

# केन्द्रीय विद्युत अनुसंधान संस्थान

(विद्युत मंत्रालय, भारत सरकार के अधीन एक स्वायत्त सोसायटी)

Central Power Research Institute (An Autonomous Society under the Ministry of Power, Govt. of India)

स्विचगियर परीक्षण तथा विकास केन्द्र Switchgear Testing & Development Station गोविन्दपुरा, भोपाल - 462 023

Govindpura, Bhopal - 462 023

## **DRAFT E-NOTICE INVITING TENDER**

**NIT NO.** : 33 / 2024-25

**NAME OF WORK:** Reconstruction of Toilets Block (G+1) for STL and EMTL Division by demolishing the old existing toilet block at CPRI, STDS, Govindpura, Bhopal.

**ESTIMATED COST:** Rs. 28,36,655/-

(Civil Rs. 27,96,069/- + Electrical Rs. 69,143/-)

TIME ALLOWED : 06 (Six) Months

### CENTRAL POWER RESEARCH INSTITUTE, Switchgear Testing and Development Station, Govindpura, Bhopal 462023

### Civil Engineering Division

## e-NIT/Tender/Agreement

<u>1.</u>	Name of work	Reconstruction of Toilets Block (G+1) for STL and EMTL Division by demolishing the old existing toilet block at CPRI, STDS, Govindpura, Bhopal.
<u>2.</u>	Estimate cost put to tender	Rs. 28,36,655/-
<u>3.</u>	Earnest money deposit	Rs. 56,800/-
<u>4.</u>	Security Deposit	Security Deposit shall be recovered at the rate of 2.5 % each of the gross amount of each running bill till the sum along with the already deposited as Earnest Money Deposit.
<u>5.</u>	Period of completion	6 Months
<u>6.</u>	Schedule of rates	Based on the CPWD DSR 2023 and CPWD DSR (E&M) 2022 with up-to-date amendments
<u>7.</u>	<u>Specifications</u>	The work shall be carried out as per CPWD specifications for Civil 2019 Vol. I to II and CPWD General Specifications for Electrical Works 2023 Vol. I to II with up-to-date correction slips
<u>8.</u>	Materials Supplied by the Institute	Nil
<u>9.</u>	Material to be provided by the contractor	All materials shall be arranged by the contractor
<u>10.</u>	<u>T&amp;P</u>	The contractor shall arrange all T & P required for the work.

Certified that the e-NIT/Tender/Agreement contains 46 pages (Forty-Six) with drawings, excluding the covering sheets.

Engineer-in-Charge

#### **IMPORTANT**

#### **Statement of objects and reasons:**

- 1. Reference to CPWD specifications, CPWD tender/contract forms -6 & 8, as well as, those made in this tender document, etc., shall be operative only to the extent that they are not inconsistent / inapplicable with any of the terms and conditions contained in this document.
- 2. The under mentioned changes / substitutions mutatis mutandis shall be applicable to this tender document as well as to the formal agreement that would be concluded in CPWD GCC form-8 of 2023 edition with up-to-date amendments, wherever references are made as under:

IN THE PLACE OF	SUBSTITUTE
Government/ Central Government	Central Power Research Institute (CPRI)
President of India	Director General, CPRI (DG, CPRI)
Chief Engineer	Director General, CPRI (DG, CPRI)
Superintending Engineer	Chairman High Power Committee, CPRI, Head Office Bangalore. (Chairman, HPC)
Division Engineer/Executive Engineer/Engineer-in-Charge	Engineering Officer Gr. 4, CED, CPRI, STDS, Bhopal
Subdivision Officer/SDO /Assistant Engineer/Assistant Executive Engineer	Official as nominated by AD/Unit Head CPRI, STDS, Bhopal
CPWD	CPRI
Department	Central Power Research Institute

- 3. Powers / duties vested with certain officers by designation like Chief Engineer, Superintending Engineer, Executive Engineer, Assistant Executive Engineer, Divisional Officer, Sub-divisional Officer, Divisional Accountant, etc., contained in this document shall be exercised and discharged by such of the officers of the institute as may be nominated / Authorized / substituted by Director General, CPRI for the purpose of operation of the contract from time to time.
- 4. In case of any discrepancy / discrepancies noticed between Hindi version and English version in this e-NIT / e-Tender / Contract, the English version shall be treated as holding good.

#### PRESS NOTICE TO BE ISSUED FOR PUBLICATION IN NEWS PAPERS

#### NOTICE INVITING E-TENDERS (Through e-tendering only) https://cpri.res.in/

Advt. No: 14(14)/CED/1014/2024-25

Officer-in-Charge, Civil Engineering Division, CPRI, Bangalore on behalf of Director General, CPRI, Bangalore invites online item rate e-tenders for following work:

e-NIT No. 33 /24-25

Name of Work: - Reconstruction of Toilets Block (G+1) for STL and EMTL Division by demolishing the old existing toilet block at CPRI, STDS, Govindpura, Bhopal.

1.	Estimated cost:	Rs. 28,36,655/-
2.	Earnest money deposit:	Rs. 56,800/-
3.	E-tender processing fee:	Rs. 2837/- + GST 18% or Rs. 3348/-
4.	Time of completion:	6 Months from the fifteenth day after issue of
		letter of acceptance of tender or from the date
		of handing over the site whichever is later.

The e-tender forms / documents and other details can be downloaded from the website: www.tenderwizard.com/CPRI. The last date for submission of online e-tenders is up to <u>17/02/2025</u>. Interested and eligible bidders must obtain User ID and password by registering in the above-mentioned website. For more details contact e-tender help desk: 080-40482000, 9686196764, 9686115318. Email ID of the Officer-In-Charge: <u>ksuryanarayana@cpri.in</u> & Email ID of the Engineer-In-Charge: <u>sunil@cpri.in</u> Mob: 9893100710

#### CENTRAL POWER RESEARCH INSTITUTE Switchgear Testing and Development Station Govindpura, Bhopal 462023

#### Notice Inviting Tender through e-tendering only

The Officer-in-Charge, Civil Engineering Division, Central Power Research Institute (CPRI), Bangalore on behalf of Director General, CPRI, Bangalore invites online item rate e-Tendering for the following work:

Sl. no.	e-NIT no.	Name of the work & location	Estimate cost put to tender (in Rs.)	Generation Earnest money deposit (in Rs.)	م E-Tender processing fee	Time of completion	$\overset{\infty}{\simeq} $ Last date & time of submission of online bid	Last date & time for submission of EMD, e-tender processing fee and other stipulated documents	Date & time of opening of technical bids (hard copies and online)	Date & time of opening of financial bids (online)
01	33 /24-25	Reconstruction of Toilets Block (G+1) for STL and EMTL Division by demolishing the old existing toilet block at CPRI, STDS, Govindpura, Bhopal.	Rs. 28,36,655/-	Rs.56,800/-	Rs.2837/- + GST 18% or Rs.3348/-	6 Months	17/02/2025 upto3.00 PM	17/02/2025 upto3.00 PM	<b>17/02/2025</b> at 4.00 PM	<b>24/02/2025</b> at 3.30 PM

#### ELIGIBILITY AND GENERAL INSTRUCTIONS FOR TENDERERS

1. Contractors who fulfill the following requirements shall be eligible to apply. Joint ventures are not accepted.

(a) Should have satisfactorily completed work/works as mentioned below during the last seven years ending 31.12.2024.

(i) Three similar works each of value not less than Rs. 11.35 Lakh or two similar works, each of value not less than Rs. 17.02 Lakh or one similar work of value not less than Rs. 22.70 Lakh in the last 7 years ending on 31.12.2024.

Similar work(s) means "Construction of buildings works" etc. The similar works shall be with some Central/ State Government/ Central Autonomous/ Central Public Sector undertaking/ State Public Sector undertaking. The contractor shall submit work completion certificate signed by Executive

Engineer or above for works carried out with Government Sector Organizations. The value of executed works shall be brought to current costing level by enhancing actual value of work at simple rate of 7% per annum; calculated from the date of completion the last date of receipt of application for bids.

(b) Should to have average annual financial turnover of Rs. 14.18 Lakh during the last three years ending 31.12.2024.

(c) Should have valid certificates of EPF, ESI and GST Registration number. The intending service provider shall upload the scanned copies of the above-mentioned original certificates and submit the duly attested hard copies of these certificates.

2. The tenderer must read the terms and conditions of CPWD-6 carefully. He should only submit his tender if he considers himself eligible and if he is in possession of all the documents required.

3. Information and Instructions for tenderers posted on '<u>www.tenderwizard.com/CPRI</u>'website shall form as part and parcel of the bid document.

4. The tender document consisting of 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 and other necessary documents can be seen and downloaded from website: <u>www.tenderwizard.com/CPRI</u> free of cost.

5. But the tender can only be submitted after uploading the mandatory scanned documents such as Banker's cheque/ Demand Draft drawn from any scheduled bank guaranteed by Reserve Bank of India, towards EMD in favour of 'Accounts Officer, CPRI, STDS, Bhopal' and e-tendering processing fee in favour of KSEDCL payable at Bangalore. Earnest Money shall be in the form of Demand Draft/Banker's Cheque/FDR issued by any scheduled bank guaranteed by Reserve Bank of India, drawn in favour of the 'Accounts Officer, CPRI, STDS, Bhopal'. FDR shall be pledged in favour of the 'Director General, CPRI'.

For consideration of tender, the original earnest money deposit, tender processing fee, and attested copies of valid registration certificate as contractor and relevant work experience certificates, registration with GST and Financial Turnover should be handed over in the office of the undersigned on or before date and time as mentioned in column 9 of the table. In case the tenderer fails to deposit the original Earnest Money Deposit and e-Tender Processing Fee, in case of payment mode other than 'online payment', such tenderer shall stand disqualified.

6. The contractors who are not registered for e-tendering on the website mentioned are required to get prior registration with KEONICS, No.24, 3<sup>rd</sup> Stage, 4<sup>th</sup> Block, Basaveshwarnagar, Bangalore –560079, after fulfilling due procedural formalities, including making payment of the requisite registration fee of **Rs. 2360/-** in the form of Demand Draft in favour of KSEDCL payable at Bangalore.

7. One of the pre-requisites for participation in e-tendering is obtaining a valid Class III Digital Signature Certificate from one of the Digital Signature Certifying authorities such as NIC, MTNL, e-Mudhra, TCS, Safescrypt, GNFC etc., preferably through KEONICS.

8. On opening date, the contractors can login and can witness the bids opening process. Sequel to the opening of bids at the appointed date & time, the tenderers would automatically receive competitor-bid-sheets, giving them a clear picture as to where they stand in the competition.

9. Contractors can upload documents in the form of JPG format and/ PDF format.

10. Contractor must ensure to quote rate of each item. The column meant for quoting rate in figures appears in pink colour and the moment rate is entered, it turns sky blue. In addition to this, while selecting any of the cells; a warning appears that if any cell is left blank the same shall be treated as "0"

Therefore, if any cell is left blank and no rate is quoted by the tenderer, rate of such item shall be treated as "0" (ZERO).

11. The tenderer shall furnish an affidavit on non-judicial stamp paper of appropriate value duly attested by a notary as under:

- (i) 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 from tendering in CPRI 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 furnished by me/us.
- (ii) None of the contracts executed by us in the past have been rescinded / terminated by any of Client Department and we have not been blacklisted by any Department.

12. The competent authority reserves the right to accept or reject any or all tenders, without assigning any reason thereof.

#### List of Documents to be scanned and uploaded within the period of tender submission:

1. Demand Draft/Banker's Cheque/FDR issued by any of the scheduled banks guaranteed by Reserve Bank of India, drawn in favour of the 'Accounts Officer, CPRI, STDS, Bhopal' against EMD or proof of online payment via tender wizard.

2. Demand Draft towards cost of e-tendering processing fee payable in the form of banker's cheque or DD in favor of 'KSEDCL' payable at Bangalore or proof of online payment via tender wizard.

- 3. Certificates of Work experience.
- 4. Affidavit as per provisions of clause 1.2.2 of CPWD Form-6.

5. Certificate of Registration with Goods and Service Tax Department for GST tax payment etc.

6. Certificate of enlistment with CPWD/ MES/Railways/ State PWD/ Central or State Public Sector Undertaking.

- 7. Certificate of Financial Turnover from Chartered Accounts.
- 8. Certificate of Registration with EPF and ESI.
- 9. Attested Copy of PAN card.
- 10. Declaration that service provider is not Blacklisted by any organization.

Sd/-Engineer-in-Charge, Civil Engineering Division, CPRI, Bhopal

## FORM-6

### CENTRAL POWER RESEARCH INSTITUTE Switchgear Testing and Development Station Govindpura, Bhopal 462023

(CPWD Form-6 for e-Tendering)

1. Item rate e-tenders are invited on behalf of Director General, Central Power Research Institute from approved and eligible contractors of CPWD and those of appropriate list of M.E.S., Railway and State P.W.D. (B&R), Central/State Public Sector Undertaking or State Govt's Department dealing with buildings and roads for the work of **Reconstruction of Toilets Block (G+1) for STL and EMTL Division by demolishing the old existing toilet block at CPRI, STDS, Govindpura, Bhopal.** 

The enlistment of the contractors should be valid on the last date of submission of tenders in case the last date of submission of tender is extended, the enlistment of contractor should be valid on the original date of submission of tenders.

- 1.1 The work is estimated to cost **Rs. 28,36,655/-**. This estimate, however, is given merely as a rough guide.
- 1.2 Tenders will be issued to eligible contractors provided they produce definite proof from the appropriate authority, which shall be to the satisfaction of the Competent Authority, of having satisfactorily completed similar works of magnitude specified below:

#### 1.2.1 Criteria of eligibility for issue of tender documents:

Three similar works each of value not less than Rs. 11.35 Lakh or two similar works each of value not less than Rs. 17.02 Lakh or one similar work of value not less than Rs. 22.70 Lakh in the last 7 years ending on 31.12.2024.

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 last date of receipt of application for tender.

1.2.2 To become eligible for issue of tender, the tenderer shall have to furnish the following affidavits on a non-judicial stamp paper of worth Rs.100/ each attested by a notary as under:

(i) I/We undertake and confirm that eligible similar works(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 bidding in CPRI 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 furnished by me/us. I/We also confirm that none of the contracts executed by me/us in the past have been rescinded / terminated by any of client department and I/we have not been black listed by any department. (Scanned copy to be uploaded at the time of submission of tender)

- 2. Agreement shall be drawn with the successful tenderer on prescribed Form No. CPWD GCC From-8 of 2023 edition with up-to-date amendments, which is available as a Govt. of India Publication. Tenderer shall quote his rates as per various terms and conditions of the said form which will form part of the agreement.
- 3. The time allowed for carrying out the work will be **Six Months** (180 Days) 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 tender documents.

- 4. The site for the work is available. But it would be made available to the contractor in stretches according to requirement of traffic regulations and according to mutually agreed time and progress chart for execution of the work.
- 5. The tender document consisting of plans, specifications, the schedule of quantities of the various types of items to be executed and the set of terms and conditions of contract to be compiled with and the other necessary documents, except standard general conditions of contract form can be seen on website www. Tenderwizard.com/CPRI, free of cost. General Conditions of Contract 2023 Construction Works is available as a standard document on CPWD website which has free access for everyone. Hence GCC document is not printed along with the e-NIT. However, the applicable GCC (with relevancy of conditions indicated in clear terms) shall form part of the agreement.
- 6. After submission of tender, the contractor can resubmit revised tender any number of times, but before last time and date of submission of tender as notified.
- 7. While submitting the revised tender, contractor can revise the rate of one or more items any number of times (he need not re-enter rate of all the items) but before last time and date of submission of tender as notified.
- 8. (i) Earnest money deposit of **Rs. 56,800/-** in the form of fixed deposit receipt of a scheduled bank/demand draft of a scheduled bank issued in favour of 'Accounts Officer, CPRI, STDS Bhopal' shall be scanned and uploaded to the e-tendering website within the period of tender submission and original should be deposited in the office of Engineer-in-Charge Civil Engineering Division.

(i) Interested contractor who wishes to participate in the tender has also to make following payments in the form of Demand Draft or Banker's cheque of any scheduled bank and to be scanned and uploaded to the e-tendering website within the period of tender submission.

E-Tendering processing fee: **Rs. 3348/-** inclusive of GST drawn in favour of 'KSEDCL' payable at Bangalore.

The payments towards e-tendering processing fee can also be made online through Tender wizard.

(ii) Demand Draft or Banker's cheque against EMD, cost of e-tendering processing fee shall be placed in single sealed envelope superscripted as "Earnest Money Deposit and Cost of e-tendering processing fee" with name of the work and due date of opening of the tender also mentioned thereon.

(iii) Copy of Enlistment Order and certificates of work experience and other documents as specified in the press notice shall be attested, scanned and uploaded to the e-tendering website within the period of tender submission and certified copy of each shall be deposited in a separate envelope as "Other documents".

(iv) Both the envelopes shall be placed in another envelope with due mention of name of work, date and time of opening of tender and to be submitted in the office of Officer-in-Charge after last date and time of submission of tender and up to 3:00 P.M on 17/02/2025 The documents submitted shall be opened at 3:30 P.M on 17/02/2025.

(v) Online bid documents submitted by intending bidders shall be opened only of those bidders, whose EMD and e-Tender Processing Fee and other documents placed in the envelope are found in order. The bid submitted shall be opened at 3.30 PM of 24/02/2025 e-Tender processing fee paid is non-refundable.

- (vi) The bid submitted shall become invalid if:
  - a) The bidder is found ineligible.
  - b) The bidder does not upload all the documents as stipulated in the bid document.
  - c) If any discrepancy is noticed between the documents as uploaded at the time of submission of bid and hard copies as submitted physically in the office of Engineer-in-Charge, Civil Engineering Division.
  - d) If the bidder fails to deposit the Earnest Money Deposit in the form of original DD or FDR and Tender Processing Fee in case if payment mode other than 'online payment' on the prescribed date, such bidder shall stand disqualified.
- 9. The contractor, whose tender is accepted, will be required to furnish **Performance Guarantee of 5% (Five Percent)** of the tender amount within the period specified in Schedule 'F'. This guarantee shall be in the form of Banker's cheque of any scheduled bank/Demand Draft of any scheduled bank/Fixed Deposit Receipts or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the prescribed form the Performance Guarantee shall be initially valid up to the stipulated date of completion plus sixty days beyond that. 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.
- 10. Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their Tenders 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 tender. A Tenderer 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 tenderer shall be responsible for arranging and maintaining at his own cost all materials, tools & plants, water, electricity, facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of a tender by a tenderer 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 CPRI and local conditions and other factors having a bearing on the execution of the work.
- 11. The competent authority on behalf of the Director General, Central Power Research Institute, Bangalore does not bind itself to accept the lowest or any other tender and reserves to itself the authority to reject any or all the tenders received, without the assignment of any reason. All tenders in which any of the prescribed condition is not fulfilled or any condition including that of conditional rebate is put forth by the Tenderer shall be summarily rejected.
- 12. Canvassing whether directly or indirectly, in connection with tenderer is strictly prohibited and the tenders submitted by the contractors who resort to canvassing will be liable to rejection.
- 13. The competent authority on behalf of the Director General, Central Power Research Institute, Bangalore reserves to himself the right of accepting the whole or any part of the tender and the tenderers shall be bound to perform the same at the rate quoted.
- 14. The contractor shall not be permitted to tender for works in CPRI responsible for award and execution of contracts, in which his near relative is posted as an officer in any capacity as Engineering or Scientific Officer at the headquarters or at Units of CPRI which is responsible for award and execution of the contract. 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 CPRI. Any breach of this condition by the contractor would render him liable to be

debarred from tendering in CPRI in future, forever.

- 15. No officer of the rank of Engineering Officer Gr.1 or above working in any capacity in CPRI shall be allowed to work as a contractor for a period of one year after his retirement from CPRI service, without the previous permission of competent authority in CPRI, in writing. This contract is liable to be cancelled, in case of contravention of this provision either by the contractor, or any of his employees.
- 16. The tender for the works shall remain open for acceptance for a period of **Ninety (90) days** from the date of opening of tenders. If any tenderer withdraws his tender before the said period or issue of letter of acceptance, whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the CPRI/ department, then CPRI shall, without prejudice to any other right or remedy, be at liberty to forfeit 50% of the said earnest money as aforesaid. Further the tenderer shall not be allowed to participate in the re-tendering process of the work.
- 17. This notice inviting tender shall form a part of the contract document. The successful tenderer/contractor, on acceptance of his tender by the Accepting Authority shall within 15 days from the stipulated date of start of the work, sign the contract consisting of:
- a) The Notice Inviting tender, all the documents including additional conditions, specifications and drawings, if any, forming part of the tender as uploaded at the time of invitation of tenders and the rates quoted online at the time of submission of tender and acceptance thereof together with any correspondence leading thereto.
- b) Standard C.P.W.D. GCC Form-8 of 2023 edition with up-to-date amendments.

#### CENTRAL POWER RESEARCH INSTITUTE Switchgear Testing and Development Station Govindpura, Bhopal 462023

#### Percentage Rate Tender / Item Rate Tender & Contract for Works

(A) E-Tender for the work of: **Reconstruction of Toilets Block** (G+1) **for STL and EMTL Division by demolishing the old existing toilet block at CPRI, STDS, Govindpura, Bhopal.** 

- (i) To be uploaded by 3:00 PM hours on <u>17/02/2025</u> to Officer-in-Charge, CED, CPRI, Bangalore/upload at <u>www.tenderwizard.com/cpwd</u>
- (ii) To be opened in presence of tenderers who may be present at 3:30 PM hours on 24/02/2025 in the office of CED, Bangalore.

Issued to.....

Signature of officer issuing the documents

Designation .....

Date of Issue

#### E-TENDER

I/We have read and examined the notice inviting e-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 Director General, CPRI 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 in case e-Tenders are invited on 2- bid system and not to make any modification in its terms and conditions.

A sum of **Rs. 56,800/-** is hereby forwarded in fixed deposit receipt of scheduled bank/demand draft of a scheduled bank as earnest money. If I/We, fail to furnish the prescribed performance guarantee within prescribed period, I/We agree that the said Director General, CPRI 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 Director General, CPRI 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 Deposit & 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 CPRI 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 there from to any person other than a person to whom I/We am/are authorized to communicate the same or use the information in any manner prejudicial to the safety of the State.

Dated:

Signature of Contractor Postal Address

Witness: Address:

Occupation:

#### ACCEPTANCE

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

(a)

(b)

(c)

For & on behalf of Director General CPRI

Dated:

Signature Designation: Engineer-in-Charge, CED, CPRI, Bhopal

## **PROFORMA OF SCHEDULES**

(Separate Performa for Civil, Elect. & Hort. Works in case of Composite Tenders)	
(Operative Schedules to be supplied separately to each intending tenderer)	

haterial will be issued to the contractor. contractor has to arrange all the materials red for execution of the work at his cost. bols and plants shall be issued to the actor by CPRI on hire basis. The actor has to arrange all the tools and is required for execution of the work at wn cost. e refer pages 16 & 20 of this document. D GCC form-8 of 2023 with up-to-date dments nstruction of Toilets Block (G+1) for and EMTL Division by demolishing the existing toilet block at CPRI, STDS,
actor by CPRI on hire basis. The actor has to arrange all the tools and s required for execution of the work at wn cost. e refer pages <b>16 &amp; 20</b> of this document. D GCC form-8 of 2023 with up-to-date dments nstruction of Toilets Block (G+1) for and EMTL Division by demolishing the
D GCC form-8 of 2023 with up-to-date dments nstruction of Toilets Block (G+1) for and EMTL Division by demolishing the
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8,36,655/-
6,800/-
f tendered value
of tendered value
tional Director/Unit Head, CPRI, STDS, al
Below
neering Officer Gr. 4, CED, STDS, al
tor General, Central Power Research ute, Bangalore
D DSR 2023 & CPWD DSR (E&M)
al Power Research Institute
D GCC form-8 of 2023 incorporating dments up to Circular bearing No.
dments up to Circular bearing No. CON/340 dated 21.08.2023, which is able as a Govt. of India Publication
CON/340 dated 21.08.2023, which is able as a Govt. of India Publication

progress	and applicable labour licenses,			
0	tion with EPFO, ESIC and BOCW			
	board or proof of applying thereof from			
	of issue of letter of acceptance:			
	mum allowable extension with late fee @	7 days		
-	r day of performance guarantee amount			
	he period provided in (i) above			
Clause 2			~	
	y for fixing compensation under clause 2	Chairman, High Pov CPRI, Bangalore	ver C	ommittee (HPC),
Clause 2				
Compens	Clause 2A shall be applicable i.e. sation for delay	Clause 2 shall be applicable		
Clause 5	-			
	of days from the date of issue of letter of	Fifteenth day afte		sue of letter of
acceptan	ce for reckoning date of start	acceptance of tender handing over the site		
Mileston	e(s) as per table given below:			
Sl. No	Description of Milestone	Time allowed in day	ys	Amount to be
	(Physical)			with-held in case of non- achievement of
				milestone
1	All works up to plinth level including	2 months (60 days)		2% of tendered
-	excavation, foundation and plinth beam	· · · ·		amount
2	All RCC superstructure work including	4 months (120 days)		
	slabs, Brick work complete	, <b>,</b> ,		
3	All flooring, finishing work including	6 months (180 days)		
	painting			
	works and electrical wiring. All water			
	supply, sanitary installation, WS fittings,			
	sanitary fittings, electrical installations			
	complete in all respect including testing.			
	y to decide:			
(i) Exten	sion of time	Additional Directo Bhopal	r/Unit	t Head/, STDS,
(ii) Resc	heduling of milestones	Chairman, High Pow	er Co	mmittee (HPC)
. ,	Eting of date of start in case of delay in over of site	Chairman, High Power Committee (HPC)		
•	RMA OF SCHEDULES Clause 5 Schedule	of handing over of site		
Part	Portion of site	_	Tim	e period for
רמונ				ling over reckoned
				a date of issue of
				r of Intent
Part A	Portion without any hindrance	Full siteZero (0) days		
Part B	Portions with encumbrances	N.A.		N.A.
Part C	Portions dependent on work of other agencies	N.A.		N.A.
Clause Book/ <del>Ele</del>	6: Computerized Measurement ectronic Measurement Book	Clause 6 applicable		

<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	Rs. 10.00 lakhs or as decided by Engineer- In- Charge.
being eligible to interim payment	
Clause 7 A	Yes
Whether Clause 7 A shall be applicable	
<b>Clause 10A:</b> List of testing equipment's to be provided by the contractor at Site Lab.	All the materials required for the work shall be arranged by the contractor
Clause 10B(ii):	
Whether clause 10B(ii) shall be applicable:	No mobilization advance against the work shall be given
Clause 10C:	
Component of labour expressed as percentage of value of work:	25%
Clause 10CC:	Applicable
Clause 10D: Dismantled Material Govt. Property	Materials dismantled shall be disposed at any location within CPRI as identified and instructed by Engineer-in-charge. Dismantled windows and doors shall be stacked at location within CPRI as instructed by EIC. Debris shall be stored at identified location. All dismantled fittings and fixtures shall be stored in classified gunny bags.
Clause 11: Specifications to be followed for execution of work	As per CPWD specifications for Civil 2019 Vol. I to II and CPWD General Specifications for Electrical Works 2023 Vol. I to II with up- to-date amendments and as per nomenclature of items of work.
Clause 12: Authority to decide deviation up to 1.5 times of tendered amount	Director General, CPRI
Clause 12.2 & 12.3:	50%
12.2 & 12.3 Deviation Limit beyond which clauses 12.2 & 12.3 shall apply for building work	
<ul> <li>12.4: (i) Deviation Limit beyond which clauses</li> <li>12.2 &amp; 12.3 shall apply for foundation work</li> <li>(Except items mentioned in earth work sub head in DSR and related items)</li> <li>(ii) Deviation limit for items mentioned in earth work sub head of DSR and related items</li> </ul>	50% 100%
Point no.13 of General Rules and directions of GCC 2023 Construction Works	The rate quoted by the agency / firm shall be exclusive of GST and the same shall be processed as per applicable rules.
CLAUSE 16:	Chairman, High Power Committee, CPRI,
Competent Authority for deciding reduced rates.	Bangalore
<b>Clause 18:</b> List of mandatory machinery, tools, and plants to be deployed by the contractor at Site.	As required for the work
Clause 19C: Authority to recover costs from the contractor for defaulting in providing safety provisions as per CPWD Safety Code	Engineer-in-charge

Classes 10D	
Clause 19D: Authority for effecting deductions from the hills if	Engineer-in-charge
Authority for effecting deductions from the bills if	
the contractor does not furnish a true statement	
(fortnightly report) indicating the number of	
labourers, their working hours, wages paid to them,	
accidents that occurred during that period, the	
number of female workers who have been allowed	
maternity leave and the amount paid to them	
Clause 19G:	Engineer-in-charge
Authority for effecting deductions from the bills if	
the contractor commits a default of provisions of	
the CPWD, Contractor's Labour Regulations and	
Model Rules	
Clause 19 H	CPRI shall not make availability of any site to
	the contractor for erection of hutments for his
	labour in CPRI campus.
Clause 19K:	Not applicable
Authority to recover costs from the contractor for	
non-deployment of qualified tradesman	
Clause 21:	Individuals holding power of attorney shall
	not be allowed to operate a contract awarded
	to a contractor.
Clause 25:	No dispute redressal committee shall be
Constitution of Dispute Redressal Committee	constituted. All other provisions of the clause
(DRC)	are as follows.
(DRC)	Except where otherwise provided in the
	contract, all questions and disputes relating to
	the meaning of the specifications, designs,
	drawings and instructions here –in before
	mentioned and as to the quality of
	workmanship or materials used on the work
	-
	or as to any other question, claim, right,
	matter or thing whatsoever in any way arising
	out of or relating to the contract, designs,
	drawings, specifications, estimates,
	instructions, orders or these conditions or
	otherwise concerning the works or the
	execution or failure to execute the same
	whether arising during the progress of the
	work or after the cancellation, termination,
	completion or abandonment thereof shall be
	dealt with as mentioned herein after.
	(i) If the contractor considers any work
	demanded of him to be outside the
	requirements of the contract, or disputes any
	drawings, record or decision given in writing
	by the Engineer-in-charge on any matter in
	connection with or arising out of the contract
	or carrying out of the work, to be
	unacceptable, he shall promptly within 15
	days request the Chairman HPC in writing
	for written instruction or decision.
	Thereupon, the Chairman HPC shall give his
	moreupon, me chanman me c shan give liis

written instructions or decision within a period of one month from the receipt of the contractor's letter. If the Chairman HPC fails to give his instructions or decision in writing within the aforesaid period or if the contractor is dissatisfied with the instructions or decisions of the Chairman HPC, the contractor may, within 15 days of the receipt of Chairman HPC's decision, appeal to the Director General who shall afford an opportunity to the contractor to be heard, if the latter so desires, and to offer evidence in support of his appeal. The Director General shall give his decision within 30 days of receipt of contractor's appeal. If the contractor is dissatisfied with the decision of the Director General, the contractor may within 30 days from the receipt of the Director General's decision, give notice to the Director General for appointment of Arbitrator on prescribed Proforma as per Appendix XV, failing which the said decision shall be final binding and conclusive and not referable to adjudication by the arbitrator.

It is a term of contract that each party invoking arbitration must exhaust the aforesaid mechanism of settlement of claims/ disputes prior to invoking arbitration.

(ii) Except where the decision has become final, binding and conclusive in terms of sub- para (i) above, disputes or difference shall be referred for adjudication through arbitration by a sole arbitrator appointed by the Director General CPRI, in charge of the work. If the arbitrator so appointed is unable or unwilling to act or resigns his appointment or vacates his office due to any reason whatsoever, another sole arbitrator shall be appointed in the manner aforesaid. Such person shall be entitled to proceed with the reference from the stage at which it was left by his predecessor.

It is a term of this contract that the party invoking arbitration shall give his list of disputes with amounts, claim in respect of each such disputes along with the notice for appointment of arbitrator and giving reference to the rejection by the Director General of the appeal.

It is also a term of this contract that no person, other than a person appointed by such Director General CPRI, as aforesaid, should

	act as arbitrator and if for any reason that is not possible, the matter shall not be referred to arbitration at all.
Clause 31	Clause 31 Applicable.

#### CLAUSE 32:

Requirement of Technical Representative(s) and Recovery rate:

Sl.	Minimum	Discipline	Designation	Minimum	Number	Rate at which	recovery shall
No	Qualification		(Principal	Experience		be made from the contractor	
	of Technical		Technical/	-		in the event of	f not fulfilling
	Representative		Technical			provision of	f clause 36(i)
			Representative)			Figures	Words
1	Diploma/	Civil	Principal	1 year	1	Rs.	Rupees Ten
	Graduate		Technical/	-		10,000/-	Thousand
			Technical			Per Month	per Month
			Representative				r

Assistant Engineers retired from Government services that are holding Diploma will be treated at par with Graduate Engineers.

Diploma holder with minimum 10 years relevant experience with reputed construction co. can be treated at par with Graduate Engineers for the purpose of such deployment subject to the conditions that such Diploma Holders should not exceed 50% of the requirement of Degree Engineers.

#### CLAUSE 38:

(i) Schedule/statement for determining theoretical quantity of cement & bitumen:

On the basis of Delhi Schedule of Rates -2023 printed by C.P.W.D. with correction slips issued up to a day previous to last date of receipt of tender.

- (ii) Variations permissible on theoretical quantities
  - (a) Cement:  $\pm 2 \%$
  - (b) Reinforcement Steel & structural steel sections for each diameter, section and category:  $\pm 2$  %
  - (c) Bitumen for all works: 2.5% plus only & Nil on minus side.
  - (d) All other materials: Nil

S. No.	Description of Item	Rates in figures and words at which recovery shall be made from the Contractor			
		Excess beyond permissible	Less use beyond		
		variation	permissible variation		
01	Cement	Not Applicable	₹ 700/- Per Bag of 50 kg		
02	Reinforcement Steel	Not Applicable	₹ 120/- Per Kilogram		
03	Acrylic exterior paint	Not Applicable	₹ 700/- Per Kilogram		
04	Acrylic emulsion paint	Not Applicable	₹ 500/- Per Kilogram		
	White Cement Based				
05	Putty	Not Applicable	₹ 50/- Per Kilogram		

#### RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

#### ADDITIONAL TERMS, CONDITIONS AND SPECIFICATIONS

## Name of Work: Reconstruction of Toilets Block (G+1) for STL and EMTL Division by demolishing the old existing toilet block at CPRI, STDS, Govindpura, Bhopal.

- 1. These Additional Terms, Conditions and specifications shall be read in conjunction with General Conditions of contract for CPWD Works form-8 of 2023 edition with up-to-date amendments.
- 2. The scope of the work consists of Reconstruction of Toilets Block (G+1) by demolishing the old existing toilet block as per attached drawings.
- 3. The rate quoted for the items of work shall be inclusive of all leads and all lifts, including cost of necessary scaffolding, etc., complete.

4. The contractor has to arrange all the tools and plant, ladders, scaffolding, jhoolas and all necessary accessories etc., required for execution of the work at his own cost and nothing extra shall be paid. The quoted rate shall be inclusive of all these costs.

5. The contractor shall bring all the materials required for the work during working hours and working days of CPRI, save under exceptional situations, with the prior approval of Engineer-In-Charge.

6. Whenever the contractor brings any material into CPRI campus for use in execution of the work, he shall submit the photocopies of corresponding bills / vouchers / delivery challans. The Engineer-in-Charge shall arrange to get the material brought by the contractor inside the CPRI campus duly checked / verified departmentally, before taking the same into Material at Site Account (MAS account). The Engineer-in-charge or his authorized representative(s) shall affix his signature on bills/ vouchers / delivery challans. If the contractor fails to submit the bills, etc., or fails to get the material checked / verified by the Engineer-in-Charge or his authorized representative(s), the same shall not be taken into MAS account.

7. The contractor shall scrupulously follow all the security regulations of CPRI that would be in force from time to time, during the period of execution of work. He shall obtain necessary entry gate passes for bringing in materials and work force inside CPRI campus needed for execution of work and shall furnish full details of materials collected at site of work and labour deployed thereon with supporting documentary evidence. He shall be permitted to take out his surplus materials, tools etc., from the site of work, from the CPRI campus, after obtaining necessary authorized gate pass, from the Engineer-In-Charge or his authorized representatives. The entry of materials shall be through Main gate of CPRI only.

8. The contractor must strictly follow the provisions of contract Labour (Regulation & Abolition) Act, 1970 of Government of India and 'The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996.

9. The contractor shall comply with the provisions of the Payment of Wages Act 1936, Minimum Wages Act, 1948, Employees Liability Act, 1938, Workmen's Compensation Act, 1923, Industrial Dispute Act, 1947, Maternity Benefits Act, 1961, or the modifications thereof or any other laws relating thereto and the rules made there under from time to time.

10. The contractor shall indemnify CPRI against payments to be made under and for the observance of the laws aforesaid and the Contractor's Labour regulations, without prejudice to his right to claim indemnity from his sub-contractors.

11. Whatever is the minimum wage for the time being, or if the wage payable is higher than such wage, such wage shall be paid by the contractor to the workmen, directly without the intervention

of Jamadar and that Jamadar shall not be entitled to deduct or recover any amount from the minimum wage payable to the workmen as and by way of commission or otherwise.

12. The contractor shall ensure that no amount by way of commission or otherwise is deducted or recovered by the Jamadar from the wage of workmen.

13. The contractor shall follow the provision of CPWD safety code contained in GCC for CPWD Works-2023 with up-to-date amendments.

14. The Engineer-In-Charge may without prejudice to his right against the contractor in respect of any delay or inferior workmanship or otherwise or to any claim for damages in respect of any breaches of the contract/work order and without prejudice to any rights or remedies under any of the provisions of the work order/contract or otherwise and whether the date of completion has or has not elapsed by notice in writing absolutely determine or rescind the contract/work order.

15. Income tax at the prescribed rate shall be deducted from the contractor, at source, from the bills payable to him.

16. Single phase/ three phase electricity required for the above said work, if available, will be supplied to the contractor, free of charges at one point only with subject to the following condition. The contractor shall make his own arrangement for laying distribution lines, cables, safety devices like fuses ELCB, MCB, control panels etc. at his own cost as directed by the Engineer-In-Charge. No compensation shall be paid to the contractor, in case of non-supply of power to the contractor.

17. The rate quoted for the item of work shall be inclusive of all taxes and levies, **but excluding GST**, payable under respective statute. However, if any further tax or levy or cess is imposed by statute, after the last stipulated date for receipt of quotations, including extensions, if any, and the contractor thereupon necessarily and properly pays such taxes/levies/cess, the contractor shall be reimbursed the additional tax amount so paid, provided such payments, if any ,is not, in the opinion of The Chairman, High Power Committee (HPC) (whose decision shall be final and binding on the contractor) attributable to delay in execution of work, within the control of the contractor.

(a) The onus of complying with the statutory obligations of making payment of GST to the GST Department lies with the contractor. The contractor shall make a mention of his GST number and CPRI's GST number in the invoice to be raised after completion of work.

#### 18. TESTING OF MATERIALS

- a) 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. In all cases, cost of samples and to & fro carriage shall be borne by the contractor. Contractor shall establish a laboratory at site of work at his own cost. The laboratory shall be equipped with all necessary equipment as per requirement of specification or as per direction of Engineer-in-Charge. A list of laboratory equipment to be maintained by the contractor. Establishing the laboratory at site shall not absolve the contractor from fulfilling the criteria of getting the test done in independent approved laboratories. The decision of the Engineer-in-Charge of allowing any test in the site laboratory shall be final.
- b) Even ISI marked materials may be subjected to quality test at the discretion of the Engineerin-charge besides testing of other materials as per the specifications described for the item/material. Whenever ISI-marked materials are brought to the site of work, the contractor shall, if required by the Engineer-in-charge, furnish manufacturer test certificate or test

certificate from approved testing laboratory to establish that the material procured by the contractor for incorporation in the work satisfy the provisions if IS codes relevant to the material and/or the work.

#### 19. Maintenance of Registers

(i) All the registers for tests of material to be carried out at construction site or in outside laboratories shall be maintained by the contractor. These registers shall be issued to the contractor by Engineer-in-Charge.

Sub-standard Material/Work:

In case any material/work is found sub-standard, the same shall be rejected by the Engineer-in-Charge and the same shall be removed from the site of work within 48 hours, failing which the same shall be got removed by the Engineer-in-Charge at the risk and cost of the contractor without giving any further notice and time.

(ii) The test registers to be issued to the contractor are:

- a) Materials at Site register.
- b) Cement register.
- c) Master test register.
- d) Cube test register.
- e) Inspection/Site register.
- f) Drawing register.
- g) Hinderance register.

(iii) All the entries in the register will be made by the designated engineering staff of the contractor and same should be regularly reviewed by the Engineer-in-Charge.

(iv) Contractor shall be responsible for safe custody of all the test registers.

(v) 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 in CPRI office.

Cement	ACC, Ultratech, Vikram, Shree Cement, Birla Gold, Ambuja & J.K. Cement
Vitrified Tiles	Kajaria / Somany / Johnson & Johnson / Nitco
Reinforcement Steel	TMT Bars of grade 500 or above SAIL / TATA / TISCO / ISCO / JSW / Jindal / RINL / GK / Bansal / Kamdhenu / Goel
Wash Basin	Jaquar / Kohler / Grohe / Kerovit / Parryware / Hindware
Acrylic Exterior paint	Apex Ultima of Asian Paints, Weather Coat all Guard of Berger, Weather Shield Max of Dulux
Acrylic Emulsion paint	Royal Luxury Emulsion of Asian Paints, Silk Luxury emulsion of Berger Paint, Velvet touch emulsion of Dulux.
Acrylic Distemper	Royal Luxury Emulsion of Asian Paints, Silk Luxury emulsion of Berger Paint, Velvet touch emulsion of Dulux.
Synthetic Enamel Paint	Apcolite of Asian Paint, Luxol of Burger Paint and Dulux Paint.
Epoxy Adhesive	FOSROC, Aquomix, Choksey, BAL-ENDURA, Berger Paints India Ltd.
Aluminum Door window hardware (ISI Mark only)	Shalimar, Archie, Classic (ISI)
Centrifugally Cast-Iron Pipe & Fittings	NECO, SKF, BIC, RIF, KAPILANSH
C.I. Hubless pipe	SKF, NECO, Kapilansh
Ceramic Tiles	Kajaria, Somany, Nitco, Johnson, RAK Ceramics
CI Manhole Cover	SKF, NICO, Hepco, Kapilansh

20. List of Approved makes / brands of materials (Civil):

CI Double flanged non-return valves	Kirloskar, Sant, Kartar
CI / SCI Spun pipes and fittings	NECO, HEPCO, Bengal Iron Corporation, Kapilansh
Cover Block	Khalsa, Balaji, Simcom
CP fittings	Jaquar, Marc, Kohler, Hindware, Shakti, Prayag Polymers(P), Ltd.
CPVC Pipes & Fittings	Astral, Ashirvad, Prince, Supreme, Finolex, VECTUS, Prayag
Dash fastener, Expansion Bolt	Hilti, Bosch, Fischer
Dash fasteller, Expansion Bolt	
Hydraulic Door closer, Floor springs	Dorma, Hettich, Hafele, dorset, Hardwin, kelvin, Godrej, Hyper
Ductile Iron Pipe (Water Supply)	Electro steel, Kesoram, Electro Spun, TATA DUCTURA, Swastic
EPDM Gasket	Hanu, Anand, Lescuyer
Epoxy Grouting Compound	Pidilite, Ferrous Crete (Ferro-102), MYK- LATICRETE, Berger Paints India Ltd., Ultratech
Epoxy Primer & Paints	Berger, Pidilite, CICO, BASF, SIKA, Asian Paints
Elastomeric Antifungal Exterior Paint	Ultima of Asian Paints, Weathershield of ICI Dulux, Alguard of Berger
Float Glass Mirror	Modifloat, Saint Gobain, Asahi, TATA float
Flush Doors (ISI Mark only)	Century, Archid, Greenply, Marino, Duro, Jayna, Gujcon, Durian, A1 flush door, M.P. Wood
Galvanized/Stainless Steel Anchor Fasteners	Shakti, Arrow, Hilti, Fischer
GI Pipe & fittings	Tata, Zenith, Jindal, Prakash Surya, Swastik
Gun Metal Gate Valve, Ball valve	Zoloto, Leader, SANT
Gypsum Plaster	Asian Paints, Fosroc, BASF, Sika, Saint-Gobain, Pidilite
FRP Door	Fiberways, Jayna, Shiv Shakti
HDPE Pipes	VECTUS, Emco, Polyfins, Pioneer, Plyfab, Jain Irrigation, Kissan
Jet Assembly for EWC/Health Faucet	Parryware, Jaquar, Marc, Hindware
Laminate and Veneers	Merino, Greenlam, Formica, Kitlam,
Locks / Latch	Godrej, Harrision, Dorma, Yale, dorset, Hafele
Marine Plywood / BWP Ply/Plywood	Duro, Century, Kitply, Greenply, Archidply
Melamine Polish	Asian Paints, Pidilite, ICI Dulux, Berger
M.S. Tubes	SAIL, Tata, Apolo, Prakash Surya, RINL, JSW and JSPL
Polycarbonate Sheet	Bayer, Macrolux, Danpalon, DPI Daylights, Fibreways
Polysulphide / Silicon Sealant	Pidilite, Fosroc, Tuffseal, Berger Paints India Ltd.
POP (Plaster of paris)	JK-Laxmi, Sriram Nirman, Sakarni
Pre-coated Profile Sheet	Tata, Bhushan (Jindal), National, Jindal
Pre-laminated Particle Board	Ecoboard, Action-Tesa, Duro, Century Ply, Greenlam
PTMT Water supply fittings	Prayag, Polytuff, Estylo, Plasto, Shakti
PVC Cistern	Steelbird, Jindal, Prayag, Commander, Shakti, Jaquar, Hindware
PVC Connection Pipe	Supreme, Prince, Finolex
PVC Rain Water Pipe & Fitting (SWR) Pipes	Finolex, Kisan, Kasta, Supreme, Astral, Prince, Vectus
PVC Shutter	Polygreen, Rajshri, Plastogreen, Sintex
PVC Water storage Tank (Only ISI)	VECTUS, Water well, Plasto, Sintex, Gangotri

Sluice Valve	Kirloskar, Venus, Kalpana, SANT, KARTAR, Zoloto
Solid PVC frames and shutters	Polygreen, Rajshri, Plastogreen, Sintex
Stainless Steel	Jindal, Salem or equivalent
Stainless steel Door/Window fittings & Fixtures	Dorset, Prayag, Dorma, Ozone, Hettich, Kich, Geze
Structural steel section	TATA, SAIL, RINL, JSW Steel Ltd., Jindal Steel & Power Ltd. (JSPL)
Tile Adhesive	Ferrous Crete (Ferro-1122), Ardex Endura (Gold Star), PIDILITE (Fevimate XL), WEABR(Saint-Gobin) Sika, Thermoshield, Asian Paints, Berger Paints India Ltd., Ultratech (tile-fixo)
UPVC Pipes & Fittings	Astral, Flowguard, Ashirvad, Prince, Supreme, Finolex, VECTUS, Prayag
Urinal, Washbasin, Orrisa Pattern W.C., Wall mounted European W.C.Seat with Cistern	Hindware, Parryware, Jaquar, Cera, Kohler, Grohe
Vitrified Tile, Rectified Tile	Johnson, Marbonite, Somany, Kajaria, NITCO, RAK
Wall Putty	JK, BIRLA, SARAPUTTY, Asian Paints, Berger Paints India Ltd
Waste Pipe	Kamal, Viking, Jaquar
Water Proofing Compound (Liquid)	Pidilite, Cico, Impermo, Fosroc, BASF, Ardex Endura, Sika, Asian Paints, Berger Home Shield.
Water Proofing membrane- PU based	Asian Paints, Berger Home Shield or equivalent
White Cement	JK White, Birla White, Grasim
Wood polymer composite (WPC) Door frames and shutters	Sintex, Rajshri, Plastiwood, Alstone, Polygreen
UPVC Windows	Fenesta, Aluplast, Kommerling, Duraplast

#### Note:

- a) In case approved make/brand for any material/item is not specified in the NIT, the decision of finalizing a particular make/brand shall rest with Engineer-in-charge.
- b) In case of non-availability of a particular material/make/brand item from specified manufacturers/makes, the decision of Engineer-in-charge in selection of alternate manufacture/make/brand is final.

## SCHEDULE – A

## Part-A (Civil)

 Name of work: Reconstruction of Toilet Block (G+1) for STL and EMTL Division by demolishing the old existing toilet block at CPRI, STDS, Bhopal.

S.	Brief description of item	Unit	Quantity	Rat	e (In Rs.)	Amount
No.				(In Fig.)	(In Words)	
	EARTHWORK					
1	Boring holes in all soils with augur, over all depth to be 3.5m below the bottom of					
	the pile cap, grade beam or ground level whichever is lower including getting out					
	the excavated soil in all lifts and disposing of the excavated soil as directed with in					
	a with in a lead of 50m (nothing extra shall be paid for empty boring involved if					
	any from ground level to bottom of pile cap, grade beam and use of bentonite					
	during boring etc. complete.					
	300mm diameter single under reamed pile with one bulb with 750 mm diameter conforming to IS: 2911	Nos.	16.00			
2	Earth work in excavation by mechanical means (Hydraulic excavator)/ manual					
	means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm					
	on plan) including dressing of sides and ramming of bottoms, lift up to 1.5 m,					
	including getting out the excavated soil and disposal of surplus excavated soil as					
	directed, with in a lead of 50m.					
	All kinds of soils	Cum	11.00			
3	Supplying and stacking at site.					
	Moorum	Cum	13.00			
4	Filling available excavated earth/moorum (excluding rock) in trenches, plinth,	Cum	16.00			
	sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each					
	deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.					
	CEMENT CONCRETE (CAST IN SITU)					
5	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work up to plinth level:					
	1:4:8 (1 cement: 4 coarse sand (zone-III): 8 graded stone aggregate 40 mm	Cum	7.00			
	nominal size).					

6	Providing and laying cement concrete in retaining walls, return walls, walls (any				
	thickness) including attached pilasters, columns, piers, abutments, pillars, posts,				
	struts, buttresses, string or lacing courses, parapets, coping, bed blocks, anchor blocks, plain window sills, fillets, sunken floor etc., up to floor five level,				
	excluding the cost of centering, shuttering and finishing:				
	1:5:10 (1 cement: 5 coarse sand: 10 graded Brick aggregate 40 mm nominal size)	Cum	1.00		
7	Making plinth protection 50 mm thick of cement concrete 1:3:6 (1 cement: 3	Sqm	23.00		
,	coarse sand: 6 graded stone aggregate 20 mm nominal size) over 75mm thick bed	bqiii	23.00		
	of dry brick ballast 40 mm nominal size, well rammed and consolidated and				
	grouted with fine sand, including finishing the top smooth.				
	REINFORCED CEMENT CONCRETE				
8	Providing and laying in position specified grade of reinforced cement concrete,				
	excluding the cost of centering, shuttering, finishing and reinforcement - All work				
	up to plinth level: 1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) derived from natural resources : 3	0,000	21.00		
	graded stone aggregate 20 mm nominal size derived from natural resources).	cum	21.00		
9	Reinforcement cement concrete work in walls (any thickness), including pilasters,				
	buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments,				
	posts and struts, etc. above plinth level up to floor five level, excluding cost of				
	centering, shuttering, finishing and reinforcement: 1:1.5:3 (1 cement : 1.5 coarse sand (zone-III) derived from natural resources : 3	Cum	3.00		
	graded stone aggregate 20 mm nominal size derived from natural resources).	Cuili	5.00		
10	Reinforced cement concrete work in beams, suspended floors, roofs having slope	cum	21.00		
10	up to 15° landings, balconies, shelves, chajjas, lintels, bands, plain window sills,	cum	21.00		
	staircases and spiral stair cases above plinth level up to floor five level, excluding				
	the cost of centering, shuttering, finishing and reinforcement, with 1:1.5:3 (1				
	cement : 1.5 coarse sand (zone-III) derived from natural resources : 3 graded				
	stone aggregate 20 mm nominal size derived from natural resources).				
11	Centering and shuttering including strutting, propping etc. and removal of form				
	for		10.00		 
(a)	Foundations, footings, bases of columns, etc. for mass concrete.	sqm	42.00		 
(b)	Suspended floors, roofs, landings, balconies and access platform	sqm	102.00		
(c)	Lintels, beams, plinth beams, girders, bressumers and cantilevers	sqm	50.00		
(d)	Columns, Pillars, Piers, Abutments, Posts and Struts	sqm	44.00		
(e)	Small lintels not exceeding 1.5 m clear span, moulding as in cornices, window	sqm	6.00		
	sills, string courses, bands, copings, bed plates, anchor blocks and the like				

12	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.				
	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	2600.00		
13	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.				
	Thermo-Mechanically Treated bars of grade Fe-500D or more.	Kg	3900.00		
14	Providing and fixing in position factory made precast RCC M-40 fixing with hold fast embedded in 1:3:6 concrete block for doors and windows frames having excellent smooth finish as per IS: 6523 with reinforcement of 3 Nos, 6 mm dia main bars tied with 3 mm M.S stirrups placed @ 200 mm C/C and 6 numbers high strength polymer blocks of required size for fixing hinges including providing 6 no specially designed M.S. galvanised sleeves for accomodating 6 mm dia fully threaded bolts for fixing hold fast on vertical members, providing suitable arrangement for receiving sliding door bolts and tower bolt etc. all complete, as per the direction of Engineer-in-charge. The frame shall be measured in running				
	metre correct to two places of decimal.				
	Door frame 125 mm x 60 mm	mtrs	21.00		
	MASONRY WORK				
15	Half brick masonry with common burnt clay F.P.S. (non-modular) bricks of class designation 7.5 in superstructure above plinth level up to floor V level.				
	Cement mortar 1:4 (1 cement : 4 coarse sand)	sqm	39.00		
16	Extra for providing and placing in position 2 Nos 6mm dia. M.S. bars at every third course of half brick masonry.	sqm	39.00		
17	Brick work with non-modular fly ash bricks conforming to IS:12894, class designation 10 average compressive strength in super structure above plinth level up to floor V level in :				
	Cement mortar 1:6 (1 cement : 6 Coarse sand)	cum	21.00		
	CLADDING WORK				
18	Providing and fixing stone slab with table rubbed, edges rounded and polished, of size 75x50 cm deep and 1.8 cm thick, fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer-in-charge and finished smooth.				
	Granite Stone of approved shade	sqm	4.00		

19	Providing and fixing Ist quality ceramic glazed wall tiles conforming to IS: 15622 (thickness to be specified by the manufacturer), of approved make, in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados, over 12 mm thick bed of cement mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @	sqm	200.00		
	3.3kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.				
	WOOD AND P.V.C. WORK				
20	Extra for providing frosted glass panes 4 mm thick (weight not less than 10 kg per sqm) instead of ordinary float glass panes 4 mm thick (weight not less than 10 kg per sqm) in doors, windows and clerestory window shutters. (Area of opening for glass panes excluding portion inside rebate shall be measured).	sqm	3.00		
21	Providing and fixing ISI marked flush door shutters conforming to IS: 2202 (Part I) non-decorative type, core of block board construction with frame of 1st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters:				
	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	sqm	9.00		
22	Extra for Providing and fixing flush doors with decorative veneering instead of non-decorative ISI marked flush door shutters conforming to IS: 2202 (Part I)				
	On one side only	sqm	9.00		
23	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete.				
	Fixed to openings /wooden frames with rawl plugs screws etc.	Kg	70.00		
24	Providing and fixing aluminium die cast body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 35 kg and door width upto 700 mm), with necessary accessories and screws etc. complete.	Each	4.00		
25	Providing and fixing factory-made door frame (single rebate) made out of solid foam PVC extruded profile of minimum 60 mm width and minimum 30 mm thickness, having homogenous fine cellular structure and integral smooth outer skin. The frame's vertical and horizontal members to be mitered cut & joined together with PVC solvent adhesive/cement and both corners strenghtened with fully threaded steel screws (of required size) fixed diagonally. The door frame is to be fixed to door jambs using 6 Nos. SS 304 grade minimum 8 mm dia CSK phillips stainless steel self-taping screws/fasteners with PA6 grade polyamide sleeves both of required size, and gapif any between the door frame and the jamb must be filled with clear silicon, complete as per direction of the Engineer-in-charge.	mtrs	40.00		

26	Providing and fixing factory-made PVC door shutter made of solid foam PVC profiles of thikness 5mm and 15mm at edges integrally extruded for vertical style and horizontal (top/ bottom/ lock) rails of minimum cross section of 70mmx 28mm, of shape and design as per manufacturer's specifications having homogenous fine cellular structure and smooth integral outer skin, inserted with G.I. 'C' section/ rectangular tube profile of minimum 0.30mm thickness with 120 gsm coating as stiffeners as per manufacturer's specifications Mitred cut joints for styles and rails provided with telescopic polymeric 'L' corners are jointed together using solvent adhesive and strenghtened with fully threaded stainless steel screws (of required size) through reinforced stiffener with paneling of specified solid foam PVC board/ high pressure laminate of required thickness and of approved design and shade (matching the styles and rails), secured within styles and rails with specially designed solid foam PVC moulded beadings of required size using PVC solvent adhesive/ cement. The finished door shutter including SS hardware, 1 no. ss sliding bolt 200 x 10mm, 1 no. SS tower bolt 200 x 10mm and 2 nos. SS handles 125mm, shall be fixed to frame with 3 nos. stainless steel hinges of minimum size 100x58x1.9mm and stainless-steel screws of required size complete as per direction of the Engineer-in-Charge. (Cost of above hardware is inclusive in rates)				
	5mm thick solid foam PVC panel of required size with moulded/ extruded beading of appropriate design shape and size as per manufacturer's specifications (to secure the panel insert tight in place within the style and rails of shutter) matching the colour and shade of shutter frame. Non decorative type.	sqm	14.00		

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27	Providing and fixing factory made uPVC glazed/ wire mesh windows/ doors				
	comprising of lead free uPVC multi- chambered frame, sash and mullion/ coupler				
	(wherever required) extruded profiles having minimum wall thickness of 1.70 mm				
	for Series R1 and R2 profiles and 2.10 mm for Series R3 and R4 profiles				
	conforming to EN: 12608 in any shape, colour and design duly reinforced with				
	galvanized mild steel section made of required shape & size as per CPWD				
	Specification, uPVC extruded glazing beads, interlocks and Inline sash adaptor				
	(where ever required) of appropriate dimension, EPDM gasket, hardware, SS 304				
	grade fasteners of minimum 8 mm dia. with countersunk head, comprising of				
	matching polyamide PA6 grade sleeve for fixing frame to finished wall as per IS				
	1367 : Part 1 to 14, plastic packers, plastic caps and necessary stainless steel				
	screws etc. Profile of frame, sash & mullion (if required) shall be mitred cut and				
	fusion welded/ mechanically jointed duly sealed at all corners, including drilling				
	of holes for fixing hardware and drainage of water etc. After fixing frame the gap				
	between frame and adjacent finished wall shall be filled with weather proof silicon				
	sealant over backer rod of approved size and quality, all complete as per approved				
	drawing conforming to CPWD specification & direction of Engineer-in-Charge.				
	Section of steel reinforcement and cross sections of uPVC profiles to be as per				
	design approved by Engineer-in- Charge. Wire mesh/ Glazing of plain/ toughened/				
	laminated/ double glass unit with/ without high performance coatings as per				
	design requirements and conforming to IS: 3548 & IS: 16231 shall be paid				
	separately. Note: -Structural design proof checked from a Government				
	Engineering Institute, to be provided by the manufacturer for : (i) Sites with basic				
	wind speed > 45 m/sec as per IS 875 - Part 3 (ii) Sites with structure height more				
	than 20m for all wind speeds.				
	Fixed window/ ventilator with mullion/ transom.				
	Using R1 series with frame (33mm & above) x (35mm & above). (Height upto 0.9	sqm	3.00		
	metre)	squi	5.00		
	FLOORING				
28	Providing and laying Vitrified tiles in floor in different sizes (thickness to be				
20	specified by the manufacturer) with water absorption less than 0.08% and				
	conforming to IS:15622, of approved brand & manufacturer, in all colours and				
	shade, laid on 20 mm thick cement mortar 1:4 (1 cement: 4 coarse sand) jointing				
	with grey cement slurry @3.3 kg/sqm including grouting the joints with white				
	cement and matching pigments etc. The tiles must be cut with the zero-chipping				
	diamond cutter only. Laying of tiles will be done with the notch trowel, plier,				
	wedge, clips of required thickness, leveling system and rubber mallet for placing				
	the tiles gently and easily.				
	the thes gently and easily.				

	Glazed Vitrified tiles Matt/Antiskid finish of size				
	Size of Tile 600 x 600 mm	sqm	70.00		
29	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion, (i) Single socketed pipes.	*			
	110 mm diameter	mtrs	21.00		
30	Providing and fixing on wall face unplasticised - PVC moulded fittings/ accessories for unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A, including jointing with seal ring conforming to IS : 5382, leaving 10 mm gap for thermal expansion.				
(a)	Coupler				
	110 mm	Each	6.00		
(b)	Bend 87.5°				
	110 mm bend	Each	4.00		
(c)	Shoe (Plain)				
	110 mm Shoe	Each	4.00		
31	Providing and fixing unplasticised -PVC pipe clips of approved design to unplasticised - PVC rain water pipes by means of 50x50x50 mm hard wood plugs, screwed with M.S. screws of required length, including cutting brick work and fixing in cement mortar 1:4 (1 cement : 4 coarse sand) and making good the wall etc. complete.				
	110 mm	Each	14.00		
32	Providing and fixing to the inlet mouth of rain water pipe PTMT (an Engineering Thermoplastic) grating square (Slit) 150 mm square with a height of 8 mm and weighing not less than 100 gms.	Each	4.00		
	FINISHING				
33	12 mm cement plaster of mix :				
	1:6 (1 cement: 6 fine sand)	sqm	230.00		
34	15 mm cement plaster on the rough side of single or half brick wall of mix :				
	1:6 (1 cement: 6 fine sand)	sqm	150.00		
35	6 mm cement plaster of mix :				
	1:3 (1 cement : 3 fine sand)	sqm	80.00		

26	Finishing walls with Premium Acrylic Smooth exterior paint with Silicone				]
36	additives of required shade:				
	New work (Two or more coats applied @ 1.43 ltr/10 sqm over and including priming coat of exterior primer applied @ 0.90 litre/10 sqm)	sqm	170.00		
37	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade:				
	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture	sqm	12.00		
38	Providing and applying white cement-based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	sqm	230.00		
39	Wall painting with acrylic emulsion paint, having VOC (Volatile Organic Compound) content less than 50 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required, to achieve even shade and colour.				
	Two coats	sqm	80.00		
40	Providing and fixing water closet squatting pan (Indian type W.C. pan) with 100 mm sand cast Iron P or S trap, 10 litre low level white P.V.C. flushing cistern, including flush pipe, with manually controlled device (handle lever) conforming to IS : 7231, with all fittings and fixtures complete, including cutting and making good the walls and floors wherever required:				
	White Vitreous china Orissa pattern W.C. pan of size 580x440mm with integral type foot rests	Each	4.00		
41	Providing and fixing floor mounted, white vitreous china single piece, double traps syphonic water closet of approved brand/make, shape, size and pattern including integrated white vitreous china cistern of capacity 10 litre with dual flushing system, including all fittings and fixtures with seat cover, cistern fittings, nuts, bolts and gasket etc including making connection with the existing P/S trap, complete in all respect as per directions of Engineer-in-Charge.	Each	4.00		
42	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps, 32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require:				
	White Vitreous China Flat back wash basin size 550x 400 mm with single 15 mm C.P. brass pillar tap	Each	6.00		
43	Providing and fixing 600x450 mm beveled edge mirror of superior glass (of approved quality) complete with 6 mm thick hard board ground fixed to wooden cleats with C.P. brass screws and washers complete.	Each	6.00		

44	Providing and fixing toilet paper holder:				
	C.P. brass	Each	4.00		
45	Providing and fixing soil, waste and vent pipes:				
(a)	100 mm dia				
	Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905	mtrs	48.00		
(b)	75 mm diameter:				
	"Hubless centrifugally cast (spun) iron pipes epoxy coated inside & outside IS:15905	mtrs	160.00		
46	Providing and fixing M.S. holder-bat clamps of approved design to Sand Cast iron/cast iron (spun) pipe embedded in and including cement concrete blocks 10x10x10 cm of 1:2:4 mix (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size), including cost of cutting holes and making good the walls etc. :				
(a)	For 100 mm dia pipe	Each	16.00		
(b)	For 75 mm dia pipe	Each	52.00		
47	"Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.				
(a)	100 mm dia				
	Hubless centrifugally cast (spun) iron coated inside & outside as per IS:15905	Each	4.00		
(b)	75 mm dia				
	Hubless centrifugally cast (spun) iron coated inside & outside as per IS:15905	Each	13.00		
	ероху				
48	Providing and fixing plain bend of required degree.				
(a)	100 mm dia				
	Hubless centrifugally cast (spun) iron	Each	4.00		
(b)	75 mm dia				
	Hubless centrifugally cast (spun) iron epoxy coated inside & outside IS:15905 pipes	Each	26.00		
49	Providing and fixing single equal plain junction of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.				
(a)	100x100x100 mm				
	Sand cast iron S&S as per IS - 3989	Each	8.00		

(b)	75x75x75 mm				
	Sand cast iron S&S as per IS - 3989	Each	26.00		
50	Providing and fixing terminal guard:				
(a)	100 mm				
	Hubless centrifugally cast (spun) iron epoxy	Each	4.00		
(b)	75 mm dia				
	Sand cast iron S&S as per IS – 3989 coated inside & outside as per IS:15905	Each	13.00		
51	Providing and fixing shielded coupling for Hubless centrifugally cast-iron pipe.				
(a)	100 mm dia				
	SS 304 grade coupling with EPDM rubber	Each	8.00		
(b)	75 mm dia				
	SS 304 grade coupling with EPDM rubber gasket	Each	26.00		

52	Providing and fixing trap of self cleansing design with screwed down or hinged grating with or without vent arm complete, including cost of cutting and making good the walls and floors:				
	100 mm inlet and 75 mm outlet				
	Hubless centrifugally cast (spun) iron epoxy coated inside & outside as per IS:15905	Each	14.00		
53	Providing and fixing PTMT Bottle Trap for Wash basin and sink.				
	Bottle trap 31 mm single piece moulded with height of 270 mm, effective length of tail pipe 260 mm from the centre of the waste coupling, 77 mm breadth with 25 mm minimum water seal, weighing not less than 260 gms.	Each	12.00		
54	Providing and fixing PTMT liquid soap container 109 mm wide, 125 mm high and 112 mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour, weighing not less than 105 gms.	Each	6.00		
55	Providing and fixing white vitreous china battery based infrared sensor operated urinal of approx. size 610 x 390 x 370 mm having pre & post flushing with water (250 ml & 500 ml consumption), having water inlet from back side, including fixing to wall with suitable brackets all as per manufacturers specification and direction of Engineer-in-charge.	Each	6.00		
	WATER SUPPLY				
56	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold-water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching, refilling & testing of joints complete as per direction of Engineer in Charge. External work				
	25 mm nominal dia Pipes	mtrs	46.00		
57	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold-water supply, including all CPVC plain & brass threaded fittings and fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and the cost of cutting chases and making good the same including testing of joints complete as per direction of Engineer in Charge. Concealed work, including cutting chases and making good the walls etc.				
(a)	15 mm nominal dia Pipes	mtrs	48.00		
(b)	25 mm nominal dia Pipes	mtrs	16.00		
58	Providing and fixing G.I. pipes complete with G.I. fittings including trenching and refilling etc. External work				
	25 mm dia nominal bore	mtrs	20.00		

59	Making connection of G.I. distribution branch with G.I. main of following sizes by providing and fixing tee, including cutting and threading the pipe etc. complete:					
	50 to 80 mm nominal bore	Each	1.00			
60	Providing and fixing uplasticised PVC connection pipe with brass unions:					
	45 cm length					
	15 mm nominal bore	Each	6.00			
61	Providing and placing on terrace (at all floor levels) polyethylene water storage tank, IS : 12701 marked, with cover and suitable locking arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.	Ltrs	2000.00			
62	Providing and fixing C.P. brass long nose bib cock of approved quality conforming to IS standards and weighing not less than 810 gms.					
	15 mm nominal bore	Each	8.00			
63	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931					
	15 mm nominal bore	Each	20.00			
64	Providing and fixing PTMT grating of approved quality and colour.					
	Circular type					
(a)	100 mm nominal dia	Each	14.00			
(b)	125 mm nominal dia with 25 mm waste hole	Each	6.00			
65	Providing and fixing square-mouth S.W. gully trap class SP-1 complete with C.I. grating brick masonry chamber with water tight C.I. cover with frame of 300 x 300 mm size (inside) the weight of cover to be not less than 4.50 kg and frame to be not less than 2.70 kg as per standard design:					
	100x100 mm size P-type					
	With common burnt clay F.P.S. (non-modular) bricks of class designation 7.5	Each	10.00			
66	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete :					
	150 mm dia. R.C.C. pipe	mtrs	10.00			

67	Constructing brick masonry manhole in cement mortar 1:4 (1 cement : 4 coarse sand) with R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 coarse sand (zone-III) : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:4:8 mix (1 cement : 4 coarse sand (zone-III) : 8 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand) finished with floating coat of neat cement and making channels in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate 20 mm nominal size) finished with a floating coat of neat cement complete as per standard design :				
	Inside size 90x80 cm and 45 cm deep including C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover and frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg):				
	With common burnt clay F.P.S. (non-modular) bricks of class designation 7.5	Each	3.00		
	WATER PROOFING				
68	Providing and laying water proofing treatment in sunken portion of WCs, bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying: (a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/ sqm. This layer will be allowed to air cure for 4 hours. (b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours. followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.	sqm	16.00		

69       Providing and laying integral cement-based water proofing treatment including paration of sufface as required for treatment of roofs, balconies, terraces etc consisting of following operations: <ul> <li>(a) Applying a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300 mm height including cleaning the surface before treatment.</li> <li>(b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 15.1 (cement 15 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement 15 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including of junctions of walls and slabs.</li> <li>(c) After two days of proper curing applying a second coat of cement slurry using 2.75 kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge.</li> <li>(d) Frinishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved quality in top layer of plaster and finally finishing the surface with trowel with near cement slurry and making pattern of 300300 mm square 3 mm dege.</li> <li>(e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. "All above operations to be done in order and as directed and specified by the Engineer-in-charge'.</li> </ul> <ul> <li>With av</li></ul>	r				1	1
consisting of following operations:       (a) Applying a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS. 2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300 mm height including cleaning the surface before treatment.         (b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement :5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs.         (c) After two days of proper curing applying a second coat of cement slurry using 2.75 kg/ sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved by Engineer-in-charge including laying glass fibre cloth of approved by Engineer-in-charge including laying glass fibre cloth of approved with mate remoting to 300x300 mm square 3 mm deep.         (e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final text. "All above operations to be done in order and as directed and specified by the Engineer-in-Charge":       with average thickness of 120 mm and minimum thickness at khura as 65 mm.       sqm 45.00         70       Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer - in-charge.       cum <td>69</td> <td></td> <td></td> <td></td> <td></td> <td></td>	69					
(a) Applying a slurry coat of neat cement using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS .2645 and approved by Engineer-in-charge over the RCC slab including adjoining walls upto 300 mm height including cleaning the surface before treatment.         (b) Laying brick bats with mortar using broken bricks/brick bats 25 mm to 115 mm size with 50% of cement mortar 1:5 (1 cement 1:5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge over 20 mm thick layer of cement mortar of mix 1:5 (1 cement 1:5 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge to required slope and treating similarly the adjoining walls upto 300 mm height including rounding of junctions of walls and slabs.         (c) After two days of proper curing applying a second coat of cement slurry using 2.75 kg/sqm of cement admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge.         (d) Finishing the surface with 20 mm thick jointless cement mortar of mix 1:4 (1 cement :4 coarse sand) admixed with water proofing compound conforming to IS : 2645 and approved by Engineer-in-charge including laying glass fibre cloth of approved by Engineer-in-charge.         (e) The whole terrace so finished shall be flooded with water for a minimum period of two weeks for curing and for final test. "All above operations to be done in order and as directed and specified by the Engineer-in-Charge":         With average thickness of 120 mm and minimum thechanical means including stacking of steel bars and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.         71       Demolishing R.C.C						
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direction of Engineer-in- charge.		direction of Engineer-in- charge.				
72 Dismantling doors, windows and clerestory windows (steel or wood) shutter	72					
including chowkhats, architrave, holdfasts etc. complete and stacking within 50						
metres lead:						
Of area 3 sq. metres and belowEach4.00		Of area 3 sq. metres and below	Each	4.00		

73	Taking out doors, windows and clerestory window shutters (steel or wood) including stacking within 50 metres lead:				
	Of area 3 sq. metres and below	Each	4.00		
74	Dismantling tile work in floors and roofs laid in cement mortar including stacking material within 50 metres lead.				
(a)	For thickness of tiles 10 mm to 25 mm	sqm	25.00		
(b)	For thickness of tiles above 25 mm and up to 40 mm	sqm	8.00		
75	Dismantling old plaster or skirting or wall tiles raking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground within 50 metres lead.	sqm	80.00		
	Total Rs.				

(R	Rupees	)nly)	
(1)		/my/	

#### ENGINEER-IN-CHARGE

#### SIGNATURE OF CONTRACTOR

#### SCHEDULE – A

#### Part-B (Electrical)

कार्य का नाम: सीपीआरआई, एसटीडीएस, भोपाल में मौजूदा पुराने टॉयलेट ब्लॉक को ध्वस्त करके एसटीएल और ईएमटीएल विभाग के लिए टॉयलेट ब्लॉक (जी+1) का पुनर्निर्माण । Name of work: Reconstruction of Toilet Block (G+1) for STL and EMTL Division by demolishing the old existing toilet block at CPRI, STDS, Bhopal.

S.	Brief description of item	Unit	Quantity	Rat	te (In Rs.)	Amount
No.				(In Fig.)	(In Words)	
1	Wiring for light point/ fan point/ exhaust fan point/ call bell point with 1.5 sq.mm					
	FRLS PVC insulated copper conductor single core cable in surface / recessed					
	medium class PVC conduit, with modular switch, modular plate, suitable GI box					
	and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor					
	single core cable etc. as required.					
	Group C	Point	40			
2	Wiring of circuit/submain wiring alongwith earth with the following sizes					
	of FRLS PVC insulated copper conductor, single core cable in					
	surface/recessed medium class PVC conduit as required					
	2 X 2.5 sq.mm + 1 X 2.5 sq.mm earth wire	Metre	20			
3	Supplying and fixing of following sizes of medium class PVC conduit					
	along with accessories in surface/recess including cutting the wall and					
	making good the same in case of recessed conduit as required.					
	32 mm	Metre	18			
4	Supplying and fixing following modular switch/ socket on the existing					
	modular plate & switch box including connections but excluding modular					
	plate etc. as required.					
a)	5/6 A switch	Each	40			
b)	3 pin 5/6 A socket outlet	Each	10			
5	Supplying and fixing following size/ modules, GI box along with modular					
	base & cover plate for modular switches in recess etc as required.					
a)	4 Module	Each	2			
b)	6 Module	Each	2			

c)	8 Module	Each	4		
6	Supplying and fixing 5 A to 32 A rating, 240/415 V, 10kA, "C" curve,				
	miniature circuit breaker suitable for inductive load of following poles in				
	the existing MCB DB with connections, testing and commissioning etc. as				
	required				
a)	Single Pole	Each	5		
b)	Single Pole and neutral	Each	1		
7	Supplying and fixing and Cable End Box (Loose wire Box) suitable for				
	following single pole and neutral, sheet steel, MCB distribution board, 240				
	Volts, on surface/recess, complete with testing and commissioning etc. as				
	required.				
	For 8-way, Double door SPN MCBDB	Each	1		
	Total Rs.				

(Rupees ...... Only)

**ENGINEER-IN-CHARGE** 

SIGNATURE OF CONTRACTOR

#### SCHEDULE – A

#### (Part-A & Part-B)

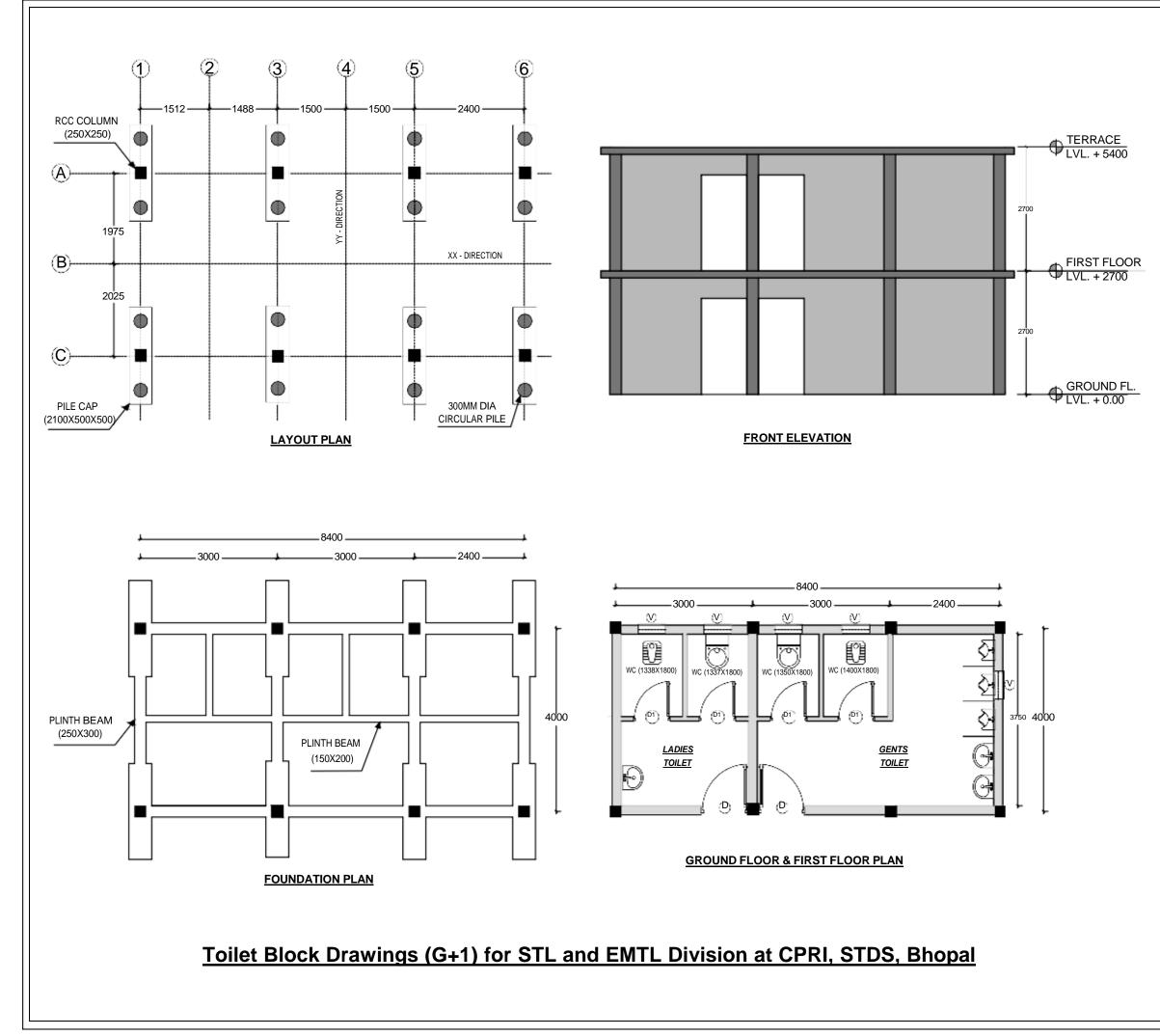
कार्य का नाम: सीपीआरआई, एसटीडीएस, भोपाल में मौजूदा पुराने टॉयलेट ब्लॉक को ध्वस्त करके एसटीएल और ईएमटीएल विभाग के लिए टॉयलेट ब्लॉक (जी+1) का पुनर्निर्माण। Name of work: Reconstruction of Toilet Block (G+1) for STL and EMTL Division by demolishing the old existing toilet block at CPRI, STDS, Bhopal.

S. No.	PARTICULARS	AMOUNT (In Rs.)
1	TOTAL AMOUNT OF PART-A (CIVIL)	
2	TOTAL AMOUNT OF PART-B (ELECTRICAL)	
	Gross Total (in Rs.) of PART-A & PART-B	

(Rupees... Only)

**ENGINEER-IN-CHARGE** 

SIGNATURE OF CONTRACTOR



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#### NOTE:

1. RCC COLUMNS WITH INFILL BRICKWORK 2. RCC CIRCULAR PILE, PILE CAP, PLINTH BEAM AND TIE BEAM

3. ROOF: RCC SLAB WITH REINFORCEMENT 4. WATER PROOFING IN THE SUNKEN AREAS OF TOILET

5. PVC DOORS AND FIXED VENTILATORS AS REQUIRED

6. GLAZED VITRIFIED MATT/ANTI-SKID FINISH TILES FOR ALL FLOOR AREAS

7. HEIGHT OF CEILING: 2.70 METRE

8. WATER SUPPLY LINE, DRAINAGE & SEWAGE LINE

9. ALL DIMENSIONS ARE IN MM 10. PLINTH PROTECTION AROUND BUILDING 11. C-PVC PLUMBING SYSTEM FOR WATER SUPPLY LINE, CAST IRON PIPES FOR SOIL PIPELINE & WASTE PIPELINE

#### SCHEDULE OF OPENINGS:

	-				
S.NO.	TYPE	SIZ	ZE	SILL AT	LINTEL AT
		WIDTH	HEIGHT		
1.	D	1000	2100	-	2100 (SINGLE SHUTTER)
2.	D1	800	2100	-	2100 (SINGLE SHUTTER)
3.	V	600	300	1800	2100 (SINGLE SHUTTER)

#### AREA STATEMENT:

AREA OF GROUND FLOOR
 AREA OF FIRST FLOOR

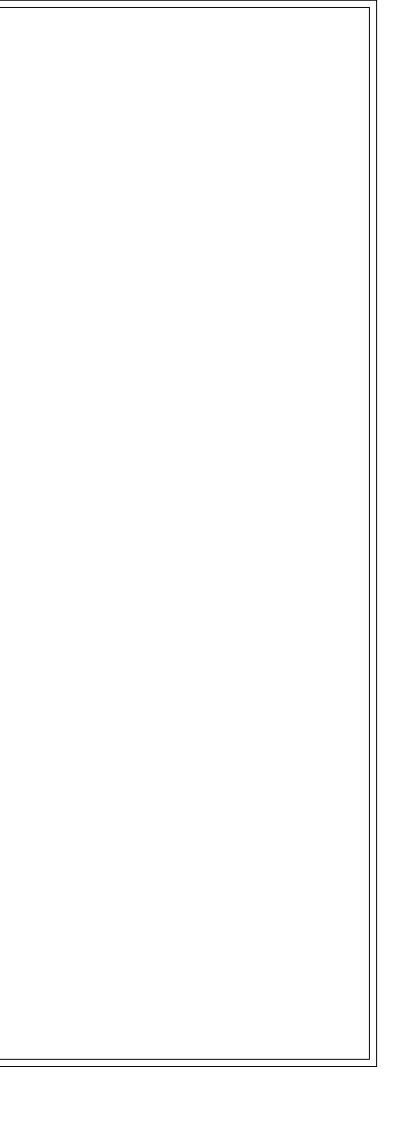
- 35.50 Sq.M. - 35.50 Sq.M.

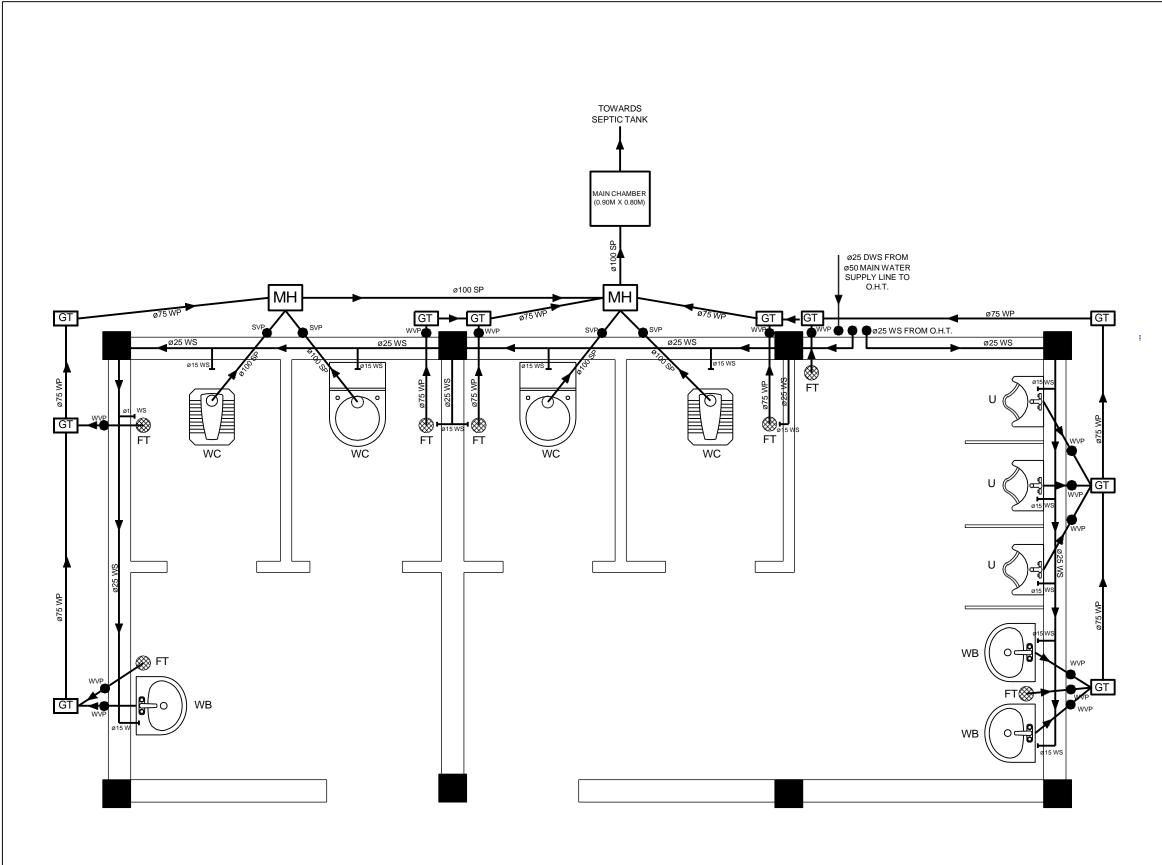
TOTAL AREA

- 71.00 Sq.M.

### **CPRI, STDS, BHOPAL**

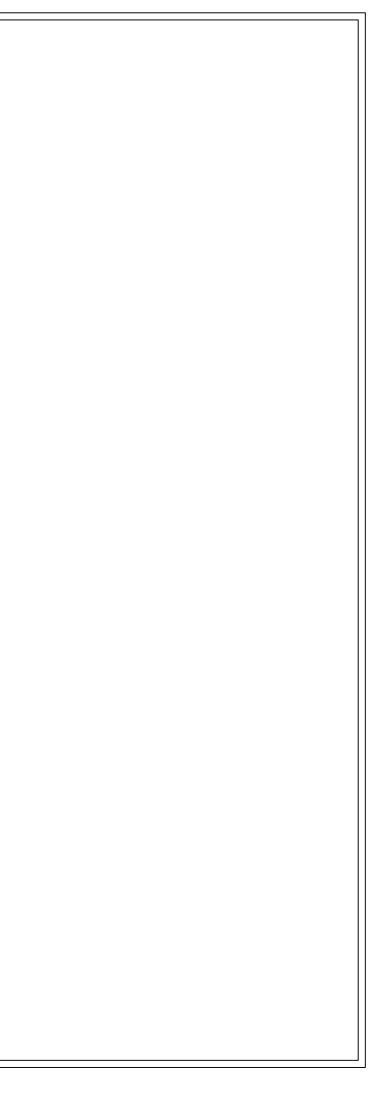
NAME OF WORK	Reconstruction of Toilet Block (G+1) for STL and EMTL Division by demolishing the old existing toilet block at CPRI, STDS, Bhopal.
	GROUND FLOOR AND FIRST FLOOR DRAWINGS OF TOILET BLOCK FOR STL & EMTL DIVISION
DRAWING NO.	CPRI/BPL/STL/TOILET-01
DRAWN BY	RAJAT MALGOTRA
CHECKED BY	SUNIL KOCHE
APPROVED BY	SUMBUL MUNSHI
DATE	07/08/2024

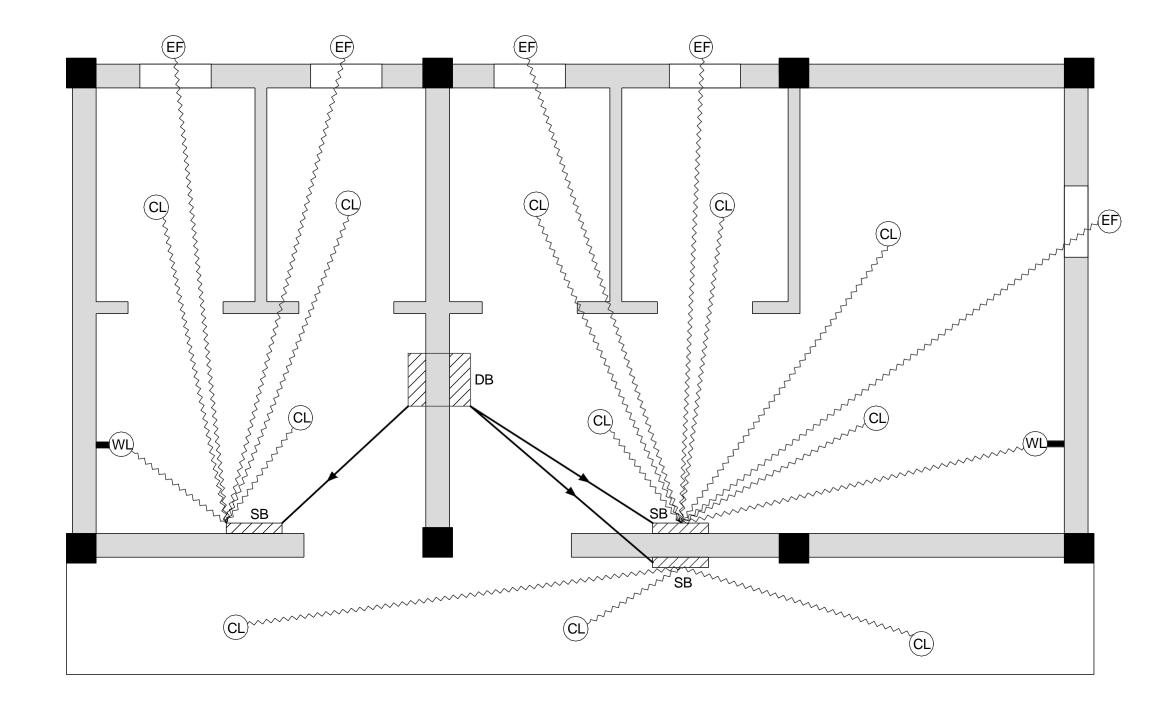




### **TYPICAL DRAWING OF WATER SUPPLY, WASTE WATER & SEWARAGE SYSTEM**

мн	LEGENDS MANHOLE (0.90M X 0.80M)
GT	GULLY TRAP
WP	75MM WASTE PIPE
WVP	75MM WASTE VENT PIPE
SP	100MM SOIL PIPE
SVP	100MM SOIL VENT PIPE
WS	CPVC WATER SUPPLY PIPE
DWS	25MM G.I. DISTRIBUTION WATER SUPPLY FROM 50MM MAIN WATER SUPPLY LINE TO O.H.T.
FT	FLOOR TRAP
WC	WATER CLOSET
WB	WASH BASIN
U	URINAL
1.         D           2.         D1         4           3.         V         0           AREA STAT         •         •           •         AREA OF GR         •           •         AREA OF FIR         •	OUND FLOOR - 35.50 Sq.M.
	I, STDS, BHOPAL Reconstruction of Toilet Block (G+1) for
NAME OF WORK	TYPICAL DRAWING OF WATER SUPPLY, WASTE WATER & SEWARAGE SYSTEM OF TOILET BLOCK FOR STL DIVISION
DRAWING NO.	CPRI/BPL/STL/TOILET-02
DRAWN BY	RAJAT MALGOTRA
CHECKED BY	SUNIL KOCHE
APPROVED BY	SUMBUL MUNSHI
DATE	08/08/2024





### **TYPICAL ELECTRICAL DRAWING**

LEGENDS         EF       EXHAUST FAN         CL       LED CEILING LIGHT         DB       MAIN DISTRIBUTION BOARD         SB       SWITCH BOARD         WL       LED WALL LIGHT         VVL       LED WALL LIGHT         VVL       LED WALL LIGHT         VVL       LED WALL LIGHT         VVC       OF 1.5 SQMM. PVC INSULATED COPPER SINGLE CORE CABLE IN 25MM RECESSED MEDIUM CLASS PVC CONDUIT         VIRING FOR CIRCUIT/SUBMAIN OF 2X2.5 SQ.MM. +1X2.5 SQ.MM. PVC INSULATED COPPER SINGLE CORE CABLE IN 32MM RECESSED MEDIUM CLASS PVC CONDUIT         AREA OF GROUND FLOOR AREA OF GROUND FLOOR AREA OF GROUND FLOOR TOTAL AREA       - 35.50 Sq.M.
CL       LED CEILING LIGHT         DB       MAIN DISTRIBUTION BOARD         SB       SWITCH BOARD         WL       LED WALL LIGHT         WL       LED WALL LIGHT         WRING FOR LIGHT, EXHAUST FAN OF 1.5 SQMM. PVC INSULATED COPPER SINGLE CORE CABLE IN 25MM RECESSED MEDIUM CLASS PVC CONDUIT         WIRING FOR CIRCUIT/SUBMAIN OF 2X2.5 SQ.MM. +1X2.5 SQ.MM. PVC INSULATED COPPER SINGLE CORE CABLE IN 32MM RECESSED MEDIUM CLASS PVC CONDUIT         AREA STATEMENT:         • AREA OF GROUND FLOOR • AREA OF FIRST FLOOR       - 35.50 Sq.M.
DB       MAIN DISTRIBUTION BOARD         SB       SWITCH BOARD         WL       LED WALL LIGHT         WIRING FOR LIGHT, EXHAUST FAN OF 1.5 SQMM. PVC INSULATED COPPER SINGLE CORE CABLE IN 25MM RECESSED MEDIUM CLASS PVC CONDUIT         WIRING FOR CIRCUIT/SUBMAIN OF 2X2.5 SQ.MM. +1X2.5 SQ.MM. PVC INSULATED COPPER SINGLE CORE CABLE IN 32MM RECESSED MEDIUM CLASS PVC CONDUIT         AREA STATEMENT:         • AREA OF GROUND FLOOR       - 35.50 Sq.M.         • AREA OF FIRST FLOOR       - 35.50 Sq.M.
SB       SWITCH BOARD         WL       LED WALL LIGHT         WIRING FOR LIGHT, EXHAUST FAN OF 1.5 SQMM. PVC INSULATED COPPER SINGLE CORE CABLE IN 25MM RECESSED MEDIUM CLASS PVC CONDUIT         WIRING FOR CIRCUIT/SUBMAIN OF 2X2.5 SQ.MM. +1X2.5 SQ.MM. PVC INSULATED COPPER SINGLE CORE CABLE IN 32MM RECESSED MEDIUM CLASS PVC CONDUIT         AREA STATEMENT:         • AREA OF GROUND FLOOR • AREA OF FIRST FLOOR       - 35.50 Sq.M.
WL       LED WALL LIGHT         WIRING FOR LIGHT, EXHAUST FAN OF 1.5 SQMM. PVC INSULATED COPPER SINGLE CORE CABLE IN 25MM RECESSED MEDIUM CLASS PVC CONDUIT         WIRING FOR CIRCUIT/SUBMAIN OF 2X2.5 SQ.MM. +1X2.5 SQ.MM. PVC INSULATED COPPER SINGLE CORE CABLE IN 32MM RECESSED MEDIUM CLASS PVC CONDUIT         AREA STATEMENT:         • AREA OF GROUND FLOOR       - 35.50 Sq.M.         • AREA OF FIRST FLOOR       - 35.50 Sq.M.
WIRING FOR LIGHT, EXHAUST FAN OF 1.5 SQMM. PVC INSULATED COPPER SINGLE CORE CABLE IN 25MM RECESSED MEDIUM CLASS PVC CONDUIT         WIRING FOR CIRCUIT/SUBMAIN OF 2X2.5 SQ.MM. +1X2.5 SQ.MM. PVC INSULATED COPPER SINGLE CORE CABLE IN 32MM RECESSED MEDIUM CLASS PVC CONDUIT         AREA STATEMENT: • AREA OF GROUND FLOOR • AREA OF FIRST FLOOR       - 35.50 Sq.M.
OF 1.5 SQMM. PVC INSULATED         COPPER SINGLE CORE CABLE IN         25MM RECESSED MEDIUM CLASS         PVC CONDUIT         WIRING FOR CIRCUIT/SUBMAIN OF         2X2.5 SQ.MM. +1X2.5 SQ.MM. PVC         INSULATED COPPER SINGLE         CORE CABLE IN 32MM RECESSED         MEDIUM CLASS PVC CONDUIT         AREA STATEMENT:         • AREA OF GROUND FLOOR       - 35.50 Sq.M.         • AREA OF FIRST FLOOR       - 35.50 Sq.M.
2X2.5 SQ.MM. +1X2.5 SQ.MM. PVC         INSULATED COPPER SINGLE         CORE CABLE IN 32MM RECESSED         MEDIUM CLASS PVC CONDUIT         AREA OF GROUND FLOOR         • AREA OF FIRST FLOOR         • 35.50 Sq.M.
AREA OF GROUND FLOOR     AREA OF FIRST FLOOR     - 35.50 Sq.M.     - 35.50 Sq.M.
SCHEDULE OF OPENINGS:
S.NO. TYPE SIZE SILL AT LINTEL AT
WIDTH         HEIGHT           1.         D         1000         2100         -         2100 (SINGLE SHUTTER
1.         D         1000         2100         -         2100 (single shuffer           2.         D1         800         2100         -         2100 (single shuffer
3. V 600 300 1800 2100 (SINGLE SHUTTER
CPRI, STDS, BHOPAL         NAME OF WORK       Reconstruction of Toilet Block (G+1) for STL and EMTL Division by demolishing the old existing toilet block at CPRI, STDS, Bhopal.
TYPICAL ELECTRICAL DRAWING OF TOILET (G+1) BLOCK FOR STL & EMTL DIVISION
DRAWING NO. CPRI/BPL/STL/TOILET-03
DRAWN BY RAJAT MALGOTRA
CHECKED BY SUNIL KOCHE
CHECKED BY SUNIL KOCHE APPROVED BY SUMBUL MUNSHI

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