steel 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 steel so less used shall be recovered from the contractor at rate as specified in schedule 'F'. Decision of the Engineer-in- Charge in regard to theoretical quantity of steel which should have been actually used and recovery of the rate specified shall be final and binding on the contractor
12. In case the contractor brings surplus quantity of steel the same after completion of the work will be removed from the site by the contractor at his own cost after approval of the Engineer-in-Charge.
13. Reinforcement including authorized spacer bars and lappages shall be measured in length of different diameters, as actually (not more than as specified in the drawing) used in the work, nearest to a centimeter. Wastage and unauthorized overlaps shall not be measured.
14. The standard sectional weights referred to as in Table 5.4 under para 5.3.4 in CPWD specifications for works 2009 Vol. 1 will be considered for conversion of length of various sizes of MS bars, Tor steel bars and TMT bars into standard

- weight.
15. Records of actual sectional weight shall also be kept dia-wise & lot-wise. The average sectional weight for each diameter shall be arrived at from samples from each lot of steel received at site. The decision of the Engineer-in-Charge shall be final for the procedure to be followed for determining the average sectional weight of each lot. Quantity of each diameter of steel received at site of work each day will constitute one single lot for the purpose. The weight of steel by conversion of length of various sizes of bars based on the actual weighted average sectional weight shall be termed as derived actual weight.
  16. If the derived weight as in para 15 above is lesser than the standard weight as in para 14 above, the derived actual weight shall be taken for payment.

If the derived actual weight is found more than the standard weight then the standard weight as worked out in para 14 above shall be taken for payment. In such case nothing extra shall be paid for the difference between the derived actual weight and the standard weight.

17. Mixing of different type of steel/different grades of steel shall not be allowed in the same structural members as main reinforcement to satisfy clause 26.1 of IS:456.
18. Tolerances on Nominal Mass (individual sample) shall be as under:-

Sl. No.	Nominal size mm	Tolerances on the Nominal Mass, percentage
1	Upto and including 10	-8%
2	Over 10 upto & including 16	-6%
3	Over 16	-4%

## **PARTICULAR SPECIFICATIONS OF CIVIL WORKS :**

A. 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 guidance only).

B. Stone aggregate of all grades shall be of hard stone variety fulfilling CPWD specifications 2019 Vol-I&II /relevant IS Code and shall be obtained from quarries approved by the Engineer-in-Charge

C. Sand to be used in cement concrete work, mortar for masonry and plaster work shall be of standard quality conforming to CPWD specifications 2019 Vol-I&II /relevant IS Codes and shall be obtained from quarries approved by the Engineer-in-Charge.

### **EARTH WORK:**

1.1 The work shall be done in accordance with CPWD specifications.

1.2 The earthwork in excavation, wherever required, shall be carried out in slushy position. Rates for earthwork shall include cost of the element for working in or under water / liquid mud including pumping of water / liquid mud. Nothing extra shall be payable on this account. Therefore, the Contractor shall quote his rates after studying the site conditions.

1.3 Any trenching and digging for laying sewer lines/water lines/cables etc. shall be commenced by the contractor only when all men, machinery and materials have been arranged and closing of the trench(s) thereafter shall be ensured within the least possible time.

1.4 De-watering shall be carried out by suitable means with adequate stand-by arrangements of pumps etc. and it shall be ensured that its disposal is carried out as per the regulations of the local bodies. The agencies are, therefore, advised to inspect and acquaint themselves of the site and location of disposal point(s) of water / slush and satisfy themselves as regards method of pumping and disposal required to be adopted. Any default or failure on the part of the Contractor to acquaint himself with the aforesaid aspect of work shall not absolve him from his responsibility for the execution/ performance of this contract. Also, all permissions in this regard, to be taken from local authorities, shall be obtained by the Contractor. Nothing extra shall be payable on these accounts.

1.5 In trenches where surface water is likely to get into cut / trench during monsoons, a ring bund of puddle clay or by any other means shall be formed outside, to the required height, and maintained by the Contractor. Also, suitable steps shall be taken by the Contractor to prevent back flow of pumped water into the trench. Nothing extra shall be payable on this account.

1.6 The cost of de watering or working under water and / or liquid mud for execution of all the items for the work is deemed to be included in quoted rates of the respective items and shall not be measured separately for payment. Nothing extra shall be payable for de

watering in this work, irrespective of whether specified or not, in the item descriptions or in the specifications / conditions in this contract agreement.

1.7 This shall also include water encountered from any source such as rains, floods, sub soil water table being high and/or due to any other cause whatsoever.

### **RCC WORK:**

- 2.1 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 38) 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 Engineer-in- Charge 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.
- 2.2 For non-scheduled items, the decision of the Superintending Engineer cum Project Director, CPWD, IIT Kanpur Project, Kanpur regarding theoretical quantity of the cement which should have been actually used shall be final and binding on the contractor.
- 2.3 Cement brought to site and cement remaining unused after completion of work shall not be removed from site without written permission of the Engineer-in-Charge.
- 2.4 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 Engineer-in-Charge.
- 2.5 Cement register for the cement shall be maintained at site.
- 2.6 Cement bags shall be stored in separate godowns to be constructed by the contractor at his own cost as per sketch (which is only indicative and actual size will depend on the site requirements) given in CPWD specifications with weather proof roofs and walls. Each godown shall be provided with a single shutter door with two locks. The key of one lock shall remain with Engineer-in-charge or his authorized representative and that of the other lock with the authorized agent of the contractor at the site of work so that the cement is issued from the godown according to the daily requirements with the knowledge of both parties and proper account for the same is maintained in the standard proforma.

## PROFORMA FOR THE CEMENT REGISTER

### PARTICULARS OF RECEIPT

Date of receipt	Quantity received	Progressive total	Date issue	of	Quantity issued	Items of work for which issued
1	2	3	4		5	6

### PARTICULARS OF ISSUE

Qty. returned at the end of the day	Total issued	Daily balance in hand	Contractor's initial	JE's initial	Remarks (AE/EE's periodical check)
7	8	9	10	11	12

### 2.6 DESIGN MIX CONCRETE:

The contractor shall be required to submit two separate design mix of concrete with and without using plasticizers, separately for machine batched mix concrete. The decision of the engineer-in-charge to specify the design mix of concrete based on above shall be final.

2.6.1 Coarse aggregate: As per CPWD Specifications

2.6.2 Fine Aggregate: As per CPWD Specifications.

2.6.3 Water: It shall conform to requirements laid down in IS:456 : 2000 and CPWD specifications.

2.6.4 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.

2.6.5 Slump: Design slump should be clearly specified in the mix design.

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 in 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.

2.6.6 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 <sup>2</sup> )	Specified characteristic compressive strength at 28 days (N/mm <sup>2</sup> )	Minimum cement quantity (Kg. per cum. Mtr.)	Maximum water cement ratio
i.	M25	As per design	25	As Per CPWD Specifications / 2019 / relevant IS code	
ii.	M30	As per design	30		
iii.	M35	As per design	35		
iv.	M40	As per design	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/mm<sup>2</sup>

(ii) 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.

(iii) Design slump has to be constantly monitored and maintained during placing of concrete through slump tests carried out as per CPWD specification 2019 Vol. 1 for Mortar, Concrete and RCC works, and records maintained accordingly.

2.6.7 The concrete mix design/laboratory tests with and without admixture shall be got done by contractor at his own cost and will be carried out by the contractor through one of the following laboratory/Test houses:

(i) IIT Kanpur, IIT Roorkee, IIT Delhi

(ii) HBTI Kanpur

And as directed by the Engineer-in-charge.

The various ingredients for mix design / laboratory tests shall be sent to the test houses through the Engineer-in-Charge and the samples of such aggregate & cement shall be preserved at site by the department.

2.6.8 The contractor shall submit the mix design report from any of above approved laboratory for approval of Engineer-in-Charge within 30 days from the date of issue of letter of acceptance of the tender. No concreting shall be done until the mix design is approved by the Engineer-in-charge. In case of white portland cement and the likely use of admixtures in concrete with PPC/white portland cement the contractor shall design and test the concrete mix by using trial mixes with white cement and/or admixtures also for which nothing extra shall be payable.

2.6.9 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 above mentioned approved laboratory shall be submitted by the contractor as per the direction of the Engineer-in-Charge. No payment will be made for revised mix design.

## 2.7 APPROVAL OF DESIGN MIX

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

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.

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

2.9 The batching plant shall conform to IS:4925. It shall have the facilities of presetting the quantity to be weighed with automatic cutoff when the same is achieved. Concreting at places may have to be resorted to through concrete pump for which nothing extra shall be paid.

2.10 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.

## 2.11 WORK STRENGTH TEST

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 specimen. 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 laboratory of CPWD or in any other laboratory as directed by the Engineer-in-Charge.

#### **Lot size**

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

Quantity of concrete in the work cubic metre per day	Number of samples.
1-5	1
6-15	2
16-30	3
31-50	4
51 & above	4 + one additional sample for additional 50 cubic metre or part thereof.

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

### **2.12 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  $(F_{ck} - 3) \text{ N/mm}^2$

b) The mean of test result from any group of four consecutive samples is more than  $(F_{ck} + 3) \text{ N/mm}^2$ .

(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 Engineer-in- Charge for which nothing extra is payable to the contractor

2.13 Only New 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 Engineer-in-Charge.

2.14 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.

### 2.15 Ultrasonic Pulse Velocity Method of Test for RCC

i) The underlying principle of assessing the quality of concrete is that comparatively higher velocities are obtained when the quality of concrete in terms of density, homogeneity and uniformly is good. The consistency of the concrete as regards its general quality gets established. In case of poorer quality lower velocities are obtained. If there are cracks, voids or flaws inside the concrete which come in the way of transmission of pulse, lower velocities are obtained.

ii) The quality of concrete in terms of uniformity, incidence or absence of internal flaws, cracks and segregation etc. indicative of the level of workmanship employed, can thus be assessed using the guidance given in table below, which have been evolved for characterizing the quality concrete in structure in term of the ultrasonic pulse velocity.

#### **Velocity criterion for Concrete Quality Grading.**

Sl. No	Pulse velocity by Cross Probing (km/sec)	Concrete Quality Grading
1	Above 4.5	Excellent
2	4.5 to 3.5	Good
3	3.5 to 3.0	Medium
4	Below 3.0	Doubtful

**Note : In Case of —doubtful|| quality it may be necessary to carry further tests.**

iii) Pulse velocity method of test of concrete is to be conducted for CPWD works as a routine test. The acceptance criteria as per the above table will be applicable which is as per IS 13311 (part-1): 1992. From the above —Good|| and —Excellent|| grading are acceptable and below these grading the concrete will not be acceptable.

iv) 5% of the total number of RCC members in each category i.e. beam, column, slab and footing may be tested by UPV test method for establishing quality of concrete. It is suggested that test be conducted on RCC beam near joint with column, on RCC column near joint with beam, on RCC footings and rafts. On RCC rafts a suitable grid can be worked out for determining number of tests. In addition doubtful areas such as honeycombed locations, locations, where continuous seepage is observed, construction joints and visible loose pockets will also be tested.

v) The test results are to be examined in view of the above acceptance criteria —Good and —Excellent and wherever concrete is found with less than required quality as per acceptance criteria, repairs to concrete will be made. Honeycombed areas and loose pockets will be repaired by grouting using Portland Cement Mortar/Polymer Modifies Cement Mortar /Epoxy Mortar ,etc. after chipping loose concrete in appropriate manner. In areas where concrete is found below acceptance criteria and defects are not apparently visible on surface ,injecting



3.3 Leveled	Y/N
3.4 Holes plugged	Y/N
4.0 REINFORCEMENT	TYPE
4.1 Cover blocks	Y/N
4.2 Conforms to Drawings	Y/N
4.3 Tied Properly	Y/N
4.4 Space Bars / chairs	Y/N
4.5 Pre-stressing operations completed	Y/N
5.0 CONCRETE	TYPE
5.1 Plant informed about mix and type	Y/N
5.2 Transit mixer ready	Y/N
5.3 Tower crane ready	Y/N
5.4 Concrete pump ready	Y/N
5.5 Vibrators (Electrical & Diesel Ready)	Y/N
5.6 Predetermined Holes left wherever required	Y/N
5.7 Boards for construction joints	Y/N
5.8 Conduits placed in position	Y/N
5.9 Fan clamps placed in position	Y/N
5.10 Steel templates	Y/N
5.11 Cement slurry	Y/N

Date:

The above information filled by me after proper verification (SITE ENGINEER OF FIRM)

The above information checked by me (ASSISTANT ENGINEER)

CONCRETING MAY BE ALLOWED (EXECUTIVE ENGINEER)

**MASONRY WORK:**

1.1 AAC block works shall be executed as per CPWD specifications 2019 complete as per direction of Engineer-in-Charge.

1.2 All masonry work in walls shall be in AAC block/ Burnt clay FPS bricks as per GFC drawings. The AAC block shall conform to Grade-I of IS: 2185 part 3 (1984). The precast AAC blocks shall be procured from approved manufactures only and shall not be permitted to be cast/ manufactured at site.

Acceptance criteria – The blocks shall be of Grade-I confirming to s.no.(ii) of Table No.1 of IS: 2185 Part-3.

1.3 Brick work with common burnt clay F.P.S. (non-modular) bricks of class designation 7.5 shall be done in walls as per GFC drawings and as per CPWD Specifications 2019 all complete as per direction of Engineer-in-Charge.

1.4 RCC bands in AAC block work shall be provided as per CPWD specifications 2019 and relevant IS codes and manufacturer's specification. The horizontal & vertical RCC bands shall also be provided as per CPWD specifications 2019.

1.5 AAC block work shall be executed using AAC block adhesives mortar as per list of preferred make, synthetic glass fiber mesh of minimum 100 gsm and RCC band of depth & width as per GFC drawings complete as per direction of Engineer-in-Charge.

1.6 RCC bands shall be properly anchored in columns for stability as directed by Engineer in charge. For low height Masonry Walls in parapets etc, RCC coping of required sizes shall be provided as per drawings. The work of masonry walls, coping etc shall be done in accordance with CPWD specifications 2019 Volume - I & II with correction slips up to the last date of submission of tender documents

### **Form Work:**

1.1 All the specifications for formwork/shuttering shall be as per CPWD Specifications 2019 Vol-I&II.

1.2 Only New M.S. centering / shuttering and scaffolding material unless & otherwise specified shall be used for all R.C.C. 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 to be approved by the Engineer-in-Charge.

1.3 Steel shuttering as approved by the Engineer-in-Charge shall be used by the contractor. Minimum size of shuttering plates shall be 600mm x 900mm except for the case when closing pieces required to complete the shuttering panels. Dented, broken, cracked, twisted or rusted shuttering plates shall not be allowed to be used on the work. The shuttering plates shall be cleaned properly with electrically driven sanders to remove any cement slurry or cement mortar or rust.

1.4 Proper shuttering oil or de-bonding compound shall be applied on the surface of the shuttering plates in the requisite quantity before assembly of steel reinforcement.

1.5 For the execution of centering and shuttering, the contractor shall use propriety —Reebole|| chemical mould release agent of FOSROC or equivalent as shuttering oil as approved by Engineer-in-charge and nothing extra shall be paid on this account.

1.6 Double steel scaffolding having two sets of vertical supports shall be provided for external wall finish, cladding etc. The supports shall be sound and strong, tied together with horizontal pieces over which scaffolding platform shall be fixed. Scaffolding shall have steel staircase for inspection of works at upper levels.

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

1.8 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 R.C.C. shall be accordingly adjusted at the time of its centering, shuttering and casting for which nothing extra shall be paid to the Contractor.

1.9 As per general engineering practice, level of floors in toilet / bath, balconies, shall be kept lower than general floors as required as per GFC drawings. Shuttering should be adjusted accordingly. Nothing extra is payable on this account.

1.10 Concreting of upper floor shall not be done until concrete of lower floor has set at least for 14 days but form work and reinforcement can be taken up after the concrete has set at least for three days.

1.11 Centering and shuttering for all concrete and reinforced concrete wherever required shall be in steel mainly used for concrete purpose to produce a smooth straight level and sharp profiles shall be used for the works for uniform finish on all exposed surfaces.

1.12 Panels to be in largest practicable sizes to reduce the number of joints, form work material shall have strength adequate to withstand pressure of newly placed concrete. However, all props, bracings, scaffolding etc., shall be in steel.

1.13 In some restricted places where it is not feasible to use steel formwork, marine ply shall be used with the approval of engineer in charge. The entire responsibility of planning, design, erection and safety of formwork shall lie with the contractor.

Form work shall include all temporary or permanent forms or moulds required for forming the concrete which is cast-in-situ, together with all temporary construction required for their support.

## **ALUMINIUM WORKS**

The work of Aluminium door frame, windows, doors etc as per GFC drawings shall be carried out as per CPWD Specifications 2019 Vol-I & II and as per direction of Engineer-in-Charge.

**Extent and Intent:** - The work shall be carried out in the factory/site work shop by the contractor who shall furnish all material, labour, accessories, equipment, tool and plants and incidentals required for providing and installing anodized/powder coated aluminium doors, windows, claddings, louvers and other items as called for on the drawings. The drawings and specifications cover the major requirements only. The supplying of additional fastenings, accessories, fixtures and other items not mentioned specifically herein, but which are necessary to make a complete installation shall be a part of this contract.

**General:** - Aluminium doors, windows etc. shall be of sizes, section details as shown on the Architectural drawings. The details shown on the drawings indicate generally the sizes of the component parts and general standards. These may be varied slightly to suit the standard adopted by the manufacturers. Before proceeding with any manufacturing, the contractor shall prepare and submit complete manufacturing and installation drawings for approval of the Engineer-in-Charge and no work shall be performed until the approval of these drawings is obtained.

**Shop Drawings:** - The contractor shall submit the shop drawings of doors, windows, louvers, cladding and other aluminium work, based on the architectural drawings to the Engineer-in-Charge for his approval. The shop drawing shall show full size sections of doors, windows etc. thickness of metal (i.e. wall thickness) details of construction, sub frame/rough ground profile, anchoring details hardware as well as connection of windows, doors and other metal work to adjacent work. Samples of all joints and methods of fastening and joining shall be submitted to the Engineer-in-Charge for approval well in advance of commencing the work.

**Samples:** - Samples of doors, windows louvers etc. shall be fabricated, assembled in the factory/site work shop and submitted to Engineer-in-Charge for his approval. They shall be of sizes, types etc. as decided by Engineer-in-Charge. All samples shall be provided at the cost of the contractor.

**Sections:** - Aluminium doors and windows shall be fabricated from extruded sections of profiles as detailed on drawings. The sections shall be extruded by the manufacturers approved by the Engineer-in-Charge. The aluminium extruded sections shall conform to BIS designation IIE/IIV 9 WP alloy, with chemical composition technical properties, as per IS: 733 and IS: 1285. The permissible tolerance of the extruded sections shall be such as not to impair the proper and smooth function/ operations and appearance of doors and windows.

**Fabrication:** - Doors, windows etc. shall be fabricated to sizes at factory/site work shop and shall be of section, sizes, combinations and details as shown on the drawings. All doors, windows etc. shall have mechanical joints. The joints shall be designed to withstand a minimum wind load of 150 Kg. per Sqm. The design shall also incur that the maximum deflection of any member shall not exceed 1/175 of the span of the member. All members shall be accurately machined and fitted to form hairline joints prior to assembly. The joints accessories such as cleats, brackets etc. shall be of such material as not to cause any bimetallic action. The design of the joints and accessories shall be such that the accessories are fully concealed. The fabrication of doors, windows, etc. shall be done in suitable sections to facilitate easy transportation, handling and installation. Adequate provision shall be made in the door and window members for anchoring to support and fixing of hardware and other fixture as approved by the Architect.

**Anodizing/ powder coating:** - Aluminium sections which are to be powder coated shall have minimum 50 micron thickness as per requirement as per IS: 7088 and in required colour as specified in the item as per IS: 1868 grading as specified in item schedule after cutting the member to requisite sizes before the final assembly. Powder coating shall be of minimum 50 micron thickness.

Aluminium sections which are to be anodized, their anodizing shall conform to specified grade with minimum average thickness of 15 microns when measured as per IS: 612. The anodic coating shall be properly sealed by steams or in boiling water or cold sealing process as per IS:1868/IS: 6057. Polythene tape protection shall be applied on the anodised section before they are brought to site. All care shall be taken to ensure surface protection during transportation, storage at site and installation. The tape protection shall be removed on installation. The sample will be tested in the approved laboratory and cost of samples; etc. shall be borne by the contractor.

**Protection of finish:** - All aluminium members shall be wrapped with approved self-adhesive non-staining. PVC tapes.

**Handling and Stacking:** -

Fabricated materials shall be carried in an approved manner to protect the material against any damage during transportation. The loading and unloading shall be carried out with utmost care. On receipt of material at site, it shall be carefully examined to detect any damaged pieces. Arrangements shall be made for expeditious replacement of damaged pieces/ parts. Materials found to be acceptable on inspections shall be repacked in crates and stored safely.

In the case of composite windows and doors, the different units are to be assembled first. The assembled composite units should be checked for line, level and plumb before final

fixing is done. Units may be serial numbered and identified as out how to be assembled in their final locations if situation so warrants.

The contractor shall be responsible for assembling composite, bedding and filling the groove with polysulphide sealant inside and outside, at transoms and mullions placing the doors, windows etc. in their respective openings. After the doors/ windows have been fixed in their correct assigned position, the open hollow sections abutting masonry concrete shall be fitted with approved polysulphide sealant densely packed and finished neat.

The contractor shall be responsible for doors, windows, etc. being set straight, plumb, level and for their satisfactory/site work shop operation after fixing is complete.

### **Installation:**

The frame shall be fixed into position true to line and level using adequate number of expansion machine bolts, anchor fasteners, of approved size and manufacture and in an approved manner. The holes in concrete/masonry members for housing anchor bolts shall be drilled with an electric drill.

The door/ windows assembled as shown on drawings shall be placed in correct final position on the opening and marks made on concrete members at jambs, sills and heads against the holes provided in frames for anchoring. The frame shall then be removed from the opening and laid aside. Neat holes with parallel sides of appropriate size shall then be drilled in the concrete members with an electric drill at the marking to house the expansion bolts. The expansion bolts shall then be inserted in the holes, struck with a light hammer till the nut is forced into the anchor shell. The frame shall then be placed in final position in the opening and anchored to the support through cadmium plated machine screws of required size and anchored to the support through cadmium plated machine screws of required size threaded to expansion bolts. The frame shall be set in the opening by using wooden wedges at supports and be plumbed in position. The wedges shall invariably be placed at the meeting at points of glazing bars and frame.

**EPDM Rubber / Neoprene gaskets:** The contractor shall provide and install EPDM Rubber / Neoprene gaskets of approved size and profile at all locations as shown and as called for to render the doors, windows etc. absolutely air tight and weather tight. The contractor shall produce samples of the gaskets for approval and shall procure the same after approval only.

**Fittings:** Hinges, stays, handles, tower bolts, locks and other fittings shall be of quality and manufacturer as approved by the Engineer-in-Charge.

**Manufacturer's Attendance:** The manufacturer immediately prior to the commencement of glazing shall adjust and set all windows and doors and accept responsibility for the satisfactory working of the opening frames.

**Poly-sulphide:** The gaps between frames and supports and also any gaps in the door and windows sections shall be raked out as directed and filled with poly-sulphide of approved colour and make to ensure complete water tightness. The poly-sulphide shall be of such colour and composition that it would not stain the masonry/concrete work, shall receive paint without bleeding, will not sag or run and shall not set hard or dry out under any conditions of weather. The sample of poly-sulphide to be used for this purpose shall be got approved from the Engineer-in-Charge before its actual use.

**Details of Test :**

The various tests on aluminium sections shall be conducted in accordance with the relevant IS codes. The minimum number of tests for anodizing/powder coating and corrosion resistance shall be as given below: -

**S. No. Details****No. of Tests**

Doors, windows and ventilators

One test for every 1000 kg or part thereof.

The samples of major member of each unit of doors/ windows shall be selected at random by Engineer-in-Charge as such that all the aluminium section shall be got tested.

**Rates: -**

The rates of the item shall include the cost of materials, labour required in all the above operations. The rates exclude the cost of stainless steel friction hinges / stays selected for specified wind load and dead loads or specifically extruded in-built hinges, and rest of the fittings shall also be paid separately.

**Flooring & Dado / Cladding :**

General (applicable for all kinds of flooring and dado / cladding works under this sub- head):

1. The work under this sub-head in general shall be carried out as per the CPWD Specifications, as per the architectural drawings and as per the direction of Engineer- in-Charge.

2. The Engineer-in-Charge or his representative may, if required, visit the source of supply of the various stones to assess the quality as well as availability of the material in the required quantities. The Department shall bear the cost of such visits of the officers of the Department.

3. Based on the samples approved by the Engineer-in-Charge for various flooring and dado /cladding materials as specified hereinafter, the contractor shall prepare mock up(s) at site of work as specified under relevant flooring and dado / cladding items, for approval of quality of workmanship and material specified. If the quality of the workmanship and the material is as per the required standards and approved by the Engineer-in- Charge, the mock up shall be allowed as part of the work and measured for payment. Otherwise, it shall be dismantled by the contractor as directed by the Engineer-in-Charge and taken away from the site of the work at his own cost. The mock up(s) so made shall be kept till completion of respective works for reference. Nothing extra shall be payable on this account.

4. The stones / tiles shall be transported to site well packed in boxes or otherwise. These shall be handled carefully to prevent any damage. The various types of stones and tiles, procured shall be free of any surface defect or any edge damage. The damaged stones and tiles shall not be allowed to be used in the work. So, the contractor shall procure additional quantity of the stone and tiles to cover such contingencies. However, nothing extra shall be payable on this account.

For the enclosures with circular or curved profile, only the actual area of the flooring shall be measured for payment and nothing extra shall be payable for labour, material, wastages and any other incidental charges.

6. For the skirting in the enclosures with curvilinear profiles, the tiles / stones shall be cut to the required size and the shape to match the profile and/ or the joints as per the architectural drawings. Similarly, the skirting shall be fixed in a manner as to flush or project from the finished face of the wall as per the architectural drawings and as directed by the Engineer – in- Charge. Any chasing of the CC/Brick masonry works required for such fixing is deemed to be included in the cost of masonry. Nothing extra shall be payable on this account.

7. For flooring work, the joints between the different types of flooring shall be located as per the architectural drawings and the measurement shall be done as per item description. Also, the Contractor shall maintain the uniform level of the finished flooring of the different type unless specifically mentioned on the architectural drawings. Nothing extra shall be payable on these accounts.

8. All the flooring works specified under this sub-head shall be adequately protected by a layer of plaster of paris which shall be laid over a 400 micron PVC film. The protective layer shall be maintained throughout the execution of works and removed just before handing over of the site for which nothing extra shall be payable.

9. At the time of handing over, flooring & dado / cladding shall be free of any scratches, stain setc. The flooring & dado / cladding shall be properly cleaned before handing over. However, abrasive cleaners shall not be used to clean the marks and other scratches.

**Granite stone work:**

1. The Contractor shall procure and submit the samples of different types of granite stones, for the approval of the Engineer-in-charge prior to the execution of the item.

2. The mock up (one each) shall be prepared in staircase, lift wall and lift lobby, kitchen counter and window sill.

3. The entire supply for each type of granite stone slab shall be procured from one location (in one quarry), and supplied preferably, in one lot to keep variations to the minimum. The Contractor shall also segregate and sort the slabs according to colour, shade, texture and size of grains etc. to keep variation(s) in stones used at any one location to the minimum. Any slab with variation in the colour, shade, texture and size of grains etc., not acceptable to the Engineer-in-Charge, shall not be used in the work and shall be removed and replaced by the Contractor. Nothing extra shall be payable on these accounts. Also no claim of any kind shall be entertained from the Contractor on this account.

4. Granite stone slabs shall be pre polished (mirror polished) or given any other surface treatment as specified in the item nomenclature, as per the Architectural drawings and as directed by the Engineer-in-Charge.

5. Machine polishing and cutting to required size shall be done with water (as lubricant) only. Sawing shall also be done preferably with water as lubricant but as a special case, the Engineer-in-Charge may permit, at his discretion, oil or kerosene as lubricant subject to all kerosene or oil in the body and surface of tiles / slabs being thoroughly dried in ovens. Tiles /slabs with stains or patches due to the use of oil or otherwise, either before or after installation, shall be rejected and shall be replaced by the Contractor at his own cost. Nothing extra shall be payable on this account.

6. The stone work may be required to be carried out in patterns, design and / or in combination with granite stones of different colour and shade with or without borders and in combination of different stone slabs / tiles for which nothing extra shall be payable. The stones shall be provided in sizes and shapes as per the architectural drawings and wastages and incidental costs, if any, shall be deemed to be covered in the cost of the relevant items. Nothing extra shall be payable on this account.

7. For the flooring portions curved in plan, the stone slabs (at the edge) shall be cut to the required profile and shape as per the architectural drawings. Nothing extra shall be payable on this account and any consequent wastages and incidental charges on such accounts shall be deemed to be included in the cost of such items. For the purpose of payment, the actual area of granite stone shall be measured separately as specified under the relevant items.

8. The granite slabs used for providing and fixing on the tread of stairs, sills, soffits and jambs of doors, windows, ventilators and similar locations shall be in single piece unless otherwise directed by the Engineer-in-Charge. Wherever stone slab other than in single piece is allowed to be fixed, the joints shall be provided as per the architectural drawings and as per the directions of the Engineer-in-Charge. In the cabin areas, the joints in sills shall preferably be provided in line with the partition wall. Depending on the number of joints, as far as possible, the stone slabs shall be procured and fixed in slabs of equal lengths as per the architectural drawings and as directed by Engineer-in-Charge.

9. The specifications for dressing, laying, curing, finishing, measurements, rate etc. for the granite stone flooring shall be same as that of works for the Marble flooring, skirting and risers of steps under Flooring Sub Head of the CPWD Specifications. The wall lining / veneer work with granite stone shall be as per the CPWD Specifications for Marble work Sub Head.

#### **Vitrified and Ceramic tiles work:**

1. The contractor shall procure and submit the samples of approved make, shade and thickness of different types of vitrified and ceramic tiles, for the approval of the Engineer-in-charge prior to the execution of the item.

2. The mock up (one each) shall be prepared for flooring and dado, for vitrified tiles etc.

3. The entire supply for each type of tiles shall be procured from one manufacturer / authorized dealer, preferably, in one lot to keep variations to the minimum.

4. The tiling work may be required to be carried out in patterns, design and / or in combination with tiles of different colour and shade and in combination of different stone

slabs / tiles for which nothing extra shall be payable. The tiles shall be provided as per the architectural drawings and wastages and incidental costs, if any, shall be deemed to be covered in the cost of the relevant items. Nothing extra shall be payable on this account.

5. For the flooring portions curved in plan, the tiles (at the edge) shall be cut to the required profile and shape as per the architectural drawings. Nothing extra shall be payable on this account and any consequent wastages and incidental charges on such accounts shall be deemed to be included in the cost of such items.

6. The Contractor shall obtain and submit to the Department the manufacturer's test certificate for compliance of various parameters for the material as per the manufacturer's specifications, with each lot of material received at site.

7. The flooring and dado / cladding should be set out such that the perimeter/ corner tiles are in excess of half a tile so that the edge panels on both the sides are of equal sizes, as far as possible. The tiles shall be cut to required size and shape in a workman like manner but with all precautions, as per the manufacturer's specifications.

8. For dado / cladding / skirting work, the tiles shall be chamfered at the meeting edges on the corners in a manner that butt edges are not visible. It shall be ensured that the edges shall be ground / filed to chamfer the edges so that the glazing layer at the edges of the tiles is not chipped off otherwise the work shall be rejected and redone by the Contractor at his own cost.

**False ceiling:**

General (applicable for all kinds of roofing works under this sub-head):

1. The work in general shall be carried out as per the CPWD specifications, as per the manufacturer's specifications, as per architectural drawings and as per directions of Engineer-in-Charge.

2. Various false ceiling shall be done in different levels in linear and curvilinear pattern in plan and elevation and in combination with other types of false ceiling as specified in schedule of quantities, as per the architectural drawings. However, payment shall be made under respective items.

3. The tiles and the suspension system shall be as specified in the item nomenclature. The contractor shall procure and submit the samples of tiles and grid system of approved make, for the approval of the Engineer-in-charge prior to execution of the item.

4. The Contractor shall prepare the mock-up at site for approval of material and quality of workmanship by the Engineer-in-Charge. Only after the approval of Mock-up, the Contractors shall start the mass work. If the quality of the workmanship and the material is as per the required standards and approved by the Engineer-in- Charge, the mock up shall be allowed as part of the work and measured for payment. Otherwise, it shall be dismantled by the contractor as directed by the Engineer-in- Charge and taken away from the site of the

work at his own cost. The mock up(s) so made shall be kept till completion of respective works for reference. Nothing extra shall be payable on this account.

5. Once the material and mock-up are approved, the entire material (tiles as well as grid system) shall be procured from the approved manufacturer or its authorized dealer.

6. The installation shall be got done through an experienced installer, executing similar works.

1. The material shall be transported to site well packed. The ceiling material procured shall be free of any surface defect, edge damage and any other such defects. The contractor shall ensure careful handling and storage and prevent any rough handling, rolling of cartons or dropping cartons to prevent any edge damage or breakage. The defective / damaged material shall not be allowed to be used in the work. So, the contractor shall procure additional quantity of material to cover such contingencies. However, nothing extra shall be payable on this account.
2. Adequate care shall be taken before installation as well as afterwards till completion of the work. It shall be protected from rains, excessive humidity, chemical fumes, vibrations, dust etc. Any tile with edge damaged or crack etc. shall not be allowed to be used in the work and shall be replaced by the contractor at his own cost. Similarly, adequate care shall be taken by the contractor while placing or removing and handling the tiles so as not to cause any damage. The ceiling shall be cleaned as per manufacturer's specifications. Abrasive cleaners shall not be used to clean the marks.
3. The Contractor shall obtain and submit to the Department the manufacturer's test certificate /report for compliance of the material to the relevant standards along with each lot of material supplied for the work.
4. The suspension system for various types of false ceiling shall be as per item nomenclature and as per CPWD specification 2019. The false ceiling tiles shall be fixed on to coordinated suspension ceiling system with supporting grids system that fully integrates with the ceiling tiles as per manufacturer's specifications. It shall be ensured that the suspension system shall be suitable to take all designed dead, imposed and all incidental loads efficiently and shall not sag. The true line and levels for false ceiling work shall be maintained.
5. The luminaries, air grills / diffusers, signages etc. shall be as far as possible independently supported to avoid any over loading of the ceiling system which may result in excessive deflection or twisting of grids. Any strengthening of grid system by providing additional hangers, fasteners, runners, cross tees etc. or providing additional bracing may be carried out as required for any specific locations or for specific purpose for which nothing extra shall be payable.
6. The rate for the item of various false ceiling system shall include cost of all inputs of labour, materials, wastage if any, T&P, scaffolding, staging or any other temporary enabling structure /services etc. and all other incidental charges including making necessary cut outs for A.C diffusers, Light fittings, grills, Fire detection, alarm, sprinklers devices and fittings etc. No deduction in the area shall be made for openings nor anything extra shall be payable for making the openings. Also nothing extra shall be payable on account of any wastage in materials. Also nothing extra shall be payable on account of

any strengthening of the supporting suspension system for the false ceiling, around the openings in the false ceiling by using additional hangers, fasteners, runners, cross tees, cross channels, etc. However, for the purpose of payment only the actual area of the false ceiling shall be measured in sqm.

#### **WATER PROOFING TREATMENT:**

1. Water proofing treatment work shall be executed as per specifications mentioned in item nomenclature and as per CPWD specifications. Treatment for roof surface with integral cement based compound (Brick-coba). This item shall be got executed from any of the specialized agency to be got approved from Engineer-in-charge.

2. The brick bats shall be from over burnt bricks. The water proofing compound shall bear I.S.I. mark and shall conform to IS: 2715. Before execution of work water proofing compound has to be brought to and a certificate of its conforming to IS code should be produced. The Engineer-in-charge reserve the right to collect the random sample from material brought at site and get it tested from laboratory of his choice. The material which does not conform to the specification shall have to be removed forthwith by the contractor.

3. The finished surface after water proofing treatment shall have minimum slope of 1 in 80. At no point shall the thickness of water proofing treatment be less than 65mm.

4. While treatment of roof surface is done, it shall be ensured that the outlet drain pipes have been fixed and mouths at the entrance have been eased and rounded off properly for easy flow of water.

5. The surface where the water proofing is to be done shall be thoroughly cleaned with wire brushes. All loose scales mortar splashes etc. shall be removed and dusted off. The surface shall be treated with neat cement slurry admixed with water proof compound to penetrate into crevices and fill up all the pores in the surface. This cement slurry shall be applied at the junction of parapet and terrace slab including the vertical face of the parapet.

6. After the slurry coat is laid, layer of over burnt brick bats shall be laid in cement mortar of mix as specified by specialist firm but not leaner than 1:5 ( 1 cement : 5 coarse sand) admixed with proprietary water proofing compound to required gradient and joints filled to half the depth. The bricks bat layer shall be rounded at the junction with the parapet and tapered towards top for a height of 300mm. Curing of this layer shall be done for 2 days.

7. After curing the surfaces shall be applied with a coat of cement slurry admixed with water proofing compound.

8. Joints of bricks bat layer shall be filled fully with cement mortar of mix as specified by the specialist firm but not leaner than 1:5 ( 1 cement : 5 coarse sand) admixed with water proofing compound and finally top finished with average 20 mm thick layers of cement mortar 1:4 ( 1 cement : 4 coarse sand) and finished smooth with cement slurry mixed with

proprietary water proofing compound. The finished surface shall have marking of 300x300 mm false squares to give the appearance of tiles.

9. Curing of water proofing treatment shall be done for a minimum period of two weeks by flooding the water by making kiaries etc.

10. Rates: The rate shall include the cost of all labour and materials involved in all the operations described above.

#### **11. GUARANTEE BOND:**

d) The work shall be guaranteed for a period of Ten years from the date of completion of entire work under the contract

e) The security deposit @ 10% against this item of work shall be in addition to the security deposit mentioned in schedule-F.

f) The contractor shall execute the necessary guarantee bond against any structural defect, faulty materials, workmanship, leakages and defective finish etc. In addition 10% (ten percent) of the cost of this item of work shall be retained as security deposit and the amount so withheld would be released after Ten years from the date of completion of the entire work under the agreement, if the performance of the work done is found satisfactory. If any defect is noticed during the guarantee period, it shall be rectified by the contractor along with any incidental repairs to structure, flooring, finishing, fixtures and any other related damaged work within fifteen days of receipt of intimation of such defects in the work. If the defects pointed out are not attended to with the specified period, the same shall be got done from another agency at the risk and cost of the contractor and the cost of attending such repairs shall be deducted from any dues payable to the contractors. However, the security deposit deducted may be released in full against bank guarantee of equivalent amount in favour of Engineer-in-Charge in the prescribed proforma.

#### **Fire check doors:**

1. The doors shall be procured from approved manufacturer(s) only.

2. The fire check door shall not collapse during of hot gases or the flames through the rebate of the gap between the door frame and shutter or through the holes, developed in the shutter during fire.

3. Door frame and shutter shall be manufactured as per the nomenclature of the items.

4. Door fitting & fixture shall be provided as per the nomenclature of the items.

5. Specification: The Fire Check doors shall satisfy:

a) STABILITY: The fire check door should not collapse during the rated period of 2 hours fire under the specified fire conditions. The fire check doors provide safe access to the escape route in the building namely protected corridors and staircase.

b) INTERGRITY: The fire check doors should not allow the passage of hot gases or the flames or the flames through the rebate or the gap between the door frame and shutters for the duration of its fire rating.

- c) INSULATION: The mean temperature of fire door on unexposed side should not exceed 140 degree C above ambient temperature for the duration of its fire rating.
  - d) The fire/smoke check door assembly being offered shall be as proto-type tested by CBRI, Roorkee, for the prescribed fire – rating as per BS: 476 part 20/22 IS: 3614 Part-II.
  - e) A test report from CBRI, Roorkee shall be submitted for approval before executing the work.
  - f) The Fire / Smoke check doors should also have Tariff Advisory Committee approval as admissible.
  - g) The contractor shall employ specialized agency or manufacturer of the fire check door assembly, having their own manufacturing facilities and such agency shall be got approved by the Engineer-in-Charge.
  - h) Door frame and shutter in general, be fabricated as per nomenclature of the item of the work and recommendation of the specialized agencies as approved by the Engineer-in-Charge.
6. Fire check doors shall be of 2 hour fire rated and shall satisfy the three performance criteria of stability, integrity and insulation as per BS 476 part-22 and IS 3614 part-II.
7. Tenderer shall be responsible for obtaining –No objection Certification from CFO for the executed work.||

#### **8. GUARANTEE BOND:**

- g) The work shall be guaranteed for a period of Ten years from the date of completion issued by the Competent Authority.
- h) The security deposit @ 10% against this item of work shall be in addition to the security deposit mentioned in schedule-F.
- i) The contractor shall execute the necessary guarantee bond against any structural defect, faulty materials, workmanship and defective finish. In addition 10% (five percent) of the cost of this item of work shall be retained as security deposit and the amount so withheld would be released after Three years from the date of completion of the entire work under the agreement, if the performance of the work done is found satisfactory. If any defect is noticed during the guarantee period, it shall be rectified by the contractor along with any incidental repairs to structure, flooring, finishing, fixtures and any other related damaged work within fifteen days of receipt of intimation of such defects in the work. If the defects pointed out are not attended to with the specified period, the same shall be got done from another agency at the risk and cost of the contractor and the cost of attending such repairs shall be deducted from any dues payable to the contractors. However, the security deposit deducted may be released in full against bank guarantee of equivalent amount in favour of Engineer-in-Charge in the prescribed proforma.

#### **THERMATICALLY SEALED UNIT:**

1. Insulating glass shall be a double glazed unit comprising two sheets of approved glass panes separated by a spacer, hermetically sealed using primary and secondary sealants.

The design of insulating glass system shall consist of :

a) HOLLOW SPACER BAR : The hollow aluminium spacer bar shall be of required size and shape and shall be colour anodized. The spacer bar shall have two lines of perforations in the inner surface.

b) DESICCANT: The desiccant filled in the aluminium spacer bar shall be synthesized crystalline compounds of Aluminium Hydroxide, Caustic Soda and Sodium Silicate which absorbs water molecules. The desiccant shall be of 3A size (A means Angstrom). The quantity of desiccant used shall not be less than 35 gm/m length of spacer bar. Filled spacer bar frame shall not be stored for more than 6 hrs. before assembly and sealing of the unit to ensure proper functioning of the desiccant. The contractor shall submit documentary proof of using the above material in the work.

c) PRIMARY SEALANT : The primary sealant BUTYL (NAFTOTHERM BU|| or equivalent) shall be single component, thermo plastic solvent free sealing compound based on polyisobutylene. The sealant surface shall be free from cavities, depression and other defects. The contractor shall submit documentary proofing of using the above material in this work.

d) SECONDARY SEALANT : The secondary sealant in double glazed unit shall be silicone sealant. The contractor shall submit documentary proof of using the above material in this work to the entire satisfaction of Engineer-in-Charge. Before application of silicone/polysulphide, the surface shall be cleaned and free from oil, grease, dust and other loose matter. The surface shall be cleaned with alcohol or other suitable solvents. Detergent or soap shall not be used to clean the surfaces. The polysulphide shall be mixed and applied mechanically using automatic mixing machine in the manner approved by Engineer-in-Charge.

2. TESTING:- One door assembly shall be selected at random out of the entire lot, one for single leaf and one for double leaf and shall be tested for two hours fire rating. The testing shall be got done from laboratory approved by the Engineer-in-charge. The cost of materials, for testing and transportation/packing, testing charges and other incidental charges, shall be borne by the contractor. In case the door fails to meet the requirement, the entire lot shall be rejected.

#### **uPVC WINDOW SYSTEMS:**

The work of uPVC door and windows shall be as per CPWD Specifications 2019 and as per direction of Engineer-in-Charge. **The fabricator entrusted for fabrication/supply/ installation of complete assembly/unit of uPVC doors/windows, engaged by the contractor must be certified by the uPVC profile manufacturer for the said work.** In this regard, uPVC profile manufacturer shall submit the letter of certification of such fabricator through contractor to the Engineer-in-Charge exclusively for said work prior to start of manufacturing of uPVC door/window units.

#### **Guarantees:**

uPVC profile manufacturer to offer a warrantee on the window profile used in the manufacture of uPVC window/door systems for a period of 10 years from the date of completion. The Warrantee has to cover all abnormal defects in workmanship/quality. The guarantee has to be underwritten by the company nominated Executive and also signed by the contractor. In addition 10% (Five percent) of the cost of this item of work shall be retained as security deposit and the amount so withheld would be released after Three years from the date of completion of the entire work under the agreement, if the performance of the work done is found satisfactory. If any defect is noticed during the guarantee period, it

shall be rectified by the contractor along with any incidental repairs to structure, flooring, finishing, fixtures and any other related damaged work within fifteen days of receipt of intimation of such defects in the work. If the defects pointed out are not attended to within the specified period, the same shall be got done from another agency at the risk and cost of the contractor and the cost of attending such repairs shall be deducted from any dues payable to the contractors. However, the security deposit deducted may be released in full against bank guarantee of equivalent amount in favour of Engineer-In-Charge in the prescribed proforma.

## **GENERAL TERMS AND CONDITIONS**

- 1 In the case of discrepancy between the specifications and / or the drawings, the following order of preference shall be observed:-
  - i) Nomenclature of items as per schedule of quantities.
  - ii) Particular specification and special condition, if any.
  - iii) Architectural Drawings
  - iv) CPWD specifications.
  - v) Indian standard specifications of B.I.S.
  - vi) Sound Engineering Practice
  - vii) Decision of Engineer-in-Charge.

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 tenders. The contractor shall keep at his own cost all such publications of relevant Indian standard applicable to the work at site.

- 2 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 Engineer-in-Charge. Wherever CPWD specifications are silent the latest IS codes/specification shall be followed.
- 3 Existing roads of campus may be used for transport purpose, upto the point where the same is available and allowed with the specific permission of IIT Kanpur authorities in the interest of work. However, restrictions on the existing roads of campus may be imposed by the security personals regarding route available, speed, honking, ply timing etc which shall be strictly observed. Also no claim whatsoever shall be made on this account by the contractor.
- 4 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 flooring, aluminium, glazing, stainless steel, & plumbing work and other specialized works will specially require engagement of skilled workers having experience particularly in execution of such items.
- 5 a) The contractor (s) shall inspect the site of work before tendering and

acquaint himself with the site conditions and no claim on this account shall be entertained by the department.

- c) 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.
6. The contractor (s) shall study the soil investigation report for the site, available in the office of the Engineer-in-Charge 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 shall be entertained.
7. The tenderer shall see the approaches to the site. In case any approach from main road is required by the contractor, the same shall be made good, improved and maintained by the contractor at his own cost. No payment shall be made on this account.
8. 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.
9. 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
10. Other agencies doing works related with this project may also simultaneously execute their works and the contractor shall afford necessary facilities for the same. The contractor shall leave such necessary holes, openings etc. for laying/burying in the work, pipes cables, conduits, clamps, boxes and hooks for fan clamps etc. as may be required for the other agencies. Nothing extra over the Agreement rates shall be paid for doing these.
11. Some restrictions may be imposed by the security staff etc. on the working and for movement of labour, materials etc. The contractor shall be bound to follow all such restrictions/instructions and nothing extra shall be payable on account of the same.
12. The contractor shall fully comply with all legal orders and directions of the Public or local authorities or municipality and adhere by their rules and regulations and pay all fees and charges for which he may be liable in this regard. Nothing extra shall be paid/reimbursed for the same.
13. The building work shall be carried out in the manner complying in all respects with the requirements of the relevant bylaws and regulations of the local body under the jurisdiction of which the work is to be executed or as directed by the Engineer-in-charge and nothing extra shall be paid on this account.
14. The contractor shall give a performance test of the entire installation(s) as per standing specifications before the work is finally accepted by making his own arrangements for water supply, electricity etc. and nothing extra

- whatsoever shall be payable for the same.
15. Huts for labour are not to be erected at the site of work, the contractor shall be required to provide such accommodation at a place as is acceptable to the local body and nothing extra shall be paid on this account.
  16. It shall be ensured by the contractor that no electric live wire is left exposed or unattended to avoid any accidents in this regard.
  17. The structural and architectural drawings shall at all times be properly co-related before executing any work.
  18. The contractor shall maintain in perfect condition, all portions executed till completion of the entire work allotted to him. Where however phased delivery of work is contemplated these provisions shall apply separately to each phase.
  19. The entire royalty at the prevalent rates shall have to be paid by the contractor on all the boulders, metals, shingle sand, earth etc. collected by him for execution of the work, directly to the Revenue authority or authorized agents of the State Government concerned or the Central Government, as the case may be.
  20. **Defects Liability Period (DLP)**
    - 20.1 Defects liability period shall be taken as **thirty-six (36) months** from the date of completion of the work for building as a whole, wherein all the defects shall be rectified by the contractor at his own cost.
    - 20.2 Defects of serious nature causing inconvenience such as leakage, reverse floor slopes affecting the drainage (ponding of water), warping and opening of joints in doors and window shutters etc shall be undertaken by the contractor immediately on receipt of the complaint but not exceeding one week time, failing which the defects will be got removed at his risk and cost plus 25% as supervision and establishment charge.
    - 20.3 All other defects notified to the contractor during the DLP shall be rectified to the entire satisfaction of Engineer-in-Charge or item replaced as soon as possible but not later than one month in any case. Failure to do so in a reasonable period the Engineer-in-Charge shall get it done at his cost plus 25% as supervision and establishment charges after final notice of 10 days. The decision of Engineer-in-Charge regarding a defect being of serious nature or otherwise shall be final and binding.
    - 20.4 **Release of Security Deposit: 25% security deposit will be released after expiry of 12 months from the date of completion of work on satisfactory performance during defect liability period, next 25% of the security deposit will be released after expiry of 24 months from the date of completion of work on satisfactory performance during defect liability period and remaining 50% of the security deposit will be released after expiry of 36 months from the date of completion of work on satisfactory performance during defect liability period.**

## 21 Other Terms and Conditions

### 21.1 Timely Completion

7. The work included in this tender is of urgent nature.
8. The work of all components must be started simultaneously and has to be delivered together or early within the given time schedule.
9. The contractor has to deploy the labor and supervisory staff in shifts to meet the targeted completion date. The work may be executed in extended shifts or two shifts.
10. Number of days from the date of issue of letter of acceptance for reckoning date of start shall be as per Schedule. If the Contractor commits default in commencing the execution of the work as aforesaid, the performance guarantee shall be forfeited.
11. The detailed program chart approved by the engineer-in-charge shall indicate how the resources will be deployed by the contractor to maintain desired progress and for the completion of the work within the specified period. If the submitted program is approved, the milestone shall be redefined accordingly by the Executive Engineer of IWD, IITK. The amount to be withheld in such a case, for non-achievement of milestone(s), shall remain unaltered. Any delay in achieving the milestone must be compensated within the limitations of time imposed in the Contract document
12. The contractor shall procure the required materials in advance so that there is sufficient time for testing of the materials and approval of the same before use in the work, as required.

## 21.2 Rates

1. Unless otherwise provided in the schedule of quantities of the work the rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths of the building and nothing extra shall be payable to him on this account.
2. The rates for all items of work shall, unless clearly specified otherwise, include cost of all labours, materials and other inputs involved in the execution of the item irrespective of whether they have been specifically mentioned in the tender document or not.
3. In case the same item (s) appear more than once in the schedule of work / BOQ under the same sub head or among the different subhead of works, the lowest rate quoted for that item (s) shall be considered for the particular item(s) wherever appeared in any part of BOQ / Schedule of works for the purpose of tender evaluation although web generated e-price bid may incorporate different quoted rate for same item(s) as per the quoting pattern of the tenderer. The tendered amount thus worked out shall be final & shall be binding on the contractor

4. The rates quoted by the contractor will be deemed to be inclusive of any extra expenditure of this reason. The contractor has to increase the manpower or other tools etc. to do the work as per requirement of the work at his own expenses. Nothing shall be paid on this account.
5. 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 Engineer-in-Charge. Nothing extra shall be payable on this account.
6. Other agencies may also simultaneously execute and install the works and the contractor shall afford necessary facilities for the same. The contractor shall leave such recesses, holes, openings, trenches etc. as may be required for such related works (for which inserts, sleeves, brackets, conduits, base plates, clamps etc. shall be available as specified elsewhere in the contract) and the contractor shall fix the same at the time of casting of concrete, stone work and brick work, if required, and nothing extra shall be payable on this account.
7. All material shall only be brought at site as per program finalized with the Engineer-in- Charge. Any pre-delivery of the material not required for immediate consumption shall not be accepted and thus not paid for.
8. Water tanks, taps, sanitary, water supply and drainage pipes, fittings and accessories should conform to approved manufacturers specifications where CPWD Specifications are not applicable. The contractor should get the materials (fixtures/fittings) tested from approved labs wherever required at his own cost.
9. 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 client department. No extra payment shall be made on this account.
10. The rates quoted by the Contractor are deemed to be inclusive of site clearance, setting out work, profile, establishment of reference bench mark(s), taking spot levels, construction of all safety and protection devices, barriers, preparatory works, working during monsoon, working at all depths, height, lead, lift and location etc until / unless specified otherwise and any other incidental works required to complete this work. Nothing extra shall be payable on this account.

### 21.3 **Quality and Workmanship**

1. The contractor shall be entirely responsible and answerable for all the works done by him regarding quality, adherence to the laid down specifications, terms and conditions, warranty/guarantee etc. and he shall be liable to bear

any compensation that may be levied by the department under any of the clauses of the agreement.

2. The materials having ISI mark shall have precedence over the one conforming to ISSpecifications.
3. The proposed is for Institute premises 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.
4. Samples of all materials and fittings to be used in the work in respect of brand manufacturer and quality shall be approved from the Engineer-in-Charge, well in advance of actual execution and shall be preserved till the completion of the work.
5. All materials used in the work shall be new and of good quality, conforming to the relevant specifications as per good engineering practice. All the materials proposed to be used in the work should be approved from Engineer in Charge before use in work.
6. Articles bearing BIS certifications mark shall only be used unless no manufacturer has got BIS/ISI 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. Where the make of any particular material is not specified in the Contract document, the material shall be supplied as per makes desired by the engineer-in-charge.
7. It will be the responsibility of the contractor / bidder to ensure use of genuine materials in the work. The department reserves the right to get (any / all materials / components) inspected by the manufacturer or their authorized representatives at any stage of the execution of work. If any of the materials, supplied and used in work is found spurious at any stage, then the department reserves the right to ask the contractor to replace it by genuine one and make suitable recovery till it is done, even if any payment against that material is already made.
8. The contractor should get the make/TDS documents approved before procuring any material at site. The TDS/Make once approved shall not be changed without any valid recorded reasons. No material to be brought and used at site without the prior knowledge & approval of Engineer-in-Charge.
9. The department may ask for any valid document like manufacturer's test certificate, document for purchase of the material, document for import/shipment of imported material etc. as deemed fit by the engineer-in-charge to ascertain genuinely of material supplied by/used in the work by the contractor. The contractor shall remain bound to submit all such documents to the department failing which payment may not be made or if already paid may be recovered/

withheld from subsequent running account payment.

10. All equipment and their components, and all the materials to be used in the work shall be suitable for the environmental conditions at the location of the work.
11. The contractor shall ensure quality control measures on different aspects of construction including materials, workmanship and correct construction methodologies to be adopted. He shall have to submit quality assurance programme within two weeks of the award of work. The quality assurance programme should include method statement for various items of work to be executed along with check lists to enforce quality control.
12. The contractor shall get the source of all other materials, not specified elsewhere in the document, approved from the Engineer-in-Charge. The contractor shall stick to the approved source unless it is absolutely unavoidable. Any change shall be done with the prior approval of the Engineer-in-Charge for which tests etc. shall be done by the contractor at his own cost. Similarly, the contractor shall submit brand/ make of various materials not specified in the agreement, to be used for the approval of the Engineer-in-Charge along with samples and once approved, he shall stick to it.
13. The contractor shall arrange carrying out of all tests required under the agreement through the laboratory as approved by the Engineer-in-Charge and shall bear all charges in connection therewith including fee for testing. The said cost of tests shall be borne by the contractor/department 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 department, if the results conform to relevant CPWD Specifications / BIS code or specification mentioned elsewhere in the documents.
14. Sample of building materials fittings and other articles required for execution of work shall be got approved from the Engineer-in-Charge. Articles manufactured by companies of repute and approved by the Engineer-in-Charge shall only be used. Articles bearing BIS certification mark shall be used in case the above are not available, the quality of samples brought by the contractor shall be judged by standards laid down in the relevant BIS specifications. All materials and articles brought by the contractor to the site for use shall conform to the samples approved by the Engineer-in-Charge which shall be preserved till the completion of the work.
15. The contractor shall ensure quality construction in a planned and time bound manner. Any sub-standard material/work beyond set out tolerance limit shall be summarily rejected by the Engineer-in-Charge.

16. BIS marked materials except otherwise specified shall be subjected to quality test at the discretion of the Engineer-in-Charge besides testing of other materials as per the specifications described for the item/materials. Wherever BIS marked materials are brought to the site of work, the contractor shall if required, by the Engineer-in-Charge furnish manufacturers test certificate or test certificate from approved testing laboratory to establish that the material produced by the contractor for incorporation in the work satisfies the provisions of BIS codes relevant to the material and/or the work done.
17. All materials brought by the contractor for use in the work shall be got checked from the Engineer-in-Charge or his authorized representative of the work on receipt of the same at site before use.
18. All the material brought by the contractor for use in the work shall be got checked from the Engineer-in-Charge or his authorized representative of the work on receipt of the same at site before use.
19. The contractor shall be fully responsible for the safe custody of the materials issued to him even if the materials are in double lock and key system.

#### 21.4 **Natural calamity:**

1. No payment will be made to the contractor for any damage caused by rain, snow fall, floods, dampness, fire, sun or any other natural cause whatsoever during the execution of work. The damage to the work due to above reason, if any, shall have to be made good by the contractor at his own cost and no claim on this account shall be entertained.

#### 21.5 **Stocking and Disposal of Materials & Debris**

1. The contractor shall take instructions from the Engineer-in-Charge regarding collection and stacking of materials at any place. No excavated earth or building rubbish shall be stacked on areas where other buildings, roads, compound wall, services etc. are to be constructed.
2. After completion of work the agency shall remove materials and debris etc. from site as per the direction of Engineer-in-Charge, at no extra cost.
3. Contractor's job will also include removing of all malba and debris arising in the process of painting including washing of floor to remove stains of paint, at no extra cost.
4. 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 Engineer-in-Charge 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.

5. For construction/renovation 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.
6. Dismantled but useful materials/components/equipment, if any, should be returned to the Institute as per the direction of Engineer-in-Charge.
- 7. The dismantled materials shall not be thrown anywhere in the campus. Proper space has been marked and these shall be deposited in C & D waste site near Security Barrack only. Dumping of C & D waste in campus may attract penalty of Rs. 5000/- per tractor trolley.**

#### 21.6 **Painting**

1. Contractor will thoroughly clean all paint marks left here and there due to spilling and splashes of paint at no extra cost.
2. Contractor will first submit the shade cards of relevant make of paint to IIT for approval of color before procuring the paint in bulk.
3. No mixing will be allowed with Stainer to achieve a particular color. Contractor will procure direct colour paint of approved shade and apply directly.
4. Contractor shall have to brought at least 50% quantity of total premium acrylic smooth exterior silicon additives paint and water proofing cement paint and shall deposit it in the custody of concerned site Engineer before start of work. The consumption shall be monitored by the Institute. All empty drums shall have to be kept till completion of the work.
5. Contractor has to make a sample of exterior painting on the surface of wall and after getting approval from the competent authority. The contractor has to finish the rest of work accordingly as per satisfaction of Engineer-in-charge.

#### 21.7 **Safety and Security**

1. The contractor has to follow all safety norms as laid down in National Building Code of India. All the workers shall be equipped with the required safety gadgets while working at site such as ISI marked helmets, Shoes and safety belts, gumboots, gloves etc.
2. The contractor, the authorized representative(s), workmen etc., shall strictly observe orders pertaining to fire precautions prevailing in the area.
3. The contractor shall be fully responsible for the safe custody of materials brought

by him/ issued to him even though the materials may be under double lock key system.

4. Contractor will arrange proper metal ladders, M.S. double scaffolding (for working, painting, etc. at higher levels) at his own cost and will take all safety measures like double harness safety belt, mechanized electrically operated platform etc. If it is observed that work is proceeding without adequate safety precautions, work may be stopped by Engineer-in-charge and in such cases, contractor will be solely responsible for delay and its consequences thereof.
5. 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 department. No extra payment shall be made on this account.
6. 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.
7. It shall be ensured by the contractor that no electric live wire is left exposed or unattended to avoid any accidents in this regard.
8. The Institute shall not have any responsibility or liability in case of any accident injury to the personnel to the contractor at work site or to the general public at the work site due to mishandling equipment by the personnel of the contractor or any other similar reason. The responsibilities and liabilities for such accidents and incidents shall be borne by the contractor.

#### **21.8 Approach to Site**

1. The tenderer shall see the approaches to the site. In case any approach from main road is required at site or existing approach is to be improved and maintained for cartage of materials by the contractor, the same shall be provided, improved and maintained by the contractor at his own cost.
2. Contractor shall take all precautionary measures to avoid any damage to adjoining property. All necessary arrangement shall be made at his own cost.

#### **21.9 Water and Flooding**

1. The contractor shall have to arrange water of desirable quality for the construction purpose for which he may have to install water purifier at site or might have to bring/ purchase water from outside as per decision of Engineer-in-charge. Nothing extra shall be paid on this account.

2. For works below ground level the contractor shall keep that area free from water. If dewatering or bailing out of water is required the contractor shall do it and nothing extra shall be paid except otherwise provided in the items of schedule of quantity.
3. In case of flooding of site on account of rain or any other cause and any consequent damage, whatsoever, no claim financially or otherwise shall be entertained not withstanding any other provisions elsewhere in the contract agreement. Also, the Contractor shall make good, at his own cost, the damages caused, if any.
4. The water charges (for water connection) shall be borne by the contractor.

#### 21.10 **Acts and Laws**

1. The Contractor shall keep himself fully informed of all acts and laws of the Central & State Governments, all orders, decrees of statutory bodies, tribunals having any jurisdiction or authority, which in any manner may affect those engaged or employed and anything related to carrying out the work. All the rules & regulations and bye-laws laid down by Collector / MC etc. and any other statutory bodies shall be adhered to, by the contractor, during the execution of work.
2. The Contractor shall also adhere to all traffic restrictions notified by the local authorities.
3. All statutory taxes, levies, charges (including water and sewerage charges, charges for temporary service connections and / or any other charges, as applicable) payable to such authorities for carrying out the work, shall be borne by the Contractor.
4. The Contractor shall arrange to give all notices as required by any statutory / regulatory authority and shall pay to such authority all the fees that is required to be paid for the execution of work. He shall protect and indemnify the Institute and its officials & employees against any claim and /or liability arising out of violations of any such laws, ordinances, orders, decrees, by himself/herself or by his/her employees or his/her authorized representatives. Nothing extra shall be payable on these accounts.
5. The fee payable to statutory authorities for obtaining the various permanent service shall be borne by the Institute.

#### 21.11 **Labour and Laws**

1. The Contractor shall display all permissions, licenses, registration certificates, bar charts, other statements etc. under various labour laws and other regulations applicable to the works, at his site office.
2. Huts for labour are not permitted within the premises of the Institute. No extra

cost shall be payable even if the contractor provides such accommodation at a place as is acceptable to the local body.

#### **21.12 Nondisclosure Agreement.**

1. The Agency shall take all precautions not to disclose, divulge and/or disseminate to any third party any confidential information, proprietary information on the Institute business or security arrangements (including but not limited to the Assignment instructions, Schedules and other subsequent Arrangements) and/or business of the Institute. The obligation is not limited to any Scope and the Agency shall be held responsible in case of breach of the confidentiality of Institute's information.
2. If the Agency receives enquiries from Press/Media/Radio/Television or other bodies / persons, the same shall be referred by the Agency to Institute immediately on receipt of such queries.

#### **21.13 Indemnification:**

1. The agency shall be directly responsible to indemnify the Institute against all charges, dues, claims, etc. arising out of the disputes relating to the dues and employment of the personnel deployed and further for any claim/compensation against all damages and accidents caused due to negligence on the part of the agents, employees and other personnel of the agency.
2. That the contractor shall keep the IITK indemnified against all claims whatsoever in respect of the employees deployed by the contractor. In case any employee of the contractor so deployed enters in dispute of any nature whatsoever, it will be the primarily responsibility of the contractor to contest the same. In case IITK is made party and is supposed to contest the case, IITK will be reimbursed for the actual expenses incurred towards Counsel Fee and other expenses which shall be paid in advance by the Contractor to IITK on demand. Further, the contractor shall ensure that no financial or Any other liability comes on IITK in this respect of any nature whatsoever and shall keep IITK indemnified in this respect.

#### **21.14 Force Majeure:**

If at any time, during the continuance of this contract, the performance in whole or in part by either party of any obligation under this contract is prevented or delayed by reasons of any war, hostility, acts of public enemy, civil commotion, sabotage, fires, floods, explosion, epidemics quarantine restriction, strikes, lockouts or acts of god (hereinafter referred to as events) provided notice of happenings of any such event, is served by party seeking concession to the other as soon as practicable, but within 21 days from the date of

occurrence and termination thereof. Provided the Party satisfies Institute adequately of the measures taken by it. Neither party shall, by reason of such event, be entitled to terminate this contract, nor shall either party have any claim for damages against the other in respect of such non-performance or delay in performance. Further, the services under the contract shall be resumed as soon as practicable after such event has come to an end or ceased to exist and the decision of Institute as to whether the services have to resume or not shall be final and conclusive, provided further, that if the performance in whole or in part of any obligation under this contract is prevented or delayed by reason of any such event for a period exceeding 60 days, Institute may at his option, terminate the contract.

#### **21.15 Dispute resolution**

1. The institute reserves the right to amend rules whenever and wherever considered necessary and appropriate. The same shall be intimated to the agency in due course.
2. Any dispute arising out of and in relation to this agreement shall be referred to the arbitration by sole arbitrator to be appointed by Director of the Institute. The arbitration would be conducted and governed by and under the provisions of Arbitration Act, 1996 and its amendments. Any legal dispute will be subject to jurisdiction of Kanpur Courts only and no other court shall have the jurisdiction.
3. Any dispute arising out of and in relation to this agreement shall be referred to the arbitration by sole arbitrator to be appointed by Director of the Institute. The arbitration would be conducted and governed by and under the provisions of Arbitration Act, 1996. Any legal dispute will be subject to jurisdiction of Kanpur Courts only and no other court shall have the jurisdiction.

#### **21.16 Arbitration**

1. Except as otherwise provided anywhere in this Agreement, if any dispute, difference, the question of disagreement or matter, whatsoever, arises between the parties, as to the meaning, operation or effect of the Agreement or out of or relating to the Agreement or breach thereof, the same shall be referred to a Sole Arbitrator, to be appointment by the Director of the Institute at the time of the dispute.
2. If the Arbitrator, to whom the matter is originally referred, dies or refuses to act or resigns for any reasons from the position of arbitration, it shall be lawful for the Director of the Institute to appoint another person to act as Arbitrator in the manner aforesaid. Such person shall be entitled to proceed with the reference from the stage at which it was left by its predecessor, provided

both the parties consent to this effect, failing which, the arbitrator shall be entitled to proceed on the matter de- novo.

3. It is a term of the Agreement that the party invoking the arbitration shall specify all disputes to be referred to arbitration at the time of invocation of arbitration under the clause.
4. It is a term of the contract that the cost of arbitration shall be borne by the parties themselves.
5. The place of the arbitration shall be Kanpur Nagar, Uttar Pradesh, India.
6. Subject as aforesaid, the provisions of the Arbitration and Conciliation Act, 1996 and any statutory modifications, amendments or re-enactment thereof and rules made the reunder and for the time being in force, shall apply to the arbitration proceeding under this clause.
7. Except as otherwise provided anywhere in this Agreement, the Arbitration proceedings shall be conducted in English and the Agreement shall be constructed, interpreted and governed by the law of India, for the time being in force.

#### **21.17 Jurisdiction of Courts**

The court(s) at Kanpur Nagar, Uttar Pradesh, shall have the exclusive jurisdiction to try any asall the disputes(s) between the parties arising out this Agreement.

#### **21.18 Insurance Policy**

- (i) Before commencing the execution of work, the Contractor shall, without in any way limiting his obligations and liabilities, insure at his own cost and expense against any damage or loss or injury, which may be caused to any person or property, at site of work. The Contractor shall obtain and submit to the E ngineer-in-Charge proper Contractor All Risk Insurance Policy for an a mount 1.25 times the contract amount for this work, with Engineer-in-Charge a s the first beneficiary. The insurance shall be obtained in joint names of Engineer-in-Charge and the Contractor (who shall be second beneficiary). Also, he shall indemnify the Department from any liability during the entire execution period of the work. The labour license shall also be submitted immediately and same shall be kept valid till the entire completion period of the work including the extensions ,if any.
- (ii) The Contractor shall, from time to time, provide documentary evidence as regards payment of premium for Insurance Policy for keeping them valid till the completion of the work. Without prejudice to any of its obligations and responsibilities specified above, the Contractor shall within 15 days from the date of letter of acceptance of the tender and thereafter at the end of each quarter submit a report to the Department giving details of the Insurance Policy along with Certificate of this insurance policy being valid, alongwith documentary evidences as required by the Engineer-in-Charge. No work shall be

commenced by the Contractor unless he obtains the Insurance Policy as mentioned above. Also, no payment shall be made to the Contractor on expiry of insurance policy unless renewed by the Contractor. Nothing extra shall be payable on this account. No claim of hindrance (or any other claim) shall be entertained from the contractor on this accounts

21.19 On completion of work, the contractor shall submit at his own cost four prints of "as built" drawings to the Engineer-in-Charge within 30 days of completion of work.

**21.20 Personal Safety Measures for Labour:**

Contractor shall provide the following items for safety of workers employed by contractor and associate agencies:

- (i) Protective footwear / helmet and gloves to all workers employed for the work on mixing, cement, lime mortars, concrete etc. and openings in water pipeline/sewer line.
- (ii) Welder's protective eye-shields to workers who are engaged in welding works.
- (iii) Safety helmet and Safety harness/ belt Provide adequate sanitation/safety facilities for construction workers to ensure the health and safety of the workers during construction, with effective provisions for the basic facilities such as sanitation, drinking water and safety equipment's or machinery.
- (iv) All the workers should be wearing helmet and shoes all the time on site.
- (v) Masks and gloves should be worn whenever and wherever required.
- (vi) Adequate drinking water facility should be provided at site, adequate number of decentralized latrines and urinals to be provided for construction workers.
- (vii) First aid facility should also be provided.
- (viii) Overhead lifting of heavy materials should be avoided. Barrow wheel and hand-lift boxes should be used to transport materials onsite.
- (ix) Tobacco and cigarette smoking should be prohibited onsite.
- (x) All dangerous parts of machinery are well guarded and all precautions for working on machinery are taken.
- (xi) Maintain hoists and lifts, lifting machines, chains, ropes and other lifting tackles

in good condition. Provide safety net of adequate strength to arrest falling material down below.

- (xii) Use of durable and reusable formwork systems to replace timber formwork and ensure that formwork where used is properly maintained.
- (xiii) Ensure that walking surfaces or boards at height are of sound construction and are provided with safety rails and belts. Provide protective equipments such as helmets.
- (xiv) Provide measure to prevent fire. Fire extinguisher and buckets of sand to be provided in fireprone area and elsewhere.
- (xv) Provide sufficient and suitable light for working during night.
- (xvi) Ensure that measures to protect workers from materials of construction, transportation, storage and other dangers and health hazards are taken.
- (xvii) Ensure that the construction firm/division/company have sound safety policies.
- (xviii) Comply with the safety procedure, norms and guidelines (as applicable) as outlined in NBC 2005 (BIS 2005c). All workers shall be provided regular safety training by the designated safety officer of the contractor before allowing them to work at site.
- (xix) Adopt additional best practices and prescribed norms as in NBC 2005 (BIS2005).

# **PART-B1**

# **GENERAL CONDITIONS FOR WORK**

## **Scope of Work**

1. The work shall be executed in accordance with the percentage rate contract basis to completion and handing over in fit condition ready for occupation.
2. The land is free from encroachment and there is no hindrance to execute the work. The agency shall fix a permanent bench mark at the site of work. Plinth level shall be fixed above the General finished ground level as per drawings and decided by Engineer-in-charge. The data provided in this document are for general guidelines. Changes, if any, would not affect the agreed rates and no claim on this account shall be entertained.
3. To carry out survey of the site for execution of the project and shall verify the site dimensions as per the site plan provided with bid document.
4. Providing, erecting & maintaining 5.00 metre high temporary barricading with MS tubular members of appropriate sizes out of which brand new profile sheet of 3.00 metre height & rest 2.00 metre height covered with green garden cloth which also covered entire height of profile sheet as approved by Engineer-in-charge on the construction site. After completion of work, the contractor will take away all the barricading material. There should be only one temporary gate in the temporary barricading erected for the site.
5. Complete leveling/dressing including filling of earth, its supply, disposal of surplus earth is to be completed as directed by the Engineer-in-charge
6. .Taking all precautionary measures to safeguard safety measures against any accidents for the agency's employees, labour, public, and staff of IWD by providing all necessary safety equipment, helmets etc. at work site.
7. Defects liability period shall be 36 months from the date of recording of completion certificate by the competent authority.
8. The Agency shall construct/provide one site office (semi-permanent structure) with modern outlook and having Air Conditioning, for use by Engineer-in-charge and his staff consisting of 1 room with toilet (not less than 40 sqm). The location

and plan shall be got approved from Engineer-in-Charge. Specification for the site office shall be suitable and matching for running an office which shall be got approved from Engineer-in-charge. The Agency shall provide a typical plan of site office (having light fixtures, wiring &, AC etc.) with specification within 15 days of award of work and shall construct after approval of Engineer-in-Charge. All running cost & charges for the office room shall be borne by the agency. The agency shall provide the following furniture (new) for use of IWD staff at site office and will take them away these items after completion of work.

<b>S.No</b>	<b>Articles</b>	<b>Quantity</b>
1.	Office Tables	2 Nos.
2.	Office Chairs	2 Nos.
3.	Steel Almirah (Big)	1 Nos.
4.	Visitor chairs	4 Nos.

9. The scope as described above is only indicative and not exhaustive. In additions to the above the agency shall be responsible for executing all the items required for completing the building in all respect to make the building fully functional and ready for occupation with firefighting works complete as per direction of Engineer-in-charge.
10. The above scope of work includes cost of all materials, manpower, equipment's, T&P fixtures, accessories, royalties, all taxes (excluding GST) watch & ward till handing over the complete premises to the department and all other essential elements for completion Any change, modification, revision etc. required to be done by IWD, CFO, local bodies, proof consultants etc. in accordance with applicable standards and bye- laws will have to be done at agency's cost and nothing extra shall be payable.

## **SPECIAL CONDITIONS**

1. The contractor shall execute the whole work in the most substantial and workmanlike manner in strict accordance with the specifications, approved design, drawings, particular specifications, special conditions, additional conditions and instructions of the Engineer-in-Charge.
2. Before tendering, the contractor shall inspect the site of work and structures and shall fully acquaint himself about the conditions prevailing at site, availability of materials, availability of land and suitable location for construction of go-downs, stores, site office, transport facilities, constraints of space for establishing design mix plants, weather condition at site, the extent of leads and lifts involved in execution of work etc., which may affect or influence the tenders. No claim whatsoever on account of above factors shall be entertained.
3. **Labour huts at site shall not be allowed.** The contractor shall make own arrangement on rent or otherwise, outside the IIT campus for labour hutment etc at his own cost.
4. The contractor shall at his own expense and risk arrange land for accommodation of labour.
5. Subject to availability and further with the restrictions as imposed by IIT Kanpur authorities, a small parcel of land may be provided on as is basis to the contractor near the work site (within 1000 mtrs distance from the construction site) for setting up of site office, storage of materials, erection of temporary workshops, small rest room and construction of approach roads to the site of work, including land required for carrying out of all jobs connected with the completion of the work. The contractor shall have to abide by the regulations of the authorities concerned and the directions of the Engineer-in-Charge strictly for use of land available at the site of work. Also if it becomes necessary during construction to remove or shift the stored materials, shed, workshop, access roads, etc to facilitate execution of the work included in this agreement or any other work by any other agency, the contractor shall have remove or shift these facilities as directed by the Engineer-in-Charge and no claim shall be entertained on such account. Also no claim on the basis of inadequacy, unsuitability or any other ground whatsoever regarding land provided shall be entertained.
6. It shall be deemed that the contractor has satisfied himself as to the nature and location of the work, availability of labour, materials, transport facilities, availability and suitability of land for setting up of camp, etc with respect to the work to be executed. The department will bear no responsibility for lack of such knowledge and the consequences thereof.
7. The contractor shall have to make approaches to the site, if so required and keep them in good condition for transportation of labour and materials as well as inspection of works by the Engineer-in-Charge. Nothing extra shall be paid on this account.
8. The contractor shall carry out true and proper setting out of the work in co-ordination with the Engineer-in-Charge or his authorized representatives and shall

be responsible for the correctness of the positions, levels, dimensions and alignment of all parts of the structure. If at any time during the progress of the work any error appears or arises in the position, level, dimensions or alignment of any part of the work, the contractor shall rectify such error to the entire satisfaction of Engineer-in-charge. The checking by the Engineer-in-Charge or his authorized representatives shall not relieve the contractor of his responsibility for the correctness of any setting out of any line or level. The contractor shall carefully protect and preserve all bench marks, pegs and pillars provided for setting out of works. Nothing extra shall be paid on this account.

9. All setting out activities concerning establishment of bench marks, theodolite stations, centre line pillars, etc. including all material, tools, plants, equipments, theodolite and all other instruments, labour, etc. required for performing all the functions necessary and ancillary thereto at the commencement of the work, during the progress of the work and till the completion of the work shall be carried out by the contractor and nothing extra shall be paid on this account.
10. The work shall be carried out in such a manner so as not to interfere or adversely affect or disturb other works being executed by other agencies, if any.
11. Any damage done by the contractor to any existing works or work being executed by other agencies shall be made good by him at his own cost.
12. The work shall be carried out in the manner complying in all respects with the requirement of relevant rules and regulations of the local bodies under the jurisdiction of which the work is to be executed and nothing extra shall be paid on this account.
13. The contractor may have to work in two or more shifts for completing the work in time, and no claims whatsoever shall be entertained on this account, notwithstanding the fact that the contractor will have to pay or may have paid to the labourers and other staff engaged directly or indirectly on the work according to the provisions of the labour regulations and the agreement entered upon and/or extra amount for any other reasons.
14. The contractor shall make his own arrangements for electricity including obtaining electric connection required and make necessary payments directly to the State / Central Govt. department concerned. Similarly the Contractor shall make his own arrangement for water and also get the water tested from laboratory approved by the Engineer-in-charge at regular interval as per the CPWD Specifications.
15. The contractor alone shall be responsible for any loss or damage caused by the commencement of work on the basis of any erroneous and or incomplete information.
16. The works to be governed by this contract shall cover delivery and transportation up to destination, safe custody at site, insurance, erection, testing and commissioning of the entire works.
17. No payment shall be made to the contractor for damage caused by rain, whatsoever during the execution of works and any damage to the work on this account shall have to be made good by the contractor at his own cost.

18. The rates tendered by the contractor shall be all inclusive and shall apply to all heights, lifts, leads and depths of the building and nothing extra shall be payable to him on this account.
19. Ancillary and incidental facilities required for execution of work like labour camp, stores, fabrication yard, offices for Contractor, watch and ward, temporary ramp required to be made for working at the basement level, temporary structure for plants and machineries, water storage tanks, installation and consumption charges of temporary electricity connection, telephone, water etc. required for execution of the work, liaison and pursuing for obtaining various approvals, no objection certificates, completion certificates from local bodies etc, protection works, etc. during execution shall be deemed to be included in rates quoted of the contractor, for various items in the schedule of quantities. Nothing extra shall be payable on these accounts. Before start of the work, the Contractor shall submit to the Engineer-in-Charge, a site / construction yard layout, specifying areas for construction, site office, positioning of machinery, material yard, cement and other storage, steel fabrication yard, site laboratory, water tank, etc.
20. No claim whatsoever for idle labour, additional establishments, costs of hire and labour charges for tools and plants, scaffolding etc, would be entertained under any circumstances. Similarly it is term of the contract that if the work gets delayed due to any site hindrance like trees, service lines, or for any other reasonable cause whatsoever only suitable extension of time for the contract shall be given but no claims whatsoever including claims of idle labour, idle machinery, cost of idle establishment, loss of profit etc on the ground of extension of contract beyond stipulated period shall be entertained even if the Extension is granted without levy of compensation by the Engineer in charge.
21. The Contractor(s) shall take all precautions to avoid accidents by exhibiting necessary caution boards day and night, speed limit boards, red flags, red lights and providing safety nets (Safety to labours in case of fall from height), safety belts etc and other safety norms as specified in the general conditions of contract. In case of any accident of labours/ contractual staffs/third party the entire responsibility will rest on the part of the contractor and any compensation under such circumstances, if becomes payable, shall be entirely borne by the contractor. The contractor shall be keep the department indemnified against any claim generated on any such account at all times.
22. Contractor shall within two weeks of award of work, submit to the Engineer-in-Charge for his approval, list of measures for maintaining safety of manpower deployed for construction and avoidance of accidents.
23. Scaffolding: Wherever required for the execution of work, all the scaffolding shall be provided and suitably fixed, by the Contractor. It shall be provided strictly with steel scaffolding system until specifically got approved otherwise from Engineer in charge , suitably braced for stability, with all the accessories, gangways, etc. with

adjustable suitable working platforms to access the areas with ease for working and inspection. It shall be designed to take all incidental loads. It should cater to the safety features for workmen. It shall be ensured that no damage is caused to any structure due to the scaffolding. Nothing extra shall be payable on this account.

24. Royalty if any payable and all other incidental expenditure shall have to be paid by the contractor on all the boulders, metal shingle, earth, sand bajri, etc. collected by him for the execution of the work, direct to the concerned Revenue Authority of the State or Central Govt. and the amount paid shall not be reimbursed in any form whatsoever.
25. Other agencies working at site may also simultaneously execute the works entrusted to them and to facilitate their working, the contractor shall make necessary provisions e.g. holes, openings, etc. for laying/burying pipes, cables, conduits, clamps, hooks, etc. as may be required from time to time. Nothing extra over the agreement rates shall be paid for doing this. The required materials/fixtures shall however be provided by department. Similarly other nearby projects may also be in progress in the campus and thus all reasonable coordination and assistance needs to be extended in order to avoid any hindrance to the nearby works. The contractor shall extend full co-operation to other agencies for smooth execution of works by other agencies. The final finishing of the work is to be executed in co-ordination with other agencies as directed by the Engineer-in-Charge.
26. Stacking of materials and excavated earth shall be done as per the directions of the Engineer-in-Charge. Double handling of materials or excavated earth if required shall have to be done by the contractor at his own cost.
27. The amount quoted shall be considered as inclusive of pumping/baling out water, if necessary, and no extra payment shall be made for pumping/baling out water. This includes water from any source such as rain, broken water mains or drains and seepage, surface and sub-soil water, rain etc. and shall apply to the execution in any season.
28. The contractor shall give a performance test of the entire installation(s) as per specifications before the work is finally accepted by making his own arrangements for water supply, electricity etc and nothing extra whatsoever shall be payable to the contractor for the performance test.
29. The steel work in railing includes fish tailing of the section to be embedded in concrete and fixing the same.
30. Some restrictions may be imposed by the State Government on quarrying of sand, stones etc, from certain areas. The contractor shall have to bring such materials

from other quarries located elsewhere for timely completion of work and nothing extra shall be paid on this account.

31. **The contractor shall give ten years guarantee in the prescribed proforma for water proofing items specified in the schedule of quantities. In addition to this, 10% of the executed cost of items shall be retained either in cash /fixed deposit or in the form of bank guarantee, which shall be released after the expiry of ten years from the date of completion if no defects is found in water proofing or the defects are made good. This amount shall be adjusted against the expenses incurred on making good the defects if the contractor commits breach of guarantee.**
32. The contractor shall arrange to keep the premises neat and clean. The rubbish/malba and unserviceable materials shall be removed on day to day basis.
33. The Contractor shall arrange electricity, water and other facilities at his own cost for testing of the various electrical installations, fire pumps, wet riser / fire fighting equipments, fire sprinklers etc. and also testing water supply, sanitary and drainage lines, water proofing of underground sump, over head tanks. Nothing extra shall be payable on this account.
34. Bar Chart
  - (i) The contractor shall give scientifically analyzed detailed bar chart for all the activities including man, material, important activity etc of the work within 15 days from the date of issue of letter of acceptance of tender.
  - (ii) While preparing the above detailed bar chart, effort shall be made to take all possible items of work simultaneously.
  - (iii) Similarly bar chart should be prepared separately for arrangement of labour.
  - (iv) The bar chart so finalized and accepted by department should be got reviewed by the department, once in a month regularly. Modified / revised bar chart shall be prepared in the event of not adhering to the targets mentioned in the earlier bar chart. The contractor shall augment additional resources, materials and man power for achieving the targets.
  - (v) In addition to the above bar chart, the contractor shall submit detailed programme of activities CPM and PERT chart using Primavera software. He shall furnish the details both in hard copies as well as soft copies.

**Conditions related to site restrictions and/or site facilities available for the work:-**

1. Arrangement for water shall be the responsibility of the contractor and no claim on this regard shall be entertained. This is also elaborated in the tender documents. However, the contractor may apply to the appropriate authority (as applicable) and to the Executive Engineer for the permission of bore wells. The Executive Engineer shall assist in obtaining the necessary permission from the appropriate authority but does not guarantee for the permission of the bore well or for the water supply from the borewell.
2. Arrangement for electricity shall be the responsibility of the contractor and no claim on this regard shall be entertained. This is also elaborated in the tender documents. However, the contractor may apply to the appropriate authority (as applicable) and to the Executive Engineer for the necessary electricity connection on payment basis. The contractor shall adhere to the applicable terms and conditions related to the electrical connections. The Executive Engineer shall assist in obtaining the necessary permission from the appropriate authority but does not guarantee for the necessary connection.
3. Justified quantum of space within the IIT campus, free of cost, shall be provided for the infrastructure facilities like material stock yard, site office etc. However, labour hutments shall not be allowed inside the campus. Similarly space for batching plant shall not be provided inside the campus.
4. Under normal circumstances, the working hours for labour are 08:00 AM to 06:00 PM. For working beyond 06:00 PM or prior to 08:00 AM, the contractor has to apply to the security personals alongwith the name of labours. Permission is normally granted for the extended hours.
5. It is clarified that normally the entry of vehicles is allowed between 08:00 AM to 10:00 PM. After 10:00 PM the vehicles with materials are not allowed to ply inside the campus. In exceptional circumstance (Procurement of Ready mix concrete or the like) permission can be obtained from the competent authority. However, as detailed in the tender conditions, restrictions on the existing roads of campus may be imposed by the security personals regarding route available, speed, honking, ply timing etc which shall be strictly observed.
6. Barricading shall be provided as detailed in this tender document.
7. The excavated earth shall continuously be dumped/carried to the dumping location as indicated in the tender document. Similarly the earth to be refilled shall be continuously carried from the dumping location as indicated in the tender document for refilling. Contractor is not permitted to stack more than 30 cum of earth excavated/to-be-refilled at the proposed building construction site.

# **PART-B2**

**List for Preferred Makes (Civil Works):**

Public Procurement (Preference to Make in India) Order (PPP-MIII Order)-2017- Revision dated 29-05-2019 and DoT Public Procurement (Preference to Make in India) Order (PPP-MII Order) dated 29-08-2018 with upto date amendments shall be strictly complied with in all cases and prevail.

Preferred Brands names of materials, whichever are applicable for the scope of work are listed below. The list is indicative and for guidance purpose only. Approved equivalent materials of any other specialized firms may also be used subject to approval of the alternate brands by the Engineer-in-Charge, provided they satisfy the tender specification in all respect (See also conditions of contract).

Sl. No.	Material description	Manufacturer / Brand Name
1.	Ready Mix Concrete	Ultratech Concrete, ACC Ready Mix and RMC India
2.	Cement (PPC/OPC)	ACC, Ultratech, Vikram, Shree Cement, Abuja, JK Cement, Century Cement, Jaypee Cement & Prism Cement.
3.	White Cement	Birla White, J.K. White
4.	Reinforcement Steel	SAIL, Tata Steel Ltd, RINL, Jindal Steel & Power Ltd. and JSW Steel Ltd
5.	Waterproofing compounds, admixtures, plasticizer, super plasticizer, curing compounds	Fosroc, ROFF/Dr. Fixit (Pidilite Industries), STP Ltd., Sika, BASF, Ardex Endura & Perma Construction Aids Pvt. Ltd.
6.	Integral water proofing compound with cement (for plaster & mortar)	Fosroc: Conplast 421, Dr. Fixit : LW+, Sika: Sikacim, Asian Paint: SmartCare Vitalia & equivalent product of BASF, STP Ltd., Ardex Endura, Perma Construction Aids Pvt. Ltd.
7.	Water proofing compound for bathroom/ toilet /balcony & other wet area	Fosroc: Bush Bond, STP Ltd.: Shalicrote, CICO: Tapecrete, Dr. Fixit : Pidifine 2K, Sika : Topseal 107, Asian Paints: Damp Block 2K & equivalent
8.	Crystalline water proofing compound	Product of BASF, Ardex Endura, Perma Construction Aids Pvt. Ltd. Fosroc: Bushbond TGP, Dr. Fixit : Dr. Fixit Krystalline, Sika: Sika 101h, Asian Paints: SmartCare & equivalent product of BASF, Ar- dex Endura, STP Ltd., Perma Construction Aids Pvt.
9.	Grouts, Tile Adhesive	Laticrete, STP Ltd., Kajaria, BASF, Perma, Ardex Endura, JK White & Ferrous Crete.

10.	Structural steel	SAIL, Tata Steel, Rashtriya Ispat Nigam Ltd. (RINL), JSW Steel Ltd., Jindal Steel & Power Ltd.
11.	Polycarbonate sheet	GE Plastic, LEXAN & MG Polyplast
12.	Profile steel sheet	Ezydeck of TATA, Lloyd Superdeck, JSW, Jindal
13.	Particle board	Action TESA, Merino, Archidply & Orion Doors
14.	Laminates	Action TESA, Greenlam, Century Ply, Merino, Archidply, Virgo & Orion doors
15.	Flush door shutters	Duro, Century, Durian, Archidply, Green Ply, JAYNA (Jain Wood Industries), Jain Doors Pvt. Ltd., GREENPANEL & Orion Doors Note: Only ISI marked flush door shutters to be used.
16.	Fire rated doors	Signum fire protection, Shakti Metdoor, NAVAIR, Promat, Thrislington, Sukri & Bhawani. If fire rated glass is integral part of fire rated door than it should be of one of the following makes: Pyroguard, Saint Gobain, Asahi India, Pilkington & Schott
17.	False ceiling system	Armstrong, USG Boral, Saint Gobain, Aerolite, Interarch, Hi- steel of PR Ceiling Products
18.	Plywood / Veneer	Greenply, Century, Merino, Durian, Archidply, GREENPANEL & Orion Doors.
19.	Melamine polish	Asian Paints melamine gold, Wudfin of Pidilite & Timbertone of ICI dulux.
20.	Floor spring & door closer	Godrej, Dormakaba, Dorset & Kich
21.	Aluminum section	Hindalco, Jindal & Indian Aluminium Co.
22.	Anodized aluminum hardware (Heavy Duty)	Kilon, Alualpha, Classic & Ebco.
23.	Clear / Float/Frosted/Toughen Glass/ Refractive glass	Saint Gobain, AIS & Modiguard
24.	Stainless steel railing, Accessories etc.	JINDAL, Dormakaba, Kich, GEZE, Godrej & Hardwyn
25.	SS fittings for doors & window	Jindal, Dormakaba, Kich, Dorset, Godrej, Ozone & Define
26.	Silicon based water repellent /weather sealant	GE Plastics, STP Ltd., Dow Corning, Waker, BASF & Pidilite (Dr. Fixit/ Roff
27.	Poly-Sulphide Sealant	Fosroc, STP Ltd., Pidilite (Dr. Fixit/Roff), Sika & BASF
28.	Mosaic tiles/Chequered Tiles	Ultra Tiles, NITCO, Hyper, Mayur & Pavcon,
29.	Glazed Ceramic Tiles	Kajaria, NITCO, Orient Bell, Johnson, Somany, RAK & Varmora

30.	Vitrified Tiles (Antiskid /Matt /Glazed)	Kajaria, NITCO, Orient Bell, Johnson, Somany, RAK, Varmora & Restile
31.	Paver block & Kerbstone	Pavcon, Hyper, Mayur, KK, Power, Sharda & Navya
32.	Cement Based wall putty	Asian Paints, Birla Wall Care, JK, White & Berger
33.	Oil bound washable distemper / dry distemper	Asian Paints (Professional Acrylic Distemper), Nerolac: Beauty Acrylic Distemper, Berger: Bison Acrylic Distemper & Dulux ICI: Maxilite
34.	1st quality acrylic distemper (washable/ready mix / Low VOC)	Asian Paints (Tractor Aqua Lock Paint), Berger: Commando or equivalent paints of Nerolac & ICI-Dulux
35.	Acrylic emulsion paints	Asian Paints: (Professional Premium Interior, Emulsion Paint), Nerolac: Beauty Gold, Berger: Rangoli Total Care & ICI Dulux: Super Cover, Indigo
36.	Plastic emulsion paint	Asian Paints: (Apolite Heavy Duty Premium Emulsion Paint), Nerolac: Impression, Berger: Easy Clean & ICI Dulux: 3 in 1
37.	Premium acrylic emulsion paints (Interior)	Asian Paints: (Royale Luxury Emulsion), Nerolac: Impression, Berger: Silk & ICI Dulux: Velvet Touch, Indigo
38.	Textured exterior paint	Asian Paints, Nerolac, Berger Paints, Ultratech Paints & Luxture
39.	Acrylic smooth exterior paint	Asian Paints: (Apex/Professional Premium Exterior Emulsion), Nerolac: XL, Berger: Weather Coat & ICI Dulux: Weather Shield, Indigo
40.	Premium acrylic smooth exterior paint with silicon additive	Asian Paints: Apex Ultima, Nerolac: XL total, Berger: Weather Coat all Guard & ICI Dulux : Weather Shield Max
41.	Synthetic Enamel Paint	Asian Paints: Apolite Premium Gloss Enamel, Nerolac: Synthetic Hi gloss, Berger: Luxol Hi gloss & ICI Dulux: Gloss Synthetic enamel.
42.	Cement Primer	Nerolac, Berger (BP white), STP Ltd., Asian (Decoprime WT) & ICI (White primer).

43.	Steel primer (Red Oxide Zinc Chromate Primer)	Asian Paints, Nerolac, Berger & ICI
44.	Wood primer	Asian Paints (wood primer - White/Pink), Burger, ICI & Nerolac
45.	Epoxy paint	Asian Paints, STP Ltd., Nerolac, Berger, ICI, Kansai, & Akzo Nobel
46.	Fire paint	Asian paint, STP Ltd., Akzo Nobel, PROMAT, & JOTUN
47.	GI/MS Pipe	Tata, Jindal (Hisar) & Prakash Surya
48.	GI Fittings	Unik, AVR & Zoloto
49.	HDPE Pipes	Reliance, Jain Pipes, ORIPLAST & Supreme
50.	DI Pipes & fittings	Electrosteel, Jindal, TATA DUCTURA, Kapil Ansh & & Kesoram
51.	UPVC pipe and fittings	Astral, Supreme, Prince, M/s Skipper Ltd, Ashirwad & Prayag Polymers Pvt. Ltd
52.	SW Pipes (BIS approved)	Anand, Parry & Perfect
53.	Centrifugally Cast (Spun) Iron Pipes & Fittings /Hub less pipes & fittings	NECO, BIC, Kapilansh, SKF, Raj Pattern Makers & Founders Pvt. Ltd. or any other ISI marked make
54.	CI Manhole covers, frames & GI Gratings	NECO, BIC, SKF & Kapilansh,
55.	SFRC Manhole covers & gratings	K K Jain & Pragati
56.	CP brass fittings (Superior range)	Jaquar, Grohe & Roka.
57.	CP brass fittings (Normal Range)	ESSCO (by Jaquar), Parryware, CERA, Kerovit (Kajaria), Johnson & Prayag Polymers Pvt. Ltd.
58.	Sanitary ware, fittings & accessories	Kerovit (Kajaria), CERA, Jaquar, Parryware, Hindware & Prayag Polymers Pvt. Ltd.
59.	Mirror glass	Atul, Modi Guard & Golden Fish

60.	CPVC Pipe & fitting	Astral, Superme, Prince, M/s Skipper Ltd., Ashirwad & Prayag Polymers Pvt. Ltd.
61.	Stainless steel sink	Neelkanth, Niralli, Jyna & Prayag Polymers Pvt. Ltd.
62.	FRP doors shutters & frame	Jayna, Fiberways, Jain Doors Pvt. Ltd. & Selected Product Co,
63.	Extruded polystyrene insulation board	Dowcorning, Supreme, Texas & Analco
64.	Gypsum plaster	Ferrous Crete, Gyproc Saint Gobain, Ultra Tech & J K White
65.	Floor hardener	Ironite, Perma, STP Ltd., Ferrok & Hardonate
66.	Modular Expansion Joint	Herculus, Sanfield India Ltd & Vexcolt
67.	Glass Wool	Dow Corning, UP Twiga & Isover
68.	uPVC door/window/ventilator	Fenesta, Komerling, Rheau, Veka, Duroplast, Aluplast & Advika Profiles Pvt. Ltd. (Fabrication and installation will be done by profile
69.	uPVC doors and window hardware	Manufacturer or his authorized fabricator). Roto, Dorset, DNV Accado & Kinlong
70.	AAC block Adhesive	UltraTech, Perma, Ardex Endura & Ferrous Crete
71.	PVC Water Tank	Syntex & Vectus
72.	AAC Block	MAX Blocks, UltraTech, HIL & BILTECH ACE & Gravit
73.	Modular Kitchen	Everyday/Hettich/Steel Art Brand Baskets of AISI 304(18/8); Hettich/Hafele Brand Auto closing, Concealed Hinges; DMS/ Dynasty/ Indoline brand shutter
74.	Aluminum shuttering	Knest, S-form, Durand Forms (India) Pvt. Ltd. & Mivan
75.	MS Tubular windows & Pressed Steel door frames	Jangid Engineering Works, AGFUV, Sen Harvic, Navair Delhi & Sukriti Delhi
76.	Dash fasteners /Anchors	Hilti, Bosch & Fischer

# **PART-B3**

**Proforma for Water Proofing, aluminium & Bank Guarantee**

**TO BE EXECUTED BY CONTRACTOR FOR REMOVAL OF DEFECTS AFTER**

**COMPLETION IN RESPECT OF WATER PROOFING WORKS**

**GUARANTEE BOND FOR REMOVAL OF DEFECTS AFTER COMPLETION IN**  
**RESPECT**

**OF WATER PROOFING WORKS**

(TOILETS & BATHROOMS/HAND WASH AREA/UNDER GROUND  
TANK/OVERHEAD TANKS/ROOF)

The Agreement made this \_\_\_\_\_ day of \_\_\_\_\_ Two thousand and \_\_\_\_ between \_\_\_\_\_ son of \_\_\_\_\_ hereinafter called the Guarantor on the one part) and the PRESIDENT OF INDIA (hereinafter called the Government on the other part).

WHEREAS THIS agreement is supplementary to a contract (hereinafter called the contract) dated \_\_\_\_\_ and made between the GUARANTOR OF THE ONE part and the Government of the other part, whereby the contractor, inter alia, undertook to render the buildings and structures in the contract recited completely water and leak-proof.

AND WHEREAS THE GUARANTOR agreed to give a guarantee to the effect that the said structures will remain water and leak-proof for 10 (Ten) years to be reckoned from the date Completion of the building.

NOW THE GUARANTOR hereby guarantees that water proofing treatment given by him will render the structures completely leak proof and the minimum life of such water proofing treatment shall be ten years to be reckoned from the date Completion of the building.

Provided that the Guarantor will not be responsible for the leakage caused by earthquake or structural defects or misuse of roof or alteration and for such purpose:

- (a) Misuse of roof shall mean any operation which will damage proofing treatment, like chopping of firewood and things of the same nature which might cause damage to the roof.
- (b) Alteration shall mean construction of an additional storey or a part of the roof or construction adjoining to existing roof whereby proofing treatment is

removed in parts.

- (c) The decision of the Engineer-in-charge with regard to cause of leakage/seepage shall be final.

During this period of guarantee the guarantor shall make good all defects and in case of any defect being found, render the building water proof to the satisfaction of the Engineer-in-charge at his cost and shall commence the work for the rectification within seven days from the date of issue of the notice from the Engineer-in-charge calling upon him to rectify the defects failing which the work shall be done by the department by some other agency contractor at the GUARANTOR's risk and cost. The decision of the Engineer-in-charge as to the cost payable by the Guarantor shall be final and binding.

That if guarantor fails to make good all defects or commits breach there under then the Guarantor will indemnify the principal and his successors against all loss, damage, cost expense otherwise which may be incurred by him by reason of any default on the part of the GUARANTOR in performance and observance of this supplementary agreement. As to the amount of loss and/or damage and/or cost incurred by the Government the decision of the Engineer-in-Charge will be final and binding on the parties.

IN WITNESS WHEREOF these presents have been executed by the Obliger \_\_\_\_\_ and by \_\_\_\_\_ and for and on behalf of the PRESIDENT OF INDIA on the day, month and year first above written SIGNED, SEALED AND delivered by OBLIGOR in the presence of :

- 1. ....
- 2. ....

SIGNED FOR AND \_\_\_\_\_ ON BEHALF OF THE PRESIDENT OF INDIA BY \_\_\_\_\_ in the presence of:

- 1. ....
- 2. ....

**GUARANTEE BOND TO BE EXECUTED BY THE CONTRACTOR FOR REMOVAL  
OF DEFECTS AFTER COMPLETION IN RESPECT OF ALUMINIUM DOORS,  
WINDOWS, VENTILATORS & STRUCTURAL GLAZING WORKS**

The agreement made this \_\_\_\_\_ day of \_\_\_\_\_ Two Thousand and \_\_\_\_\_ between \_\_\_\_\_ son of \_\_\_\_\_ (hereinafter called the GURANTOR on the one part) and the PRESIDENT OF INDIA (hereinafter called the Government on the other part.)

WHEREAS THIS agreement is supplementary to a contract (Hereinafter called the Contract) dated \_\_\_\_\_ and made between the GUARANTOR OF THE ONE PART AND the Government of the other part, whereby the contractor inter alia, undertook to render the work in the said contract recited structurally stable, leak proof and sound material, workmanship, anodizing, colouring, sealing.

AND WHEREAS THE GURANTOR agreed to give a guarantee to the affect that the said work will remain structurally stable, leak proof and guaranteed against faulty material and workmanship, defective anodizing, colouring, sealing and finishing for 3 (Three) years to be reckoned from the date Completion of the building prescribed in the contract.

NOW THE GUARANTOR hereby guarantee that work executed by him will remain structurally stable, leak proof and guaranteed against faulty material and workmanship, defective anodizing, colouring, sealing and finishing for 3 (Tthree) years to be reckoned from the date Completion of the building.

The decision of the Engineer-in-charge with regard to nature and cause of defects shall be final.

During this period of guarantee, the guarantor shall make good all defects to the satisfaction of the Engineer-in-charge at his cost and shall commence the work for such rectification within seven days from the date of issue of the notice from the Engineer-in-charge calling upon him to rectify the defects failing which the work shall be got done by the Department by some other contractor at the Guarantor's risk and cost. The decision of the Engineer-in-Charge as to the cost, payable by the Guarantor shall be final and binding.

That if the guarantor fails to make good all the defects or commits breach thereunder, then the guarantor will indemnify the principal and his successor against all loss, damage, cost expense or otherwise which may be incurred by him by reason of any default on the part of the GUARANTOR in performance and observance of this supplementary agreement. As to the amount of loss and/or damage and/or cost incurred by the Government, the decision of the Engineer-in-charge will be final and binding on both the parties.

IN WITNESS WHEREOF these presents, have been executed by the obligator \_\_\_\_\_ and \_\_\_\_\_ by \_\_\_\_\_ for and on behalf of the PRESIDENT OF INDIA on the day, month and year first above written.

SIGNED, sealed and delivered by OBLIGATOR in the presence of:

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_

SIGNED FOR AND \_\_\_\_\_ ON BEHALF OF THE PRESIDENT OF INDIA BY \_\_\_\_\_ in the presence of :

- 1. \_\_\_\_\_
- 2. \_\_\_\_\_

## Form of Performance Security (Guarantee)

### BANK GUARANTEE BOND

In consideration of the President of India (hereinafter called " the Government") 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, we

\_\_\_\_\_ (hereinafter referred to as "the Bank") hereby undertake to pay to the

\_\_\_\_\_  
(Indicate the name of the Bank)

Government an amount not exceeding ₹ \_\_\_\_\_ (\_only) on demand by the Government.

2. We \_\_\_\_\_ do hereby undertake to pay the amounts due and payable

(Indicate the name of the Bank)

under this Guarantee without any demure, merely on a demand from the Government 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 ` \_\_\_\_\_ only).

(Rupees

3. We, the said bank further undertake to pay to the government 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 thereunder and the contractor(s) shall have no claim against us for making such payment.

4. We, the said bank further undertake to pay to the government 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 thereunder and the contractor(s) shall have no claim against us for making such payment.
5. We further 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 that it shall continue to be enforceable till all the dues of the Government under or by virtue of the said agreement have been fully paid and its claims satisfied or discharged or till Engineer-in-charge on behalf of the government 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.
6. We further agree with the Government that \_\_\_\_\_ the Government (Indicate the name of the Bank) 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 government 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 government or any indulgence by the Government 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.
7. This guarantee will not be discharged due to the change in the constitution of the Bank or the contractor(s).
8. We lastly undertake not to revoke this guarantee \_\_\_\_\_ except with (Indicate the name of the Bank) the previous consent of the Government in writing.
9. This guarantee shall be valid up to \_\_\_\_\_, unless extended on demand by Government. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to \_\_\_\_\_ (₹ \_\_\_\_\_ 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 the \_\_\_\_\_ day of or \_\_\_\_\_  
(Indicate the name of the Bank)

This Guarantee will remain in force up to and including the date .....\* ..... after the deadline for submission of tender as such deadline is stated in the Instructions to contractor or as it may be extended by the Engineer-in-Charge,

notice of which extension(s) to the Bank is hereby waived. Any demand in respect of this Guarantee should reach the Bank not later than the above date.

DATE .....

SIGNATURE OF THE BANK

WITNESS .....

SEAL

(SIGNATURE, NAME AND ADDRESS)

\*Date to be worked out on the basis of validity period of 6 months from last date of receipt of tender.

**INTEGRITY PACT**

The contractor shall download the Integrity Pact, which is a part of tender documents, affix his signature & seal in the presence of a witness and upload the same while submitting the online bids. In absence of duly signed integrity pact the bids shall not be considered for technical evaluation.

**Superintending Engineer**

केन्द्रीय लोक निर्माण विभाग  
कार्यालय ज्ञापन

No. DG/MAN/410

ISSUED BY AUTHORITY OF DIRECTOR GENERAL, CPWD

NIRMAN BHAWAN, NEW DELHI

DATED: 22.10.2021

Subject: Addition of new Para 4.10.2 in CPWD Works Manual 2019 regarding testing charges to be borne by contractor.

It has been noticed that following provisions are sometimes being made in the NITs / Agreements by the NIT approving authorities:

"The cost of test shall be borne by contractor/ department in the manner as below:

- By the contractor, if the result shows that material does not conform to the relevant codes/ specification.
- By the department, if the results show that the material conforms to relevant codes/ specification."

It has been decided by the competent authority that testing charges shall be borne by the contractor in all cases. Accordingly following new para is added in CPWD Works Manual -2019.

Existing Provision	Modified Provision
4.10 Preparation of NIT	4.10 Preparation of NIT
4.10.2 No Provision	4.10.2 Testing charges to be borne by contractor
	Following provision shall be incorporated by the NIT approving authority in the NIT:
	All expenditure to be incurred for testing of samples e.g. packaging, sealing, transportation, loading, unloading etc. including testing charges shall be borne by the contractor. The NIT shall have list of approved laboratories for testing as approved by ADG / SDG.

This issues with the approval of competent authority.

(सी.पी. साहु) 22/10/2021

अपीशन अभियंता(सी.एंड एम.)

e-file 9116587

Issued from file No. CSQ/CM/10(1)/2021

प्रतिलिपि: सभी केलोनिवि तथा लोनिवि दिल्ली के अधिकारियों को आवश्यक सूचना एवं कार्यवाही हेतु। (केलोनिवि वेबसाइट के माध्यम से)।