INDIAN INSTITUTE OF TECHNOLOGY KHARAGPUR
KHARAGPUR, WEST BENGAL 721302

TENDER DOCUMENT

for
Complete Water Proofing in SAM Guest House Roof at IIT Kharagpur.
NIT No. IW/CE/NIT/2122/008

Tender Serial No. ___________________________ issued to:

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________

J.S. Jas / 15/06/2021

Himanshu / 15/06/21

15/06
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1. NOTICE INVITING TENDER

1.1. INTRODUCTION

Indian Institute of Technology (IIT) Kharagpur, hereinafter called IITKGP, invites online tenders from the eligible contractors for Complete Water Proofing in SAM Guest House Roof at IIT Kharagpur. Particulars of the project are as follows.

1.2. PARTICULARS

<table>
<thead>
<tr>
<th>1. NIT Number</th>
<th>NIT No. IW/CE/NIT/2122/008</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Name of Work</td>
<td>Complete Water Proofing in SAM Guest House Roof at IIT Kharagpur</td>
</tr>
<tr>
<td>3. Location of Work</td>
<td>SAM Guest House aforesaid area, IIT Kharagpur</td>
</tr>
<tr>
<td>4. Estimated Cost (including GST)</td>
<td>₹ 22,30,081/- (Rupees Twenty Two Lakhs Thirty Thousand and Eighty One Only)</td>
</tr>
<tr>
<td>5. Earnest Money Deposit</td>
<td>NSIC/MSEs Registration Certificate OR Bid Security Declaration Form (Annexure -III)</td>
</tr>
<tr>
<td>6. Time Limit for Execution</td>
<td>90 days from Date of Start</td>
</tr>
<tr>
<td>7. Tender Basis and Mode</td>
<td>Two stage (Technical Bid &amp; Financial Bid)</td>
</tr>
<tr>
<td>8. Date, Time &amp; Venue of Pre-bid Meeting</td>
<td>24th June 2021, 15:00hrs, CCM Meeting Room, 1st Fl, Old Bldg., IIT Kharagpur, Kharagpur-721302</td>
</tr>
<tr>
<td>9. Closing Date &amp; Time for Receipt of bids</td>
<td>29th June 2021 upto 15:00 hrs</td>
</tr>
<tr>
<td>10. Date &amp; Time for Opening of Technical Bid</td>
<td>30th June 2021 at 15:30 hrs</td>
</tr>
<tr>
<td>11. Date &amp; Time for Opening of Price Bid</td>
<td>To be intimated to the eligible bidders subsequently</td>
</tr>
<tr>
<td>12. Engineer-in-charge and contact details.</td>
<td>For Civil works: Mr. J.S. Rao, Executive Engineer (Civil), Tel: 03222-282580, Mobile: 9434198139 Email: <a href="mailto:srinivas.rao@adm.iitkgp.ac.in">srinivas.rao@adm.iitkgp.ac.in</a></td>
</tr>
<tr>
<td>13. Address for tender issue, submission and opening</td>
<td>Civil Construction &amp; Maintenance Section, 1st Floor, Old Building, IIT Kharagpur, Kharagpur WB 721302</td>
</tr>
<tr>
<td>15. Website for tender submission &amp; processing</td>
<td><a href="https://eprocure.gov.in/eprocure/app">https://eprocure.gov.in/eprocure/app</a></td>
</tr>
</tbody>
</table>
1.3. ELIGIBILITY CRITERIA

1.3.1. The bidder must be registered in appropriate class of works with Government organization like CPWD/ PWD/ MES or PSUs or those having experience in similar nature of works awarded by Government / Semi Government Organizations/ Government Funded Autonomous Organization.

1.3.2. The bidder must have done at least 1 (ONE) similar work of value of 80% of the estimated cost or 2 (TWO) similar works for projects each of value 60% of the estimated cost or 3 (THREE) similar work for projects each of value 40% of the estimated cost with Government/ Semi-government/PSU/ Government Funded Autonomous Organization during last 7 (seven) years preceding last date of the month of tender submission.

Note:

(i) The estimated is Rs22,30,081/- (Rupees Twenty Two Lakhs Thirty Thousand and Eighty One Only).
(ii) 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 applications for tender.
(iii) Similar works shall mean: Roof treatment / Water proofing treatment work / Repair & Renovation of Building.

1.3.3. The bidder must be registered with appropriate government authority as a bonafide business entity and must have GST registration certificate and Permanent Account Number of income tax.

1.3.4. The registrations and licenses should be valid during the execution phase.

1.3.5. The Average annual turnover of the bidder as per ITCC or profit & loss statement shall not be less than 30% of the estimated cost of project, not having incurred loss in more than two years, during last 5 years ending 31 Mar 2020. The documents submitted should be duly certified and audited by Chartered Accountant

On behalf of the Director, Indian Institute of Technology Kharagpur

Copy to:
1) Registrar
2) SEE(E&M)/Sr.EE(W&S)
3) Executive Engineer (Civil/E&M)
4) Assistant / Junior Engineer (Civil/ E&M)
5) Notice Board
6) Office file
2. INFORMATION TO BIDDERS

2.1 SCOPE OF WORK

2.1.1 The IITKGP intends for Complete Water Proofing in SAM Guest House Roof at IIT Kharagpur. The work consists of complete water proofing treatment including repair and renovation work of Building of aforesaid area.

2.1.2 Constraint: The job needs to be executed in Hostel area without causing any disturbances to the normal functioning of routine activities/road networks.

2.1.3 The vendor shall work out execution sequence and methodology so as to complete the project within the envisaged time and the estimated cost, duly handling the constraint mentioned above.

2.2 GENERAL INSTRUCTIONS

2.2.1 Bidding documents are to be obtained electronically through websites: http://www1.iitkgp.ac.in/topfiles/tenders.php; https://eprocure.gov.in/eprocure/app

2.2.2 This bid document shall be read in conjunction with GCC (General Conditions of Contract) available on http://www1.iitkgp.ac.in/topfiles/tenders.php.

2.2.3 The bidder shall visit and inspect the site and obtain all information on his own responsibility and at own cost, which may be necessary for the purpose of quoting and submitting the tender. No excuse or ignorance as to site conditions and local information shall be accepted after awarding of the contract. Access to the site will be granted by the Engineer-in-charge on all working days within working hours.

2.2.4 IITKGP shall not provide any space at site for labour huts.

2.2.5 All clarifications about the tender shall be sought by bidder on or before pre-bid meeting. The bidders may make suggestions which shall be considered during the Pre Bid Meeting. Intending bidder(s) may also send their queries or suggestion, if any, through e-mail to the Engineer-in-charge on snivas_rao@adm.iitkgp.ac.in on or before 24th June 2021, 14:30hrs. No queries shall be entertained after notification of replies to noteworthy queries received till the date of pre-bid meeting.

2.2.6 Completion certificate issued by Competent Authority will only be considered as credential. If the Completion certificate issued by Competent Authority does not reflect the type of work, then Final bill / Schedule of Quantity of the qualifying works also to be attached along with the Completion certificates. Certificate from private individuals / organizations for whom such works have been executed shall not be accepted.

2.2.7 The bidding document (consisting of specifications, the schedule of quantities of various types of items to be executed, the set of terms and conditions of the contract and other documents / drawings, if any), Addendum/Corrigenda, Clarifications to Pre-bid queries can be downloaded from the websites: http://www1.iitkgp.ac.in/topfiles/tenders.php, https://eprocure.gov.in/eprocure/app. Corrigenda, if any shall be published only on these websites at any time before the closing time of tender. The institute shall not be responsible for any delay / difficulties / inaccessibility of downloading facility for any reason whatsoever. The tenderers who have downloaded the tender documents from website must visit the website and ensure that such addendum(s)/corrigendum(s) (if any) is also downloaded by them. This shall be the responsibility of the prospective registered bidders to check the web site for any such corrigendum/addendum before closing time of tender and ensure that bid submitted by them are in accordance with all the corrigendum's/addendums.

2.2.8 All costs, charges & expenses that may be incurred in connection with the preparation of his tender shall be borne by him and the Institute accepts no liability whatsoever therefore.

2.2.9 Rates quoted by the bidders shall be inclusive of GST (Goods and Services Tax - Central, State and Interstate) and all applicable taxes. Income Tax and all other statutory deductions like labour cess etc. will be deducted from the bill as per prevailing rules.

2.2.10 Exemption to IITKGP against any tax/ duty/ fee/ surcharge/ charge/ cost, if any, found applicable or sought later from IITKGP after award shall be passed on to IITKGP by the contractor without dispute.

2.2.11 IITKGP reserves the right to reject any or all of the bids without assigning any reason.

2.2.12 Bid Validity: Bid shall remain valid for 120 days from the date of submission.

2.2.13 Firm Price: Bidder's quoted Rates/Prices for executing the activities under the Contract shall remain firm till completion of the entire work & shall not attract any escalation under any circumstances whatsoever.
2.2.14 If any information furnished by the bidder is found as false / fabricated, then his bid will be rejected and treated as cancelled. Even if such manipulation is detected at any stage after signing of the contract, it would lead to termination of the contract besides enforcing actions as mentioned in the Bid Security Declaration Form (Annexure-III) and liabilities towards prosecution. In such cases the bidder will be debarred from participation in future tendering process in IIITKGP for next 05 (Five) years.

2.2.15 Earnest Money Deposit (EMD) of requisite amount in prescribed mode NSIC/MSEs Registration Certificate Or Bid Security Declaration Form (Annexure-III) shall be submitted with the Technical Bid explained in following section. MSEs registered with District Industries Centers, National Small Industries Corporation and any other body specified by Ministry of MSME or Startups as recognized by Department of Industrial Policy and Promotion shall be exempted from payment of EMD in the bid. The self attested photocopy of their evidence should be submitted by the bidder(s) along with the formal request letter for exemption.

2.2.15.1 In case the NS

2.2.15.2 IC/MSEs registration certificate is found invalid during evaluation, the bid of such bidder shall be rejected.

2.2.15.3 Bidder so exempted for submission of EMD shall have to submit an undertaking as per Annexure-II.

2.2.15.4 Bidder not having NSIC/MSEs registration has to submit Bid Security Declaration Form (Annexure-III) along with an undertaking as per Annexure-II.

2.3 SUBMISSION OF TENDER

2.3.1 Help for Contractors, FAQ, Information about DSC and Bidders Manual Kit containing the detailed guidelines for e-Procurement system are also available on Central Public Procurement Portal.[https://eprocure.gov.in/eprocure/app]

2.3.2 It is mandatory for all the bidders to have a valid Class-II/Class-III Digital Signature Certificate (in the name of person having power of attorney to sign the Bid) from any of the licensed Certifying Agency (Bidders can see the list of licensed CA’s from the link www.cca.gov.in) to participate in e-Procurement of IIIT KHARAGPUR.

2.3.3 It is mandatory for the bidders to get their firm/company registered with e-procurement portal https://eprocure.gov.in/eprocure/app to have user ID & password.

2.3.4 Tender documents will be available online on website https://eprocure.gov.in/eprocure/app which can be downloaded free of cost.

2.3.5 Bidders may download and refer the “Instructions for Online Bid Submission” from (https://eprocure.gov.in/eprocure/app;sessionid=2A56E178EED5C7D8536175EFBBB57C9F.eprocegcp2?page=HelpForContractors&service=page).

2.3.6 The tender documents shall be submitted online in the prescribed format given on the websites and technical bids received online shall be opened as per NIT or Corrigendum thereof. No other mode of submission is acceptable. Detailed credentials as per the requirement of eligibility criteria and all tender papers except Bill of Quantities are to be submitted in “Technical Bid”. Bill of Quantities with rates duly filled in are to be submitted in the format provided online in the name of “Financial Bid”. Hence, physical submission of the documents is limited to submission of MSE registration certificate as per provision given in sub-clause 1.2.5 of NIT & 2.2.15 of Information to Bidders.

Representative of the bidder, who chooses to attend, may attend the online opening of the technical bids on the scheduled date and time of Bid opening. However, such representatives shall be allowed to attend the opening of the Technical Bids, only, if such person presents the letter of authority issued in his name by the bidder on his letterhead.

2.3.7 Bidders cannot submit the tender after the due date and time of e-bid submission. Time being displayed on Central Public Procurement Portal https://eprocure.gov.in/eprocure/app (“Server System Clock Time”) shall be final and binding on the bidder. e-Bids are required to be submitted by bidders, only as per the Indian Standard Time (IST) and not the time as per their location/country.

2.3.8 The bidders are advised to submit their e-bids well before the e-bid due date. IIIT Kharagpur shall not be responsible for any delay in submission of e-bids for any reason including server and technical problems.
2.3.9 The Technical and Financial Bid shall be digitally signed by the Authorized Signatory of the bidder & submitted “on-line” only. The authorized signatory of the bidder must be in possession of Power of Attorney before submitting the digitally signed bid. Scanned copies of various documents can be prepared in .pdf file format.

2.3.10 Any tender received without original Earnest Money in the form as specified in clause 1.2.8 of tender documents shall not be considered and shall be summarily rejected.

2.3.11 IIT Kharagpur reserves the right to cancel the tenders before submission/opening of tenders, postpone the tender submission/opening date and to accept/reject any or all tenders without assigning any reasons thereof. IIT Kharagpur’s assessment of suitability as per eligibility criteria shall be final and binding.

2.3.12 Tenderers may note that they are liable to be disqualified at any time during tendering process in case any of the information furnished by them is not found to be true. EMD of such tenderer shall be forfeited. The decision of IIT Kharagpur in this regard shall be final and binding.

2.4 EVALUATION OF BIDS AND AWARD OF WORK

2.4.1 The Bid of bidder will be opened electronically on the specified date and time of opening at the Civil Construction & Maintenance Section, 1st Floor, Old Building, IIT Kharagpur, Kharagpur WB 721302 in the presence of willing bidders or their authorized representatives.

2.4.2 Date, time and place of opening of Financial Bid will be informed after evaluation of Technical Bid to the Technically Qualified Bidders.

2.4.3 Bids shall, first, be checked for NSIC/MSEs registration certificate or Bid Security Declaration Form (Annexure-III). Only those bids found to have duly submitted NSIC/MSEs registration certificate or Bid Security Declaration Form (Annexure-III) shall be considered for evaluation.

2.4.4 Evaluation of Technical Bid: The bids received will then be assessed on the eligibility criteria mentioned at Para 4. Notice Inviting Tender. Bids found not meeting the eligibility criteria shall be considered non-responsive and shall be rejected summarily.

2.4.5 IITKGP retains the right to revert back to individual bidders with further clarifications / queries on the Technical Bid. The bidder has to respond to the queries within the specified time mentioned in the covering letter.

2.4.6 On the date & time specified for opening of Financial Bid or the Revised Financial Bids as the case may be will be opened on specified date and time.

2.4.7 EVALUATION OF Financial Bids: The Financial Bid should contain the complete bid document with duly filled in Schedule of Financial Quote. Financial Bids opened as above will be checked for arithmetical errors.

2.4.8 The successful bidder shall be issued Letter of Acceptance (LOA) of the bid, and be required to furnish a Performance Guarantee as per General Conditions of Contract, Program Schedule with specific Milestones to be achieved as to complete the work within the stipulated time limit and details of his Technical Staff to be deployed as per ANNEXURE-I

2.4.9 Letter of Award (Work Order) shall be issued to the successful bidder only after receipt of the Performance Guarantee, along with Program Schedule and the details of Technical Staff to be deployed for the work.

2.4.10 Agreement (Contract) consisting of complete tender document including conditions, bill of quantities, technical proposal and specialized services, drawings, if any, and acceptance thereof together with any correspondence leading thereto, shall be drawn and signed with the awardee after issue of Work Order.

2.4.11 Date of start of work shall be reckoned from 7th day from the date of issue of “Letter of Acceptance”.
2.5 BIDDING CAPACITY OF CONTRACTORS

1) The bidding capacity of the contractor should be equal to or more than the estimated cost of the work put to tender. The bidding capacity shall be worked out by the following formula:

\[ \text{Bidding Capacity} = \frac{(A \times N \times 2) - B}{2} \]

Where,

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

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

B= Value of existing commitments and ongoing works to be completed during the period of completion of work for which bids have been invited.
3. UNDERTAKING BY THE BIDDER

UNDERTAKING

I / We have read and examined the Tender document including terms & conditions, specifications, bill of quantities, drawings and designs, general rules & directions, General Conditions of Contract, Special Conditions of Contract and all relevant other documents, publications and rules referred to in the Conditions of Contract and all other contents in the tender documents for the work.

I / We, hereby tender for execution of the work specified for the Indian Institute of Technology Kharagpur within the time specified and in accordance in all respects with the specifications, designs, drawings and instructions in writing.

We agree to keep the tender open for 120 days from the last date of its submission and not to make any modifications in its terms and conditions. An undertaking as mentioned in Bid Security Declaration Form (Annexure-III) has been deposited. If I / we, fail to furnish the prescribed performance guarantee within prescribed period, I / we agree that the said Director, Indian Institute of Technology Kharagpur or his authorized officer shall without prejudice to any other right or remedy, be at liberty to enforce actions as mentioned in the Bid Security Declaration Form (Annexure-III). Further, if I / we fail to commence work as specified, I / we agree that the Director, Indian Institute of Technology Kharagpur shall without prejudice to any other right or remedy available in law, be at liberty to enforce actions as mentioned in the Bid Security Declaration Form (Annexure-III) and forfeit the performance guarantee absolutely, to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein.

Further, I / We agree that in case of enforcement of actions as mentioned in the Bid Security Declaration Form (Annexure-III) and/or Performance Guarantee as aforesaid, I / We shall be debarred for participation in the retendering process of the work.

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.

Seal & Signature of Contractor
Postal Address

Dated

Witness

Address

Occupation
## TECHNICAL STAFF OF CONTRACTOR

<table>
<thead>
<tr>
<th>DISCIPLINE</th>
<th>NAME</th>
<th>QUALIFICATION</th>
<th>EXPERIENCE</th>
<th>CONTACT NUMBER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall Project In-charge</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Engineer - Structure and Civil Works</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>In-charge - Safety, Health &amp; Environment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Seal & Signature of Contractor
UNDERTAKING FOR GCC COMPLIANCE

UNDERTAKING

We hereby undertake that we shall fulfill all the terms & conditions within the specified time frame, after the acceptance of our offer in case our offer is accepted; failing which IIT Kharagpur may go ahead to take necessary action such as reporting the non-compliance to appropriate Government authorities and barring us from future participation in IIT Kharagpur works.

Seal & Signature of Contractor

DATED:
Bid Security Declaration Form

Date: ___________________________ Tender No. ___________________________

To (Insert complete name and address of the purchaser)

I/We, The undersigned, declare that:

I/We understand that, according to your conditions, bids must be supported by a Bid Security Declaration.

I/We, accept that I/we may be disqualified from bidding for any contract with you for a period of one year from the date of notification if I am/We are in a breach of any obligation under the bid conditions, because I/We

a) Have withdrawn/modified/amended, impairs or derogates from the tender, my/our Bid during the period of bid validity specified in the form of Bid; or

b) having been notified of the acceptance of our Bid by the purchaser during the period of bid validity (i) fail or refuse to execute the contract, if required, or (ii) fail or refuse to furnish the Performance Security, in accordance with the Instruction to Bidders.

I/We understand this Bid Securing Declaration shall cease to be valid if I am/We are not the successful Bidder, upon the earlier of (i) the receipt of your notification of the name of the successful Bidder; or (ii) thirty days after the expiration of the validity of my/our Bid.

Signed: (Insert signature of person whose name and capacity are shown)

In the capacity of (Insert legal capacity of person signing the bid Securing Declaration)

Name: (Insert complete name of person signing the Bid Securing Declaration)

Duly authorized to sign the bid on an on behalf of (Insert complete name of Bidder)

Dated on _______________ day of _______________ (Insert date of signing)

Corporate seal (where applicable)
4. Checklist for Documents to be uploaded on https://eprocure.gov.in/eprocure/app

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Documents</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Tender Documents</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>EMD</td>
<td>1.2.5</td>
</tr>
<tr>
<td>3.</td>
<td>Document support of Bonafide Business Entity</td>
<td>1.3.3</td>
</tr>
<tr>
<td>4.</td>
<td>GST Registration Certificate</td>
<td>1.3.3</td>
</tr>
<tr>
<td>5.</td>
<td>Permanent Account Number</td>
<td>1.3.3</td>
</tr>
<tr>
<td>6.</td>
<td>Average annual turnover of the bidder as per ITCC or profit and loss statement for last 5 years</td>
<td>1.3.5</td>
</tr>
<tr>
<td>7.</td>
<td>Experience Certificate</td>
<td>1.3.2</td>
</tr>
<tr>
<td>8.</td>
<td>ANNEXURES-I, II and III</td>
<td></td>
</tr>
<tr>
<td>9.</td>
<td>SOQ</td>
<td></td>
</tr>
</tbody>
</table>
INSTITUTE WORKS
CIVIL CONSTRUCTION AND MAINTENANCE SECTION
IIT KHARAGPUR

Name of the Work: Complete water proofing in SAM Guest House Roof at IIT Kharagpur.

ABSTRACT

<table>
<thead>
<tr>
<th>Item No.</th>
<th>Description of Item</th>
<th>Unit</th>
<th>Quantity</th>
<th>Rate (Rs.)</th>
<th>Amount (Rs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Providing and laying cement concrete in retaining walls, return walls, walls (any thickness) including attached plasters, 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: 1:2:4 (1 Cement : 2 coarse sand (zone-III) : 4 graded stone aggregate 20 mm nominal size)</td>
<td>Cum</td>
<td>19.00</td>
<td>8,554.50</td>
<td>162,535.50</td>
</tr>
<tr>
<td>2</td>
<td>Extra for addition of synthetic Polyester triangular fibre of length 12mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40 in cement concrete/RCC/ Flooring/ water retaining structures by using 125 gms of synthetic Polyester triangular fibre for 50 Kg cement used as per directions of Engineer-in-Charge.</td>
<td>per bag of 50 kg cement</td>
<td>61.00</td>
<td>61.05</td>
<td>3,724.05</td>
</tr>
<tr>
<td>3</td>
<td>20 mm cement plaster of mix : 1:6 (1 cement : 6 coarse sand)</td>
<td>Sqm</td>
<td>610.00</td>
<td>345.65</td>
<td>210,846.50</td>
</tr>
<tr>
<td>4</td>
<td>Extra for addition of synthetic Polyester triangular fibre of length 6 mm, effective diameter 10-40 microns and specific gravity of 1.34 to 1.40 in cement plaster/mortar by using 125 gms. of synthetic per bag of Polyester triangular fibre for 50 Kgs. cement used in cement mortar 50kg of as per directions of Engineer-in-Charge.</td>
<td>per bag of 50 kg cement</td>
<td>61.00</td>
<td>66.90</td>
<td>4,080.90</td>
</tr>
<tr>
<td>5</td>
<td>Providing and laying APP (Atactic Polypropylene Polymer) modified prefabricated five layer 3 mm thick water proofing membrane, black finished reinforced with non-woven polyester matt consisting of a coat of bitumen primer for bitumen membrane @ 0.40 litre/sqm by the same membrane manufacture of density at 25°C, 0.87-0.89 kg/litrea and viscosity 70-160 csp. Over the primer coat the layer of membrane shall be laid using Butane Torch and sealing all joints etc., and preparing the surface complete. The vital physical and chemical parameters of the membrane shall be as under: Joint strength in longitudinal and transverse direction at 23°C as 650/450N/5cm. Tear strength in longitudinal and transverse direction as 300/250N. Softening point of membrane not less than 150°C. Cold flexibility shall be upto -2°C when tested in accordance with ASTM, D - 5147. The laying of membrane shall be got done through the authorised applicator of the manufacturer of membrane : 3mm thick.</td>
<td>Sqm</td>
<td>2,795.00</td>
<td>535.00</td>
<td>1,495,325.00</td>
</tr>
<tr>
<td>Item No.</td>
<td>Description of Item</td>
<td>Unit</td>
<td>Quantity</td>
<td>Rate (Rs.)</td>
<td>Amount (Rs.)</td>
</tr>
<tr>
<td>---------</td>
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<td>--------------</td>
</tr>
<tr>
<td>6</td>
<td>Disposal of building rubbish / malba / similar unserviceable, dismantled or waste materials by mechanical means, including loading, transporting, unloading to approved municipal dumping ground or as approved by Engineer-in-charge, beyond 50 m initial lead, for all leads including all lifts involved.</td>
<td>Cum</td>
<td>36.60</td>
<td>138.85</td>
<td>5,081.91</td>
</tr>
<tr>
<td>7</td>
<td>Dismantling old plaster or skirting taking out joints and cleaning the surface for plaster including disposal of rubbish to the dumping ground within 50 metres lead.</td>
<td>Sqm</td>
<td>610.00</td>
<td>39.00</td>
<td>23,790.00</td>
</tr>
<tr>
<td>8</td>
<td>Providing, mixing and applying bonding coat of approved adhesive on chipped portion of RCC as per specifications and direction of Engineer-in-Charge complete in all respect. SBR Polymer (@10% of cement weight) modified cementitious bond coat @ 2.2 kg cement per sqm of surface area mixed with specified proportion of approved polymer.</td>
<td>Sqm</td>
<td>610.00</td>
<td>117.30</td>
<td>71,553.00</td>
</tr>
<tr>
<td>9</td>
<td>Taking out old damaged tarfelt from the roof, parapet etc. preparing the roof surfaces by removing all spoils, blisters, moss etc. from the working site and disposal of the same beyond the compound and cleaning the site in all respect as per direction of Engineer-in-Charge in all floor.</td>
<td>Sqm</td>
<td>2,440.00</td>
<td>14.30</td>
<td>34,892.00</td>
</tr>
<tr>
<td>10</td>
<td>Supply and apply a flexible FPO based membrane for expansion joint width of 100 mm by Supply and applying an epoxy based membrane adhesive base coat &amp; top coat. Product: Sikadur®-Combiflex® SG System or equivalent Product requirements: Chemical Base Modified flexible Polyolefin (FPO) with advanced adhesion Fire Rating Euroclass E (EN ISO 11925-2, classification to EN 13501-1) Service Temperature -30°C min. to +40°C max. in wet conditions -30°C min. to +60°C max. in dry conditions Tensile Strength &gt; 12 N/mm² (EN 12311-2) Tear Strength &gt; 40 N/mm (ISO 34-B) Elongation at Break &gt; 600% (EN 12311-2) Seam strength &gt;500 N/5cm (2 mm) (EN 12316-2) &gt;400 N/5cm (2 mm) (EN12317-2) Behaviour under hydrostatic pressure 6bar/72h No leakage (EN 1928-B) Thermal Resistance Thermal ageing:Passed (SIA V280, 1996) Bonding test: No cracks at -40°C (EN 495-5) Artificial weathering:7500 h passed (SIA V280, 1996) Adhesive Product: Sikadur®- 31 C or equivalent Consumption: 1.4 kg/m (strip width 200 mm) Product requirements: mixed density: 1.75 kg/ltr; bond strength &gt; 1.5 N/mm². The rates should include the reapir of edges, backing material, tools tackles etc all complete.</td>
<td>Mtr</td>
<td>75.00</td>
<td>1,480.00</td>
<td>111,000.00</td>
</tr>
<tr>
<td>Item No.</td>
<td>Description of Item</td>
<td>Unit</td>
<td>Quantity</td>
<td>Rate (Rs.)</td>
<td>Amount (Rs.)</td>
</tr>
<tr>
<td>---------</td>
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</tr>
<tr>
<td>11</td>
<td>Providing and applying Fibre reinforced, Flexible, Non-shrink, Acrylic Emulsion Polymer composed of selected fillers &amp; additives for filling internal &amp; external surface cracks on plaster upto 10 mm width as per manufacturers specification. The work includes - making V-shape groove of size upto 10mmx10mm from negative side, cleaning grooves and filling the cracks with the compound firmly with a spatula or putty knife and level the surface. The work shall be carried out all complete as per specification and the direction of the Engineer-In-Charge.</td>
<td>Mtr</td>
<td>222.00</td>
<td>46.00</td>
<td>10,212.00</td>
</tr>
<tr>
<td>12</td>
<td>Providing and applying ready to use dual shrinkage compensated, trowelable fibre reinforced thixotropic high strength formulation repair mortar for structural concrete repairs as per manufacturers specification. The work includes - cleaning of concrete surface to remove dust, oil, grease including removal of laitance and cutting the visible cracks by making a 10mm X 10mm V-shape Groove from positive side and filling the same with the compound firmly with trowel and finishing by Float or sponge as soon as mortar has started to stiffen. The work shall be carried out all complete as per specification and the direction of the Engineer-In-Charge.</td>
<td>Mtr</td>
<td>280.00</td>
<td>122.00</td>
<td>34,160.00</td>
</tr>
<tr>
<td>13</td>
<td>Providing and fixing 15 mm dia Specially treaded nozzles along the roof crack / construction joints at regular intervals not exceeding 1.0 mtr c/c, injecting non-shrink grouting compound mixed with neat cement slurry through the nozzles under pressure by pump till refusal and sealing of the nozzles after the completion of the injection operation is complete and as per direction of the EIC.</td>
<td>Each</td>
<td>240.00</td>
<td>262.00</td>
<td>62,880.00</td>
</tr>
</tbody>
</table>

**TOTAL Rs.** 2230080.86

**SAY Rs.** 2230081.00

(Rupees : Twenty Two Lakhs Thirty Thousand and Eighty One Only)