Indore Smart City Development Limited

Request for Proposal

Conservation, Restoration & Redevelopment of Rajwada, Indore (Phase I)

Indore Smart City Development Limited, Indore

Regd. Off.: **107-109, Palika Plaza Phase II, M.T.H. Compound, Indore - 452007**
Ph. No.: **0731-2535572;** ***E-mail:*** **smartcityindore16@gmail.com**
CIN: **U75100MP2016SGC035528;** ***Website:*****www.smartcityindore.org**

INDORE SMART CITY DEVELOPMENT LIMITED

APPENDIX 2.10

TENDER DOCUMENT

FOR PERCENTAGE RATE ONLY IN WORKS DEPARTMENT AND OTHER DEPARTMENT

NIT Number and Date : 12/ISCDL/2017-18, dated 29 May 2017

Agreement Number and Date : _____

Name of Work	**:**	**Conservation, Restoration & Redevelopment of Rajwada, Indore (Phase I)**
Name of the Contractor	**:**	
Probable Amount of Contract	**:**	
(Rs. In Figure)	**:**	**Rs. 19.92 Cr.**
(Rs. In Words)	**:**	**Rupees Nineteen Crore Ninety-Two Lakh Only**
Contract Amount	**:**	
(Rs. In Figure)	**:**	**_____**
(Rs. In Words)	**:**	**_____**
Stipulated Period of Completion	**:**	**24 months**

Tender Document
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Section-1

INDORE SMART CITY DEVELOPMENT LIMITED

107-109, Palika Plaza, Phase-II, MTH Compound, Indore-452007

NIT No. 12/ISCDL/ 17-18 **Date: 29 May 2017**

NOTICE INVITING TENDER

Rajwada is an important heritage structure of Indore. Indore Smart City Development Limited under its Smart City Mission invites **online percentage rate tenders** for the following work. Tender forms may be purchased online by bidders who possess similar work experience.

S. No.	Name of Work	Estimated Cost of Work	Cost of Tender Form	Earnest Money Deposit	Completion Period
1.	Conservation, Restoration & Redevelopment of Rajwada, Indore (Phase I)	Rs.19.92 Cr.	Rs. 50,000/-	Rs.10,00,000	24 Months

1. Last date for Purchase of Tender	:	29.06.2017 till 1730 Hrs.
2. Pre-Bid Conference	:	16.06.2017 at 1500 Hrs.
3. Last date for submission of tender (Online)	:	30.06.2017 till 1730 Hrs.
4. Last date for Submission of Hard Copy of Technical Bid.	:	03.07.2017 till 1500 Hrs.
5. Technical bid opening (Online)	:	03.07.2017 till 1600 Hrs.
Tender Document and other details shall be available on: - Website- www.mpeproc.gov.in		
6. Amendment to NIT, if any would be published on website only.		

Chief Executive Officer
Indore Smart City Development Limited, Indore

INDORE SMART CITY DEVELOPMENT LIMITED

Notice Inviting e-Tenders

NIT Number and Date : 12/ISCDL/2017-18, 29 May 2017

Online percentage rate bids for the following works are invited from contractors and firms of repute fulfilling pre-qualification criteria and having similar relevant experience.

S. No.	Name of Work	Estimated Cost of Work	Cost of Tender Form	Earnest Money Deposit	Completion Period
1.	Conservation, Restoration & Redevelopment of Rajwada, Indore (Phase I)	Rs.19.92 Cr.	Rs. 50,000/-	Rs.10.0 Lakh	24 Months

1. All details relating to the Bid Document(s) can be viewed and downloaded from the website mentioned in NIT.
2. Bid document can be purchased after making online payment of portal fees through Credit/Debit/Cash Card/internet banking.
3. At the time of submission of the Bid the eligible bidder shall be required to:
    i) pay the cost of Bid Document;
    ii) deposit the Earnest Money;
    iii) Submit a check list; and
    iv) Submit an affidavit.

Details can be seen in the Bid Data Sheet

4. Eligibility for Bidders:
    (a) At the time of submission of the Bid the bidder should have valid registration with the Government of Madhya Pradesh, PWD in appropriate class. However, such bidders who are not registered with the Government of Madhya Pradesh and are eligible for registration can also submit their bids after having applied for registration with appropriate authority.
    (b) The bidder would be required to have valid registration with MPPWD in appropriate class at the time of signing of the Contract.
    (c) Failure to sign the contract by the selected bidder, for whatsoever reason, shall result in forfeiture of the earnest money deposit.
5. Pre-qualification – Prequalification conditions, wherever applicable, are given in the Bid Data Sheet.
6. Special Eligibility - Special Eligibility Conditions, if any, are given in the Bid Data Sheet.
7. Amendment to NIT, if any, would be published on website only, and not in Newspaper.

Chief Executive Officer
Indore Smart City Development Ltd., Indore

SECTION 2

INSTRUCTIONS TO BIDDERS (ITB)

A. GENERAL

1. SCOPE OF BID

The detailed description of work, hereinafter 'work', is given below.

1.1 Introduction:

Indore traces its roots to its 16th century founding as a trading hub between the Deccan and Delhi. The city and its surroundings came under Hindu Maratha Empire on 18 May 1724 after Maratha Peshwa Baji Rao I assumed the full control of Malwa. During the days of the British Raj, Indore State was a 19 Gun Salute (21 locally) princely state (a rare high rank) ruled by the Maratha Holkar dynasty, until they acceded to the Union of India. Indore served as the capital of the Madhya Bharat from 1950 until 1956.

Indore is a district and commercial center of the Indian state of Madhya Pradesh. It is situated on the banks of the River Kahn and Sarawati. Indore is known for its architectural splendor. The tales of the glorious past are narrated by these splendid historical monuments and cast a magical spell on the visitors. Rajwada is one such kind of structure.

1.2 Rajwada:

Rajwada is one of the important historical buildings in Indore which is the historical palace of the Holkars. It was built about two centuries ago and is located near the Chhatris in the main square. It is a seven-storied structure, which serves as the living example of the grandeur of the Holkars. Rajwada stands in the center of the city. The new palace is on the northern side, while the old palace stands in the old part of the town. The old palace is a multi-storied building which also serves as a gateway of the Rajwada. It stands amongst the crowded streets of the Khajuri Bazar and faces the main square of the city.

The palace was once the center of all the trading activities in the city. It is a blend of Maratha, Mughal and French style of architecture. The entrance of the palace has a lofty archway with a giant wooden door which is covered with iron studs. The Gopura like monument is made up of wood and stone. It has a number of balconies windows and corridors. The entrance leads to a huge courtyard, which is surrounded by galleried rooms and the arcaded Ganesha hall, which was once the venue of all state and religious functions. This hall is now used for art exhibitions and classical music concerts.

Rajwada has been burnt three times in history. The last fire broke out in 1984 and caused the maximum destruction. The lower three floors are made up of stone, while the top floors are made of wood. This made it very vulnerable to destruction by fire. Now, only the front part of the original structure remains. The palace has recently been renovated, which has managed to bring back the old glory to some extent. In the rear part of the palace, a beautiful Garden has been created. It contains fountains, an artificial waterfall and some magnificent pieces of 11th century sculpture.

1.3 Need for the Project:

Our heritage is diverse and includes buildings, monuments, gardens, cemeteries, landscapes and archaeological sites. Each one of these places contains elements that help tell its own individual story. It may be the design of a building, the material it was built from, the interior features like woodwork and cornicing, the paint colors or even the landscaping that are physical reminders of the place's story. For this reason, it is important that any changes to a heritage place respect its significant elements.

With this in mind, places can be changed to meet contemporary needs and new uses. Sensitive development or adaptive reuse is often the best way to ensure a place is used and valued into the future. Reusing heritage places also amounts to a substantial environmental and financial saving in embodied energy. It avoids the creation of waste and the need for replacement building materials.

The original or significant elements should be identifiable so that future generations can understand the story of the place.

Presently Rajwada is occupied by the Department of Archaeology, Archives and Museums, (DoAAM) Government of Madhya Pradesh, Madhya Pradesh wherein apart from a temple, office of DoAAM it also houses a Museum on the First floor at its Northern wing.

Conservation of the Heritage Sites is utmost **need of the hour** which will allow them survive for a longer period so as to showcase them to our coming generations. The Criteria for the selection of these buildings are as below:

- Significance and Values related to these.
- Its historical significance.
- Architectural and aesthetic importance (traditional building materials such as brick masonry in lime , ashlar masonry, ancient Sandstone works , lime plaster ,woodworks, ornamentation like the decorative railings, grills etc., brackets, cornices ,architraves, ancient title boards(if existing) Jharokhas, chajjas, brackets and jalis, floral mouldings, reliefs and ornamental plaster works in lime on building facades having greater architectural and aesthetic importance and other specialized building crafts etc. present which are prominently visible externally apart from its internal areas which might have much more traditional architecture supporting the heritage site.
- Integrity and Authenticity (buildings with original facade intact and less alteration & additions)
- Social significance
- Diversified experience (Heritage, Religion, Local Culture, and more)

1.4 Scope of work:

Following are the nature of works that are to be undertaken in the project – **Conservation, Restoration & Redevelopment of Rajwada, Indore: Phase I.**

Conservation and Restoration of the Heritage structures

- East Side (Front) Façade Upgradation

- North Side Façade Upgradation

Redevelopment of the Peripheral area (East & North Side)

- Platform in front of East Façade

- Landscaped area I front of East facade

1.5 Project Approach:

1.5.1 Conservation Guidelines and Methodology:

a. Detailed documentation shall be prepared by means of

i. Photo documentation

ii. Condition Mapping

b. Any alterations made to the Heritage site in the later period shall be recorded.

c. Structural damages to be recorded.

d. Proposals to be prepared for:

i. For Structural Strengthening
ii. Building restoration
iii. Development of the surroundings areas
iv. Arranging public convenience /amenities for occupants and visitors
v. Providing better Services (water supply, electricity and sanitation) etc.
vi. Signages (Descriptive, Illustrative and Directive)
vii. Sign boards/Title boards of shops and buildings

e. Below are the natures of works to be undertaken during the process of Conservation w.r.t various materials for restoring them to their original form, design, type, pattern etc. Different approaches to retain them.

i. Lime plaster Restoration-Careful removal of lime plaster and lime mortar from various areas identified under damage, necessary Conservation works to be executed in the traditional lime mix god in strength quality, finish retaining the original finish, design etc.

ii. Wood Conservation - Careful removal of old finish, Anti termite Treatment, Necessary Conservation works, Clear Melamine Finish, Clear Lacquer Finish etc.

iii. Stone Restoration - Stitching of cracks, necessary Conservation works etc.

iv. Painting Restoration-careful removal of existing popped and peeled plaster, careful application of paint finish with necessary base preparation etc.

v. Metal Restoration - necessary Conservation works, replacing the damaged members etc.

vi. Glass restoration - necessary Conservation works, replacing the damaged panels etc.

vii. Structural Strengthening and stability of various parts of the structure by means of civil works etc.

f. For executing the above works, provisions for below-mentioned facilities should be made:

i. Arrangement of water supply and drinking water
ii. Arrangement of Electricity
iii. Providing the necessary Scaffoldings
iv. Machineries and Tools required.
v. Sufficient storage space to keep materials and machineries/tools separately during the progress of works.

1.5.2 Conservation works to be executed at Rajwada, Indore.

i. Stone Restoration
ii. Lime Restoration
iii. Metal Restoration
iv. Wood Restoration
v. Landscape redevelopment

2. General Quality of Work:

The work shall have to be executed in accordance with the drawings (prepared by Contractor and approved by the competent authority), technical specifications specified in the Bid Data Sheet/ Contract Data, and shall have to meet high standards of workmanship, safety and security of workmen and works.

3. PROCEDURE FOR PARTICIPATION IN E-TENDERING

The procedure for participation in e-tendering is given in the Bid Data Sheet.

4. ONE BID PER BIDDER

4.1 The bidder can be an individual entity or a joint venture (if permitted as per Bid Data sheet). In case J.V. is permitted, the requirement of joint venture shall be as per the Bid Data Sheet.

4.2 No bidder shall be entitled to submit more than one bid whether jointly or severally. If he does so, all bids wherein the bidder has participated shall stand disqualified.

5. Cost of Bidding

The bidder shall bear all costs associated with the preparation and submission of his bid, and no claim whatsoever for the same shall lie on the ULB.

6. Site Visit and examination of works

The bidder is advised to visit and examine the Site of Works and its surroundings and obtain for itself on its own responsibility all information that may be necessary for preparing the bid and entering into a contract for construction of the work. All costs shall have to be borne by the bidder.

B. BID DOCUMENTS

7. CONTENT OF BID DOCUMENTS

The Bid Document comprises of the following documents:

1. NIT with all amendments.
2. Instructions to Bidders,
3. Conditions of Contract:
    i. Part I General Conditions of Contract and Contract Data; and
    ii. Part II Special Conditions of Contract.
4. Specifications
5. Drawings,
6. Priced Bill of Quantities
7. Technical and Financial Bid
8. Letter of Acceptance
9. Agreement and
10. Any other document(s), as specified.

8. The bidder is expected to examine carefully all instructions, conditions of contract, the contract data, forms, terms and specifications, bill of quantities, forms and drawings in the Bid Document. Bidder shall be solely responsible for his failure to do so.

9. Pre-Bid Meeting (where applicable)

Wherever the Bid Data Sheet provides for pre-bid meeting:
9.1 Details of venue, date and time would be mentioned in the Bid Data Sheet. Any Change in the schedule of pre-bid meeting would be communicated on the website only, and intimation to bidders would not be given separately.

9.2 Any prospective bidder may raise his queries and/or seek clarifications in writing before or during the pre-bid meeting. The purpose of such meeting is to clarify issues and answer questions on any matter that may be raised at that stage. The Employer may, at his option, give such clarifications as are felt necessary.

9.3 Minutes of the pre-bid meeting including the gist of the questions raised and the responses given together with any response prepared after the meeting will be hosted on the website.

9.4 Pursuant to the pre-bid meeting if the Employer deems it necessary to amend the Bid Document, it shall be done by issuing amendment to the online NIT.

10. Amendment of Bid Documents

10.1 Before the deadline for submission of bids, the Employer may amend or modify the Bid Documents by publication of the same on the website.

10.2 All amendments shall form part of the Bid Document.

10.3 The Employer may, at its discretion, extend the last date for submission of bids by publication of the same on the website.

C. PREPARATION OF BID

11. The bidders have to prepare their bids online, encrypt their Bid Data in the Bid Forms and submit Bid Seals (Hashes) of all the envelopes and documents related to the Bid required to be uploaded as per the time schedule mentioned in the key dates of the Notice Inviting e-Tenders after signing of the same by the Digital Signature of their authorized representative.

12. DOCUMENTS COMPRISING THE BID

The bid submitted online by the bidder shall be in the following parts:

Part 1 – This shall be known as **Envelope A** and would apply for all bids. **Envelope A** shall contain the following as per details given in the Bid Data Sheet:

i. Registration number or proof of application for registration and organizational details in format given in the Bid Data sheet
ii. Payment of the cost of Bid Document;
iii. Earnest Money; and
iv. EPF Registration
v. An affidavit duly notarized.

Part 2 – This shall be known as **Envelope B** and required to be submitted only in works where pre-qualification conditions and/or special eligibility conditions are stipulated in the Bid Data Sheet. Online **Envelope B** shall contain a self-certified sheet duly supported by documents to demonstrate fulfillment of pre-qualification conditions.

Part 3 – This shall be known as Online **Envelope C** and would apply to all bids. **Envelope C** shall contain financial offer in the format prescribed enclosed with the Bid Data Sheet.

13. LANGUAGE

The bid as well as all correspondence and documents relating to the bid exchanged by the Bidder and the Employer shall be in English or Hindi. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in English. In such case, for the purposes of interpretation of the bid, such translation shall govern.

14. TECHNICAL PROPOSAL

14.1 Only, in case of bids with pre-qualification conditions defined in the Bid data sheet, the Technical Proposal shall comprise of formats and requirements given in the Bid Data Sheet.

14.2 All the documents/ information enclosed with the technical proposals should be self-attested and certified by the Bidder. The Bidder shall be liable for forfeiture of his earnest money deposit, if any document/ information is found false/ fake/ untrue before acceptance of Bid. If it is found after

acceptance of the Bid, the sanctioning authority may at his discretion forfeit his performance security/ guarantee, security deposit, enlistment deposit and take any other suitable action.

15. FINANCIAL BID

i. The bidder shall have to quote rates in format referred in Bid Data sheet, in overall percentage, and not item wise. If the bid is in absolute amount, overall percentage would be arrived at in relation to the probable amount of contract given in NIT. The overall percentage rate would apply for all items of work.

ii. Percentage shall be quoted in figures as well as in words. If any difference in figures and words found, lower of the two shall be taken as valid and correct.

iii. The bidder shall have to quote rates inclusive of all duties, taxes, royalties and other levies; and the Employer shall not be liable for the same.

iv. The material along with the units and rates, which shall be issued, if any, by the department to the contractor, is mentioned in the Bid Data Sheet.

16. PERIOD OF VALIDITY OF BIDS

The bids shall remain valid for a period specified in Bid Data Sheet after the date of "close for biding" as prescribed by the Employer. The validity of the bid can be extended by mutual consent in writing.

17. EARNEST MONEY DEPOSIT (EMD)

17.1 The Bidder shall furnish, as part of the Bid, Earnest Money Deposit (EMD), of the amount specified in the Bid Data Sheet.

17.2 The EMD shall be in the form of Demand Draft/ Fixed Deposit of a scheduled commercial bank, issued in favor of the name given in the Bid Data Sheet. The Fixed Deposit Receipt shall be valid for six months or more after the last date of receipt of bids. However, other forms of EMD may be allowed by the employer by mentioning it in the Bid Data sheet.

17.3 Bid not accompanied by EMD shall be liable for rejection as non-responsive.

17.4 EMD of bidders whose bids are not accepted will be returned within ten working days of the decision on the bid, except second lowest till the time period of agreement with first lowest.

17.5 EMD of the successful Bidder will be discharged when the Bidder has signed the Agreement and furnished the Bank Guarantee of required value for Performance Security.

17.6 Failure to sign the contract by the selected bidder, for whatsoever reason, shall result in forfeiture of the Earnest money deposit.

D. SUBMISSION OF BID

18. The bidder is required to submit online bid duly signed digitally, and Envelope "A" in physical form also at the place prescribed in the Bid Data Sheet.

E. OPENING AND EVALUATION OF BID

19. PROCEDURE

19.1 **Envelope 'A'** shall be opened first online at the time and date notified and its contents shall be checked. In cases where Envelope 'A' does not contain all requisite documents, such bid shall be treated as nonresponsive, and **Envelope "B" and/or "C"** of such bid shall not be opened.

19.2 Wherever Envelope 'B' (Technical Bid) is required to be submitted, the same shall be opened online at the time and date notified. The bidder shall have freedom to witness opening of the Envelope 'B'. Envelope 'C' (Financial Bid) of bidders who are not qualified in Technical Bid (Envelope 'B') shall not be opened.

19.3 Envelope 'C' (Financial Bid) of the qualified bidders shall be opened online at the time & date notified. The bidder shall have freedom to witness opening of the Envelope 'C'.

19.4 After opening Envelope 'C' all responsive bids shall be compared to determine the lowest evaluated bid.

19.5 The Employer reserves the right to accept or reject any bid, and to annul the biding process and reject all the bids at any time prior to contract award, without incurring any liability. In all such cases reasons shall be recorded.

19.6 The Employer reserves the right of accepting the bid for the whole work or for a distinct part of it.

20. Confidentiality

20.1 Information relating to examination, evaluation, comparison and recommendation of contract award shall not be disclosed to bidders or any other person not officially concerned with such process until final decision on the bid.

20.2 Any attempt by a bidder to influence the Employer in the evaluation of the bids or contract award decisions may result in the rejection of its bid.

F. AWARD OF CONTRACT

21. Award of Contract

The Employer shall notify the successful bidder by issuing a 'Letter of Acceptance' (LOA) that his bid has been accepted.

22. Performance Security

22.1 Prior to signing of the Contract the bidder to whom LoA has been issued shall have to furnish performance Security of the amount, form and duration, etc. as specified in the Bid Data Sheet.

22.2 Additional performance security, if applicable, is mentioned in the Bid Data Sheet and shall be in the form and for the duration etc. similar to performance security

23. Signing of Contract Agreement

23.1 The successful bidder shall have to furnish Performance security and additional performance security, if any, and sign the contract agreement within 15 days of issue of LOA.

23.2 The signing of contract agreement shall be reckoned as intimation to commencement of work. No separate work order shall be issued by the Employer to the contractor for commencement of work.

23.3 In the event of failure of the successful bidder to submit Performance Security and additional performance security if any or sign the Contract Agreement, his EMD shall stand forfeited without prejudice to the right of the employer for taking action against the bidder.

24. CORRUPT PRACTICES

The Employer requires that bidders observe the highest standard of ethics during the procurement and execution of contracts. In pursuance of this policy, the Employer:

1. may reject the bid for award if it determines that the bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for the Contract; and
2. may debar the bidder declaring ineligible, either indefinitely or for a stated period of time, to participate in bids, if it at any time determines that the bidder has, directly or through an agent, engaged in corrupt, fraudulent, collusive, or coercive practices in competing for, or in executing, a contract.

For the purposes of this provision, the terms set forth above are defined as follows:

a. "**corrupt practice**" means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;
b. "**fraudulent practice**" means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
c. "**coercive practice**" means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;
d. "**Collusive practice**" means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party.

End of ITB

BID DATA SHEET

General

S.No.	Particulars	Data
1	Office inviting Tender	Indore Smart City Development Ltd., Indore
2	NIT No	12/ISCDL/17-18
3	Date of NIT	29 May 2017
4	Bid document download Available from date & time	30 May 2017, 11:30 am
5	Website link / Portal	http://www.mpeproc.gov.in

Section 1 – NIT

Clause Reference	Particulars	Data
2	Portal fees	Rs. _____ (shall be reflected on the portal)
3	Cost of bid document	Rs. 50,000/-
	Cost of bid document payable at	Bidders shall be directed to the payment gateway through the portal
	Cost of bid document in favor of	
4	Affidavit format	Annexure B
5	Pre-qualifications required	Yes
	If Yes, details	As per Annexure C
6	Special Eligibility	Yes
	If Yes, details	As per Annexure D
7	Key Dates	Annexure A

Section 2 – ITB

Clause Reference	Particulars	Data
1	Name of work	Conservation, Restoration & Redevelopment of Rajwada, Indore (Phase I)
2	Specifications	Annexure E
3	Procedure for participation in e-tendering	Annexure F
4	Whether Joint-venture is allowed	No
	If yes, requirement for Joint venture	
9	Pre-bid meeting to held	Yes
	If Yes, Date, Time & Place	Date: 16 06 2017 Time from: 1500 hours Place: Rajwada Site, Indore
12	Envelope –A containing: Should reach in physical form at	Office of Chief Executive Officer 107-109, Palika Plaza, Phase II, MTH

Clause Reference	Particulars	Data
		Compound, Indore-452007 (M.P.)
14	Envelope-B Technical Proposal	Annexure I (Format I-1 to I-5)
	Envelope-C Financial Bid	Annexure J (Online)
15	Materials to be issued by the department	Nil
16	Period of Validity of Bid	120 Days
	Earnest Money Deposit	Rs. 10,00,000/- (Rupees Ten Lakh Only)
17	Forms of Earnest Money Deposit	i. FDR/ e-FDR ii. Demand Draft of National/ Scheduled Commercial Bank iii. Interest Bearing Securities of Post Office iv. Bank Guarantee
	EMD valid for a period of	120 days
	FDR (Fixed Deposit Receipt) must be drawn in favour of	Executive Director, ISCDL, Indore
21	Letter of Acceptance (LoA)	Annexure L
22	Amount of Performance Security	5% of contract amount
	Additional Performance Security, if any	Yes
	Performance security in the format	Annexure M
	Performance security in favour of	Executive Director, ISCDL, Indore
	Performance security valid up to	Till issue of Physical Completion Certificate as per clause 35.1

Annexure A

Key Dates & Events

S No.	Department Stage	Bidder's Stage	Start		Expiry		Envelopes
			Date	Time	Date	Time	
1.		Purchase of Tender – Online	30.05.2017	1130 Hours	29.06.2017	1730 Hours	
2.	Pre-Bid Meeting		16.06.2017	1500 Hours			
3.		Bid Submission – Online			30.06.2017	1730 Hours	
4.		Bid Submission – Hard Copy			03.07.2017	1500 Hours	
5.	Technical Proposal Opening		03.07.2017	1600 Hours			Envelope A + B
6.	Financial Bid Opening		TBA				Envelope C

Annexure B
(See clause 3 of Section 1-NIT)

|| **AFFIDAVIT** ||

(To be contained in Envelope A)
(On Non-Judicial Stamp of Rs.100)

I/we _____ who is/are _____ (status in the firm/company) and competent for submission of the affidavit on behalf of M/S _____ (contractor) do solemnly affirm an oath and state that: I/we are fully satisfied for the correctness of the certificates/records submitted in support of the following information in bid documents which are being submitted in response to notice inviting e-tender No. _____ for _____ (name of work) dated _____ issued by the _____ (name of the ULB).

I/we are fully responsible for the correctness of following self-certified information/ documents and certificates:

1. That the self-certified information given in the bid document is fully true and authentic.
2. That:
    a. Term (Fixed) deposit receipt / Bank Guarantee / Demand Draft / any other deposited as earnest money, and other relevant documents provided by the Bank are authentic.
    b. Information regarding financial qualification and annual turn-over is correct.
    c. Information regarding various physical qualifications is correct.
3. No close relative of the undersigned and our firm/company is working in the department.

OR

Following close relatives are working in the department:

Name _____ Post _____ Present Posting _____

Signature with Seal of the Deponent (bidder)

I/ We, _____ above deponent do hereby certify that the facts mentioned in above paras 1 to 4 are correct to the best of my knowledge and belief.

Verified today _____ (dated) at _____ (place).

Signature with Seal of the Deponent (bidder)

Annexure C

(See clause 5 of Section 1 NIT)

PRE-QUALIFICATIONS CRITERIA

i. The bidder should have an Average Annual Financial Turnover for Construction Works not less than 50% of the probable amount of contract during last 3 financial years.

ii. The bidder should have executed either of the following within last 7 years.

a. One Heritage Conservation Work costing not less than 70% of the probable amount of contract; or
b. Two Heritage Conservation Works costing not less than 40% of the probable amount of contract; or
c. Three Heritage Conservation Works costing not less than 30% of the probable amount of contract.

Bidders are required to submit the corresponding Work Order copies & Execution/ Completion Certificates issued by the respective clients. The Certificates should be issued by respective authority (Not below Executive Engineer) of client. ISCDL may call for original certificates for verification.

Note: Work execution/Completion Certificate shall include detailed scope of work, actual cost of work completed with date of commencement& date of completion of the work.

Annexure D

(See Clause 6 of Section 1 NIT)

SPECIAL ELIGIBILITY CRITERIA

ELIGIBILITY CRITERIA FOR BIDDER:

Prequalification Criteria of the Bidder(s)

1. The Bidder shall meet the Qualification Criteria specified in Annexure C as a Single firm entirely on its own without forming JV/Consortium for civil works. Only JV with Art Restoration contractor or electrical sub-contractor is permitted. In case of JV, the lead Contractor should fulfil all the eligibility criteria listed in Annexure G.
2. The Client reserves the right to visit previously executed sites (submitted by Contractor as part of Experience) that conform to the above criteria and assess the quality and finish of the same to prequalify the contractor. The Client reserves the right to conduct reference checks on the documents/ work detail submitted by the contractor in 'Technical Bid' to ensure that they have the ability to deliver on quality, timeliness and site management and co-ordination. The Client may disqualify the contractor if any discrepancy is found during the assessment.

Technical Pre-Qualification for Heritage Experience:

1. Before evaluation of the Technical Proposals, Bidder(s) are expected to meet the pre-qualification criteria, which would be a part of the Technical competence. Bidder(s) failing to meet these criteria or not submitting requisite proof for supporting pre-qualification criteria are liable to be rejected at the Technical Proposal level. The Bidder(s) should have the requisite ability to follow the designs and drawings to execute the work, ability to manage complex situations and to effectively coordinate the work with the concerned offices/ officers of the department.
2. The Contracting Firm should be mainly engaged in restoration works of historic buildings, and should have worked on **3 projects of heritage building conservation** in the last 5 years. Bidder(s)s failing to meet these criteria or not submitting requisite proof for supporting pre-qualification criteria are liable to be rejected at the Technical Proposal level. The interested parties should have academic, technical and financial capabilities on the lines, mentioned below:

Experience –

1. The Bidder(s) should have required experience in executing architectural conservation works similar in nature to the Project applied for. Minimum experience of 3 years (Organization) or Minimum Experience of the Company Head/ Technical lead to have an individual experience of 7 years in field of Heritage Conservation Projects.

2. At least one heritage building (declared by state / central government of any Grade) including following works:

    a. Structural Conservation and Roof Repairs
    b. Lime Plaster Works
    c. Doors, Windows, other woodworks Restoration
    d. Traditional brick masonry works

Domain Expertise –

1. Bidders should have team of skilled craftsmen with experience in lime plaster, structural, architectural and interior conservation and should have worked on conservation of heritage buildings.

2. Bidders should have on his payroll a Site-supervision team with the requisite ability to follow the designs and drawings to execute the work, ability to manage complex situations and to effectively coordinate the work with the concerned offices/ officers of the department as per details given in RFP.

3. The Bidder shall provide details of the Domain/ technical experts as per Annexure I-3 Engagement of the proposed personnel. In unavoidable circumstances, the Bidder shall be required to provide a replacement with equivalent or better qualifications, abilities and relevant experience.

4. The Bidder(s) should attach copy of Muster Roll of employed craftsmen and/or consent letters from associated experts in the field of heritage conservation.

5. The information required to be submitted in the Pre-Qualification for the Project should be as per format provided in Annexure I.

TECHNICAL COMPETENCE

1. A supporting cover document shall be provided listing all projects supplied for Evaluation of Technical Competence containing a brief one paragraph write up about the project. This should describe the project in detail including the nature of works undertaken under contract, quantity and specification of works undertaken in the project (like lime plaster, brickwork in lime, restoration works, stitching of structural cracks, lime concrete, stonework, etc.).
2. If available, these work descriptions should preferably be supported with photographs showing executed works (before/after conservation). Projects with photographs to be given preference.
    a. Name of Project:
    b. Scope of work:
    c. Construction experience - key activities:

Annexure E

(See clause 2 of Section 2-ITB & Clause 10 of GCC)

1. MPUADD Specifications for Civil Works

(The soft copy of the specifications is available at departmental website http://www.mpurban.gov.in/StandardSchedule.asp)

For items not covered under MP-UADD specifications with correction slips or those specifications are not given in the technical specifications appended or not incorporated in the nomenclature of the individual item, the work shall be done as per latest relevant BIS Codes of Practice or as per approval of Engineer-in-charge.

2. MPPKVVCO.LTD SPECIFICATIONS FOR ELECTRICAL WORKS

The Provisions of General/ Special Conditions of Contract, those specified elsewhere in the bid document, as well as execution drawings and notes, or other specifications issued in writing by the employer shall form part of the technical specifications of this work.

3. Handbook of Conservation of Heritage Buildings Published by Directorate General, Central Public Works Department in July 2013.

4. INDIAN NATIONAL TRUST FOR ART AND CULTURAL HERITAGE (INTACH) SCHEDULE OF RATES FOR BUILDING CONSERVATION WORKS, ARCHITECTURAL HERITAGE DIVISION. The rates are as per prevailing market Rates and DSR 2016 rates / MPPWD.

All the works shall be executed as per the approved drawings/ designs. The patterns shown in the tender drawings can be modified as per the site requirements by the Engineer-in-charge and nothing extra whatsoever shall be payable over and above the quoted rates.

Material should be of the best approved quality obtainable and they shall comply to the respective Indian Standard Specifications. Samples of all materials shall be got approved before placing order and the approved sample shall be deposited with the Client/Engineer In-Charge.

1) DEMOLITION, DISMANTLING AND REMOVAL WORK

a) All special tools & equipment required for careful demolition and dismantling shall be arranged so that no harm is caused to any part of the Heritage structure.
b) The work shall be carried out under the supervision of a traditional craftsmen, so that the method of carrying out the work can be decided by him, knowing what the under layers may be and at what strength the demolition of dismantling should be carried out so as not to harm the structural integrity of the heritage structure.
c) Proper sheeting arrangement of the monument shall be done such that the work and the debris falling while carrying out the works does not harm or injure anybody and the dust doesn't spread in the adjoining areas.
d) Traditional crafts person shall inspect all the works while it is being carried out and shall inform the Engineer if any structural or other damage or cracks are seen to the monument when the outer layers/elements/flooring are removed.

2) SPECIFICATION FOR LIME MORTAR

SCOPE:

This Specification covers materials, proportions, preparation and storage of lime mortars.

MATERIALS:

Lime: --Lime A, B and C class shall be used in the preparation of mortar and shall conform to lime specification no. 3.3 and relevant IS codes.

Aggregates: --Any of the following or their mixture in the given proportion shall be used.

Sand: --Sand should be angular to sub angular moderately sorted aggregate of nominal size of 150um to 1.18mm. River sand shall not be used.

Water: --For all mortars water used shall be free from mud, clay, acidic, basic or organic impurities and shall be drinkable.

PROPORTIONS:

Different types of ratio shall be used for works as per different trades mentioned in BOQ in which the quantity of lime is based on standard lime.

The volume of lime for purpose of the table in lime specifications shall be on dry hydrated lime basis. Where Quick lime is used the ratio shall be worked out accordingly, so as to provide the necessary quantity of dry hydrated lime.

PREPARATION OF MORTAR:

Slaking of lime: -- Quick Lime shall be properly slaked and then used. The hydrated lime can be used as such for making mortar or may be run into putty and then used for making mortar (In contrast to Quick lime.)

TANK SLAKING:

Two or preferably three tanks lined with stone or brick large enough to permit, stirring and hoeing shall be prepared (generally tanks suitable for 5 quintals or 10 quintals of quick lime are used in practice).

One of these shall be at the higher level and about 0.5 m deep and the remaining about 0.7 to 0.8 m, deep at lower level such that the contents of higher tank shall flow into the lower tanks by gravity.

The upper tank shall be filled to half its depth with water. Quick lime shall be gradually added till it fills the entire bottom to about half the depth of water. (Never add water to lime). While quick lime is being added it shall be constantly stirred and hoed so as to break up the lumps. No part of the lime shall be allowed to expose above water level. As the lime slakes with evolution of heat temperature begins to rise and more lime or water may be added till the required

temperature is reached and that temperature should be maintained by the addition of more lime or water till all the lime apparently has slaked, the stirring and hoeing shall be continued during the above process and for some period even after the slaking is apparently over.

MATURING:

After the lime has cooled it shall be transferred to the lower tank allowing it to flow through I.S. sieve size 1.18mm, more water shall be added if required and it shall be left undisturbed as under Class B lime for minimum of 12 hours and be used in seven (7) days. The putty shall be allowed to mature but not allowed to dry out till it is used.

Making Putty from hydrated lime:

The putty shall be obtained by adding hydrated lime to water in a tank and stirring to the consistency of cream and allowing to stand as under:

Class A lime = Not more than 12 hours.

Class B lime = Minimum for 2 days.

Class C lime = Minimum for 2 days for mortar used for finishing coat of plaster and minimum of 16 hours for mortar used for other purposes.

The putty shall be allowed to mature but not allowed to dry out till it is used.

Making of coarse stuff:

Manual mixing: -- After the lime has matured as specified above, more water shall be added and the putty stirred, till milk of lime is obtained. The fine aggregate shall be added with a whirling motion of hand so that the aggregate falls evenly in the tank. The milk of lime shall be stirred and hoed continuously till the required quantity of fine aggregate is added.

Mortar mill (Gharat) Mixing: -

Quick lime shall not be used directly while dry hydrated lime can be used directly for making mortar. Putty or dry hydrated lime and fine aggregates in required proportions shall be put along with water in the Gharat spreading uniformly all along its circumference and ground till a mortar of uniform colour and desired consistency is obtained. As grinding is done the mixture shall be continuously raked and turned over and over specially from corners and sides. Mortar shall be ground not less 180 revolutions or for 1/2 hours minimum, considering a Gharat to have 15 rpm.

Mortar for final coat of plaster: -- It shall be ground for a second time after an interval of 2 days for class C limes.

STORAGE OF MORTAR:

Lime mortars prepared from Class A and Class B limes shall be used up as soon as possible after mixing but not later than 12 hours for Class A limes from the time of first grinding and 2 days for Class B limes from the time of making Putty or first grinding as the case may be. Mortars from class C limes can be used for periods longer than 3 days after the making of mortar provided they are protected from drying out.

REJECTION OF MORTAR:

Dried out lime will not be used under any circumstances.

Mortar not found in accordance with the Specifications above and unsuitable according to field and laboratory tests of lime mortar shall be rejected. The Contractor at his own cost shall remove rejected mortar from the site of work within 24 hours.

Lime Kara

Item: Lime Kara Finish 3 to 5 MM thickness

Providing and application of Lime Kara of 1:2 (1 slaked & sieved Lime: 2 Zikki powder) on Lime Surkhi / Lime rock sand plastered wall surfaces, with thickness between 3 to 6 MM including organic additives, as per traditional practices. Zikki powder shall be free of any impurities, lumps, etc. The preparation of mortar is to be done following traditional practice includes using chakki/garat (wet grinding of lime and Zikki powder by heavy stone mill / chakki/garat), application shall be done in 2 layers, first base layer shall be of 2 to 3 MM thick, second layer shall be of not more than 2 mm and should be done with a gap of minimum 7 days of previous layer and not more than 12 days from previous layer. Lime shall be slaked minimum for 60 days in separate tanks, with repeated process of sieving with muslin cloth and changing water every 2 to 3 days. Only Fat Lime / non-hydraulic shall be used and should be free of any impurities. Preparation of kara (mortar) shall be done in small batches. Final layer of Kara shall be cured and traditional process of rubbing & polishing shall be done by expert craftsman till desired finish is not achieved on the surface. Post application, Surface shall be free from any kind of hairline cracks, undulations, patchy finish. Finished surface shall be free from any powder / chalk on the surface. Item also includes all lead and lift, establishing work yard / chakki, scaffolding, formwork tools and implements etc.

Note:

1) Before application of the Kara, base lime plaster shall be free from any cracks, bulge or undulations. Lime plaster shall be well cured and should be 60 days old.

2) Inspection of finished Kara surface shall be done after 1 month of application.

3) Item shall be measured for surface of application in Square Meters.

3) <u>TREATMENT AROUND THE ROOTS OF VEGETATION</u>
SCOPE:

The work covered under this specification includes opening up of all layers in plan and elevation, excavation /removal of the earth, cutting and removal of the trees with its roots and applying & pouring in the plinth, for stopping the growth of trees in earth or structure.

GENERAL:

The treatment shall be provided under the supervision of experienced traditional craftsmen and only the traditional materials should be used.

MATERIALS:

Lime :- Lime A, B and C Class shall be used and shall be in confirmation with the lime specifications and as suggested by traditional craftsmen.

TREATMENT:

Opening up of all layers in plan, elevation and excavation shall be done around the trees up to the depth till roots are found. Excavation shall be done in plan areas up to the roots wherever the growth is seen. Cutting and removal of all roots from earth and ensure that no roots remain in the earth. Engineer shall inspect this. Hot Tar shall be applied to the cut ends of the roots, which are not removable, and Hot lime slurry shall be poured around the roots. This work has to be executed under strict supervision of traditional craftsmen.

Refilling shall be done by using earth in layers of 200mm. thickness with compaction in pits. After refilling hot lime slurry shall be poured on the top surface.

MEASUREMENT& PAYMENT:

Measurement shall be done in Sq.M. for the plan in case of growth or elevation in case of building surface area as applicable and excavated or opened for the treatment only. The excavation shall be paid separately.

The depth should not be considered for payment purpose thus the payment cannot be made in cubic meters.

4) SPECIFICATION FOR SEALANT

The sealants of approved grade and color shall only be used. The silicone for perimeter joints (between Aluminum section and RCC/Stone masonry) shall be of make approved by the Engineer in Charge.

METHOD OF APPLICATION

Surface Preparation: Clean all joints and glazing pockets by removing all foreign matter and contaminants such as grease, oil, dust, water, frost, surface dirt, old sealants or glazing compounds and protective coatings.

Masking: Areas adjacent to joints shall be masked to ensure neat sealant lines. Masking tape shall not be allowed to touch clean surfaces to which the silicone sealant is to adhere. Tooling shall be completed in one continuous stroke immediately after sealant application and before a skin forms and masking shall be removed immediately after tooling.

Application: Install backer rod of appropriate size and apply silicone sealant in a continuous operation using a positive pressure adequate to properly fill and seal the joint. The silicone sealant shall be tooled with light pressure to spread the sealant against backing material and the joint surfaces before a skin forms. A tool with convex profile shall be used to keep the sealant within the joint. Soap or water shall not be used as a tooling aid. Remove masking tape as soon as silicone joint is tooled.

Tolerance: A tolerance of + 3 mm shall be allowed in the width of silicone joints. The depth of the joints at throat shall not be less than 6 mm.

5) SPECIFICATION FOR PANELLED GLAZED OR PANELLED AND GLAZED SHUTTERS

Paneled or glazed shutters for doors, windows, ventilators and cupboards shall be constructed in the form of timber frame work of stiles and rails with panel inserts of timber, plywood, block board, veneered particle board, fibre board wire gauze or sheet glass. The shutters may be single or multipaneled, as shown in the drawings or as directed by the Engineer-in-Charge. Timber for frame work, material for panel inserts and thickness of shutters shall be as specified. All members of the shutters shall be straight without any warp or bow and shall have smooth well planed face at right angles to each other. Any warp or bow shall not exceed 1.5 mm. The right angle for the shutter shall be checked by measuring the diagonals and the difference between the two diagonals should not be more than ± 3 mm.

Frame Work

Timber for stiles and rails shall be of the same species and shall be sawn in the directions of grains. Sawing shall be truly straight and square. The timber shall be planed smooth and accurate to the required dimensions. The stiles and rails shall be joined to each other by plain or haunched mortise and tenon joints and the rails shall be inserted 25 mm short of the width of the stiles. The bottom rails shall have double tenon joints and for other rails single tenon joints shall be provided. The lock rails of door shutter shall have its centre line at a height of 800 mm from the bottom of the shutters unless otherwise specified. The thickness of each tenon shall be approximately one-third the finished thickness of the members and the width of each tenon shall not exceed three times its thickness.

Gluing of Joints : The contact surfaces of tenon and mortise shall be treated, before putting together, with bulk type synthetic resin adhesive conforming to IS 851 suitable for construction in wood or synthetic resin adhesive (Phenolic and aminoplastic) conforming to IS 848 or polyvinyl acetate dispersion based adhesive conforming to IS 4835 and pinned with10 mm dia hardwood dowels or bamboopins or star shaped metal pins; after the frames are put together and pressed in position by means of press.

Stiles and bottom rail shall be made out of one piece of timber only. Intermediate rail exceeding 200 mm in width may be out of one or more pieces of timber. The width of each piece shall be not less than 75 mm. Where more than one piece of timber is used for rails, they shall be joined with a continuous tongued and grooved joint glued together and reinforced with metal dowels at regular intervals not exceeding 200 mm.

Rebating

The shutters shall be single-leaf or double leaved as shown in the drawings or as directed by the Engineer-in-Charge. In case of double leaved shutters, the meeting of the stiles shall be rebated by one-third the thickness of the shutter.

Paneling

The panel inserts shall be either framed into the grooves or housed in the rebate of stiles and rails. Timber, plywood, hard board and particle board panels shall be fixed only with grooves. The depth of the groove shall be 12 mm and its width shall accommodate the panel inserts such that the faces are closely fitted to the sides of the groove. Panel inserts shall be framed into the grooves of stiles and rails to the full depth of the groove leaving on space of 1.5 mm. Width and depth of the rebate shall be equal to half the thickness of stiles and rails. Glass panels, asbestos panels wire gauze panels and panel inserts of cupboard shutters shall be housed in the rebates of stiles and rails.

Stained glass panel :

Cobalt blue /Vaseline /fluorescent yellow/rubby gold/ cranberry glass/red glass/Egyptian blue /emerald green ,umber brown joinery with lead. Thickness not less than 6 mm .

Glass panelling (Glazing) shall be done with float sheet glass as per IS 14900. Glazing in the shutters of doors, windows and ventilators of bath, WC and Lavatories shall be provided with frosted glass the weight of which shall be not less than 10 kg/sqm. Frosted glass panes shall be fixed with frosted face on the inside. Glass panels shall be fixed by providing a thin layer of putty conforming to IS 419 applied between glass pane and all along the length of the rebate and also between glass panes and wooden beading.

Measurements:

Framework and panelling shall be measured separately.

Frame Work of Shutters :

The overall length and width of the framework of the shutters shall be measured nearest to a cm in fixed position (overlaps not to be measured in case of double leaved shutters) and the area calculated in square metres correct to two places of decimeter. No deduction shall be made to form panel openings or louvers. No extra payments shall be made for shape, joints and labour involved in all operations described above.

For panelling of each type or for glazed panel length and width of opening for panels inserts or glazed panels shall be measured correct to a cm before fixing the beading and the area shall be calculated to the nearest 0.01 sq.m. The portions of the panel inserts or glazed panel inside the grooves or rebates shall not be measured for payment.

Rate

Rate includes the cost of materials and labour involved in all the operations described above. The frame work and panelling of each type or glazed panels shall be paid separately. The rate for frame work includes the cost of butt hinges and necessary screws, However, extra shall be paid for providing moulded beading where specified.

6) SPECIFICATION FOR WOOD

TEAK WOOD FRAME

Teak wood frame shall generally conform to standard laid in I.S. 1002 or the latest revision for requirements of materials, construction workmanship and shall be of specified thickness and of 1st class C.P. teak wood of approved design with stiles, top, bottom and lock rail generally as per drawing. Wherever shown, each panel shall be in a single width piece, but when two or more pieces have to be used and are permitted, all of them shall be of equal width and shall be jointed with a tongue and groove joint with chamfered edges glued together and reinforced with metal dowels. panel shall be in a single width piece, but when two or more pieces have to be used and are permitted, all of them shall be of equal width and shall be jointed with a tongue and groove joint with chamfered edges glued together and reinforced with metal dowel.

Hardware Fittings

All hardware fittings for doors shall be either oxidized iron, brass, anodized aluminum as specified in the schedule of quantities. These hardware fittings shall be obtained from approved manufacturers and shall bear ISI mark wherever available. The samples for the fittings shall be submitted to the Employer for their approval. Hardware fittings for door shutters shall be paid in door shutter item or separately as given in schedule of quantities. No separate payment shall be made for hardware fittings if not mentioned otherwise in the schedule of quantities. The rate for hardware fittings shall include for supplying, fitting and fixing the fittings with necessary cadmium plated screws, washer's bolts, nuts etc. as required. All locks shall be provided with keys in duplicate/triplicate and rate shall include for the same. Approved samples of hardware fittings shall be deposited with Employer for reference.

Workmanship

a) The workmanship shall be first class and to the approval of the Employer. Scantlings and board shall be accurately sawn and shall be of required width and thickness. All carpenter's work shall be wrought except where otherwise described. The workmanship and joinery shall be accurately set out in strict conformity according to the drawings and shall be framed together and securely fixed in approved manner and with properly made joints. All work is to be properly tanned shouldered, wedged, pinned, braced etc. and properly glued with approved quality glue to the satisfaction of the Employer.

b) Screws: Unless otherwise specified all screws to be used in woodwork and joinery shall be of cadmium plated and of approved quality. The size (diameter and length) should conform to those specified in hardware schedule.

c) Tolerance: l.5 mm (l/l6") will be allowed for each wrought face of sizes specified except where described as finished in which case they shall hold to the full dimensions.

d) Protection: All edges of timber frames etc. shall be protected from being damaged during construction by providing rough timber casing securely fixed and other adequate protective measures.
e) frames/shelf shall have cut rebate. Planted rebates shall not be permitted.
f) Where frames are fixed flush with plaster to wall, teak wood cover mould 40 x l2 mm as per drawings shall be provided all round and shall be painted or polish finished to match with finished shutters. This will be paid as a separate item as described in Schedule of Quantities.

Rates to Include

Apart from other factors mentioned elsewhere in this contract the rate for item of wood work and joinery shall include for the following:-

A. Items of Scantling
i) All labor, materials and equipment's for fixing frame work as per drawing including the cost of holdfasts, raw plugs, or other fasteners etc.

B. Items of display case
i) All labor, materials, hardware fittings and equipment's for carrying out the work as per drawing.
ii) Labor for fixing display case in position (including/excluding the cost of fittings as specified in the BOQ) as per drawing.

Mode of Measurement

All measurements shall be as per relevant section of I.S. l200 of latest edition.

i) Scantling shall be measured in cum. The sectional area shall be the area of the least square, or rectangles from which the scantling may be cut. The length shall be actual length of timber required for the purposes including the extra portion required for jointing.

ii) Shutter shall be measured in square meter for closed door shutters area i.e. rebate to rebate without extra measurement for rebates and/or splayed meeting styles of door.

iii) Partitions, encasing shall be measured in square meter of the finished work. For full height partition no payment shall be made for additional frame work extended up to ceiling for rigidity of the same.

iv) Display cases /frames /display box shall be measure in one unit including the complete finishing and fixing of individual unit

LIST OF MATERIALS OF APPROVED BRAND AND/OR MANUFACTURER

Description	Name of Manufacturer as below or as approved by EIC
Glazing:	M/s. Saint Gobain M/s. Asai Glass M/s. Modi Guard M/s. Hindusthan Pilkington
Castors:	M/s. Efficient Gadgets, M/s. EPCO or equivalent
Locks & Fittings:	M/s. Godrej M/s. EPCo M/s. Hafele M/s. Hettich M/s. B & R Brass Collection
Aluminum Hardware	M/s. Allen, M/s. Metaco, M/s. Crown or equivalent with ISI mark.
Brass Hardware:	M/s. Brass Arts (India) Pvt Ltd./ M/s. Vijay Industrial Eng Corp.
Screws:	M/s. Nettle Fold, M/s. GKW or equivalent approved quality.

Note:

1. If the approved brands mentioned above are not available, equivalent make as may be approved by the Employer only to be used for the work.

2. The Employer shall have the final say about which material amongst the above mentioned shall be used in the project and the contractor shall have no claims on this account.

7) LIME SAND PLASTER (FOR UNDERCOATES AND EXCLUDING ITS USE ON FLOOR)

SCOPE:

The work covered by this specification shall be in furnishing and installation of lime plaster finish over walls, ceiling etc. For all plaster works, double scaffolding having two sets of vertical supports shall be provided, so that scaffolding is independent of walls. For ceiling scaffolding, in stages where required shall be done. Preferably, steel tubular scaffolding confirming to I.S. 2750 and carried out in accordance with I.S. 4014, shall be used.

SURFACE PREPARATION:

Surfaces to be plastered shall be thoroughly cleaned of all dust, grease, oil and loose mortar. Efflorescence if any shall be removed by brushing and scraping and then applying few drops of hydrochloric acid added to water for 2 to 3 days. The entire surface shall then be thoroughly washed with brush and clean water.

Joints shall be raked out to depth of 20mm. minimum with a hook tool made for the purpose. Care should be taken not to damage masonry edges while raking. All surfaces of concrete, old plaster and stone shall be roughened sufficiently for bond. Soft or crumbling stonework and other surfaces shall be dismantled and remade if required. All surfaces to be plastered shall be thoroughly wetted for 24 hours before commencing plaster and shall be kept damp during the progress of work. At the same time the wall should not be too wet, as plaster is then likely to fall out and will

not be satisfactory. It is essential to maintain uniform suction of water by receiving surfaces, which shall be ensured by damping evenly all dry patches before applying plaster. The Engineer will inspect all preparatory work and plastering shall not be commenced, until the Engineer approves all preparatory works.

MATERIALS:

Lime: - Lime B class shall be used in the preparation of mortar and shall, conform to lime specification 3.3.

Aggregates: - Any of the following or their mixture in the given proportion shall be used.

Sand: - Sand should be angular to sub angular moderately sorted aggregate of nominal size of 150um to 1.18mm. River sand shall not be used.

Gur/ Sugarcane molasses: - 'Lapti' gur, without impurities, is to be added in the specified proportion.

Gugal/Bel: - 'Bhainsa' googal / Bel without impurities, is to be added in the specified proportion.

Methi :- Methi water to be prepared over a period of 3 days by keeping the methi soaked in water and hand-abraded on every day basis. The resultant liquid concoction should be filtered to make it ready for use.

Water : - For all mortars water used shall be free from mud, clay, acidic, basic or organic impurities and shall be drinkable.

APPLICATION & CURING:

The first coat shall be done for saresi. Saresi is a lime plaster as specified in specification should be in ratio 1:1 (lime: Sand). The saresi shall be applied to the wall with trowel in thickness 5 to 8mm. The saresi surface shall be raked out, immediately after applying saresi when it is wet, by trowel at distances 30mm. to 45mm. in jig jag pattern. The saresi shall be done for complete area under execution and should be left for 2-3 days.

Now the surface shall be thoroughly wetted for 24 hours before applying Sand plaster. Ceiling plaster shall be completed before commencement of wall plaster. The Lime Sand plaster in ratio 1:1 (lime: sand) for wall shall be done from the top to bottom and if possible each wall should be done on the same day if to avoid defects or unevenness at the joints. To ensure even thickness and a true surface, about 150mm. x 150mm. of Lime Sand plaster shall first be applied horizontally and vertically at 2m. centres approximately, over the entire surfaces, to serve as gauges.

The lime sand mortar shall be filled between two gauges with a straight edge wooden piece (plainer or butkada). The plastered surface shall be firmly pressed to uniform plumb and plane. The surface shall be left for 24 hours. The surface shall develop cracks after 24 hours.

The surface shall be hammered at the cracks with the help of wet wooden sticks (jaal / bent wood) made for the purpose. The process should continue till the cracks are removed. The surface shall be left for 7 days and shall be cured.

All corners, angles, junctions, etc. shall be truly vertical, horizontal or carved as the case may be and shall be carefully finished. Rounding or chamfering of corners or junctions wherever required shall be done without any extra payment. No portion shall be left out initially to be patched up later on. Before applying Lime Sand, loi the entire surface of the Lime Sand plaster should be rechecked with a true straight edge (wooden or aluminium plainer 2.5m long), plumb, string, level, etc.

If any crack appears on surfaces or if any portion found soft or if sound defective due to less lime, improper curing or any other reason, the relevant portion shall be removed and redone as per the instruction of the Engineer.

The surface is thoroughly wetted before applying loi. Now the Lime Sand loi shall be apply in thickness 2mm. (ratio 1:2) is applied with the plainer. The surface shall be smoothened by rubbing and pressing.

The total thickness of the lime Lime Sand plaster, inclusive of all three coats could be from 15MM to 40 mm as required at site.

MEASUREMENT & PAYMENT:

The measurement shall be in Sq.M. as per drawings and BOQ. Opening shall be deducted in full and jambs or soffits shall be considered. The rate shall include jambs, curves at the junctions of walls, ceilings, arches etc. and at all corner. The above procedure shall apply to the both faces of the wall. No extra charge shall be paid for drip moulds, tapkas or grooves areas. If the average thickness of the plaster done by the Contractor is more than the specified one then no extra payment shall be made.

8) LIME PLASTER (FINISHING COATS)

SCOPE:

This specification covers lime-sand and lime surkhi plasters and lays down requirements for mortar for plaster and specified method of application of the different coats and mode of measurement & payment for lime plaster.

MATERIALS:

Mortar For Plaster: Unless otherwise specified in the Bill of Quantities, lime mortar mixes shall be as per specification and shall be prepared as per specification of lime mortar. The mortar, which has set or hardened before being used shall be rejected and immediately, removed from site.

TWO/THREE COAT PLASTER:

Application of Rendering Coat: In this case the rendering coat shall be a combination of the rendering floating coat of the "Three coat Plaster"' and done under one continuous operation

except that the scratching of the rendering coat as specified for three coat plaster work above shall not be done here and the total thickness shall be 12 mm.

Application of Floating or Second Coat:

The rendering coat shall be cleaned of all dirt, dust and other loose mortar droppings and lightly wetted. Patches 15 x 15 cm. or strips 10 cm. wide shall be applied at suitable spacing to act as gauges. Then the mortar shall be thrown with mason's trowel spread and rubbed to the required plain surface with wooden float. The surface obtained shall be dead true in all directions.

In case of lime and plasters the finishing coat shall generally be applied immediately as given below.

In case of lime-surkhi plasters the floating coat shall be allowed to slightly set and then lightly beaten crises cross with float's edge at close spacing for about 4 cm. This shall be cured to set completely for a minimum period of 10 days and then allowed to dry out completely.

Application of finishing coat with: Immediately after the floating coat has been applied the finishing coat consisting of the cream of lime shall be applied with steel trowels rubbed and finished smooth. The rubbing should be continued till it is quite dry.

It shall be cured for at least 7 days, curing should be started only after 24 hours.

Loi : -The surface shall be cleaned of all dirt, dust and any mortar droppings etc. It shall be fully wetted and then the finishing coat shall be applied with suitable trowels rubbed hard and finished smooth.

Jhiki – Marble powder

Water proofing Jhiki plaster 5-8 mm thick to be done instead of Loi on the two coats of lime surkhi plaster, Lime is slaked with curd and gur in proportion – (50 Kg Lime: 2 Kg Curd: ½ Kg Gur) for 15 days with changing of water everyday. After 15 days, one part of this lime putty is mixed with 2 parts of Jhiki and manually grounded on stone. The process is repeated two to three times with interval of one day between the process. The obtained mixture is now ready for use on the prepared surface. The surface is prepared by cleaning it removing all dust and then receives a coat of solution of sugar and water. The Jhiki plaster is normally done in three coats with interval of one day between coats. Before applying fresh coat the surface is given a rub using masons wooden hand held tool locally called 'batkara'.

No curing shall be done after the finishing coat has been applied.

MEASUREMENT & PAYMENT:

The measurement shall be in Sq.M. as per Standard specifications.

9) RED OR WHITE FINE DRESSED SAND STONE FLOORING

Stone Slabs

The slabs shall be red or white as specified in the description of the item. The stone slabs shall be hard, sound, durable and tough, free from cracks, decay and weathering. In case of red sand

stone, white patches or streaks shall not be allowed. However, scattered spots upto 10 mm diameter will be permitted. Before starting the work the contractor shall get samples of slabs approved by the Engineer-in-Charge.

The slabs shall be hand or machine cut to the requisite thickness along planes parallel to the natural bed of stone and should be of uniform size if required.

Dressing of Slabs

Every slab shall be cut to the required size and shape and chisel dressed on all sides to a minimum depth of 20 mm. The top and the joints shall be fine tooled so that straight edge laid along the face is fully in contact with it. In case machine cut stonesare used, chisel dressing and fine tooling of machine cut surface need not be done provided a straight edge laid anywhere along the machine cut surface is in contact with every point on it. The thickness of the slabs after dressing shall be 40 mm or as specified in the description of item with a permissible tolerance of ± 2 mm.

Laying

Base concrete on which the slabs are to be laid shall be cleaned, wetted and mopped. The bedding for the slabs shall be with cement mortar 1:5 (1 cement : 5 coarse sand) or as given in the description of the item.

The average thickness of the bedding mortar under the slabs shall be 20 mm and the thickness at any place under the slabs shall not be less than 12 mm.

The slab shall be laid in the following manner: Mortar of specified mix shall be spreaded under each slab. The slab shall be washed clean before laying. It shall then be laid on top, pressed and larried, so that all hollows underneath get filled and surplus mortar works up through the joints. The top shall be tapped with a wooden mallet and brought to level and close to the adjoining slabs, with thickness of joint not exceeding 5 mm. Subsequent slabs shall be laid in the same manner. After laying each slab surplus mortar on the surface of slabs shall be cleaned off and joints finished flush.

In case pointing with other mortar mix is specified, the joint shall be left raked out uniformly and to a depth of not less than 12 mm when the mortar is still green. The pointing shall be cured for a minimum period of 7 days. The surface of the flooring as laid shall be true to levels and slopes as instructed by the Engineer-in-Charge.

Slabs which are fixed in the floor adjoining the wall shall enter not less than 12 mm under the plaster, skirting or dado. The junction between wall plaster skirting and floor shall be finished neatly and without waviness.

The finished floor shall not sound hollow when tapped with wooden mallet.

Finishing

In case of chisel dressed stone flooring slight unevenness, if any existing between the edges of slabs at joints shall then be removed by chiselling in a slant.

Measurements

These shall be as specified in para 11.19.5.

Rate

The rate shall include the cost of all materials and labour involved in all the operations described above. Where pointing is to be done, this will be paid extra unless specifically included in the description of the item.

10) <u>MARBLE FLOORING :-</u>

3.0.GENERAL:

Marble shall be hard, sound, dense and homogeneous in texture with crystalline texture as far as possible. It shall generally be uniform in color and free from stains, cracks, decay and weathering.

3.0.1 Marbles are metamorphic rocks capable of taking polish, formed from the re-crystallization of lime stones or dolomitic lime stones and are distinguished from lime stone by even visibly crystalined nature and nonflaggy stratification.

Note : Marble is a product of nature hence it is difficult to guarantee uniformity of colour, veining or other characteristics that may be represented in any sample submitted. A sample will indicate only an average of colour, veining and other general texture and specified finish.

3.1 CLASSIFICATION:

The marble blocks, slabs and tiles shall be classified broadly in the following two categories:

3.1.1 White Marble Raj Nagar (plain white) Marble/ Makrana / Makrana Dhobi Doongr

It shall be plain white marble with coarse grains predominantly showing mica particles giving reflection in light.

Makrana Dhobi Doongri Marble: Greyish marble with white flowery pattern available at Dhobi Doongri.

3.1.2 Granite Stone

It shall be of any colour and size as directed by Engineer-in-Charge. Granite shall be plain machine cut and mirror polished. The stone shall be smooth and of even surface without holes or pits.

3.2 SIZES AND TOLERANCES

The Thickness of marble is 18 mm and size, pattern of marble tiles as per design provided by Employer.

3.3.1 Approval of Sample

Before starting the work, the contractor shall get samples of marble approved by the Engineer-in-Charge. Approved samples shall be kept in the custody of the Engineer-in-Charge and the

marble supplied and used on the work shall conform to samples with regard to soundness, color, veining and general texture.

3.4 MARBLE WORK - TABLE RUBBED AND POLISHED (PLAIN WORK)

Marble work in steps, jambs, columns and other plain work shall be as specified below:

Joints in staircase treads, kitchen platforms shall be permitted only at curvature or when width/length is more than 0.6/2 mtrs. respectively. Number of joints in each direction shall not be more than one number for every 2 mtrs. length beyond the initial 2.00 m length. Additional joints due to curvature or for providing fixture shall be provide judiciously.

3.5.1 Dressing, Cutting and Rubbing

Every marble stone shall be gang saw/machine cut to the required size and shape, chisel dressed machine finished on all beds and joints, so as to be free from any waviness and to give truly vertical, horizontal, radial or circular joints as required. The exposed faces and sides of stones forming joints upto 6mm. from the face shall be fine tooled machine cut such that a straight edge laid along the face of the stone is in contact with every point on it. All window sills, tread of steps, counters vanities moulding edges etc. shall be machine cut & polished to give high gloss mirror finish as per direction of Engineer-in-Charge. These surfaces shall then be rubbed smooth.

3.5.2 Mortar

The mortar used for jointing shall be as specified.

3.5.3 Laying

All marble stones shall be wetted before placing in position. These shall then be floated on mortar and bedded properly in position with wooden mallets without the use of chips or under pinning of any sort.

The walls and pillars shall be carried up truly in plumb or battered as shown in the drawings. All courses shall be laid truly horizontal and all vertical joints shall be truly vertical.

In case of work without backing of brick work or coursed rubble masonry, face stone shall be laid in headers and stretchers alternatively unless otherwise directed. The headers shall be arranged to come as nearly as possible in the middle of stretchers above and below. Stone shall be laid in regular courses of not less than 15 cm in height and all courses shall be of the same height unless otherwise specified.

3.5.4 Joints

The depth of joints 6 mm from the face shall be uniform and as fine as possible but shall be not more than 1.5 mm thick on the exposed face. Beyond the depth of 6 mm from face, the thickness of joints shall increase in an inverted V shape so as to give good mortar bond between two stones. The inverted portion of the joints shall be filled with bedding mortar and the face 6 mm portion with pointing mortar.

3.5.6 Curing

The work shall be kept constantly moist on all faces for a period of atleast seven days.

3.5.7 Finishing

After the marble work is cured, it shall be rubbed with carborandum stone of different grades no. 60, 120 and 320 in succession or with electrical rubbing machines rubbed with carborandum items 0 to 6 nos.in succession, so as to give a plane true and highly smooth surface. It shall then be cleaned with a solution of oxalic acid, washed and finished clean.

3.5.8 Protection

Green work shall be protected from rain by suitable coverings. The work shall also be suitably protected from damage during construction.

3.5.9 Measurements

For plain work: Measurements shall be taken correct to a cm in length and breadth and correct to 0.5 cm in thickness.

11) TECHNICAL SPECIFICATIONS FOR ELECTRICAL WORK

Specifications/ standards applicable to this work shall be Indian Standard Specifications, Indian Electricity Act. National Electrical Code, Indian Electricity Rules and Punjab. PWD specifications, unless otherwise specified in the description of item, given in the Bill of Quantitiesor in the special conditions and/or Technical Specifications, Requirements of these specifications shall be fulfilled by the contractor within the tendered rates. Item rates quoted shall be deemed to have taken these specifications, fire insurance regulations and SEB requirements into account. Sales tax, tax return over and any other tax levies by any authority and or any other statutory requirements.

NOTES:

1. Employer reserves the right to have any or all random samples of materials checked / tested by an approved test house. Contractor will bear all such test fees and other liaison works.

2. Wherever switchgears, DB etc., of specific ratings are not manufactured by the manufacturer next available higher size appropriately fused shall be used within the rated quoted.

3. Materials shall be brought to site in original packing. Manufacturing test certificates and or/ invoice for all materials shall be handed over to the site engineer on demand.

4. All materials specified in these specifications and conditions of contract must conform to the above brand name, and be of First quality, ISI marked wherever available and Department (Electricity), Punjab approved. Fabricated items shall be manufactured in accordance with the ISI specification and be first quality. Samples of all materials to be used must be submitted and got approved before procurement, and the Employer reserves the right to select any of the Brand named specified herein for use.

12) TECHNICAL SPECIFICATIONS FOR PLUMBING WORK

1. The Bill of Quantities shall be read in conjunction with the Technical Specification and Drawings supplied by the Consultant. In case of any discrepancy between Schedule of Quantities, Technical Specification and Drawings, during execution period, the decision of the Employer will be final and the Contractor has to do the works as per the instruction of Engineer in Charge without any extra cost.

2. The quantities given in the Bill of Quantities are estimated and are given to provide a common basis for bidding. The quoted rates shall not vary if the actual quantities arrived as per working drawings differ from that of the tender quantities. The basis of payment will be the actual quantities of work carried out as per the final specifications and drawings issued for execution and as measured by the Contractor and Engineer jointly. The method of measurement of completed work for payment shall, unless said otherwise, be in accordance with the joint measurement carried out by the Contractor and Engineer and the decision of Engineer in Charge will be final and the Contractor will be liable to accept the decision.

3. Unless otherwise mentioned, the Contractor shall consider all work items on supply, installation, balancing, testing and commissioning of equipment & accessories.

4. All civil works such as groove cutting in wall and floor and finishing of all grooves, making opening in wall /floor and making good etc. shall form part of item rates quoted against each item in the Bill of Quantities and shall not be measured separately. Only Sanitary & Plumbing works which have been specifically indicated in the Bill of Quantities shall be paid for at an agreed cost.

GENERAL REQUIREMENTS:

The installation shall be carried out in conformity with the requirements of relevant bye-laws of Municipal and other Authorities in whose jurisdiction; the work is being carried out and also with specification laid down by Indian Standards in this codes and National Building Code of Practice - No. SP: 7 - 1983 (Part IX) plumbing services. & SP: – 35: 1987

i) All water supply, drainage and sanitary work shall be executed by a Licensed Plumbing Contractor and shall be in accordance with the requirement of relevant bye-laws of Municipal or other Authorities in whose jurisdiction the work is being carried out.
ii) The diameter of pipes and fittings wherever mentioned shall mean the internal diameter, unless otherwise specified.
iii) The job shall include the cost of making necessary chases, holes etc. in walls, floors and in other places and also making good on completion of the work. The contractor shall make good, to the satisfaction of Employer in case of any damage caused to floors during sanitary and plumbing works.
iv) Careful Handling, fitting and fixing the sanitary fixtures, as per drawings/ specifications and instructions of authorities concerned and complete testing of necessary pipe connections, etc.

v) Fitting and fixing including jointing of uPVC Soil, waste pipes and fittings to be completed. Prior to fixing, all pipes and fittings are to be properly checked. After fixing of pipelines, the same are to be tested by water test to ensure the system is leak proof.
vi) Fitting & fixing of CPVC Pipe as per ASTM D 2846, SDR-11 for hot & cold-water supply (concealed work) with various fittings such as tee, elbow, reducer, union, valves, cocks, float valve etc. with Solvent Cement Joint as per ASTM D-2564 for cold fusion. On TECHNICAL SPECIFICATIONS 4 UECPL completion the pipelines are to be tested by Hydraulic Pressure Testing Machine to ensure that the system is absolutely leak proof.
vii) Fitting & fixing of PVC pipe (lead free) as per ASTM D-1785, schedule 40 for ring main, vertical distribution & fittings such as tee, elbow, reducer, union, coupling, male/female adapter, end cap, valves, cocks, float valve etc. with solvent cement solution as per ASTM D-2564. On completion, the pipelines are to be tested by Hydraulic Pressure Testing Machine to ensure that the system is absolutely leak proof
viii) Fitting, fixing & jointing of rain water pipe shall be laid over the M.S clamp (if required) with plastic clamps of suitable designs. Provision shall be made for movement in the suspended pipe caused due to thermal differences such that it does not grip or disturb the pipe at supports between the nut-bolts. The supports shall allow the repeated movements to take place without abrasion. Jointing of uPVC pipes shall be made by means of solvent cement for horizontal lines & "O" rubber ring for vertical line
ix) Provide all tools and equipment's including testing machines required for testing and supporting & fixing devices so as to install the sanitary fittings, pipe lines etc. securely in position.

13) TECHNICAL SPECIFICATIONS FOR FIRE FIGHTING WORK

General Requirements

2.1 All materials shall be of the best quality conforming to the specifications and subject To the approval of the employer.

2.2 Pipes and fittings shall be fixed truly vertical, horizontal or in slopes as required in A neat workman like manner.

2.3 Pipes shall be fixed in a manner as to provide easy accessibility for repair and Maintenance and shall not cause obstruction in shafts, passages, etc .

2.4 Pipes shall be securely fixed to walls and ceilings by suitable clamps at intervals Specified. Only approved type of anchor fasteners shall be used for RCC ceilings and walls.

2.5 Valves and other appurtenances shall be so located that they are easily accessible for Operations, repairs and maintenance.

Pipes and fittings For Internal work:

a) All pipes within the building in exposed locations and shafts including connections Buried under floor shall be ERW mild steel tubes conforming to IS:1239 (Heavy Class) with screwed or welded joints as specified by the engineer in charge .

b) Fittings of 50 mm or below shall be forged steel with socket weld ends of approved Makes .For 65 mm and above shall be W.I./ M.S with butt weld ends .

4. Jointing (See clause 12.0 of General Technical Specifications)

5. Excavation Excavations for pipe line shall be in open trenches to levels and grades shown on the Drawings or as required at site . Pipe lines shall be buried to a minimum depth of 1 to 1.5 meter or as shown on the drawings. Wherever required contractor shall support all trenches or adjoining structures with Adequate supports to prevent landslides. On completion of testing and painting, trenches shall be refilled with excavated earth in 15 Cm layers and compacted. Contractor shall dispose off all surplus earth within the SBCH site .

6. Anchor Blocks Contractor shall provide suitable cement concrete anchor blocks as may be necessary for Overcoming pressure trusts in underground / external pipes . Anchor blocks shall be of cement concrete 1:2:4 mix .

7. Valves Butterfly valves 65 mm dia and above shall be cast iron double flanged with lever type .Butterfly valves shall confirm to and marked IS : 13095-1991 780 Class PN- 1.6 tested to 20 kg./sq.cm . Valves on MS pipe 50 mm and below shall be heavy pattern gun –metal gate valves (with Cast iron wheel)/ Ball Valve with lever type tested to 20 kg /sq .cm pressure . Valves shall conform to and marked IS:778. Check valves shall be cast iron double flanged conforming to IS 5312-1975 with cast iron Steel body and stainless steel internal trims . 8. Internal Hydrants

8.1 Contractor shall provide on each landing and other locations as shown on the drawings one Signal headed gunmetal landing valve with 63 m dia outlets and 80 mm inlet (I.S 5290-1969) with individual shut off valves and cast iron wheels . Landing valves shall have flanged inlet and instantaneous type outlet as shown on the drawings/BOQ .

8.2 Instantaneous outlets for fire hydrants shall be of standard pattern approved and suitable for Fire brigade hoses. Contractor shall provide for each internal fire hydrant station two numbers of 63 mm dia 15 meter long reinforced rubber lined hose pipes with gunmetal male and female instantaneous type coupling machine wound with G.I wire (hose to IS 636 type A and couplings to I . S 903 with I.S certification), fire hose reel , gunmetal branch pipe with nozzle I.S 903 fireman's axe as shown on the drawings/BOQ .

8.3 Each hose box shall be, after thorough cleaning of surface, painted as per section 28 of General Technical Specifications. The words Fire House to be painted on the inner face of the glass.

9. Fire Aid Hose Reels

Contractor shall provide standard fire hose reels with 20 mm dia high pressure rubber hose of 36 meters length with gunmetal nozzle with 6 mm bore, and control valve, shut of nozzle connected wall mounted on circular hose reel of heavy duty mild steel construction and cast-iron

brackets. Hose reel shall conform to I.S 884 – 1969. The hose reel shall be connected directly to the MS pipe rise through an independent connection as shown on the drawings/BOQ.

10. Pressure Gauges a) All pressure gauges shall be of dial type with bourdon tube element of IS 316. The gauge Shall be of reputed make. The dial size shall be 150 mm dia and scale division shall be in metric units marked clearly in black on a white dial. The range of pressure gauge shall be 0 to 10 kg / sq .cm.

b) All pressure gauges shall be complete with isolation cock, nipples, tail pipes etc .

11. Pressure switches

a) The pressure switch shall be industrial type single pole double throw electric pressure Switch designed for starting or stopping of equipment when the pressure in the system drops or exceeds the pre- set limits. It shall comprise of a single pole change – over switch, below element assembly and differential spindle

. b) All the pressure switches shall have 1/4" B.S P (f) inlet connection and screwed cable Entry for fixing cable gland .

12. Fire Brigade Connection

13.1 The contractor shall provide as shown on drawing gunmetal Fourr way collecting head with 63 mm dia instantaneous type inlets with built in check valve of 100/150 mm dia. outlet connection to the fire main grid and for tank filling, collecting head shall conform to IS 904-1965.

13. Air Valves

13.1 The contractor shall provide 25 mm dia screwed inlet case iron single acting air valve on all high Points in the system or as shown on drawings

. 14 rain valves

14.1 The contractor shall provide 25 mm dia M.S pipe to IS : 1239 (heavy class) with brass gate Valve for draining any water in the system in low pockets as shown in drawings or as directed by the Employer .

15 Valve chambers

15.1 Contractor shall provide suitable brick masonry chambers in cement mortar 1:5 (1 cement: 5 coarse sand) on cement concrete foundations 150 mm thick 1: 5 : 10 mix (1 cement : 5 fine sand 10 graded stone aggregate 40 mm nominal size) 15 mm thick cement plaster inside and outside finished with a floating coat of neat cement inside with cast iron surface box approved by fire brigade including excavation , back filling , complete . 15.2 Valve chamber shall be of the following size : For depths 100 cm and beyond 120 x 120 cms 16 Jointing of pipes Pipes and fittings shall be joined with electrical resistance welding in approved manner .

16. Painting

16.1.1 All above grounded pipes, pipe fittings, hose cabinets structural steel work pipe supports etc. Shall be painted as per specifications given below.

16.2 Painting shall be done only after completion of fabrication work and testing.

16.3 The instructions of paint manufacture shall be followed as far as possible otherwise the work is to be done as directed by the Employer.

16.4 All cleaning materials, brushes, tools and tackles, painting, material etc . shall be arranged By the contractor at site in sufficient quantity.

16.5 All rust, dust shall scale, welding slag or any other foreign materials shall be removed fully So that a clean and dry surface is obtained prior to painting. Any other oily containment shall be removed by use of a solvent prior to surface cleaning.

16.6 First coat of primer paint must be applied by brush on dry clean surface immediately or in any Case within 3 hours of such cleaning.

16.7 Primer paint – one coat (minimum thickness 100 microns) self – priming epoxy mastic.

16.8. Finishing coats:

a) For production areas – 2 coats (thickness minimum 50 microns each) of epoxy paint, fire Red shade as per IS code.

b) For other than production areas – 2 coats of synthetic enamel paint , fire red shade as per IS:5.

17. Coating wrapping for underground pipes

17.1 All underground piping shall be protected by coating and wrapping as per the following Procedure. 17.2 The materials and workmanship shall in general confirm to IS:10221 or as directed by the Employer. Pipe Protection (See clause 28.0 & 29.0 on 'Painting' and 'Coating / Wrapping' under General Technical Specifications)

18. Pipe Supports

18.1 All Pipes shall be adequately supported from ceiling or walls by means of anchor fasteners by drilling holes with electrical drill in an approved manner as recommended by manufacturer of the fasteners.

18.2 All supports / clamps fabricated from MS Structural e.g . Roads, channels, angles and flats shall be painted as described in specifications for "painting" under General Technical Specifications.

18.3 Where inserts are not provided the contractor shall provide anchor fasteners. Anchor Fasteners shall be fixed to walls and ceilings by drilling holes with electrical drill in an approved manner as recommended by the manufacturer of the fasteners.

19 .Testing

19.1 All piping in the system shall be tested to a hydrostatic pressure of 11.0 kg / sq .m without Drop in pressure for at least 2 hours. 18.2 Rectify all leakages, make adjustments and reset as required and directed.

LIST OF APPROVED MAKES OF MATERIALS FOR FIRE PROTECTION WORKS

Note: The tenderer shall quote his rates on the basis of price of brand/ make stipulated in the item of works as described in BOQ specification and furnished in technical data. The tenderer shall consider the first make of material from the list of Approved make while quoting tender.

Measurement

Mild steel pipes shall be measured per liner meter of the finished length along the centre line and shall include all fittings (including flanges), welding, jointing, clamps for fixing to walls or hangers, anchor fastener and testing. Butterfly valves, check valves and full way valves shall be measured by number and shall Include all items necessary and required for fixing and as given in the specifications / schedule of quantities. Landing valves, hose cabinets, reinforced rubber lined fire hose pipes , first aid fire hose reels (with gunmetal full way valves) and gunmetal branch pipes shall be measured by numbers and shall include all items necessary and required for fixing as given in the specifications / Bill of Quantities. Suction and delivery headers shall be measured per linear meter or finished length and shall Include all items as given in the schedule of quantities. Painting / wrapping / coating of headers, pipes shall be included in the rate for pipes and no Separate payment shall be made. Brick masonry chambers shall be measured by number and shall include all items as given in the Bill of Quantitiesspecifications. No additional payment shall be admissible for cutting holes or chases in walls or floors, making connections to Pipe, inlet, equipment and appliances.

Annexure F
(See clause 3 of Section 2-ITB)

Procedure for participation in e-Tendering

1. **Registration of Bidders on e-Tendering System**
   All the PWD registered bidders already registered on the new e-procurement portal https://www,mpeproc.gov.inThe user id will be the contractor ID provided to them from MP Online. The password for the new portal as communicated to the bidders registered email ID. For more details, may contact M/s Tata consultancy Services Corporate Block, 5th floor, DB city Bhopal-462011, email id: eproc_helpdesk@mpsdc.gov.in. Helpdesk phone numbers are available on website.
2. **Digital Certificate:**
   The bids submitted online should be signed electronically with a class III Digital Certificate to establish the identity of the bidder submitting the bid online. The bidders may obtain class III Certificate issued by an approved certifying Authority authorized by the controller of certifying Authorities, government of India. A class III digital Certificate is issued upon receipt of the required proofs along with an application. Only upon the receipt of the required documents, a digital certificate can be issued. For details please visit cca.gov.in.

   Note:

   i. It may take up to 7 working days for issuance of class III digital certificate; hence the bidders are advised to obtain the certificate at the earliest. Those bidders who already have valid class III digital certificate need not obtain another Digital Certificate for the same. The bidders may obtain more information and the APPLICATION FORM REQUIRED TO BE SUBMITTED FOR THE ISSUANCE OF DIGITAL CERTIFICATE FROM cca.gov.in.
   ii. Bids can be submitted till bid submission end date. Bidder will require digital signature while bid submission. The digital certificate issued to the authorized user of a partnership firm/Private limited company/ Public Limited Company and user for online bidding will be considered as equivalent to a no-objection certificate/power of attorney to that user.
   In case of Partnership firm, majority of the partners have to authorize a specific individual through authority letter signed by majority of partners of the firm.

   In case of Private Limited company, Public Limited Company, the Managing Director has to authorize a specific individual through Authority Letter. Unless the certificate is revoked, it will be assumed to represent adequate authority of the specific individual to bid on behalf of the organization for online bids as per Information Technology Act 2000. This Authorized User will be required to obtain a digital certificate. The Digital Signature executed through the use of the responsibility of Management/Partners of the concerned firm to inform the Certifying Authority, if the authorized user changes, and apply for a fresh Digital Certificate for the new Authorized user.

3. Set Up of Bidder's Computer System:

In order for a bidder to operate on the e-tendering System, the Computer system of the bidder is required to be set up for Operating System, Internet Connectivity, Utilities, Fonts, etc. The details are available at https://www.mpeproc.gov.in

4. Key Dates:

The bidders are strictly advised to follow the time schedule (Key dates) of the bid of their side for tasks and responsibilities to participate in the bid, as all the stages of each bid are locked before the tart time and date and after the end time and date for the relevant stage if the bid as set by the Department.

5. Preparation and Submission of Bids

The bidders have to prepare their online, encrypt their bid data in the Bid forms and submit Bid of all the envelopes and documents related to the Bid required to be uploaded as per the time schedule mentioned in the key dates of the notice inviting e-Tenders after singing of the same by the Digital Signature of their authorized representatives.

6. Purchase of Bid Document

For purchasing of the bid document bidders have to pay Service Charge online only which is Rs. [as per Bid Data Sheet]. Cost of Bid document is separately mentioned in the detailed NIT. The Bid Document shall be available for purchase to concerned eligible bidders immediately after online release of the bids and up to scheduled time and date as set in the key dates. The payment for the cost of bid document shall be made online through Debit/Credit card. Net banking or NeFT Challan through the payment gateway provided on the portal.

7. Withdrawal, Substitution and Modification of Bids

Bidder can withdraw and modify the bid submission end date.

Note:

- Bidders are requested to visit our e-tendering website regularly for any clarifications and/or due date extension or corrigendum.
- Bidder must positively complete online e-tendering procedure at www.mpeproc.gov.in
- ISCDL shall not be responsible in any way for delay/ difficulties/ inaccessibility of the downloading facility from the website for any reason whatsoever.
- In case, due date for submission & opening of tender happens to be a holiday, the due date shall be shifted to the next working day for which no prior intimation will be given.
    - ISCDL reserves the right for extension of due date of opening of technical bid.

Annexure G

(See clause 4 of Section 2-ITB)

JOINT VENTURE (J.V.)

Not Applicable.

Annexure H

(See clause 12 of Section 2 ITB & clause 4 of GCC)

ORGANIZATIONAL DETAILS

(To be enclosed with technical proposal)

S.N.	Particulars	Details
1.	Registration No. issued by centralized registration system of Govt. of MP or proof of application for registration	(If applicable, scanned copy of proof of application for registration to be uploaded)
2.	Valid registration of Bidder in appropriate class through centralized registration of Govt. of MP Registration no……. date…….	(Scanned copy of Registration to be uploaded)
3.	Name of Organization/ Individual	
4.	Entity of Organization Individual/Proprietary Firm/Partnership Firm (Registered under Partnership Act)/ Limited Company (Registered under the Companies Act–1956)/ Corporation	
5.	Address of Communication	
6.	Telephone Number with STD Code	
7.	Fax Number with STD Code	
8.	Mobile Number	
9.	E-mail Address for all communications	
	Details of Authorized Representative	
10.	Name	
11.	Designation	
12.	Postal Address	
13.	Telephone Number with STD Code	
14.	Fax Number with STD Code	
15.	Mobile Number	
16.	E-mail Address	

Note: *In case of partnership firm and limited company certified copy of partnership deed/ Articles of Association and Memorandum of Association along with registration certificate of the company shall have to be enclosed.*

Signature of Bidder with Seal

Date:

Annexure I

(See clause 14 of Section 2 of ITB)

Envelope – B, Technical Proposal

Technical Proposal shall comprise the following documents:

S.N.	Particulars to be submitted	Format
1.	Financial and Physical Experience	(Format: I - 1)
2.	Annual Turnover	(Format: I - 2)
3.	List of Technical Personnel for the Key Positions	(Format: I - 3)
4.	List of Key equipment/ machine/s quality control labs	(Format: I - 4)
5.	List of Key equipment/ Machines for Construction Work.	(Format: I – 5)

Note:

1. Technical Proposal should be uploaded duly page numbered and indexed.
2. Technical Proposal should be uploaded otherwise will not be considered

Annexure I (Format: I-1)

(See clause 14 of Section 2 of ITB

FINANCIAL & PHYSICAL EXPERIENCE DETAILS

Bidders to furnish details of minimum requirement for Scope of Work.

Annexure I (Format: I-2)

(See clause 14 of Section 2 of ITB

ANNUAL TURN OVER

Requirements:

Average annual construction turnover for the construction works to be provided in the following format for the last 3 financial years;

Financial Information			
Financial Year	2014-15	2015-16	2016-17
Annual Turnover (in INR Crore)			
AVERAGE ANNUAL TURNOVER			

Note:

i. *Annual turnover of construction works should be certified by chartered accountant.*
ii. *Mandatory Supporting Documents:*
    a. *Audited balance sheet including all related notes and income statements for the above financial years to be enclosed.*
iii. *Should have positive net- worth.*

Annexure I (Format: I-3)

(See clause 14 of Section 2 of ITB)

LIST OF TECHNICAL PERSONNEL FOR THE KEY POSITIONS

Contractor will have to appoint the following key personnel during the execution and entire contract period.

S.N.	Discipline	Minimum Qualification	Required nos.
1	Project Manager	Degree/ Diploma in Civil Engineering having minimum 5 years (7 years for Diploma holder) of relevant experience in the field of heritage conservation and restoration.	One
2	Site Supervisor	Degree/ Diploma in Civil Engineering having minimum 3 years (5 years for Diploma holder) of relevant experience in the field of heritage conservation and restoration.	One
3	Craftsman	Domain Experts with requisite ability to follow the designs and drawings to execute the work, ability to manage complex situations and to effectively coordinate the work – minimum 5 years' experience	
A	Craftsman 1	Expertise: WOODEN structures	One
B	Craftsman 2	Expertise: STONE Structures	One
C	Craftsman 3	Expertise: CIVIL works (Lime Concrete, lime plaster and lime kara)	One

Penalty for Non-deployment of above staff are as follows:

S.N.	Discipline	Penalty to be computed on Per Day basis
1	Project Manager	Rs. 50,000/- P.M
2	Site Supervisor	Rs. 35,000/- P.M
3	Craftsman	
A	Craftsman 1	Rs. 25,000/- P.M
B	Craftsman 2	Rs. 25,000/- P.M
C	Craftsman 3	Rs. 25,000/- P.M

Annexure I (Format: I-4)

(See clause 14 of Section 2 of ITB)

LIST OF KEY EQUIPMENT/ MACHINES FOR QUALITY CONTROL LABS

Annexure I (Format: I-5)

(See clause 14 of Section 2 of ITB)

LIST OF EQUIPMENTS / MACHINES FOR CONSTRUCTION WORK

Minimum requirement			Available with the bidder	
S.N.	Details of Equipment/ Machinery	Quantity	Details of Equipment/ Machinery	Quantity
1.	Traditional Chakki with heavy stone wheel	1		
2.	Water Tanker (1000 ltr)	2		
3.	Pressure Grouting Machine	2		
4.	H Frame Scaffolding (Metal Cup-lock System)	300 Sqm		
5.	Winch machine/ material lift	2		
6.	Pressure Water Jets	2		
7.	Lime mixing equipment	2		
8.	Spray machine for polish work on wood	2		
9.	Hand equipment for ornamental work on wood/ stone/lime plaster	6 Sets		
10.	Machine for sand blasting with pressure control	1		
11.	CNC/ wood carving machines / land equipment for decorative wood work.	1		

Annexure J

(See clause 14 of Section 2 of ITB)

FINANCIAL BID

(To be filled Online Only and not to be submitted in Hard Copy or Envelope C)

NAME OF WORK: _____

(Name of the work as appearing in the bid for the work)

I/We do hereby BID to execution of the above work within the time specified at the rate (In figures) _____ (In words) _____ percent below / above or at par based on the Bill of Quantities and item wise rates given therein in all respects and in accordance with the specifications, designs, drawings and instructions in writing in all respects in accordance with such conditions so far as applicable.

I/We have visited the site of work and am/are fully aware of all the difficulties and conditions likely to affect carrying out the work. I/We have fully acquainted myself/ourselves about the conditions in regard to accessibility of site and quarries/ kilns, nature and the extent of ground, working conditions including stacking of materials, installation of tools and plant conditions effecting accommodation and movement of labour etc. required for the satisfactory execution of contract.

Should this bid be accepted, I/We hereby agree to abide by and fulfill all the terms and provisions of the said conditions of contract annexed hereto so far as applicable, or in default thereof to forfeit and pay to the Executive Director, Indore Smart City Development Limited, Indore or his successors in office the sums of money mentioned in the said conditions.

Note:

1. *Only one rate of percentage above or below or at par based on the Bill of Quantities and item wise rates given therein shall be quoted.*
2. *Percentage shall be quoted in figures as well as in words. If any difference in figures and words is found lower of the two shall be taken as valid and correct rate. If the bidder is not ready to accept such valid and correct rate and declines to furnish performance security and sign the agreement his earnest money deposit shall be forfeited.*
3. *In case the percentage "above" or "below" is not given by a bidder, his bid shall be treated as non-responsive.*
4. *All duties, taxes, and other levies payable by the bidder shall be included in the percentage quoted by the bidder.*

Signature of Bidder

Name of Bidder

Annexure K

(See clause 15 of Section 2 of ITB)

MATERIALS TO BE ISSUED BY THE DEPARTMENT

S.No	Name of material	Rate (Issue rate)	Unit	Remarks
				

Annexure L
(See clause 21 of Section 2 of ITB)

No. _____ Dated: _____

LETTER OF ACCEPTANCE (LOA)

M/s. _____

(Name and address of the contractor)

Subject: _____
(Name of the work as appearing in the bid for the work)

Dear Sir (s),

Your bid for the work mentioned above has been accepted on behalf of the (Name of ULB), at your bided offer as per scope of work given therein. You are requested to submit within 15 (Fifteen) days from the date of issue of this letter:

a. The performance security/ performance guarantee of Rs. _____ (in figures) Rupees_____ (in words only). The performance security shall be in the shape of term deposit receipt/ bank guarantee of any nationalized / schedule commercial bank.

b. Sign the contract agreement.

Please note that the time allowed for carrying out the work as entered in the bid is _____ months including/excluding rainy season, shall be reckoned from the date of signing the contract agreement.

Signing the contract agreement shall be reckoned as intimation to commencement of work and no separate letter for commencement of work is required. Therefore, after signing of the agreement, you are directed to contact Engineer-in-charge for taking the possession of site and necessary instructions to start the work.

Yours faithfully,

EXECUTIVE ENGINEER

Annexure M
(See clause 22 of Section 2 of ITB)

PERFORMANCE SECURITY

To
_____ [Name of Employer]
_____
_____ [Address of Employer]
_____

WHEREAS_____ [name and Address of Contractor] (Hereinafter called "the **Contractor**") has undertaken, in pursuance of Letter of Acceptance No._____ Dated _____to execute_____ [Name of Contract and brief description of works] (herein after called "the **Contract**").

AND WHEREAS it has been stipulated by you in the said Contract that the contractor shall furnish you with a Bank Guarantee by a recognized bank for the sum specified therein as security for compliance with his obligation in accordance with the contract;

AND WHREREAS we have agreed to give the Contractor such a Bank Guarantee:

NOW THEREFORE we hereby affirm that we are the Guarantor and responsible to you on behalf of the Contractor, up to a total of _____ [amount of Guarantee]*_____ (in words), such sum being payable in the types and proportions of currencies in which the contract price is payable, and we undertake to pay you, upon your first written demand and without cavil or argument, any sum or sums within the limits of_____ [amount of Guarantee] as aforesaid without your needing to prove or to show grounds or reasons for your demand for the sum specified therein.

We hereby waive the necessity of your demanding the said debt from the contractor before presenting us with the demand.

We further agree that no change or addition to or other modification of the terms of the Contract of the Works to be performed there under or of any of the Contract documents which may be made between you and the Contractor shall in any way release us from any liability under this Guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall be valid till issue of physical completion certificate.

Signature, Name and Seal of the Guarantor_____

Name of Bank _____
Address _____
Phone No., Fax No., E-mail Address, of Signing

Authority_____

Date_____

** An amount shall be inserted by the Guarantor, representing the percentage the Contract Price specified in the Contract including additional security for unbalanced Bids, if any and denominated in Indian Rupees.*

SECTION 3
Conditions of Contract

Part – I General Conditions of Contract [GCC]

Table of Clauses of GCC

A. General

1. DEFINITIONS

1.1 "**Bill of Quantities**" means the priced and completed Bill of Quantities forming part of the Bid.

1.2 "Chief Executive Officer" means the executive officer as defined under the relevant section of the article of association;

1.3 "Completion "means completion of the work as certified by the Engineer-in-Charge, in accordance with provisions of agreement.

1.4 "Contract" means the Contract between the Employer and the Contractor to execute, complete and/or maintain the work. Agreement is synonym of Contract and carries the same meaning wherever used.

1.5 "Contract Data Sheet" means the documents and other information which comprise of the Contract.

1.6 "Contractor "means a person or legal entity whose bid to carry out the work has been accepted by the Employer.

1.7 "Contractor's bid" means the completed bid document submitted by the Contractor to the Employer.

1.8 "Contract amount" means the amount of contract worked out on the basis of accepted bid.

1.9 "Completion of work" means completion of the entire contracted work. Exhaustion of quantity of any particular item mentioned in the bid document shall not imply completion of work or any component thereof.

1.10 "Day" means the calendar day.

1.11 "Defect" means any part of the work not completed in accordance with the specifications included in the contract.

1.12 "Drawings" means drawings including calculations and other information provided or approved by the Engineer-in-Charge.

1.13 "Department" means Indore Smart City Development Limited, Indore as the case may be.

1.14 "Employer" means the party as defined in the Contract Data, who employs the Contractor to carry out the work. The employer may delegate any or all functions to a person or body nominated by him for specified functions. The word Employer/Government/Department wherever used denote the Employer.

1.15 "Engineer" means the person named in contract data sheet.

1.16 "Engineer in charge" means the person named in the contract data.

1.17 "Equipment" means the Contractor's machinery and vehicles brought temporarily to the Site for execution of work.

1.18 "Executive Director" means the executive director of the Board as appointed under the provision of the article of association;

1.19 "Government" means Government of Madhya Pradesh.

1.20 "In Writing" means communicated in written form and delivered against receipt.

1.21 "Material "means all supplies including consumables used by the Contractor for incorporation in the work.

1.22 "Stipulated date of completion" means the date on which the Contractor is required to complete the work. The stipulated date is specified in the Contract Data.

1.23 "Specification" means the specification of the work included in the Contract and any modification or addition made or approved by the Engineer-in-Charge.

1.24 "Start Date "means the date 14 days after the signing of agreement for the work. However, the employer may extend this time limit by another 14 days, as and when required.

1.25 "Sub-Contractor" means a person or corporate body who has a Contract (duly authorized by the employer) with the Contractor to carry out a part of the construction work under the Contract.

1.26 "Temporary Work" means work designed, constructed, installed, and removed by the Contractor that are needed for construction or installation of the work.

1.27 "Tender/ Bid, Tenderer/ Bidder" are the synonyms and carry the same meaning where ever used.

1.28 "Variation "means any change in the work which is instructed or approved as variation under this contract.

1.29 "Work" the expression **"work" or "works"** where used in these conditions shall unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the work by virtue of contract, contracted to be executed, whether temporary or permanent and whether original, altered, substituted or additional.

2. INTERPRETATIONS AND DOCUMENTS

2.1 Interpretations: In the contract, except where the context requires otherwise:

a. words indicating one gender include all genders;

b. words indicating the singular also include the plural and vice versa.

c. provisions including the word "agree", "agreed" or "agreement" require the agreement to be recorded in writing;

d. written" or "in writing" means hand-written, type-written, printed or electronically made, and resulting in a permanent record;

2.2 Documents Forming Part of Contract:

1. NIT with all amendments.
2. Instructions to Bidders
3. Conditions of Contract:
    i. Part I General Conditions of Contract and Contract Data; with all Annexures
    ii. Part II Special Conditions of Contract.
4. Specifications
5. Drawings
6. Bill of Quantities
7. Technical and Financial Bid
8. Agreement
9. Any other document (s), as specified.

3. Language and Law

The language of the Contract and the law governing the Contract are stated in the Contract Data.

4. Communications

All certificates, notice or instruction to be given to the Contractor by Employer/Engineer shall be sent on the address or contact details given by the Contractor in [Annexure H of ITB]. The address and contract details for communication with the Employer/Engineer shall be as per the details given in Contract Data Sheet. Communication between parties that are referred to in the conditions shall be in writing. The notice sent by facsimile (fax) or other electronic means (email) shall also be effective on confirmation of the transmission. The notice sent by registered post or speed post shall be effective on delivery or at the expiry of the normal delivery period as undertaken by the postal service. In case of any change in address for communication, the same shall be immediately notified to Engineer-in-Charge

5. Subcontracting

Subcontracting shall be permitted for contracts value more than amount specified in the Contract Data with following conditions.

a. The Contractor may subcontract up to 25 percent of the contract price, only with and after the approval of the Employer in writing, but will not assign the Contract. Subcontracting shall not alter the Contractor's obligations.

b. The following shall not form part of the sub-contracting:

i. hiring of labour through a labour contractor,

ii. hiring of plant & machinery

c. The sub-contractor will have to be registered in the appropriate category in the centralized registration system for contractors of the GoMP.

6. Personnel

6.1 The Contractor shall employ for the construction work and routine maintenance the technical personnel as provided in the Annexure I-3 of Bid Data sheet, if applicable. If the Contractor fails to deploy required number of technical staff, recovery as specified in the Contract Data will be made from the Contractor.

6.2 If the Engineer asks the Contractor to remove a person who is a member of the Contractor's staff or work force, stating the reasons, the Contractor shall ensure that the person leaves the Site within three days and has no further connection with the Works in the Contract.

7. Force Majeure

7.1 The term "Force Majeure" means an exceptional event or circumstance:

a) Which is beyond a party’s control,

b) Which such party could not reasonably have provided against before entering into the contract,

c) Which, having arisen, such party could not reasonably have avoided or overcome, and

d) Which is not substantially attributed to the other Party

Force Majeure may include, but is not limited to, exceptional events or circumstances of the kind listed below, so long as conditions (a) to (d) above are satisfied:

(i) War, hostilities (whether war be declared or not), invasion, act of foreign enemies),

(ii) Rebellion, terrorism, sabotage by persons other than the contractor's Personnel, revolution, insurrection, military or usurped power, or civil war,

(iii) Riot, commotion, disorder, strike or lockout by persons other than the Contractor's Personnel,

(iv) Munitions of war, explosive materials, ionizing radiation or contamination by radio activity, except ass may be attributed to the Contractor's use of such munitions, explosives, radiation or radio activity, and

(v) Natural catastrophes such as earthquake, hurricane, typhoon or volcanic activity,

7.2 In the event of either party being rendered unable by force majeure to perform any duty or discharge any responsibility arising out of the contract, the relative obligation of the party affected by such force majeure shall upon notification to the other party be suspended for the period during which force majeure event lasts. The cost and loss sustained by either party shall be borne by respective parties.

7.3 For the period of extension granted to the Contractor due to Force Majeure the price adjustment clause shall apply but the penalty clause shall not apply. It is clarified that this sub clause shall not give eligibility for price adjustment to contracts which are otherwise not subject to the benefit of Price adjustment clause.

7.4 The time for performance of the relative obligation suspended by the force majeure shall stand extended by the period for which such cause lasts. Should the delay caused by force majeure exceed twelve months, the parties to the contract shall be at liberty to foreclose the contract after holding mutual discussions.

8. Contractor's Risks

8.1 All risks of loss of or damage to physical property and of personal injury and death which arise during and in consequence of the performance of the Contract are the responsibility of the Contractor.

8.2 All risks and consequences arising from the inaccuracies or falseness of the documents and/or information submitted by the contractor shall be the responsibility of the Contractor alone, notwithstanding the fact that designs/drawings or other documents have been approved by the department.

9. Liability for Accidents to Person

The contractor shall be deemed to have indemnified and saved harmless the Government and/or the employer, against all action, suits, claims, demands, costs etc. arising in connection with injuries suffered by any persons employed by the contractor or his subcontractor for the works whether under the General law or under workman's compensation Act, or any other statute in force at the time of dealing with the question of the liability of employees for the injuries suffered by employees and to have taken steps properly to ensure against any claim there under.

10. Contractor to Construct the Works

10.1 The Contractor shall construct, install and maintain the Works in accordance with the Specifications and Drawings as specified in the Contract Data

10.2 In the case of any class of work for which there is no such specification as is mentioned in contract Data, such work shall be carried out in accordance with the instructions and requirement of the Engineer-in-charge.

10.3 The contractor shall supply and take upon himself the entire responsibility of the sufficiency of the scaffolding, timbering, Machinery, tools, implements and generally of all means used for the fulfillment of this contract whether such means may or may not approved of or recommended by the Engineer.

11. Discoveries

Anything of historical or other interest or of significant value unexpectedly discovered on the Site shall be the property of the Employer. The Contractor shall notify the Engineer of such discoveries and carry out the Engineer's instructions for dealing with them.

12. Dispute Resolution System

12.1 No dispute can be raised except before the Competent Authority as defined in Contract data in writing giving full description and grounds of Dispute. It is clarified that merely recording protest while accepting measurement and/or payment shall not be taken as raising a dispute.

12.2 No issue of dispute can be raised after 45 days of its occurrence. Any dispute raised after expiry of 45 days of its first occurrence shall not be entertained and the Employer shall not be liable for claims arising out of such disputes.

12.3 The Competent Authority shall decide the matter within 45 days.

12.4 Appeal against the order of the Competent Authority can be preferred within 30 days to the Appellate Authority as defined in the Contract data. The Appellate Authority shall decide the dispute within 45 days.

12.5 Appeal against the order of the Appellate Authority can be preferred before the Madhya Pradesh Arbitration Tribunal constituted under Madhya Pradesh Madhyastham Adhikaran Adhiniyam, 1983.

12.6 The contractor shall have to continue execution of the works with due diligence notwithstanding pendency of a dispute before any authority or forum.

B. Time Control

13. Programme

13.1 Within the time stated in the Contract Data, the Contractor shall submit to the Engineer for approval a Programme showing the general methods, arrangements, order, and timing for all the activities in the Works for the construction of works.

13.2 The program shall be supported with all the details regarding key personnel, equipment and machinery proposed to be deployed on the works for its execution. The contractor shall submit the list of equipment and machinery being brought to site, the list of key personnel being deployed, the list of machinery/equipment being placed in field laboratory and the location of field laboratory along with the Programme

13.3 An update of the Programme shall be a Programme showing the actual progress achieved on each activity and the effect of the progress achieved on the timing of the remaining Works, including any changes to the sequence of the activities.

13.4 The Contractor shall submit to the Engineer for approval an updated Programme at intervals no longer than the period stated in the Contract Data. If the Contractor does not submit an updated Programme within this period, the Engineer may withhold the amount stated in the Contract Data from the next payment certificate and continue to withhold this amount until the next payment after the date on which the overdue Programme has been submitted.

13.5 The Engineer's approval of the Programme shall not alter the Contractor's obligations

14. Extension of Time

14.1 If the Contractor desires an extension of time for completion of the work on the ground of his having been unavoidably hindered in its execution or on any other grounds, he shall apply, in writing, to the Engineer-in-charge, on account of which he desires such extension. Engineer-in-charge shall forward the aforesaid application to the competent authority as prescribed.

14.2 The competent authority shall grant such extension at each such occasion within a period of 30 days of receipt of application from contractor and shall not wait for finality of work. Such extensions shall be granted in accordance with provisions under clause- 15 of this agreement.

14.3 In case of the work already in progress, the contractor shall proceed with the execution of the works, including maintenance thereof, pending receipt of the decision of the competent authority as aforesaid with all due diligence.

15. Compensation for delay

15.1 The time allowed for carrying out the work, as entered in the agreement, shall be strictly observed by the Contractor.

15.2 The time allowed for execution of the contract shall commence from the date of signing of the agreement. It is clarified that the need for issue of work order is dispensed with.

15.3 In the event milestones are laid down in the Contract Data for execution of the works, the contractor shall have to ensure strict adherence to the same.

15.4 Failure of the Contractor to adhere to the timelines and/or milestones shall attract such liquidated damages as is laid down in the Contract Data

15.5 In the event of delay in execution of the works as per the timelines mentioned in the contract data the Engineer-in- charge shall retain from the bills of the Contractor Amount equal to the liquidated damages leavyable until the contractor makes such delays good. However, the Engineer-in-charge shall accept bankable security in lieu of retaining such amount.

15.6 If the contractor is given extension of time after liquidated damages have been paid, the engineer in charge shall correct any over payment of liquidated damages by the Contractor in the next payment certificate.

15.7 In the event the contractor fails to make good the delay until completion of the stipulated contract period (including extension of time) the sum so retained shall be adjusted against liquidated damages levied.

16. **Contractor's quoted percentage**

The contractor’s quoted percentage rate referred to in the "Bid for works" will be deducted/ added from/to the net amount of the bill after deducting the cost of material supplied by the department.

C. Quality Control

17. Tests

17.1 The Contractor shall be responsible for:

a. Carrying out the tests prescribed in specifications, and

b. For the correctness of the test results, whether preformed in his laboratory or elsewhere.

17.2 The contractor shall have to establish field laboratory within the time specified and having such equipments as are specified in the Contract Data.

17.3 Failure of the contractor to establish laboratory shall attract such penalty as is specified in the Contract Data.

17.4 Ten percent of the mandatory tests prescribed under the specifications shall be got carried out through Laboratories accredited by National Accreditation Board of Laboratories (NABL) by the Engineer-In –Charge and the cost of the such testing shall be deducted from the payments due to Contractor.

18. Correction of Defects noticed during the Defect Liability Period

18.1 The defect liability period of work in the contract shall be the Contract Data

18.2 The Contractor shall promptly rectify all defects pointed out by the Engineer well before the end of the Defect Liability Period. The Defect Liability Period shall automatically stand extended until the defect is rectified.

18.3 If the Contractor has not corrected a Defect pertaining to the Defect Liability Period to the satisfaction of the Engineer, within the time specified by the Engineer, the Engineer will assess the cost of having the Defect corrected, and the cost of correction of the Defect shall be recovered from the Performance Security or any amount due or that may become due to the contractor and other available securities.

D. Cost Control

19. Variations - Change in original Specifications, Designs, Drawings etc.

19.1 The Engineer in charge shall have power to make any alterations, omissions or additions to or substitutions for the original specifications, drawings, designs and instructions, that may appear to him to be necessary during the progress of the work and the contractor shall carry out the work in accordance with any instructions which may be given to him in writing signed by the Employer, and such alterations, omission, additions or substitutions shall not invalidate the contract and any altered, additional or substituted work, which the contractor may be directed to do in the manner above specified, as part of the work, shall be carried out by the contractor on the same conditions in all respects on which he agree to do the main work.

19.2 The time for the completion of the work shall be extended in the proportion that the altered, additional or substituted work bears to the original contract work and the certificate of the Engineer in charge shall be conclusive as to such proportion.

20. Extra items

20.1 All such items which are not in the priced BOQ shall be treated as extra items.

21. Payments for Variations and/ or Extra Quantities

21.1 The rates for the additional (Extra Quantities), altered or substituted work/ extra items under this clause shall be worked out in accordance with the following provisions in their respective order: -

a. The contractor is bound to carry out the additional (Extra quantity), work at the same rates as are specified in the contract for the work.
b. If the item is not in the priced BOQ and is included in the SOR of the department, the rate shall be arrived at by applying the quoted tender percentage on the SOR rate.
c. If the rates of the altered or substituted work are not provided in applicable SOR-such rates will be derived from the rates for a similar class (type) of work as is provided in the contract (priced BOQ) for the work.

d. If the rates are for the altered, substituted work cannot be determined in the manner specified in the sub clause (c) above-then the rates for such composite work item shall be worked out on the basis of the concerned schedule of rates minus/plus the percentage quoted by the contractor.

e. If the rates of a particular part or parts of the item is not in the schedule of rates and the rates for the altered, or substituted work item cannot be determined in the manner specified in sub clause (b) to (d) above, the rate for such part or parts will be determined by the Competent Authority as defined in the Contract data on the basis of the rate analysis derived out of prevailing market rates when the work was done.

f. But under no circumstances, the contractor shall suspend the work on the plea of non-acceptability of rates on items falling under sub clause (a) to (d). In case the contractor does not accept the rate approved by Engineer in charge for a particular item, the contractor shall continue to carry out the item at the rates determined by the Competent Authority. The decision on the final rates payable shall be arrived at through the dispute settlement procedure.

22. No compensation for alterations in or restriction of work to be carried out.

22.1 If at any time after the commencement of the work, the Government, for any reason whatsoever, not require the whole or any part of the work as specified in the bid to be carried out, the Engineer in charge shall give notice in writing of the fact to the Contractor and withdraw that whole or any part of the work.

22.2 The Contractor shall have no claim to any payments or compensation whatsoever, on account of any profit or advantage which he might have derived from the execution of work in full or on account of any loss incurred for idle men and machinery due to any alteration or restriction of work for whatsoever reason.

22.3 The Engineer in charge may supplement the work by engaging another agency to execute such portion of the work, without prejudice to his rights.

23. No Interest Payable

No interest shall be payable to the Contractor on any payment due or awarded by any authority.

24. Recovery from Contractors

Whenever any claim against the Contractor for the payment arises under the contract, the Department shall be entitled to recover such sum by:

a) Appropriating, in part or whole of the Performance Security and additional Performance Security, if any; and/or Security deposit and/or any sums payable under the contract to the contractor.

b) If the amount recovered in accordance with (a) above is not sufficient, the balance sum may be recovered from any payment due to the contractor under any other contractor of the department, including the securities which become due for release.

c) The department shall, further have an additional right to effect recoveries as arrears of land revenue under the M.P. Land revenue Code.

25. Tax

25.1 The rates quoted by the Contractor shall be deemed to be inclusive of the sales and other levies, duties, cess, toll, taxes of Central and State Governments, local bodies and authorities. But the rates shall be excluding excise duty exemption on pipes as per Norms

25.2 The liability, if any, on account of quarry fees, royalties, octroi and any other taxes and duties in respect of materials actually consumed on public work, shall be borne by the Contractor. Any Changes in the taxes due to change in legislation or for any other reason shall not be payable to the contractor.

26. Check Measurements

26.1 The department reserves to itself the right to prescribe a scale of check measurement of work in general or specific scale for specific works or by other special orders.

26.2 Checking of measurement by superior officer shall supersede measurements by subordinate officer(s), and the former will become the basis of the payment.

26.3 Any over/excess payments detected, as a result of such check measurement or otherwise at any stage up to the date of completion of the defect liability period specified in this contract, shall be recoverable from the Contractor, as per clause 24 above.

27. Termination by Engineer in Charge

27.1 If the contractor fails to carry out any obligation under the Contract, the Engineer in charge may by notice require the Contractor to make good the failure and to remedy it within a specified reasonable time.

27.2 The Engineer in charge shall be entitled to terminate the contract if the Contractor

a. Abandons the works or otherwise plainly demonstrates the intention not to continue performance of his obligations under the contract;
b. the Contractor is declared as bankrupt or goes into liquidation other than for approved reconstruction or amalgamation;
c. without reasonable excuse fails to comply with the notice to correct a particular defect within a reasonable period of time;
d. the Contractor does not maintain a valid instrument of financial Security, as prescribed;
e. the Contractor has delayed the completion of the Works by such duration for which the maximum amount of liquidated damages is recoverable;
f. If the Contractor fails to deploy machinery and equipment or personnel or set up a field laboratory as specified in the Contract Data.
g. if the Contractor, in judgmental of the engineer in charge has engaged in corrupt or fraudulent practices in competing for or in executing the contract;
h. Any other fundamental breaches as specified in the Contract Data.

27.3 In any of these events or circumstances, the engineer in charge may, upon giving 14 days' notice to the contractor, terminate the contract and expel the Contractor from the site. However, in the case of sub paragraph (b) or (g) of clause 27.2, the Engineer in charge may terminate the contract immediately.

27.4 Notwithstanding the above, the Engineer in charge may terminate the contract for convenience by giving notice to the contractor.

28. Payment upon Termination

28.1 If the contract is terminated under clause 27.3, the Engineer shall issue a certificate for value of the work accepted on final measurements, less advance payments and penalty as indicated in the Contract Data. The amount so arrived at shall be determined by the Engineer-in-charge and shall be final and binding on both the parties.

28.2 Payment on termination under clause 27.4 above, the Engineer shall issue a certificate for the value of the work done, the reasonable cost of removal of Equipment, repatriation of the contractor's personnel employed solely on the works, and the contractor's costs of protecting and securing the works and less advance payments received up to the date of the certificate, less other recoveries due in terms of the contract and less taxes due to be deducted at source as per applicable law.

28.3 If the total amount due to the Employer exceeds any payment due to the Contractor, the difference shall be recovered as per clause 24 above.

29. Performance Security

The Contractor shall have to submit performance security and additional performance security, if any, as specified in Bid data sheet at the time of signing of the contract. The contractor shall have to ensure that such performance security and Additional performance, if any, security remains valid for the period as specified in the Contract data.

30. Security Deposit

30.1 Security deposit shall be deducted from each running bill at the rate as specified in the contract data. The total amount of security deposit so deducted shall not exceed the percentage of contract price specified in the Contract data.

30.2 The Security may be replaced by equivalent amount of bank guarantee or fixed deposit receipt assigned to the Employer, with validity up to 3(three) months beyond the completion of defect Liability Period/ Extended Defect Liability Period.

30.3 The Security deposit shall be refunded on completion of defect liability period.

31. Price Adjustment

31.1 Applicability

1. Price adjustment shall be applicable only if provided for in the contract data.
   The price adjustment clause shall apply the works executed from the date of signing of the agreement until the end of the intended completion date or extensions granted for reasons attributed to the Employer. The contractor shall not be entitled any benefit arising from the price adjustment clause for extension in the contract period reasons attributed to the contractor. In the Force Majeure event price escalation clause shall apply.

31.2 Procedure

1. Contract price shall be adjusted for increase or decrease in rates and price of labour, materials, fuels and lubricants in accordance with following and as per formula given in the contract data.
2. The price adjustable shall be determined from the formula given in the contract data.
3. Following expression and meaning are assigned to done during each quarter:
   R= Total value of work during the quarter include the amount of secured advance granted, if any, during the secured advance recovered, if any during 3 the quarter, less value of

department, if any during the quarter. Weightages of various components they shall be as per the Contract Data.

31.3 To the extent that full compensation any rise or fall in costs to the contractor is not covered by the provisions of this or clauses in the contact, the unit rates and prices included in the contract shall be deemed amounts to cover the contingency of such other rise or fall in costs.

31.4 The index relevant to any quarter, for which such compensation is paid, shall be the arithmetical average of the indices relevant of the calendar month.

31.5 For the purpose of clarity it is pointed out that the adjustment may be either positive or negative, i.e. if the price adjustment is in favor the same shall be recovered from the sums payable to the Contractor.

32. Mobilization and Construction Machinery Advance

32.1 Payment of advances shall be applicable not more than 5% against the bank guarantee against 10% interest per annum for project mobilization.

32.2 If applicable, the Engineer bearing advance payment to the contractor of the against provision by the contractor of an unconditional Bank in nationalized/Scheduled banks, in the name as stated in the in the advance payment. The Guarantee shall remain effective been repaid, but the amount of the guarantee shall be progressively repaid by the contractor.

32.3 The rate of interest shall be as per Contract data.

32.4 The construction machinery advance, if applicable, shall be limited to 80% of the cost of new construction machinery.

32.5 The advance shall be recovered as stated in the Contract data by deducting proportionate amounts from payment otherwise due to the Contractor. No account shall be taken of the advance payment or its recovery in assessing valuations of work done, variations, price adjustments, compensation events, or liquidated damages.

33. Secured Advance

33.1 Payment of secured advance shall be applicable if provided in Contract data.

33.2 If applicable, the Engineer shall make advance materials intended for but not yet incorporated in the works and against of an unconditional bank guarantee in a form and by a nationalized/scheduled name as stated in the contract data, in amounts equal to the guarantee shall remain effective until the advance payment has been of the guarantee shall be progressively reduced by the amounts adjusted contractor.

33.3 The amount of secured advance and conditions to be fulfilled shall be as stipulated in the Contract Data.

33.4 The secured advance paid shall be recovered as stated in the Contract data.

34. Payment Certificates

The payment to the contractor will be as follows for construction work:

a. The contractor shall submit to the engineer monthly statement of the value of the work executed less the cumulative amount certified previously, supported with detailed measurement of the items of work executed.
b. The engineer shall check the Contractor's monthly statement and certify the amount to be paid to the contractor.

c. The value of work executed shall be determined, based on the measurements approved by the Engineer/ Engineer in charge.
d. The value of work executed shall comprise the value of the quantities of the items in the Bill of quantities completed.
e. The value of work executed shall also include the valuation of variations and compensation events.
f. All payments shall be adjusted for deductions for advance payment, security deposit, other recoveries in terms of contract and taxes at source as applicable under the law.
g. The Engineer may exclude any item certified in a previous certificate or reduce the proportion of any item previously certified in any certificate in the light of later information.
h. Payment of intermediate certificate shall be regarded as payments by way of advance against the final payment and not as payments for work actually done and completed.
i. Intermediate payment shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be removed and taken away and reconstructed or be considered as an admission of the due performance of the contractor any part thereof, in any respect or the occurring of any claim.
j. The payment of final bill shall be governed by the provisions of clause 36 of GCC.

E. Finishing the Contract

35. Completion Certificate

35.1 A completion certificate in the prescribed format in Contract data shall be issued by the Engineer in charge after physical completion of the work.

35.2 After final payment to the contractor, a final completion certificate in the prescribed format in the contract data shall be issued by the Engineer in charge.

36. Final Account

36.1 The Contractor shall supply the Engineer with a detailed account of the total amount that the Contractor considers payable for works under the Contract within 21 days of issue of certificate of physical completion of works. The Engineer shall issue a Defects Liability Certificate and certify any payment that is due to the Contractor within 45 days of receiving the Contractor's account if it is correct and complete. If the account is not correct or complete, the Engineer shall issue within 45 days a schedule that states the scope of the corrections or additions that are necessary. If the Account is still unsatisfactory after it has been resubmitted, the matter shall be referred to the competent authority as defined in the Contract data, who shall decide on the amount payable to the contractor after hearing the Contractor and the Engineer in Charge.

36.2 In case the account is not received within 21 days of issue of Certificate of Completion as provided in clause 32.1 above, the Engineer shall proceed to finalize the account and issue a payment certificate within 28 days. G. Other Conditions of Contract

F. Other Conditions of Contract

37. Currencies

All payments will be made in Indian Rupees.

38. Labour

38.1 The Contractor shall, unless otherwise provided in the Contract, make his own arrangements for the engagement of all staff and labour, local or other, and for their payment, housing, feeding and transport.

38.2 The Contractor shall, if required by the Engineer, deliver to the Engineer a return in detail, in such form and at such intervals as the Engineer may prescribe, showing the staff and the numbers of the several classes of labour from time to time employed by the Contractor on the Site and such other information as the Engineer may require.

39. COMPLIANCE WITH LABOUR REGULATIONS

39.1 During continuance of the Contract, the Contractor and his sub-Contractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of the State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. Salient features of some of the major labour laws that are applicable to construction industry are given in the Contract data. The Contractor shall keep the Employer indemnified in case any action is taken against the Employer by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/byelaws/Acts/Rules/ regulations including amendments, if any, on the part of the Contractor, the Engineer/Employer shall have the right to deduct any money due to the Contractor including his amount of performance security. The Employer/Engineer shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by the Employer. The employees of the Contractor and the Sub-Contractor in no case shall be treated as the employees of the Employer at any point of time.

40. Audit and Technical examination

Government shall have the right to cause an audit and technical examination of the works and the final bill of the contract including all supporting vouchers, abstract etc. To be made after payment of the final bill and if as a result of such audit and technical examination nay sum is found to have been overpaid in respect of any work done by the contractor under the contract or nay work claimed by him to have been done under the contract and found not to, have been executed, the contractor shall be liable to refund the amount of overpayment and it shall be lawful for government to recover the same from him in the manner prescribed in clause 24 above and if it is found that the contractor was paid less than what was due to him, under the contract in respect of any work executed by him under it, the amount of such under payment shall be duly paid by government to the Contractor.

41. Death or permanent invalidity of contractor

During continuance of the contract, the contractor and his sub- contractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications, and bye laws of the state or central government or local authority and any other labour law

(including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the state or the major labour laws that are applicable to construction industry are given in the contract data. The contractor shall keep the employer indemnified in case any action is taken against the employer by the competent authority on account of contravention of any of the provisions of any Act or rules made their under, regulations or notifications including amendments. If the Employer is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications/bye laws/Acts/Rules regulations including amendments, if any, on the part of the contractor, the engineer/employer shall have the right to deduct from any money due to the contractor including his amount of performance of security. The employer/engineer shall also have right to recover from the contractor any sum required or estimated to be required for making good the loss or damage suffered by the employer. The employees of the contractor and the sub-contractor in no case shall be treated as the employees of the employer at any point of time.

42. Jurisdiction

This contract has been entered into the State of Madhya Pradesh and its validity, construction, interpretation and legal effect shall be subjected to the exclusive jurisdiction of the courts in Indore or of the courts at the place where this agreement is entered into. No other jurisdiction shall be applicable.

[End of GCC]

CONTRACT DATA SHEET

Clause Reference	Particulars	Data
1.14	Employer	Indore Smart City Development Limited, Indore
1.15	Engineer	Engineer as notified by employer
1.16	Engineer in Charge	Executive Engineer of ISCDL
1.22	Stipulated period of completion	24 Months
3	Language & Law of Contract	English and Indian Contract Act 1872
4	Address & contact details of the Contractor	As per "Annexure H"
	Address & contact details of the Employer/Engineer-phone, Fax, e-mail.	
5	Subcontracting permitted for contract value	Not permitted
6	Technical Personnel to be provided by the contractor	As per 'Annexure-I' (Format I-3)
	Penalty, if required Technical personal not available.	As per 'Annexure-I' (Format I-3)
10	Specifications	As per "Annexure E"
	Drawings	As per "Annexure N"
12	Competent authority for deciding dispute under Dispute resolution system	Chief Executive Officer, ISCDL, Indore
	Appellate Authority for deciding dispute under Dispute resolution system	Executive Director, ISCDL, Indore
13	Period of submission of updated construction program	15 days after signing of contract agreement and every month thereafter.
14	Competent authority for granting time permission	Executive Director, ISCDL, Indore
15	Milestones laid down for the contract	-
	If yes, details of milestone	As per "Annexure O"
	Compensation (to Employer) for Delay	As per "Annexure P"
17	List of equipment for lab	As per Annexure I
	Time to establish	-
	Penalty for not establishing lab	-
18	Defects Liability Period for Civil Work	12 months after physical completion of the work.
21	Competent authority for determining the rate	Executive Director, ISCDL, Indore
27	Any other condition for breach of contract	-
28	Penalty	Penalty shall be recovered from a. Security deposit as per clause 30 of General Conditions of Contract; and b. Compensation imposed as per

Clause Reference	Particulars	Data
		clause 15 from performance security (Guarantee) including additional Performance Security (Guarantee), if any, as per clause 29 of General Conditions of Contract, whichever is higher.
29	Performance guarantee (Security) shall be valid up to	Till completion of physical period as per Clause 35.1.
30	Security deposit to be deducted from each running bill	At the rate of 5%
	Maximum limit of deduction of Security Deposit	5% of final contract amount
31	Price adjustment formula and procedure to calculate	Not Applicable
31.1 (1)	Price adjustment shall be applicable	Not Applicable
32	32.1 Mobilization and Construction Machinery Advance applicable	Yes
	32.2 If yes, unconditional Bank Guarantee	As per format in Annexure S
	32.3 If Yes Rate of Interest	10%
	32.4 If Yes, Type and Amount that can be paid	upto 10% of the Contract Amount
	32.5 If Yes, Recovery of Payment	@10% of the Advance from each running bill (third running bill onwards)
33	33.1 Secured Advance Payable	No Secured Advance Payable.
	33.2 If Yes, Amount of Secured Advance	-
	33.3 If Yes, Conditions for Secured Advance	-
	33.4 If Yes, Recovery of Secured Advance	-
35	Completion Certificate – after physical completion of work	As per Annexure U
	Final Completion Certificate – after final payment on completion of the work.	As per Annexure V
39	Salient features of some of the major labour laws that are applicable	As per Annexure W

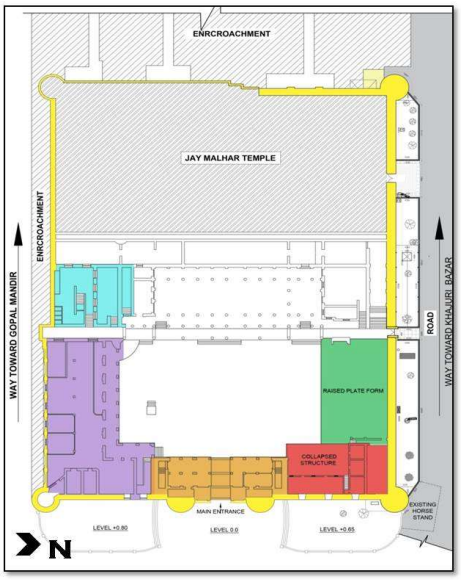
Annexure N

(See clause 10 of Section 3 of GCC)

DRAWING

As per Detailed Project Report and Interventions (Appendix A)

Indicative Zoning is shown below for the scope of works



SITE PLAN

For proposals the existing building is divided into six identifiable zones, namely;

	ZONE -1	FRONT GATE AREA
	ZONE -2	NORTH EAST WING
	ZONE -3	NORTH WING
	ZONE -4	SOUTH WING (MUSEUM AREA)
	ZONE -5	TOILET BLOCK
	ZONE -6	ALL FOUR SIDES FAÇADE INCL. BASTIONS + GATES.

ZONING

Annexure O

(See clause 13 of Section 3 of GCC)

DETAILS OF MILESTONE

Annexure P
(See clause 10 of Section 3 of GCC)

COMPENSATION FOR DELAY

In case the work is not completed within the stipulated period of completion along with all such extensions which are granted to the Contractor for either Employer's default or Force Majeure, the compensation shall be levied on the contractor at the rate of 0.05% per day of delay limited to maximum of 10% of contract price.

The decision of Chief Executive Officer shall be final and binding upon both the parties.

Annexure Q
(See clause 10 of Section 3 of GCC)

LIST OF EQUIPMENT FOR QUALITY CONTROL LAB

As per Annexure I (Form I-4)

Annexure R

(See clause 10 of Section 3 of GCC)

Price Adjustment

……..NA……..

Annexure S-1
(See clause 32 at Section 3 -GCC)

Bank Guarantee Form for Mobilization and Construction Machinery Advance

To,
_____ [Name of Employer]
_____ [Address of Employer]
_____ [Name of Contractor]

In accordance with the provisions of the General Conditions of Contract, clause 31 ("Mobilization and Construction Machinery Advance") of the above-mentioned Contract _____ [Name and address of Contractor] (hereinafter called "the Contractor") shall deposit with _____ _____ _____ _____ [name of Employer] a bank guarantee to guarantee his proper and faithful performance under the said Clause of the Contract in an amount of _____ _____[amount of Guarantee]_____[in words).

We, the _____[bank of financial institution], as instructed by the Contractor, agree unconditionally and irrevocably to guarantee as primary obligator and not as surety merely, the pavement to_____ _____ _____ _____ [Name of Employer] on his first demand without whatsoever right of obligation on our part and without his first claim to the Contractor,' in the amount not exceeding _____ _____ [amount of guarantee]_____ [in words).

We further agree that no change or addition to or other modification of the terms of the Contractor or Works to be performed there under or of any of the Contract documents which may be made between _____ _____ _____ _____ [name of Employer) and the Contractor, shall in any way release us from any liability under this guarantee, and we hereby waive notice of any such change, addition or modification.

This guarantee shall remain valid and in full effect from the date of the advance payment under the Contract until _____ [name of Employer) receives full repayment of the same amount from the Contractor.
Yours truly,

Signature and Seal: -
Name of Bank/Financial Institution: -
Address: -
Date: -

An amount shall be inserted by the Bank or Financial Institution representing the amount of the Advance Payment, and denominated in Indian Rupees.

Annexure S2. Bank Guarantee for Earnest Money Deposit

UNCONDITIONAL AND IRREVOCABLE BANK GUARANTEE
Bank Guarantee No.: _____ Dated: _____
Issuer of Bank Guarantee:

_____
(Name of the Bank)

_____

_____
(hereinafter referred to as the "**Bank**")
Beneficiary of Bank Guarantee:
Indore Smart City Development Limited
(hereinafter referred to as the "**Authority**")

Nature of Bank Guarantee:
Unconditional and irrevocable Bank Guarantee.
Context of Bank Guarantee:
Whereas the Indore Smart City Development Limited (the "Authority") has invited bids by its Request for Bid dated ..... (the "**RFP**") for the **Insert the name of the Project** ("**Project**") in Indore, Madhya Pradesh. Whereas in accordance with the terms of the RFP, ... <insert name of Bidder> is submitting a bid for the Project in ..... <Indore>, and is required to submit a security of Rs. _____ (Rupees _____ Only) with respect to the same.

Operative part of the Bank Guarantee:

1. At the request of the (Insert the name of the Bidder), we _____, _____ (name and address of the bank), hereinafter referred to as the "**Bank**"), do hereby unconditionally and irrevocably affirm and undertake that we are the Guarantor and are responsible to the ISCDL i.e. the beneficiary on behalf of the Bidder, up to a total sum of Rs. _____ (Rupees _____ Only), such sum being payable by us to the ISCDL immediately upon receipt of first written demand from ISCDL.
2. We unconditionally and irrevocably undertake to pay to the ISCDL on an immediate basis, upon receipt of first written demand from the ISCDL and without any cavil or argument or delaying tactics or reference by us to Bidder and without any need for the ISCDL to convey to us any reasons for invocation of the Guarantee or to prove the failure on the part of the Bidder to repay the amount of _____ or to show grounds or reasons for the demand or the sum specified therein, the entire sum or sums within the limits of Rs. _____ (Rupees - _____ Only). We hereby waive the necessity of the ISCDL demanding the said amount from Bidder prior to serving the Demand Notice upon us.
3. We further agree and affirm that no change or addition to or other modification to the terms of the Agreement, shall in any way release us from any liability under this unconditional and irrevocable Guarantee and we hereby waive notice of any such change, addition or modification. We further agree that the ISCDL shall be the sole and the exclusive judge to determine that whether or not any sum or sums are due and payable to him by Concessionaire, which are recoverable by the ISCDL by invocation of this Guarantee.
4. This Guarantee will not be discharged due to the change in constitution of the Bank or the Bidder. We undertake not to withdraw or revoke this Guarantee during its currency/ validity period, except with the previous written consent of the ISCDL.

5. We unconditionally and irrevocably undertake to pay to the ISCDL, any amount so demanded not exceeding Rs. _____ (Rupees _____ Only), notwithstanding any dispute or disputes raised by Bidder or anyone else in any suit or proceedings before any dispute review expert, arbitrator, court, tribunal or other authority, our liability under this Guarantee being absolute, unconditional and unequivocal. The payment so made by us under this Guarantee to the ISCDL, shall be a valid discharge of our liability for payment under this Guarantee and the Bidder shall have no claim against us for making such payment.
6. This unconditional and irrevocable Guarantee shall remain in full force and effect and shall remain valid until _____ (180 days from the Bid due date).

Notwithstanding any contained herein:

1. Our liability under this Bank Guarantee shall not exceed Rs. _____ (Rupees - _____ Only).
2. This unconditional and irrevocable Bank Guarantee shall be valid for a period of **180 days** from _____ (Bid Due Date).

We are liable to pay the guaranteed amount or any part thereof under this unconditional and irrevocable Bank Guarantee only and only if Indore Smart City Development Limited (ISCDL) serves upon us a written claim or demand on or before _____.

_____

Authorized Signatory for Bank

Annexure -T

(See clause 33 *of Section* 3 *-GCC*)

Bank Guarantee Form for Secured Advance

……..NA……..

Annexure U

(See clause 35 of section 3 -GCC)

Physical Completion Certificate

Name of Work:

_____

_____

_____

Agreement No. _____Date_____

Amount of Contract Rs _____

Name of Agency: _____

Used MB No.: _____

Last measurement recorded

a. Page No. & MB No.: _____

b. Date: _____

Certified that the above-mentioned work was physically completed on..... (Date) and taken over on..... (Date) and that I have satisfied myself to best of my ability that the work has been done properly.

Date of issue

Engineer

_____

_____

Annexure V

(See clause 35 of section 3 -GCC)

Final Completion Certificate

Name of Work:

_____

_____

_____

Agreement No._____ Date: _____

Name of Agency: _____

Used MB No._____

Last Measurement recorded

a. Page No. & MB No._____

b. Date_____

Certified that the above-mentioned work was physically completed on_____ (date) and taken over on_____ (date).

Agreement amount Rs. _____

Final amount paid to contractor Rs. _____

Incumbency of officers for the work

I have satisfied myself to best of my ability that the work has been done properly.

Date of Issue: _____

Engineer in Charge _____

Indore Smart City Development Limited, Indore

Annexure W

(See clause 39 of Section 3 -GCC)

Salient Features of Some Major Labour Laws Applicable

(a) Workmen Compensation Act 1923: - The Act provides for compensation in case of injury by accident arising out of and during the course of employment.

(b) Payment of Gratuity Act 1972: - Gratuity is payable to an employee under the Act on satisfaction of certain conditions on separation if an employee has completed the prescribed minimum years (say, five years) of service or more or on death the rate of prescribed minimum days'(say, 15 days) wages for every completed year of service. The Act is applicable to all establishments employing the prescribed minimum number (say, 10) or more employees.

(c) Employees P.F. and Miscellaneous Provision Act 1952: The Act Provides for monthly contributions by the Employer plus workers at the rate prescribed (say, 10% or 8.33%). The benefits payable under the Act are:

i. Pension or family pension on retirement or death as the case may be. '
ii. Deposit linked insurance on the death in harness of the worker.
iii. Payment of P.F. accumulation on retirement/death etc.

(d) Maternity Benefit Act 1951: - The Act provides for leave and some other benefits to women employees in case of confinement or miscarriage etc.

(e) Contract Labour (Regulation & Abolition) Act 1970: - The Act provides for certain welfare measures to be provided by the Contractor to contract labour and in case the Contractor fails to provide, the same are required to be provided, by the Principal Employer by Law. The principal Employer is required to take Certificate of Registration and the Contractor is, required to take license from the designated Officer. The Act is applicable to the establishments or Contractor of Principal Employer if they employ prescribed minimum (say 20) or more contract labour.

(f) Minimum Wages Act 1948: - The Employer is to pay not less than the Minimum Wages fixed by appropriate Government as per provisions of the Act if the employment is a scheduled employment. Construction of buildings, roads, runways is scheduled employment.

(g) Payment of Wages Act 1936: - It lays down as to by what date the wages are to be paid, when it will be paid and what deductions can be made from the wages of the workers.

(h) Equal Remuneration Act 1979: - The Act provides for payment of equal wages for work of equal nature to male and female workers and for not making discrimination against female employees in the matters of transfers, training and promotions etc.

(i) Payment of Bonus Act 1965: - The Act is applicable to all establishments employing prescribed minimum (say, 20) or more workmen. The Act provides for payments of annual bonus 'within the prescribed range of percentage of wages to employees drawing up to the prescribed amount of wages, calculated in the prescribed manner. The Act does not apply to certain establishments.

The newly set-up establishments are exempted for five years in certain circumstances. States may have different number of employment size.

(j) Industrial Disputes Act 1947: - The Act lays down the machinery and procedure for resolution of industrial disputes, in what situations a strike or lock-out becomes illegal and what are the requirements for laying off or retrenching the employees or closing down the establishment.

(k) Industrial Employment (Standing Orders) Act 1946: - It is applicable to all establishments employing prescribed minimum (say, 100, or 50). The Act provides for laying down rules governing the conditions of employment by the Employer on matters provided in the Act and gets these certified by the designated Authority.

(l) Trade Unions Act 1926: - The Act lays down the procedure for registration of trade unions of workmen and Employers. The Trade Unions registered under the Act have been given certain immunities from civil and criminal liabilities.

(m) Child Labour (Prohibition & Regulation) Act 1986: - The Act prohibits employment of children below 14 years of age in certain occupations and processes and provides for regulations o employment of children in all other occupations and processes. Employment of child labour is prohibited in building and construction industry.

(n) Inter -State Migrant Workmen's (Regulation of Employment & Conditions of Service) Act 1979: - The Act is applicable to an establishment which employs prescribed minimum (say, five) or more inter-state migrant workmen through an intermediary (who has recruited workmen in one state for employment in the establishment situated in another state). The inter- State migrant workmen, in an establishment to which this Act becomes applicable, are required to be provided certain facilities such as Housing, Medical-Aid, Travelling expenses from home up to the establishment and back etc.

(o) The Building and Other Construction workers (Regulation of Employment and Conditions of Service) Act 1996 and the Cess Act of 1996: - All the establishments who carry on any building or other construction work and employs the prescribed minimum (say, 10) or more workers are covered under this Act. All such establishments are required to pay cess at the rate not exceeding 2% of the cost of construction as. may be modified by the Government., The Employer of the establishment- is required to provide safety measures at the building or construction work and other welfare measures, such as canteens, first-aid facilities, ambulance, housing accommodations for workers near the-work place etc. The Employer to whom the Act applies has to obtain a registration certificate from the Registering Officer appointed by the Government.

(p) Factories Act 1948: - The Act lays down the procedure for approval of plans before setting up a factory, health and safety provisions, welfare provisions, working hours, annual earned leave and rendering information regarding accidents or dangerous occurrences to designated authorities. it is applicable to premises employing the prescribed minimum (say, 10) persons or more with aid of power or another prescribed minimum (say, 20) or more persons without the aid of power engaged in manufacturing process.

Section 3

Conditions of Contract

Special Conditions of Contract [SCC] Part II

1. General

The data and information given in the Contract Document are based on the investigations, planning and designs carried out so far. The data considered for the project planning have been included in the bid documents. The Contractor shall, therefore, satisfy himself about the adequacy and accuracy of the said data/information and interpretation thereof and collect fresh data/additional data/information and carry out/conduct further investigations and studies and get the approval of same from the employer. The Employer shall not be responsible for the accuracy/adequacy of the data/information and interpretation thereof by the Contractor.

2. Sufficiency of Bid

a. The Contractor shall be deemed to have visited and carefully examined the Project Site and it's surrounding to have satisfied himself to the nature and conditions of the means of transport and communications, whether by land or air, as available at present and as to possible interruptions thereto including the access and regress conditions for the Site. The Contractor is also deemed to have made enquiries, examined and satisfied himself as to the sites source for obtaining sand, stones, bricks and other materials, the sites for disposal of surplus materials and accommodation for depots, colonies, workshops and other infrastructure facilities as may be necessary for executing and completing the Works, as also the sub-soil water and variations thereof, storms, prevailing winds, climatic conditions and all other similar matters affecting the works including law & order.

b. Any neglect or omission or failure on the part of the Contractor in obtaining necessary and reliable information upon the foregoing or any other matter affecting the Contract shall not relieve him from any risks or liabilities or the entire responsibility for the completion of the Works in accordance with the Contract.

3. Incentive for Early Completion

In the event that the Contractor completes the work ahead of scheduled completion time, a bonus @ 1% (one percent) of the contract price per month computed on per day basis, shall be payable to the Contractor, subject to a maximum limit of 5% (five per cent) of the contract price. The amount of bonus, if payable, shall be paid along with final bill after completion of work.

4. Fire Prevention

The Contractor shall take all precautions necessary to ensure that no vegetation or property/ies along the line of the road outside the area of the permanent works is affected by fires arising from the execution of the Works. The Contractor shall obtain and follow any instructions of the competent authorities with respect to fire hazard when working in the vicinity of gas installations. Should a fire occur adjacent to the project road for any reason, the Contractor shall immediately suppress it. In the event of any other fire emergency in the vicinity of the Works the Contractor shall render assistance to the civil authorities to the best of his ability. Any scrub or plantation damaged by fire considered by the Employer to have been initiated by the Contractor's staff or labour shall be replanted and otherwise restored to the satisfaction of the Employer at the Contractor's expense.

5. Water Supply

The Contractor shall make his own arrangements at his own expense for water supply for construction, sectional testing if any and other purposes.

6. Relations with Local Communities and Authorities

In setting and operating his plant and facilities and in executing the Works the Contractor shall at all-time bear in mind and to the extent practicable minimize the impact of his activities on existing communities. Where communities are likely to be affected by major activities such as road widening or laying of utility lines or the establishment of a camp, large borrow pit or haul road, he shall liaise closely with the concerned communities and their representatives and if so directed, shall attend meetings arranged by the Employer to resolve issues and minimise impacts on local communities.

7. Site Clearance

Before handing over the work to the Authority, the contractor shall remove all temporary structure like the site offices, cement godown, stores, labour hutments etc., scaffolding rubbish, left over materials tools and plants, equipments etc., clean and grade the site to the entire satisfaction of the Engineer-In-Charge. If this is not done the same will be got done by ISCDL at his risk and cost.

8. Site Documents

The following site documents shall mainly be maintained by the contractor at site:

- Copy of contract documents and drawings.
- Computerized bill format.
- Site Order Book.
- Material testing registers / Quality Inspection Reports.
- Measurement books on computerized format.
- Progress bar chart.
- Sample approval register.
- Hindrance Register.
- Work Diary.
- Deviation/variation order registers.
- Cement consumption register.
- Reinforcement registers.
- Concrete cube test register.
- Slump test register.
- Silt content and sand bulkage register.

9. Safety & Health

Contractor shall be solely responsible for conducting operations under this contract to avoid risk of harm to the health and safety of persons and property and for inspecting and monitoring all its equipment, materials and work practices to ensure compliance with its obligations under this contract.

Contractor shall conform and comply with:

1. All applicable laws, ordinances, statutes, rules, regulations, and codes governing safety and health in the workplace;
2. Contractor's specific Scope of Work under this contract; and

3. To the extent allowed by law, Contractor shall assume all responsibility and liability with respect to all matters regarding the safety and health of its employees and the employees of Contractor's suppliers and subcontractors of any tier, with respect to the risks under this contract.
4. Contractor's failure to correct any unsafe condition or unsafe act by its employees, suppliers or subcontractors of any tier may, at the sole discretion of Authority, be grounds for an order by Authority to stop the affected work or operations until the unsafe act or condition is corrected to Authority's satisfaction at Contractor's expense.
5. Unless otherwise specified by Authority, Contractor shall furnish all safety equipment required for the Work, require the use of such safety equipment, and provide safety instructions to its employees.
6. Contractor shall maintain accident and injury records as required by applicable laws and regulations. Such records will be made available to Authority upon request. Contractor shall furnish Authority with a weekly and monthly summary of accidents, injuries, and labor hours lost to work related injuries of its employees and employees of Contractor's suppliers and subcontractors of any tier, in a form and format designated by Authority.
7. Contractor shall immediately report to Authority any death, injury or damage to property incurred or caused by Contractor's employees and employees of Contractor's suppliers and subcontractors of any tier.

10. Ensure safe access

a. Where regular or frequent access to height is required, permanent safe access arrangements should be installed. For example, on plant or machinery, this might be steps and platform with handrails.
b. When portable equipment is used for temporary access, it is important that it is not restricted to that which happens to be at hand. For example, hiring a scissor lift or cherry picker might improve safety.

Falls caused by slipping

c. Many falls from height occur when workers slip (eg from the top of plant or off step rungs). Places where workers will stand should be dry where possible and free from contamination.

Falls on stairs

d. A third of reported fall accidents occur on stairs. This is often due to the stairs being contaminated with water or food product, or the use of inappropriate footwear.
e. Use of proper personnel protective equipment is to be ensured by contractor at all time.

11. Environmental Requirements

Throughout performance of the Work, Contractor shall conduct all operations in such a way as to minimize impact upon the natural environment and prevent any spread or release of contaminated or hazardous substances. Contractor shall undertake work in accordance with the standards and requirements Environmental Safety including but not limited to the following:

Contractor shall:

1. Comply with all applicable laws, regulations, ordinances, statutes, rules, and codes governing environmental requirements and conduct the Work based on the requirements of this contract, including compliance with permit requirements and Project plans and approvals.

2. Provide all documentation required by all levels of governing authority or Contractor and Authority concerning environmental requirements.
3. Be responsible for developing and maintaining a written Environmental Compliance Plan in accordance with Contractor's established practices, including but not limited to compliance with all applicable laws/regulations and the requirements of the Project Construction Environmental Control Plan (CECP). Contractor shall have sole responsibility for implementing and enforcing its Environmental Compliance Plan.
4. Submit its written Environmental Compliance Plan to Authority for review thirty (30) calendar days after contract award and in any event prior to commencing work at the Jobsite. Authority's review of Contractor's plan shall not relieve Contractor of its obligations under this contract or as imposed by law and Contractor shall be solely responsible for the adequacy of its Environmental Compliance Plan.
5. Comply with all access restrictions, including prohibitions on access to certain areas on or adjacent to the Jobsite.
6. Require that its personnel do not hunt, fish, feed, capture, extract, or otherwise disturb aquatic, animal, or vegetative species within the Project boundary or while performing any tasks in performance of the Work.
7. Immediately stop work in any area where contaminated soil indicators (such as odor or appearance), unknown containers, piping, underground storage tanks, or similar structures are discovered; or any other materials, which are reasonably suspected to be toxic or hazardous. Contractor shall then immediately notify Authority and the stop work area shall be determined by Authority and confirmed in writing. Activity in the stop work area shall only resume upon Authority's written approval.
8. Immediately stop work in any area where cultural resources or artifacts with archaeological or historical value are discovered, and immediately notify Authority. No artifacts, items, or materials shall be disturbed or taken from the area of discovery. Neither Contractor nor any of its suppliers and subcontractors of any tier shall have property rights to such artifacts, items, or materials, which shall be secured and guarded until turned over to Authority or the appropriate authorities. Contractor shall also require that its personnel and those of its suppliers and subcontractors of any tier comply with this provision and respect all historic and archaeological sites in the area.
9. Manage, store, and dispose of all hazardous waste generated by Contractor during its Work in accordance with national, regional, and local requirements and as outlined in the Project CECP. This includes, but is not limited to: waste minimization; hazardous waste generator registration; hazardous materials inventory with Material Safety Data Sheets (MSDS) for each hazardous material on site; employee training; hazardous waste spill management and reporting; proper storage of hazardous waste; equipment decontamination; onsite and offsite transport of hazardous waste; and selection and use of offsite final disposal facilities.

12. Security Requirements

In performance of the Work under this contract, Contractor shall establish and maintain a security program, implementing and supplementing Project security requirements. This shall include a written Security Plan which shall be submitted to AUTHORITY for review and approval within thirty (30) calendar days after contract award and in any event prior to commencing work at the Jobsite. Such program shall include:

1. Controlled access to office, warehouse, material and equipment sites.
2. Physical security of office, warehouse, material and equipment sites, to include periodic security checks of all work areas assigned to Contractor.
3. Control of material and equipment packaging, transportation, and delivery to the Jobsite.
4. Accountability procedures for storage, requisition and issue of material and equipment.
5. Personnel security to include, but not limited to, compliance with Project work rules (access, badging, prohibited activities and items, etc.)
6. Communications security to include, but not limited to, use of radios, radio finders, beacons, etc.
7. Compliance with the Project Emergency Response Plan to include, but not limited to, emergency notification lists, personnel accountability procedures, etc.
8. Compliance with all Project security programs and the coordination measures, with AUTHORITY, Authority and others on the Jobsite, established for that purpose.
9. Prompt reporting of incidents of loss, theft or vandalism to AUTHORITY subsequently detailed and provided in writing.

13. Supply of Coloured Record Photographs

The Contractor shall, at his own cost, arrange to take colour photographs at various stages / facets of the work including interesting and novel features of the work as directed by the ISCDL officials and supply two copies of colour record photographs mounted in the albums including negatives with specification and these shall be kept by Employer.

14. Storage of Old/ Original Material after proper numbering/ Classification

During the execution of the Works, the Contractor shall keep the Site free from all unnecessary obstruction, and shall store or dispose of any Contractor's Equipment or surplus materials. The Contractor shall clear away and remove from the Site any wreckage, rubbish and Temporary Works which are no longer required.

Handling and storing materials involves many different activities such as hoisting steel beams, driving a truck loaded with raw material, manually carrying bags or material and stacking supplies. Employees can be injured by improperly lifting materials (manually and by machine), falling objects and improperly stacked supplies. It is critical that the contractor make proper materials storage and handling a best practice.

It is important that the contractor stores Old/ Original Material carefully and proper numbering/ classification is done

15. Safety Net

This work includes many hazardous task and conditions such as working with height, excavation, noise, dust, power tools and equipment. The most common fatalities are caused by the fatal four: falls, struck by object, electrocutions and caught-in/between. The contractor needs to ensure proper safety nets installed when working on height.

16. Hard Barricades are a must wherever necessary.
17. Fall Arrest Harness:

A safety harness is a form of protective equipment designed to protect a person, animal, or object from injury or damage. The harness is an attachment between a stationary and non-stationary object and is usually fabricated from rope, cable or webbing and locking hardware. Some safety harnesses are used in combination with a shock absorber, which is used to regulate deceleration when the end of the rope is reached. The contractor must have approved safety harnesses at site during working on height.

Section 4
Bill of Quantities

Item	Ref.	Description	TOTAL quantity	Unit	Rate
		CLEANING & DE- VEGITATION			
1	Non SOR	Clearing grass including uprooting of vegetation, grass, bush wood, trees and saplings of all girth and any height above/below ground level and disposal of rubbish upto any lead .	**450**	SQM	**5**
2	Non SOR	De vegetation from the monuments by chemical injection of Round Up (arsenic base) compound and subsequently uprooting of all girth and any height by physical means without damaging the historic fabric and structure of the building under strict supervision of conservation site inchrge.	**80**	SQM	**650**
		REMOVAL & DISMANTLING			
3	Non SOR	Careful demolishing cement concrete (below any finishing layer sand stone/ basalt stone / ceramic /vinayal flooring), steps, blockage manually including disposal of material within any lead as per direction of Engineer - in charge. Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix) at all heights inclusive of all leads/ lifts required to undertake the work without damaging the historic fabric of the building.	**350**	CUM	475
4	Non SOR	Careful demolishing moduler/ lakhori/traditional (of any brick size) brick work manually in lime /cement mortar including stacking of serviceable material and disposal of unserviceable material within any lead as per direction of Engineer-in-charge at all heights inclusive of all leads/ lifts required to undertake the work without damaging the historic fabric of the building.	**329**	CUM	400
5	Non SOR	Demolishing R.C.C. work manually, cutting of bars including stacking of steel bars and disposal of unserviceable material within any lead as per direction of Engineer-in-charge.	**40**	CUM	700
6	Non SOR	Carefully Removal of basalt ashlar stone /sand stone slab/ floor/ pavement/ by manual /mechanical means including stacking of the serviceable material and disposal of unserviceable material up to any	**2788**	SQM	52

		lead , as per direction of Engineer-in-charge. Thickness upto 100 mm.			
7	Non SOR	Demolishing stone rubble masonry manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within any lead as per direction of Engineer-in-charge: In cement mortar	**60**	CUM	480
8	Non SOR	Carefully scrapping and removing of multiple layers of white wash enamel paint, distemper, oil paint, algae, etc. from plain plaster and surfaces gently with care to keep old designs intact .as per prescribed process and specification. Item includes cost of safety measure /use of specified equipment for workers required to complete the work. (Overall length and width will be measured for the purpose of payment)	**2285**	SQM	110
9	Non SOR	Careful dismantling of old lime plaster/cement plaster from walls of the heritage structure without damaging the stone work/brick work /historic fabric of the building including raking out of joints and cleaning the surface thoroughly. Item includes cost of safety measure /use of specified equipment for workers required to complete the work and disposal of rubbish to the dumping ground within the site by manual means including all leads, lifts and carriage as per direction of engineer inchrge.(Overall length and width will be measured for the purpose of payment)	**7570**	SQM	160
10	Non SOR	Taking out doors, windows and clerestory window shutters (steel or wood) including stacking within any lead :			
		Of area 3 sq. metres and below	**209**	EACH	100
		Of area beyond 3 sq. metres	**76**	EACH	150
11	Non SOR	Carefully Removal of wooden boardings in lining of walls and partition/ jali /railing /wall pannels with frame including removal of blockage from window /doors made on existing windows and doors with woolden block boards/plywood etc without damaging the historic fabric of the building . Item includes cost of safety measure /use of specified equipment for workers of building applicable to complete the work. Item include all leads /lift and cariage etc,from work area to site yard including proper stacking of the re-usable materials.	**475**	SQM	18

12	Non SOR	Carefully Removal of ceramic tiles from floor and wall surfaces including old cement/lime plaster from heritage structure without damaging the brickwork including raking out of joints and cleaning the surface thoroughly. For thickness of tiles upto 40 mm. Item includes disposal of rubbish to the dumping ground at all heights inclusive of all leads/ lifts and support structure required to undertake the work without damaging the historic fabric of the building.	**159**	SQM	21
13	Non SOR	Dismantling marble/ paver block flooring /sand stone flooring laid in cement mortar including stacking of serviceable material and disposal of unserviceable material within any lead. (Removal of sand stone floorings from court yard and structure to be re constructed)	**110**	SQM	52
14	NON SOR	Removal of all Electrical wire, nails, screw ,additional clamps on wall , casing /exposed pvc conduits , additional clamps on chajja ,electrical fixtures, light arrester ,lights ,boxes ,cartoon , bench ,drum, plumbing (internal & external)taps ,G.I. pipes, etc. from the site and stacking serviceable materials and disposal of unserviceable materials , as directed by Engineer inchrge, and including all leads, lifts and carriage. All complete. Item includes cost of safety measure /use of specified equipment for workers required to complete the work.	**1**	Lump Sum	125000
		EARTHWORK			
16	Non SOR	Earthwork in excavation/ removal of debris (malba) by mechanical means (Hydraulic excavator)/manual means including disposal of excavated earth, for any lead and lift, disposed Earth to be levelled and neatly dressed. All kind of soil.	**3000**	CUM	300
18	Non SOR	Filling by available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. inlayers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to any lead and lift .	**200**	CUM	60
		ROOF DISMANTLING			
20	Non SOR	Dismantling steel work in built up sections of Structural steel (I Sections) / railings /steps/grills/sheds/poles etc in angles, tees, flats and channels including all gusset plates, bolts, nuts, cutting rivets, welding etc.	**50000**	KG	5

		including dismembering and stacking within any lead.at all heights inclusive of all leads/ lifts and support structure required to undertake the work without damaging the historic fabric of the building.			
21	Non SOR	Dismantling roofing including ridges, hips valleys and gutters etc., and stacking the material within any lead of G.S. Sheet	**235**	SQM	30
22	Non SOR	Dismantling C.I. or asbestos rain water pipe with fittings and clamps including stacking the material within any lead: 100 mm dia pipe	**35**	MTR	15
23	Non SOR	Careful removal of woodwork in frames, trusses, purlins (Karis) and rafters upto any span including stacking the material, all heights and section sizes, as directed by Engineer in charge, and including all leads, lifts and carriage. All complete.	**43**	CUM	840
24	Non SOR	Careful demolishing/removing all vertical wooden posts of any size in all floors without damaging the historic fabric of building and careful stacking the same within any lead. Item inclusive of all leads and lift for all height and distances .All complete. Item includes cost of safety measure /use of specified equipment for workers required to complete the work.	**20**	CUM	840
25	Non SOR	Careful demolishing lime concrete manually and disposal of material as per direction of Engineer in-charge. Item includes cost of safety measure /use of specified equipment for workers required to complete the work.	**239**	CUM	166
26	Non SOR	Careful demolishing brick tile covering /brick on edge /clay tile in terracing including stacking of serviceable material and disposal of unserviceable material within any lead. Item includes cost of safety measure /use of specified equipment for workers of building required to complete the work.	**2345**	SQM	20
27	Non SOR	Demolishing mud phaska in terracing of any thickness and disposal of material within any lead.Item includes cost of safety measure /use of specified equipment for workers of building required to complete the work .	**311**	CUM	178
28	Non SOR	Careful removal of wooden ceiling / support frame / associated cornices/beadings /moulding in internal area of room with propre care without damaging historic fabric of building and stacking of ceilling at safe place for refixing	**180**	SQM	85

		of the same , as directed by Engineer in charge, including all leads, lifts and carriage. All complete.			
29	Non SOR	Dismantling tile work/mosaic tiling from roof and floors laid in cement mortar including stacking material within any lead. For thickness of tiles/mosaic layer up to 40 mm	**685**	SQM	21
		MASONRY WORK			
30	NON SOR	Traditional brick masonry with special brick size in lime mortar in propotion similar to the existing traditional lime mortar (lime putty -surkhi 1:2) after removing the damaged and out of plumb masonry from the historic structure, as directed by Engineer incharge, and including all leads, lifts and carriage. All complete.			
		Brick work for superstructure for all heights	**981**	CUM	8500
		Brickwork in ornamental pillars	**67**	CUM	9420
		Brick masonry for arches with special size traditional bricks	**68**	CUM	10250
31	NON SOR	Ornamental traditional brick masonry in mouldings and cornices (upto 30 cm in projection and 30 cm in depth as per traditional practice) in lime mortar similar to the existing traditional lime mortar (lime putty- surkhi 1:2) after removing the damaged and out of plumb masonary from the vertical surfaces , as directed by Engineer incharge, and including all leads, lifts and carriage. All complete.	**1620**	RMT	1335
32	Non SOR	Stone work plain ashlar in arches/ super structure upto all level in lime mortar 1:2 (1 lime : 2 surkhi sand)/lime mortar including centring, shuttering and pointing with lime mortar 1:2 with an admixture of pigment matching the stone shade. Both face dressed ,matching with existing stone. for patch work in various places.Basalt stone with matching /Approved shade in lime mortar .	**23**	CUM	41000
33	Non SOR	Stone work in plain ashlar in super structure upto all level in lime mortar 1:2 (1 lime : 2 surkhi / sand) including pointing with lime mortar 1:2 (1 lime : 2 surkhi / sand) with an admixture of pigment matching the stone shade :	**24**	CUM	36600
34	Non SOR	Stone work ashlar sunk or moulded or sunk and moulded upto all level in ime mortar 1:2 (1 lime : 2 surkhi / sand) including pointing	**4**	CUM	39000

		with lime mortar 1:2 (1 lime : 2 surkhi / sand) with an admixture of pigment matching the stone shade :			
35	Non SOR	Random rubble masonry with hard stone in foundation and plinth including levelling up with lime concrete 1:2:2 (1 lime : 2 sand : 2 graded stone aggregate 20 mm nominal size) upto all level with :Lime mortar 1:2 (1 lime : 2 surkhi/ sand)	**13**	CUM	3900
36	Non SOR	Brick work with well burnt chimney bricks in bulls patent trench kiln manufactured by ghol process, crushing strength not less than 40 kg /sq cm and water absorption not more than 15% in foundation and plinth Cement mortar 1:4 (1 cement: 4 coarse sand)	**90**	CUM	4440
		CONSOLIDATION WORK			
37	NON SOR	Stitching the cracks in brick masonry using brick and lime mortar matching/toothing with the traditional lime mortar and bricks as existing size and type joinery courses in the historic structure after raking, cleaning and washing the cracks, as directed by Engineer in charge, and including all leads, lifts and carriage. All complete.	**107**	CUM	12700
38	NON SOR	Stitching of crack in stone masonry using stone and lime mortar matching /toothing with the traditional lime mortar and stone as existing size and type joinery courses in the historic structure after raking, cleaning and washing the cracks, as directed by Engineer in charge, and including all leads, lifts and carriage. All complete.	**18**	CUM	21000
39	NON SOR	Stitching of Modular brickwork by inserting sand stone/ basalt stone plate as approved of size 600X300X100 MM at identified locations by engineer in charge and grouting the area with rich lime mortar 1:1 (1 lime: 1 Surkhi) including preparing like cutting out brickwork, teething, cleaning, grouting etc. For all heights and removal of malba as directed.	**108**	NOS	1380
40	NON SOR	Consolidation of Lime plaster with grouting, after removal of loose materials and filling the gaps with lime mortar, 1:2 (Lime putty: surkhi) tightly and using pressure grouting technique if required.	**205**	SQM	510
41	NON SOR	Pointing of stone masonry in lime mortar 1:1 (1 Lime: 1 sand) including raking out deteriorated joints in lime /cement plaster	**180**	SQM	355

		as per prescribed process and specification. (proportion of mortar may change/very from location to location within the site) as directed by conservation site in charge and edging of existing plaster around the edge. Item includes cost of shuttering/ scaffolding/ safety measure /use of specified equipment for workers required to complete the work.			
42	NON SOR	Stone consolidation/patch work in existing stone masonry - in lime mortar 1:1 (1 Lime: 1 sand) including raking out deteriorated joints in lime/ cement, removing the loose/ damaged stone and reconsolidating with new stone/ reusable stone as directed by in charge.	**11**	CUM	12335
43	Non SOR	Providing and fixing stainless steel Stone fixing cramps of required size and shape for anchoring stone wall lining and floor to the backing or securing adjacent stones in stone wall lining in lime mortar 1:2 (1lime : 2 coarse sand), including making the necessary chases in stone and holes in walls wherever required complete in all respects.	**80**	KG	548
44	Non SOR	Providing and fixing stone brackets sunk and moulded including providing and fixing with 4 Nos gun metal cramp 25x6 mm 30 cm long and dowel bars 7.5 cm long 6 mm dia as per design.	**22**	NOS	2905
		ROOFING	**0**		
45	Non SOR	Structural steel (I Sections) 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, as directed by Engineer in charge, and including all leads, lifts and carriage. All complete.	**54190**	KG	60
46	NON SOR	Providing, hoisting and laying of stone base plate of size (450X 600X 150 MM) under I sections/wooden beams on the end wall for placing the structural steel/wooden beam, as per the specification .	**730**	NOS	1600
47	NON SOR	Providing and fixing 1st class well-seasoned and chemically treated Teak wood work in beams ,ties,karis (purlins) and columns , section of various sizes as per drawing /available at site including carving and moulding as per existing in original /as per drawing / length as per design and traditional wooden joinry of members, and	**65**	CUM	276850

		fixed in position in traditional detail/manner as directed by Engineer incharge/ Consultants , All member to be finished from all sides with Redoxide of appropriate shade as approved by the Engineer In-charge / Consultants . Item also include all leads, lifts and carriage upto all heights including necessary framework/scafolding etc required to complete the task. Contractor to ensure that moisture content of wood is well within IS codes and Any timber found unseasoned shall be rejected. All timber to be free of knots, cracks etc.Item also includes Anti termite treatment of wood before fixing the frame at site.			
48	NON SOR	Providing and laying of plank of deodar wood (40 mm thick,)at floor and Ceiling , 150 to 200 mm wide and atleast 2 M long over the wooden purlins, as directed by Engineer incharge/ Consultants , and including all leads, lifts and carriage. Fixing of planks includes, planning, taking out toung & grooved joints, fixing with nails with purlins, All member to be finished from all sides with Redoxide of appropriate shade as approved by the Engineer In-charge.All timber to be free of knots, cracks etc..Item also includes Anti termite treatment of wood before fixing the frame at site	**1655**	SQM	9810
49	NON SOR	Providing and laying of 1st class well seasoned chemically trated teak wood wooden box casing around I sections/wooden section in building and replacing missing areas with 12.5-37 MM mm thick teak wood as per design including making groves, patterns, fixing in place, providing and applying antitermite treatment , .Item inclusive of carving /ingraving of pattens on frames andfinished from all sides with Redoxide of as approved by the Engineer In-charge. including all leads, lifts and carriage upto all heights.	**1185**	SQM	9810
50	NON SOR	Repair and retrofitting of reuseable existing wooden member including column beam purlin etc by replacing detoriated member with new first class well seasoned chemically treated teak wood using appropriate traiditional joinry /as directed by Engineer In-charge/ Consultants	**58**	CUM	60000

		including cost of safety measure /use of specified equipment for workers of building required to complete the work.Item inclusive of carving /ingraving of patterns on column beam purlin and finish with primer and Redoxide as approved . including all leads, lifts and carriage upto all heights. Item also includes Anti termite treatment of wood before fixing the wooden member at site.(Overall length , width and thickness of finished wooden member including any repair at any part will be measured for the purpose of payment) Note - Wooden members is already exist on site and not damage of more than 40% (0-.4 cum out of 1 cum) is fall under this catogery			
51	NON SOR	Providing and laying twin layer brick tiles over wooden planks, as directed by Engineer incharge, and including all leads, lifts and carriage. All complete.	**1655**	SQM	800
52	NON SOR	Construction of brick vaulted roof as per old design of thickness upto 230 (or as per design) mm using special size bricks in lime surkhi mortar 1: 2 (1 lime : 2 surkhi) including scaffolding/ shuttering /centering and form work for temporary support structure required for the construction as directed by conservation Consultants /site incharge.at all heights & including of all leads and lifts.(Plan area of internal walls of constructed vault to be measured for the purpose of payment)	**1518**	SQM	2400
53	NON SOR	Lime concrete (for terraces as a filler between vaults) in the ratio of 1:1:1:4 (1 Lime: 1 Surkhi : 1Coarse sand : 4 graded brick aggregate 40 mm nominal size).Item includes cost of shuttering /scaffolding /safety measure /use of specified equipment for workers required to complete the work	**218**	CUM	5470
54	NON SOR	Lime plaster 20 mm thick 1:1 (1 slaked Lime: 1 surkhi) on over the stone slab of desired level of app sheet including organic additives like sugarcane molasses, extracts of beil, maithi, etc. as per traditional practices. Item includes cost of shuttering /scaffolding /safety measure /use of specified equipment for workers required to complete the work.	**1254**	SQM	370
55	Non SOR	Relaying /replacement of stone tiles/brocken stone slab from the roof .Item	**78**	SQM	528

		includes cost of shuttering /scaffolding /safety measure /use of specified equipment for workers of building applicable to complete the work.			
56	Non SOR	providing and laying APP modified pree fabricated 5 layers 3 mm thick water proffing membrane ,black finished reinforced with non woven polyster matt consisting of a coat of bitumin primer for botumen membrane @.4 ltr /sq mtr by the same membrane manufacture of density at 25 degree centigrade ,0.87-0.89 kg/lt and viscosity of 70-160 cps .the laying of membrane shall be got done through authorised applicator of the manufacturer of membrane including laying of geo textile cloth of 70 mils thickness over the APP layer all-inclusive and complete.	**1679**	SQM	425
57	NON SOR	Providing and laying of 150 to 200 mm thick lime dhar on roofing as per traditional practice in 1:2:2:2 (1 lime: 2 sand: 2 old lime powder: 2 brick aggregate 12mm to 40 mm nominal size) using methi, gur, hemp, belgiri etc. including beating and temping as per specification. Ramming for minimum 10 days and curing for min 30 days, as directed by Engineer incharge, and including all leads, lifts and carriage. All complete.	**2586**	SQM	1440
58	Non SOR	100 mm thick (Average) mud phaska of damped brick earth on roofs laid to slope consolidated and plastered with 25mm thick mud mortar mixed with bhusa 35 kg per cum of earth and gobri leaping with mix 1:1 (1 clay: 1 cow dung) and covered with flat tile bricks of class designation 100 with pointing and grouted with lime mortar 1:2 (1 lime 2 Surkhi) mixed with 2% of ontegral water proofing compound by weight of cement and finished neat with FPS brick tile, as directed by Engineer incharge, and including all leads, lifts and carriage. All complete.	**3283**	SQM	600
59	Non SOR	Providing gola 75mm x 75mm in lime concrete 1:2:4 (1 lime: 2 coarse sand: 4 graded stone ballast 10mm nominal size) including finishing with lime mortar 1:2 (1lime: 2 fine sand), as directed by Engineer incharge, and including all leads, lifts and carriage. All complete.	**785**	MTR	143
60	Non SOR	Anti-termite treatment of wooden ceilling and existing vertical wooden member (as	**2920**	SQM	70

		per prescribe process and specification by using cloropyriphos 20% E.C. or equivalent) including removal of old paint layer and polishing of wooden planks of flooring/roofing (old planks which is reuse).Item includes cost of safety measure /use of specified equipment for workers of building required to complete the work .			
61	Non SOR	Making Khurra for 450X 450 mm with 18 mm lime mortar as a base, over additional layer of APP waterproofing layer and sealing all edges,including stone slab of size 600x450x.075 mm (as per detail) complete in all respect .	**30**	EACH	1680
62	Non SOR	Providing and fixing sand stone water spout as per traditional design with overhang of not less than 600 mm and made from single piece stone as per drawing.	**36**	EACH	1855
63	Non SOR	Providing and laying in position specified grade of reinforced cement concrete excluding the cost of centering, shuttering, finishing and reinforcement - All work up to plinth level :Cement concrete grade M-20(NominalMix)with 20 mm maximum size of stone aggregate.	**34**	CUM	4730
64	Non SOR	Reinforcement for R.C.C. work including straightening ,cutting, bending, placing in position and binding including cost of binding wire up to all level including all wastage etc. complete. Cold twisted bars.	**3265**	KG	60
65	Non SOR	Centering and shuttering including strutting, propping etc. and removal of form for :Suspended floors, roofs, landings, balconies and access platform	**280**	SQM	227
		REFIX /REPAIR DOORS/WINDOW /VENTILATORS AND OTHER WOODEN ITEMS			
66	NON SOR	Repairing of frame and re fixing the frames of doors, windows, clerestory windows,ventilators , other frames and wrought frame werever frame is damge /broken / detoriated is replaced with 1st class well seasoned chemically treated teak wood , as per traiditional wooden joinry of members , and fixed in position with the help of holdfasts / traditional holdfast / handmade nails etc . Item inclusive of carving /ingraving of pattens on frames werever missing/damage/latter added is replaced as per orignal detail/drawing and	**14**	CUM	48250

		removal of multiple layer of paint /enamel paint repeatedly on the frame as prescribe process and specification and finish with primer and Redoxide as of appropriate shade as approved by the Engineer In-charge . including all leads, lifts and carriage upto all heights.Item also includes Anti termite treatment of wood before fixing the frame at site, coating/painting of section of embedded timber coming into contact with masonry with tar application/ solignum. Measurement of final finished product will be used for the purpose of volume calculation and for payments. (REFER REPORT IMAGE R/REP/O9/10)			
67	NON SOR	Repairing of frame and re fixing the decorative arched pannel of doors, windows, clerestory windows,ventilators , other frames and wrought frame werever arched pannel is damge /broken / detoriated is replaced with 1st class well seasoned chemically treated teak wood , as per traiditional wooden joinry of members , and fixed in position with the help of holdfasts / traditional holdfast / handmade nails etc . Item inclusive of carving /ingraving of pattens on frames werever missing/damage /latter added is as per orignal detail/ drawing and removal of multiple layer of paint /enamel paint repeatedly on the frame as prescribe process and specification and finish with primer and Redoxide as of appropriate shade as approved by the Engineer In-charge including all leads, lifts and carriage upto all heights.Item also includes Anti termite treatment of wood before fixing the frame at site, coating/painting of section of embedded timber coming into contact with masonry with tar application/ solignum. Measurement of final finished product will be used for the purpose of volume calculation and for payments. (REFER REPORT IMAGE R/REP/O9/10)	**6**	CUM	48250
68	NON SOR	Repair and refixing of doors, windows and ventilators shutters werever shutter is damge /broken / detoriated is replaced with 1st class well seasoned and chemically treated teak wood single/ double leaves 40-50 mm thick fully/partialy glazed openable shutters, panneling of door in wood /glass	**315**	SQM	7,200

		using 6mm thick Clear float Glass of Saint Gobain or equivalent make ,for doors/windows/ventilator as per the existing original design and pattern /or design as per drawing instructed by the Consultants including all necessary fitting/ hardware like screws, nails,metal spikes ,ornamented nails ,metal patterns of flower, metal ribets , parliamentary hinges, tower bolts, handles, traditional handmade ms nails, traditional locking system ,decorative features(butt hinges/tower bolt/ handle /door Aldrop/lock) of the same design, size and weight, etc . Item to also include making all the mouldings and design of the panels werever missing/damage/latter added is replaced as in the original detail with all beading, patti,carving,marking , as per size given/ orignal existing detail/ drawing of shutter /pannel and removal of multiple layer of paint /enamel paint repeatedly on the shutter as prescribe process and specification and finish with primer and Redoxide as approved by the Engineer In-charge/ Consultants .Item also includes Anti termite treatment of wood including all leads, lifts and carriage upto all heights.Mode of Measurement: Area of the door/window which is changed or made new in the entire door shall only be paid. Contractors to not charge the entire area of the shutter unless the entire shutter is made new. The area of the shutter includes the entire opening with all the leaves.(REFER REPORT IMAGE R/REP/O9/10/12/13)			
69	NON SOR	Repair and refixing traiditional wooden railling werever railing is damge /broken / detoriated is replaced with 1st class well seasoned and chemically treated teak wood of approved size / as per old design and old fixing joinry details /design as per dwg as instructed by the Consultants including all necessary fitting/ hardware like screws, nails, Item to also include making all the mouldings and design of the railing werever missing/damage/latter added is replaced as in the original detail with all beading/ patti/gharari as per size etc.and removal of multiple layer of paint /enamel paint repeatedly on the frame as prescribe	**91**	SQM	3000

		process and specification and finish with primer and Redoxide as approved by the Engineer In-charge/ Consultants .Item also includes Anti termite treatment of wood including all leads, lifts and carriage upto all heights. (REFER REPORT IMAGE R/REP/11)			
70	NON SOR	Repairing ,cleaning and repolishing of wooden decorative facia / eve board with/lattoo and kiosk on chajja including making of any missing item / repairing with similer wood as per old design ,materials and specification(i.e. latto ,inner patang patti ,hanging kiosk all complete) .Item includes cost of shuttering /scaffolding /safety measure /use of specified equipment for workers of building required to complete the work . item includes removal of multiple layer of paint /enamel paint/geru repeatedly on the frame to include complete finishing of the facia inclusive of wooden primer and paint or melamine polish or Redoxide as approved by the Engineer In-charge/ Consultants .Item also includes Anti termite treatment of wood (REFER REPORT IMAGE R/REP/18)	**105**	SQM	4200
71	NON SOR	Repairing ,cleaning and repolishing of wooden decorative brackets with 1st class well seasoned and chemically treated teak wood werever missing as per the original details and design found on site of size/ approximately 600 x 750 x 100mm. The damaged bracket to be carefully dismantled from site without damaging the adjacent areas and replaced with new bracket of the same size and design. The bracket to be anchored into the wall using the original details used on site or as directed by the Consultants or Engineer in Charge. The protion of the bracket embedded in the wall to be coated with bitumen on all sides to avoid any rotting of the same and the entire bracket to be coated with 1 coat of solignum. Sample of the bracket to be shown to the Consultants for approvals before procuring and installing the same on site. Item to include 1 coat of primer and redoxide Item also includes Anti termite treatment of wood all necessary carvings, scaffolding etc. complete (REFER REPORT IMAGE R/REP/19/20)	**6**	EACH	3400

72	NON SOR	Repairing ,cleaning and repolishing of wooden decorative arches with new 1st class well seasoned and chemically treated teak wood werever missing as per the original details and design found on site of size approximately/ 1200 x 700 x 250mm. The damaged arch to be carefully dismantled from site without damaging the adjacent areas and replaced with repaired new arch of the same size and design. The arch to be placed into the wall using the original details used on site or as directed by the Consultants or Engineer in Charge. The portion of the arch embedded in the wall to be coated with bitumen on all sides to avoid any rotting of the same and the entire arch to be coated with 1 coat of solignum. Sample of the arch to be shown to the Consultants for approvals before procuring and installing the same on site. Item to include coat of primer and redoxide Item also includes Anti termite treatment of wood, all necessary carvings, scaffolding etc. complete (REFER REPORT IMAGE R/REP/22)	**5**	CUM	48250
73	NON SOR	Repairing of wooden box casing around I sections/wooden section in building and replacing missing areas with 12.5-37 MM mm thick 1st class well seasoned and chemically treated teak wood as per design including making groves, patterns wherever missing and removl of old paint layer, nailing, fixing in place,and antitermite treatment . Item inclusive of carving /ingraving of patterns on casing which made werever missing and finish with primer and Redoxide as approved by the Engineer In-charge/ Consultants . including all leads, lifts and carriage upto all heights.	**200**	SQM	1650
74	NON SOR	Repair and refixing traiditional grilll werever grill is damge /broken / detoriated is replaced with 1st class well seasoned and chemically treated teak wood of approved size / as per old design and old fixing joinry details /design as per dwg as instructed by the Consultants including all necessary fitting/ hardware like screws, nails, Item to also include making all the mouldings and design of the railing werever missing/damage/latter added is replaced as in the original detail with all beading/ patti/gharari as per size etc.and removal of	**54**	SQM	2985

		multiple layer of paint /enamel paint repeatedly on the frame as prescribe process and specification and finish with primer and paint or melamine polish or redoxide paint as approved by the Engineer In-charge/ Consultants . including all leads, lifts and carriage upto all heights.			
75	NON SOR	Repair and refixing of arched shaped ventilator werever ventilator is damge /broken / detoriated is replaced with 1st class well seasoned and chemically treated teak wood ,panneling of ventilator in wood /glass using 6mm thick Clear float Glass of Saint Gobain or equivalent make ,for ventilator as per the existing original design and pattern /or design as per drawing instructed by the Consultants including all necessary fitting/ hardware like screws, nails,metal spikes ,decorative features(butt hinges/tower bolt/ handle /door Aldrop/lock) of the same design, size and weight, etc . Item to also include making all the mouldings and design of the panels werever missing/damage/latter added is replaced as in the original detail with all beading, patti,carving,marking , as per size given/ orignal existing detail/ drawing of shutter /pannel and removal of multiple layer of paint /enamel paint repeatedly on the shutter as prescribe process and specification and finish with primer and redoxide as approved by the Engineer In-charge/ Consultants . including all leads, lifts and carriage upto all heights.Mode of Measurement: Area of the door/window	**38**	SQM	4200
76	NON SOR	Carefully removal of multiple layers of enamel paint /any other paint layer/geru from Wooden decorative/plain columns/vertical surfaces gently with care to keep old designs intact using approved brand paint removers, sandpapering the surface without damaging the historic fabric of building . Blow tourch method for cleaning of wooden member not to be used . Item includes antitermite treatment, primer with Redoxide and filling of very minner crack on wooden member by saw dust and approved adhesive .item also include cost of shuttering /scaffolding /safety measure /use of specified equipment for workers required to	**450**	SQM	380

		complete the work.(Overall length and width will be measured for the purpose of payment)			
		NEW DOORS/WINDOW /VENTILATORS			
77	NON SOR	Providing and fixing new 1st class well seasoned and chemically treated Teak wood work in frames of doors, windows, clerestory windows,ventilators , other frames and wrought frame of approved size , as per traiditional wooden joinry of members, and fixed in position in traditional detail/manner with the help of holdfasts / traditional holdfast / handmade nails etc . Item is inclusive of carving /ingraving of pattens on fames as per existing patterns on original frames / detail drawing and finish with primer and Redoxide as approved by the Engineer In-charge/ Consultants . Item also include all leads, lifts and carriage upto all heights including necessary framework/scafolding etc required to complete the task. Contractor to ensure that moisture content of wood is well within IS codes and Any timber found unseasoned shall be rejected. All timber to be free of knots, cracks etc..Item also includes Anti termite treatment of wood before fixing the frame at site, coating/painting of section of embedded timber coming into contact with masonry with tar application/ solignum. Measurement of final finished product will be used for the purpose of volume calculation and for payments. (REFER REPORT IMAGE R/REP/08/09/12/13)	**17.5**	CUM	2,83,550
78	NON SOR	Providing and fixing new 1st class well seasoned and chemically treated Teak wood work in decorative arched pannel of approved size (same as existing original wooden panels) fixed in position using traditional wooden joinry of various members. Only wooden nails/ traditional handmade nails should be used as necessary with the detail. Item to also include making all the mouldings, carvings, cutting in profile and design of the Arch panels as in the existing original detail or as per detailed drawing provided. Arch panel should be finished from all sides with Redoxide of appropriate shade as approved by the Engineer In-charge / Consultants . Item also include all leads, lifts and carriage upto all	**8**	CUM	2,83,550

		heights including necessary framework/scafolding etc required to complete the task. Contractor to ensure that moisture content of wood is well within IS codes and Any timber found unseasoned shall be rejected. All timber to be free of knots, cracks etc..Item also includes Anti termite treatment of wood before fixing the frame at site, coating/painting of section of embedded timber coming into contact with masonry with tar application/ solignum. (REFER REPORT IMAGE R/REP/08/09/12/13)			
79	NON SOR	Providing and fixing new doors, windows and ventilators shutters of 1st class well seasoned and chemically treated teak wood single/ double leaves 40-50 mm thick fully/partialy glazed openable shutters, panneling of door in wood /glass using 6mm thick Clear float Glass of Saint Gobain or equivalent make ,for doors/windows/ventilator as per the existing original design and pattern /or design as per drawing / as instructed by the Consultants including all necessary fitting/ hardware like screws, nails,metal spikes ,ornamented nails ,metal patterns of flower, metal ribets , parliamentary hinges, tower bolts, handles, traditional MS handmade nails, traditional locking system (hook and chain), decorative features (butt hinges/tower bolt/ handle /door Aldrop/lock) of the same design, material, size and weight, etc . Item to also include making all the mouldings and design of the panels as in the original detail with all beading, patti, carving, marking, as per original existing designs and size of shutters. shutters/panel should be finished from all sides with Redoxide of appropriate shade as approved by the Engineer In-charge / Consultants . Item also include all leads, lifts and carriage upto all heights including necessary framework/scafolding etc required to complete the task. Contractor to ensure that moisture content of wood is well within IS codes and Any timber found unseasoned shall be rejected. All timber to be free of knots, cracks etc..Item also includes Anti termite treatment of wood before fixing the frame at site,	**413**	SQM	10,500

		coating/painting of section of embedded timber coming into contact with masonry with tar application/ solignum. Overall Length and width of the shutter /panel will be measured of final finished product for the purpose of area calculations & payments. (REFER REPORT IMAGE R/REP/08/09/12/13)			
80	NON SOR	Providing and fixing new traiditional wooden railling of 1st class well seasoned and chemically treated teak wood of approved size / as per old design and old fixing joinry details /design as per dwg as instructed by the Consultants including all necessary fitting/ hardware like screws, nails, Item to also include making all the mouldings and design of the railing as in the original detail with all beading/ patti/gharari as per size etc., Item to include complete finishing of the railing inclusive of primer and Redoxide as approved by the Engineer In-charge/ Consultants . and anti termite treatment of wood including all leads, lifts and carriage upto all heights. Contractor to ensure that moisture content is well within IS codes and Any timber found unseasoned shall be rejected. All timber to be free of knots, cracks etc. (REFER REPORT IMAGE R/REP/11)	**64**	SQM	6200
81	NON SOR	Providing and fixing new traiditional highly carved wooden jaali of 1st class well seasoned and chemically treated teak wood of approved size / as per old design and old fixing joinry details /design as per dwg as instructed by the Consultants including all necessary fitting/ hardware like screws, nails, Item to also include making all the mouldings and design of the railing as in the original detail with all beading/ patti/gharari as per size etc., Item to include complete finishing of the railing inclusive of primer and Redoxide as approved by the Engineer In-charge/ Consultants . and antitermite treatment of wood including all leads, lifts and carriage upto all heights. Contractor to ensure that moisture content is well within IS codes and Any timber found unseasoned shall be rejected. All timber to be free of knots, cracks etc.	**4**	SQM	13550
82	NON SOR	Providing and fixing of new hanging decorative wooden facia/eve board of 1st	**51**	SQM	22200

		class well seasoned and chemically treated teak wood with/lattoo,patang patti ,ring and kiosk on chajja with complete width of as per old design ,materials and specification .Item includes cost of shuttering /scaffolding /safety measure /use of specified equipment for workers of building required to complete the work .item to include complete finishing of the shutter inclusive of primer and Redoxide as approved by the Engineer In-charge/ Consultants . and antitermite treatment of wood.(REFER REPORT IMAGE R/REP/18)			
83	NON SOR	Providing and fixing 1st class well seasoned and chemically treated teak wood new decorative brackets as per the original details and design found on site of size /approximately 600 x 750 x 100mm. The damaged bracket to be carefully dismantled from site without damaging the adjacent areas and replaced with new bracket of the same size and design. The bracket to be anchored into the wall using the original details used on site or as directed by the Consultants or Engineer in Charge. The protion of the bracket embedded in the wall to be coated with bitumen on all sides to avoid any rotting of the same and the entire bracket to be coated with 1 coat of solignum. Sample of the bracket to be shown to the Consultants for approvals before procuring and installing the same on site. Item to include coat of primer and redoxide and anti termite treatment of wood , all necessary carvings, scaffolding etc. complete (REFER REPORT IMAGE R/REP/19/20)	**26**	EACH	15350
84	NON SOR	Providing and fixing new wooden decorative arches with 1st class well seasoned and chemically treated teak wood as per the original details and design found on site of size approximately/ 1200 x 700 x 250mm. The damaged arch to be carefully dismantled from site without damaging the adjacent areas and replaced with repaired new arch of the same size and design. The arch to be placed into the wall using the original details used on site or as directed by the Consultants or Engineer in Charge. The portion of the arch embedded in the wall to be coated with bitumen on all sides to avoid	**9**	CUM	283550

		any rotting of the same and the entire arch to be coated with 1 coat of solignum. Sample of the arch to be shown to the Consultants for approvals before procuring and installing the same on site.Item to include coat of primer and redoxide and anti termite treatment of wood , all necessary carvings, scaffolding etc. complete (REFER REPORT IMAGE R/REP/22/23)			
		WOOD WORK TOILET BLOCK			
85	Non SOR	Renewing glass panes, with wooden fillets wherever necessary: Float glass panes of thickness 5.5 mm	**2**	SQM	813
86	Non SOR	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position :Second class teak wood	**2**	CUM	83000
87	Non SOR	Providing and fixing ISI marked flush door shutters conforming to IS:2202(PartI)non-decorative type,core of block board construction with frame of 1st class hardwood and well matched commercial 3 ply veneering with vertical grain s or crossband sand face veneers on both faces of shutters using following hinges. 35 mm thick including ISI markedS tainless Steel butthinges with necessary screws.	**7**	SQM	1500
		FLOORING			
88	NON SOR	Flooring with 1:1:1 (1 lime : 1 Surkhi :1 Coarse sand) with lime mortar including organic additives like sugarcane molasses, extracts of beil,maithi, etc. as per traditional practices. The preparation of mortar is to be done following traditional practice includes using chakki/garat (wet grinding of lime and sand by heavy stone mill / chakki/garat), application of mortar in single layers, with a gap of minimum 3 days and not more than 10 days from previous layer. The item rate includes application ofLoi, tampering, beating, reworking of plaster till the shrinkage cracks disappear and desired finish achieved and curing for 10 days.. 50 mm Thick and finish with Lime kara 1:2 (1lime cream : 2 Zikki powder) grinding mortar with grinding mill/manually on lime base,on all flat surface in two coats.First coat applying 3mm to 4mm thick and curing properly at least 7 days,second finishing coat done after 7days of previous coat as per	**660**	SQM	1920

		traditional practice.(thickness not more than 6 mm.)			
89	NON SOR	Restoration/repairing of basalt stone flooring of existing floors including replacement/patch work of damaged stone by using orignal size stone ,werever required . item inclusive of removal of damage stone and base work and fixing of new stone as per site .	**1205**	SQM	1950
90	NON SOR	Providing and laying Hand dressed basalt stone flooring of size 300x450x100mm or asapproved over 20 mm (average) thick base of lime Mortar 1:2 (1 Slaked lime:2 coarse sand) including flush pointing with Lime Mortar with an admixture of pigment to match the shade of stone, Joints between stones should be less than 12 mm. pattern & design as per Consultants ural drawing.	**2630**	SQM	2400
91	NON SOR	Sub base for flooring: sub- base of 50mm thick bed of local sand/morum/hard copra evenly spread and rammed brick ballast bed 150mm thick with lime mortar in equal proportion, as directed by Engineer incharge/ Consultants , and including all leads, lifts and carriage. All complete.	**3604**	SQM	325
92	NON SOR	Providing and laying Hand dressed cobble stone flooring of size 200x200x100mm (average) over 20 mm (average) thick base of lime Mortar 1:2 (1 Slaked lime:2 coarse sand) including flush pointing with Lime Mortar with an admixture of pigment to match the shade of stone, Joints between stones should be less than 12 mm. pattern & design as per Consultants ural drawing.	**1356**	SQM	1750
		FLOORING TOILET BLOCK			
93	NON SOR	Providing and laying of sand stone kerb/ Kerb stone of size 300x150x200 with cement mortar and filling of joints with mortar of matching colour	**240**	MTR	750
94	NON SOR	Providing and fixing 10mm thick acid and or alkali resistant tiles of approved make and colour using acid and or alkali resisting mortar bedding and joints filled with acid and or alkali r esisting cement as per IS:4457 complete as per the direction of Engineer-in- Charge. In flooring on a bed of1 0mm thick mortar1:4(1acidproof cement:4 coarse sand).Acid and alkali resistant tile.	**113**	SQM	1,080

95	NON SOR	In dado/skirting on 12 mmt hick mortar1:4(1acidproof cement: 4 c oarse sand).Acid and alkali resistant tile.	**110**	SQM	1,120
	NON SOR	**FINISHING**			
96	NON SOR	Lime plaster 15 to 40 MM thickness on flat wall/vertical surfaces Providing and application of Lime – surkhi Plaster 1:1 (1 slaked Lime: 1 surkhi) on wall surfaces of thickness between 15 to 40 MM including organic additives like sugarcane molasses, extracts of beil,maithi, etc. as per traditional practices. The preparation of mortar is to be done following traditional practice includes using chakki/garat (wet grinding of lime and sand by heavy stone mill / chakki/garat), application of mortar in 3 layers with last layer of 6 MM thick, with a gap of minimum 3 days and not more than 10 days from previous layer. The item rate includes application of Loi, tampering, beating, reworking of plaster till the shrinkage cracks disappear and desired finish achieved and curing for 10 days. Item also includes all lead and lift, establishing work yard / chakki, scaffolding, formwork tools and implements etc.	**7220**	SQM	730
97	NON SOR	Lime plaster 5 to 10 MM thickness on ceiling and curved surfaces. Providing and application of Lime – surkhi Plaster 1:1 (1 slaked Lime: 1 surkhi) on wall surfaces of thickness between 5 to 10 MM including organic additives like sugarcane molasses, extracts of beil,maithi, etc. as per traditional practices. The preparation of mortar is to be done following traditional practice includes using chakki/garat (wet grinding of lime and sand by heavy stone mill / chakki/garat), application of mortar in single layers, with a gap of minimum 3 days and not more than 10 days from previous layer. The item rate includes application ofLoi, tampering, beating, reworking of plaster till the shrinkage cracks disappear and desired finish achieved and curing for 10 days. Item also includes all lead and lift, establishing work yard / chakki, scaffolding, formwork tools and implements etc.	**1955**	SQM	880
98	NON SOR	Decorative plaster work in lime surkhi mortar (1:2) as per traditional practice and design, the mortar should be prepared by the grinding mill only. The thickness varying	**1790**	SQM	1225

		from 10mm to 100mm as per traditional design, as directed by Engineer incharge/ Consultants , and including all leads, lifts and carriage. All complete.			
99	NON SOR	Providing new decorative Stucco work in lime, sand, Surkhi mortar (1:2:1), 20 - 40mm thick as per existing design work/ traditional practices by skilled craftsman, the stucco work should be done as per restoration nature, the mortar should be prepared by grinding mill adding gur,methi & gugal. Sample of the design and details of the decorative stucco work to be shown to the Consultants for necessary approvals before finalizing and finishing the same in Lime and Sand plaster in proportions 1:2 with the same not more than 10mm in thickness and a final coat of 5mm Thick lime putty. Item to be paid only for the part of the design made in new plaster and not the entire panel. Item to include curing for 21 days using water pumps or any other necessary methods to avoid any surface cracks. In case of development of surface cracks, the same to be redone as part of rectification works to achieve the necessary level of finish as directed by Consultants or Engineer in charge.Item to include all necessary tools, scaffold if required etc. complete	**1380**	SQM	2360
100	NON SOR	Making Mehrab's, Arches, pillers, highly decorative creepers, flower of small sizes etc.in lime surkhi plaster (1:2) as per old trditional practices(Arches, Mehrab's) in three coats for base course and subsequent course and loi tamping, beating till the shrinkage cracks disappear than making ornamental flowering/design etc. The work is to done with all leads and lifts as per work of restoration nature as per direction of Engineer incharge. Lime surkhi Plaster 1:2 (1 lime: 2 surkhi) on pillars and other decorative features including cornices and bands.	**266**	SQM	2070
101	NON SOR	Providing & applying Lime kara 1:2 (1lime cream : 2 Zikki powder) grinding mortar with grinding mill/manually on lime base,on all flat surface in two coats.First coat applying 3mm to 4mm thick and curing properly at least 7 days,second finishing coat done after 7days of previous coat as per traditional practice.(thickness not more than 6 mm.)	**7930**	SQM	960

102	NON SOR	Providing & applying Lime kara 1:2 (1lime cream : 2 Zikki powder) grinding mortar with grinding mill/manually (on lime sand/sand plaster base) on ceilling /curved lime plaster in two coats.First coat applying 3mm to 4mm thick and curing properly at least 7 days,second finishing coat done after 7days of previous coat as per traditional practice.(thickness not more than 6 mm.	**1955**	SQM	1090
103	NON SOR	Providing lime kara on decorative/ornamental surfaces or embellishments as per decorative /ornamental designs as per old existing carving on surface highly precise	**3436**	SQM	1570
		FINISHING TOILET BLOCK			
104	NON SOR	12 mm cement plaster 1:3 (1 cement: 3 coarse sand) finished with a floating coat of neat cement.	**300**	SQM	143
105	NON SOR	6 mm cement plaster of mix : 1:3 (1 cement: 3 fine sand)	**113**	SQM	83
106	NON SOR	Providing and applying plaster of paris putty of 2 mm thickness over plastered surface to prepare the surface even and smooth complete	**300**	SQM	82
107	NON SOR	Distempering with 1st quality acrylic washable distemper (ready mixed) of approved manufacturer and of required shade and colour complete. as per manufacturer's specification.Two or more coats on new work.	**300**	SQM	29
108	NON SOR	WATER DOWN DRAIN PIPE - Providing and fixing CI PIPE of 150 mm dia with all fixing acessories including clamps,angle ,screw ,nut bolt and required cutting and cheseling etc as per the instruction of site engineer /Consultant .Item includes cost of shuttering /scaffolding /safety measure /use of specified equipment for workers of building applicable to complete the work	**48**	MTR	600
		CHEMICAL CLEANING			
109.1	NON SOR	Chemical cleaning of stone surface to clean from yellowness, blackness, algae growth, dust, dirty oil accretions, lime and gypsum deposits, soot, graffiti, joining of gaps, taking out nails and other additions,removal of multiple layer of enamel pait/other paint/ geru layer , filling oh holes/ voids in marble /stone and application of preservatives coating (pva -lavolin base) to prevent	**2900**	SQM	785

		superficial decay, under the strict supervision of archaeological chemist or art conservator. For Vertical and flat surfaces etc.			
109.2	NON SOR	Chemical cleaning of stone surface to clean from yellowness, blackness, algae growth, dust, dirty oil accretions, lime and gypsum deposits, soot, graffiti, joining of gaps, taking out nails and other additions,removal of multiple layer of enamel pait/other paint/ geru layer , filling oh holes/ voids in marble/stone and application of preservatives coating (pva -lavolin base) to prevent superficial decay, under the strict supervision of archaeological chemist or art conservator.. For ceilling and curved surface etc.	**950**	SQM	860
109.3	NON SOR	Chemical cleaning of stone surface to clean from yellowness, blackness, algae growth, dust, dirty oil accretions, lime and gypsum deposits, soot, graffiti, joining of gaps, taking out nails and other additions,removal of multiple layer of enamel pait/other paint/ geru layer , filling oh holes/ voids in marble/stone and application of preservatives coating (pva -lavolin base) to prevent superficial decay, under the strict supervision of archaeological chemist or art conservator. For decorative surface including carvings, chajja,brackets,plinth ,flag post holders etc.	**1590**	SQM	119
	NON SOR	**ART WORK MAIN PORCH**			
110.1	NON SOR	Documentation of ornamental work at ceilling of entrence veranda / stone balcony /paintings/decorative art work before conservation as per standard conservation practice and treatment carried out to be detailed in a report. Work to include all material costs and to be executed by art conservators with minimum 3 years experience in wall painting conservation under continuous on-site supervision of senior art conservator having minimum 10 years experience in the field of wall painting conservation.	**57**	SQM	3600
110.2	NON SOR	Conservation of ornamental work /paintings/decorative art work in the darbar hall by cleaning painted surfaces of dust, dirt, deposits, oil accretions etc. with suitable solvents, gels & dry cleaning methods, consolidation of weakened paint	**57**	SQM	12000

		layers and support using compatible adhesives and consolidants,removal of cement plaster,stiching of crack grouting of bulges/cavities with compatible lime-based grouts without synthetic adhesives, extraction of salts where present, and filling of small lacunae to level of surrounding plaster with compatible lime-based fills. Documentation of paintings , during, and after conservation to be carried out as per standard conservation practice and treatment carried out to be detailed in a report. Work to include all material costs and to be executed by art conservators with minimum 3 years experience in wall painting conservation under continuous on-site supervision of senior art conservator having minimum 10 years experience in the field of wall painting conservation.			
		OTHER WORKS			
111	NON SOR	Providing & fixing new sandstone (of approved quality) chajjas (As per existing size length 1200 x width 600 to 750 and thikness 100 mm) by replacing damaged / missing stone chajja, wherever required as per old existing design, including cost of dismantling /making of wall/parapet were chajja is inserted /fixed following existing design & construction details. Item includes cost of safety measure /use of specified equipment for workers of building required to complete the work .at all heights & including all leads and lift.external edge of the chajja will be measured for payments.	**318**	MTR	2710
112	NON SOR	Repair of existing sandstone chajja (of approved quality) chajjas (As per existing size length 1200 x width 600 to 750 and thikness 100 mm) by replacing damaged / missing stone chajja, wherever required as per old existing design, including cost of dismantling /making of wall/parapet were chajja is inserted /fixed following existing design & construction details. Item includes cost of safety measure /use of specified equipment for workers of building required to complete the work .at all heights & including all leads and lift.	**360**	MTR	1300
113	NON SOR	Cleaning ,Painting(with two coat of enamel paint over base coat of primer) and antirust treatment of old grill ,metal balustrade and jaali of balcony etc	**179**	SQM	100

114	NON SOR	Repairing and cleaning of existing wooden staircase from sixth to top floor as per old design intact ,including replacement of damaged wooden member trade ,riser, balustrade,hand rail,nosing,scotia ,string etc with teak wood werever required including removal of multiple layer of enamel paint from the surface of fixture as per prescribed process and specification and Redoxide with base coat primer .Item includes cost of specified equipment for workers of building required to complete the work .	**2**	JOB	100000
115	NON SOR	Repairing and cleaning of existing iron ladder of top floor including alignment of stair case,welding ,adding ,replacement of any member and painting with two coat of enamel paint over base coat of primer and antirust treatment .Item includes cost of safety measure /use of specified equipment for workers of building required to complete the work .	**1**	JOB	25000
116	NON SOR	Repairing of existing staircase as per old design intact ,including removal of multiple layer of enamel paint from the surface /masonry work werever required and finish with lime kara /paint as per prescribed process and specification and polishing of fixture .Item includes cost of shuttering /scaffolding /safety measure /use of specified equipment for workers of building required to complete the work	**3**	JOB	25000
117	NON SOR	Supplying and fixing rough dressed stone ' dasa ' stone parapet covering wall of size width 600x thickness 100 mm , cornices sriwan, string courses etc. in cement mortar 1:4 including pointing with admixture of pigment matching with the stone shade .Patch work as required including all lead ,lift upto all height.	**4.2**	CUM	7,000
118	NON SOR	Restoration of existing sandstone " jharokhas " at front facade on site of the same design & size as per the original . Item to include fabricating the damage balusters/piers, decorative bracket , parapet thambli ,dasa ,chatri ,arch etc as per the original details and design on site, including preparing necessary base for fixing the missing elements or fixing the same element after repair using S.S. dowels , filling all gaps and rpair all major/ minor crack by ss dowel	**4**	JOB	50000

		/realignment/ using adehsive for very minor cracks as directed by the Consultants or Engineer in Charge. Item to include getting approval of samples of any missing elements from the Consultants before fixing the same on site. Item to include all necessary tools. hardware etc. complete. Mode of Measurement: The item to be paid as per the complete on jharokha including from top point of pinacle to last point of hanging kiosk as a one job .(REFER REPORT IMAGE R/REP/04/05)			
119	NON SOR	Restoration of existing sandstone " balcony " at front facade on site of the same design & size as per the original . Item to include fabricating the damage balusters/piers, decorative bracket , parapet thambli ,dasa ,chatri ,arch etc as per the original details and design on site, including preparing necessary base for fixing the missing elements or fixing the same element after repair using S.S. dowels , filling all gaps and rpair all major/ minor crack by ss dowel /realignment/ using adehsive for very minor cracks as directed by the Consultants or Engineer in Charge. Item to include getting approval of samples of any missing elements from the Consultants before fixing the same on site. Item to include all necessary tools. hardware etc. complete. Mode of Measurement: The item to be paid as per the complete on jharokha including from top point of pinacle to last point of hanging kiosk as a one job . (REFER REPORT IMAGE R/REP/06/07)	**2**	JOB	200000
120	NON SOR	Repairing and cleaning of existing "wooden jharokha" of front facade as per old design intact ,including replacement of damaged wooden member i.e wooden base , decorative columns ,arch, parapet , chatri and railing etc with teak wood wherever required ,and refixing of new elements which is missing as directed by the Consultants or Engineer in Charge. Item to include getting approval of samples of any missing elements from the Consultants before fixing the same on site.itm inclusive of all required hardwere , glass pannes, wooden pannel ,nails ,wedge etc removal of multiple layer of enamel paint from the surface of fixture as per prescribed process	**2**	JOB	50000

		and specification and melamine polishing of fixture .Item includes cost of shuttering /scaffolding /safety measure /use of specified equipment for workers of building required to complete the work .(REFER REPORT IMAGE R/REP/03)			
121	NON SOR	Repairing and cleaning of existing "wooden balcony " of front and rear facade as per old design intact ,including replacement of damaged wooden member i.e wooden base , decorative columns ,arch,parapet , chatri and railling etc with teak wood werever required ,and refixing of new elements which is missing as directed by the Consultants or Engineer in Charge. Item to include getting approval of samples of any missing elements from the Consultants before fixing the same on site.itm inclusive of all required hardwere , glass pannes, wooden pannel ,nails ,wedge etc removal of multiple layer of enamel paint from the surface of fixture as per prescribed process and specification and melamine polishing of fixture .Item includes cost of shuttering /scaffolding /safety measure /use of specified equipment for workers of building required to complete the work .(REFER REPORT IMAGE R/REP/01/02)	**2**	JOB	200000
122	NON SOR	Restoration of existing Wooden " jharokhas " at west facade on site of the same design & size as per the original . Item to include fabricating the damage /miussing wooden rafter, purlin, vertical post, hand rail, grill, planks, cantilever wooden & steel brackets,eve boards , rafter and purlin as per the original details and design on site, cleaning of all existing wooden /steel members ,antitermite and redoxide paint over wooden member ,antirust paint over metalic member ,replacing of existing corrugated sheet matched in shape, size and material with existing, fixed with all fixtures etc as directed by the Consultants or Engineer in Charge. Item to include getting approval of samples of any missing elements from the Consultants before fixing the same on site. Item to include all necessary tools. hardware etc. complete. Mode of Measurement: The item to be paid as per the complete on jharokha including from top point of pinacle to last point	**1**	JOB	350000

123	NON SOR	Restoration of existing sandstone " GATE " at all 4 location on site of the same design & size as per the original . Item to include dismentaling of stone massonry/brick massonry /rcc work on side of gate /or for closing of gate repair of damaged member of gate in stone work including change of stone/patch work werever required ,and change of roof of gate with replacement of damaged meber of roofing in wood or stone as per orignal design and provide support frame /traditional hinge (chool) as directed by the Consultants or Engineer in Charge. Item to include getting approval of samples of any missing elements from the Consultants before fixing the same on site. Item to include all necessary tools. hardware etc. complete. Mode of Measurement: The item to be paid as per the complete on gate including all masonry/roofing/finishing work as a one job excluding shutter and frame .	**4**	JOB	300000
124	NON SOR	Repairing and cleaning of existing iron flag post of top floor including refixing of flagpost , water proofing provision for flagpost and painting with two coat of enamel paint over base coat of primer and antirust treatment .Item includes cost of shuttering /scaffolding /safety measure /use of specified equipment for workers of building required to complete the work	**2**	JOB	20000
125	NON SOR	Restoration/repair of existing treasury door on site of as per the original details and machenism . Item to include cleaning and painting/polishing ,cleaning of all existing steel members ,antirust paint over metalic member ,replacing of existing corrugated sheet matched in shape, size and material with existing, fixed with all fixtures etc as directed by the Consultants or Engineer in Charge.	**2**	JOB	100000
126	NON SOR	Restoration /repair of existing Wooden tijori /box on site of the same design & size as per the original . Item to include fabricating the damage /miussing wooden member as per the original details and design on site, cleaning of all existing wooden /steel members ,antitermite and redoxide paint over wooden member ,antirust paint over metalic member ,replacing of existing corrugated sheet matched in shape, size and material with	**1**	JOB	200000

		existing, fixed with all fixtures etc as directed by the Consultants or Engineer in Charge. Item to include getting approval of samples of any missing elements from the Consultants before fixing the same on site. Item to include all necessary tools. hardware etc. complete.			
127	NON SOR	Providing and fixing 25 mm dia PVC conduit for laying cable in flooring as per design including all bend ,junction box - all complete .	**2500**	MTR	150
128	NON SOR	Brick work with well burnt chimney bricks in bulls patent trench kiln manifactured by ghol process, crushing strength not less than 40 kg /sq cm and water absorption not more than 15% in foundation and plinth Cement mortar 1:4 (1 cement : 4 coarse sand) (brick massonry for drain)	**7**	cum	4440
129	NON SOR	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering All work up to plinth level. Cement concrete grade M-20(NominalMix)with 20mm maximum size of stone aggregate	**5**	cum	4600
130	NON SOR	Centering and shuttering including strutting, propping etc. and emoval of form work for : walls (any thickness) including attached pilasters, buttresses, plinth and string courses fillets, kerbs and steps etc.	**96**	SQM	216
131	NON SOR	**LIGHTING CONDUCTOR**			
	NON SOR	Providing and fixing of lightning conductor finial, made of 25 mm dia 300mm long, copper tube, having single prong at top, with 85 mm dia 3mm thick copper base plate including holes etc. complete as required	**2**	EACH	750
	NON SOR	Fixing of lightning conductor finial (single prong) with base plate including holes etc. complete as required.	**2**	EACH	154
	NON SOR	Jointing copper / G.I. tape (with another copper/ G I tape, base of the finial or any other metallic object) by riveting / nut bolting/ sweating and soldering etc as required.	**4**	EACH	72
	NON SOR	Providing and fixing copper tape 20 mm X 3 mm thick on all surface of wall for lightning conductor complete as required including dending and foolowing profile of the building surface.(For horizontal and verticlas run)	**100**	MTR	782

	NON SOR	Providing and fixing testing joint, made of 20 mm X 3 mm thick copper strip, 125 mm long, with 4 nos. of tinned brass bolts, nuts, chuck nuts and spring washers etc. complete as required.	**10**	EACH	195
	NON SOR	Providing and laying copper tape 32 mm X 6 mm from earth electrode directly in ground as required.	**25**	MTR	1,122
	NON SOR	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 metre long etc. with charcoal/ coke and salt as required.	**1**	SET	9,300
	NON SOR	Supplying and laying 25 mm X 5 mm copper strip at 0.50 metre below ground as strip earth electrode, including connection/terminating with nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of brass nut bolt & spring washer spaced at 50mm)	**50**	MTR	750
	NON SOR	Providing and fixing 25 mm X 5 mm copper strip in 40 mm dia G.I. pipe from earth electrode including connection with brass nut, bolt, spring, washer excavation and re-filling etc. as required.	**50**	MTR	1,080
	NON SOR	Providing and fixing 25 mm X 5 mm copper strip on surface or in recess for connections etc. as required.	**50**	MTR	856
132		**SUPPORT FRAME**			
132.1	NON SOR	Providing and fixing double scaffolding system (cup lock type) on the exterior side of building/structure, upto 25 metre height, above ground level, including additional rows of scaffolding in stepped manner as per requirement of site, made with 40mm dia M.S. tube, placed 1.5 metre centre to centre, horizontal & vertical tubes joint with cup & lock system with M.S. Tubes, M.S. tube challis, M.S. clamps and staircase system in the scaffolding for working platform etc. and maintaining it in a serviceable condition for execution of work of cleaning and/ or pointing and/ or applying chemical and removing it thereafter. The scaffolding system shall be stiffened with bracings, runners, connecting with the building etc, wherever required, if feasible, for inspection of work at required locations	**14210**	SQM	159

		with essential safety features for the workmen etc., complete as per directions and approval of Engineer-in-charge. sqm 159.90 Note:- (1) The elevational area of the scaffolding shall be measured for payment purpose. (2) The payment will be made once only for execution of all items for such works.			
132.2	NON SOR	Providing and erecting of Support structure for gateway by using structural steel, I-sections, Angles, Tees, pipes by welding/ bolting as necessary as per requirement including base plates, jacks etc. item also includes cutting, hoisting, lifts, leads carriage, custom fabrication, etc. as per the instructions/ directions of site engineer. rate of the item includes dismantling of support structure after the completion of the work and removal of material from site. Shop drawing of same is submitted by contractor and approved by site engineer.(2) The payment will be made once only for execution of all items for such works.	**30000**	KG	30
132.3	NON SOR	Providing and erecting of tubular steel props and/or scaffolding to support dilapidated / partially damage structure as per the instruction of Engineer in charge including wooden base plates / top support (of various sizes as required up to 2' X2') as necessary including providing all necessary bracings, jalies, ties, Jacks etc. rate of the item includes careful dismantling of support structure after the completion of the work and removal of material from site. Shop drawing of same is submitted by contractor and approved by site engineer.(2) The payment will be made once only for execution of all items for such works.	**8000**	KG	30
132.4	NON SOR	Providing and fixing 18MM thick ply wood pasted with 25MMthick thermocol sheet on one side to provide uniform support to the walls of the minarets and other out of plumb masonry structures. Plywood to be cut of various sizes as per the profile of the building. As per design.rate of the item includes careful dismantling of support structure after the completion of the work and removal of material from site. (2) The payment will be made once only for execution of all items for such works.	**500**	SQM	2100
		STRUCTURAL STRENTHNING			

135	NON SOR	Conduting Ultrasonic Pulse Velocity Test (Non-Destructive Test) to check the density of the distressed wooden beams and solid wooden beams to compare and identify the wooden members which has deteriorated due to termite action and weathering, etc.	500	Per Point	1000
136	NON SOR	Procuring custom designed anchor assembly of predefined dimensions. Each anchor assembly shall constitute of the following parts: (a) Reinforcing Member: - Stainless steel Rebar/stud/tube of Grade 304 conforms to BS 6323/6744/6105 & ASTM A554/A312 as per applicability. The diameter and size of the reinforcing members will based upon the structural requirement of structure. (b) Grout: - The grout shall be a one component dry powder mix. Its basic ingredient should be natural mineral and Portland product with graded aggregates, including sand and lime. The constituents, when proportioned with water, produce a pumpable, non-shrinking grout. The grout should NOT contain any epoxy & resin binders. (c) Sock: - This should be a specially woven tubular sock with expansion properties to suit the diameter of the bore hole in the substrate. The sock should have property to expand in lateral direction only. The mesh of the sock is to be designed to contain the aggregates of mixed grout while still allowing the milk of grout to flow from its pores. (d) Grout Delivery Pipe: - This component forms the part of all structural anchors only. It is not required for the hollow reinforcing member anchor assemblies that are generally used for stitching purposes only. A 10-12mm dia. PVC hollow pipe for delivery of grout under pressure inside the sock & around the reinforcing rebar/stud such that the grout inflates the sock all around the rebar/stud starting from far inside end, moving outward towards the front & forming mechanical bond between rebar/stud & substrate.			
136.1		1500mm length Grip Bar 20mm diameter stainless steel of grade 304 in 75mm diameter cored hole to be provided in horizontal direction from exterior façade, such to tie back the balcony projections with the main structure.	50	MTR	100000

136.2		1000mm length RAC Anchors for stitching purpose. The RAC anchors comprises of 10mm diameter stainless steel hollow tube of grade S304 in 40mm diameter cored hole to be provided as per site conditions for sitching the sections at joints and elsewhere within the structure.	80	MTR	35000.00
137	NON SOR	Procuring of consumable-specialized custom made diamond drill bits based on the hardness of the substrate material that needs to be cored for installation of anchors and weep-hole assemblies. These diamond drill bits have an average life of 10-12 meters each and are extremely light in weight for accurate coring. The drill bits should be able to core effectively holes in the substrate material.			
137.1		40mm x 500mm special diamond core bits for dry coring	5	Pc.	20000
137.2		40mm x 1000mm special diamond core bits for dry coring	5	Pc.	24000
137.3		75mm x 500mm special diamond core bits for dry coring	5	Pc.	28000
137.4		75mm x 1500mm special diamond core bits for dry coring	4	Pc.	35000
137.5		1/2" Extension Bars	5	Pc.	14000
137.6		1 1/4" unc male to 1/2" bsp adaptors	5	Pc.	12000
138	NON SOR	Marking of all anchors using thread line technology and spirit levelers on the surface of each structural member for accurate guidance of insertion of anchor into the structural member.	100	Per Location	4000
139	NON SOR	Coring in the cracked structural members with specialized machinery and trained Corer under the supervision of Senior Corer. Coring should be done by use of high speed low vibratory coring machine with diamond core bits with stringent accuracy levels up to maximum deviation of 0.05% deviation in up to 10 meter lengths. It should impart negligible vibration to the structure so that no further distress is caused in already distressed structure that is being strengthened. The rate includes the rental of two sets of specialized machinery comprising of light weight coring machine, light weight coring motors, rig, 2 nos. - Extension rods/pipes with adaptors to connect them with the drill bits, etc. required for installation of the designed	100	Per meter	12000

		anchors. It also includes the cost for travelling of manpower such as Engineer, specially trained corers, etc. to and from site.			
140	NON SOR	Grouting of anchors after careful insertion of the anchors in the cleaned holes using Presstec grout, 14-18 degree cooled potable water, paddle mixer, strainer, pressure pot, air compressor will hose pipelines, nozzles, etc. all as per the Engineer in-charge. The rate includes the rental of one set of specialized machinery comprising of pressure pot, paddle mixer, air compressor with hose line and nozzles, etc. required for grouting of the anchors within the cored hole. It also includes the cost for to and fro movement of manpower such as Engineer and specially trained workforce to site and setting up of establishment on site.	100	Per meter	12000
141	NON SOR	Finishing of the surface by cutting and shaping the front portion of the core obtained during the coring and placing it in gap left beyond the anchor and edge of the structural member with suitable glue based adhesive after due consultation with the Conservation Authority to match the surface look of the original member.	5	Per Pc.	2500
142	NON SOR	Drilling, providing, applying, and fixing of packers of PVC/Steel/Plastic for injection of lime grout manufactured under factory conditions for superior strength such as Mape-Antique I in brick masonry so as to fill the cavities. N.B – Approx. 2-3 packers are required for every meter length.	50	Per Pc.	300
143	NON SOR	Lime grouting using ratio 1:1 lime and 1 sand /surkhi or as specified by Conservation Consultant / lime grout manufactured under stiff factory conditions (Mape-Antique I or equivalent make) for superior strength to fill all gaps / voids / air pockets visible from bottom of the slab to densify the slab and enhance the contact area within the slab. The lime grout shall be a cement free, fluid hydraulic binder in powder form which should form an injectable slurry made from lime, Eco-pozzolan, natural ultra-fine sand and special additives according to a formulation developed under factory conditions. When mixed with water in mix ratio 100:35 (lime powder: water) in a	**3000**	Per Kg.	500

		suitable clean container, the lime grout forms a fluid, volumetrically stable injection slurry resistant to salts which is easy to inject with a manual or electronic pump or by gravity casting in structures with cracks, gaps or internal cavities. Once hardened, the properties of slurry made using lime grout, such as mechanical strength, modulus of elasticity and porosity, are very similar to slurry made using lime, lime-pozzolan or hydraulic lime originally used in the construction of old buildings. The lime slurry, shall also have properties which make the product resistant to various chemical-physical aggressive phenomena, such as the presence of soluble salts, freeze-thaw cycles and alkali-aggregate reactions. Apart from the above, the lime grout must have the following characteristic – Appearance - Powder, Colour - White 'Maximum size of aggregate - 100, Bulk density (kg/m3) - 1100, Consistency of mixture - Superfluid, Bleeding - Absent Compressive strength after 28 days (N/mm2) - 18			
		SIGNAGE RAILLING & BENCHES			
144	NON SOR	Providing and fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing and staircase railing including applying a priming coat of approved steel primer.	**3135**	kg	105
145	NON SOR	providing and fixing red sand stone benches (without back rest) as per design fixing concrete base (300x300x300) using nut and bolts. all Inclusive, including excavation for footing, base work fixing etc. with all leads and lifts under the supervision of Engineer in charge.	**20**	NOS	12000
146	NON SOR	Providing and fixing dustbin as per drawings and design including carriage of material upto all leads and lifts and as per direction of Engineer incharge.	**10**	NOS	4000
147	NON SOR	Providing and installing signage of bronze plate of 900 x600 MM size and as per design including graphics and text content as per detail and fixed over bronze pillar fix on grnite stone over the rcc base in ground with PCC 300 X 900 as per inclusive of required excavation as per detailed drawing and specifications and elsewhere as directed by	**5**	NOS	60000

		Engineer in charge/ Local Archaeological officer, all complete.			
148	NON SOR	**RAIN WATER HARWESTING**	**0**		
10.1	NON SOR	Providing and laying filter material as given below in recharge pit/ percolation pit or soak pit/ waste water treatment system. Sand (1.5 mm to 2.00 mm)	**5**	Cu M	1,365
10.2	NON SOR	Providing and laying filter material as given below in recharge pit/ percolation pit or soak pit/ waste water treatment system. Gravel/Pebbles (5 to 25 mm)	**5**	Cu M	1,138
10.3	NON SOR	Brick bats	**5**	Cu M	955
10.4	NON SOR	Supplying, assembling, lowering and fixing in vertical position in bore well, plasticized 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.150 mm nominal size dia.	**60**	MTR	587
10.5	NON SOR	Providing and fixing suitable size threaded mild steel cap or spot welded plate to the top of bore well housing/ casing pipe, removable as per requirement, all complete for borewell	**1**	each	195
10.6	NON SOR	Boring/drilling bore well of required dia for casing/ strainer pipe, by suitable method prescribed in IS: 2800 (part I), including collecting samples from different strata, preparing and submitting strata chart/ bore log, including hire & running charges of all equipment, tools, plants & machineries required for the job, all complete as per direction of Engineer -in-charge, upto 60 metre depth below ground level.350 mm dia	**60**	MTR	445
11.0		**pipes and chamber**			
11.1	NON SOR	Constructing brick masonry road gully chamber 50x45x60 cm with bricks of class designation 40 in cement mortar 1:4 (1 cement : 4 sand) including 500x450 mm pre-cast R.C.C. horizontal grating with frame (minimum weight of grating 75 kg) complete as per standard design : With Modular bricks	**4**	EACH	3250
11.2	NON SOR	Providing and laying S&S centrifugally cast (spun) iron pipes (Class LA) conforming to IS - 1536 :100 mm dia pipe including flanged C.I. standard specials such as tees, bends, collars, tapers, caps etc., suitable for flanged jointing as per IS : 1538 :Up to 300 mm dia	**10**	MTR	4830

11.3	NON SOR	Providing and fixing Chlorinated Polyvinyl Chloride (CPVC) pipes, having thermal stability for hot & cold water supply including all CPVC plain & brass threaded fittings This includes jointing of pipes & fittings with one step CPVC solvent cement, trenching ,refilling & testing of joints complete as per direction of Engineer in Charge.			
11.3.1		150 mm nominal outer dia Pipes	**25**	MTR	4228
11.3.2		100 mm nominal outer dia Pipes	**25**	MTR	2435
		DRAIN CONECT TO SEWER	**0**		
11.4	NON SOR	Providing and laying non-pressure NP2 class (light duty) R.C.C. pipes with collars jointed with stiff mixture of cement mortar in the proportion of 1:2 (1 cement : 2 fine sand) including testing of joints etc. complete : 150 mm dia. R.C.C. pipe	**50**	MTR	268
12.0	NON SOR	**TOILET & PLUMBING**	**0**		
12.1	NON SOR	Providing laying fixing and testing GI pipe line and special tee bends sockets, elbows etc as per design . inside building and tested etc. complete including cutting and threading (b) including cost of special tee bands socket etc ,all complete	**30**	MTR	160
12.2	NON SOR	Providing and fixing white vitreous china pedestal type water closet (European type) with seat and lid, 10 litre low level white vitreous china flushing cistern & C.P. flush bend with fittings & C.I.brackets, 40mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete including painting of fittings and brackets, cutting and making good the walls and floors wherever required :	**5**	each	3823
12.3	NON SOR	Providing and fixing C.P. brass bib cock of approved quality conforming to IS:8931.15 mm nominal bore.	**160**	each	360
12.4	NON SOR	Providing and fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to IS:8931. 15 mm nominal bore.	**5**	each	360
12.5	NON SOR	providing and fixing in position best indian made bevelled edged 5.5 mm thick mirror mounted on asbestos sheet ground fixed in position by means of 4 nos chromium plated brass screw over rubber washer and rawl plugs embeddded in the wall or chromium plated brass screws complete including	**5**	each	3500

		cutting and making good the walls etc. Indian make as per design			
12.6	NON SOR	Providing and fixing wash basin with C.I. brackets, 15 mm C.P. brass pillar taps,32 mm C.P. brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever require: White Vitreous China Wash basin size 630x450 mm with a pair of 15 mm C.P. brass pillar taps.	**5**	each	1564
12.7	NON SOR	Providing and fixing 32mm dia Gl water waste pipe embedded into wall upto All level and heights	**120**	MTR	180
12.8	NON SOR	providing and fixing in position best Indian made flexible tube connection C.P Brass 15mm x 375 mm	**10**	each	190
12.9	NON SOR	Providing and fixing in position HCI floor trap conforming to lSI specification of reputed firm of the self cleaning design design with with CP brass hinged grating with frame with or without arm and including cement concrete 1:2:4 under and around the floor trap where required up to floor level complete in all respects including cutting and making the good walls and floor etc. minimum depth of water should be 150mm with minimum seal 50mm b) 75mm internal diameter outlet.	**10**	each	1148
12.10	NON SOR	Providing and fixing in position superior quality 65mm 1/d opening C.P brass dome type hinged grating weighing 750 grams fixed in cement sand mortar 1:2 complete in all respects (as required by the Engineer -in-charge)	**0**		
	NON SOR	i) 1OOmm i/d (1.36kg)Sand cast iron S&S as per IS: 3989	**20**	NOS	980
	NON SOR	ii) 75mm i/d (1.13kg.)Sand cast iron S&S as per IS - 3989	**20**	NOS	1020
12.11	NON SOR	Providing and fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350mm and 340x410x265mm 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 : Range of three urinal basins with 10 litre white P.V.C. automatic flushing cistern.	**4**	Nos	4396

12.12	NON SOR	Painting HCI soil waste, vent pipes and fittings with black bitumastic paint of approved manufacture, lSI marked with 2 Coat on new work with lSI marked paint.	**0**		
	NON SOR	b) 1OOmm internal diameter	**150**	MTR	95
	NON SOR	c) 75mm internal diameter	**150**	MTR	80
12.13	NON SOR	Providing and fixing in position H.C.L. soil waste vent or antisyphonage pipes to I.S.I. specification of E.D.C. manufacture or of any other reputed firm including cutting a,nd wastage etc. and cutting holes in walls roofs	**0**		
12.1		b) HCL 1OOmm internal diameter	**150**	MTR	645
		c) HCI 75mm internal diameter	**150**	MTR	545
12.15	NON SOR	Providing and fixing in position gully trap fixed in concrete 1:4:8 complete with HCI grating 150mmx150mm cast iron weighing aprox 7.26 kg and frame clear opening 300mmx300mm and outside size 330mmx330mm and chamber including cost of all brick work in cement mortar 1:5 cement concrete 1:2:4 in coping around Cl cover and frame etc. with 3 coats of black bitumastic superior paint of approved manufacturer an all C.l. work as per standard design minimum seal 50mm (B) 1OOmm i/d H.C.I gully trap.	**7**	each	1570
12.16	NON SOR	Excavation for pipe line trenches and pits, in open areas where disposal of surplus earth is done along the alignment, including trimming and dressing sides, levelling of beds of trenches to correct grade, cutting loint holes, refilling, consolidation and dewatering of refille in 15 em layers and restoration of unmetalled or paved surface to its original condition. The rate includes the cost of the accessories timbering, dewatering of rain water diversion for traffic, night signal, fixing caution boards, watching fencing etc. (i) from 6.00 mts depth down to 7.5 m depth in case of all classes of soil except rocky. P/L and jointing glazed stone wire pipes clamp spl with stiff mixture of cement mortar in the proportion of 1:1 (1 cement 1 sand) including testing of band etc. complete	**6**	cum	155
12.17	NON SOR	P/L cement concrete 1:5:10 (1 cement 5 sand 10 coarse graded) all round S.W. pipes including bed concrete as per standard design			
		100mm S.W. pipes	**12**	MTR	425

		150mm S.W. pipes	**12**	MTR	130
12.18	NON SOR	Constructing brick masonry manhole in cement mortar 1:4 (1cement 2 coarse) R.C.C top[slab with1:2:4 mix (1cement 2 coarse sand 4 graded stone aggregate 20mm nominal size),foundation concrete 1:4:6 mix (1 cement :4 coarse sand 8 graded stone aggregate 40mm nominal size) inside plastering 12mm thick with cement mortar 1: 3 (1 cement and making channels in cement concrete 1:2:4 (1 cement 2 coarse sand 4 graded stone aggregate 20mm nominal size) finished with a floating coat of neat cement complete as per standard design. Inside size 90x80 em and 45cm deep including C.l cover with frame (light duty) 455x61Omm internal dimensions total weight of cover and frame to be not less than 38 kg (weight of cover 23kg and weight of frame 15kg) with F.P.S. brick with class designation 75	**10**	nos	7000
12.19	NON SOR	Providing and fixing toilet paper holder: C.P. brass	**5**	each	182
12.20	NON SOR	Providing and fixing PTMT Waste Coupling for wash basin and sink, of approved quality and colour. Waste coupling 38mm of 83mm length and 77mm breadth, weighing not less than 60gms.	**6**	each	84
12.21	NON SOR	Providing and fixing PTMT Bottle Trap for Wash basin and sink. Bottle trap 38mm single piece moulded with height of 270mm, effective length of tail pipe 260mm from the centre of the waste coupling 77mm breadth with 25mm minimum water seal, weighing not less than 263gms.	**6**	each	435
12.22	NON SOR	Providing and fixing stone slab with table rubbed, edges rounded and polished, of size 75x50 cm deep and 1.8 cm thick, fixed in urinal partitions by cutting a chase of appropriate width with chase cutter and embedding the stone in the chase with epoxy grout or with cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 6 mm nominal size) as per direction of Engineer-in-charge and finished smooth.Granite Stone of approved shade. Granite Stone of approved shade.	**2**	SQM	2825
12.23	NON SOR	Providing and placing on at all floor levels high design HDPE (polyethylene) water	**2000**	LTR	7

		storage tank ISI : 12701 marked with cover and suitable locking arrangement and making necessary holes for inlet, outlet and arrangement and making necessary holes for inlet, outlet and overflow pipes but without fittings and the base support for tank.			
12.24	NON SOR	Providing and fixing drinking water cooler including all fitings complete with metal jaali cover with frame.	**1**	EACH	30000
		ILLUMINATION			
149	NON SOR	**SITC of eW Graze Powercore** Linear exterior LED wall grazing fixtures with solid white light Housing made of Extruded anodized aluminum with clear polycarbonate lens, comes with integral waterproof male/female connectors, 4 ft length, CCT equal to 2700 deg K, CRI equal to 81, System power consumption of 60W LED, output greater than 3000 lumens, 70% Lumen for 60,000 hrs at 50 deg Ambient, IP 66, lumen output measurements must comply with IES LM-79-08 testing procedures. Luminaire should comply with IES LM-80-08 testing procedures	**14**	Each	1,22,000
150	NON SOR	**SITC of iW Blast Powercore** Exterior LED wash fixture with intelligent white light, Housing made up of Die-cast aluminium, black or white powder-coated finish comes with Clear tempered glass/ Frosted tempered glass consisting of 2700K/4000K/6500K LED channels. Color Temperature can be tuned in the range of 2700-6500 deg K. System power consumption of 50W LED at full output steady state, output greater than 1800 lumens at all channels on, 70% Lumen for 37,000 hrs at 50 deg Ambient, IP 66, lumen output measurements must comply with IES LM-79-08 testing procedures. Luminaire should comply with IES LM-80-08 testing procedures	**14**	Each	1,15,000
151	NON SOR	SITC of Leader/ Jumper cables	**180**	Meter	16,000
152	NON SOR	**SITC of Data Enabler Pro** Integrated data and power for intelligent LED lighting fixtures using Powercore	**4**	Each	61,250
153	NON SOR	SITC of Cylindrical shape, integral decorative LED bollard with opal acrylic with IP65 protection. BAJAJ (MODEL-BGEDL 405) or equivalent	**40**	Each	6,500

154	NON SOR	SITC of Ground recessed up lighter of Lamp: 1X12V 50W, MR-16 Dimension: 110X155 mm	**200**	Each	2,000
155	NON SOR	SITC of 120 V leD Wall WaSHer WWS 16 12	**160**	Each	4,200

NOTE: Bidders will submit rates as % above/below or at par, which will be applicable for all BOQ items. If any item not covered in the BOQ will be paid as per MPUADD SOR (w.e.f.10.5.12) with quoted percentage. If any item has to be executed which is not covered in BOQ items and MPUADD SOR, then it will be paid as per approved rate analysis without any quoted percentage rate.

SECTION 5
FORM OF AGREEMENT

This agreement, made on the day of _____between (name and address of Employer) (hereinafter called “the Employer) and _____ (name and address of contractor) hereinafter called "the Contractor" of the other part.

Whereas the Employer is desirous that the Contractor execute _____(name and identification number of Contract) (hereinafter called "the Works") and the Employer has accepted the Bid by the Contractor for the execution and completion of such Works and the remedying of any defects therein, at a cost of Rs. _____

NOW THIS AGREEMENT WITNESSED as follows:

1. In this Agreement, words and expression shall have the same meanings as are respectively assigned to them in the conditions of contract hereinafter referred' to and they shall be deemed to form and be read and construed as part of this Agreement.

2. In consideration of the payments to be made by the Employer to the Contractor as hereinafter mentioned, the Contractor hereby covenants with the Employer to execute and complete the Works and remedy any defects therein in conformity in all aspects with the provisions of the contract.

3. The Employer hereby covenants to pay the Contractor in consideration of the execution and completion of the Works and the remedying the defects wherein Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

4. The following documents shall be deemed to form and be ready and construed as part of this Agreement viz.

i. Letter of Acceptance
ii. Contractor's Bid
iii. Condition of Contract: General and Special
iv. Contract Data
v. Bid Data
vi. Drawings
vii. Bill of Quantities and
viii. Any other documents listed in the Contract Data as forming part of the Contract.

In witnessed whereof the parties there to have caused this Agreement to be executed the day and year first before written. The Common Seal of_____ was hereunto affixed in the presence of:

Signed, Sealed and Delivered by the said _____ in the presence of:

Binding Signature of Employer ……

Binding Signature of Contractor ……