

Tender Document

Name of Work: Construction of Construction Yard and Sub-structure
for Prototype Units at
School of Planning and Architecture, Bhopal.

School of Planning and Architecture, Bhopal

(An Institute of National Importance, Ministry of Education, Government of India)

Neelbad Road, Bhauri, Bhopal - 462030 Phone: 0755-2526800



योजना एवं वास्तुकला विद्यालय, भोपाल

राष्ट्रीय महत्व का संस्थान, शिक्षा मंत्रालय, भारत सरकार

School of Planning and Architecture, Bhopal

An Institute of National Importance, Ministry of Education, Government of India

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School of Planning and Architecture, Bhopal

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Neelbad Road, Bhauri, Bhopal - 462030 Phone: 0755-2526800

Tender Form

Name of work: Construction of Construction Yard and Sub-structure for Prototype Units at School of Planning and Architecture, Bhopal.

Project Number: SPAB/ PMAYG/2026/001

Estimated Cost: Rs. 3.5 crores (Approx.)

Processing Fee (Non-refundable): Rs. 3000/- to be deposited in SPA Bhopal Canara Bank Account (Canara Bank, Bhauri Branch, Account No. 2073201002565, IFSC Code: CNRB0004725, Account Name: SPA Bhopal internal Receipts).

Payment Details

- Transaction I.D.:
- Transaction Date:

Time allowed for Completion of Work: 9 Months from the Date of Issue of Work Order.

Name of contractor / firm:

Address of the firm:

Earnest Money Deposit: Rs. 7,00,000/- (2% of Estimated Cost) to be deposited as per details mentioned in Section – III: Instructions to Bidders.

Payment Details

- Transaction I.D.:
- Transaction Date:

Submission date: To be submitted by 16:30 Hours on 11th May 2026.

Place of Submission: Tender Box at Main Gate Security Office, SPA Bhopal.

Date and Place of Tender Opening: 14:00 Hours on 12th May 2026 at Conference Room, Satpura Block, SPA Bhopal.

School of Planning and Architecture, Bhopal

(An Institute of National Importance, Ministry of Education, Government of India)

Neelbad Road, Bhauri, Bhopal - 462030 Phone: 0755-2526800

Tender Brief

NIT No.	SPAB/PMAYG/2026/NIT-001
Name of work:	Construction of Construction Yard and Sub-structure for Prototype Units at School of Planning and Architecture, Bhopal.
Project Components	<ol style="list-style-type: none">i. Civil, Water Supply, Sewerage, Electrical and IT Work for Construction Yard.ii. Sub-structure Work for Prototype Units.iii. Site level Water Supply, Sewerage, Electrical and IT Works.
Project Number:	SPAB/ PMAYG/2026/001
Estimated Cost:	Rs. 3.5 crores (Approx.)
Earnest Money Deposit:	Rs. 7,00,000/- (2% of Estimated Cost) to be deposited as per details mentioned in Section – III: Instructions to Bidders.
Performance Guarantee:	5% of Tendered Value of the successful bidder.
Security Deposit (SD):	2.5% of the running bill / final bill (to be deducted from the running bills).
Processing Fee (Non-refundable):	Rs. 3000/- to be deposited in SPA Bhopal Canara Bank Account (Canara Bank, Bhauri Branch, Account No. 2073201002565, IFSC Code: CNRB0004725, Account Name: SPA Bhopal internal Receipts).
Time allowed for Completion of Work:	9 Months from the Date of Issue of Work Order.
Pre-bid meeting:	16:00 Hours on 29 th April 2026 at Conference Room, Satpura Block, SPA Bhopal.
Submission date:	To be submitted by 16:30 Hours on 11 th May 2026.
Place of Submission:	Tender Box at Main Gate Security Office, SPA Bhopal.
Availability of Tender Documents:	Download from Institute Website i.e. www.spabhupal.ac.in or https://eprocure.gov.in/cppp/ Portal starting 20 th April 2026.
Date and Place of Tender Opening:	14:00 Hours on 12 th May 2026 at Conference Room, Satpura Block, SPA Bhopal.
Defect liability period:	12 months from the date of completion of work in all respect, unless specifically mentioned in respective items of work.

Section I: Notice Inviting Tender (NIT)

SPAB/PMAYG/2026/NIT-001

SPA Bhopal invites sealed percentage rate tenders in three envelopes system from contractors registered in appropriate class with CPWD or contractors of equivalent categories registered with other State / Central Govt. departments, institutions, undertakings and authorities for the work of **“Construction of Construction Yard and Sub-structure for Prototype Units at School of Planning and Architecture, Bhopal”** as per the following schedule:

NIT No.	SPAB/PMAYG/2026/NIT-001
Name of work:	Construction of Construction Yard and Sub-structure for Prototype Units at School of Planning and Architecture, Bhopal.
Type of Tender:	Open Tender.
Project Number:	SPAB/ PMAYG/2026/001
Estimated Cost:	Rs. 3.5 crores (Approx.)
Time allowed for Completion of Work:	9 Months from the Date of Issue of Work Order.
Availability of NIT/Tender Documents:	Download from Institute Website i.e. www.spabhupal.ac.in or https://eprocure.gov.in/cppp/ Portal starting 20 th April 2026.
Earnest Money Deposit:	Rs. 7,00,000/- (2% of Estimated Cost) to be deposited as per details mentioned in Section – III: Instructions to Bidders.
Processing Fee (Non-refundable):	Rs. 3000/- to be deposited in SPA Bhopal Canara Bank Account (Canara Bank, Bhauri Branch, Account No. 2073201002565, IFSC Code: CNRB0004725, Account Name: SPA Bhopal internal Receipts).
Submission date:	To be submitted by 16:30 Hours on 11 th May 2026.
Place of Submission:	Tender Box at Main Gate Security Office, SPA Bhopal.
Date and Place of Tender Opening:	14:00 Hours on 12 th May 2026 at Conference Room, Satpura Block, SPA Bhopal.
Validity of Bid:	90 Days from the bid opening date.
Communication Address:	Coordinator (Construction Works), PMAY-G Research Project, School of Planning and Architecture, Bhauri, Neelbad Raod, Bhopal – 462030.
Addendum(s) / Corrigendum(s):	SPAB may issue Addendum(s) / Corrigendum(s) to the Tender Document, if any, which shall be issued at least three days before the closing date of submission of tender and shall be placed on website only.

General Information

1. No extension in the Tender Due Date shall be considered on account of delay in receipt of Tender Document by any means. Late / Delayed Tender shall not be considered for evaluation.
2. The Offer shall be valid for 90 days from the date of opening of the tender and may be extended further if required from time to time. The Bidder cannot withdraw their offer within the period of validity / extended validity, failing which they shall be liable for forfeiture of the Earnest Money Deposit.
3. Tender Document and Corrigendum(s) / Addendum(s) if any, shall be posted on the Institute Website i.e. www.spabhopal.ac.in and <https://eprocure.gov.in/cppp/> Portal.
4. Tenderers are advised to complete all submission related work well before Time and Date for Submission of Tender. Any request for modification in the time / date of submission of tender due to tenderer's failure to submit his offer, shall not be accepted.
5. The bid submitted shall become invalid and Tender Processing Fee (if applicable) shall not be refunded if:
 - a. The bidder is found ineligible.
 - b. The bidder does not submit all the documents stipulated in the bid document.
 - c. If any discrepancy is observed in the documents submitted by the bidder or if any information furnished by the bidder is found to be incorrect.

The SPA Bhopal shall not be bound to accept the lowest tender and reserves the right to accept or reject any or all the tenders without assigning any reason whatsoever.

Coordinator (Construction Works),
PMAY-G Research Project,
School of Planning and Architecture,
Bhuri, Neelbad Raod, Bhopal 462030

Section II: The Conditions Herein After Referred To

In construing these conditions, and the specifications, schedule of quantities and Contract Agreement, the following words shall have the meaning herein assigned to them except where the subject or context otherwise requires.

SPAB	School of Planning and Architecture - Bhopal (SPA Bhopal).
Engineer	Engineer in Charge / Coordinator (Construction Works, PMAY-G Research Project) / or any authorised Officer who shall supervise and be in charge of the work.
SPAB Representative	Engineer in Charge / Coordinator (Construction Works, PMAY-G Research Project) / or any authorised Officer who shall supervise and be in charge of the work.
Contractor	Shall mean the contractor to whom the work is awarded and shall include his (their) legal representatives', assignees or successors.
Project Manager	Shall mean the overall in charge / Coordinator (Construction Works of the project representing SPAB.
Site	Shall mean the site of the contract works including any building and erections thereon and any other land inclusive, as aforesaid allotted by the SPAB for the contractor' use.
This contract	Shall mean the contract entered in to by the SPAB with the Contractor at the time of awarding the work with the conditions, the salient features, the schedule of quantities and / or specifications attached hereto and duly signed.
Notice in writing	Shall mean a notice or communication in written, typed or printed or printed characters sent (unless delivered personally or otherwise proved to have been received) by registered post to the last known private or business address or registered office of the addressee and shall be deemed to have received when in the ordinary course of post, it would have been delivered.
Act of insolvency	Shall mean any act of insolvency as defined by the Presidency Towns Insolvency Act, or the Provincial Insolvency Act or any Act amending such original.
Net Prices	If in arriving at the Contract amount the Contractor shall have added to or deducted from the total of the items in the Tender any sum, either as a percentage or otherwise,

then the net price of any item in the Tender shall be the sum arrived at by adding to or deducting from the actual figure appearing in the Tender as the price of that item a similar percentage or proportionate sum provided always that in determining the percentage or proportion of the sum so added or deducted by the contractor, the total amount of any price cost items and provisional sums of money shall be deducted from the total amount of the tender. The expression “net prices” when used with reference to the contract or accounts shall be held to mean rates or prices so arrived at.

Work

The works (or the work) shall unless thereby something either in the subject or context repugnant to such construction, be considered and taken to mean the works by or virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or addition. Whether the word “works” is used it shall cover “installation” also under the same definition.

Force Majeure

Acts of God, earthquake, other natural disasters and such other events over which the Contractor has no control.

Section III: Instructions To Bidders

Percentage rate tenders are invited on behalf of School of Planning and Architecture, Bhopal from contractors registered in appropriate class with CPWD or contractors of equivalent categories registered with other State / Central Govt. departments, institutions, undertakings and authorities for the work of “**Construction of Construction Yard and Sub-structure for Prototype Units at School of Planning and Architecture, Bhopal**” through three envelopes system.

- The description of the work is as follows: - “**Construction of Construction Yard and Sub-structure for Prototype Units at School of Planning and Architecture, Bhopal**”.
- The estimated cost of the work is approximately Rs. 3.5 Crores (Three Crore Fifty Lakh rupees only).
- Tender documents can be Download from Institute Website i.e. www.spabhupal.ac.in or <https://eprocure.gov.in/cppp/> Portal starting 20th April 2026. SPAB may issue Addendum(s) / Corrigendum(s) to the Tender Document, if any, which shall be issued at least three days before the closing date of submission of tender and shall be placed on website only.
- Tenders shall be placed in sealed envelope, in the manner described below with the name of work written on the envelopes. The sealed bids shall be submitted in hard copy in the Tender Box at the Main Gate Security Office of SPA Bhopal before 16:30 Hours on 11th May 2026.
- The tender documents shall be opened at 14:00 Hours on 12th May 2026 at Conference Room, Satpura Block, SPA Bhopal in the presence of Coordinator (Construction Works, PMAY-G Project), or his authorized representative.
- An Earnest Money Deposit of Rs. 7,00,000/- (2% of Estimated Cost) shall be deposited by the bidder in the form of Account Payee Demand Draft, Fixed Deposit Receipt, Banker's Cheque or Bank Guarantee from any of the Commercial Banks or payment online in SPA Bhopal Canara Bank Account (Canara Bank, Bhauri Branch, Account No. 2073201002565, IFSC Code: CNRB0004725, Account Name: SPA Bhopal internal Receipts). The proof of the payment shall be furnished along with the bid, as per procedure described below. The bid security (EMD) shall remain valid for a period of forty-five days beyond the validity duration of the bid.
- A Tender Processing Fee (Non-refundable) of Rs. 3000/- shall be deposited by the bidder in SPA Bhopal Canara Bank Account (Canara Bank, Bhauri Branch, Account No. 2073201002565, IFSC Code: CNRB0004725, Account Name: SPA Bhopal internal Receipts) and proof of the payment shall be furnished along with the bid, as per procedure described below.
- The bid shall be deemed valid for a duration of 90 days from the date of Opening of Tender.
- Eligibility Criterion (Pre-qualification Criteria)- The bidder fulfilling the below mentioned conditions shall only be considered for the opening of Financial Bid:

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- The bidder shall have a valid Permanent Account Number (PAN) of the Bidder from Income Tax Authorities.
 - The bidder shall have valid GSTIN Registration certificate.
 - The bidder should be registered with the appropriate authorities under Employees Provident Fund (EPF) and Employees State Insurance Corporation Acts (ESIC).
 - The bidder shall be registered under Contract Labour (Regulation and Abolition) Act, 1970.
 - The bidder shall be responsible for compliance with all the provisions of Contract Labour (Regulation and Abolition) Act, 1970 and other labour regulations, as applicable and shall have clean track record towards timely payment of their taxes / dues to the concerned organizations / departments.
 - The bidder should not have been blacklisted / debarred on account of fraudulent or corrupt practices by any of the government agencies / institutions, including but not limited to Centrally Funded Technical Institutions, Central Universities, Institutions of National Importance under Government of India or State Governments, Autonomous bodies and Government organizations like railways, PWD, CPWD, MES, etc.
 - The bidder shall not have been subjected to forfeiture of EMD / Performance Guarantee in any of the previous contracts with any organization.
 - The bidder must have an average Annual Turnover of Rs. 3.5 Crores (Three Crore Fifty Lakh rupees) in last 03 Financial Years (2023-24, 2024-25 and 2025-26).
 - The bidder must be having a valid registration with at least one government or semi-government organisation such as the Railways, PWD, CPWD, MES, etc. in an appropriate class, for undertaking works of a nature similar to those outlined in this tender.
 - Experience with Similar Works (Building Works including electrical / IT works) – either completed or ongoing: Three similar works each of value not less than 40% of estimated cost of proposed work or two similar works each of value not less than 60% of estimated cost of proposed work or one similar work of value not less than 80% of estimated cost of proposed work in last 5 years ending last day of the month previous to the one in which the tenders are invited. The date of award of work shall be considered for deciding the eligibility of works under this criterion. For arriving at cost of similar work, the awarded value of work shall be brought to current costing level by enhancing the awarded value of work at simple rate of seven percent per annum, calculated from the date of award of work to the last day of the month previous to the one in which the tenders are invited.
 - The bidder must be having a registered office in Bhopal. If not, the bidder shall submit an undertaking on letterhead that a site office will be set up within 15 days of award of work. The space for site office shall be provided by SPA Bhopal.
 - The bidder must have an adequate number of technical and administrative personnel to ensure the proper execution of the contract. A list of at least three

employees proposed to be engaged with the project, if awarded, shall be submitted, along with their educational qualifications and professional experience. Of these, a minimum of two must possess technical qualifications (either a B.Tech. or Diploma) relevant to the scope of work.

- The bidder must submit an Integrity Pact signed by the bidder in the presence of a witness. The same shall be signed by Coordinator (Construction Works), PMAY-G Research Project, SPA Bhopal / any other authorised representative of SPA Bhopal, if the bid bets accepted and the same shall constitute a part of the contract document.
- The bidder shall place the three separate envelopes (called inner envelopes) marked “Earnest Money Deposit”, “Technical Bid” and “Financial Bid”, in one outer envelope (the main envelope) clearly mentioning the name of the work and details of the bidder. The inner envelopes shall have markings as follows:
 - Earnest Money Deposit and Name of the Work.
 - Technical Bid and Name of the Work.
 - Financial Bid and Name of the Work.
- The bidder shall ensure that all the envelopes are properly bound and sealed.
- Sequence of opening of envelopes:
 - After opening the main envelope, the envelope 1 (inner envelope 1) containing the proof of Earnest Money Deposit and Processing Fee shall be opened first.
 - If EMD and Processing Fee details are found in order, the envelope (inner envelope 2) containing Technical Bid shall be opened next.
 - The envelope 3 (inner envelope 3) containing Financial Bid shall be opened only for those tenderers whose EMD details, Processing Fee details and eligibility documents are found in order.
 - The unopened tenders shall be returned to the tenderers after the final decision on the tender is reached.
- Contents of the envelopes:
 - Outer envelope clearly mentioning the name of the work and the details of the bidder shall have:
 - Three separate envelopes (called inner envelopes) marked “Earnest Money Deposit”, “Technical Bid” and “Financial Bid”.
 - Inner envelope - 1 mentioning Earnest Money Deposit and Name of the Work shall have:
 - Proof of payment / Instrument of Earnest Money Deposit.
 - Proof of payment of Processing Fee.
 - Inner envelope - 2 mentioning Technical Bid and Name of the Work shall have:
 - Letter for Submission of Technical Bid as per Annexure – I.
 - Self-attested copy of Certificate of Incorporation or Registration Certificate showing type of firm.
 - Self-attested copy of Permanent Account Number (PAN).

- Self-attested copy of GSTIN Registration Certificate.
- Self-attested copies of the Registration with EPF and ESIC.
- Self-attested copy of Labour Registration or License obtained by the agency for any previous assignment.
- Self-declaration on firm's letterhead that the agency has not been defaulted in respect of payment of their taxes / dues (EPF, ESIC, GST, etc.) and stands in compliance with all applicable labour provisions concerning the manpower deployed or works executed by the agency; as per the format given (Annexure - II).
- Affidavit on Rs. 100 stamp paper stating that the bidder firm has not been blacklisted / debarred, to be submitted as per the format given (Annexure - III).
- Self-declaration on firm's letterhead regarding non-forfeiture of EMD / Performance Guarantee as per the format given (Annexure - IV).
- Certified copy of Annual Turnover by the Chartered Accountant for the Financial Year 2023-24, 2024-25 and 2025-26.
- Self-attested copy of proof of valid registration with at least one government or semi-government organisation such as the Railways, PWD, CPWD, MES, etc. in an appropriate class, for undertaking works of a nature similar to those outlined in this tender.
- Details of either completed or ongoing similar works (Building Works including electrical / IT works) in the last 5 years as per the format given (Annexure – V). Annexure – V must be appended with work orders / award letters / completion or experience certificates or other similar documents clearly stating the date of award of work, awarded value of work and scope of work to verify the information provided in Annexure – V.
- Self-attested copy of proof of registered office in Bhopal. If not, an undertaking on firm's letterhead stating that site office will be set up within 15 days of award of work as per the format given (Annexure - VI).
- Details regarding technical and administrative personnel proposed to be engaged with the project as per the format given (Annexure - VII).
 - Inner envelope - 3 mentioning Financial Bid and Name of the Work shall have:
 - Letter for Submission of financial bid as per the format given (Annexure - VIII).
- The site for the work is available. The time allowed for completion of the work shall be 9 months from the date of Issue of Work Order.
- Copies of other drawings and documents, if any, pertaining to the work shall be available for inspection by the prospective bidders at the office of Engineer in Charge / Coordinator (Construction Works, PMAY-G Research Project).
- The bidders must visit site before quoting for the above-mentioned works to acquaint themselves with the conditions on-site and to arrive at precise nature and quantum of work.

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- Tenderers are advised to inspect and examine the topography of the site and satisfy themselves before submitting their tenders as to the nature of the work and site in general (so far as is practicable), 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. Tenderer shall be deemed to have full knowledge of the site and its location whether he inspects it or not and no extra charges 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, access facilities for workers and all other services required for executing the work unless otherwise specifically provided for in the contract documents. Submission of tender by a tenderer implies that he has read these instructions and all other contract documents; and has made himself / herself aware of the scope and specifications of the work to be done; and of conditions and rates at which stores, tools, plant, services, etc. (if any) shall be provided to him by SPA Bhopal; and local conditions and other factors having a bearing on the execution of the work.
 - The charges for electricity and water consumed during works shall be borne by the contractor.
 - An Integrity Pact, if applicable (as per Annexure – IX) shall be signed by the bidder and the Engineer in Charge / Coordinator (Construction Works, PMAY-G Research Project) / any representative of Director, SPA Bhopal in the presence of two witnesses before the award of work order to the selected bidder / contractor.
 - The Competent Authority of SPA Bhopal does not bind himself / herself to accept the lowest or any other tender, and reserves to himself the authority to reject any or all of the tenders received without assigning any reason. Any tender, in which any of the prescribed conditions is not fulfilled or any additional condition including that of conditional rebate is put forth by the tenderer, shall be summarily rejected.
 - The Competent Authority of SPA Bhopal reserves the right to accept the whole or any part of the tender; and the tenderer shall be bound to perform the same at the rate quoted.
 - The company or firm shall not be permitted to tender for works at SPA Bhopal in case near relative(s) of any of its employees is / are posted in any capacity - either as non-executive or executive employee - at SPA Bhopal
 - Canvassing whether directly or indirectly, in connection with tenders is strictly prohibited and the tenders submitted by the contractors who resort to canvassing shall be liable for rejection.
 - The letter of acceptance of tender shall be issued first in favour of the successful Tenderer / Bidder. After submission of the Performance Guarantee and signing of Integrity Pact, the letter of award of work shall be issued. On the issuance of letter of award of work, the successful Tenderer / Bidder shall, within 15 days from such date, formally sign the Agreement on non-judicial stamp paper as per Annexure - X attached to this tender document. The contract shall be deemed to have come into effect on the date of signing of Agreement.

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- The Contractor whose tender is accepted, shall be required to furnish a Performance Guarantee (@ 5 percent of the tendered amount) within 15 days from the date of letter of acceptance of tender. The Performance Guarantee shall be deposited by the bidder in the form of Account Payee Demand Draft, Fixed Deposit Receipt from a Commercial Bank or Bank Guarantee from any of the Commercial Banks or payment online to SPA Bhopal Canara Bank Account (Canara Bank, Bhauri Branch, Account No. 2073201002565, IFSC Code: CNRB0004725, Account Name: SPA Bhopal internal Receipts). The same shall be initially valid up to the stipulated date of completion of work plus minimum 6 months beyond that. In case the time for completion of work gets extended, the contractor shall get the validity of Performance Guarantee extended to cover such additional time for completion of work.
 - The contractor whose tender is accepted shall also be required to furnish by way of Security Deposit, an amount equal to 2.5% of the tendered amount of the work for the fulfillment of contract. The Security deposit shall be collected by deductions from the running bills as well as final bill of the contractor at the rates mentioned above.
 - No requests regarding Mobilization Advance / Secured Advance shall be entertained.
 - Payment to the contractors – for both running and final bills - shall be made through online mode only after deduction of statutory taxes, dues, royalty (if any), Security Deposit (as per percentage mentioned above), other deductions (security or otherwise) as mentioned with respective items of work and penalty (if any, as per conditions mentioned in CPWD General Conditions of Contract – 2023); and after due certification of work and measurement by Engineer in Charge / Coordinator (Construction Works, PMAY-G Research Project). The bidder / contractor shall furnish the bank details for the same.
 - For billing purposes, the rates of all individual items shall be arrived at by adding / subtracting the percentage quoted by the bidder in the financial bid from the item wise rates mentioned in Section VIII: Schedule of Quantities.
 - The quantities of individual items may vary during the course of execution of works.

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Section IV: Conditions of Contract

In addition to the conditions / details mentioned in other sections of this tender, please refer to the documents available at the office of Coordinator (Construction Works, PMAY-G Research Project), SPA Bhopal or CPWD General Conditions of Contract Construction Works / Maintenance Works – 2023 and other related documents available on CPWD website for information regarding:

- General Guidelines, Rules and Directions.
- General Conditions and Clauses of Contract.
- Safety Code.
- Model Rules for the Protection of Health and Sanitary Arrangements for Workers.
- Labour Regulations.
- Other work-related procedural details.
- Specifications.

Please refer to the documents available at the office of Coordinator (Construction Works, PMAY-G Research Project), SPA Bhopal or CPWD General Conditions of Contract Construction Works / Maintenance Works – 2023 and other related documents available on CPWD website.

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Section V: Scope of Work

1. Name of Work: Construction of Construction Yard and Sub-structure for Prototype Units at School of Planning and Architecture, Bhopal.
2. Description of Site: School of Planning and Architecture Bhopal, Neelbad Road, Bhauri Bhopal - 462030.
3. Procurement of Materials
The contractor shall be responsible for the procurement of all the materials required to complete the work and before the procurement of materials, sample approval shall be obtained from the Engineer-in-charge / Coordinator (Construction Works, PMAY-G Research Project).
4. Scope of Work
 - i. Civil, Water Supply, Sewerage, Electrical and IT Work for Construction Yard.
 - ii. Sub-structure Work for Prototype Units.
 - iii. Site level Water Supply, Sewerage, Electrical and IT Works.

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Section VI: Technical Specifications

Along with list of approved makes mentioned in this document, CPWD Specifications shall be followed for all items of work. Wherever CPWD specifications are not available, other relevant specification in consultation with Engineer in Charge / Coordinator (Construction Works), PMAY-G Research Project, SPA Bhopal shall be followed.

Detailed Specifications and Scope of Work for Tensile Membrane

Designing, supplying and installation of Tensile Membrane Structure in the proposed Construction Yard including support structure. The scope of work shall include supply and fixing of tensile membrane fabric, supply, fabrication and installation of tubular support structure / members, connection system and other necessary supporting MS / cable structure as per approved and vetted design. The detailed scope of work for the above is as under:

1. Designing:- A concept drawing for the proposed structure is provided with the tender document however, the agency has to submit the final design and get it approved by the competent authority along with the Structural Drawing. The designing needs to be done in coordination with the civil work to be executed up to plinth level and toe columns above by the agency under separate items of work. The contractor shall be required to submit the following drawings & information for approval of the competent authority before commissioning the work:
 - a. 3 sets of final shed design including plan, section, elevation, isometric / 3-D rendered view etc. per the requirement.
 - b. 3 sets of structural drawings tubular support structure duly vetted by the competent authority. Structure Design of structural steel members duly done by a competent structure engineer and vetted by competent authority (as per Special Condition No. 1)
 - c. 3 Sets of hard copy and soft copy of shop drawing for fabrication work.
 - d. Shop drawings for fixing, pattern of roofing fabric.
 - e. Complete layout dimensions for every unit / group of units with dimensions required for erection/execution purposes.
 - f. Wind analysis in accordance with site conditions.
 - g. Any other drawing / information not specifically mentioned above but deemed to be necessary for the job by the contractor.
2. Structural Steel Frame work as per approved and vetted structure design:- Supplying, providing, fabricating, assembling, hoisting, erecting and placing in position MS Built-up section / Tubular Structure.
 - a. MS built-up section:- Rolled section & plates conforming to IS 2062.
 - b. Tubular Structure:- Made from steel hollow sections, ISI marked from SAIL / TATA / JINDAL or Equivalent Grade conforming to IS 1161/4923/1239.
 - c. Above to be riveted, bolted or welded in the profile shape as per drawings for all column, base plates, reef portals, purlins, façade frame, canopy steel structure, etc. or all other similar works with special plate connector, pinion joints, plates, hollow sections, etc. The work includes preparation of detailed fabrication and erection drawings of structural steel work from design drawings, transportation

from fabrication yard, cutting, threading, machining, leads and lifts up to all heights, tools and plants and necessary scaffolding etc. required for all operations involved to make structure of Tensile Membrane Shade. The structure needs to be executed as per approved drawings of tensile fabric profile, including all arch beams, curved lateral beams and bracings, vertical support columns, nodal joints, etc. all complete for trusses and framed work, including cutting, hoisting and fixing in position. The complete structure to be coated with one coat of epoxy zinc primer and two coats of Polyurethane (PU) paint as per approved shade on steel work at all locations after proper surface cleaning.

3. Tensile fabric:- 1050 GSM of Serge Ferrari or Mehlar or Sieon or Sattler Atlas or equivalent fabric over MS tubular frame work including cutting, welding and required MS / SS cables, plates and necessary arrangement for fixing of fabric as per design and standard industrial practise in any reasonable geometric shape including making eaves around the roof to collect rain water as per approved detailed design, drawing and as per direction of Engineer in charge (nothing extra is payable for wrapping/clipping of fabric around MS frame, overlaps, knots). This work shall include raw material, patterning, forming, cutting, welding, fixing and installation with GI cables, flashing, hot dipped galvanized e corner plates and hardware with EN8 grade 8.8 – HDG, etc. including lifts up to all heights, tools and plants, and necessary scaffolding, etc. required for all operations. The work also includes tensioning of fabric, aluminium strips, fixing on top of fabric including all materials, labour, scaffolding, fitting materials, cutting to size and shape wherever required, etc. all complete as per direction of Engineer-in-Charge (Colour of the Fabric roof to be decided by the Engineer-in-Charge and no wastage shall be paid).
4. Civil Work:- The civil work upto plinth level and concrete toe columns above (upto 600 – 1000mm above plinth level) to be executed by the agency under separate items of the schedule. The designing of tensile membrane structure needs to be done in coordination with the civil work to be executed upto plinth level and toe columns above.
5. Mode of Measurement: Plan area to be measured for payment purpose for entire canopy work including structure steel frame work, painting, etc. all complete as a one composite job. No additional for tubular support structure and associated works shall be made separately. Provisions for additional surface area of fabric roofing / canopy for its conical shape or cone height shall be made within the quoted rate for per unit plan area. Nothing extra is payable for wrapping / clipping of fabric around MS frame, overlaps, knots.
6. Other provisions: Lightening arrestor and earthing provisions to be provided within scope of this item of work. Stainless Steel components wherever required must be of 316 Grade. The specifications for any missed out components shall be discussed with Engineer in Charge / Coordinator (Construction Works), PMAY-G Research Project, SPA Bhopal and shall be followed as per their instructions.
7. Vetting Requirement: A conceptual drawing has been given with this tender to guide the contractor to know the type and nature of work to be executed. However, tender drawing attached with this document is not the final drawing to be adopted for the construction. Before execution of the work the agency must get the design of structural framework from any structural consultant and get the same vetted from any Government Engineering College (preferably, NIT or IIT) or other approved competent agency. The work is to be executed strictly as per the approved structural design duly vetted by approved authority. All expenses for the above activity shall be borne by the contractor hence the rate quoted should also include such expenses.

8. Maintenance manuals: Prior to completion of the work and handing over of the project, the contractor shall submit one set of following details:
- a. List of recommended spare parts with spare part codes, specifications & source of procurements.
 - b. Catalogue/brochure for fabric roofing.
9. Warranty: A defect liability period for overall structure stability of shade (i.e. frame and fabric) shall be of 15 years and 5% of total amount of this item will be withheld for 5 years on account of defect liability). Structural, architectural and shop drawings of MS structure and shed for execution of this item shall be submitted to Engineer-in-charge for approval before execution of this item. Manufacturer certificate of fabric and proof of approved material i.e. tax invoice and purchase order for authenticity of material shall be submitted by agency to Engineer-in-charge. This item shall be get executed by specialized agency approved by engineer-in-charge.

Specifications

- Weight 1050 gm/sqm
- Fabric Thickness > 0.8 mm
- Max Tensile Strength > 5000 (N/5 cm) in both warp / weft
- Tear Strength > 500 N in both warp / weft
- Cold Resistance - 400 Degree Centigrade
- Heat Resistance + 700 Degree Centigrade
- Surface Treatment (Top/Back) PVDF / PVDF
- Quality confirming with ISO 9001
- Solar reflective index More than 95 %
- Crack resistance No Cracks
- Colour As approved by EIC.
- Transparency Either translucent or opaque (blackout fabric) as approved by EIC.
- Architectural Tensile Fabric of Type II Category Serge Ferrari or Mehlar or Sieon or Sattler Atlas or equivalent fabric
- Finish Nano-polymered fluorinated lacquer, Multi-composed PVDF-lacquer system on both sides, protected against microbial and fungal attack, UV-protected, low-wick, Titanium dioxide (TiO₂) front side primer
- Temperature resistance -30 to +70 Degree Centigrade

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Section VII: List of Approved Makes

Civil Works (For work covered under this Contract)

S. No.	Item Name	Approved Makes
1	Cement (53 / 43 grade PPC / OPC, as required)	ACC, UltraTech, JK, Ambuja or approved equivalent.
2	Ready Mix Concrete	UltraTech, ACC, Mycem or approved equivalent.
3	Steel Reinforcement	SAIL, Tata Tiscon, RINL, Jindal or approved equivalent.
4	Formwork Ply	Green Ply, Kitply, Merino, Century or approved equivalent.
5	Admixtures (Water Reducing, Retarding, Plasticizers)	Sika, Fosroc, Cico or approved equivalent.
6	M.S. Pipe, Tubes, Bar, Flats, Angle, Tee Section	Tata, SAIL, Jindal or approved equivalent.
7	Concrete Surface Retardant, cleaner, Stain Remover, Sealer, Stain, Patching Additive, Hardener, Sealer	Sika, Fosroc, Bondit or approved equivalent.
8	Water proofing compound	Cico, Pidilite, Fosroc or approved equivalent.
9	Dash Fasteners / Mechanical Anchors	Hilti, Fischer, Bosch or approved equivalent.
10	Stainless Steel Bolts, Washers and Nuts	Viraj Profiles, Deepak, Usha, Raaj Fastener or approved equivalent.
11	Flush Door Shutter	Merino, Kitply, Century or approved equivalent.
12	Door Lock and Handle (Stainless Steel)	Godrej, Hardwyn, Dorma, Dorset, Geze or approved equivalent.
13	Door closer	Godrej, Samrat, Hardwyn or approved equivalent.
14	Door Hardware	Godrej, Samrat, Dorset, Hardwyn, Hafele, Geze or approved equivalent.
15	Toilet Accessories	Jaquar, Parryware, Hindware or approved equivalent.
16	Mirror Glass	ModiGuard Glass, Saint-Gobain, Asahi or approved equivalent.
17	Glazed Ceramic Tiles	Kajaria, Somany, Johnson or approved equivalent.
18	Zinc Phosphate Primer	ICI, Berger, Zigma or approved equivalent.
19	Steel Door Hardware	Becker Fire Solutions, Dorma, Guardian or approved equivalent.
20	Welding Electrode	Ador Welding, ESAB India, D&H India, Superon Technik or approved equivalent.

21	Two Point locking Openable Window Handle	Aries Hardware, Dhanuka Fittings, Nidhvan Locks, Ashik Enterprises or approved equivalent.
22	E.P.D.M. / Neoprene Gaskets	Milan Rubber Industries, Osaka Rubber, Asha Rubber or approved equivalent.
23	Clear Float Glass	Saint-Gobain, Guardian, AIS, ModiGuard or approved equivalent.
24	Structural Aluminium	Jindal, Hindalco, Nalco or approved equivalent.
25	Weather Silicon make and grade	Dow Corning, Wacker, GE or approved equivalent.
26	Door Locks (Concealed / Surface mounted)	Dorset, Godrej, Hafele or approved equivalent.
27	Door Handle (Concealed / Surface) (Stainless Steel)	Godrej, Harrison, Dorma, Alu Alpha or approved equivalent.
28	SS Tower Bolt	Harrison, Mumta Lock Industries (Aligarh), Alu Alpha or approved equivalent.
29	Rainwater Pipes and fittings (UPVC)	Finolex, Supreme, SFMC or approved equivalent.
30	CI Pipes / fittings (I.S: 3989-1984)	NECO, SKF or approved equivalent.
31	CPVC Pipes and Fittings	Ashirwad, Price, Astral, Plasto or approved equivalent.
32	C.P. Grating and Cockroach trap	Chilly, Jayna or approved equivalent.
33	CI Manhole frame and Covers and GI grating	Vikrant, BIC, NECO or approved equivalent.
34	Gate Valve	Zoloto, Saint-Gobain, Leader, Kartar or approved equivalent.
35	Acid / Alkali Resistant Tile	Somany, Nitco, Kajaria, Bell, Johnson or approved equivalent.
36	Acrylic Emulsion Paint	Asian (Royale), ICI (Velvet), Berger (Luxol Silk), Nerolac (Allscapes) or approved equivalent.
37	Aluminium Composite Panel	Alpolic, Alucobond, Reynobond, Eurobond, Alstrong or approved equivalent.
38	Aluminium Extrusions	Hindalco, Nalco, Jindal or approved equivalent.
39	Aluminium Sections	Jindal, Hindalco, NALCO, Vedanta Aluminium or approved equivalent.
40	Annealed Float Glass	Saint-Gobain, Modi Guard, Pilkington or approved equivalent.
41	Centrifugally Cast-Iron Pipe and Fittings	NECO, RIF, SKF, Kapilansh or approved equivalent.
42	CP Bottle Trap	Parryware, Hindware or approved equivalent.
43	CP Brass Bibcock, Pillarcock, Stopcock, Angle Valve, Concealed Stop Cock.	Jaguar, Parryware, Hindware or approved equivalent.
44	CP fittings	Jaquar, Hindware, CERA, and Prayag or approved equivalent.
45	CP Waste Coupling	Kamal, Jaquar, Kohler, Ashirvad, Nova or approved equivalent.

46	Dual Flush flushing cistern	Hindware, CERA, Parryware, Jaguar or approved equivalent.
47	Float Glass	Modiguard Float, Saint-Gobain, Asahi, Sejal or approved equivalent.
48	Flush Doors	Kutty flush door, Anchor, Kanara, Kitply, National, Swastic or approved equivalent.
49	Flush Valve	Jaguar, Kohler, Neo, Prayag or approved equivalent.
50	Galvanized / Stainless Steel Anchor Fasteners	Shakti, Arrow, Hilti, Fischer or approved equivalent.
51	Gun Metal Gate Valve	Zoloto, Leader, Saint or approved equivalent.
52	Hydraulic Door Closer	Hardwyn, Godrej, Dorset or approved equivalent.
53	Jet Assembly for EWC	Parryware, CERA, Kamal (Mahendra) or approved equivalent.
54	Laminate	Merino, Greenlam, Decolam, Century, Formica or approved equivalent.
55	Low Level PVC Cistern Single flush	Hindware, Cera, Parryware, Ruhe, Simpolo or approved equivalent.
56	Orissa Pan	Parryware, Hindware or approved equivalent.
57	Plastic Connection Pipe	Parryware, Kamal, Polytuf or approved equivalent.
58	Aluminium Powder Coating	Nerolac, Jotun, Berger Paints or approved equivalent.
59	Primer	Asian, Dulux, Berger, Nerolac or approved equivalent.
60	PVC Rainwater Pipe and Fitting	Finolex, Classic, Kisan or approved equivalent.
61	Solid Plastic Seat Cover for EWC	Parryware, CERA, Hindware or approved equivalent.
62	Stainless Steel Screws	Viraj Profile, Sundram, Arrow or approved equivalent.
63	Structural Silicon Sealant	Alstone, Anabond, Wacker or approved equivalent.
64	Super plasticizer	Dubond, Sika, Fosroc or approved equivalent.
65	Synthetic Enamel Paints	ICI (Dulux), Asian (Apcolite), Berger (Luxol), Nerolac or approved equivalent.
66	Exterior wall paint	Berger, Asian Paints Ultima, Nerolac or approved equivalent.
67	Towel Ring / Towel Rod / Towel Rack	Jaguar, Kohler, Ruhe, Kamal, Marc or approved equivalent.
68	Vitreous China Wash Basin Oval	Hindware, Parryware or approved equivalent.
69	Vitreous China Floor Moulded European with Cistern Commode	Parryware, Hindware or approved equivalent.
70	Vitreous China Floor Mounted European W.C. without cistern	Parryware, Hindware or approved equivalent.
71	Vitreous China Half Stall Urinal	Hindware, Parryware or approved equivalent.

72	Vitreous China Low Level Cistern for European W.C.	Hindware, Parryware or approved equivalent.
73	RCC Pipe NP2	Raghav Concrete Product, Super Pipe Industries, Maa Vaishnav RCC or approved equivalent.
74	Waste Pipe	Astral, Prince, Supreme, Finolex or approved equivalent.
75	Water Proofing Compound (Liquid)	Pidiproo, Cico, Impermo or approved equivalent.
76	White Cement	JK, Birla, Sakarni White Cement or approved equivalent.
77	Wall putty	JK, Birla white, Berger Wall Care Putty or approved equivalent.
78	SW Gully Trap	Finolex, Astral or approved equivalent ISI marked.
79	SFRC Manhole Cover	K.K. Concrete or approved equivalent.
80	Polyethylene Water Storage Tank	Sintex, Star, Polycon or approved equivalent.

Electrical Works (For work covered under this Contract)

S. No.	Item Name	Approved Makes
1	MCCB / MCB / MCB DB	L&T, Siemens, Schneider, Legrand or approved equivalent.
2	LT Cables	L&T, Finolex, Polycab, RR, Havells or approved equivalent.
3	PVC Conduit Pipes	Finolex, Swastik, Ashirwad or approved equivalent.
4	Ceiling Fans	Bajaj, Havells, Crompton or approved equivalent.
5	Exhaust Fans	Bajaj, Havells, Crompton or approved equivalent.
6	LED Fittings and Luminaries (Indoor)	Philips, Havells, Bajaj, CG or approved equivalent.
7	Modular Switches	Anchor, Legrand, ABB, L&T or approved equivalent.
8	LT Panel	L&T, Legrand, ABB, C&S or approved equivalent.
9	Cable Lugs	Dowells, 3-D, Jainson or approved equivalent.
10	Cable Glands	Dowells, Siemens, Comet or approved equivalent.
11	Submain / Circuit Wiring	Polycab, Havells, Finolex, RR or approved equivalent.
12	Modular PVC Box	Anchor, Legrand, ABB or approved equivalent.
13	Split AC Units	Voltas, L.G., Carrier or approved equivalent.
14	Lightening Arrestor, G.I. Strip, G.I. Box, Down Rods, Copper Plate.	ISI marked.
15	TPN Box	Legrand, ABB, L&T or approved equivalent.
16	ACB	ABB, L&T or approved equivalent.

IT Works (For work covered under this Contract)

S. No.	Item Name	Approved Makes
1	Network Switch	Cisco, HPE Aruba, Juniper Networks, Dell or approved equivalent.
2	Wireless access point (Indoor / Outdoor)	HPE Aruba, Cisco, Ruckus Networks, Juniper Networks or approved equivalent.
3	LIU	CommScope, Corning, Panduit, Molex or approved equivalent.
4	Patch panel	CommScope, Panduit, Molex, Legrand or approved equivalent.
5	CAT 6 cable (unshielded)	CommScope, Panduit, Molex, Schneider Electric or approved equivalent.
6	Optical fibre	CommScope, Polycab India, Finolex Cables or approved equivalent.
7	CAT 6 Patch Cord 1m long	CommScope, Panduit, Molex, Legrand or approved equivalent.
8	Fibre Patch Cord	Corning, CommScope, Panduit, Molex or approved equivalent.
9	4 MP IP IR Dome Camera	Honeywell, Matrix, Sparsh or approved equivalent. Note: Only STQC certified camera models complying with the required technical specifications shall be accepted.
10	Rack	Schneider, Legrand, Vartib or approved equivalent.
11	I/O Boxes, complete (with RJ 45 ports)	CommScope, Schneider, Legrand or approved equivalent.

Note:

1. The option of “approved equivalent” shall only be used if any of the approved makes are not available but with the consent of the Engineer-in Charge or if instructed by the Engineer-in Charge in writing.
2. The Contractor shall produce samples before material procurement for approval from Engineer-in Charge for all materials required for work. The makes of the material (out of the above-mentioned list) to be procured shall be decided in consultation with the Engineer-in Charge. The decision of the Engineer-in Charge shall be final in this regard.
3. In respect of the materials for which approved makes are not specified above, the same shall be decided before procurement as per the samples approved by Engineer-in-charge.

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Section VIII: Schedule of Quantities

(For Financial Bid – Percentage Rate)

Schedule of Quantities						
Construction of Construction Yard and Sub-structure for Prototype Units at School of Planning and Architecture, Bhopal.						
A. Civil Works						
S. No.	Description / Item of Work	Qty.	Unit	Rate	Amount	CPWD DSR - 2023
A.1	Earth Work					
1	Excavation in soil using hydraulic excavator and including cutting and loading in tippers, trimming bottom and side slopes in accordance with requirements of lines, grades and cross section, and transporting to the appropriate ground contour, location and levelling and dressing earth neatly with all lifts and lead upto 1000 metre.	7000	Cum	55	385000	MP PWD SOR 2.34
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, for all lift, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m.					2.8
2.1	All kinds of soil.	720	Cum	260.30	187416	2.8.1
3	Excavating trenches by mechanical / manual means of required width for pipes, cables, etc including excavation for sockets, and dressing of sides, ramming of bottoms, for all depth, including getting out the excavated soil, and then returning the soil as required, in layers not exceeding 20 cm in depth including consolidating each deposited layer by ramming, watering, etc. and disposing of surplus excavated soil as directed, within a lead of 50 m :					2.10
3.1	All kinds of soil					2.10.1
3.1.1	Pipes, cables etc, not exceeding 80 mm dia.	250	Meter	215.60	53900	2.10.1.1
3.1.2	Pipes, cables etc. exceeding 300 mm dia but not exceeding 600 mm	330	Metre	549.75	181417.5	2.10.1.3
4	Excavation work by mechanical means (Hydraulic excavator)/ manual means in foundation trenches or drains (not exceeding 1.5m in width or 10 sqm on plan), including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soils as directed, within a lead of 50 m.					2.9
4.1	Hard rock (blasting prohibited)	82	Cum	1523.05	124890.1	2.9.3

5	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and for all lift.	480	Cum	196	94080	2.25
6	Supplying and filling in plinth with crusher stone dust / coarse sand under floors including, watering, ramming and compacting in layers not exceeding 20cm in depth and dressing complete. Note: - Maximum thickness of this layer shall be 20 cm.	360	Cum	672	241920	MP PWD SOR 2.26
7	Supplying and filling in plinth under floors including watering ramming consolidating in layers not exceeding 20cm in depth and dressing complete					MP PWD SOR 2.27
7.1	With hard muram/Copra soil having CBR >12 % at under floors including watering, ramming and compacting (minimum compaction 95% of MDD) in layers not exceeding 20cm in thickness and dressing complete. (Note:- maximum thickness of this layer to be provided shall be 30cm)	650	Cum	393	255450	MP PWD SOR 2.27.1
Sub-Total					1524073.6	
A.2 Concrete Work						
8	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work upto plinth level :					4.1
8.1	1:3:6 (1 Cement : 3 coarse sand (zone-III) derived from natural sources : 6 graded stone aggregate 40 mm nominal size derived from natural sources)	85	Cum	7178.75	610193.75	4.1.6
8.2	1:2:4 (1 Cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 40 mm nominal size derived from natural sources)	170	Cum	7780.30	1322651.00	4.1.4
9	Providing and laying in position ready mixed or site batched design mix cement concrete for plain cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana/ Ordinary Portland /Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering and finishing as per direction of the engineer-in-charge; for the following grades of concrete. Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the minimum specified cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.					4.20
9.1	All works above plinth and upto floor V level					4.20.2
9.1.1	Concrete of M20 grade with minimum cement content of 270 kg /cum	38	Cum	9568.25	363593.5	4.20.2.3

10	Centering and shuttering including strutting, propping etc. and removal of form work for :						4.3
10.1	Foundations, footings, bases for columns.	260	Sqm	392.15	101959.00	4.3.1	
10.2	Retaining walls, return walls, walls (any thickness) including attached pilasters, buttresses, plinth and string courses fillets, kerbs and steps etc.	24	Sqm	842.50	20220.00	4.3.2	
11	Making plinth protection 50 mm thick of cement concrete 1:3:6 (1 cement : 3 coarse sand (zone-III) derived from natural sources : 6 graded stone aggregate 20 mm nominal size derived from natural sources) over 75 mm thick bed of dry brick ballast 40 mm nominal size, well rammed and consolidated and grouted with fine sand, including necessary excavation, levelling & dressing & finishing the top smooth.	170	Sqm	749.30	127381	4.17	
12	Providing and laying damp-proof course 40 mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 12.5 mm nominal size derived from natural sources)	90	Sqm	410.85	36976.50	4.10	
13	Providing and laying damp-proof course 50 mm thick with cement concrete 1:2:4 (1 cement : 2 coarse sand (zone-III) derived from natural sources : 4 graded stone aggregate 20 mm nominal size derived from natural sources).	75	Sqm	495.75	37181.25	4.11	
	Sub-Total				2620156		
A.3 Reinforced Cement Concrete							
14	Centering and shuttering including strutting, propping etc. and removal of form for :						5.9
14.1	Foundations, footings, bases of columns, etc. for mass concrete	380	Sqm	392.15	149017	5.9.1	
14.2	Suspended floors, roofs, landings, balconies and access platform	72	Sqm	927.25	66762.00	5.9.3	
14.3	Lintels, beams, plinth beams, girders, bressumers and cantilevers	1200	Sqm	736.40	883680	5.9.5	
14.4	Columns, Pillars, Piers, Abutments, Posts and Struts	220	Sqm	961.30	211486.00	5.9.6	
14.5	Weather shed, Chajjas, corbels etc., including edges	45	Sqm	951.10	42799.5	5.9.19	
15	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level.						5.22
15.1	Thermo-Mechanically Treated bars of grade Fe-500D or more.	33000	Kg	107.85	3559050.00	5.22.6	
16	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete above plinth level.						5.22A
16.1	Thermo-Mechanically Treated bars of grade Fe-500D or more.	11000	Kg	107.85	1186350.00	5.22A.6	

17	Providing and laying in position ready mixed or site batched design mix cement concrete for reinforced cement concrete work; using coarse aggregate and fine aggregate derived from natural sources, Portland Pozzolana / Ordinary Portland / Portland Slag cement, admixtures in recommended proportions as per IS: 9103 to accelerate / retard setting of concrete, to improve durability and workability without impairing strength; including pumping of concrete to site of laying, curing, carriage for all leads; but excluding the cost of centering, shuttering, finishing and reinforcement as per direction of the engineer-in-charge, for the following grades of concrete.: Note: Extra cement up to 10% of the minimum specified cement content in design mix shall be payable separately. In case the cement content in design mix is more than 110% of the specified minimum cement content, the contractor shall have discretion to either re-design the mix or bear the cost of extra cement.						5.33
17.1	All works upto plinth level						5.33.1
17.1.1	Concrete of M25 grade with minimum cement content of 330 kg /cum	450	Cum	9504.75	4277137.5	5.33.1.1	
17.2	All works above plinth level upto floor V level						5.33.2
17.2.1	Concrete of M25 grade with minimum cement content of 330 kg /cum	86	Cum	9860.40	847994.40	5.33.2.1	
	Sub-Total				11224276.40		
A.4 Masonry Work							
18	Brick work with common burnt clay modular bricks of class designation 7.5 in foundation and plinth in:						6.2
18.1	Cement Mortar 1:6 (1 cement : 6 coarse sand).	2	Cum	6295.15	12590.30	6.2.2	
19	Brick work with common burnt clay modular bricks of class designation 7.5 in superstructure above plinth level up to floor five level in cement mortar 1:6 (1 cement : 6 coarse sand) :						NSR
19.1	With Modular bricks	92	Cum	7833.00	720636	NSR	
20	Compressed Stabilized Earth Block (CSEB) or Stabilized Earth Block (SEB) of size 240mm x 115mm x 90mm manufactured from a uniform mixture of suitable soil (fairly dry in organic sub-soil, non-expensive clay etc) and stabilizer such pozzolana portland cement (3 to 5% of cement as per design or combination of lime and pozzolana cement. The average compressive strength of block should be of minimum 50kg/cm ² after curing for 28 days in superstructure above plinth level upto floor two level, specification of Compressed Stabilized Earth Block (CSEB) or Stabilized Earth Block (SEB) shall be confirming to IS 1725:2013)						NSR
20.1	Cement Mortar 1:6 (1 cement : 6 coarse sand).	24	Cum	6305.00	151320	NSR	
	Sub-Total				884546.30		
A.5 Stone Work							

21	Random rubble masonry with hard stone in foundation and plinth including levelling up with cement concrete 1:6:12 (1 cement : 6 coarse sand : 12 graded stone aggregate 20 mm nominal size) upto plinth level with :						7.1
21.1	Cement mortar 1:6 (1 cement : 6 coarse sand)	220	Cum	7311.25	1608475	7.1.1	
	Sub-Total				1608475.00		
A.6	Cladding Work						
22	Providing and fixing 1st 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 @ 3.3 kg per sqm, including pointing in white cement mixed with pigment of matching shade complete.	26	Sqm	1267.95	32966.70	8.31	
	Sub-Total				32966.70		
A.7	Wood and P.V.C. Work						
23	Providing and fixing ISI marked flush door shutters conforming to IS : 2202 (Part I) decorative type, core of block board construction with frame of 1st class hard wood and well matched teak 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters.						9.20
23.1	35 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	6.30	Sqm	3473.85	21885.26	9.20.1	
23.2	30 mm thick including ISI marked Stainless Steel butt hinges with necessary screws	3.36	Sqm	3167.95	10644.31	9.20.2	
24	Providing and fixing ISI marked stainless steel tower bolt (Barrel type) with necessary screws etc. complete						NSR
24.1	250x10 mm	5	Each	165.00	825	NSR	
25	Providing and fixing ISI marked stainless steel door latches with screws etc. complete :						NSR
25.1	300x16x5 mm	5	Each	430.00	2150	NSR	
25.2	250x16x5 mm	2	Each	386.00	772	NSR	
26	Providing and fixing ISI marked stainless steel handles with necessary screws etc. complete :						NSR
26.1	125 mm	10	Each	136.00	1360	NSR	
27	Providing and fixing Stainless steel hanging type floor twin door stopper with necessary screws, etc. complete.	3	Each	136.00	408	NSR	
28	Providing and fixing aluminium extruded section body tubular type universal hydraulic door closer (having brand logo with ISI, IS : 3564, embossed on the body, door weight upto 36 kg to 80 kg and door width from 701 mm to 1000 mm), with double speed adjustment with necessary accessories and screws etc. complete.	2	Each	983.15	1966.30	9.84	

	Sub-Total				40010.87	
A.8	Steel Work					
29	Structural steel work in single section, fixed with or without connecting plate, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	12000	Kg	117.35	1408200	10.1
30	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	110	Kg	133.70	14707	10.2
31	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 - part 1 and M.S. top cover of required thickness for rolling shutters.					10.6
31.1	80x1.25 mm M.S. laths with 1.25 mm thick top cover	40	Sqm	3653.20	146128	10.6.1
32	Providing and fixing ball bearing for rolling shutters.	10	Each	492.35	4923.50	10.7
33	Extra for providing mechanical device chain and crank operation for operating rolling shutters.					10.8
33.1	Exceeding 10.00 sqm and upto 16.80 sqm in the area	40	Sqm	1281.35	51254	10.8.1
34	Providing and fixing pressed steel door frames conforming to IS: 4351, manufactured from commercial mild steel sheet of 1.60 mm thickness, including hinges, jamb, lock jamb, bead and if required angle threshold of mild steel angle of section 50x25 mm, or base ties of 1.60 mm, pressed mild steel welded or rigidly fixed together by mechanical means, including M.S. pressed butt hinges 2.5 mm thick with mortar guards, lock strikeplate and shock absorbers as specified and applying a coat of approved steel primer after pre-treatment of the surface as directed by Engineer-in-charge:					10.14
34.1	Profile B					10.14.1
34.1.1	Fixing with adjustable lugs with split end tail to each jamb	15.60	Metre	583.30	9099.48	10.14.1.1
34.2	Profile C					10.14.2
34.2.1	Fixing with adjustable lugs with split end tail to each jamb	10.40	Metre	611.75	6362.20	10.14.2.1
35	Steel work in built up tubular (round, square or rectangular hollow tubes etc.) trusses etc., including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer, including welding and bolted with special shaped washers etc. complete.					10.16
35.1	Hot finished welded type tubes	12500	Kg	194.40	2430000.00	10.16.1

36	Providing and fixing M.S. fan clamp type I or II of 16 mm dia M.S. bar bent to shape with hooked ends in R.C.C. slabs, beams during laying including painting the exposed portion of loop, all as per standard design complete.	10	Each	226	2260	10.17
37	Providing and fixing circular/ Hexagonal cast iron or M.S. sheet box for ceiling fan clamp of internal dia 140mm, 73mm height, top lid of 1.5mm thick M.S. sheet with its top surface hacked for proper bonding, top lid shall be screwed into the cast iron/ M.S. sheet box by means of 3.3mm dia. round headed screws, one lock at the corners. Clamp shall be made of 12mm dia M.S. bar bent to shape as per standard drawing.	22	Each	220.65	4854.3	10.18
38	Providing and fixing mild steel round holding down bolts with nuts and washer plates complete.	225	Kg	97.20	21870	10.19
39	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing, staircase railing and similar works, including applying priming coat of approved steel primer.					10.26
39.1	M.S. tube	104	Kg	196.80	20467.20	10.26.1
40	Steel work welded in built up sections/ framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required.					10.25
40.1	In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	1280	Kg	172.60	220928	10.25.2
	Sub-Total				4341053.68	
A.9 Flooring						
41	Kota stone slab flooring over 20 mm (average) thick base laid over and jointed with grey cement slurry mixed with pigment to match the shade of the slab, including rubbing and polishing complete with base of cement mortar 1:4 (1 cement : 4 coarse sand) :					11.26
41.1	25 mm thick	130	Sqm	1948.25	253272.50	11.26.1
42	Kota stone slabs 20 mm thick in risers of steps, skirting, dado and pillars laid on 12 mm (average) thick cement mortar 1:3 (1 cement: 3 coarse sand) and jointed with grey cement slurry mixed with pigment to match the shade of the slabs, including rubbing and polishing complete.	5	Sqm	2354.70	11773.50	11.27
43	Providing and laying Ceramic glazed floor tiles of size 300x300 mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20 mm thick cement mortar 1:4 (1 Cement : 4 Coarse sand), Jointing with grey cement slurry @ 3.3 kg/sqm including pointing the joints with white cement and matching pigment etc., complete.	11	Sqm	1096.55	12062.05	11.37
	Sub-Total				277108.05	
A.10 Roofing						

44	Providing gola 75x75 mm in cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 stone aggregate 10 mm and down gauge), including finishing with cement mortar 1:3 (1 cement : 3 fine sand) as per standard design :					12.21
44.1	In 75x75 mm deep chase	115	Metre	305.15	35092.25	12.21.1
45	Making khurras 45x45 cm with average minimum thickness of 5 cm cement concrete 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate of 20 mm nominal size) over P.V.C. sheet 1 m x1 m x 400 micron, finished with 12 mm cement plaster 1:3 (1 cement : 3 coarse sand) and a coat of neat cement, rounding the edges and making and finishing the outlet complete.	6	Each	298.25	1789.50	12.22
46	Providing sand stone slab for roofing and laying them in cement mortar 1 : 4 (1 cement : 4 coarse sand) over wooden karries or R.C.C. battens or structural steel sections (Karries or battens or structural steel sections to be paid separately), including pointing the ceiling joints with cement mortar 1:3 (1 cement : 3 fine sand) complete :					12.23
46.1	Red sand stone slab					12.23.1
46.1.1	40 to 50 mm thick	450	Sqm	1138.20	512190	12.23.1.1
47	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					12.41
47.1	110 mm diameter	90	Metre	377.40	33966	12.41.2
48	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.					12.42
48.1	Bend 87.5°					12.42.5
48.1.1	110 mm bend	16	Each	150.35	2405.6	12.42.5.2
48.2	Shoe (Plain)					12.42.6
48.2.1	110 mm Shoe	16	Each	131.85	2109.6	12.42.6.2
49	Providing and fixing Unplasticised -PVC pipe clips of approved design to Unplasticised - PVC rain water pipes by means of 50x50x50mm 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.					12.43
49.1	110 mm	80	Each	371.30	29704.00	12.43.2
50	Providing and fixing to the inlet mouth of rain water pipe cast iron grating 15 cm diameter and weighing not less than 440 grams.	16	Each	54.70	875.2	12.44

51	Providing and fixing precoated galvanised iron profile sheets (size, shape and pitch of corrugation as approved by Engineer-in-Charge) of total coated thickness 0.50 mm (base metal of minimum 0.45 mm thickness with total coating thickness of 0.05mm) with zinc coating 120 grams per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns. Sheet should have protective guard film of 25 microns minimum to avoid scratches during transportation and should be supplied in single length upto 12 metre or as desired by Engineer-in-charge. The sheet shall be fixed using self drilling /self tapping screws of size (5.5x 55 mm) with EPDM seal, complete upto any pitch in horizontal/ vertical or curved surfaces, excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required.	540	Sqm	738.65	398871	12.50
52	Providing and fixing precoated galvanised steel sheet roofing accessories of total coated thickness 0.50 mm (base metal of minimum 0.45 mm thickness with total coating thickness of 0.05 mm) with Zinc coating 120 gram per sqm as per IS: 277, in 240 mpa steel grade, 5-7 microns epoxy primer on both side of the sheet and polyester top coat 15-18 microns using self drilling/ self tapping screws complete :					12.51
52.1	Ridges plain (500 - 600mm)	40	Metre	532.35	21294	12.51.1
52.2	Gutter (600 mm over all girth)	65	Metre	1313.70	85390.50	12.51.6
52.3	Crimp curve	65	Metre	496.75	32288.75	12.51.5
53	Designing, supplying and installation of Tensile Membrane Structure with 1050 GSM fabric including support structure. The scope of work shall include supply and fixing of tensile membrane fabric, supply, fabrication and installation of tubular support structure / members, connection system and other necessary supporting MS / cable structure as per approved and vetted design; and standard industrial practise in any reasonable geometric shape including making eaves around the roof to collect rain water as per approved detailed design, drawing and as per direction of Engineer-in-charge. Detailed specifications, scope of work, mode of measurement and warranty conditions as per details mentioned in Section VI of this Tender Document. A defect liability period for overall structure stability of shade (i.e. frame and fabric) shall be of 15 years and 5% of total amount of this item will be withheld for 5 years on account of defect liability). Structural, architectural and shop drawings of MS structure and shed for execution of this item shall be submitted to Engineer-in-charge for approval before execution of this item. Manufacturer certificate of fabric and proof of approved material i.e. tax invoice and purchase order for authenticity of material shall be submitted by agency. This item shall be get executed by specialized agency approved by Engineer-in-charge.	576	Sqm	6700	3859200	NSR
Sub-Total					5015176.40	

A.11	Finishing					
54	12 mm cement plaster of mix :					13.1
54.1	1:4 (1 cement: 4 fine sand)	630	Sqm	347.05	218641.5	13.1.1
55	15 mm cement plaster on the rough side of single or half brick wall of mix :					13.2
55.1	1:4 (1 cement: 4 fine sand)	630	Sqm	399.45	251653.5	13.2.1
56	12 mm cement plaster finished with a floating coat of neat cement of mix :					13.7
56.1	1:4 (1 cement: 4 fine sand)	30	Sqm	425.55	12766.5	13.7.2
57	15 mm cement plaster on rough side of single or half brick wall finished with a floating coat of neat cement of mix :					13.8
57.1	1:4 (1 cement: 4 fine sand)	15	Sqm	477.90	7168.50	13.8.2
58	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.	630	Sqm	156.05	98311.5	13.80
59	Pointing on stone work with cement mortar 1:3 (1 cement : 3 fine sand) :					13.33
59.1	Flush/ Ruled pointing	50	Sqm	385.40	19270	13.33.1
60	Finishing walls with Acrylic Smooth exterior paint of required shade :					13.46
60.1	New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including priming coat of exterior primer applied @ 0.90 litre/10 sqm)	630	Sqm	160.60	101178	13.46.1
61	Painting with synthetic enamel paint of approved brand and manufacture of required colour to give an even shade :					13.62
61.1	Two or more coats on new work over an under coat of suitable shade with ordinary paint of approved brand and manufacture	750	Sqm	226.25	169687.5	13.62.1
62	Wall painting with premium acrylic emulsion paint of interior grade, 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.					13.83
62.1	Two coats	630	Sqm	142.80	89964	13.83.2
	Sub-Total				968641.00	
A.12	Road Work					
63	Supplying of kopra soil for Construction of embankment subgrade & earthen shoulders/Hard shoulder with approved material having CBR > 12 obtained from borrow pits i/c all leads and lift and removal of top soil if any, including cost of land as a source of material, transporting to site, spreading, grading to required slope and compacting using static rollers of 80 to 100 kN static weight to meet requirement of tables 300.1 and 300.2 including all leads, royalty etc. as per Technical Specification Clauses 301.4, 301.5, and 303.	125	Cum	928	116000	NSR

64	Providing and laying at or near ground level factory made kerb stone of M-25 grade cement concrete in position to the required line, level and curvature, jointed with cement mortar 1:3 (1 cement: 3 coarse sand), including making joints with or without grooves (thickness of joints except at sharp curve shall not to more than 5 mm), including making drainage opening wherever required complete etc. as per direction of Engineer in- charge (length of finished kerb edging shall be measured to calculate volume for payment). (Precast C.C. kerb stone shall be approved by Engineer-in-charge).	0.90	Cum	10117.60	9105.84	16.69
65	Providing and fixing pre-moulded joint filler in expansion joints of RCC roads / CC pavements after making the joints dust free with high pressure air jet cleaners, all complete as per direction of the Engineer-in-Charge. (Pre-moulded joint fillers shall be made of bitumen hot sealing compound impregnated fibre board having impregnation more than 35%, conforming to IS:1838 for fibre board and IS: 1834 for hot sealing bitumen compound grade A.)	2000	per cm depth per cm width per metre length	5.30	10600	16.45
66	Construction of granular sub-base by providing close graded Material conforming to specifications, mixing in a mechanical mix plant at OMC, carriage of mixed material by tippers to work site, for all leads & lifts, spreading in uniform layers of specified thickness with motor grader on prepared surface and compacting with vibratory power roller to achieve the desired density, complete as per specifications and directions of Engineer-in- Charge.					16.78
66.1	With material conforming to Grade-III (size range 26.5 mm to 0.075 mm) having CBR Value-20	30	Cum	2808.55	84256.50	16.78.3
67	Construction of dry lean cement concrete sub base over a prepared subgrade with coarse and fine aggregate conforming to IS:383, the size of coarse aggregate not exceeding 25 mm, aggregate cement ratio not to exceed 15:1, aggregate gradation after blending to be as per specifications, cement content not to be less than 150 Kg/cum, optimum moisture content to be determined during trial length construction, concrete strength not to be less than 10 Mpa at 7 days, mixed in a batching plant, transported to site, for all leads & lifts, laid with a mechanical paver, compacting with 8-10 tonne vibratory roller, finishing and curing etc. complete as per direction of Engineer-in- charge.	20	Cum	4148.65	82973.00	16.80

68	Providing and laying design mix cement concrete of M-30 grade, in roads/ taxi tracks/ runways, using cement content as per design mix, using coarse sand and graded stone aggregate of 40 mm nominal size in appropriate proportions as per approved & specified design criteria, providing dowel bars with sleeve/ tie bars wherever required, laying at site, spreading and compacting mechanically by using needle and surface vibrators, levelling to required slope/ camber, finishing with required texture, including steel form work with sturdy M.S. channel sections, curing, making provision for contraction/ expansion, construction & longitudinal joints (10 mm wide x 50 mm deep) by groove cutting machine, providing and filling joints with approved joint filler and sealants, complete all as per direction of Engineer-in- charge (Item of joint fillers, sealants, dowel bars with sleeve/ tie bars to be paid separately). Note:- Cement content considered in M-30 is @ 340 kg/cum. Excess/ less cement used as per design mix is payable/ recoverable separately.						16.43
68.1	Cement concrete manufactured in automatic batching plant (RMC plant) including transportation to site in transit mixer	40	Cum	11098.45	443938.00	16.43.2	
Sub-Total					746873.34		
A.13 Sanitary Installations							
69	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:						17.1
69.1	White Vitreous china Orissa pattern W.C. pan of size 580x440mm with integral type foot rests.	1	Each	6767.40	6767.40	17.1.1	
70	Providing and fixing white vitreous china pedestal type water closet (European type W.C. pan) with seat and lid, 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 :						17.2
70.1	W.C. pan with ISI marked white solid plastic seat and lid	1	Each	6515.55	6515.55	17.2.1	
71	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350 mm and 340x410x265 mm sizes respectively with automatic flushing cistern with standard flush pipe and C.P. brass spreaders with brass unions and G.I clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required :						17.4
71.1	One urinal basin with 5 litre white P.V.C. automatic flushing cistern	1	Each	6258.75	6258.75	17.4.1	

72	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:						17.7
72.1	White Vitreous China Wash basin size 630x450 mm with a pair of 15 mm C.P. brass pillar taps	2	Each	2648.85	5297.70	17.7.1	
73	Providing and fixing 8 mm dia C.P. / S.S. Jet with flexible tube upto 1 metre long with S.S. triangular plate to European type W.C. of quality and make as approved by Engineer - in - charge.	1	Each	349.15	349.15	17.16A	
74	Providing and fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6 mm thick hard board backing :						17.32
74.1	Rectangular shape 453x357 mm	2	Each	1361.80	2723.60	17.32.2	
75	Providing and fixing toilet paper holder :						17.34
75.1	C.P. brass	1	Each	803.70	803.70	17.34.1	
76	Providing and fixing soil, waste and vent pipes :						17.35
76.1	100 mm dia.						17.35.1
76.1.1	Centrifugally cast (spun) iron socket & spigot (S&S) pipe as per IS: 3989.	23	Metre	1180.75	27157.25	17.35.1.2	
76.2	75 mm diameter :						17.35.2
76.2.1	Centrifugally cast (spun) iron socketed pipe as per IS: 3989.	50	Metre	1186.00	59300	17.35.2.2	
77	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. :						17.37
77.1	For 100 mm dia. Pipe	6	Each	362.85	2177.10	17.37.1	
77.2	For 75 mm dia. Pipe	6	Each	360.00	2160	17.37.2	
78	Providing and fixing bend of required degree with access door, insertion rubber washer 3 mm thick, bolts and nuts complete.						17.38
78.1	75 mm dia						17.38.2
78.1.1	Sand cast iron S&S as per IS - 1729	3	Each	501.45	1504.35	17.38.2.1	
79	Providing and fixing plain bend of required degree.						17.39
79.1	75 mm						17.39.2
79.1.1	Sand cast iron S&S as per IS - 1729	8	Each	376.25	3010.00	17.39.2.1	
80	Providing and fixing heel rest sanitary bend						17.40
80.1	100 mm dia						17.40.1
80.1.1	Sand cast iron S&S as per IS - 1729	8	Each	584.25	4674.00	17.40.1.1	
80.2	75 mm						17.40.2
80.2.1	Sand cast iron S&S as per IS - 1729	14	Each	490.05	6860.70	17.40.2.1	
81	Providing and fixing collar:						17.57
81.1	100 mm						17.57.1
81.1.1	Sand cast iron S&S as per IS - 1729	8	Each	463.35	3706.80	17.57.1.1	
81.2	75 mm						17.57.2
81.2.1	Sand cast iron S&S as per IS - 1729	8	Each	305.15	2441.20	17.57.2.1	

82	Providing lead caulked joints to sand cast iron/ centrifugally cast (spun) iron pipes and fittings of diameter:						17.58
82.1	100 mm	16	Each	622.50	9960.00	17.58.1	
82.2	75 mm	25	Each	526.25	13156.25	17.58.2	
83	Providing and fixing terminal guard :						17.56
83.1	100 mm						17.56.1
83.1.1	Sand cast iron S&S as per IS - 1729	1	Each	442.00	442	17.56.1.1	
83.2	75 mm						17.56.2
83.2.1	Sand cast iron S&S as per IS - 1729	1	Each	340.70	340.70	17.56.2.1	
84	Providing and fixing door piece, insertion rubber washer 3 mm thick, bolts & nuts complete :						17.55
84.1	100 mm						17.55.1
84.1.1	Sand cast iron S&S as per IS - 1729	2	Each	783.45	1566.90	17.55.1.1	
84.2	75 mm						17.55.2
84.2.1	Sand cast iron S&S as per IS - 1729	8	Each	501.45	4011.60	17.55.2.1	
85	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:						17.60
85.1	100 mm inlet and 75 mm outlet						17.60.2
85.1.1	Sand cast iron S&S as per IS - 1729	2	Each	1558.35	3116.70	17.60.2.2	
86	Painting sand cast iron/ centrifugally cast (spun) iron soil, waste vent pipes and fittings with two coats of synthetic enamel paint of any colour such as chocolate grey, or buff etc. over a coat of primer (of approved quality) for new work :						17.65
86.1	100 mm diameter pipe	12	Metre	82.80	993.6	17.65.1	
86.2	75 mm diameter pipe	12	Metre	62.95	755.4	17.65.2	
87	Providing and fixing PTMT liquid soap container 109mm wide, 125mm high and 112mm 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.	2	Each	168.35	336.70	17.71	
88	Providing and fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fittings arrangement of approved quality and colour						17.73
88.1	450 mm long towel rail with total length of 495 mm, 78 mm wide and effective height of 88 mm, weighing not less than 170 gms	2	Each	673.40	1346.80	17.73.1	
	Sub-Total					177733.90	
A.14	Water Supply						
89	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply and all CPVC plain & brass threaded fittings, including fixing the pipe with clamps at 1.00 m spacing. This includes jointing of pipes & fittings with one step CPVC solvent cement and testing of joints complete as per direction of Engineer-in-Charge. Internal work - Exposed on wall						18.7

89.1	25 mm nominal outer dia. Pipes.	90	Metre	401.55	36139.50	18.7.3
89.2	32 mm nominal outer dia. Pipes.	120	Metre	518.75	62250.00	18.7.4
90	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.					18.8
90.1	20 mm nominal outer dia. Pipes.	15	Metre	537.60	8064	18.8.2
91	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings. This included 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					18.9
91.1	50 mm nominal outer dia. Pipes.	140	Metre	794.25	111195.00	18.9.6
92	Providing and fixing gun metal gate valve with C.I. wheel of approved quality (screwed end) :					18.17
92.1	25 mm nominal bore	1	Each	622.40	622.40	18.17.1
92.2	32 mm nominal bore	1	Each	689.60	689.60	18.17.2
92.3	50 mm nominal bore	5	Each	1026.65	5133.25	18.17.4
93	Providing and fixing ball valve (brass) of approved quality, High or low pressure, with plastic floats complete :					18.18
93.1	25 mm nominal bore	1	Each	464.05	464.05	18.18.3
94	Providing and fixing uplasticised PVC connection pipe with brass unions:					18.21
94.1	45 cm length					18.21.2
94.1.1	15 mm nominal bore	2	Each	97.75	195.50	18.21.2.1
95	Providing and fixing C.P. brass angle valve for basin mixer and geyser points of approved quality conforming to IS:8931					18.53
95.1	15 mm nominal bore	4	Each	574.30	2297.20	18.53.1
96	Constructing masonry Chamber 30x30x50 cm inside, in brick work in cement mortar 1:4 (1 cement :4 coarse sand) for stop cock, with C. I. surface box 100x100 x75 mm (inside) with hinged cover fixed in reinforced cement concrete slab 1:1.5:3 mix (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size), including necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :					Modified 18.32

96.1	With common burnt clay modular bricks of class designation 7.5	5	Each	1992.60	9963.00	18.32.1	
97	Constructing masonry Chamber 60x60x75 cm inside, in brick work in cement mortar 1:4 (1 cement : 4 coarse sand) for sluice valve, with C.I. surface box 100 mm top diameter, 160 mm bottom diameter and 180 mm deep (inside) with chained lid and RCC top slab 1:1.5:3 mix (1 cement : 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size), including necessary excavation, foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size) and inside plastering with cement mortar 1:3 (1 cement : 3 coarse sand) 12 mm thick, finished with a floating coat of neat cement complete as per standard design :						Modified 18.33
97.1	With common burnt clay modular bricks of class designation 7.5	5	Each	10862.40	54312.00	18.33.1	
98	Providing and placing on terrace (at all floor levels) polyethylene water storage tank ISI : 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	1000	Per Ltr.	11.00	11000	18.48	
99	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931 :						18.49
99.1	15 mm nominal bore	4	Each	506.80	2027.20	18.49.1	
100	Providing and fixing C.P. Brass extension nipple (size 15 mm x 50 mm) of approved make and quality as per direction of Engineer-in-charge.	2	Each	74.80	149.60	18.53 A	
	Sub-Total				304502.30		
A.15 Drainage							
101	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 :						Modified 19.4
101.1	150 x 100 mm size P type.						19.4.2
101.1.1	With common burnt clay modular bricks of class designation 7.5	11	Each	2734.20	30076.20	19.4.2.1	
102	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 :						19.6
102.1	150 mm dia. R.C.C. pipe	350	Metre	556.45	194757.5	19.6.2	
102.2	300 mm dia. R.C.C. pipe	220	Metre	994.30	218746	19.6.4	

103	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 :						Modified 19.7
103.1	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) :						19.7.1
103.1.1	With common burnt clay modular bricks of class designation 7.5	4	Each	12770.55	51082.2	19.7.1.1	
103.2	Inside size 120x90 cm and 90 cm deep including C.I. cover with frame (medium duty) 500 mm internal diameter, total weight of cover and frame to be not less than 116 kg (weight of cover 58 kg and weight of frame 58 kg) :						19.7.2
103.2.1	With common burnt clay modular bricks of class designation 7.5	5	Each	26405.50	132027.50	19.7.2.1	
104	Extra for depth for manholes						Modified 19.8
104.1	Size 90x80 cm						19.8.1
104.1.1	With common burnt clay modular bricks of class designation 7.5	4	Metre	8825.40	35301.60	19.8.1.1	
104.2	Size 120x90 cm						19.8.2
104.2.1	With common burnt clay modular bricks of class designation 7.5	5	Metre	10585.50	52927.50	19.8.2.1	
105	Supplying and fixing C.I. cover without frame for manholes :						19.18
105.1	500 mm diameter C.I. cover (medium duty) the weight of the cover to be not less than 58 kg	9	Each	3441.20	30970.80	19.18.2	
106	Making soak pit 2.5 m diameter 3.0 metre deep with 45 x 45 cm dry brick honey comb shaft with bricks of class designation 75 and S.W. drain pipe 100 mm diameter, 1.8 m long complete as per standard design.						Modified 19.32
106.1	With common burnt clay modular bricks of class designation 7.5	1	Each	26861.90	26861.90	19.32.1	
107	Constructing brick masonry road gully chamber 50x45x60 cm with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame complete as per standard design :						Modified 19.27
107.1	With common burnt clay modular bricks of class designation 7.5	20	Each	5957.90	119158	19.27.1	

108	Constructing brick masonry chamber for underground C.I. inspection chamber and bends with bricks in cement mortar 1:4 (1 cement : 4 coarse sand) C.I. cover with frame (light duty) 455x610 mm internal dimensions, total weight of cover with frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg), R.C.C. top slab with 1:1.5:3 mix (1 cement : 1.5 fine sand : 3 graded stone aggregate 20 mm nominal size), foundation concrete 1:5:10 (1 cement : 5 fine sand : 10 graded stone aggregate 40 mm nominal size), inside plastering 12 mm thick with cement mortar 1:3 (1 cement : 3 coarse sand), finished smooth with a floating coat of neat cement on walls and bed concrete etc. complete as per standard design:						Modified 19.30
108.1	Inside dimensions 455x610 mm and 45 cm deep for single pipe line :						19.30.1
108.1.1	With common burnt clay modular bricks of class designation 7.5	8	Each	6937.90	55503.20	19.30.1.1	
	Sub-Total				947412.4		
A.16	Aluminium Work						
109	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / panelling, C.P. brass / stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :						21.1
109.1	For shutters of doors, windows & ventilators including providing and fixing hinges/ pivots and making provision for fixing of fittings wherever required including the cost of EPDM rubber / neoprene gasket required (Fittings shall be paid for separately).						21.1.2
109.1.1	Powder coated aluminium (minimum thickness of powder coating 50 micron)	750	Kg	634.45	475837.5	21.1.2.2	
110	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber/ neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in basic item) :						21.3
110.1	With float glass panes of 5 mm thickness (weight not less than 12.50 kg/sqm)	60	Sqm	1505.25	90315	21.3.2	
111	Providing and fixing ISI marked Aluminium starlock with necessary screws etc. complete :	48	Each	442	21216	NSR	

112	Providing and fixing fly proof aluminium wire gauge to windows and clerestory windows using aluminium wire gauge with average width of aperture 1.4 mm in both directions with wire of dia 0.63 mm all complete.	15	Sqm	700	10500	NSR
Sub-Total					597868.5	
A.17 Water Proofing						
113	<p>Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C., kitchen and the like consisting of :</p> <p>i) Ist course of applying cement slurry @ 4.4 Kg/sqm mixed with water proofing compound conforming to IS 2645 in recommended proportions including rounding off junction of vertical and horizontal surface.</p> <p>ii) IInd course of 20mm cement plaster 1:3 (1 cement : 3 coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface.</p> <p>iii) IIIrd course of applying blown or residual bitumen applied hot at 1.7 Kg. per sqm of area.</p> <p>iv) IVth course of 400 micron thick PVC sheet. (Overlaps at joints of PVC sheet should be 100 mm wide and pasted to each other with bitumen @ 1.7 Kg/sqm.)</p>	15	Sqm	769.60	11544	22.3
114	<p>Providing and laying water proofing treatment on roofs of slabs by applying cement slurry mixed with water proofing cement compound consisting of applying:</p> <p>(a) after surface preparation, first layer of slurry of cement @ 0.488 kg/ sqm mixed with water proofing cement compound @ 0.253 kg/sqm.</p> <p>(b) laying second layer of Fibre glass cloth when the first layer is still green. Overlaps of joints of fibre cloth should not be less than 10 cm.</p> <p>(c) third layer of 1.5 mm thickness consisting of slurry of cement @ 1.289 kg/sqm mixed with water proofing cement compound @ 0.670 kg/sqm and coarse sand @ 1.289 kg/sqm. This will be allowed to air cure for 4 hours followed by water curing for 48 hours. The entire treatment will be taken upto 30 cm on parapet wall and tucked into groove in parapet all around.</p> <p>(d) fourth and final layer of brick tiling with cement mortar (which will be paid for separately. For the purpose of measurement the entire treated surface will be measured.</p>	400	Sqm	688.90	275560	22.6
Sub-Total					287104.00	
A.18 Rain Water Harvesting & Tubewells						

115	Supplying, filling, spreading & leveling stone boulders of size range 5 cm to 20 cm, in recharge pit, in the required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	15	Cum	1509.80	22647	23.5	
116	Supplying, filling, spreading & leveling gravels of size range 5 mm to 10 mm, in the recharge pit, over the existing layer of boulders, in required thickness, for all leads & lifts, all complete as per direction of Engineer-in-charge.	15	Cum	1538.25	23073.75	23.6	
117	Supplying, filling, spreading & leveling coarse sand of size range 1.5 mm to 2 mm in recharge pit, in required thickness over gravel layer, for all leads & lifts, all complete as per direction of Engineer –in-charge.	15	Cum	1538.25	23073.75	23.7	
118	Drilling of perfectly vertical bore of specified diameter upto the required depth in all type of strata including hard rock including all works pertaining to drilling such as transportation installation and removal of drilling machines equipments etc. complete as per IS:2800 Part I, 1991 :	NSR					
118.1	200 mm dia bore	40	Metre	755	30200	NSR	
119	Supplying, assembling, lowering and fixing in vertical position in bore well, unplasticized PVC medium well casing (CM) pipe of required dia, conforming to IS: 12818, including required hire and labour charges, fittings & accessories etc. all complete, for all depths, as per direction of Engineer –in-charge.	23.3					
119.1	150 mm nominal size dia.	40	Metre	793.25	31730.00	23.3.2	
Sub-Total					130724.50		
TOTAL of Section – A: Civil Works (including all taxes)					31728702.94		
B. Electrical Works							
S. No.	Description / Item of Work	Qty.	Unit	Rate	Amount	CPWD E&M DSR - 2025	
201	Supply of XLPE insulated power cable (conforming IS-7098 Part-I) 1100 Volt grade, 1 core/2 core/3½ core/4 core ISI marked with alu. stranded /solid conductor						PWD - 2024 41.1
201.1	4 core armoured						PWD - 2024 41.1.10
201.1.1	300 sq. mm.	150	Metre	2873.30	430995	PWD - 2024 41.1.10.13	
201.1.2	35 sq. mm	320	Metre	422.44	135181	PWD - 2024 41.1.10.5	
201.1.3	10 sq. mm.	300	Metre	213.58	64074	PWD - 2024 41.1.10.2	
202	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 1.1 KV grade of						Modified 10.5

	following size in the existing RCC/ HUME/ METAL pipe/Trench as required.					
202.1	Upto 35 sq. mm	700	Metre	47.00	32900	10.5.1
202.2	Above 185 sq. mm and upto 400 sq. mm	350	Metre	170.00	59500	10.5.4
203	Supplying and making end termination with brass compression gland and aluminium lugs for following size of PVC insulated and PVC sheathed / XLPE aluminium conductor cable of 1.1 KV grade as required.					11.1
203.1	4 X 10 sq. mm (25mm)	24	Each	325.00	7800	11.1.32
203.2	4 X 35 sq. mm (32mm)	14	Each	438.00	6132	11.1.34
203.3	3½ X 400 sq. mm (82mm)	4	Each	1713.00	6852	11.1.31
204	Earthing with copper earth plate 600 mm X 600 mm X 3 mm thick including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe of 2.7 Meter long etc. (but without charcoal/ coke and salt) as required.	4	Set	13733.00	54932	5.5
205	Supplying and laying 25 mm X 5 mm G.I strip at 0.50 meter below ground as strip earth electrode, including connection/ terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut bolt & spring washer spaced at 50 mm)	80	Metre	160.00	12800	5.9
206	Wiring for circuit/ submain wiring along with earth wire with the following sizes of FRLS/PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required.					Modified 1.14
206.1	2 X 4 sq. mm + 1 X 4 sq. mm earth wire	700	Metre	373.00	261100	1.14.3
207	Supplying and fixing of following ways surface/ recess mounting, vertical type, 415 V, TPN MCB distribution board of sheet steel, dust protected, duly powder painted, inclusive of 200 A tinned copper bus bar, common neutral link, earth bar, din bar for mounting MCBs (but without MCBs and incomer) as required. (Note : Vertical type MCB TPDB is normally used where 3 phase outlets are required.)					2.5
207.1	8 way (4 + 24), Double door	6	Each	10724.00	64344	2.5.2
208	Supply of ISI marked and accepted standard of miniature circuit breaker (MCB) of 'D' series with short circuit indication, suitable for 240/415 Volts,50 Cycle, 10 kA/15 kA Value AC supply conforming to IS : 8828 : 1996, IEC : 60898 :2002 & 60947-2 but without enclosures :-					PWD - 2024 27.9
208.1	Four pole					PWD - 2024 27.9.4
208.1.1	MCB FP 50 Amp to 63 Amp,10 kA rating	4	Each	3626.14	14504.56	PWD - 2024 27.9.4.4
208.1.2	MCB FP For 40 Amp, 10kA rating	3	Each	3368.90	10106.70	PWD - 2024 27.9.4.3

209	Supplying and fixing 5 A to 32 A rating, 240/415 V, 10 kA, "C" curve, miniature circuit breaker suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.						Modified 2.10
209.1	Single pole MCB 32 A, 10 KA rating	120	Each	285.00	34200	2.10.1	
210	Modular PVC box (surface):- Supplying and fixing of approved make modular type PVC box minimum depth 40mm and minimum thickness 2mm with modular base and cover plate including fixing on surface etc. as required for:-						PWD - 2024 18.3
210.1	6 Module PVC box	40	Each	299.72	11988.80	PWD - 2024 18.3.4	
211	Supply and fixing as per specification Switch of approved make ISI marked with necessary material complete.						PWD - 2024 29.9
211.1	16/20Amp SP 250 Volt modular switch	80	Each	105.02	8401.60	PWD - 2024 29.9.5	
212	Socket:- Supply and fixing as per specification socket outlet of approved make & ISI marked with necessary material complete						PWD - 2024 29.10
212.1	10/16/20Amp 250 Volt 3 Pin modular type	80	Each	165.20	13216	PWD - 2024 29.10.4	
213	Supplying & fixing pin terminal lugs as per ISS specification suitable for cable evenly cramped with high pressure tool & connection to switch gear terminal as required complete.						PWD - 2024 41.8
213.1	Copper Lugs Pin Type						PWD - 2024 41.8.2
213.1.1	Upto 16 Sq.mm conductor size	1000	Each	35.40	35400	PWD - 2024 41.8.2.1	
214	Supplying, erecting and testing of approved make exhaust fan heavy duty with mounting frame, blades AC 230-250 complete connection and including, frame bolt/anchor hole fasteners etc. complete finished and as required.						PWD - 2024 30.6
214.1	300 mm sweep RPM 900 / 1400	2	Each	3033.78	6067.56	PWD - 2024 30.6.1	
215	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 steel conduit, with modular switch, modular plate, suitable GI/PVC box and earthing the point with 1.5 sq.mm FRLS PVC insulated copper conductor single core cable etc. as required.						Modified 1.3
215.1	Group A Point	18	Point	1440.00	25920	1.3.1	
215.2	Group B Point	40	Point	1684.00	67360	1.3.2	
215.3	Group C Point	70	Point	2101.00	147070	1.3.3	

216	LED Down lighter (SMD Type) (System lumen efficacy $\geq 120 < 135$ lm/Watt) Supplying, installation, Testing & Commissioning of LED Recessed/surface Down lighter (Round/ square/ Rectangular) SMD type of following body material with PMMA and prismatic diffuser and construction as per IS : 10322 with driver as per the requirement with Driver efficiency $> 85\%$, Operating voltage AC 140-270 Volt, frequency 50/60 hz, Operating temp range $-5\text{ }^{\circ}\text{C}$ to $40\text{ }^{\circ}\text{C}$ centigrade, internal surge protection of 2.5 KV with Short & Open circuit protection ,THD $< 10\%$, P. F. ≥ 0.95 , IP20, CRI ≥ 80 , UGR (Unified Glare Rating) ≤ 19 , Flicker free (flicker should be below 5 %), life time (LED, Driver & electrical circuitry), life time of minimum 50000 Burning Hours with 70% of initial Lumen maintained till life ends, CCT 3000°K / 4000°K / 5700°K / 6500°K (As per ANSI Bin), SDCM(Standard Deviation Color Matching) < 3 , Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard and trade mark certificate (T.C.). Manufactures Word Mark/ Name Engraved/ Embossing/ Screen printing on housing. OEM must have its own in house NABL lab setup for all testing facilities for LED fixtures. Complete in all respect i/c connections with 1.5 sq mm FRLS, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy $\geq 120 < 135$ lm/Watt output . LM79 & LM80 Test report from NABL lab for all testing required for LED fixtures as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement. (Thermal management: heat sink of aluminum housing such that LED junction temperature shall not rise above 90°C). Powder coated die cast /Extruded aluminum Body including trim.						Modified 8.2
216.1	22 Watt LED Light	35	Each	967	33845	8.2.5	
217	Wiring for circuit/ submain wiring along with earth wire with the following sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit as required.						Modified 1.14
217.1	2X 1.5 sq. mm + 1 X 1.5 sq. mm earth wire	200	Metre	267.00	53400	1.14.1	
218	Supply, fixing testing of Lightning Arrester:-Brass Copper Lightning Arrester is 9.2 mm diameter and 915 mm in length and Elapp Epoxy electrical Insulator (red),. The total weight of this product is 1.3 kg. The dimensions of the base plate are 9*9 cm, The copper lightning arrester offers a coverage of 45 degrees from the top point of the arrester, the surrounding area of the 1.83-meter radius will be protected by this lightning arrester, Lightning arrester allows the current to flow the surge current from a clap of thunder to the ground without causing any damage to the building /structure, The copper lightning arrester is made with brass copper. The inner portion of this product is made of hi-tensile steel with a coating of	4	Each	3000.00	12000	NSR	

	pure copper in order to enhance the conductivity, required fitting hardware, insulator etc as required to complete work as per direction of client for drawing and details.					
219	<p>LED Street light fixture, powder coated pressure die cast aluminum body (System lumen efficacy ≥ 135 lm/Watt).</p> <p>Supplying, Installation, Testing & Commissioning of Street light LED fixture, powder coated pressure die cast aluminium body with built in or separate driver as per the requirement with Driver efficiency $>85\%$, Input voltage: 140-270 Volt AC, frequency 50/60 hz, Operating temp range -5°C to 50°C, internal surge protection of 5 KV L,N,E as per IEC 61000-4-5, Driver efficiency $>85\%$, THD $< 10\%$ as per IEC 61000-3-2, P. F. ≥ 0.95, IP-66, IK-10, CRI ≥ 70, under voltage and over voltage protection, EMI-EMC as per CISPR-15, lenses for beam angle as per IESNA type I/II/III as per the width of the road and the project requirement., suitable to fit in up to 65mm dia pipe, life time (LED, Driver & electrical circuitry) of minimum 50000 Burning Hours with 70% of initial Lumen maintained till life ends as per LM80 extrapolation IES TM-21-11 report, CCT 3000°K / 4000°K / 5700°K / 6500°K (As per ANSI Bin), SDCM (Standard Deviation Color Matching) < 5, Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard complete in all respect i/c external connections with 1.5 sq mm FRLS, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy ≥ 135 lm/Watt output . LM79 & LM80 Test report and all testing required for LED fixtures as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in-Charge as per requirement. (Thermal management: heat sink of aluminum housing such that LED junction temperature shall not rise above 90°C).</p>					8.14
219.1	50 watt	22	Each	2185.00	48070	8.14.12

220	LED Flood Light, powder coated pressure die cast aluminum (System lumen efficacy $\geq 105 < 120$ lm/Watt). Supplying, Installation, Testing & Commissioning of Flood Light, powder coated pressure die cast aluminum body with built in or separate driver as per the requirement with Driver efficiency $> 85\%$, Input voltage: Input voltage: 140-270 Volt AC, frequency 50/60 hz, Operating temp range -5°C to 50°C , internal surge protection of 5 KV L,N,E as per IEC 61000-4-5, Driver efficiency $> 85\%$, THD $< 10\%$ as per IEC 61000-3-2, P. F. ≥ 0.95 , IP- 66, IK-10, CRI ≥ 70 , under voltage and over voltage protection, EMI-EMC as per CISPR - 15, lenses for beam angle 30 deg-120deg as per the application and the project requirement., suitable tilt able fitting, life time (LED, Driver & electrical circuitary) of minimum 50000 Burning Hours with 70% of initial Lumen maintained till life ends as per LM80 extrapolation IES TM-21-11 report, CCT 3000°K / 4000°K / 5700°K / 6500°K (As per ANSI Bin) , SDCM(Standard Deviation Color Matching) < 5 , Maximum power consumption should not more than the specified rating and Fixture shall be of relevant BIS standard complete in all respect i/c external connections with 1.5 sq mm FRLS, PVC insulated copper conductor single core cable and earthing etc. as required with Minimum 5 year OEM warranty. System lumen efficacy $\geq 105 < 120$ lm/Watt output . LM79 & LM80 Test report and all testing required for LED fixtures as per BIS shall be submitted. Shape size and CCT shall be as approved by Engineer-in- Charge as per requirement. (Thermal management: heat sink of aluminum housing such that LED junction temperature shall not rise above 90°C).						8.15
220.1	100 watt	18	Each	2266.00	40788	8.15.3	
221	Supplying & fixing suitable size GI box with modular plate and cover in front on surface or in recess including providing and fixing 25 A modular socket outlet and 25 A modular SP MCB, "C" curve including connections, painting etc. as required.	6	Each	807.00	4842	1.57	
222	Laying of one number PVC insulated and PVC sheathed / XLPE power cable of 11 KV grade of following size in the existing RCC/ HUME/ METAL pipe as required.						22.3
222.1	Above 120 sq. mm and upto 400 sq. mm	150	Metre	170.00	25500	22.3.2	
223	Dismantling of existing underground cable safely with its accessories and refilling the trench to ground level including recoiling of dismantled cable.	170	Metre	34.22	5817.40	PWD - 2024 35.5	
224	Supplying and making indoor cable end termination with heat shrinkable jointing kit complete with all accessories including lugs suitable for following size of 3 core, XLPE aluminium conductor cable of 33 KV grade as required :						23.7
224.1	240 sq. mm	2	Each	36190.00	72380	23.7.3	

225	Supplying and making straight through cable jointing with heat shrinkable jointing kit complete with all accessories including ferrules suitable for following size of 3 core, XLPE aluminium conductor cable of 33 KV grade as required :						23.9
225.1	240 sq. mm	2	Each	103493.00	206986	23.9.3	
226	Down rod for ceiling fan :- Supply and fixing M.S. down rod 14 SWG (2mm) thick for ceiling fan including threading, painting, making holes etc. as required complete. Note: For new works difference of installed & standard down rod length shall be paid.	55	Metre	134.52	7398.60	PWD - 2024 30.13	
227	Brush Less Direct Current (BLDC) Fan without Remote Supply, Installation, Testing and Commissioning of ceiling fan with Brush Less Direct Current (BLDC) Motor, class of insulation: B, 3 nos. metal (Aluminium alloy) blades, 30 cm long down rod, 2 nos. canopies, shackle kit, safety rope, copper winding, steel/Al body Power Factor not less than 0.9, Service Value (CM/M/W) minimum as below, 350 RPM (tolerance as per IS : 374-2019), THD (Total Harmonic Distortion) less than 10%, suitable for operation with regulator for speed control and all remaining accessories including safety pin, nut bolts, washers, temperature rise=75 °C (max.), insulation resistance more than 2 mega ohm, suitable for 230 V, 50 Hz, single phase AC supply, Ceiling Fan compliant to IS 374:2019 fan i/c external connections with 1.5 sq.mm FRLS/HFFR, PVC insulated copper conductor single core cable and earthing etc. as required.						9.2
227.1	1200 mm, service value \geq 6.0 CM/Min/Watt, air delivery 210 CM/Min (Minimum)	7	Each	2695.00	18865	9.2.3	
227.2	1400 mm, service value \geq 6.0 CM/Min/Watt, air delivery 245 CM/Min (Minimum)	22	Each	2737.00	60214	9.2.4	
228	LT Panel:- Supply, fixing, testing & commissioning wall/floor mounted LT panel primer coated with powder coated paint & provided with required gasket for dust/vermin proof with degree of protection IP42 to 65 suitable for 415Volt 3 phase, 50 Hz, 4 wire system fabricated out of CRCA sheet upto 2 mm thick (1.6 mm for doors) duly compartmentalized for incomer, bus section, outgoing, cable alleys & CT, PT Ampere Metre, Volt Metre, selector switches, frequency Metre, phase indicating lamp, Energy Metre complete including cost of busbar supports, detachable cable gland plates, 2 earthing terminals, internal wiring & fixing of separately supplied MCBs, MCCBs, ACB, panel mounted changeover switch/SFUs, etc. as required but excluding cost of busbar strips, Ampere Metre, Volt Metre, selector switch as per approved design & specification	100	Kg	468.46	46846	PWD - 2024 29.27	
229	LT panel accessories:- Supply and fixing of LT panel accessories of approved make in existing LT panel including connections etc. as required as per specification.						PWD - 2024 29.28

229.1	Digital Ampere Metre with CTs with selector switch	2	Per set	2507.50	5015	PWD - 2024 29.28.1
229.2	Digital Volt Metre with selector switch & HRC fuse	2	Per set	2829.64	5659.28	PWD - 2024 29.28.2
229.3	Frequency Metre	2	Each	1693.30	3386.60	PWD - 2024 29.28.3
229.4	Multifunction Meter	2	Each	3052.66	6105.32	PWD - 2024 29.28.4
229.5	Copper bus bar strips with PVC sleeves	20	Kg	929.84	18596.80	PWD - 2024 29.28.5
229.6	Aluminium bus bar strips with PVC sleeves	20	Kg	335.12	6702.40	PWD - 2024 29.28.6
229.7	LED lamp indicator	40	Each	300.90	12036	PWD - 2024 29.28.7
230	MCCB 3Ph & N, 4Pole, 50Hz, 415V (thermal - magnetic release) :- Supplying of ISI marked and approved make of moulded case circuit breaker (MCCB) suitable for 3 phase & N, 4 pole, 50 Hz, 415 Volts, (Ics=100%Icu) AC supply with thermal-magnetic release having respective breaking capacity (KA) at 415 Volts cited against their range standard conforming to IS/IEC 60947-2					PWD - 2024 27.3
230.1	MCCB 25kA current rating - 125Amp & adjustable overload setting 80% -100% of In, adjustable short circuit setting 6-10 In 4 Pole (Outgoing provision in Panel)	7	Each	13679.74	95758.18	PWD - 2024 27.3.2
230.2	MCCB 25kA current rating - 200 Amp & adjustable overload setting 80% -100% of In, adjustable short circuit setting 6-10 In 4 Pole (Outgoing provision in Panel)	5	Each	23240.10	116200.50	PWD - 2024 27.3.4
231	Air circuit breaker (ACB) (Microprocessor Release) :- Supply of ISI marked and approved make of air circuit breaker (ACB) with microprocessor release with overload, short circuit, neutral protection, instantaneous, ground fault protection (LSING) Ics=Icu=Icw for 1sec for total selectivity, ambient temperature 50deg.C, In with breaking capacity of 50 kA/60kA/75kA, 4 pole, 415 Volts conforming to IS/IEC : 60947-2					PWD - 2024 27.7
231.1	630 Amp, manual, fixed 50kA	1	Each	179604.26	179604.26	PWD - 2024 27.7.1
232	Exhaust fan heavy duty :- Supplying, erecting and testing of approved make exhaust fan heavy duty with mounting frame, blades AC 230-250 complete connection and including, frame bolt/anchor hole fasteners etc. complete finished and as required.					PWD - 2024 30.6
232.2	450mm sweep RPM 900 / 1400	2	Each	5025.62	10051.24	PWD - 2024 30.6.3

233	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.						1.21
233.1	20 mm	75.00	Metre	151.00	11325	1.21.1	
233.2	25 mm	400.00	Metre	168.00	67200	1.21.2	
234	Bollard :- Supply, fixing & testing of approved make of LED integral type bollard cylindrical/square shape housing cast aluminium dome shape top cover fixed with cylindrical shape acrylic cover having base plate with holes for direct mounting complete with all accessories including preparation of foundation, fixing, connection etc. as required. LED of 1 to 3 Watt each assembled on single MCPCB, system lumens output with efficacy >90 lm/W. luminaire having color temp upto 6500K & 50000 burning hrs. life with minimum @ L 70, The colour rendering index of LED light should be more than 70. Luminaire, comprises of driver PF > 0.95 & surge protection 10KV. IP65 protection. Submission LM 79-08/IS16106 (2012), IEC60598, IEC61347i/c connection wire, testing etc. to complete the job.						PWD - 2024 31.16
234.1	Bollard LED 8-10 Watt cylindrical shape height > 700mm, color temp 3000-6000k	4	Each	5444.52	21778.08	PWD - 2024 31.16.1	
TOTAL of Section – B: Electrical Works (including all taxes)					2707215.68		

C. IT Works

S. No.	Description / Item of Work	Qty.	Unit	Rate	Amount	CPWD E&M DSR - 2025
301	Supplying, installation, Testing and commissioning of following capacity 24 port Layer 3 Network Switch having features and specifications etc. as mentioned here under: At least 20 X RJ-45 Gigabit Ethernet Ports and additional 4 combo 10/100/1000 base-t/SFP Ports with additional 4 SFP+ ports non-blocking architecture by having Switching capacity of min. 128Gbps and packet forwarding rate of 95Mpps or higher, 16K MAC table. Console Port, USB port, Internal AC Power supply with operating temperature of 0 to +50 0C. Stacking port with stacking support of minimum 8 units per stack. 48K Mac address, 9K or more Jumbo frame, ERPS with enabling ring to converge in less than 50 ms from node or link failure, Static routing, Static, 6to4, ISATAP and GRE, IPv6 Neighbor Discovery (ND), BGP, ISIS, MPLS, VRRP v2, OSPFv2/v3, PBR, Route Redistribution, RIPv1/v2/ng, IP Helper all L3 Protocols should support from day 1 for both IPv6 and IPv4, 802.1x, Port security , Radius C TACACS+ authentication C accounting, DAD, DAI, DoS attack prevention, SSH, Guest VLAN, IP Access List, MAC Access List. Multicast: VLAN, PIM-SM, PIM-DM, PIM- SDM, PIM-SMv6, DVMRP v3 and MSDP, IGMP C MLD Snooping, Flow mirroring, IGMP C MLD Snooping Querier, Per-VLAN IGMP C MLD Snooping. SNMP, Dual configurations, Multiple images, RMON, LLDP/LLDP-MED, sFlow, DHCP/BOOTP Client, IPv4/IPv6, Syslog server, Debug command, 802.3ah Ethernet Link OAM, 802.1ag Connectivity Fault, Y.1731 OAM, 802.1Qbb Priority- based Flow Control (PFC), Dying Gasp, Cable Diagnostics , 6 kV surge protection on all Gigabit Ethernet ports and on all GE RJ-45 access ports. Certifications: UL, CE, FCC, RoHS, MTCTE, OEM/Product must be on Trusted Telecom Portal of Department of Telecommunication, Government of India etc. complete as required.	2.00	Each	193791.00	387582	39.4
302	Supplying, Installation, Testing and commissioning of indoor Wireless Access Point for Low Density use having features and specifications etc. as mentioned here under - Dual-band Wi-Fi6 (802.11ax) 574Mbps (2.4GHz) + 1200Mbps (5GHz), WI-FI 6 Certified, 1 x RJ45 console port, 1G LAN POE Port, factory reset, WPA/WPA2/WPA3™ Personal/Enterprise, WEP 64/128-bit, SSID broadcast disable, MAC address access control, Internal RADIUS server, SNMP, Customizable Captive Portal, Auto Channel, Works as Access Point, WDS, WDS with AP, Wireless Client, Web (HTTP), Secure Socket Layer (SSL), Traffic control, Support ATF/Fast Roaming/Band Steering,					

	Supports enhanced security - WPA-PSK/WPA2-PSK/WPA3-PSK and RADIUS client, and Cipher negotiation, and MAC/ IP ACL for networks, Certifications: MTCTE, CE, FCC. Should also work as Standalone and must be Compatible with S/W & H/W Controller with additional features like - Real-Time Monitoring and Alerts, Rich Advanced Features, Centralized Device Management, Role-Based Administration, Real-Time Monitoring, VLAN and Access Control, Auto RF Management and Bandwidth Optimization, Multi-SSID and Captive Portal Authentication.OEM/Product must be on Trusted Telecom Portal of Department of Telecommunication, Government of India etc. complete as required.	2	Each	22739.00	45478	39.7
303	Supplying, Installation, Testing and commissioning of Outdoor Wireless Access Point having features and specifications etc. as mentioned here under - WIFI 6 Certified, 1 x RJ45 console port, MG 2.5G LAN POE Port, factory reset, 4 x internal antennas, the transmission coverage of shall be minimum 80 meters in radius, AP should have transmission power minimum of 22 dBm, The AP shall provide a minimum of 29 dBm EIRP for both 2.4 GHz and 5 GHz frequencies. Feild deployment shall be with EIRP as per regulatory guidelines, AP shall have dual-band Omni-directional Antenna, either internal or external. Feild deployment shall be with EIRP as per the WPC guideline, WPA/WPA2/WPA3™ Personal/Enterprise, WEP 64/128-bit, SSID broadcast disable, MAC address access control, Internal RADIUS server, SNMP, Customizable Captive Portal, Auto Channel, Works as Access Point, WDS, WDS with AP, Wireless Client, Web (HTTP), Secure Socket Layer (SSL), Traffic control, Support ATF/Fast Roaming/Band Steering, Supports enhanced security – WPA PSK/WPA2-PSK/WPA3-PSK and RADIUS client, and Cipher negotiation, and MAC/ IP ACL for networks, IP68 water/dustproof standard, 6KV Surge Protection; 4KV ESD Protection (contact), 6KV (air), Operating ambient temperature (-5~50 °C), Grounding point support, IEC 60601-1-2 EMC Medical Electrical Equipment Testing and Certification, EN50121-1 & EN50121-4 for Wireless Application. Certifications: MTCTE, CE, FCC. Works as Standalone, Compatible with S/W & H/W Controller with additional features like - Real-Time Monitoring and Alerts, Rich Advanced Features, Centralized Device Management, Role Based Administration, Real-Time Monitoring, VLAN and Access Control, Auto RF Management and Bandwidth Optimization, Multi-SSID and Captive Portal Authentication.OEM/Product must be on Trusted Each Telecom Portal of Department of Telecommunication, Government of India etc. complete as required.	2	Each	46171.00	92342	39.9

304	Supplying Installation Testing and Commissioning of 24 port Cat6 Patch Panel loaded. Must be of 1U height with clear label holders and white label with the panel. 24 Ports Cat-6 Patch Panel should have ETL/UL verification program certificate for compliance with ANSI/TIA-568.2-D etc. complete as required.	4	Each	5278.00	21112	39.11
305	Supplying, Installation, Testing and commissioning of following CAT6 Patch Cord should have ETL/UL verification program certificate for compliance with ANSI/TIA-568.2-D etc. complete as required.	39.12				
305.1	Copper Patch Cords of length 1m (3ft)	48	Each	151.00	7248	39.12.1
306	Supplying, Installation, Testing and commissioning of CAT6 Copper Information Outlet (IO) with face plate of color as per site requirement, should have ETL/UL verification program certificate for compliance with ANSI/TIA-568.2-D. All copper Cable and Components should be from same OEM to maintain compatibility and interoperability etc. complete as required.	48	Each	212.00	10176	39.14
307	Supplying, drawing, Installation, Testing and commissioning of CAT6 UTP LSZH 23AWG Twisted Pair Cable in existing conduit/ on surface, Category 6 Unshielded Twisted Pair, 4 pair should be complied as per UL/ETL verification program for compliance with ANSI/TIA-568.2-D standard. Outer diameter should be in the range of 6.1mm nominal with Operating Temperature Range : -5° to +60°C, Bending Radius : < 4 X Cable Diameter at -5°C ± 1°C and Pulling Force : 11.5Kg etc. complete as required.	39.17				
307.1	1 Run of cable	50	Metre	60.00	3000	39.17.1
307.2	2 Run of cable	30	Metre	96.00	2880	39.17.2
307.3	3 Run of cable	15	Metre	131.00	1965	39.17.3
307.4	4 Run of cable	400	Metre	167.00	66800	39.17.4
308	Supplying and drawing following core Fiber Optic Cable having corrugated steel armoring. The Fiber should be SM Fiber Central -loose tube filled with Thixotropic jelly, duly following Standards: ISO 11801, IEC 60793-1/60794-1-2, ITU-T-REC G.652D and Telecordia GR-20-core, High quality Electro Chromium Coated Corrugated Steel tape (ECCS) and HDPE- Sheath, Operating ambient Temperature should be – 5 °C to +50 °C and Storage Temperature shall be – 5 °C to +50 °C, Max Attenuation ± 0.36 (db / km) at Operational Wavelength 1310 nm and ± 0.22 db / km at Operational Wavelength 1550 nm. type of fiber should be 9/125 / G.652D & Refractive Index should be 1.4670/1.4675. The value for Mode-field, Cladding Diameter 9.2 ± 0.4 µm and 125 ± 0.7 µm correspondingly. The Dispersion value ≤ 3.5 ≤ 18 ps/nm-km and PMD value ≤ 0.2 ps/km and Cable Cut-off wavelength ≤ 1260 nm i/c splicing & marking etc complete as required	39.19				
308.1	Single Mode 12 Core Optical fiber cable	700	Metre	89.00	62300	39.19.2

309	Supply and fixing following port Rack Mount loaded LIU with pigtail, Front-mounted cable saddles for jumper management, suitable to manage both splices and terminations, Pre-assembled shelves in multiple configurations, Rubber fiber slotted bracket built-in, metal splice shelf to protect the fibers, 2 fiber spools built-in for 900µm tight buffered fiber storing, Capable of storing up to 3 meters of 900µm tight buffered fiber per adapter, Removable front and rear covers for better access to interior of LIU, Should be Single / Multi mode LC Type fully loaded. Accessory kit consists of cable ties, mounting ear screws, and spiral wrap tube etc complete as required.					39.21
309.1	24 Port LIU	4	Each	10049.00	40196	39.21.3
310	Supplying and fixing Patch Cord of Optical Fiber Multi Mode or Single Mode LC to LC Fiber Duplex having high precision ceramic ferrule with good concentricity, Fiber corning single mode G652D, Cable Type 2mm with Mechanical specification Apex Offset ≤ 50 µm, Fiber Height ± 100 nm, End-face radius of Curvature 7mm < R < 25mm, Repeatedly ≤ 0.2 db, Working ambient Temperature – 5 °C to +50 °C, Storage Temperature – 10 °C to +50 °C, Length -- 2meter, Type -- LC-LC Duplex etc complete as required.	18	Each	705.00	12690	39.22
311	Supplying and fixing of following size Wall Mount Rack having Fixed Structure with 0.8mm CRCA Sheet, completely knocked-down condition (CKD) Shape, Vertical Mounting Rail 1.6 mm with 'U'Marking, Minimum 2 cable entry/exit provision at Top and bottom with rubber protection, Front 5mm Toughened Glass with lock, wall mounting kit, Powder coated Color- RAL- 7035, complied with UL & RoHS, 2 x 6 sockets 16A power distribution units, 3 numbers closed cable organizer, Hardware mounting screws packet of 20 x 1 number, etc. complete as required.					39.23
311.1	15U Rack	2	Each	13330.00	26660	39.23.3
312	Supplying Installation Testing and Commissioning of 4MP IP IR Dome Camera having following specifications and features etc :- 1) Signal System: PAL/NTSC, Signal to Noise Ratio: > 50 dB, Camera should display Camera title, Date & Time in live & recorded video 2) Image Sensor: 1/2.8" or better progressive Scan CMOS to get color image even at night condition (Minimum Illumination: 0.006 Lux@ F1.4, AGC ON, 0 lux with IR or better) True Day & Night High Performance Mechanical IR cut filter with auto switch, Integrated IR Source (Auto, Manual)- Inbuilt IR LED's with effective distance upto 50 meter or better and 30 meter for colour view in night, Imaging: 1/3s to 1/30000s electronic shutter support, Auto Gain Control, White Balance- Auto, Back Light Compensation, Multi zone Privacy Masking, HLC, Digital Watermarking. 3) Compression (Minimum): Video:- H.265 or better, Audio:- G.711U/A, G.711Mu, G.726, AAC, G.723					

	<p>4) Wide Dynamic Range:- WDR (120dB or more) 5) Digital Noise Reduction:- DNR (3D) On/Off 6) Video Streaming & Frame Rates :- Triple streaming , configurable Main stream: 4MP (2560×1440)25/30fps , Sub streams minimum: 720P@25/30 fps 7) Image Setting: Rotate Mode, saturation, brightness, contrast, sharpness adjustable through client software or web browser, Edge Analytics: Tripwire, Intrusion, Motion Detection 8) Cyber Security: AES 256-bit Encryption, Configuration encryption, trusted execution, Digest, security logs, account lockout, video encryption, IP/MAC filtering, HTTPS, trusted upgrade 9) Onboard Storage: Camera should support built-in Micro SD/SDHC/SDXC Card slot upto 512 GB. It should be supplied with minimum 128GB memory Card. 10) Recording Management: Format SD, overwrite, storage management, video to NAS device, 11) Alarm Trigger : Motion/tampering detection; network disconnection detection; IP conflict detection; memory card state detection; memory space detection 12) Network Protocol: SFTP, IPv6, IPv4, DNS, RTCP, NTP, RTP, HTTP, HTTPS, SNMP TCP/IP, PPPoE, NFS, UDP, ICMP, SSL, DHCP, SMTP, RTSPS, unicast, 13) System Capability: ONVIF, Camera shall support open source VMS 14) Ethernet: 1 RJ 45 10/100 Ethernet port 15) Audio : It should support 1 x Built-In Mic and 1/1 Alarm In/ Out for External Mic. and Speakers as per site requirement. 16) Power Input: The camera should support simultaneous dual power input—12 VDC (via power adapter) and PoE (802.3af)—to ensure continuous operation in the event of a failure in one power source. 17) Power Requirement: 12VDC/24 VDC/PoE (802.3af)/ePoE 18) Housing/ Enclosure:- IP67 weather proof, IK10, Metallic body 19) Operating Condition:- Ambient Temperature:- (-)05°C to 50°C, humidity 95% (max) (non-condensing) 20) IR life: 40000 hours or higher 21) Video Bit rate: 32 KBPS - 8 MBPS or better 22) Standards: BIS with ER, STQC Certified, CE, FCC and RoHS</p>					40.3
312.1	4MP @ 25/30fps@1440P (2560 x 1440) Dome Camera with 2.8/ 3.6/ 6/8/12 mm fixed lens (as per site requirement).	4	Each	10365.00	41460	40.3.1
TOTAL of Section – C: IT Works (including all taxes)					821889.00	
GRAND TOTAL A + B + C (Including all taxes, duties, EPF, ESIC, etc.)					35257807.62	

Note: The percentage rate and amount for the above-mentioned work has to be submitted in the financial bid only (and not in the technical bid), otherwise the bid will be disqualified from participation in the financial bid.

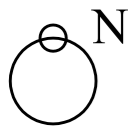
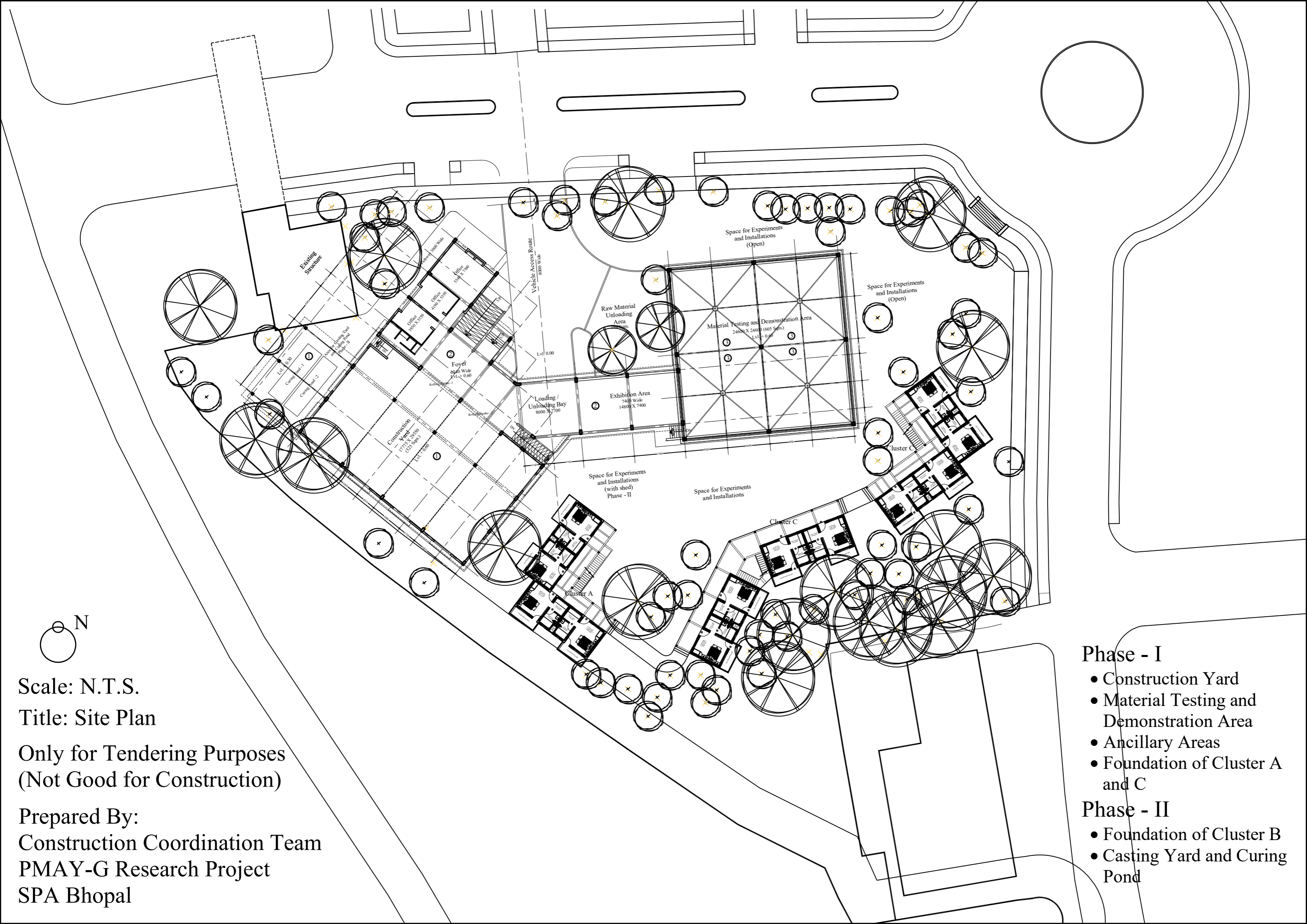
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Note:

- *These drawings are for tendering purpose only and are not good for construction. Detailed drawings are available at the office of Coordinator (Construction Works), PMAY-G Research Project, SPA Bhopal.*
- *Changes in layouts / dimensions / specifications are possible during the execution of work and shall be accepted only on written instructions from Engineer in Charge / Coordinator (Construction Works), PMAY-G Research Project, SPA Bhopal.*

.....



Scale: N.T.S.

Title: Site Plan

Only for Tendering Purposes
(Not Good for Construction)

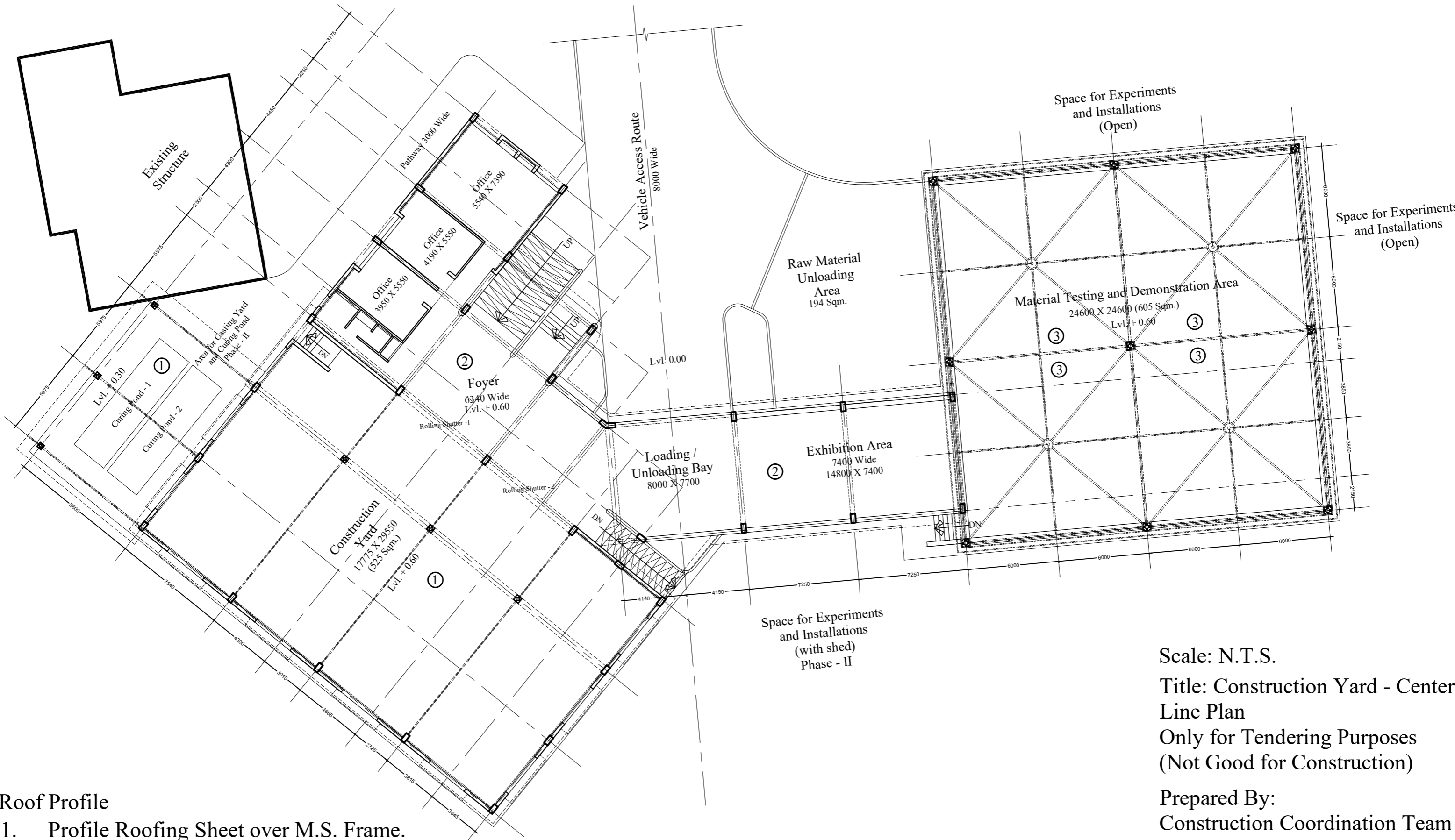
Prepared By:
Construction Coordination Team
PMAY-G Research Project
SPA Bhopal

Phase - I

- Construction Yard
- Material Testing and Demonstration Area
- Ancillary Areas
- Foundation of Cluster A and C

Phase - II

- Foundation of Cluster B
- Casting Yard and Curing Pond



Roof Profile

1. Profile Roofing Sheet over M.S. Frame.
2. Stone Slab roofing over steel girders (flat roof with nominal slope).
3. Tensile roofing over M. S. frame (preferably pre-engineered).

Scale: N.T.S.
 Title: Construction Yard - Center Line Plan
 Only for Tendering Purposes
 (Not Good for Construction)
 Prepared By:
 Construction Coordination Team
 PMAY-G Research Project
 SPA Bhopal (In consultation
 with our Structural Consultant)



SCHEDULE OF SLABS

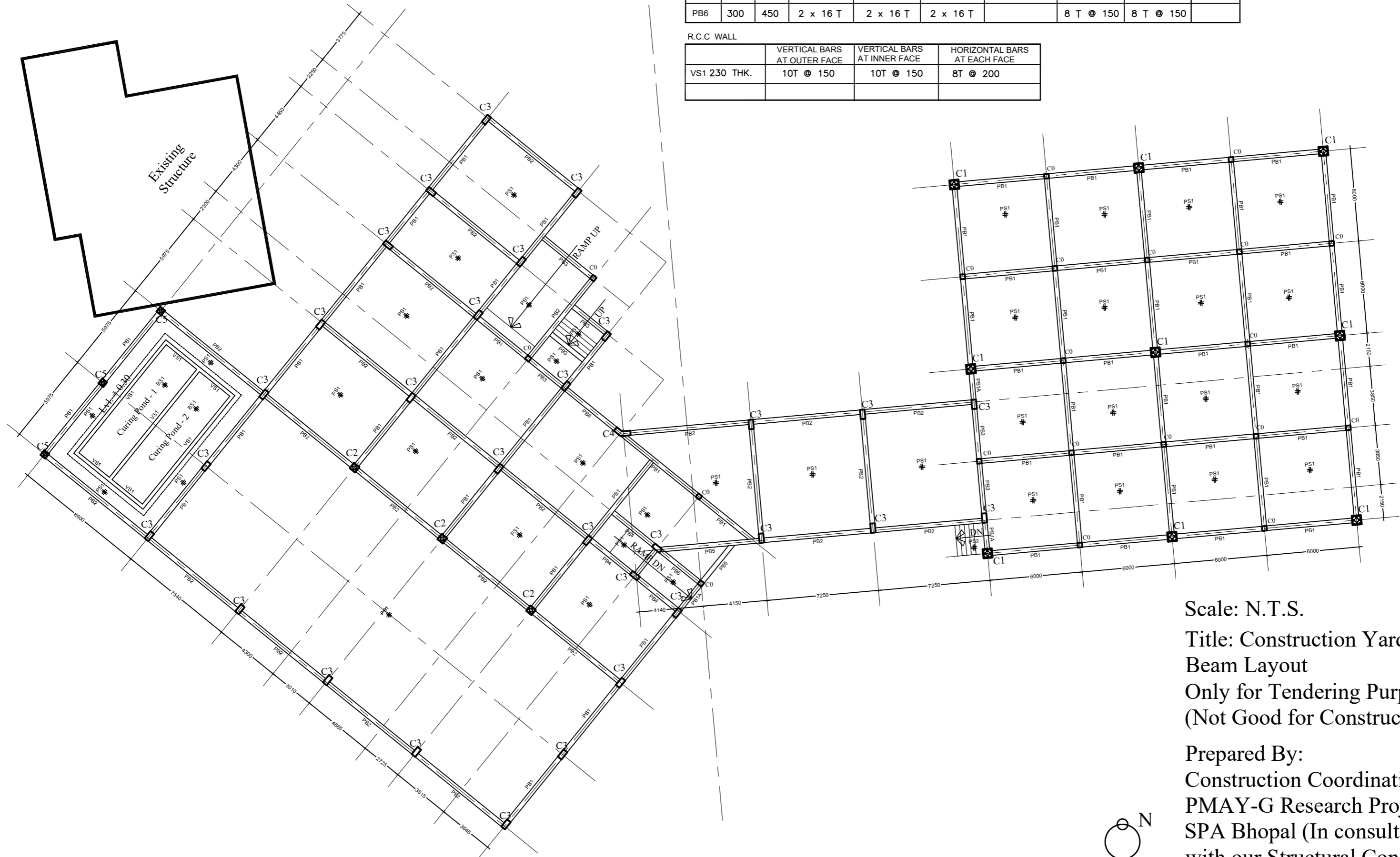
SLAB NO.	SIZE (OVERALL) IN MM	MID SPAN MAIN BARS		TOP BARS THROUGHOUT	EXTRA TOP BARS UPTO 0.3xL FROM FACE OF BEAM	DISTRIBUTION BARS C/C	REMARKS
		BOTM. BARS	BOTTOM BENT-UP @ L/4 FROM CENTER				
PS1	150 THK.	10T @ 150				10T @ 150	PLINTH SLAB
PS2	150 THK.	10T @ 150		10T @ 150		8 T @ 200	
BS1	200 THK.	10T @ 150 MESH		10T @ 150 MESH			BASE SLAB

SCHEDULE OF BEAMS

BEAM NO.	SIZE		BOTTOM REINFORCEMENT		TOP REINFORCEMENT		STIRRUPS		REMARK
	B	D	THROUGHOUT	MID SPAN 0.7xL	THROUGHOUT	EXTRA TOP 0.25xL FROM FACE OF COLUMN ON EACH SIDE	UPTO 2D FROM FACE OF COLUMN	AT MID SPAN	
PB1	300	450	2 x 16 T	2 x 16 T	2 x 16 T	2 x 16 T	8 T @ 100	8 T @ 150	
PB1A	300	450	2 x 16 T		4 x 16 T		8 T @ 100	8 T @ 100	
PB2	300	600	3 x 16 T	2 x 16 T	2 x 16 T	2 x 16 T	8 T @ 100	8 T @ 150	
PB3	300	450	2 x 16 T		2 x 16 T		8 T @ 150	8 T @ 150	
PB4	300	450	2 x 16 T	1 x 16 T	2 x 16 T		8 T @ 150	8 T @ 150	
PB5	300	600	2 x 16 T	2 x 16 T	2 x 16 T	2 x 16 T	8 T @ 100	8 T @ 150	
PB6	300	450	2 x 16 T	2 x 16 T	2 x 16 T		8 T @ 150	8 T @ 150	

R.C.C WALL

	VERTICAL BARS AT OUTER FACE	VERTICAL BARS AT INNER FACE	HORIZONTAL BARS AT EACH FACE
VS1 230 THK.	10T @ 150	10T @ 150	8T @ 200



Scale: N.T.S.

Title: Construction Yard - Plinth Beam Layout
 Only for Tendering Purposes
 (Not Good for Construction)

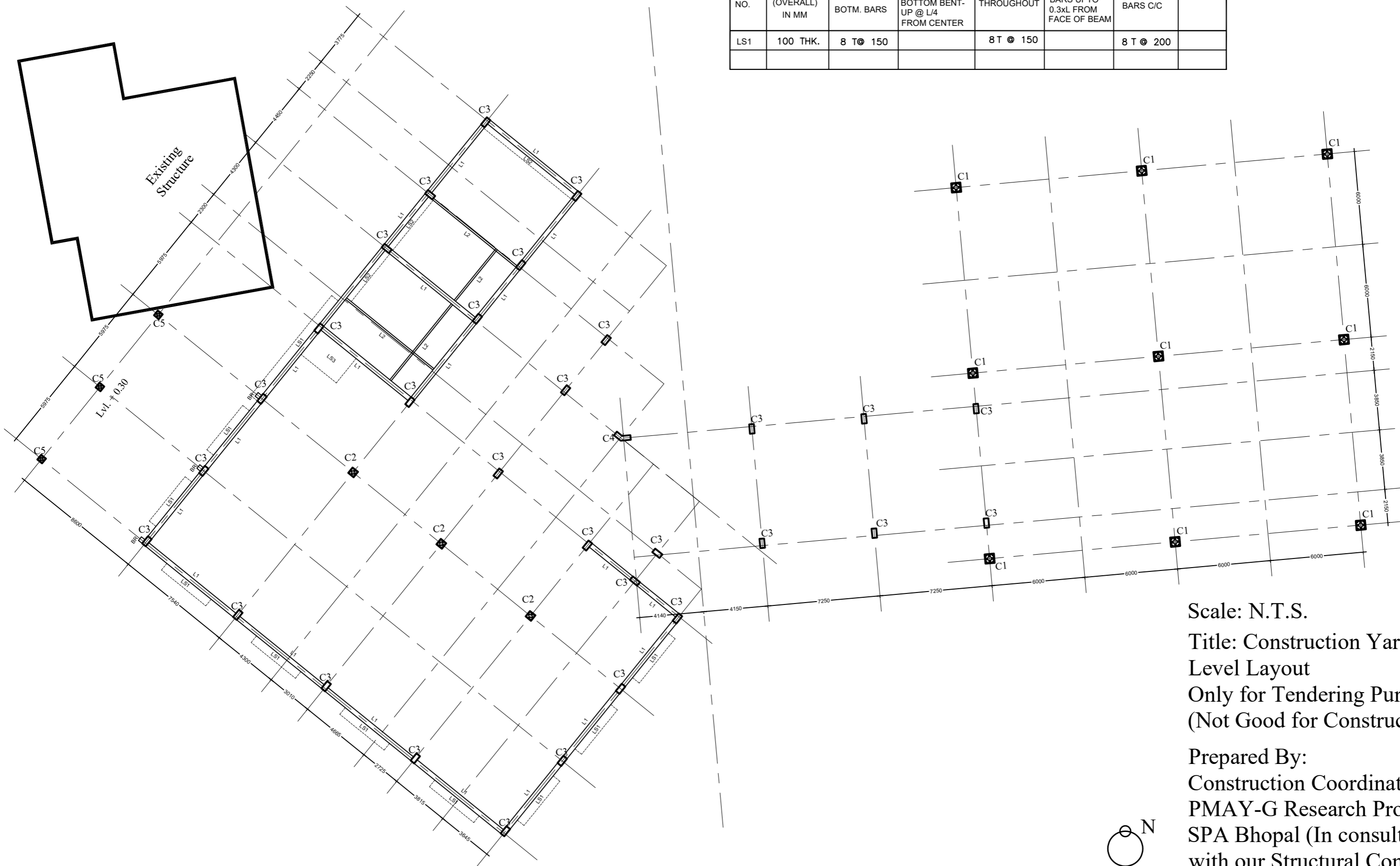
Prepared By:
 Construction Coordination Team
 PMAY-G Research Project
 SPA Bhopal (In consultation
 with our Structural Consultant)

SCHEDULE OF BEAMS

BEAM NO.	SIZE		BOTTOM REINFORCEMENT		TOP REINFORCEMENT		STIRRUPS		REMARK
	B	D	THROUGHOUT	MID SPAN 0.7xL	THROUGHOUT	EXTRA TOP 0.25xL FROM FACE OF COLUMN ON EACH SIDE	UPTO 2D FROM FACE OF COLUMN	AT MID SPAN	
L1	230	230	2 x 10 T		2 x 10 T		8 T @ 150	8 T @ 150	Resting on wall
L2	115	150	2 x 10 T		2 x 10 T		8 T @ 150	8 T @ 150	Resting on wall

SCHEDULE OF SLABS

SLAB NO.	SIZE (OVERALL) IN MM	MID SPAN MAIN BARS		TOP BARS THROUGHOUT	EXTRA TOP BARS UPTO 0.3xL FROM FACE OF BEAM	DISTRIBUTION BARS C/C	REMARKS
		BOTM. BARS	BOTTOM BENT-UP @ L/4 FROM CENTER				
LS1	100 THK.	8 T @ 150		8 T @ 150		8 T @ 200	



Scale: N.T.S.

Title: Construction Yard - Lintel Level Layout

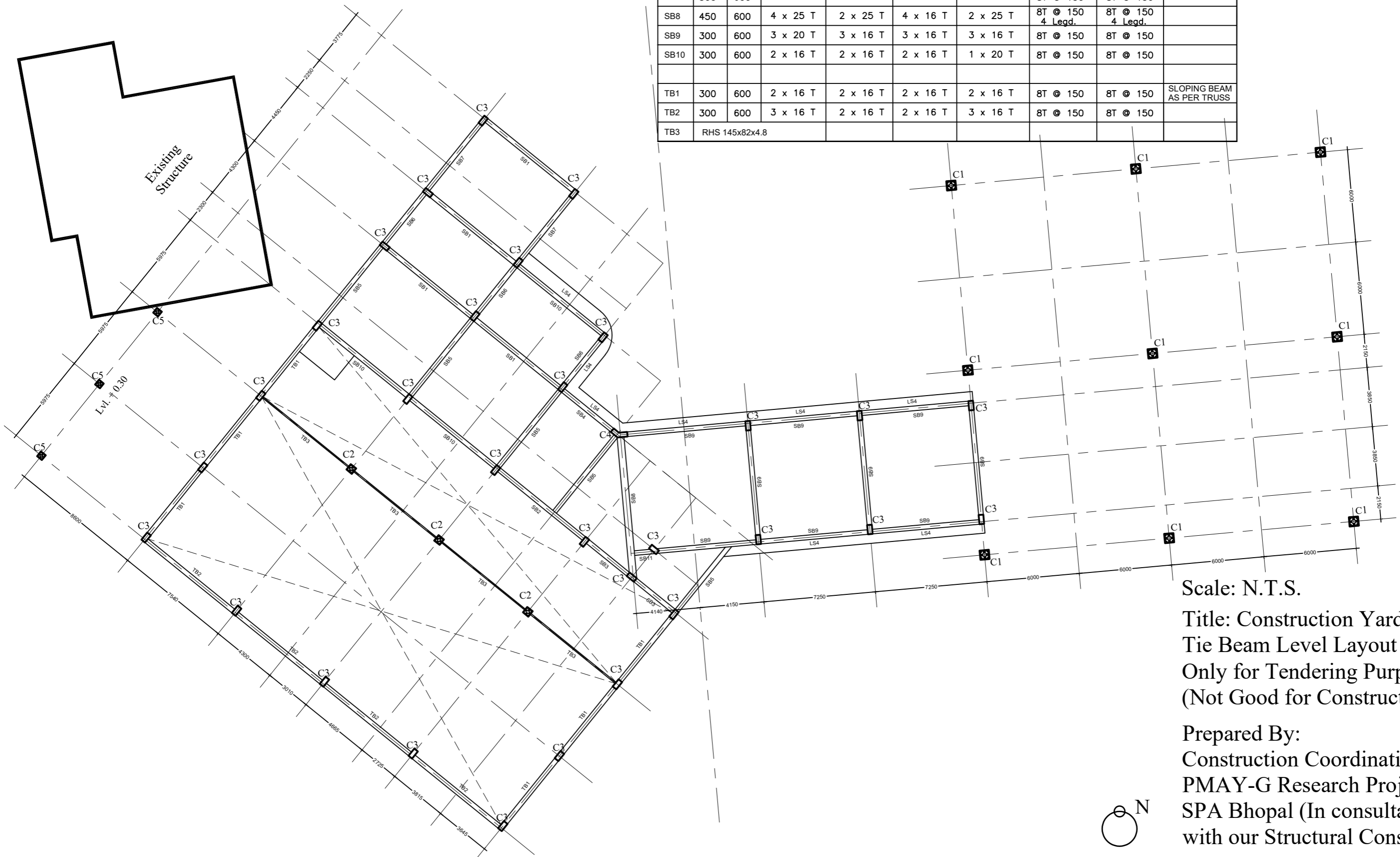
Only for Tendering Purposes
(Not Good for Construction)

Prepared By:

Construction Coordination Team
PMAY-G Research Project
SPA Bhopal (In consultation with our Structural Consultant)

SCHEDULE OF BEAMS

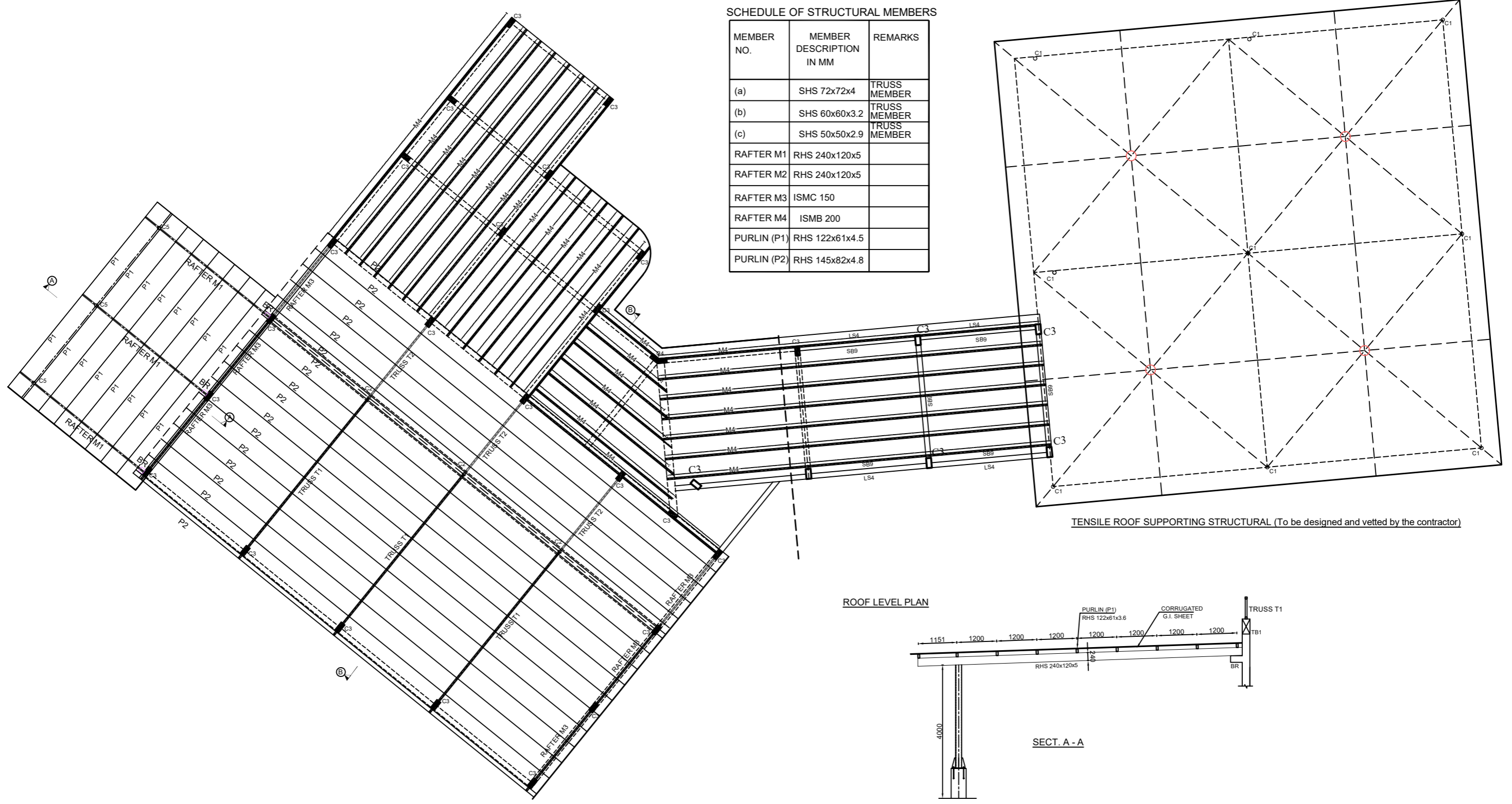
BEAM NO.	SIZE		BOTTOM REINFORCEMENT		TOP REINFORCEMENT		STIRRUPS		REMARK
	B	D	THROUGHOUT	MID SPAN 0.7xL	THROUGHOUT	EXTRA TOP 0.25xL FROM FACE OF COLUMN ON EACH SIDE	UPTO 2D FROM FACE OF COLUMN	AT MID SPAN	
SB1	300	600	3 x 20 T	3 x 20 T	3 x 16 T	3 x 20 T	8T @ 150	8T @ 150	
SB2	300	600	3 x 20 T	2 x 20 T	3 x 16 T	2 x 20 T	8T @ 150	8T @ 150	
SB3	300	600	3 x 16 T		3 x 16 T		8T @ 150	8T @ 150	
SB4	300	600	3 x 16 T	1 x 16 T	3 x 16 T		8T @ 150	8T @ 150	
SB5	300	600	3 x 20 T	2 x 16 T	3 x 16 T	2 x 16 T	8T @ 150	8T @ 150	
SB6	300	600	3 x 16 T	1 x 16 T	3 x 16 T		8T @ 150	8T @ 150	
SB7	300	600	2 x 16 T	2 x 16 T	2 x 16 T	2 x 16 T	8T @ 150	8T @ 150	
SB8	450	600	4 x 25 T	2 x 25 T	4 x 16 T	2 x 25 T	8T @ 150 4 Legd.	8T @ 150 4 Legd.	
SB9	300	600	3 x 20 T	3 x 16 T	3 x 16 T	3 x 16 T	8T @ 150	8T @ 150	
SB10	300	600	2 x 16 T	2 x 16 T	2 x 16 T	1 x 20 T	8T @ 150	8T @ 150	
TB1	300	600	2 x 16 T	2 x 16 T	2 x 16 T	2 x 16 T	8T @ 150	8T @ 150	SLOPING BEAM AS PER TRUSS
TB2	300	600	3 x 16 T	2 x 16 T	2 x 16 T	3 x 16 T	8T @ 150	8T @ 150	
TB3	RHS 145x82x4.8								



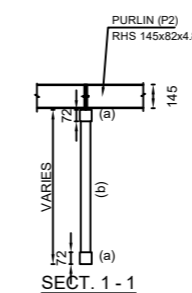
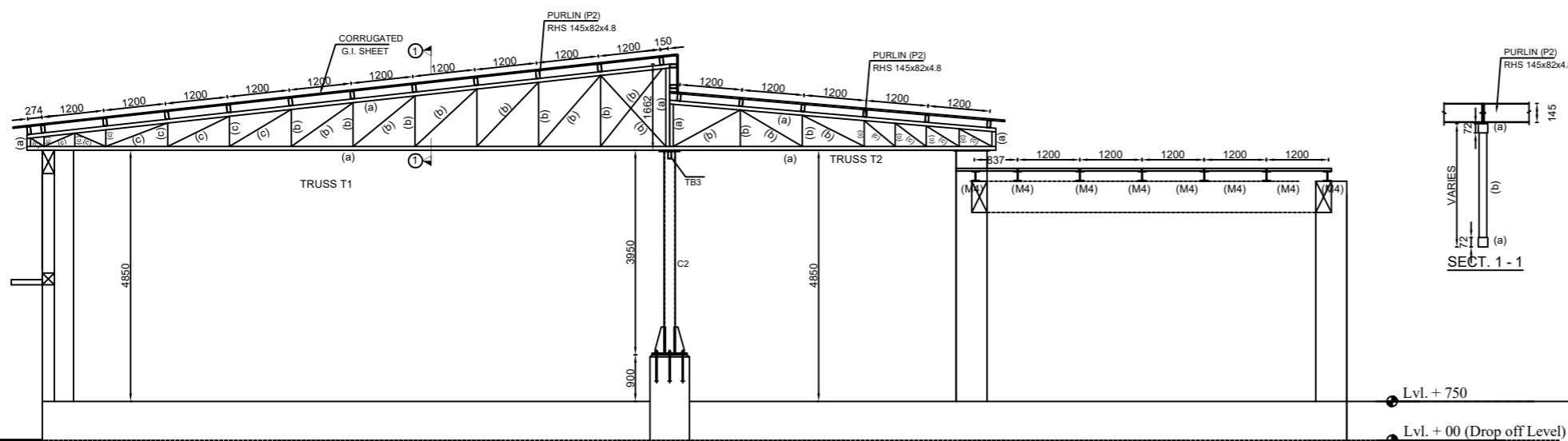
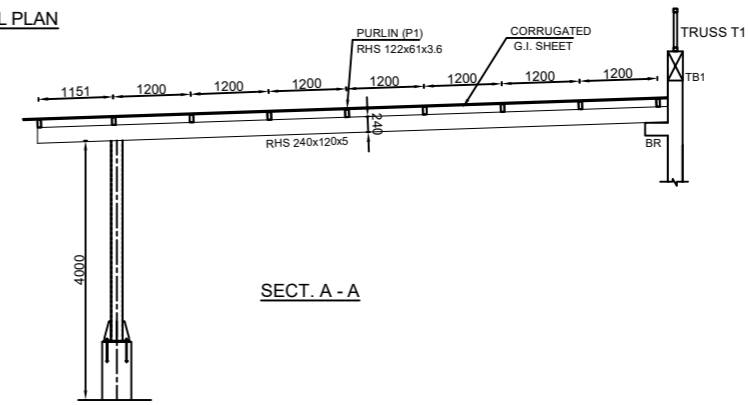
Scale: N.T.S.
 Title: Construction Yard - Slab / Tie Beam Level Layout
 Only for Tendering Purposes
 (Not Good for Construction)
 Prepared By:
 Construction Coordination Team
 PMAY-G Research Project
 SPA Bhopal (In consultation with our Structural Consultant)

SCHEDULE OF STRUCTURAL MEMBERS

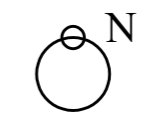
MEMBER NO.	MEMBER DESCRIPTION IN MM	REMARKS
(a)	SHS 72x72x4	TRUSS MEMBER
(b)	SHS 60x60x3.2	TRUSS MEMBER
(c)	SHS 50x50x2.9	TRUSS MEMBER
RAFTER M1	RHS 240x120x5	
RAFTER M2	RHS 240x120x5	
RAFTER M3	ISMC 150	
RAFTER M4	ISMB 200	
PURLIN (P1)	RHS 122x61x4.5	
PURLIN (P2)	RHS 145x82x4.8	



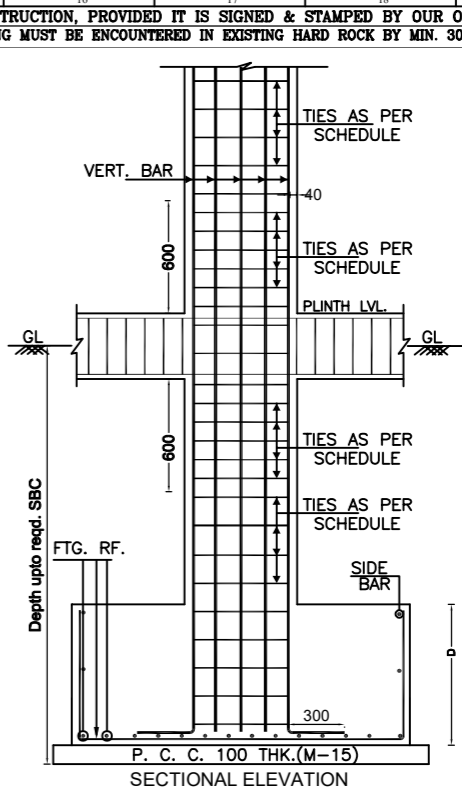
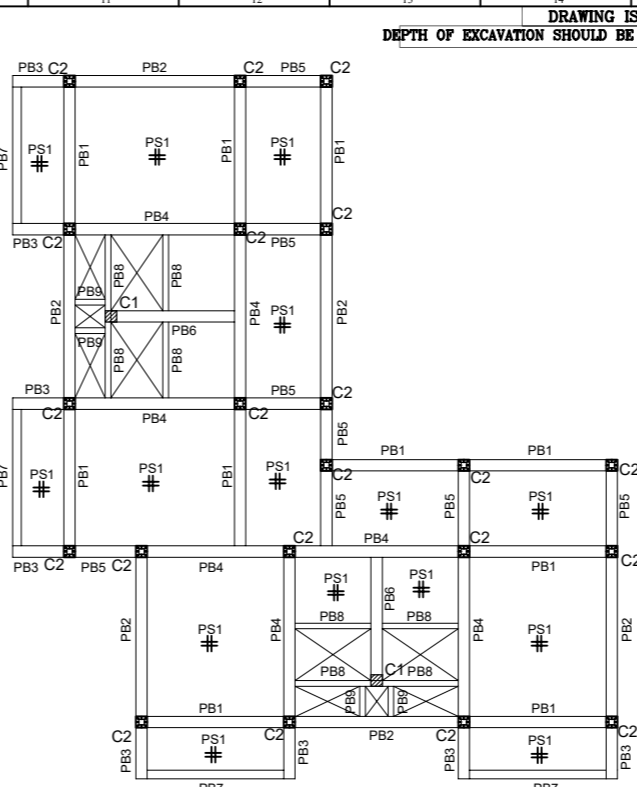
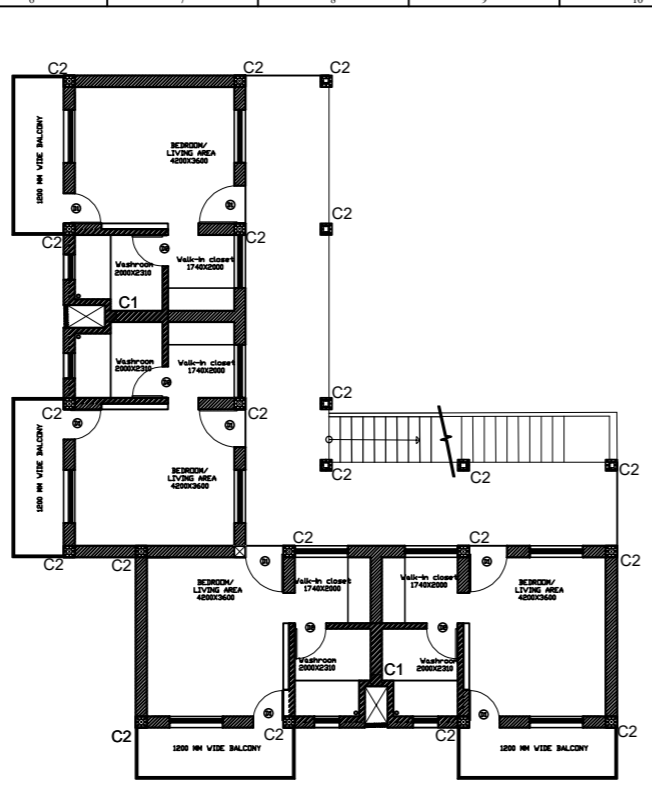
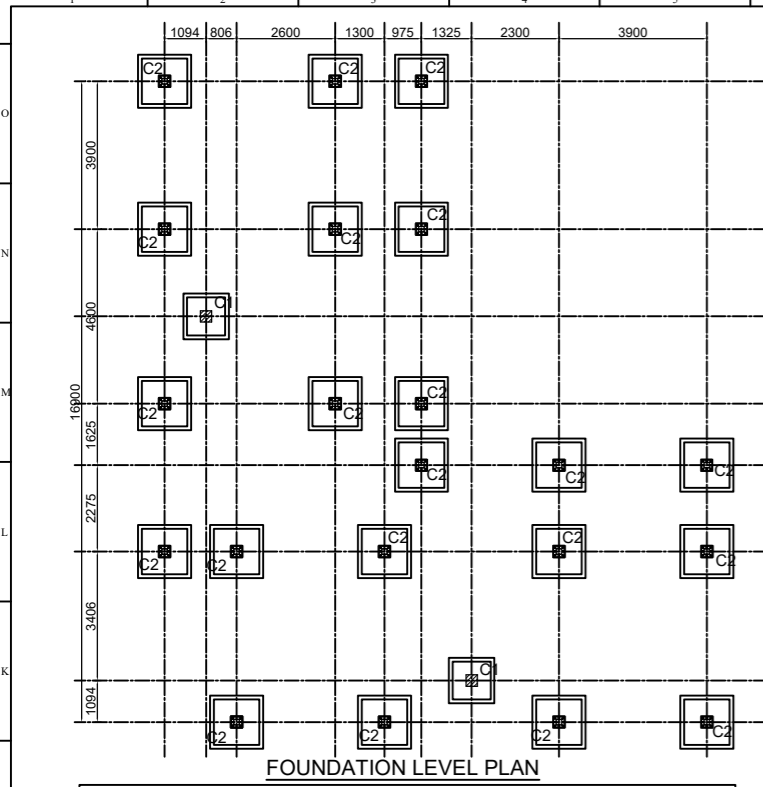
ROOF LEVEL PLAN



• Lvl. + 750
 • Lvl. + 00 (Drop off Level)
 Reference Level



Scale: N.T.S.
 Title: Roof Level Layout
 Only for Tendering Purposes
 (Not Good for Construction)
 Prepared By:
 Construction Coordination Team
 PMAY-G Research Project
 SPA Bhopal (In consultation
 with our Structural Consultant)



SAFE BEARING CAPACITY OF SOIL
 1. U.O. OF SOIL FOR DESIGN OF FOUNDATION HAS BEEN TAKEN AS SPECIFIED. MINIMUM DEPTH SHALL BE UPTO HARD STRATA. IN CASE OF ANY DOUBT REGARDING S.B.C. DURING EXCAVATION, THE MATTER SHALL BE REPORTED TO THE GEO-TECH CONSULTANT.

REINFORCING STEEL
 U.O. ALL REINFORCEMENT SHALL BE OF HIGH STRENGTH DEFORMED BARS OF SPECIFIED GRADE CONFORMING TO IS:1786.

CONCRETE
 U.O. CONCRETE MIX FOR ALL ELEMENT SHALL BE OF SPECIFIED GRADE CONFORMING TO IS:456-2000. PLAIN CEMENT CONCRETE (P.C.C.) M:15.

COVER
 U.O. IN THE DWG. CLEAR COVER TO MAIN REINFORCEMENT SHALL BE AS FOLLOWS -
 1. FOOTING (50 mm) 2. RAFT (50 mm) 3. COLUMN (40 mm) 4. BEAM (25 mm)
 5. PILE (50 mm) 6. SLAB (20 mm) 7. RETAINING WALL (25 mm)
 IN CASE COLUMN WIDTH 200MM, COVER - (25MM)
 OR DIA. OF BAR WHICHEVER IS GREATER.

GENERAL NOTES
 1. EXTRA TOP OR BENT UP BARS SHALL BE EXTENDED UPTO 0.3M IN ADJACENT SPAN OVER A CONTINUOUS SUPPORT, AND ANCHOR DOWN AT END SUPPORT.
 2. AT BEAM & COLUMN JOINTS, THE MAIN BARS OF ONE MEMBER SHALL BE GRADUALLY BENT & PLACED CLEAR OF COLUMN BARS. UNDER NO CIRCUMSTANCES COLUMN VERTICAL BARS SHALL BE BENT TO ACCOMMODATE BEAM BARS.
 3. TOP BARS OF ALL CANTILEVER BEAM / SLAB SHOULD BE EXTENDED ON OVERHANG SIDE UP TO 1.5 TIMES CANTILEVER PROJECTION UNTO.
 4. CORNERING STRIPS IN BEAM COLUMN JOINTS SHALL BE PROVIDED AT THE SPACING INDICATED. HOWEVER IF BEAMS ARE CONNECTED ON ALL THE FOUR DIRECTIONS OF COLUMN THE SPACING SHOULD BE DOUBLED.
 5. RING STRIPS SIZE IS COLUMN IS SAME BELOW AND ABOVE G.L.
 6. U.O. MINIMUM LAP LENGTH SHALL BE 30 TIMES OF BAR DIA. OF SMALLER BAR AT ANY SECTION. 7. NOT MORE THAN 50% OF BARS SHALL BE LAPPED AT A SECTION. THE LOCATION OF LAPPING SHALL BE AVOIDED AS FOLLOWS:
 8. IN HANGERS LAPPING OF BARS IS NOT PERMITTED BETWEEN FLOOR.
 9. FOR FOUNDATION BEAM RAFT LAPS CLOSE TO MID SPAN TOP BARS & CLOSE TO SUPPORT IN BOTTOM BARS.
 10. ALL MULTIPLE LEGGED RINGS/STRIPS/ARMS ARE AT ALL LOCATIONS UNTO.
 11. USE OF NEEDLE WEAVER AND SUPER PLASTER RECOMMENDED FOR R.C.C. WORK.
 12. USE DESIGNATED COATED HYWID FOR SHRETTING & FORMWORK.
 13. BENT OR NOT PERMITTED FOR DEFLECTING.
 14. BOTTOM OF ALL OVER BEAM SHALL BE 10MM BELOW GROUND LVL AND SHALL HAVE CLEAR ANCHOR OF 18MM FOR R.C. SOIL STRUCTURE.
 15. AT PLINTH LVL. COVER BEAM BOTTOM IS SAME AS IN BEAM TOP & SAME UO. IF BEAM IS OVER L.F. BEAM SHALL HAVE 10MM CLEARANCE FROM BEAM BOTTOM. COMPLETE BEAM SHALL CAST BELOW PLINTH SLAB NOTIONAL.
 16. AT ANY LVL. WHERE COLUMN SIZE GETS REDUCED IN OTHER DIMENSION BEAM IS ABSOLUTELY ESSENTIAL.
 17. CURING -
 EXPOSED SURFACE OF CONCRETE SHALL BE KEPT CONTINUOUSLY IN WET CONDITION MINIMUM FOR 14 DAYS.
 18. USE OF P.C.C. IS RECOMMENDED FOR ALL WORK.
 19. CUTOFF/OPENING -
 ANY TYPE OF OPENING FOR PLUMBING, DRAINAGE OR ELECTRICAL NOT PERMITTED IN R.C.C. BEAM AND COLUMN DURING OR AFTER CASTING.
 20. SERVICE -
 FOR SERVICES PROVIDE ADDL TWO RINGS SPACED @ 25MM C/C OVER OTHER SIDE OF L. U.O. IN THE DWG. CONSTRUCTION JOINT SHOULD BE APPROVED BY ENGINEER AT THE CONSTRUCTION JOINT SHOULD BE AT QUARTER SPAN OF BEAM AND SLAB. IN NO CONDITION SHOULD BE AT THE SUPPORT.
 21. READ THE DWG. WITH REFERENCE ARCHITECTURAL & SERVICES DWG.
 22. STRIPPING TIME SHALL BE AS PER IS:456-2000. CLAY & LIFT UP PRESSURE RELEASE VALVE (PRV) THROUGH SIDE RETAINING WALL @ 1M ABOVE RAFT TILL COMPLETE CONSTRUCTION OF BUILDING AND SHOULD BE RUGGED LATER WITH NON-HARMFUL GROUT MATERIAL OR GEL REGRADING.
 23. ALL DIMENSIONS ARE IN MM, EXCEPT IN LAYOUT. LEVELS ARE IN METER.
 24. IN CASE OF ANY AMBIGUITY, PLEASE BRING IT TO THE NOTICE OF THIS OFFICE BEFORE EXECUTION OF WORK.
 25. SHRETTING & SCAFFOLDING @ THE RESPONSIBILITY OF CONTRACTOR.
 26. STRIPPING TIME SHALL BE AS PER IS:456-2000. CLAY & LIFT UP PRESSURE RELEASE VALVE (PRV) THROUGH SIDE RETAINING WALL @ 1M ABOVE RAFT TILL COMPLETE CONSTRUCTION OF BUILDING AND SHOULD BE RUGGED LATER WITH NON-HARMFUL GROUT MATERIAL OR GEL REGRADING.
 27. AT THE JUNCTION MAIN BEAM & SECONDARY BEAM, PROVIDE STEEL BAR BENT UP HANGER TYPE BAR IN MAIN BEAM EQUAL TO 1/6 OF SIZE OF MAIN BEAM BOTTOM BAR OF SECONDARY BEAM WHICH IS GREATER.
 28. ALL BEAMS IF PERMITTED BY STRUCTURAL ENGINEER SHALL BE IN CLASSIFY AS PIPE & IN NO CASE BEING SQUARE BEAM. OPENING SHOULD BE PROVIDED IN BEAM.
 29. PRESSURE RELEASE PIPE IN BASE SLAB/RAFT-TILL CONSTRUCTION OF COMPLETE BUILDING DEPENDING UPON NO. OF BASE PROVIDE 150 DIA. P.C.P. PIPE BOTTOM OF PCC AND KEEP 150MM MEDIA AROUND PIPE BOTTOM. PIPE SHOULD PASS THROUGH WATER PROOFING MEMBRANE/WATER PROOFING DISTR.
 30. GROUND AROUND CONSTRUCTION OF R.C.C. STRUCTURE OR THE WEIGHT OF R.C.C. STRUCTURE SHOULD BE MORE THAN WEIGHT OF WATER OF EQUAL TO BASEMENT VOLUME.
 31. PROCEDURE - PRESSURE RELEASE PIPE IN BASE SLAB/RAFT -
 A) AFTER DONE PRESSURE RELEASE PIPE IN BASE SLAB/RAFT.
 B) AFTER LAYING MEMBRANE/WATER PROOFING MEMBRANE LAYING 100 DIA. P.C.P. PIPE IN BASE SLAB/RAFT.
 C) AFTER LAYING MEMBRANE/WATER PROOFING MEMBRANE LAYING 100 DIA. P.C.P. PIPE IN BASE SLAB/RAFT.
 D) RIGID DOWN DOWN AGGREGATE IN REMOVED PCC COVER UP TO PCC TOP.
 E) THE REMAIN P.C.P. PIPE VERTICALLY ON WATER PROOFING MEMBRANE AND RIGID.
 F) EDGE OF P.C.P. PIPE SHALL BE PROPERLY SEATED FROM OUTER SIDE ALONG WITH MEMBRANE G) AFTER LAYING MEMBRANE/WATER PROOFING MEMBRANE SHALL BE DONE.
 G) AFTER LAYING MEMBRANE/WATER PROOFING MEMBRANE SHALL BE DONE.
 H) ALL THESE PIPE SHOULD BE COVERED WITH 20MM DOWN METAL FILTER MEDIA AND DO NOT COVER THESE PIPE BY CLOSING/CORRODIBLE TO AVOID CHOCCING.

NOTE:-THIS CENTRE LINE DRAWING SHALL BE CHECKED AND APPROVED BY ARCHITECT BEFORE EXECUTION OF THE WORK AND IF ANY CHANGE TAKES PLACE PLEASE INFORM THIS OFFICE.

SCHEDULE OF COLUMNS & FOOTINGS.

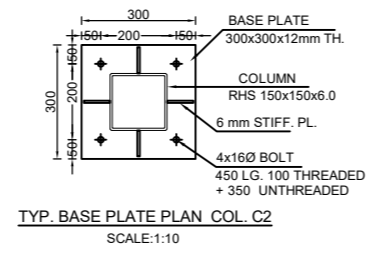
COLUMN NO.	EXCAVATION SIZE	P.C.C. THK.	FOOTING SIZE	FOOTING DEPTH	REINFORCEMENT ALONG		COLUMN AT GROUND FLOOR		REMARK	
					LONG LOWER TIER	SHORT UPPER TIER	SIZE	VERT. BARS		TIES
C1	1200 x 1200	100	1000 x 1000	400	10T @ 150	10T @ 150	300x300	4x12T	8T@100-150	
C2	1400 x 1400	100	1200 x 1200	400	10T @ 150	10T @ 150	300x300	4x12T	8T@100-150	STEEL COLUMN ABOVE PLINTH LVL.

SCHEDULE OF SLABS

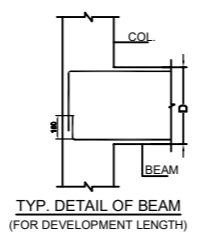
SLAB NO.	THICKNESS (OVERALL) IN MM	MID SPAN MAIN BARS		TOP BARS THROUGHOUT	EXTRA TOP BARS UPTO 0.3xL FROM FACE OF BEAM	DISTRIBUTION BARS C/C	REMARKS
		BOTM. BARS	BOTTOM BENT-UP @ L/4 FROM CENTER				
PS1	125 THK.	8T@250				8T@150	

SCHEDULE OF BEAMS

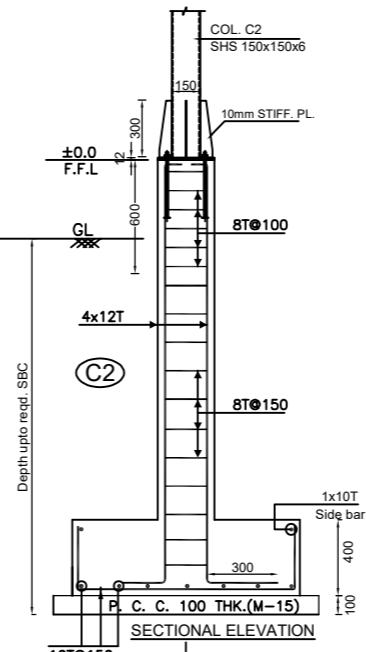
BEAM NO.	SIZE		BOTTOM REINFORCEMENT		TOP REINFORCEMENT		STIRRUPS		REMARK
	B	D	THROUGHOUT	MID SPAN 0.7xL	THROUGHOUT	EXTRA TOP 0.25xL FROM FACE OF COLUMN ON EACH FACE	UPTO 2D FROM FACE OF COLUMN	AT MID SPAN NO.	
PB1	300	450	2 x 12 T	2 x 12 T	2 x 12 T	2 x 12 T	8T@150	8T@150	
PB2	300	450	3 x 12 T	2 x 12 T	2 x 12 T	3 x 12 T	8T@150	8T@150	
PB3	300	450	3 x 12 T	2 x 12 T	4 x 12 T		8T@100	8T@100	
PB4	300	450	3 x 12 T	2 x 12 T	2 x 12 T	2 x 12 T	8T@150	8T@150	
PB5	300	350	3 x 12 T	2 x 12 T	2 x 12 T		8T@150	8T@150	
PB6	300	450	3 x 12 T	1 x 12 T	2 x 12 T		8T@150	8T@150	
PB7	230	450	2 x 12 T	2 x 12 T	2 x 12 T		8T@150	8T@150	
PB8	150	350	2 x 12 T	2 x 12 T			8T@150	8T@150	
PB9	150	350	2 x 10 T	2 x 10 T			8T@150	8T@150	



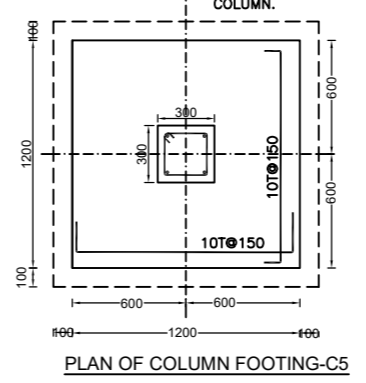
TYP. BASE PLATE PLAN COL. C2 SCALE:1:10



TYP. DETAIL OF BEAM (FOR DEVELOPMENT LENGTH)

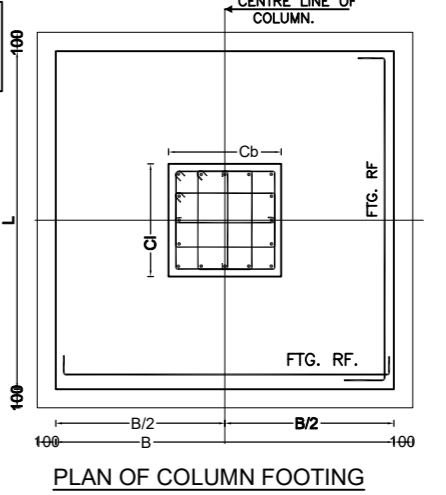


SECTIONAL ELEVATION

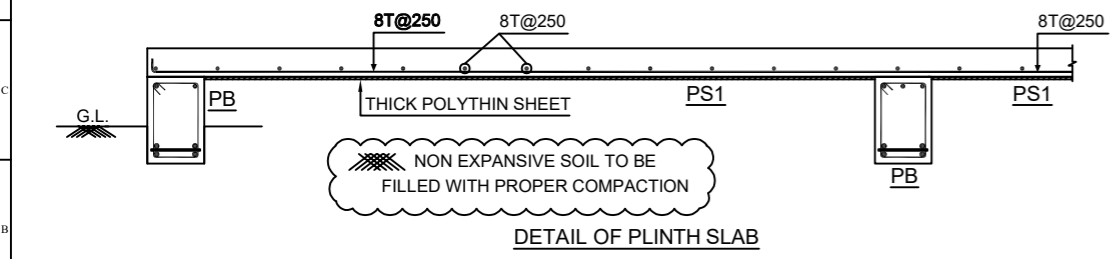


PLAN OF COLUMN FOOTING-C5

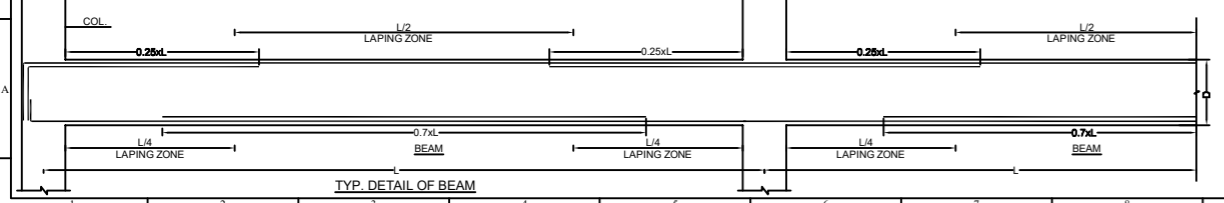
B: WIDTH OF FOOTING
 L: LENGTH OF FOOTING
 D: DEPTH OF FOOTING
 Cl: LENGTH OF COLUMN
 Cb: WIDTH OF COLUMN



PLAN OF COLUMN FOOTING



DETAIL OF PLINTH SLAB



TYP. DETAIL OF BEAM

TYP. DETAIL OF RING

TENDER COPY

CLUSTER A

GENERAL SAFETY NOTES
 1. THIS DRAWING FOR CONSTRUCTION SHALL BE KEPT AT THE SITE OF THE PROJECT.
 2. THE RESPONSIBILITY OF THE CONTRACTOR SHALL BE TO MAINTAIN THE SAFETY OF THE SITE DURING CONSTRUCTION.
 3. THE SAFETY OF ANY ADJOINING BUILDING / PERSONS STAYING IN ADJOINING BUILDING / PERSONS & PROPERTIES ON ADJOINING ROADS.
 4. SAFETY OF CONSTRUCTION WORKERS/ANY PERSONNEL AT WORK SITE DURING CONSTRUCTION.
 5. CORRECTING SAFETY OF ANY TEMPORARY STRUCTURE, SCAFFOLDING, SHRETTING, CONTAINERS, ERECTED @ SITE AND ANY INQUIRY TO ANY PERSONNEL ARISING OUT OF THEIR ACCIDENTS.
 6. ANY ACCIDENT OCCURRING DUE TO CONSTRUCTION OF ELEMENTS OF BUILDING NOT DESIGN BY US, MATERIAL OR WORKMANSHIP / FAULTY CONSTRUCTION PROCEDURE.
 7. ACCIDENT OCCURRING DUE TO PREMATURE DESTABILIZING FAULTY / SUBSTANDARD CONSTRUCTION MATERIAL OR WORKMANSHIP / FAULTY CONSTRUCTION PROCEDURE.
 8. ALL STRUCTURAL CONCRETE SHOULD BE WEIGH BACHED, MACHINE MIXED & MECHANICALLY VIBRATED.
 9. SUPERVISION IF SPECIFICALLY ASKED FOR WILL BE PROVIDED TO THE EXTENT OF VIBRICATION OF REINFORCEMENT ON SITE BUT RESPONSIBILITY REGARDING CORRECT & SOUND CONSTRUCTION SHALL SOLELY REST WITH CONTRACTOR / BUILDER / OWNER.

STRIPPING TIME TABLE (AS PER IS 456-2000)

S.R.NO.	TYPE OF FORMWORK	MINIMUM TIME BEFORE STRIPPING FORMWORK
1.	VERTICAL FORMWORK TO COLUMNS, WALLS, BEAMS	16-24 HRS.
2.	SOFFIT FORMWORK TO SLABS (PROPS TO BE REMOVED IMMEDIATELY AFTER REMOVAL OF FORMWORK)	3 DAYS
3.	SOFFIT FORMWORK TO BEAMS (PROPS TO BE REMOVED IMMEDIATELY AFTER REMOVAL OF FORMWORK)	7 DAYS
4.	PROPS TO SLAB (a) SPANNING OVER 4.5M (b) SPANNING OVER 4.5M	2 DAYS
5.	PROPS TO BEAMS AND ARCHES (a) SPANNING UP TO 4.5M (b) SPANNING OVER 4.5M (c) CANTILEVER BEAM UP TO 3.0M	14 DAYS

KEY PLAN KEY SECTION

NO.	DESCRIPTION	SCALE
1.	DESIGNED FOR GROUND FLOOR ONLY	
2.		
3.		

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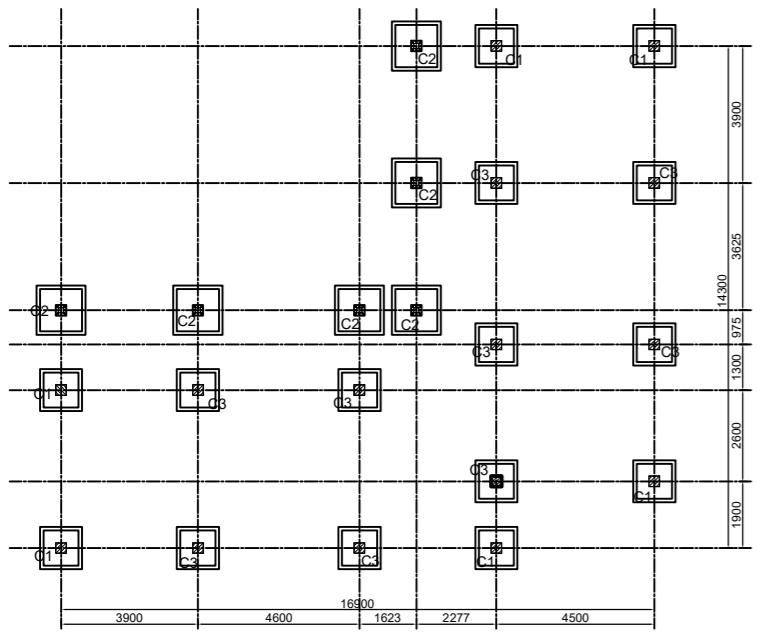
TITLE :- R.C.C DETAIL OF COLUMNS, FOOTINGS & PLINTH BEAM OF CLUSTER A
 PROJECT :- DEVELOPMENT OF BUILDING UNITS & WORKSHOP AREAS FOR PMAY RESEARCH PROJECT AT SPA BHOPAL
 CLIENT :- SCHOOL OF PLANNING AND ARCHITECTURE BHOPAL
 ARCHITECT :- SPA BHOPAL

PATANKAR CONSULTANTS
 PRIVATE LIMITED
 Structural Design | Structural Audit | PMC

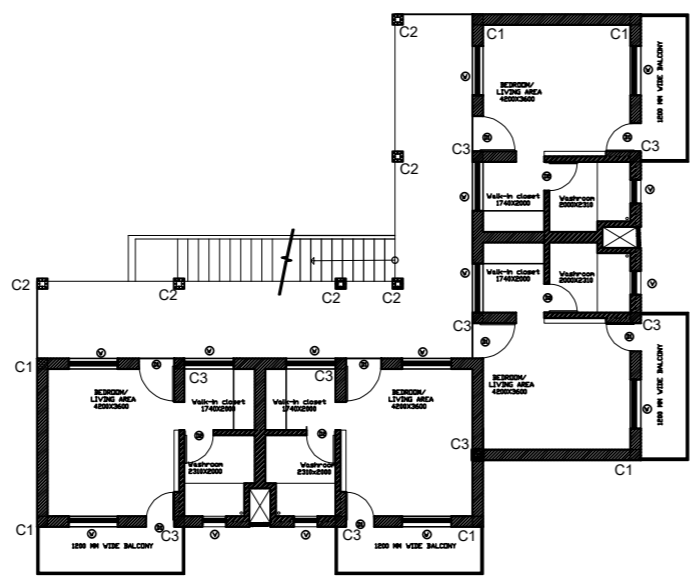
REGD. OFFICE: Universal Annex, 79, Shivaji Nagar, Nagpur- 440 010, INDIA
 Telephone: +91-112-240096, 2448233 | Mobile: +91-930030940
 project@patankarconsultants.com | www.patankarconsultants.com

DESIGN BY: P.S.P. DRAWN BY: MRUNAL. CHD. BY: S.V.S./R.M. DATE: 13/03/2024.
 SCALE: NTS
 DRG NO: PCPL-26071/603/CA-1 SHEET NO: 01
 CAD FILE: PCPL-26071/603/CA-1/PMAY RESEARCH PROJECT/SINGLE UNIT
 ESTIMATE COPY TENDER COPY ADVANCE COPY GOOD FOR CONST.

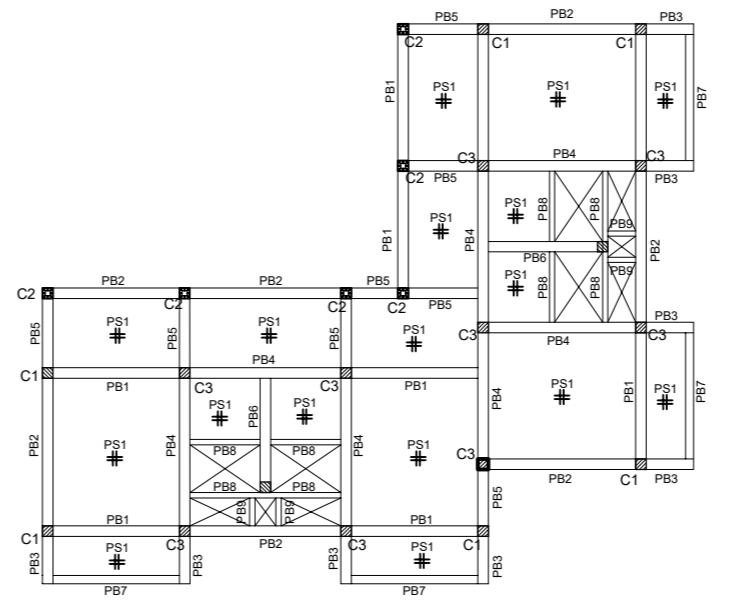
DRAWING IS VALID FOR CONSTRUCTION, PROVIDED IT IS SIGNED & STAMPED BY OUR OFFICE S.B.C. CONCRETE MIN 550 KN/M² STEEL Fe 500
 DEPTH OF EXCAVATION SHOULD BE SUCH THAT FOOTING MUST BE ENCOUNTERED IN EXISTING HARD ROCK BY MIN. 300mm



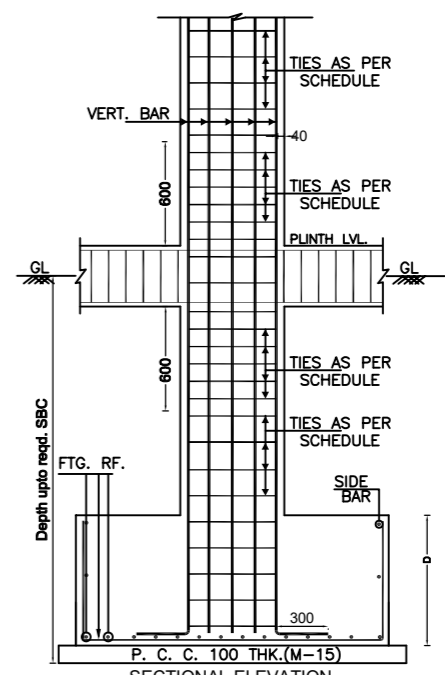
FOUNDATION LEVEL PLAN



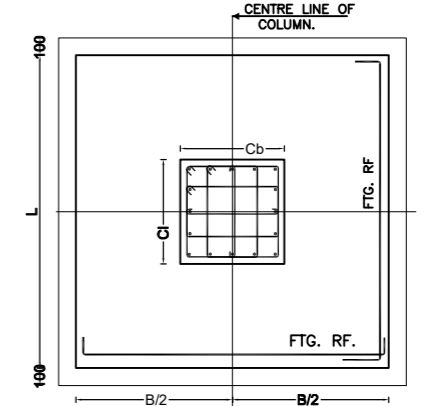
GROUND FLOOR PLAN



PLINTH BEAM LVL. PLAN



SECTIONAL ELEVATION



PLAN OF COLUMN FOOTING

NOTE: THIS CENTRE LINE DRAWING SHALL BE CHECKED AND APPROVED BY ARCHITECT BEFORE EXECUTION OF THE WORK AND IF ANY CHANGE TAKES PLACE PLEASE INFORM THIS OFFICE.

SCHEDULE OF COLUMNS & FOOTINGS.

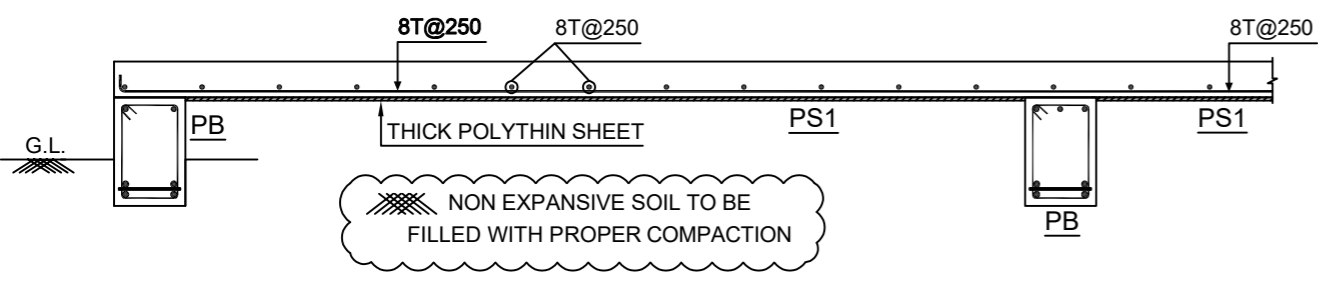
COLUMN NO.	EXCAVATION SIZE	P.C.C. THK.	FOOTING SIZE	FOOTING DEPTH	REINFORCEMENT ALONG		COLUMN AT GROUND FLOOR			REMARK
					LONG LOWER TIER	SHORT UPPER TIER	SIZE	VERT. BARS	TIES	
C1	1200 x 1200	100	1000 x 1000	400	10T @ 150	10T @ 150	300x300	4x12T	8T@100-150	
C2	1400 x 1400	100	1200 x 1200	400	10T @ 150	10T @ 150	300x300	4x12T	8T@100-150	
C3	1200 x 1200	100	1000 x 1000	400	10T @ 150	10T @ 150	300x300	4x16T	8T@100-150	

SCHEDULE OF SLABS

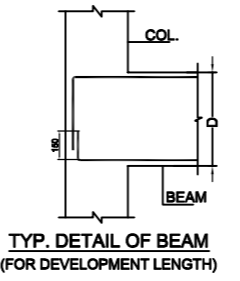
SLAB NO.	THICKNESS (OVERALL) IN MM	MID SPAN MAIN BARS		TOP BARS THROUGHOUT	EXTRA TOP BARS UPTO 0.3XL FROM FACE OF BEAM	DISTRIBUTION BARS C/C	REMARKS
		BOTM. BARS	BOTTOM BENT-UP @ L4 FROM CENTER				
PS1	125 THK.	8T@250				8T@250	

SCHEDULE OF BEAMS

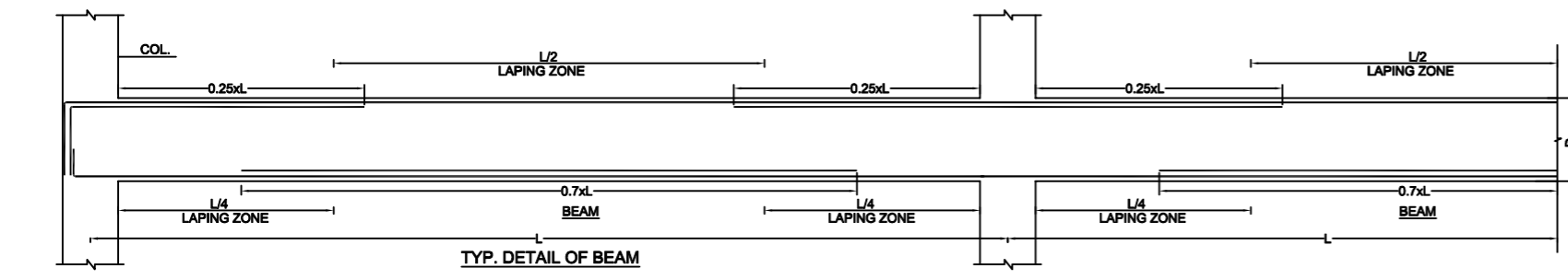
BEAM NO.	SIZE	BOTTOM REINFORCEMENT		TOP REINFORCEMENT		STIRRUPS		REMARK
		THROUGHOUT	MID SPAN 7.0XL	THROUGHOUT	EXTRA TOP 0.25XL FROM FACE OF COLUMN ON EACH FACE	UPTO 2D FROM FACE OF COLUMN	AT MID SPAN NO.	
PB1	300 x 450	2 x 12 T	2 x 12 T	2 x 12 T	2 x 12 T	8T@150	8T@150	
PB2	300 x 450	3 x 12 T	2 x 12 T	2 x 12 T	3 x 12 T	8T@150	8T@150	
PB3	300 x 450	3 x 12 T		4 x 12 T		8T@100	8T@100	
PB4	300 x 450	3 x 12 T	2 x 12 T	2 x 12 T	2 x 12 T	8T@150	8T@150	
PB5	300 x 350	3 x 12 T		2 x 12 T		8T@150	8T@150	
PB6	300 x 450	3 x 12 T	1 x 12 T	2 x 12 T		8T@150	8T@150	
PB7	230 x 450	2 x 12 T	2 x 12 T	2 x 12 T		8T@150	8T@150	
PB8	150 x 350	2 x 12 T		2 x 12 T		8T@150	8T@150	
PB9	150 x 350	2 x 10 T		2 x 10 T		8T@150	8T@150	



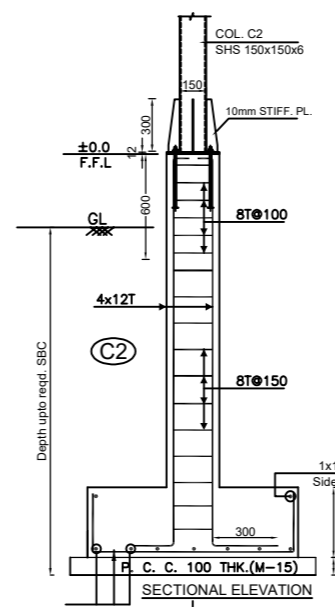
DETAIL OF PLINTH SLAB



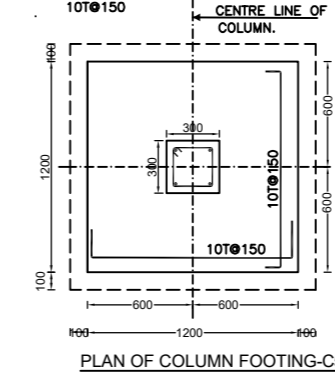
TYP. DETAIL OF BEAM (FOR DEVELOPMENT LENGTH)



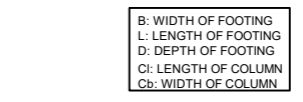
TYP. DETAIL OF BEAM



SECTIONAL ELEVATION



PLAN OF COLUMN FOOTING-C5



TYP. DETAIL OF RING

- SAFE BEARING CAPACITY OF SOIL**
 1.8 C.C. OF SOIL FOR DESIGN OF FOUNDATION HAS BEEN TAKEN AS SPECIFIED. MINIMUM DEPTH SHALL BE UPTO HARD STRATA. IN CASE OF ANY DOUBT REGARDING I.C.C. DURING EXCAVATION, THE MATTER SHALL BE REPORTED TO THE GEO-TECH CONSULTANT.
- REINFORCING STEEL**
 U.N.O. ALL REINFORCEMENT SHALL BE OF HIGH STRENGTH DEFORMED BARS OF SPECIFIED GRADE CONFORMING TO IS:1786.
- CONCRETE**
 U.N.O. CONCRETE MIX FOR ALL ELEMENT SHALL BE OF SPECIFIED GRADE CONFORMING TO IS:456-2000. PLAIN CEMENT CONCRETE (P.C.C.) M.15.
- COVER**
 U.N.O. IN THE DWG. CLEAR COVER TO MAIN REINFORCEMENT SHALL BE AS FOLLOWS -
 1. FLOORING (20 mm) 2. RAFT (20 mm) 3. COLUMN (40 mm) 4. BEAM (20 mm)
 5. PILE (50 mm) 6. SLAB (20 mm) 7. RETAINING WALL (25 mm)
 IN CASE COLUMN WIDTH 200mm, COVER - (25mm)
 OR DIA. OF BAR WHICH IS GREATER.
- GENERAL NOTES**
 1. EXTRA TOP OR BENT UP BARS SHALL BE EXTENDED UPTO 0.3M IN ADJACENT SPAN OVER A CONTINUOUS SUPPORT, AND ANCHOR DOWN AT END SUPPORT.
 2. AT BEAM & COLUMN JOINTS, BEAM BARS SHOULD BE CONNECTED WITH COLUMN BARS SHALL BE GRADUALLY BENT & PLACED CLEAR OF COLUMN BARS. UNDER NO CIRCUMSTANCES COLUMN VERTICAL BARS SHALL BE BENT TO ACCOMMODATE BEAM BARS.
 3. TOP BARS OF ALL CANTILEVER BEAMS SHALL BE EXTENDED ON ALL THE FOUR DIRECTIONS UP TO 1.5 TIMES CANTILEVER PROJECTION UNDO.
 4. CORNERING STIRRUPS IN BEAM COLUMN JOINTS SHALL BE PROVIDED AT THE SPACING INDICATED. HOWEVER IF BEAMS ARE CONNECTED ON ALL THE FOUR DIRECTIONS OF COLUMN THE SPACING SHOULD BE DOUBLED.
 5. RINGS/STIRRUPS SIZE IN COLUMN BE SAME BELOW AND ABOVE GL.
 6. U.N.O. MINIMUM LAP LENGTH SHALL BE 30 TIMES OF BAR DIA. OF SMALLER BAR AT ANY SECTION. 7. NOT MORE THAN 50% OF BARS SHALL BE LAPPED AT A SECTION. THE LOCATION OF LAPPING SHALL BE AVOIDED AS FOLLOWS:
 a) FOR FLOOR BEAMS: CLOSE TO MID SPAN IN BOTTOM BARS & CLOSE TO TOP IN TOP BARS. b) FOR FOUNDATION BEAMS: RAFTS CLOSE TO MID SPAN IN TOP BARS & CLOSE TO SUPPORT IN BOTTOM BARS.
 8. IN HANGERS LAPPING OF BARS IS NOT PERMITTED UNDER FLOOR.
 9. STIRRUPS FOR CANTILEVER BEAMS TO HAVE HOOK AT BOTTOM.
 10. ALL MULTIPLE LOGGED RINGS/STIRRUPS ARE TO BE AT SAME LOCATION UNDO.
 11. USE OF HEELE BARS FOR AND SUPER FLATNESS RECOMMENDED FOR R.C.C. WORK.
 12. USE IDENTIFIED COLOURED PLYWOOD FOR SHRETTING & FORMWORK.
 13. BENT OR NOT PERMITTED FOR DEFLECTING.
 14. BOTTOM OF ALL CUTTER BEAM SHALL BE 10MM BELOW GROUND LVL AND SHOULD HAVE CLEAR GAP OF 10MM FOR R.C. SOIL STRUCTURE.
 15. AT PLINTH LVL. COVER BEAM BOTTOM @ SAME LVL. AS BEAM TOP @ SAME LVL. IF SPAN IS LESS THAN 1.0M. IF BE SPACING ABOVE MAIN REINFORCEMENT, COMPLETE BEAM SHALL CAST BELOW PLINTH SLAB NOTION.
 16. AT ANY LVL. WHERE COLUMN RES GETS REDUCED IN OTHER DIMENSION BEAM IS ABSOLUTELY ESSENTIAL.
 17. COVER -
 a) EXPOSED SURFACE OF CONCRETE SHALL BE KEPT CONTINUOUSLY IN WET CONDITION MINIMUM FOR 14 DAYS.
 b) USE OF P.C.C. IS RECOMMENDED FOR ALL WORK.
 18. CURING/OPENING -
 ANY TYPE OF OPENING FOR PLUMBING, DRAINAGE OR ELECTRICAL NOT PERMITTED IN R.C.C. BEAM AND COLUMN DURING OR AFTER CASTING.
 19. SURVEY -
 FOR SURVEY PROVIDED ADD. TWO BRGS SPACED @ 28MM C/C ON OTHER SIDE OF L. U.N.O. IN THE DWG. CONSTRUCTION JOINT SHOULD BE APPROVED BY ENGINEER AT SITE. CONSTRUCTION JOINT SHOULD BE AT QUARTER SPAN OF BEAM AND SLAB. IN NO CONDITION SHOULD BE AT THE SUPPORT.
 20. READ THE DWG. WITH RELEVANT ARCHITECTURAL & SERVICES DWG.
 21. DO NOT SCALE THE DWG. ONLY WRITTEN DIMENSION ARE TO BE FOLLOWED.
 22. ALL DIMENSIONS ARE IN MM. EXCEPT IN LAYOUT. LEVELS ARE IN METER.
 23. IN CASE OF ANY AMBIGUITY, PLEASE BRING IT TO THE NOTICE OF THIS OFFICE BEFORE EXECUTION OF WORK.
 24. SHRETTING & SCAFFOLDING @ AT THE RESPONSIBILITY OF CONTRACTOR.
 25. STRIPPING TIME SHALL BE AS PER IS:456-2000. CLAUSE 17.6. PAGE NO.12.
 26. AFTER CASTING OF SLAB IT SHOULD BE IMMEDIATELY COVERED WITH A POLYTHIN FILM & CURING SHALL START AS EARLY AS POSSIBLE. U.N.O. UNLESS NOTED OTHERWISE.
 27. FOR BARRING, SLAB UPTO 12M DIA. UP TO 1.5M PRESSURE RELEASE VALVE (PRV) THROUGH SIDE RETAINING WALL @ 1.0M ABOVE RAFT TILL COMPLETE CONSTRUCTION OF BUILDING AND SHOULD BE RUGGED LATER WITH MINIMUM OF 50% OF REQUIRED LVL.
 28. AT THE JUNCTION MAIN BEAM & SECONDARY BEAM, THE SIZE OF RING OF MAIN BEAM SHALL BE REDUCED BY 25MM.
 29. AT THE JUNCTION MAIN BEAM & SECONDARY BEAM, PROVIDE STEEL BAR BENT UP HANGER TYPE BAR IN MAIN BEAM EQUAL TO 3/8" OF SIZE OF MAIN BEAM TOP OF SECONDARY BEAM. MIN. 100mm.
 30. A. ALL BARS ARE PERMITTED BY STRUCTURAL ENGINEER SHALL BE IN CLASS B AS PER IS: 456-2000. B. NO BAR IS ALLOWED TO BE OPENED OR BENT IN BEAM.
 31. PRESSURE RELEASE PIPE IN SLAB/RAFT-TILL CONSTRUCTION OF COMPLETE BUILDING DEPEND UPON NO. OF BARS PROVIDED IS DIA. P.C.C. PIPE UPTO BOTTOM OF P.C.C. AND KEEP PIPES MIN. 100mm FROM TOP OF SLAB. PIPES IN BASE SLAB.
 32. MEMBRANE/WATER PROOFING DETAIL.
 33. AFTER LAYING ROOF P.C.C. WORK MAKE THE LAYOUT FOR LOCATION OF PRESSURE RELEASE PIPE 7.0M C/C. ANY P.C.C. PIPE VERTICALLY ON WATER PROOFING MEMBRANE AND R.F.E. IF EDGE OF P.C.C. PIPE SHALL BE PROPERLY STATED FROM OUTER SIDE ALONG WITH MEMBRANE & AFTER LAYING REINFORCEMENT, CONCRETE SHALL BE DONE.
 34. PIP IN SIDE RETAINING WALL.
 a) PROVIDE SLEAVE 150mm DIA. PIP IN SIDE WALLS AT HEIGHT ABOVE IF INVERTED FOOTING) THE TOP OF FOOTING OR SOLID UNIFORM RAFT.
 b) AFTER SIDE WALL CONSTRUCTION WATER PROOFING OF OUTER FACE OF RETAINING WALL DRAIN PIPE NETWORK TO BE USED IN AGGREGATE (IN CASE OF INVERTED FOOTING).
 c) PROVIDE THIS CONNECTING NETWORK @ 1M INTERVAL. P.C.C. PIPE IN AGGREGATE CAPACITY HAVING PERFORATION FROM DOWN SIDE.
 d) CONNECT ALL THESE PIPE TO SUMP TANK TO BE PROVIDED AS PER M.P. CONSULTANT. e) ALL THESE PIPE SHOULD BE COVERED WITH 25MM DOWN METAL FILTER MEDIA AND DO NOT COVER THESE PIPE BY CLOSING/GRITTOLE TO AVOID CHOKING.

- GENERAL SAFETY NOTES**
 1. THIS DRAWING FOR CONSTRUCTION SHALL BE VALID ONLY WITHIN THE SCOPE OF THE FOLLOWING CONDITIONS: a) OWNER'S RESPONSIBILITY b) CONTRACTOR'S RESPONSIBILITY c) SAFETY OF OLD STRUCTURE DURING DEMOLITION. d) SAFETY OF ANY ADJOINING BUILDING PERSONS STAYING IN ADJOINING BUILDING PERSONS & PROPERTIES ON ADJOINING ROADS. e) SAFETY OF CONSTRUCTION WORKERS/ANY PERSONNEL AT WORK SITE DURING CONSTRUCTION f) CORRECTNESS/LIABILITY OF ANY TEMPORARY STRUCTURE, SCAFFOLDING, SHRETTING, CURING, ERECTED @ SITE AND ANY INQUIRY TO ANY PERSONNEL ARISING OUT OF THEIR ACCIDENTS. g) ANY ACCIDENT OCCURRING DUE TO CONSTRUCTION OF ELEMENTS OF BUILDING NOT DESIGN IN US. MATERIAL OR WORKMANSHIP / FAULTY CONSTRUCTION PROCEDURE. h) ACCIDENT OCCURRING DUE TO PREMATURE DESHRETTING FAULTY / SUBSTANDARD CONSTRUCTION MATERIAL OR WORKMANSHIP / FAULTY CONSTRUCTION PROCEDURE. i) ALL STRUCTURAL CONCRETE SHOULD BE WEIGH BATCHED, MACHINE MIXED & MECHANICALLY VIBRATED.
 2. SUPERVISION IF SPECIFICALLY ASKED FOR WILL BE PROVIDED TO THE EXTENT OF VERIFICATION OF REINFORCEMENT ON SITE BUT RESPONSIBILITY REGARDING CORRECT & SOUND CONSTRUCTION SHALL SOLELY REST WITH CONTRACTOR/ BUILDER / OWNER.

STRIPPING TIME TABLE (AS PER IS 456-2000)

S.R.NO.	TYPE OF FORMWORK	MINIMUM TIME BEFORE STRIPPING FORMWORK
1.	VERTICAL FORMWORK TO COLUMNS, WALLS, BEAMS	16-24 HRS.
2.	SOFFIT FORMWORK TO SLABS (PROPS TO BE REMOVED IMMEDIATELY AFTER REMOVAL OF FORMWORK)	3 DAYS
3.	SOFFIT FORMWORK TO BEAMS (PROPS TO BE REMOVED IMMEDIATELY AFTER REMOVAL OF FORMWORK)	7 DAYS
4.	PROPS TO SLAB (a) SPANNING UP TO 4.5M (b) SPANNING OVER 4.5M	2 DAYS 14 DAYS
5.	PROPS TO BEAMS AND ARCHES (a) SPANNING UP TO 4.5M (b) SPANNING OVER 4.5M (c) CANTILEVER BEAM UP TO 3.0M	14 DAYS 21 DAYS 14 DAYS

KEY PLAN **KEY SECTION**

DESIGNED FOR GROUND FLOOR ONLY

NO.	DATE	DESCRIPTION	SIGN.
01			
02			

CAUTION:- This drawing is the property of PATANKAR CONSULTANTS. It should not be used, copied, produced or distributed in any form detrimental to our interest without our written consent. This drawing is a result of detailed design of structure suitable for a specific project of specific location for a particular client. Use of this drawing by any person, for any other project or different location is strictly prohibited and would be risky & culpable.

TITLE :- R.C.C. DETAIL OF COLUMNS, FOOTINGS & PLINTH BEAM OF CLUSTER C
 PROJECT :- DEVELOPMENT OF BUILDING UNITS & WORKSHOP AREAS FOR PMAY RESEARCH PROJECT AT SPA BHOPAL
 CLIENT :- SCHOOL OF PLANNING AND ARCHITECTURE BHOPAL
 ARCHITECT :- SPA BHOPAL

PATANKAR CONSULTANTS
 PRIVATE LIMITED
 Structural Design | Structural Audit | PMC

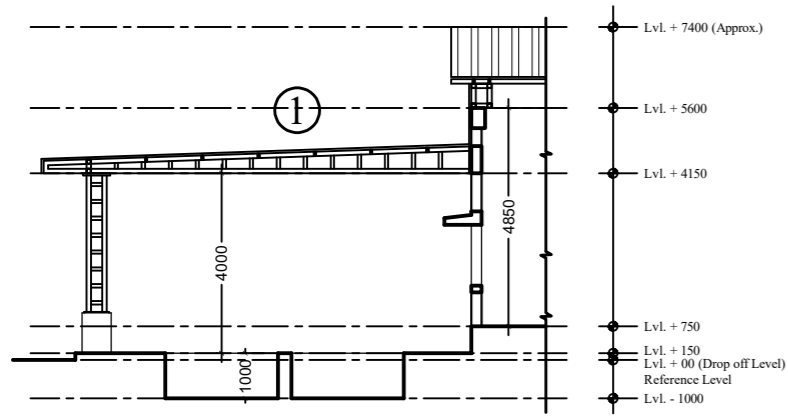
REGD. OFFICE: Universal Annex, 79, Shivaji Nagar, Nagpur- 440 010, INDIA
 Telephone: +91-712-240906; 2448293 | Mobile: +91-9030036460
 project@patankarconsultants.com | www.patankarconsultants.com

DESIGN BY: P.S.P. DRAWN BY: MRUNAL. CHECKED BY: SVS/RMS. DATE: 13/03/2024.
 SCALE: NTS

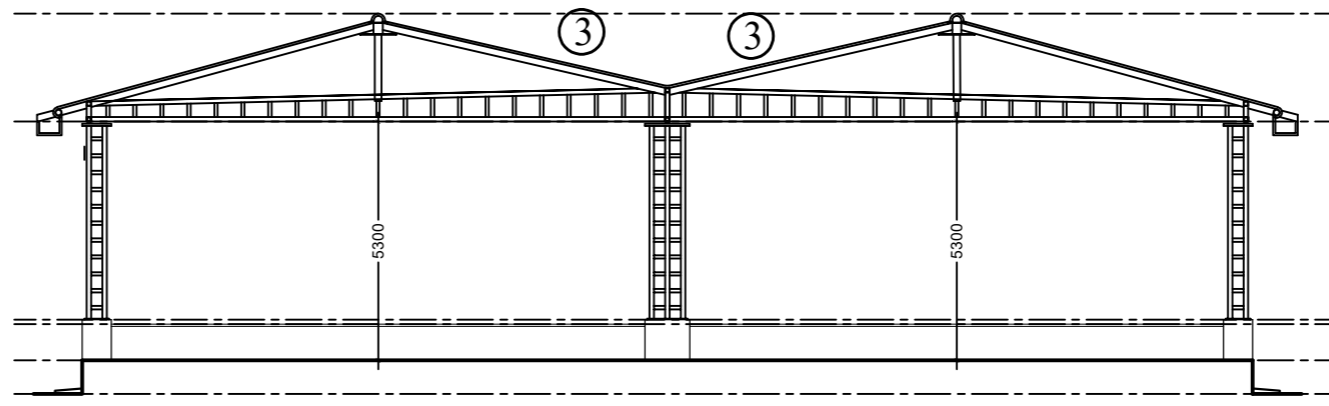
DWG NO: PCL-262071/603/CC-01 SHEET NO: 01
 CAD FILE: PCL-262071/603/CC-01 FOR PMAY RESEARCH PROJECT/SINGLE UNIT
 ESTIMATE COPY TENDER COPY ADVANCE COPY GOOD FOR CONST.

TENDER COPY

CLUSTER C



Section AA'

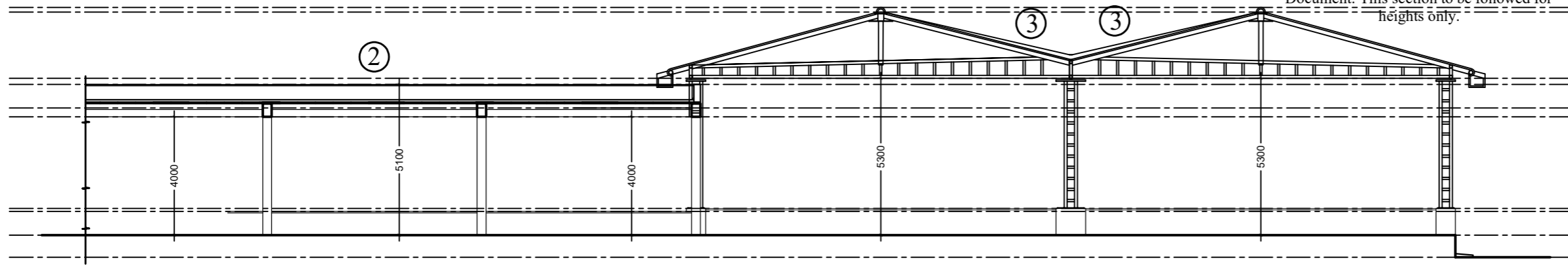


Section DD'

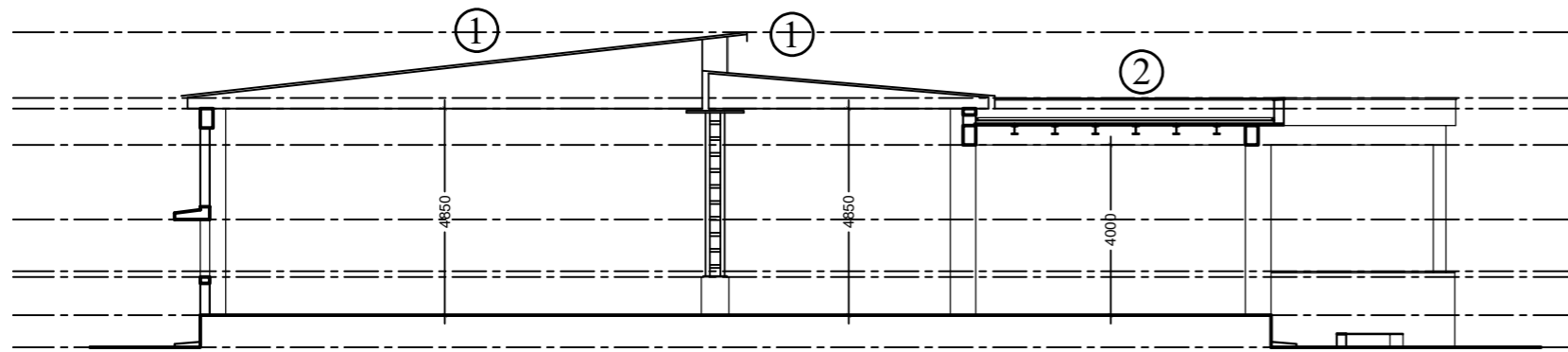
Detailed design of Tensile Fabric Structure to be done by the contractor (to be vetted and approved as per details provided in Tender Document. This section to be followed for heights only.

Roof Profile

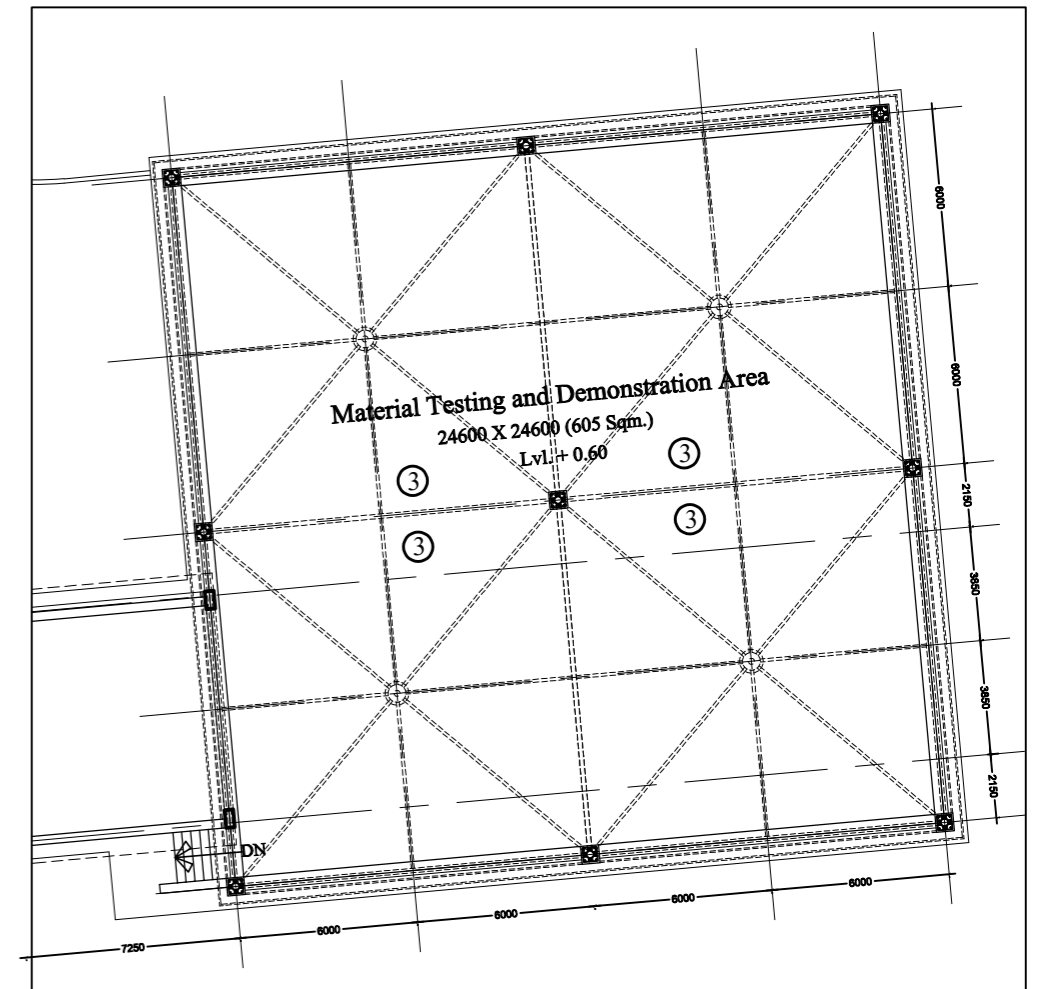
1. Profile Roofing Sheet over M.S. Frame.
2. Stone Slab roofing over steel girders (flat roof with nominal slope).
3. Tensile roofing over M. S. frame (preferably pre-engineered).



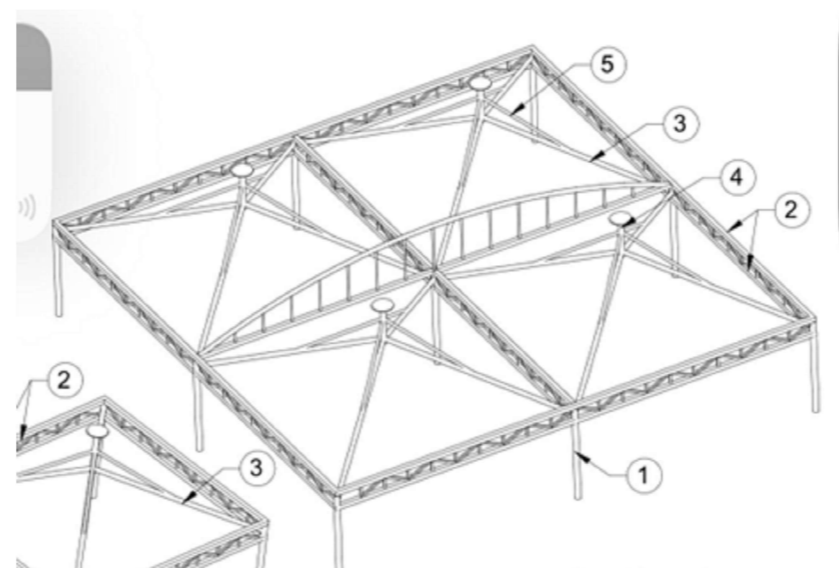
Section CC'



Section BB'



Tensile Fabric Structure Tentative Layout



Tensile Fabric Structure Tentative Profile (Refer section for height)

Scale: N.T.S.
 Title: Sections (for heights and roof profile only)
 Only for Tendering Purposes
 (Not Good for Construction)
 Prepared By:
 Construction Coordination Team
 PMAY-G Research Project
 SPA Bhopal (In consultation
 with our Structural Consultant)

Section X: Annexures

1. Annexure – I : Letter for Submission of Technical Bid.
2. Annexure – II : Undertaking in respect of ESIC, EPF, GST, etc.
3. Annexure – III : Undertaking for declaration that firm has not been declared ineligible/ blacklisted /rejected.
4. Annexure – IV : Undertaking in respect of EMD / Security Deposit / Performance Guarantee.
5. Annexure – V : Experience with Similar Works – either completed or ongoing.
6. Annexure – VI : Details of registered office in Bhopal or undertaking regarding setting up of site office.
7. Annexure – VII : Details of technical and administrative personnel.
8. Annexure – VIII : Letter for Submission of Financial Bid.
9. Annexure – IX : Integrity Pact.
10. Annexure – X : Draft Agreement.
11. Annexure – XI : Form of Bank Guarantee for Performance Guarantee.
12. Annexure – XII : Form of Bank Guarantee for Earnest Money Deposit.

Letter for Submission of Technical Bid

From:
.....

Date:

To

The Director,

School of Planning and Architecture-Bhopal

Subject: Submission of Technical Bid for the work titled “Construction of Construction Yard and Sub-structure for Prototype Units at School of Planning and Architecture, Bhopal.”

Ref: SPA, Bhopal Tender Doc. SPAB/ PMAYG/2026/001 dated 20th April 2026.

Dear Sir / Madam,

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

- I / we hereby certify that all the statements made, and information supplied in the enclosed forms are true and correct.
- I / we have furnished all information and details necessary for eligibility and have no further pertinent information to supply.
- I / we have deposited EMD and Processing Fee in the prescribed manner and the documents regarding the same are furnished in the Inner Envelope – 1.
- I / we have submitted Financial Bid in the prescribed format in the Inner Envelope – 3.
- I / we submit the following documents as part of Technical Bid (Inner Envelope – 2) in support of our suitability, technical knowledge and capability to execute the proposed works:

S. No.	Description of Information sought / Eligibility Criteria	Documents to be submitted	Whether Submitted – Yes / No	Page No.
1.	Letter of transmittal	As per Annexure - I	Yes / No	
2.	Certificate of Incorporation or Registration Certificate.	Self-attested photocopy of Certificate.	Yes / No	
3.	Permanent Account Number (PAN).	Self-attested photocopy of PAN card.	Yes / No	
4.	GSTIN Registration Certificate.	Self-attested photocopy of Certificate.	Yes / No	

5.	Registration with EPF and ESIC.	Self-attested photocopies of Registration with EPF and ESIC.	Yes / No	
6.	Labour Registration or Labour License.	Self-attested photocopy of Registration or License obtained by the agency for any previous assignment.	Yes / No	
7.	Declaration by the agency in respect of timely payment of taxes / dues and compliance with labour regulations.	Undertaking on firm's letterhead as per Annexure – II.	Yes / No	
8.	Affidavit that the firm has not been blacklisted / debarred.	Affidavit on Rs. 100 stamp paper as per Annexure – III.	Yes / No	
9.	Declaration regarding non-forfeiture of EMD / Performance Security.	Undertaking on firm's letterhead as per Annexure – IV.	Yes / No	
10.	Annual Turnover for FY. 2023-24, 2024-25 and 2025-26.	Certified copy of Annual Turnover by the Chartered Accountant.	Yes / No	
11.	Proof of valid registration with at least one government or semi-government organisation (As mentioned in Section – III).	Self-attested photocopy of registration document.	Yes / No	
12.	Details of either completed or ongoing similar works.	Annexure – V (with supporting documents as mentioned in Section – III)	Yes / No	
13.	Details regarding registered office / site office.	Undertaking on firm's letterhead as per Annexure – VI.	Yes / No	
14.	Details regarding technical and administrative personnel.	Annexure – VII.	Yes / No	

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

Stamp and Signature(s) of Bidder(s)

Date of Submission

Undertaking

(Self-declaration on Firm's letter Head)

Subject: Undertaking in respect of timely payment of taxes / dues and compliance with labour regulations.

Ref: SPA, Bhopal Tender Doc. SPAB/ PMAYG/2026/001 dated 20th April 2026.

I hereby declare that the Agency / Firm has not been involved in any activity that constitutes a default in the payment of taxes / dues (EPF, ESIC, GST, etc.) to concerned organisations / departments and stands in compliance with all the provisions of Contract Labour (Regulation and Abolition) Act, 1970 and other labour regulations, as applicable concerning the manpower deployed or works executed by the agency.

Stamp and Signature of Authorized Person

Date:

Name:

Place:

Affidavit

(On Rs. 100/- stamp paper)

Subject: Undertaking for declaration that firm has not been declared ineligible/ blacklisted /rejected.

Ref: SPA, Bhopal Tender Doc. SPAB/ PMAYG/2026/001 dated 20th April 2026.

I hereby declare that any of the government agencies / institutions, including but not limited to Centrally Funded Technical Institutions, Central Universities, Institutions of National Importance under Government of India or State Governments, Autonomous bodies, banks and government organizations like railways, PWD, CPWD, MES etc. has not declared us ineligible; or black listed us on charges of engaging in corrupt, fraudulent, collusive or coercive practices or any failure / lapses of services; or terminated or rejected contract before completion of tenure or commencement due to any of the above issues.

I hereby also declare that the above information is true & correct to the best of my knowledge and belief. If I have made any false, fraud or untrue statement, suppression or concealment of the true facts, I understand that our services shall be terminated if the above facts are found to be incorrect or false and shall be liable for appropriate legal action. I understand that in the event of my information being found false or incorrect at any stage, my credential / bid shall be liable to be rejected without notice.

Stamp and Signature of Authorized Person

Date:

Name:

Place:

Undertaking

(Self-declaration on Firm's letter Head)

Subject: Undertaking in respect of EMD / Security Deposit / Performance Security.

Ref: SPA, Bhopal Tender Doc. SPAB/ PMAYG/2026/001 dated 20th April 2026.

I hereby declare that EMD / Security Deposit / Performance Security of the bidding firm for the previously executed projects has not been forfeited by any organization at any stage.

Stamp and Signature of Authorized Person

Date:

Name:

Place:

Experience with Similar Works – either completed or ongoing.

(Self-declaration on Firm's letter Head)

Subject: Details regarding either completed or ongoing similar works in last 5 years.

Ref: SPA, Bhopal Tender Doc. SPAB/ PMAYG/2026/001 dated 20th April 2026.

The details of either completed or ongoing similar works in last 5 years are as follows:

S. No.	Description of Project	Date of Award	Awarded Value of Work	Current Value	Status – Completed / Ongoing
1					
2					
3					
4					
5					
6					

** This annexure must be appended with work orders / award letters / completion or experience certificates or other similar documents clearly stating the date of award of work, awarded value of work and scope of work to verify the information provided.

** The current value of work shall be calculated by enhancing the awarded value of work at simple rate of seven percent per annum, calculated from the date of award of work to the last day of the month previous to the one in which the tenders are invited.

Stamp and Signature of Authorized Person

Date:

Name:

Place:

Undertaking

(Self-declaration on Firm's letter Head)

Subject: Details of registered office in Bhopal or undertaking regarding setting up of site office.

Ref: SPA, Bhopal Tender Doc. SPAB/ PMAYG/2026/001 dated 20th April 2026.

Please select the applicable one.

I hereby declare that the Agency / Firm does have a registered office in Bhopal and the details of the same are as follows:

- Name of the Agency / Firm :
- Address of Registered Office :
- (in Bhopal) :
- Contact No. :
- E-mail (if available) :

I hereby declare that the Agency / Firm does not have a registered office in Bhopal and hence, a site office will be set up within 15 days of award of work.

Stamp and Signature of Authorized Person

Date:

Name:

Place:

Technical and Administrative Personnel

(Self-declaration on Firm's letter Head)

Subject: Details of technical and administrative personnel.

Ref: SPA, Bhopal Tender Doc. SPAB/ PMAYG/2026/001 dated 20th April 2026.

The details of technical and administrative personnel proposed to be engaged with the project are as follows:

S. No.	Name of the Personnel	Designation	Educational Qualification	Professional Experience (in years)
1				
2				
3				
4				
5				
6				

** If work is awarded, the contact details and other information regarding above-mentioned need to be furnished within 15 days of award of work.

Stamp and Signature of Authorized Person

Date:

Name:

Place:

Letter for Submission of Financial Bid
(On Firm's letter Head)

From:
.....

Date:

To
The Director,
School of Planning and Architecture-Bhopal

Subject: Submission of Financial Bid for the work titled “**Construction of Construction Yard and Sub-structure for Prototype Units at School of Planning and Architecture, Bhopal.**”

Ref: SPA, Bhopal Tender Doc. SPAB/ PMAYG/2026/001 dated 20th April 2026.

Dear Sir / Madam

Having examined the Bid Document including Notice Inviting Tender, Instructions to Bidders, General Conditions of Contract and other conditions, Technical Specifications, Bill of Quantities, Drawings and Annexures for the execution of the above-mentioned work, I / we, the undersigned, offer to execute and complete such works and remedy any defects therein in conformity with the said Bid Document at the rates derived in accordance with the percentage rate mentioned in this letter.

Our financial bid for the execution of the above-mentioned project as per bill of quantity, drawings and specifications attached herewith will be % above / below (strike off whichever is not applicable) the detailed estimate given in Section – VIII: Schedule of Quantities of this document. Thus, amounting to Rs. (In Words: Only), Including all taxes and duties as applicable.

We undertake, if our Bid is accepted, to commence the works within fifteen (15) days from the issuance of Work Order, and to complete and deliver the work comprised in the Contract within the specified period. We also undertake to furnish Performance Guarantee (in the specified form) in accordance with the Conditions of Contract. We agree to abide by this Bid for the period of

twelve months (90 months) from the date of bid opening and it shall remain binding upon us and may be accepted at any time before the expiry of that period.

We confirm our agreement to treat the Bid Document, Drawings and other records connected with the works as confidential documents and shall not communicate information contained therein to any other person other than the person authorized by the Employer or use such information in any manner prejudicial to the safety and integrity of the works.

We undertake that, in completing for (and, if the award is made to us, in executing) the above Contract, we will observe the laws against fraud and corruption in force in India. We confirm that our firm has valid GST / PAN registrations along with EPF, ESI codes as stipulated.

We hereby confirm that this bid complies with the eligibility criteria, bid validity and bid security required as stated in the tender documents.

Stamp and Signature(s) of Bidder(s)

Date of Submission

.....

Acceptance

The above tender (as provided in the letters mentioned hereunder) is accepted by me for and on behalf of the Director, School of Planning and Architecture, Bhopal for a sum of Rs.

..... (Rupees

..... Only)

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

- (a)
- (b)
- (c)
- (d)
- (e)

For & on behalf of the Director,
School of Planning and Architecture, Bhopal.

Name

Designation

Date

Integrity Pact

This Integrity Pact is made at on this day of 2026.

BETWEEN

Director, School of Planning and Architecture, Bhopal represented by the **Engineer-in-Charge / Coordinator (Construction Works, PMAY-G Research Project)** (hereinafter referred to as the Principal, which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assignees)

AND

.....
(Name and address of the bidder)

(Hereinafter referred to as the Bidder / Contractor and which expression shall unless repugnant to the meaning or context hereof include its successors and permitted assignees).

Preamble

WHEREAS the Principal has floated the tender (NIT No. **SPAB/PMAYG/2026/NIT-001**) (hereinafter referred to as the Tender) and intends to award, under laid down organizational procedure, contract for **Construction of Construction Yard and Sub-structure for Prototype Units at School of Planning and Architecture, Bhopal**, hereinafter referred to as the Contract.

AND WHEREAS the Principal values full compliance with all relevant laws of the land, rules, regulations, economic use of resources and of fairness / transparency in its relation with its Bidder(s) and Contractor(s).

AND WHEREAS to meet the purpose aforesaid both the parties have agreed to enter into this Integrity Agreement (hereinafter referred to as Integrity Pact), the terms and conditions of which shall also be read as integral part and parcel of the Tender / Bid documents and Contract between the parties.

In order to achieve these goals, the Principal will appoint Independent External Monitors (IEMs) who will monitor the tender process and the execution of the contract for compliance with the principles mentioned hereunder.

NOW, THEREFORE, in consideration of mutual covenants contained in this Pact, the parties hereby agree as follows and this Integrity Pact witnesses as under:

Articles

Article 1: Commitment of the Principal

- 1) The Principal commits itself to take all measures necessary to prevent corruption and to observe the following principles:
 - a) No employee of the Principal, personally or through any of his / her family members, will in connection with the Tender, or the execution of the Contract, demand, take a promise for or accept, for self or third person, any material or immaterial benefit which the person is not legally entitled to.
 - b) The Principal will, during the Tender process, treat all Bidder(s) with equity and reason. The Principal will, in particular, before and during the Tender process, provide to all Bidder(s) the same information and will not provide to any Bidder(s) confidential / additional information through which the Bidder(s) could obtain an advantage in relation to the Tender process or the Contract execution.
 - c) The Principal shall endeavour to exclude from the Tender process any person, whose conduct in the past has been of biased nature.
- 2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the Indian Penal code (IPC) / Prevention of Corruption Act, 1988 (PC Act) or is in violation of the principles herein mentioned or if there be a substantive suspicion in this regard, the Principal will inform the Chief Vigilance Officer and in addition can also initiate disciplinary actions as per its internal laid down policies and procedures.

Article 2: Commitment of the Bidder(s)/Contractor(s)

- 1) It is required that each Bidder / Contractor (including their respective officers, employees and agents) adhere to the highest ethical standards, and report to the Government / Department / School of Planning and Architecture, Bhopal all suspected acts of fraud or corruption or Coercion or Collusion of which it has knowledge or becomes aware, during the tendering process and throughout the negotiation or award of a contract.
- 2) The Bidder(s) / Contractor(s) commits himself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the Tender process and during the Contract execution:
 - a) The Bidder(s) / Contractor(s) will not, directly or through any other person or firm, offer, promise or give to any of the Principal employees involved in the Tender process or execution of the Contract or to any third person any material or other benefit which he / she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the Tender process or during the execution of the Contract.
 - b) The Bidder(s) / Contractor(s) will not enter with other Bidder(s) into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to cartelize in the bidding process.
 - c) The Bidder(s) / Contractor(s) will not commit any offence under the relevant IPC / PC Act. Further the Bidder(s) / Contractor(s) will not use improperly, (for the purpose of competition or personal gain), or pass on to others, any information or documents provided by the Principal / SPAB as part of the business relationship,

regarding plans, technical proposals and business details, including information contained or transmitted electronically.

- d) The Bidder(s) / Contractor(s) of foreign origin shall disclose the names and addresses of agents / representatives in India, if any. Similarly Bidder(s) / Contractor(s) of Indian nationality shall disclose names and addresses of foreign agents / representatives, if any. Either the Indian agent on behalf of the foreign principal or the foreign principal directly could bid in a tender but not both. Further, in cases where an agent participates in a tender on behalf of one manufacturer, he shall not be allowed to quote on behalf of another manufacturer along with the first manufacturer in a subsequent/parallel tender for the same item.
 - e) The Bidder(s) / Contractor(s) will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the Contract.
 - f) Bidder(s) / Contractor(s) who have signed the Integrity Pact shall not approach the courts while representing the matter to IEMs and shall wait for their decision in the matter.
- 3) The Bidder(s) / Contractor(s) will not instigate third persons to commit offences outlined above or be an accessory to such offences.
 - 4) The Bidder(s) / Contractor(s) will not, directly or through any other person or firm indulge in fraudulent practice, willful misrepresentation or omission of facts or submission of fake / forged documents in order to induce public official to act in reliance thereof, with the purpose of obtaining unjust advantage by or causing damage to justified interest of others and / or to influence the procurement process to the detriment of the School of Planning and Architecture, Bhopal /Government interests.
 - 5) The Bidder(s) / Contractor(s) will not, directly or through any other person or firm use coercive practices (which shall include the act of obtaining something, compelling an action or influencing a decision through intimidation, threat or the use of force directly or indirectly, where potential or actual injury may befall upon a person, his / her reputation or property) to influence their participation in the tendering process.

Article 3: Consequences of Breach

Without prejudice to any rights that may be available to the Principal under law or the contract or its established policies and laid down procedures, the Principal shall have the following rights in case of breach of this Integrity Pact by the Bidder(s) / Contractor(s) and the Bidder / Contractor accepts and undertakes to respect and uphold the Principal absolute right:

- 1) If the Bidder(s) / Contractor(s), either before award or during execution of Contract has committed a transgression through a violation of Article 2 above or in any other form, such as to put his reliability or credibility in question, the Principal after giving 14 days' notice to the contractor shall have powers to disqualify the Bidder(s) / Contractor(s) from the Tender process or terminate / determine the Contract, if already executed or exclude the Bidder / Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of transgression and determined by the Principal. Such exclusion may be forever or for a limited period as decided by the Principal.
- 2) Forfeiture of Earnest Money Deposit / Performance Guarantee / Security Deposit: If the Principal has disqualified the Bidder(s) from the Tender process prior to the award of the Contract or terminated / determined the Contract or has accrued the right to terminate /

determine the Contract according to Article 3(1), the Principal apart from exercising any legal rights that may have accrued to the Principal, may in its considered opinion forfeit the entire amount of Earnest Money Deposit / Performance Guarantee and Security Deposit of the Bidder / Contractor.

- 3) Criminal Liability: If the Principal obtains knowledge of conduct of a Bidder or Contractor, or of an employee or a representative or an associate of a Bidder or Contractor which constitutes corruption within the meaning of PC Act, or if the Principal has substantive suspicion in this regard, the Principal will inform the same to law enforcing agencies for further investigation.

Article 4: Previous Transgression

- 1) The Bidder declares that no previous transgressions occurred in the last 3 years with any other Company in any country confirming to the anticorruption approach or with Central Government or State Government or any other Central / State Public Sector Enterprises / Autonomous body in India that could justify his exclusion from the tender process.
- 2) If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or action can be taken for banning of business dealings / holiday listing of the Bidder / Contractor as deemed fit by the Principal.
- 3) If the Bidder / Contractor can prove that he has resorted / recouped the damage caused by him and has installed a suitable corruption prevention system, the Principal may, at its own discretion, revoke the exclusion prematurely.

Article 5: Equal Treatment of all Bidders/Contractors/Subcontractors

- 1) The Bidder(s) / Contractor(s) undertake(s) to demand from all subcontractors a commitment in conformity with this Integrity Pact. The Bidder / Contractor shall be responsible for any violation(s) of the principles laid down in this agreement by any of its Subcontractors / sub-vendors.
- 2) The Principal will enter into pacts on identical terms as this one with all Bidders and Contractors.
- 3) The Principal will disqualify Bidders who do not submit the duly signed Integrity Pact between the Principal and the Bidder along with the Tender or violate its provisions at any stage of the Tender process.

Article 6: Duration of the Pact

This Integrity Pact begins when both the parties have legally signed it. It expires for the Contractor 12 months after the completion of work under the contract or expiry of defect liability period or last payment made under the contract, whichever is later and for all other bidders, 6 months after the Contract has been awarded. If any claim is made / lodged during this time, the same shall be binding and continue to be valid despite the lapse of this Integrity Pact as specified above, unless it is discharged / determined by the ADG / SDG, CPWD concerned.

Article 7: Other Provisions

- 1) This Integrity Pact is subject to Indian Law, place of performance and jurisdiction is the Headquarter of the Division of the Principal, who has floated the tender.
- 2) Changes and supplements as well as termination notice need to be made in writing.
- 3) If the Contractor is a partnership or a consortium, this Integrity Pact must be signed by all the partners or by one or more partner holding power of attorney signed by all partners

and consortium members. In case of a Company, the Integrity Pact must be signed by a representative duly authorized by board resolution.

- 4) Should one or several provisions of this Integrity Pact turn out to be invalid; the remainder of this Pact remains valid. In this case, the parties will strive to come to an agreement to their original intentions.
- 5) Issues like Warranty / Guarantee etc. shall be outside the purview of IEMs.
- 6) It is agreed term and condition that any dispute or difference arising between the parties with regard to the terms of this Integrity Pact, any action taken by the Principal in accordance with this Integrity Pact or interpretation thereof shall not be subject to arbitration.
- 7) In view of the nature of integrity pact, the Integrity Pact is irrevocable and shall remain valid even if the main tender / contract is terminated till the currency of the integrity pact.
- 8) If any complaint regarding violation of IP is received directly by the Principal in respect of the contract, the same shall be referred to the IEM for comments/recommendations.

Article 8: Independent External Monitor (IEM)

- 1) The Principal appoints competent and credible Independent External Monitor for this Pact after approval by Central Vigilance Commission (Names and address of IEMs are as mentioned in Schedule-F). The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.
- 2) The Monitor is not subject to instructions by the representatives of the parties and performs his / her functions neutrally and independently. The Monitor would have access to all contract documents, whenever required. It will be obligatory for him/her to treat the information and documents of the Bidders / Contractors as confidential.
- 3) The Bidder(s) / Contractor(s) accepts that the IEM has the right to access without restriction to all project documentation of the Principal including that provided by the Contractor, The Contractor will also grant the IEM, upon his / her request and demonstration of a valid interest, unrestricted and unconditional access to their project documentation. The same is applicable to sub- contractors.
- 4) The IEM is under contractual obligation to treat the information and documents of the Bidder{s} / Contractor(s) / Sub-contractor(s) with confidentiality. The IEM has also signed 'Non-Disclosure of Confidential Information' and 'Absence of Conflict of Interest'. In case if any conflict of interest arising at a later date, the IEM shall inform the Engineer-in-Charge and recuse himself / herself from that case.
- 5) As soon as the IEM notices, or believes to notice, a violation of this agreement, he/she will so inform the Management of the Principal and request the Management to discontinue or take corrective action, or to take other relevant action. The IEM can in this regard submit non-binding recommendations. Beyond this, the IEM has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
- 6) The IEM will submit a written report to the SDG / ADG concerned within 8 to 10 weeks from the date of reference or intimation to him by the Principal and, should the occasion arise, submit proposals for correcting problematic situations.
- 7) If the IEM has reported to the ADG/SDG concerned, a substantiated suspicion of an offence under relevant IPC / PC Act, and the ADG / SDG concerned has, within a reasonable time, not taken visible action to proceed against such offence or reported it

to the Chief Vigilance Officer, the IEM may also transmit this information directly to the Central Vigilance Commissioner.

- 8) The Principal will provide to the IEM sufficient information about all meetings among the parties related to the project provided such meetings could have impact on contractual relations between the Principal and the contractor. The parties will offer to the IEM the option to participate in such meetings.
- 9) The word IEM or monitor would include both singular and plural.

Article 9: Legal and Prior Rights

All rights and remedies of the parties hereto shall be in addition to all the other legal rights and remedies belonging to such parties under the Contract and/or law and the same shall be deemed to be cumulative and not alternative to such legal rights and remedies aforesaid. For the sake of brevity, both the Parties agree that this Integrity Pact will have precedence over the Tender/Contact documents with regard to any of the provisions covered under this Integrity Pact.

IN WITNESS WHEREOF the parties have signed and executed this Integrity Pact at the place and date first above mentioned in the presence of following witnesses:

.....

.....
(For and on behalf of Bidder/Contractor)

.....
(For and on behalf of Principal)

WITNESSES:

1.
(Signature, name and address)

2.
(Signature, name and address)

Place :
Date :

Note: To be signed by the Bidder and the Engineer in Charge / Dean(P&D) / Director -in-Charge.

Draft Agreement

(Agreement (On ₹ 1000 Non-Judicial Stamp))

THIS AGREEMENT made on the _____ day of _____ 2026 between the Director, School of Planning and Architecture, Bhopal (herein after called "the SPA, Bhopal" of the one part) and (herein after called "the contractor" of the other part);

WHEREAS the SPA, Bhopal is desirous of providing work order for Construction of Construction Yard and Sub-structure for Prototype Units at School of Planning and Architecture, Bhopal.

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this agreement words and expressions shall have the same meanings as are respectively assigned to them in the Conditions of Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement (Contract Document):
 - a. Signed Bid Document.
 - b. Specifications.
 - c. List of Approved Makes.
 - d. Drawings.
 - e. Financial Bid.
 - f. Documents of Technical Bid.
 - g. Letter (Notification) of Award (LOA) of Contract.

In consideration of the payments to be made by the SPA, Bhopal to the agency as herein after mentioned, the contractor hereby covenants with the SPA Bhopal to undertake the Construction of Construction Yard and Sub-structure for Prototype Units at School of Planning and Architecture, Bhopal as per Terms and Conditions and reference documents mentioned in the Tender Document.

The SPA, Bhopal may also terminate this Agreement at any time upon thirty days written notice due to unacceptable performance by the firm, which shall be determined by SPA, Bhopal sole at its absolute discretion.

A brief particular of the works which shall be undertaken by the agency is as given in the Letter (Notification) of Award (LOA) of Contract and the Tender Document.

In WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the Indian laws on the day and year first above written.

i) Signature, Seal and delivered on
behalf of SPA, Bhopal

ii) Signature, Seal and delivered on
behalf of contractor

Date:

Place:

In presence of two witnesses:

(i) Signature

Name:

.....

Date:

(ii) Signature

Name:

Date:

Form of Bank Guarantee for Performance Guarantee
Guarantee offered by Bank to SPA Bhopal in connection with the execution of contract
(On non-judicial stamp paper)

Whereas the Coordinator (Construction Works, PMAY-G Research Project) on behalf of Director, School of Planning and Architecture, Bhopal (hereinafter called “The School of Planning and Architecture, Bhopal”) has issued the Letter (Notification) of Award (LOA) of Contract to (name and address of the contractor) (hereinafter called “the Contractor”) for the execution of work titled “**Construction of Construction Yard and Sub-structure for Prototype Units at School of Planning and Architecture, Bhopal**”. The School of Planning and Architecture, Bhopal has further agreed to accept an irrevocable Bank Guarantee for Rs. (Rupees only) valid up to (date) as Performance Guarantee from the said Contractor for compliance of his obligations in accordance with the terms and conditions of the agreement.

We, (name of the bank) (herein after referred to as “the Bank”), hereby undertake to pay to the School of Planning and Architecture, Bhopal an amount not exceeding Rs. (Rupees only) on demand by School of Planning and Architecture, Bhopal within 10 days of the demand.

We, (name of the bank), do here by undertake to pay the amount due and payable under this guarantee without any demur, merely on a demand from the School of Planning and Architecture, Bhopal stating that the amount claimed is required to meet the recoveries due or likely to be due from the said Contractor. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. (Rupees only).

We, (name of the bank), further undertake to pay the School of Planning and Architecture, Bhopal any money so demanded notwithstanding any dispute or disputes raised by the contractor in any suit or proceeding pending before any Court or Tribunal, our liability under this Bank Guarantee being absolute and unequivocal. The payment so made by us under this Bank Guarantee shall be a valid discharge of our liability for payment there under and the Contractor shall have no claim against us for making such payment.

We, (name of the bank), further agree that the School of Planning and Architecture, Bhopal shall have the fullest liberty without our consent and without affecting in any manner our obligation here under to vary any of the terms and conditions

of the said agreement or to extend time of performance by the said Contractor from time to time or to postpone for any time or from time to time any of the powers exercisable by the School of Planning and Architecture, Bhopal against the said contractor and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said Contractor or for any forbearance, act of omission on the part of School of Planning and Architecture, Bhopal or any indulgence by the School of Planning and Architecture, Bhopal to the said Contractor or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

We, (name of the bank), further agree that the School of Planning and Architecture, Bhopal at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor at the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee the School of Planning and Architecture, Bhopal may have in relation to the Contractor's liabilities.

This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor.

We, (name of the bank), undertake not to revoke this guarantee except with the consent of the School of Planning and Architecture, Bhopal in writing.

This Bank Guarantee shall be valid up to (date) unless extended on demand by the School of Planning and Architecture, Bhopal. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs. (Rupees only) and unless a claim in writing is lodged with us within the date of expiry or extended date of expiry of this guarantee, all our liabilities under this guarantee shall stand discharged.

Date

Witnesses:

- | | | |
|----|------------------|----------------------|
| 1. | Signature | Authorized signatory |
| | Name and address | Name |
| | | Designation |
| | | Staff code no. |
| 2. | Signature | Bank seal |
| | Name and address | |

Form of Bank Guarantee for Earnest Money Deposit
Guarantee offered by Bank to SPA Bhopal in connection with the execution of contract
(On non-judicial stamp paper)

Whereas the Coordinator (Construction Works, PMAY-G Research Project) on behalf of Director, School of Planning and Architecture, Bhopal (hereinafter called “The School of Planning and Architecture, Bhopal”) has invited bids under **SPAB/PMAYG/2026/NIT-001** dated **16th April 2026** for “**Construction of Construction Yard and Sub-structure for Prototype Units at School of Planning and Architecture, Bhopal**”. The School of Planning and Architecture, Bhopal has further agreed to accept an irrevocable Bank Guarantee for Rs. (Rupees only) valid up to (date) as Earnest Money Deposit from (name and address of contractor) (hereinafter called “the contractor”) for compliance of his obligations in accordance with the terms and conditions of the said NIT.

We, (name of the bank) (herein after referred to as “the Bank”), hereby undertake to pay to the School of Planning and Architecture, Bhopal an amount not exceeding Rs. (Rupees only) on demand by School of Planning and Architecture, Bhopal within 10 days of the demand.

We, (name of the bank), do here by undertake to pay the amount due and payable under this guarantee without any demur, merely on a demand from the School of Planning and Architecture, Bhopal stating that the amount claimed is required to meet the recoveries due or likely to be due from the said Contractor. Any such demand made on the Bank shall be conclusive as regards the amount due and payable by the Bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs. (Rupees only).

We, (name of the bank), further undertake to pay the School of Planning and Architecture, Bhopal any money so demanded notwithstanding any dispute or disputes raised by the contractor in any suit or proceeding pending before any Court or Tribunal, our liability under this Bank Guarantee being absolute and unequivocal. The payment so made by us under this Bank Guarantee shall be a valid discharge of our liability for payment there under and the Contractor shall have no claim against us for making such payment.

We, (name of the bank), further agree that the School of Planning and Architecture, Bhopal shall have the fullest liberty without our consent and without affecting in any manner our obligation here under to vary any of the terms and conditions

of the said agreement or to extend time of performance by the said Contractor from time to time or to postpone for any time or from time to time any of the powers exercisable by the School of Planning and Architecture, Bhopal against the said contractor and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said Contractor or for any forbearance, act of omission on the part of School of Planning and Architecture, Bhopal or any indulgence by the School of Planning and Architecture, Bhopal to the said Contractor or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

We, (name of the bank), further agree that the School of Planning and Architecture, Bhopal at its option shall be entitled to enforce this Guarantee against the Bank as a principal debtor at the first instance without proceeding against the Contractor and notwithstanding any security or other guarantee the School of Planning and Architecture, Bhopal may have in relation to the Contractor's liabilities.

This guarantee will not be discharged due to the change in the constitution of the Bank or the Contractor.

We, (name of the bank), undertake not to revoke this guarantee except with the consent of the School of Planning and Architecture, Bhopal in writing.

This Bank Guarantee shall be valid up to (date) unless extended on demand by the School of Planning and Architecture, Bhopal. Notwithstanding anything mentioned above, our liability against this guarantee is restricted to Rs. (Rupees only) and unless a claim in writing is lodged with us within the date of expiry or extended date of expiry of this guarantee, all our liabilities under this guarantee shall stand discharged.

Date

Witnesses:

- | | | |
|----|------------------|----------------------|
| 1. | Signature | Authorized signatory |
| | Name and address | Name |
| | | Designation |
| | | Staff code no. |
| 2. | Signature | Bank seal |
| | Name and address | |