GOVERNMENT OF MAHARASHTRA
PUBLIC WORKS DEPARTMENT
PUBLIC WORKS REGION, NAGPUR
PUBLIC WORKS CIRCLE, CHANDRAPUR
PUBLIC WORKS DIVISION WARDHA

E-TENDER PAPERS

NAME OF WORK

CONSTRUCTION OF THIRD FLOOR IN ADMINISTRATIVE BUILDING AT WARDHA

NAME OF AGENCY : ________________________________

AGREEMENT No. : ________________________________
GOVERNMENT OF MAHARASHTRA
PUBLIC WORKS DEPARTMENT

Original Agreement No. : B-1 (Percentage Rate)

Name of Work : CONSTRUCTION OF THIRD FLOOR IN ADMINISTRATIVE BUILDING AT WARDHA

Name of Contractor : 

Date of Receipt of Tender No. & Date of Work Order : Online As per tender schedule

Amount put to Tender Percentage quoted : Rs. 65,00,941/-

Amount of Contract : 

Date of Commencement : 

Time stipulated for completion of work : 06 (Six) Calender Months from the date of written order to start work, which will include the monsoon period.

Date of completion as per Agreement : 

Actual Date of Completion : 

Reference to sanction of tender : 

Extension of time limit : 1

2

Certified that this original Agreement contains : Pages 0 to 100

Contractor No. of Corrections Executive Engineer

1
### DETAILS OF WORK

**NAME OF WORK:** - CONSTRUCTION OF THIRD FLOOR IN ADMINISTRATIVE BUILDING AT WARDHA

Estimated Cost put to tender  **Rs. 65,00,941/-**
Earnest Moey  **Rs. 65,100/-**

**The EMD applicable amount shall be paid via Online mode only.** It should be ensured that the EMD is paid online through the Bidders Account only.

Total Security Deposit 4% (four percent) **Rs. 2,60,400/-** (50% in cash at the time of Agreement and 50% from R.A.bills).

<table>
<thead>
<tr>
<th>Details</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost of Tender Form</td>
<td>Rs 5000/-</td>
</tr>
<tr>
<td>Period for Downloading Tender Forms</td>
<td>Refer Online schedule on portal <a href="https://pwd.maharashtra.etenders.in">https://pwd.maharashtra.etenders.in</a></td>
</tr>
<tr>
<td>Date of Pre-bid meeting and Venue</td>
<td>06.12.2016 at 16.00 hours In the office of Executive Engineer, P.W Division, Wardha</td>
</tr>
<tr>
<td>Last date and time for online bid preparation and hash submission (technical and financial)</td>
<td>Refer Online schedule on portal <a href="https://pwd.maharashtra.etenders.in">https://pwd.maharashtra.etenders.in</a></td>
</tr>
<tr>
<td>Date and time for online bid data decryption and re-encryption (technical and commercial)</td>
<td>Refer Online schedule on portal <a href="https://pwd.maharashtra.etenders.in">https://pwd.maharashtra.etenders.in</a></td>
</tr>
<tr>
<td>Receipt of online EMD, Self Declaration on plain paper in prescribed format given in Annexure I and Tender Document fees, to be paid online only via Payment Gateway mode / TDR of Additional performance Security Deposit (If required)</td>
<td>Document Tender Fee and EMD to be paid via online mode only.</td>
</tr>
<tr>
<td>Registration class of Contractor</td>
<td>Class- IV A and Above</td>
</tr>
</tbody>
</table>
GOVERNMENT OF MAHARASHTRA
PUBLIC WORKS DEPARTMENT
INVITATION FOR TENDERS

DETAILED TENDER NOTICE

NAME OF WORK: - CONSTRUCTION OF THIRD FLOOR IN ADMINISTRATIVE BUILDING AT WARDHA

Online percentage rate tenders in ‘B-1’ Form are invited by the Executive Engineer, PUBLIC WORKS DIVISION WARDHA for the following work from Contractors registered in appropriate class of the Public Works Department of Maharashtra State. The name of work, estimated cost, earnest money, security deposit, time limit for completion etc. are as under.

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of work</th>
<th>Estimated Cost (Rupees)</th>
<th>Earnest Money (Rupees)</th>
<th>Security Deposit (Rupees)</th>
<th>Class of Contractor</th>
<th>Time limit in Tender (Calendar Months)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>CONSTRUCTION OF THIRD FLOOR IN ADMINISTRATIVE BUILDING AT WARDHA</td>
<td>65,00,941/-</td>
<td>65,100/-</td>
<td>2,60,400/-</td>
<td>Class IV-A and Above</td>
<td>06 (Six) Calendar Months</td>
</tr>
</tbody>
</table>

Pre-tender conference open to all prospective tenderers who have downloaded tender form before the date of Pre-tender Conference, will be held on Dt. 06.12.2016 at 16.00 Hrs. in the office of the Superintending Engineer, P.W. Circle Chandrapur

Tender form, conditions of contract, specifications and contract drawings can be downloaded from the eTendering portal of Public Works Department, Government of Maharashtra i.e. https://pwd.maharashtra.etenders.in after entering the details, payment of Rs. 5,000/- (Rupees five Thousand only) should be paid online using payment gateway. The fees of tender document will be non refundable. Further information regarding the work can be obtained from the above office.

Tender acceptance is subject to verification of documents uploaded by the contractor. Uploading of any false information or document by the contractor will result in rejection of bid and action as may deem fit will be taken by the department against the contractor.

In the tender process, if the lowest offer is more than 10% below the cost put to tender, the tender calling authority shall obtain the detailed justification and planning of executing the work at such lower rate from the concerned contractor and based on that shall ensure the possibility of completing the work at the offered lowest rate.

The offer in envelope 2 without demand Draft of appropriate amount of performance security shall be treated as invalid offer.

TENDERING PROCEDURE: -

1.1 A Blank Tender Forms

Tender Forms can be purchased from the e-Tendering Portal of Public Works Department, Government of Maharashtra i.e. https://pwd.maharashtra.etenders.in after
paying Tender Fees via online mode as per the Tender Schedule.

PRE-TENDER CONFERENCE:

1.2 B

1.2.1 Pre-tender conference open to all prospective tenderers who have downloaded tender form before the date of Pre-tender Conference, will be 06.12.2016 at 16.00 Hrs. in the office of the Superintending Engineer, P. W. Circle, Chandrapur wherein prospective Tenderers will have an opportunity to obtain clarifications regarding the work and the Tender Conditions.

1.2.2 The prospective tenderers are free to ask for any additional information or clarification either in writing or orally concerning the work, and the reply to the same will be given by the Superintending Engineer, P. W. Circle, Chandrapur in writing and this clarification referred to as Common Set of Conditions/Deviations (C.S.D.), shall form part of tender documents and which will also be common and applicable to all tenderers. The point/points if any raised in writing and/or verbally by the contractor in pre-tender conference and not finding place in C.S.D. issued after the pre-bid conference, is/are deemed rejected. In such case the provision in NIT shall prevail. No individual correspondence will be made thereafter with the contractor in this regard.

1.2.3 The tender submitted by the tenderer shall be based on the clarification, additional facility offered (if any) by the Department, and this tender shall be unconditional. Conditional tenders shall be summarily REJECTED.

1.2.4 All tenderers are cautioned that tenders containing any deviation from the contractual terms and conditions, specifications or other requirements and conditional tenders will be treated as non responsive. The tenderer should clearly mention in forwarding letter that his offer (in envelope No. 1& 2) does not contain any conditions, deviations from terms and conditions stipulated in the tender.

1.2.5 Tenderers should have valid Class II / III Digital Signature Certificate (DSC) obtained from any Certifying Authorities. In case of requirement of DSC, interested Bidders should go to http://maharashtra.etenders.in/mah/DigitalCerti.asp and follow the procedure mentioned in the document ‘Procedure for application of Digital Certificate’. The Tenderers have to make a payment of Rs 1,063/- online as service charges for the use of Electronic Tendering during Online Bid Data Decryption and Re-encryption stage of the Tender.

1.2.6 For any assistance on the use of Electronic Tendering System, the Users may call the below numbers:

Landline No. – 020 – 2531 5555 / 56
Landline No. – 022 – 2661 1117 (Ext 25 / 26)
Mobile No. – 91679 69601 / 04 / 14

1.2.8 Tenderers should install the Mandatory Components available on the Home Page of https://maharashtra.etenders.in under the section ‘Mandatory Components’ and make the necessary Browser Settings provided under section ‘Internet Explorer Settings’

1.3 Guidelines to Bidders on the operations of Electronic Tendering System of Public Works Department.

https://pwd.maharashtra.etenders.in
A

Pre-requisites to participate in the Tenders processed by PWD

1. Enrolment and Empanelment of Contractors on Electronic Tendering System:
The Contractors interested in participating in the Tenders of Public Works Department –
processed using the Electronic Tendering System shall be required to obtain User ID on the
Electronic Tendering System. After submission of application for enrolment on the System, the application information
shall be verified by the Authorized Representative of the Service Provider. If the information is found to be complete, the enrolment submitted by the Vendor shall be approved.
For participating in Limited and Restricted tenders the registered vendors have to apply
for empanelment on the sub-portal of PWD in an appropriate class of registration. The empanelment will have to be approved by the respective officer from the PWD. Only empanelled vendors will be allowed to participate in such tenders.
The Contractors may obtain the necessary information on the process of enrolment and
empanelment either from Helpdesk Support Team or may visit the information published under the link Enrol under the section E-Tendering Toolkit for Bidders on the Home Page of the Electronic Tendering System.

2. Obtaining a Digital Certificate:
The Bid Data that is prepared online is required to be encrypted and the hash value
of the Bid Data is required to be signed electronically using a Digital Certificate (Class –
II or Class – III). This is required to maintain the security of the Bid Data and also to
establish the identity of the Contractor transacting on the System.
The Digital Certificates are issued by an approved Certifying Authority authorized by the Controller of Certifying Authorities of Government of India through their Authorized
Representatives upon receipt of documents required to obtain a Digital Certificate.
Bid data / information for a particular Tender may be submitted only using the Digital Certificate which is used to encrypt the data / information and sign the hash value during
the Bid Preparation and Hash Submission stage. In case during the process of preparing
and submitting a Bid for a particular Tender, the Contractor loses his/her Digital Signature Certificate (i.e. due to virus attack, hardware problem, operating system problem); he / she may not be able to submit the Bid online. Hence, the Users are advised to store his / her Digital Certificate securely and if possible, keep a backup at safe place under adequate security to be used in case of need.
In case of online tendering, if the Digital Certificate issued to an Authorised User of a Partnership Firm is used for signing and submitting a bid, it will be considered
invalid to a no objection certificate / power of attorney to that User to submit the bid
on behalf of the Partnership Firm. The Partnership Firm has to authorize a specific individual via an authorization certificate signed by a partner of the firm (and in case the applicant is a partner, another partner in the same form is required to sign) to use the digital certificate as per Indian Information Technology Act, 2000.
Unless the Digital Certificate is revoked, it will be assumed to represent adequate
authority of the Authority User to bid on behalf of the Firm for the Tenders processed on
the Electronic Tender Management System of Government of Maharashtra as per Indian Information Technology Act, 2000. The Digital Signature of this Authorized User will be binding on the Firm. It shall be the responsibility of Partners of the Firm to inform the Certifying Authority or Sub Certifying Authority, if the Authorized User changes, and apply for a fresh Digital Signature Certificate. The procedure for application of a Digital Signature Certificate will remain the same for the new Authorised User. The same procedure holds true for the Authorized Users in a Private / Public Limited Company. In this case, the Authorisation Certificate will have to be signed by the Director of the Company or the Reporting Authority of the Applicant. For information on the process of application for obtaining Digital Certificate, the Contractors may visit the section Digital Certificate on the Home Page of the Electronic Tendering System.

3. Recommended Hardware and Internet Connectivity:

To operate on the Electronic Tendering System, the Contractors are recommended to use Computer System with at least 1 GB of RAM and broadband connectivity with minimum 512 kbps bandwidth.

4. Set up of Computer System for executing the operations on the Electronic Tendering System:

To operate on the Electronic Tendering System of Government of Maharashtra, the Computer System of the Contractors is required to be set up. The Contractors are required to install Utilities available under the section Mandatory Installation Components on the Home Page of the System. The Utilities are available for download freely from the above mentioned section. The Contractors are requested to refer to the E-Tendering Toolkit for Bidders available online on the Home Page to understand the process of setting up the System, or alternatively, contact the Helpdesk Support Team on information / guidance on the process of setting up the System.

5. Payment for Service Provider Fees:

In addition to the Tender Document Fees payable to PWD, the Contractors will have to pay Service Providers Fees of Rs. 1,063/- through online payments gateway service available on Electronic Tendering System. For the list of options for making online payments, the Contractors are advised to visit the link E-Payment Options under the section E-Tendering Toolkit for Bidders on the Home Page of the Electronic Tendering System.

Steps to be followed by Contractors to participate in the e-Tenders processed by PWD

1. Preparation of online Briefcase:

All Contractors enrolled on the Electronic Tendering System of Government of Maharashtra are provided with dedicated briefcase facility to store documents / files in digital format. The Contractors can use the online briefcase to store their scanned copies of frequently used documents / files to be submitted as a part of their bid response. The
Contractors are advised to store the relevant documents in the briefcase before starting the Bid Preparation and Hash Submission stage.
In case, the Contractors have multiple documents under the same type (e.g. multiple Work Completion Certificates) as mentioned above, the Contractors advised to either create a single .pdf file of all the documents of same type or compress the documents in a single compressed file in .zip or .rar formats and upload the same

It is mandatory to upload the documents using the briefcase facility. Therefore, the Contractors are advised to keep the documents ready in the briefcase to ensure timely bid preparation

**Note:** Uploading of documents in the briefcase does not mean that the documents are available to PWD at the time of Tender Opening stage unless the documents are specifically attached to the bid during the online Bid Preparation and Hash Submission stage as well as during Decryption and Re-encryption stage.

2. Online viewing of Detailed Notice Inviting Tenders:
The Contractors can view the Detailed Tender Notice along with the Time Schedule (Key Dates) for all the Live Tenders released by PWD on the home page of PWD e-Tendering Portal on [https://pwd.maharashtra.etenders.in](https://pwd.maharashtra.etenders.in) under the section Recent Online Tender.

3. Download of Tender Documents:
The Pre-qualification / Main Bidding Documents are available for free downloading. However to participate in the online tender, the bidder must purchase the bidding documents via online mode by filling the cost of Tender Form Fee.

**Online Bid Preparation and Submission of Bid Hash (Seal) of Bids:**
Bid preparation will start with the stage of EMD Payment which bidder has to pay online using any one online pay mode as RTGS, NEFT or payment gateway.
For EMD payment, If bidder uses NEFT or RTGS then system will generate a challan (in two copies). With unique challan No specific to the tender. Bidder will use this challan in his bank to make NEFT/RTGS Payment via net banking facility provided by bidder's bank.
Bidder will have to validate the EMD payment as a last stage of bid preparation. If the payment is not in accordance with bank, in that case system will not be able to validate the payment and will not allow the bidder to complete his Bid Preperation stage resulting in nonparticipation in the aforesaid eTender.

**Note:**
* Realisation of NEFT/RTGS payment normally takes 2 to 24 hours, so it is advised to make sure that NEFT/RTGS payment activity should be completed well before time.
* NEFT/RTGS option will be depend on the amount of EMD.
* Help File regarding use of ePayment Gateway can be downloaded from eTendering portal.

Submission of Bids will be preceded by online bid preparation and submission of the digitally signed Bid Hashes (Seals) within the Tender Time Schedule (Key Dates) published in the Detailed Notice Inviting Tender. The Bid Data is to be prepared in the templates provided by the Tendering Authority of PWD. The templates may be either form based, extensible tables and / or uploadable documents. In the form based type of templates and extensible table type of templates, the Contractors are required to enter the
data and encrypt the data using the Digital Certificate.
In the uploadable document type of templates, the Contractors are required to select the relevant document / compressed file (containing multiple documents) already uploaded in the briefcase.

Notes:
The Contractors upload a single document or a compressed file containing multiple documents against each unloadable option.
The Hashes are the thumbprint of electronic data and are based on one way algorithm. The Hashes establish the unique identity of Bid Data.
The bid hash values are digitally signed using valid Class – II or Class – III Digital Certificate issued any Certifying Authority. The Contractors are required to obtain Digital Certificate in advance.
After the hash value of bid data is generated, the Contractors cannot make any change / addition in its bid data. The bidder may modify bids before the deadline for Bid Preparation and Hash Submission as per Time Schedule mentioned in the Tender documents.
This stage will be applicable during both, Pre-bid / Pre-qualification and Financial Bidding Processes.

5.Close for Bidding (Generation of Super Hash Values):
After the expiry of the cut – off time of Bid Preparation and Hash Submission stage to be completed by the Contractors has lapsed, the Tender will be closed by the Tender Authority.
The Tender Authority from PWD shall generate and digitally sign the Super Hash values (Seals).

6.Decryption and Re-encryption of Bids (submitting the Bids online):
After the time for generation of Super Hash values by the Tender Authority from PWD has lapsed, the Contractors have to make the online payment of Rs. 1,063/- towards the fees of the Service Provider.
After making online payment towards Fees of Service Provider, the Contractors are required to decrypt their bid data using their Digital Certificate and immediately re-encrypt their bid data using the Public Key of the Tendering Authority. The Public Key of the Tendering Authority is attached to the Tender during the Close for Bidding stage.
Note: The details of the Processing Fees shall be verified and matched during the Technical Opening stage.
At this time, the Contractors are also required to upload the files for which they generated the Hash values during the Bid Preparation and Hash Submission stage.
The Bid Data and Documents of only those Contractors who have submitted their Bid Hashes (Seals) within the stipulated time (as per the Tender Time Schedule), will be available for decryption and re-encryption and to upload the relevant documents from Briefcase. A Contractor who has not submitted his Bid Preparation and Hash Submission stage within the stipulated time will not be allowed to decrypt / re-encrypt the Bid data / submit documents during the stage of Decryption and Re-encryption of Bids (submitting the Bids online).
7. **Shortlisting of Contractors for Financial Bidding Process:**

The Tendering Authority will first open the Technical Bid documents of all Contractors and after scrutinizing these documents will shortlist the Contractors who are eligible for Financial Bidding Process. The shortlisted Contractors will be intimated by email.

8. **Opening of the Financial Bids:**

The Contractors may remain present in the Office of the Tender Opening Authority at the time of opening of Financial Bids. However, the results of the Financial Bids of all Contractors shall be available on the PWD e-Tendering Portal immediately after the completion of opening process.

9. **Tender Schedule (Key Dates):**

The Contractors are strictly advised to follow the Dates and Times allocated to each stage under the column “Contractor Stage” as indicated in the Time Schedule in the Detailed Tender Notice for the Tender. All the online activities are time tracked and the Electronic Tendering System enforces time-locks that ensure that no activity or transaction can take place outside the Start and End Dates and Time of the stage as defined in the Tender Schedule.

At the sole discretion of the Tender Authority, the time schedule of the Tender stages may be extended.

C) **Terms and Conditions For Online-Payments**

The Terms and Conditions contained herein shall apply to any person (“User”) using the services of PWD Maharashtra, hereinafter referred to as “Merchant”, for making Tender fee and Earnest Money Deposit(EMD) payments through an online Payment Gateway Service (“Service”) offered by ICICI Bank Ltd. In association with E Tendering Service provider and Payment Gateway Service provider through PWD Maharashtra website i.e. http://pwd.maharashtra.etenders.in. Each User is therefore deemed to have read and accepted these Terms and Conditions.

**Privacy Policy**

The Merchant respects and protects the privacy of the individuals that access the information and use the services provided through them. Individually identifiable information about the User is not willfully disclosed to any third party without first receiving the User’s permission, as covered in this Privacy Policy.

This Privacy Policy describes Merchant’s treatment of personally identifiable information that Merchant collects when the User is on the Merchant’s website. The Merchant does not collect any unique information about the User (such as User’s name, email address, age, gender etc.) except when you specifically and knowingly provide such information on the Website. Like any business interested in offering the highest quality of service to clients, Merchant may, from time to time, send email to the User and other communication to tell the User about the various services, features, functionality and content offered by Merchant’s website or seek voluntary information from the User.

Please be aware, however, that Merchant will release specific personal information about the User if required to do so in the following circumstances:

a) in order to comply with any valid legal process such as a search warrant, statute, or court order.
order, or available at time of opening the tender

b) if any of User's actions on our website violate the Terms of Service or any of our guidelines for specific services, or

c) to protect or defend Merchant's legal rights or property, the Merchant's site, or the Users of the site or;
d) to investigate, prevent, or take action regarding illegal activities, suspected fraud, situations involving potential threats to the security, integrity of Merchant's website/offering.

General Terms and Conditions For E-Payment
1. Once a User has accepted these Terms and Conditions, he/ she may register on Merchant's website and avail the Services.
2. Merchant's rights, obligations, undertakings shall be subject to the laws in force in India, as well as any directives/ procedures of Government of India, and nothing contained in these Terms and Conditions shall be in derogation of Merchant's right to comply with any law enforcement agencies request or requirements relating to any User's use of the website or information provided to or gathered by Merchant with respect to such use. Each User accepts and agrees that the provision of details of his/ her use of the Website to regulators or police or to any other third party in order to resolve disputes or complaints which relate to the Website shall be at the absolute discretion of Merchant.

3. If any part of these Terms and Conditions are determined to be invalid or unenforceable pursuant to applicable law including, but not limited to, the warranty disclaimers and liability limitations set forth herein, then the invalid or unenforceable provision will be deemed superseded by a valid, enforceable provision that most closely matches the intent of the original provision and the remainder of these Terms and Conditions shall continue in effect.

4. These Terms and Conditions constitute the entire agreement between the User and Merchant. These Terms and Conditions supersede all prior or contemporaneous communications and proposals, whether electronic, oral, or written, between the User and Merchant. A printed version of these Terms and Conditions and of any notice given in electronic form shall be admissible in judicial or administrative proceedings based upon or relating to these Terms and Conditions to the same extent and subject to the same conditions as other business documents and records originally generated and maintained in printed form.

5. The entries in the books of Merchant and/or the Payment Gateway Service Providers kept in the ordinary course of business of Merchant and/or the Payment Gateway Service Providers with regard to transactions covered under these Terms and Conditions and matters therein appearing shall be binding on the User and shall be conclusive proof of the genuineness and accuracy of the transaction.

6. Refund For Charge Back Transaction: In the event there is any claim for/ of charge back by the User for any reason whatsoever, such User shall immediately approach Merchant with his/ her claim details and claim refund from Merchant alone. Such refund (if any) shall be effected only by Merchant via payment gateway or by means of a demand draft or such other means as Merchant deems appropriate. No claims for refund/ charge back shall be made by any User to the Payment Gateway Service Provider(s) and in the event such claim is made it shall not be entertained.
7. In these Terms and Conditions, the term “Charge Back” shall mean, approved and settled credit card or net banking purchase transaction(s) which are at any time refused, debited or charged back to merchant account (and shall also include similar debits to Payment Gateway Service Provider’s accounts, if any) by the acquiring bank or credit card company for any reason whatsoever, together with the bank fees, penalties and other charges incidental thereto.

8. Refund for fraudulent/duplicate transaction(s): The User shall directly contact Merchant for any fraudulent transaction(s) on account of misuse of Card/ Bank details by a fraudulent individual/party and such issues shall be suitably addressed by Merchant alone in line with their policies and rules.

9. Server Slow Down/Session Timeout: In case the Website or Payment Gateway Service Provider's webpage, that is linked to the Website, is experiencing any server related issues like 'slow down' or 'failure' or 'session timeout', the User shall, before initiating the second payment, check whether his/her Bank Account has been debited or not and accordingly resort to one of the following options:

i. In case the Bank Account appears to be debited, ensure that he/ she does not make the payment twice and immediately thereafter contact Merchant via e-mail or any other mode of contact as provided by Merchant to confirm payment.

(ii) In case the Bank Account is not debited, the User may initiate a fresh transaction to make payment.

However, the User agrees that under no circumstances the Payment Gateway Service Provider shall be held responsible for such fraudulent/duplicate transactions and hence no claims should be raised to Payment Gateway Service Provider. No communication received by the Payment Gateway Service Provider(s) in this regard shall be entertained by the Payment Gateway Service Provider.

**Limitation of Liability**

1. Merchant has made this Service available to the User as a matter of convenience. Merchant expressly disclaims any claim or liability arising out of the provision of this Service. The User agrees and acknowledges that he/ she shall be solely responsible for his/ her conduct and that Merchant reserves the right to terminate the rights to use of the Service immediately without giving any prior notice thereof.

2. Merchant and/or the Payment Gateway Service Providers shall not be liable for any inaccuracy, error or delay in, or omission of (a) any data, information or message, or (b) the transmission or delivery of any such data, information or message; or (c) any loss or damage arising from or occasioned by any such inaccuracy, error, delay or omission, non-performance or interruption in any such data, information or message. Under no circumstances shall the Merchant and/or the Payment Gateway Service Providers, its employees, directors, and its third party agents involved in processing, delivering or managing the Services, be liable for any direct, indirect, incidental, special or consequential damages, or any damages whatsoever, including punitive or exemplary arising out of or in any way connected with the provision of or any inadequacy or deficiency in the provision of the Services or resulting from unauthorized access or alteration of transmissions of data or arising from suspension or termination of the
3. The Merchant and the Payment Gateway Service Provider(s) assume no liability whatsoever for any monetary or other damage suffered by the User on account of:

   (iii) the delay, failure, interruption, or corruption of any data or other information transmitted in connection with use of the Payment Gateway or Services in connection thereto; and/or

   (ii) any interruption or errors in the operation of the Payment Gateway.

4. The User shall indemnify and hold harmless the Payment Gateway Service Provider(s) and Merchant and their respective officers, directors, agents, and employees, from any claim or demand, or actions arising out of or in connection with the utilization of the Services.

The User agrees that Merchant or any of its employees will not be held liable by the User for any loss or damages arising from your use of, or reliance upon the information contained on the Website, or any failure to comply with these Terms and Conditions where such failure is due to circumstance beyond Merchant's reasonable control.

**Miscellaneous Conditions:**

1. Any waiver of any rights available to Merchant under these Terms and Conditions shall not mean that those rights are automatically waived.

2. The User agrees, understands and confirms that his/ her personal data including without limitation details relating to debit card/ credit card transmitted over the Internet may be susceptible to misuse, hacking, theft and/ or fraud and that Merchant or the Payment Gateway Service Provider(s) have no control over such matters.

3. Although all reasonable care has been taken towards guarding against unauthorized use of any information transmitted by the User, Merchant does not represent or guarantee that the use of the Services provided by/ through it will not result in theft and/or unauthorized use of data over the Internet.

4. The Merchant, the Payment Gateway Service Provider(s) and its affiliates and associates shall not be liable, at any time, for any failure of performance, error, omission, interruption, deletion, defect, delay in operation or transmission, computer virus, communications line failure, theft or destruction or unauthorized access to, alteration of, or use of information contained on the Website.

5. The User may be required to create his/ her own User ID and Password in order to register and/ or use the Services provided by Merchant on the Website. By accepting these Terms and Conditions the User agrees that his/ her User ID and Password are very important pieces of information and it shall be the User's own responsibility to keep them secure and confidential. In furtherance hereof, the User agrees to;
i. Choose a new password, whenever required for security reasons.
ii. Keep his/ her User ID & Password strictly confidential.
iii. Be responsible for any transactions made by User under such User ID and Password.

The User is hereby informed that Merchant will never ask the User for the User’s password in an unsolicited phone call or in an unsolicited email. The User is hereby required to sign out of his/ her Merchant account on the Website and close the web browser window when the transaction(s) have been completed. This is to ensure that others cannot access the User’s personal information and correspondence when the User happens to share a computer with someone else or is using a computer in a public place like a library or Internet café.

**Debit/Credit Card, Bank Account Details**

1. The User agrees that the debit/credit card details provided by him/her for use of the aforesaid Service(s) must be correct and accurate and that the User shall not use a debit/credit card, that is not lawfully owned by him/her or the use of which is not authorized by the lawful owner thereof. The User further agrees and undertakes to provide correct and valid debit/credit card details.

2. The User may make his/her payment(Tender Fee/Earnest Money deposit) to Merchant by using a debit/credit card or through online banking account. The User warrants, agrees and confirms that when he/she initiates a payment transaction and/or issues an online payment instruction and provides his/her card/bank details:

   i. The User is fully and lawfully entitled to use such credit/debit card, bank account for such transactions;

   ii. The User is responsible to ensure that the card/bank account details provided by him/her are accurate;

   iii. The User is authorizing debit of the nominated card/bank account for the payment of Tender Fee and Earnest Money Deposit

   **iv.** The User is responsible to ensure sufficient credit is available on the nominated card/bank account at the time of making the payment to permit the payment of the dues payable or the bill(s) selected by the User inclusive of the applicable Fee.

**Personal Information**

3. The User agrees that, to the extent required or permitted by law, Merchant and/or the Payment Gateway Service Provider(s) may also collect, use and disclose personal information in connection with security related or law enforcement investigations or in the course of cooperating with authorities or complying with legal requirements.
4. The User agrees that any communication sent by the User vide e-mail, shall imply release of information therein/ therewith to Merchant. The User agrees to be contacted via e-mail on such mails initiated by him/ her.

5. In addition to the information already in the possession of Merchant and/ or the Payment Gateway Service Provider(s), Merchant may have collected similar information from the User in the past. By entering the Website the User consents to the terms of Merchant’s information privacy policy and to our continued use of previously collected information. By submitting the User’s personal information to us, the User will be treated as having given his/her permission for the processing of the User’s personal data as set out herein.

6. The User acknowledges and agrees that his/ her information will be managed in accordance with the laws for the time in force.

**Payment Gateway Disclaimer**

The Service is provided in order to facilitate payment of Tender Fees/Earnest Money Deposit online. The Merchant or the Payment Gateway Service Provider(s) do not make any representation of any kind, express or implied, as to the operation of the Payment Gateway other than what is specified in the Website for this purpose. By accepting/ agreeing to these Terms and Conditions, the User expressly agrees that his/ her use of the aforesaid online payment service is entirely at own risk and responsibility of the User.

### 1.4 ENVELOPE No. 1: (Documents Required)

The bidder must purchase the bidding documents via online mode by filling the cost of Tender.

The first envelope “**Envelope No. 1**” shall contain the following documents:

<table>
<thead>
<tr>
<th>1.4.1</th>
<th>The EMD applicable will be paid via online mode. It should be ensured that EMD is paid online through bidder’s account only. Additional (Performance) Security (if Required) (copy to be Submitted as per the tender Schedule).</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.4.2</td>
<td>Scanned from original of Valid certificate as a Registered Contractor with the Government of Maharashtra in appropriate class</td>
</tr>
<tr>
<td>1.4.3</td>
<td>Declaration regarding completeness, correctness and truthfulness of documents submitted on plain paper as per prescribed proforma given in Annexure I</td>
</tr>
<tr>
<td>1.4.4</td>
<td>Scanned from original copy of Power of Attorney on behalf of firm, proprietorship firm /Partnership firm / Pvt limited Company or any other registered company Registered with Registrar of Company to sign agreement/ other correspondence with department authority.</td>
</tr>
<tr>
<td>1.4.5</td>
<td>Scanned from original of registration documents of firm (firm, proprietorship firm/ Partnership firm / Pvt limited Company or any other company or any other company case may be</td>
</tr>
<tr>
<td>1.4.6</td>
<td>Scanned from original of list of work completed and in hand and works tendered along with supporting certificate.</td>
</tr>
<tr>
<td>1.4.7</td>
<td>Scanned from original list of vendors and Machinery duly signed by the contractor.</td>
</tr>
<tr>
<td>1.4.8</td>
<td>Scan from original list of Technical Person/employee. Duly signed by the contractor.</td>
</tr>
<tr>
<td>1.4.9</td>
<td>Scanned from original of Noterise agreement Joint Venture if applicable</td>
</tr>
</tbody>
</table>

#### 1.4.10 Use of specialized Machinery

(i) Mixer With Weigh batcher of Minimum capacity 6 cum/hr on ownership of undertaking to hire
1.5 **ENVELOPE No. 2 TENDER (FINANCIAL BID)**

(i) Upload Blank Tender Copy (In Word Format) Issued and Digitally Signed by the Department

(ii) Upload Common Set of Deviations (CSD) Issued and Digitally Signed by the Department after P.T.C (In Word Format)

(iii) Offer to be submitted Online

(iv) If the tenderer quotes his offer 1% to 10% below the cost put to tender, he shall submit the Demand Draft of the amount equal to 1% of cost put to tender as Performance Security, in Envelope no. 2 of tender. (Scanned copy shall be submitted along with e-tender)

(v) If the offer quoted is more than 10% below the cost put to tender, the tenderer shall submit the Demand Draft of the cumulative amount which is equal to the amount by which offer is more than 10% below plus the amount as per (iv) above in Envelope no. 2 of tender. (Scanned copy shall be submitted along with e-tender) (For example, for 14% below rate: 1% + (14% - 10%)i.e.4% thus total 5%)

(vi) The offer in envelope 2 without demand Draft of appropriate amount of performance security shall be treated as invalid offer.

1.6 **SUBMISSION OF TENDER: -**

Refer to Section ‘Guidelines to Bidders on the operations of Electronic Tendering System of Public Works Department’ for details.

1.7 **OPENING OF TENDERS:**

On the date, specified in the Tender Schedule, following procedure will be adopted for opening of the Tender.

(iii) **ENVELOPE No. 1 :- (Documents)**

First of all Envelope No. 1 of the tender will be opened online to verify its contents as per requirements. If the various documents contained in this envelope do not meet the requirements of the Department, a note will be recorded accordingly by the tender opening authority and the said tenderers Envelope No. 2 will not be considered for further action and the same will be recorded.

The decision of the tender opening authority in this regard will be final and binding on the contractors.

**(B) ENVELOPE No. 2: (Financial Bid)**

a) This envelope shall be opened online immediately after opening of Envelope No. 1, only if contents of Envelope No. 1 are found to be acceptable to the Department. The tendered rates in Schedule ‘B’ or percentage above/below the estimated rates shall then be read out, in the presence of bidders who remain present at the time of opening of Envelope No. 2.

1.8 **EARNEST MONEY :**

Earnest money of minimum Rs. 65,100/- shall be paid via online using NEFT/RTGS or payment gateway mode.
After Tender opening, the EMD of the unsuccessful bidder will be returned to account provided by the bidder during the bid preparation as given in challan under Beneficiary Account Number.

**Earnest Money in the form of cheques or any other form except above will not be accepted.**
(iii) The amount will be refunded to the unsuccessful tenderers on deciding about the acceptance or otherwise of the tender. In case of successful tenderer, it will be refunded on his paying initial Security Deposit and completing the tender documents in form B-1.

(iv) In case of Joint Venture, Earnest money shall be paid via online using NEFT/RTGS or payment gateway mode. The Security Deposit, additional security deposit etc. in the form of T.D.R. / F.D.R. issued in the name of Joint Venture Company drawn by scheduled bank having branches in Maharashtra and endorsed, in the name of Executive Engineer, PUBLIC WORKS WORKHA for the period of one year will be considered.

1.9 A **SECURITY DEPOSIT:**

(i) The successful tenderer whose tender is accepted will have to pay Rs. 2,60,400/- towards the Security Deposit
(ii) Rs. 1,30,200/- is to be deposited in cash or bank guarantee of scheduled bank, F.D.R. of the scheduled bank / National Saving Certificate duly pledged in the name of the Executive Engineer, PUBLIC WORKS DIVISION WARDHA towards the initial Security Deposit, valid within the time limit prescribed in clause 1 of B-1 Form, till completion of defect liabilities period failing which his earnest money will be forfeited to Government.
(iii) In addition to the above, an amount of Rs. 1,30,200/- will be deducted from the running bills at 4 % of value of the gross bill towards balance security deposit. This is a compulsory deduction.

1.9 (B) **Condition regarding Performance Security if offer is below the schedule B rate**

(i) Following action shall be taken about making available Demand Draft of performance security /returning Demand Draft etc.:

(a) Demand Draft shall be drawn on the name of Executive Engineer, P.W.Division Wardha
(b) Demand Draft shall be drawn from Nationalized or Scheduled banks.
(c) Validity of Demand Draft shall be minimum 3 months from the date of submission of tender.
(d) Scanned copy of Demand Draft shall be uploaded by the contractors at the time of e-tendering.
(e) Contractor shall submit Demand Draft in sealed envelope in the office of the Executive Engineer, P.W.Division Wardha, within 5 working days from the date of submission of tender. Name of work and e-tender no. shall be written on the envelope.
(f) It is essential to have Bank’s MICR and IFSC code no.on Demand Draft.
(g) On opening the tender, if papers in Envelope no.1 don’t fulfill the essential qualification requirements, then Executive Engineer shall return the envelope of Demand Draft to concerned contractor within 7 days from the date of opening of tender.
(h) Offer in envelope no.2 shall be opened of those contractors whose documents in envelope no.1 fulfill the essential qualification requirements. Envelope of Demand Draft of these contractors, except 2
lowest tenderers, shall be returned within 7 days. The offer in envelope 2 without demand Draft of appropriate amount of performance security shall be treated as invalid offer.

(i) Demand Draft of second lowest tenderer shall be returned within 3 days after issuing work order to the lowest tenderer.

(j) EMD of the contractors submitting false documents/Demand Draft in above process shall be forfeited and registration of the said contractors shall be cancelled for 1 year. For this, Superintending Engineer shall have full authority.

(ii) Executive Engineer shall issue the work order only after encashing the Demand Draft of the lowest tenderer.

(iii) Executive Engineer shall return the Performance Security to contractor within 3 months, after satisfactory completion of the work.

1.10 ISSUE OF FORMS:
Information regarding contract as well as blank tender forms can be downloaded from the eTendering website upon providing the details of the payment of cost as detailed in the N.I.T.

1.11 TIME LIMIT:
The work is to be completed within time limit as specified in the N.I.T. which shall be reckoned from the date of written order for commencing the work and shall be inclusive of monsoon period.

1.12 TENDER RATE:
No alteration in the form of tender and the schedule of tender and no additions in the scope of special stipulations will be permitted. Rates quoted for the tender shall be taken as applicable for all leads and lifts.

1.13 TENDER UNITS
The tenderers should particularly note the units mentioned in the Schedule “B” on which the rates are based. No change in the units shall be allowed. In the case of difference between the rates written in figures and in words, the correct rate will be the one, which is lower of the two.

1.14 CORRECTION:
No corrections shall be made in the tender documents. Any corrections that are to be made shall be made by crossing the incorrect portion and writing the correct portions above with the initials of tenderer.

1.15 TENDER’S ACCEPTANCE:
Acceptance of tender will rest with the Executive Engineer. P.W Division, Wardha who reserves the right to reject any or all tenders without assigning any reason therefore. The tenderer whose tender is accepted will have to enter in to a regular B-1 agreement within 10 days of being notified to do so. In case of failure on the part of Tenderer to sign the agreement within the stipulated time, the earnest money paid by him shall stand forfeited to the Government and the offer of the tenderer shall be considered as withdrawn by him.

1.16 CONDITIONAL TENDER:
The tenders who do not fulfil the condition of the notification and the general rules and directions for the guidance of contractor in the agreement form or are incomplete in any respect are likely to be rejected without assigning any reason therefore.

1.17(a) The Tenderers shall be presumed to have carefully examined the drawings, conditions and specifications of the work and have fully acquainted themselves with all details of the site, the
conditions of rock and its joints, pattern, river, weather characteristics, labour conditions and in
general with all the necessary information and data pertaining to the work, prior to tendering for the
work.

The data whatsoever supplied by the Department along with the tender documents are meant to
serve only as guide for the tenderers while tendering and the Department accepts no responsibility
whatsoever either for the accuracy of data or for their comprehensiveness.

The quarries for extraction of metal, murum etc. provided in the sanctioned estimate are as per
survey conducted by the Department. The Contractor should however examine these quarries and
see whether full quantity of materials required for execution of the work strictly as per specification
are available in these source before quoting the rates. In case the materials are not available due to
reasons whatsoever, the contractor will have to bring the materials from any other source with no
extra cost to Government. The rates quoted, should therefore be for all leads and lifts from wherever
the materials are brought at site of work and inclusive of royalty to be paid to the Revenue
Department by the Contractor

1.17(b)

1.17(c)

POWER OF ATTORNEY

If the tenderers are a firm or company, they should in their forwarding letter mention the names of all
the partners together with the name of the person who holds the power of Attorney, authorizing him to
conduct all transactions on behalf of the body, along with the tender.

The tenderer may, in the forwarding letter, mention any points are may wish to make clear but the
right is reserved to reject the same or the whole of the tender if the same becomes conditional tender
thereby.

The contractor or the firms tendering for the work shall inform the Department if they appoint their
authorized Agent on the work.

No foreign exchange will be released by the Department for the purchase of plants and machinery for
the work by the Contractor

Any dues arising out of contract will be recovered from the contractor as arrears of Land Revenue, if
not paid amicably. Moreover, recovery of Government dues from the Contractors will be affected from
the payment due to the Contractor from any other Government works under execution with them
All pages of tender documents, conditions, specifications, correction slips etc. shall be initialled by the
tenderer. The tender should bear full signature of the tenderer, or his authorized power of Attorney
holder in case of a firm.

The Income Tax at 2.30 % including surcharge or percentage in force from time to time or at the rate
as intimated by the competent Income Tax authority shall be deducted from bill amount whether
measured bill, advance payment or secured advance.

The successful tenderer will be required to produce, to the satisfaction of the specified concerned
authority a valid concurrent license issued in his favour under the provisions of the Contract Labour
(Regulation and Abolition) Act 1970 for starting the work. On failure to do so, the acceptance of the
tender shall be liable to be withdrawn and also liable for forfeiture of the earnest money.

The tenderer shall submit the list of apprentices engaged by the Contractor under Apprentice Act.

Cess @ 1% (One percent) shall be deducted at source from every bill of the Contractor by the
Executive Engineer Under " Building and Other Construction for workers Welfare Cess Act 1996
Value Added Tax Deduction 2 % from the registered contractors under the MVAT Act, 2005 and 4 %
from the unregistered contractor under MVAT Act, 2005, shall be recovered from the contractor from
the gross bill amount of every bill, whether for measured works or Advance Payment or Secured
Advance

The tender rates are inclusive of all taxes, rates, cesses and are also inclusive of the leviable tax in
respect if sale by transfer of property in goods involved in the execution of a work contract under the

VALIDITY PERIOD - The offer shall remain open for acceptance for minimum period of 90 days
from the Date of opening of Envelope No. 2 (Financial Bid) and thereafter until it is withdrawn by the

Contractor No. of Corrections Executive Engineer
contractor by notice in writing duly addressed to the authority opening the tender and sent by Registered Post Acknowledgment due.

1.31 In the tender process, if the lowest offer is more than 10% below the cost put to tender, the tender calling authority shall obtain the detailed justification and planning of executing the work at such lower rate from the concerned contractor and based on that shall ensure the possibility of completing the work at the offered lowest rate.

1.32 The offer in envelope 2 without demand Draft of appropriate amount of performance security shall be treated as invalid offer.
Work Description

NAME OF WORK :: CONSTRUCTION OF THIRD FLOOR IN ADMINISTRATIVE BUILDING AT WARDHA

Scope of Work

1. Foundations :-
   R.C.C Foundation is proposed in M-20 grade cement concrete

2. Plinth :-
   Plinth height is proposed at 1.00 m. above average G.L. Filling of plinth as per type drawing used.

3. Columns :-
   R.C.C Columns are proposed in M-20 grade cement concrete.

4. Beams :-
   R.C.C Beams are proposed in M-20 grade cement concrete.

5. Slab :-
   R.C.C Slabs & Landings are proposed in M-20 grade cement concrete. The thickness of slab for all floor is taken as 0.15 m. Where as thickness for Waist slab, Stretcher Ramp & landings is taken as 0.20 m.

6. Other Items :-
   R.C.C Chajjas, Canopies, Pardies, fins are proposed in M-20 grade cement concrete.

7. Walls :-
   Walls are proposed in Fly Ash Bricks, in C.M.1:5 for 23 cm. thick wall & C.M.1:4 for Half brick wall.

8. Doors and Windows :-
   Door D-1:- Fully panelled C.T.W frame with Double leaf shutter & partly fixed.
   Door D-2, & D-4:- Pressed steel door box frame of M.S.sheet made of 18 guage & solid core flush door shutters in double leaves.
   Door D-3:- Pressed steel door box frame of M.S.sheet made of 18 guage & partly glazed & partly panelled shutters in double leaves.
   Door D-5:- Pressed steel door box frame of M.S.sheet made of 18 guage & solid core flush door shutters in Single leaves.
   Door D-5:- Factory made precast door frames of C.C. M-40 grade & shutter of Fiber reinforced plastic glass sheet of 1.75 mm. To 2.00 mm thick.
   Door D-6, & D-9:- Factory made precast door frames of C.C. M-40 grade & shutter of Fiber reinforced plastic glass sheet of 1.75 mm. To 2.00 mm thick.

   Windows W-1, W-2 & W-3 :- M.S.Box frame, fully glazed (UPV SHEET) with Six & Three shutter.
   Ventilators V-1 :- M.S.staggerred, fully glazed (UPV SHEET)

9. Plastering :-
   Outer surface in Sand faced plaster, Inner plaster in 20 mm / 12 mm th., is proposed with neeru finish. For ceilings 6 mm th. with neeru finish is proposed. 12 mm & 6 mm plaster, without neeru finish is proposed, to area open to sky & coming in contact with water.

10. Flooring :-
    Flooring is proposed as detailed below -
    Entrance hall / Foyer, Mirror Polished Kota stone with marble strips flooring. Dado upto 2.10 m. height
Corridor, Waiting, Passage, Lobby: Polished Kota stone flooring. Dado up to 1.20 m. height.

Doctors room, Conference hall, Operation theatre: Vitrified tiles with dado @ roof height for operation theatre, & 1.20 m. height for other rooms.

Wards: Ceramic tiles with dado @ 2.10 m. height.

Toilet Block: Ceramic tiles with dado @ 2.10 m. height.

Ramp, Stretcher ramp: Coloured chequered tiles.

11 Painting & Colouring: -
Outer surface is proposed in water proof cement paint, whereas inner surface in water bound distemper.

12 Water proofing: -
Terrece Slab is proposed is to be treated with Polymer based waterproofing treatment. The sunk slab of WC & Bath are to be treated with using approved water proofing compound. Chajjas boxes are are to treated with using approved water proofing compound.

13 Miscellaneous: -
Inspection Chamber, SWR Pipes, & all fastenings required for sanitay & water supply arrangement is proposed.

Sub-Estimate II: septic Tank & Sump Well

1 Foundation
R.C.C. Raft foundation in M-20 Grade Cement concrete

2 Column
R.C.C. Column are proposed in M-20 Grade Cement Concrete

3 Beams: -
R.C.C Beams are proposed in M-20 grade cement concrete.

4 Walls: -
Walls are proposed in Fly Ash Bricks, in C.M.1:5 for 23 cm. thick wall for pump house

5 Slab: -
R.C.C Slabs are proposed in M-20 grade cement concrete. The thickness off slab is taken as 0.12 m.

6 Plastering: -
Outer surface in Sand faced plaster, Inner plaster in 20 mm / 12mm th,is proposed with neeru finish. For ceilings 6mm th. with neeru finish is proposed. 12 mm & 6 mm plaster, without neeru finish is proposed, to area open to sky & coming in contact with water.

7 Painting & Colouring: -
Outer surface is proposed in water proof cement paint, whereas inner surface in water bound distemper.

8 Flooring is proposed as detailed below: -
Mirror Polished Kota stone flooring 20 to 25 mm thick for pump house

9 Door and Windows
Providing single leaf door with country teak wood shutter and panels, precast R.C.C. Frame and Jet type steel ventilator for pump house

Sub-Estimate III: Compound wall

1 Foundation
R.C.C. Raft foundation in M-20 Grade Cement concrete
Column
R.C.C. Column are proposed in M-20 Grade Cement Concrete

Beams :-
R.C.C Beams are proposed in M-20 grade cement concrete.

Walls :-
Walls are proposed in Fly Ash Bricks, in C.M.1:5 for 23 cm. thick wall for pump house

Sub-Estimate IV Internal Road
While preparing the detailed estimates, the 5.50m/3.75 m. C.C. Carriageway with following provisions are made in the estimat-

1 GSB :- 150mm thick

2 WBM:- Grade I & Grade II metal layer of 75mm thick each.

3 Levelling Course :-
0.075 m thick ,M-10 Cement Concrete is proposed as levelling/ base course to receive Concrete Pavement.

4 Pavement :-
200/170 mm thick ,M-30 grade Cement Concrete is proposed for C.C.Pavement

5 Shoulders :-
1.25 m wide ,paved shoulder is proposed.

6 Misc.
Dowel bars, Bitumen pad, Plastic Sheet etc. are proposed.

Sub-Estimate V Drain
While preparing the detailed estimates, C.C. Drai with following provisions are made in the estimat-

1 Soling :-
0.15 m thick ,80 mm soling is proposed

2 Levelling Course:-
0.10 m thick ,C.C.1:4:8 is proposed as levelling course.

3 Base Course :-
0.15 m thick ,C.C.M-15 grade concrete is proposed with nominal reinforcement.

4 Drain Walls
0.15 m thick ,M-15 grade Cement Concrete is proposed for face wall with nominal reinforcement & Weep holes.

5 R.C.C.Slab :-
0.15 m thick ,M-20 grade Cement Concrete Precast Slab is proposed for Bridging over road / junction crossing.

Sub-Estimate VI Rain Water Harvesting
FORM B-1
PUBLIC WORKS DEPARTMENT

P.W.Region, Nagpur
P.W.Circle, Chandrapur
Executive Engineer PUBLIC WORKS DIVISION WARDHA

1) All work proposed to be executed by contract shall be notified in a form of invitation to tender, pasted on a board hung up in the office of the Executive Engineer and signed by Executive Engineer, PUBLIC WORKS DIVISION WARDHA.

The form will state the work to be carried out as well as date of submitting and opening tender, the time allowed for carrying out the work, also the amount of earnest money to be deposited with the tender and the amount of security deposit to be deposited by the successful tenderer and the percentage if any to be deducted from bills. It will also state whether a quarry fees, royalties and ground floor rents will be granted. Copies of the specifications, designs and drawings and estimated rates, schedule rates and any other documents required in connection with the work which will be signed by Executive Engineer for the purpose of identification shall also be open for inspection by contractors at the office of the Executive Engineer during office hours.

Where the work are proposed to be executed according to the specifications recommended by a contractor and approved by a competent authority on behalf of the Government of Maharashtra, specifications with designs and drawings shall form part of the accepted tender.

2) In the event of the tender being submitted by a firm, it must be signed separately by each partner thereof, and in the event of the absence of any partner it shall be signed on his behalf by a person holding a power of attorney authorising him to do so.

A
(i) The contractor shall pay along with the tender the sum of Rs. 65,100/- as and by way of earnest money. Earnest money shall be be paid via online using NEFT/RTGS or payment gateway mode. The said amount of earnest money shall not carry any interest whatsoever.

(ii) In the event of his tender being accepted, subject to the provision of sub clause (iii) below, the said amount of earnest money shall be appropriated towards the amount deposit payable by him under condition of General Conditions of Contract.

(iii) If after submitting the tender, the contractor withdraws his offer or modifies the same or if after the acceptance of his tender the contractor fails or neglects to furnish the balance of security deposit, without prejudice to any other rights and powers of the Government hereunder, or in law, Government shall be entitled to forfeit the full amount of the earnest money deposited by him.

(iv) In the event of his tender not being accepted, the amount of earnest money deposited by the contractors shall, unless it is prior thereof forfeited under the provision of sub-clause (ii) above, be refunded to him on his passing receipt therefore.

3) Receipt for payments made on account of any work, when executed by a firm, should also be signed by all the partners. Except where the contractors are described in their tender as a firm, in which case the receipts shall be signed in the name of the firm by one of the partners, or by some other person having authority to give effectual receipts for the firm.

4) Any person who submits a tender shall fill up the usual printed form including the column of estimated quantities stating at what rate he is willing to undertake all item of the work. Tenders which propose any alteration in the work specified in the said form of invitation to tender, or in the time allowed for carrying out the work or which contain any other conditions of any sort, will be liable for rejection. No single tender shall include more than one work, but contractors who wish to tender for two or more works shall submit a separate tender for each. Tenderers shall have the name and the number of work to which they refer written outside the envelope.
5) The Superintending Engineer, Public Works Circle Chandrapur or his duly authorized assistant will open tenders in the presence of any intending contractors who may be present at the time and will enter the amount of the several tenders in a comparative statement in a suitable form. In the event of a tender being accepted, the contractor shall thereupon, for the purpose of identification, sign copies of the specifications and other documents mentioned in Rule 1. In the event of a tender being rejected, the Divisional Officer shall authorised the Treasury Officer / Bank concerned to refund the amount of earnest money deposited by the contractor making the tender, on his giving a receipt for the return of the money. In the event of a tender being rejected, the Divisional Officer shall refund the amount of earnest money deposited by the contractor online.

6) The Officer competent to dispose of the tender shall have the right to reject any or all of the tenders.

7) No receipt for any payment alleged to have been made by a contractor in regard to any matter relating to this tender or the contract shall be valid and binding on Government unless it is signed by the Executive Engineer.

8) The memorandum of the work to be tendered for and the schedule of materials to be supplied by the Public Works Department and their rates shall be filled in and completed by the office of the Executive Engineer before the tender form is issued if a form issued to an intending tenderer has not been so filled in and completed he shall request the said office to have done this before the completes and delivers his tender

9) All work shall be measured net by standard measure and according to the rules and customs of the Public Works Department without reference to any local custom.

10) Under no circumstance shall any contractor be entitled to claim enhanced rates for any item in this contract.

11) All correction and additions or pasted slips should be initialed.

12) The measurement of work will be taken according to the usual method in the Public Work Department and no proposal to adopt alternative methods will be accepted. The Executive Engineer's decision as to what is “the usual method in use in Public Work Department will be final”.

(i) The contractor shall give a list of machinery in their possession and which they propose to use on the work.

(ii) The contractor will have to construct shed for storing materials procured by him at his own cost at the work site having double locking arrangement. The materials will be taken for use in the presence of the Departmental Person. No materials will be allowed to be removed from site of the work.

13) The tender will be liable to be rejected, if while submitting it, the tenderer or in the case of a firm each partner thereof does not sign or the signature / signatures is / are not attested by a witness on page 28 of the tender in the space provided for the purpose.

14) Use of Government Machinery

(a) If Government Machinery is available and the contractor desires to hire it for Work on the project it may be hired to him subject to the rules and hire charges that may be laid down by the Government from time to time during the currency of tender

(b) No security will be taken from the contractor, so long as the machinery is worked by the departmental staff and under the entire control of department and is not handed over to the contractor at all for operation by his crew and staff and the charges for the use of machinery are levied on hourly basis and as per prevailing schedule of rate for hire charges.

(c) Machinery should be worked only where the departmental staff is confidant to use it safely & never in difficult situation and dangerous spot.

(d) The recovery of plant hire charges will be immediately made through the next Running Accounts bills.

15) The tendering contractors shall furnish a declaration along with the tender showing all works for he has already entered into contract, and the value of work that remains to be executed in each case on the date of submitting tender

16) In view of the difficult position regarding the availability of foreign exchange, no foreign exchange
would be released by the Department for the purchase of plant and machinery required for the
execution of the work contracted for.

17) The contractor will have to construct shed for storing controlled and valuable materials issued to
him under schedule ‘A’ of the agreement. The materials will then be taken for use in the presence
of the departmental person. No material will be allowed to be removed from the site of works.

18) The tendering contractor should furnish a detailed statement of works in hand, showing the cost of
works in hand, the works completed against each with certificate from head of the office concerned.

19) In case of joint venture, the copy of registered partnership deed shall be produced at the time of
purchasing of tender form and also in Envelope No. 1.

20) Two or more contractors of any class may combine and tender for a work costing to the amounts
up-to which each individual contractor or the higher of two limits if they are of different categories
are empowered to tender as per the original registration provided.

   ((i)   The combination is of the contractor as a whole and not individual partners and
   (ii)   They draw a registered partnership deed.
   (iii)  They should register in the name of joint Venture on the
http://pwd.maharashtra.etenders.in
   (iv)   For empanelment on the http://pwd.maharashtra.etenders.in they should submit noterised
joint Venture papers to Authority / Engineers In charge
   (v)    The Empanelment on http://pwd.maharashtra.etenders.in shall be only for This work.

21) Whenever the advantage of such combination of two or more contractors is to be taken for quoting
for a work, the registered partnership deed should be irrevocable till the completion of work for
which they have combined and till all the liabilities there of are liquidated and the share of the
contractor of higher category should not be less than 50 %. Further the percentage share of the
contractor of the lower category in such a partnership/ combination should not be more than his
limit of eligibility to quote for works divided by the estimated cost of work put to tender (i.e. when
such a percentage is applied to the cost of the work, his share of cost not exceed his own eligibility
limit of tendering for works).

22) The lead partners shall meet not less than 50 percent of all qualifying criteria like annual turnover,
single work, quantities of items and Bid Capacity above. The joint venture must collectively satisfy
the criteria of para annual turnover, single work, quantities of items and Bid capacity above The
experience of the other joint partners shall be considered if it is not less than 30 percent of the
qualifying criteria like annual turnover, single work, quantities of items and Bid capacity above.

23) If joint venture firm is found lowest at the time of opening of bids, the tenderer shall register the joint
venture with the Registrar of Firm and submit the same to the Engineer-in-charge within 45 days
from the date of opening of tender, failing which his bid shall be considered non responsive and the
Earnest Money shall be forfeited.
TENDER FOR WORKS

I / We hereby tender for the execution for the Governor of Maharashtra (here in before and here in after referred to as Government) of the work specified in the under written memorandum within the time specified in such memorandum at*

_____________________________________________  

_____________________________________________  

_______  

_____________________________________________  

_______) Percent below / above the estimated rates entered in Schedule ‘B’ (memorandum showing items of work to be carried out) and in accordance in all respects with the specifications, designs, drawing and instructions in writing referred to in rule 1 here of and in clause 13 of the annexed conditions of contract and agree that when materials for the work are provided by Government such materials and the rates to be paid for them shall be as provided in Schedule ‘A’ hereto.

* In figure as well as in words.
MEMORANDUM

(a) General Description: CONSTRUCTION OF THIRD FLOOR IN ADMINISTRATIVE BUILDING AT WARDHA

(b) Estimated cost : Rs. 65,00,941/-

c) Earnest Money: Rs. 65,100/-

d) Security Deposit :

(i) Cash (not less than amount of earnest money) Rs. 1,30,200/-

(ii) To be deducted from current bills Rs. 1,30,200/-

Total : Rs. 2,60,400/-

e) Percentage, if any, to be deducted from bill so as to make up the total amount required as security deposit by the time half the work as measured by the cost is done 4 percent.

(f) Time allowed for the work from date of written order to commence is 06 (Six) months including monsoon should this tender be accepted.

I / We hereby agree that this offer shall remain open for acceptance for a minimum period of 90 days from the date fixed for opening the same and thereafter until it is withdrawn by us / by notice in writing duly addressed to the authority opening the tenders and sent by registered post A.D. or otherwise delivered at the office of such authority. Treasury challan No. __________ dated _ _________________. Term Deposit Receipt; in respect of sum of Rs. 65,100/- representing the earnest money is herewith forwarded. The amount of earnest money shall not bear interest and shall be liable to be forfeited to the government should I / We fail to (1) abide by the stipulation to keep the offer open for the period mentioned above or (2) signed and complete the contract documents required by the Engineer and furnish the security deposit as specified in item (d) of memorandum contained in paragraph 1 above, within the time limit laid down in clause (i) of the annexed general conditions of the contract. The amount of earnest may be adjusted towards the security deposit or refunded to me / us if so desired by me / us in writing unless the same or any part thereof has been forfeited as aforesaid above, within the time limit laid down in clause

I /we hereby agree to abide by and fulfill all the terms and provisions of the conditions of contract annexed hereto so far as applicable and in

Contractor No. of Corrections Executive Engineer
default to forfeit and pay to government the sum of money mentioned in the said condition. Receipt no ___________ dt ___________ from the government Treasury at in respect of the sum Rs. 65,100/- forward representing the earnest money (a) the full value of which is to be absolutely forfeited to Government should/we not deposit the fully amount of security specified in the above memorandum in accordance with Clause 1(A) of the said conditions of the contract. Otherwise the said sum of Rs. 65,100/- shall be refunded

**Contractor**

Signature of Contractor before submission of tender.

(Address)

Dated the ________________ day of __________ 2016

Signature of witness to Contractor’s Signature.

(Address)

Dated the ________________ day of __________ 2016

Signature of the officer by whom accepted.

The above tender is hereby accepted by me on behalf of the Governor of Maharashtra.

**Executive Engineer,**

**Public Works Division,**

**Wardha**

Dated the ________________ day of __________ 2016
## CONDITIONS OF CONTRACT

| Security Deposit | Clause 1: The person / persons whose tender may be accepted (herein after called the contractor, which expression shall unless excluded by or repugnant to the context include his, heirs executors, administrators, contractor and assigns) shall (A) within 10 days (which may be extended by the Superintending Engineer concerned upto 15 days if the Superintending Engineer thinks fit to do so) of the receipt by him of the notification of the acceptance of his tender deposit with the Executive Engineer in cash or Govt. securities endorsed to the Executive Engineer (if deposited for more than 12 months) of sum sufficient which will make up the full security deposit specified in tender or (B) permit Government at the time of making any payment to him for work done under the contract to deduct such as will amount to 4(Four) percent of all moneys so payable, such deduction to be held by Government by way of security deposit, provided always, that, in the event of the contractor depositing a lump sum by way of security deposit as contemplated at (A) above, then and in such case, a the sum so deposited shall not amount to 4(four ) percent, of the total estimated cost of the work, it shall be lawful for Government at the time of making any payment to the contractor for work done under the contract, to make up the payment to the contractor for work done under the contract to make up the full amount of 4(four ) percent, by deducting a sufficient sum from every such payment as last aforesaid, until the full amount of the security deposit is made up.

All compensation or other sum of money payable by the contractor to government under the terms of his contract may be deducted from or paid by the sale of sufficient part of his security deposit or from the interest arising there from or from any sums which may be due or may become due by Government to the contractor under any other contract or transaction of any nature on any account whatsoever, and in the event of his security deposit being reduced by reason of any such deduction or sale as aforesaid the contractor shall within ten days there after make good in cash or Government securities endorsed as aforesaid, any sums or sums which may have been deducted from or raised by sale of his security deposits or may part thereof. The security deposit referred to, when paid in cash may, at the cost of the depositor, be converted into interest bearing securities provided that the depositor has expressly desired this in writing.

If the amount of the Security Deposit to be paid in lump sum within the period specified at (A) above is not paid, the tender / Contract already accepted shall be considered as cancelled and legal step will be taken against the contractor for recovery of the amounts. The amount of the Security Deposit lodged by a contractor shall be refunded along with the payment of the final bill, if the date up to which the contractor has agreed to maintain the work in good order is over. If such date is not over, only 50% amount of security deposit shall be refunded along with the payment of the final bill. The amount of security deposit retained by the Government shall be released after expiry of period up to which the contractor has agreed to maintain the work in good order is over. In the event of the contractor failing or neglecting to complete rectification work within the period up to which the contractor has agreed to maintain the work in good order, then subject to provisions of clause 17 and 20 here of the amount of security deposit retained by Government shall be adjusted towards the excess cost incurred by the department on rectification work** This will be the same percentage as that in the tender at (e).

| Compensation for delay | Clause 2 : The time allowed for carrying out the work as entered in the tender shall be strictly observed by the contractor and shall be reckoned from the date on which the order to commence work is given to the contractor. The work shall throughout the stipulated period of the contract be proceeded with, all due diligence (time being deemed to be the
essence of the contract on part of the contractor) and the contractor shall pay as compensation an amount equal to one percent, or such smaller amount as the Superintending Engineer (whose decision in writing shall be final) may decide, of the amount of the estimated cost of the whole work as shown in the tender for every day that work remains un-commenced, or unfinished after the proper dates. And further to ensure good progress during the execution of the works, the contractor shall be bound in all cases, in which the time allowed for any work exceeds one month to complete.

<table>
<thead>
<tr>
<th>1/4 of the work in</th>
<th>1/3 of the time</th>
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<tr>
<td>1/2 of the work in</td>
<td>1/2 of the time</td>
</tr>
<tr>
<td>2/3 of the work in</td>
<td>2/3 of the time</td>
</tr>
<tr>
<td>Full work</td>
<td>06 (Six) Calendar Months (Including Monsoon)</td>
</tr>
</tbody>
</table>

In the event of the contractor failing to comply with these conditions he shall be liable to pay as compensation an amount equal to one percent, or such smaller amounts as the Superintending Engineer (whose decision in writing shall be final) may decide of the said estimated cost of the whole work for every day that the due quantity of work remains incomplete. Provided always that the total amount of compensation to be paid under provision of this clause shall not exceed 10 percent of the estimated cost of the work shown in the tender. Superintending Engineer should be the final authority in this respect irrespective of the fact that the tender is accepted by Chief Engineer / Superintending Engineer.

**Clause 3**: In any case in which under any clause or clauses of this contracts the contractor shall have rendered himself liable to pay compensation amounting to the whole of his security deposit (whether paid in one sum or deducted by installments) or in the case of abandonment of the work owing to serious illness or death of the contractor or any other cause, the Executive Engineer on behalf of the Governor of Maharashtra shall have power to adopt any of the following courses as he may deem best suited to the interest of Government.

<table>
<thead>
<tr>
<th>Action when whole of Security Deposit is forfeited.</th>
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<tbody>
<tr>
<td>a) To rescind the contract (of which rescission notice in writing to the contractor under the hand of the Executive Engineer shall be conclusive evidence) and in that case the security deposit of the Contractor shall stand forfeited and be absolutely at the disposal of Government.</td>
<td></td>
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<tr>
<td>b) To carry out of work or any part of the work departmentally debiting the contractor with the cost of the work, expenditure incurred on tools and plant, and charges on additional supervisory staff including the cost of work charged establishment employed for getting unexecuted part of the work completed and crediting him with the value of the work done departmentally in all respects in the same manner and at the same rates as if it had been carried out by the contractor under the terms of the contract. The certificate of the Executive Engineer as to the cost of the work and other allied expenses so included and the value of the work so done departmentally shall be final and conclusive against the contractor.</td>
<td></td>
</tr>
</tbody>
</table>
| c) To order that the work of the contractor be measured up and to take such part thereof as shall be unexecuted out of his hands and to give it to another contractor to complete, in which case all expenses incurred on advertisement for fixing a new contracting agency, additional supervisory staff including the cost of work charged establishment and cost of the work executed by the new contract agency will be debited to contractor and the value of the work done or executed through the new contractor shall be credited to the contractor in all respects and in the same manner and at the same rates as if it had been carried out by the contractor under the terms of his contract. This certificate of the Executive Engineer as to all
the cost of the work and other expenses incurred as aforesaid for or in getting the unexecuted work done by the new contractor and as to the value of the work done by the new contractor and as to the value of the work so done shall be final and conclusive against contractor.

In case the contract shall be rescinded under clause (a) above, the contractor shall not be entitled to recover or be paid any sum for any work thereto actually performed by him under this contract unless and until the Executive Engineer shall have certified in writing the performance of such work and the amount payable to him in respect thereof he shall only be entitled to be paid the amount so certified. In the event of either of the courses referred to in clause (b) or (c) being adopted and the cost of the work executed departmentally or through a new contractor and other allied expenses exceeding the value of such work credited to the contractor, the amount of excess value shall be deducted from any money due to the contractor by the Govt. under the contract or otherwise, howsoever or from his security deposit or the sale proceeds thereof provided howsoever, that the contractor shall have no claim against government even if certified value of the work done departmentally or through a new contract except the certified cost of such work and allied expenses provided always that whichever of the three courses mentioned in clause (a) (b) or (c) is adopted by the Executive Engineer, the contractor shall have no claim to compensation for any loss sustained by reason of him having no claim to compensation for any materials, or entered into engagement or made any advance on account of or with a view of the execution of the work or the performance of contract.

**Action when process of particular work is unsatisfactory**

**Clause 4**: If the progress of any particular portion of the work is unsatisfactory the Executive Engineer shall not with standing that the general progress of the work is satisfactory in accordance with clause 2 be entitled to take action under clause 3 (b) after giving the contractor 10 days notice in writing and the contractor will have no claim for compensation for any loss sustained by him owing to such action.

**Contractor remains liable to pay compensation if action not taken under clause 3.**

**Clause 5**: In any case in which any of the powers conferred upon the Executive Engineer by clause 3 and 4 hereof shall have become exercisable and the same shall not have been exercised, the non-exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall not-with standing be exercisable in any future case of default by the contractor for which by under any clause or clauses hereof he is declared liable to pay compensation amounting to the whole of his security deposit and the liability of the contractor for past and future compensation shall remain unaffected. In the event of the Executive Engineer taking action under sub-clause (a) or (c) of clause (3) he may, if he so desires, take possession of all or any tool plant, materials and stores in or upon the works or the site thereof or belonging to the contractor or procured by him and intended to be used for the execution of the works or the site thereof or belonging to the contractor, or procured by him and intended to be used for the execution of the work or any part thereof, paying or allowing, for the same in account at the contract rates, or in the case of contract rates not being applicable at current market rates, to be certified by the Executive Engineer whose certificate there of shall be final. In the alternative the Executive Engineer may, by notice in writing to the contractor or to his clerk of the works, foreman or other authorised agent require him to remove such tools, plant materials or stores from the premises within a time to be specified in such notice and in the event of contractor failing to comply with any such requisition the Executive Engineer may remove them at the contractor’s expenses or sale them by auction or private sale, at risk and account of the contractor in all such removal and the amount of the proceeds and expenses of any such sale be final and conclusive against the contractor.

**Power to take possession of or required removal of or all contractor’s plant**

**Extension of time limit.**

**Clause 6**: If the contractor desires an extension of the time for completion of the work on the ground of his having unavoidable hindering in its execution or on the other ground, he
shall apply in writing to the Executive Engineer before the expiration of the period stipulated in the tender or before the expiration of 30 days from the date to which he was hindered as aforesaid or on which the cause for asking ever extension occurred, which ever is earlier and the Executive Engineer may, if in his opinion there are reasonable ground for granting an extension, grant such extension as he thinks necessary or proper. The decision of the Executive Engineer in this matter shall be final.

Clause 6 A : In the case of delay in handing over the land required for the work due to unforeseen cause, the contractor shall not be entitled for any compensation what so ever from the Government on the ground that the machinery or the labour was idle for certain period. Contractor may, however apply for extension of time limit which may be granted on the merit of the case.

Final Certificate

Clause 7 : On completion of the work the contractor shall be finished with a certificate by the Executive Engineer (Hereinafter called the Engineer-in-charge) in such completion but no certificate shall be given nor shall the work be considered to be complete until the contractor shall have removed from the premises on which the work shall have been executed, all scaffolding, surplus materials and rubbish and shall have cleaned of the dirt from all wood work, doors, floors or other parts of any building in or upon which the work has been executed or on which he may have had possession for the purpose of executing the work or until the work shall have been measured by the Engineer-in-charge or where the measurements have been taken by his subordinates until they have received the approval of the Engineer-in-charge the said measurement being binding and conclusive against the contractor. If the contractor fails to comply with the requirement of the clause as to the removal of scaffolding, surplus material and rubbish and cleaning of dirt on or before the date fixed for the completion of the work. The Executive-in-charge may at the expense of the contractor, remove such scaffolding, surplus materials and rubbish and dispose off the same as he think fit and clean of such dirt as aforesaid and the contractor shall forthwith pay the amount of all expenses so incurred but shall have no claim in respect of any such scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale thereof.

Payments on intermediate certificate to be regarded as advance.

Clause 8 : No payment shall be made for any work estimated to cost less than Rs. One thousand till after the whole of the said work shall have been completed and a certificate of completion given. But in the case of the works estimated to cost more than Rs. One thousand, the contractor shall not submitting a monthly bill there off be entitled to receive payment proportionate to the part of the work then approved and passed by the Engineer-in-charge whose certificate of such approval and passing of the sum payable shall final and conclusive against the contractor. All such intermediate payment shall be regarded as payment by way of advance against the final payment only and not preclude the Engineer-in-charge from requiring any bad, unsound, imperfect or unskillful work to be removed and taken away and reconstructed or rejected, nor shall any such payment be considered as an admission of the due performance of the contractor or any part thereof, in any respect of the occurring of any claim, nor shall it conclude, determine or affect in any way the powers of the Engineer-in-charge as to final settlement and adjustment of the accounts or otherwise or in any other way vary or affect the contract. The final bill shall be submitted by the Contractor within one months of the date fixed for the completion of the work otherwise the Engineer-in-charge’s certificate of the measurement and of the total amount payable for the work shall be final and binding on all parties.

Payment at reduced rates on account of items of work

Clause 9 : The rates for several items of work estimated to cost more than Rs. One thousand agreed to within shall be valid only when the item concerned is accepted as having been completed fully in accordance with the sanctioned specifications. In case where the items of work are not accepted as so completed the Engineer-in-charge may
<table>
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<tr>
<th>Contractor</th>
<th>No. of Corrections</th>
<th>Executive Engineer</th>
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</table>

**Clause 10:** A bill shall be submitted by the contractor each month on or before the date fixed by the Engineer-in-charge for all work executed submitted in the previous month, and the Engineer-in-charge shall take or cause to be taken the requisite measurement for the purpose of having the same verified and the claim so far as it is admissible shall be adjusted, if possible within ten days from the presentation of the bill. If the contractor does not submit the bill within time fixed as aforesaid, the Engineer-in-charge may depute a subordinate to measure up the said work in the presence of the contractor or his duly authorised agent whose counter signature to the measurement list shall be sufficient warrant and the Engineer-in-charge may prepare a bill from such list which shall be binding on the contractor in all respects.

**Bill to be submitted monthly**

**Clause 11:** The contractor shall submit all bills on the printed forms to be had on application at the office of the Engineer-in-charge. The charges to be made in the bills shall always be entered at the rates specified in the tender or in the case of any extra work ordered in pursuance of these conditions and not mentioned or provided for in the tender, at the rate hereinafter provided for such work.

**Bill to be on printed form.**

**Stores supplied by Government**

**Clause 12:** If the specification or estimate of the work provides for the use of any special description of materials to be supplied from the P.W.D. store or if it is required that the contractor shall use certain stores to be provided by the Engineer-in-charge (such material and stores, and the prices to be charged therefore as hereinafter mentioned being so far as practicable for the convenience of the contractor but not so in any way to control the meaning or effect of this construction specified in the schedule or memorandum hereto annexed) the contractor shall be supplied with such materials and stores as may be required from time to time to be used by him for the purpose of the construction only, and values of the full quantity of materials and stores as supplied shall be set off or reduced from any sums then due, or hereafter to become due to the contractor under the contract or otherwise or from the security deposits, or the proceeds of sale thereof, if the deposit is held in Government, and shall on no account be removed from the site of the work and shall at all times be open to inspection by the Engineer-in-charge. Any such material unused and in good condition at the time of completion or determination of the contract shall be returned to the Public Works Department stores, if the Engineer-in-charge so requires by a notice in writing given under his hand, but the contractor shall not be entitled to return any such materials except with such consent and he shall have no claim for compensation on account of any such material supplied to him as aforesaid but remaining unused by him or for any wastage into damage thereto.

**Store Material**

**Clause 12 A:** All store of contractor material such as cement, steel, Bitumen etc. Supplied by the contractor at his own cost should be kept by the contractor under lock and key and will be accessible for inspection by the Executive Engineer or his agent at all times.
<table>
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<tr>
<th>Work to be executed in accordance with specification, drawing, orders etc.</th>
<th>Clause 13: The contractor shall execute the whole and every part of the work like manner and both as regards materials and every other respect in strict accordance with specifications. The contractor shall also confirm exactly fully and faithfully to the designs, drawings and instructions in writing relating to the work signed by the Engineer-in-charge and lodged in his office and to which the contractor shall be entitled to have access for the purpose of inspection at such office or at the site of work during office hours. The contractor will be entitled to receive three sets of contracts drawings and working drawings as well as one certified copy of the accepted tender along with the work order free of cost. Further copies of the contract drawings and working drawings, if required by him, shall be supplied at the rate of Rs. 500/- per set of contact drawing and Rs. 150/- per working drawing except where otherwise specified.</th>
</tr>
</thead>
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<tr>
<td>Alteration in Specifications and designs not to invalidate contract.</td>
<td>Clause 14: The Engineer-in-charge shall have power to make any alterations in, or additions to, the original specifications, drawings, designs and instructions, that may appear to him to be necessary or advisable during the progress of the work and the contractor shall be bound to carry out the work in accordance with any instructions in this connection which may be given to him in writing signed by the Engineer-in-charge and such alteration shall not invalidate the contract, and any additional work which the contractor may be directed to do in the manner above specified as a part of the work shall be carried out by the contractor in the same conditions in all respects on which he agreed to the main work and at the same rates as per specified in the tender for the main work. And if the additional or altered work, includes any class of work for which no rate is specified in this contract, then such class of work shall be carried out at the rates entered in Schedule of Rates of the division or at the mutually agreed upon between the Engineer-in-charge and the contractor, whichever are lower. If the additional or altered work, for which no rate is entered in the schedule of rates of the division, is ordered to be carried out before the rates are agreed upon, then the contractor shall within seven days of the date of receipt by him of order to carry out work inform the Engineer-in-charge of the rate which it is his intention to charge for such class of work, and if the Engineer-in-charge does not agree to this rate he shall by notice in writing be at liberty to cancel his order to carry out such class of work and arrange to carry it out in such manner as he may consider advisable, provided always that if the contractor shall commence work or incurs any expenditure in regard thereto before the rate shall have been determined as lastly herein-before mentioned then in such case he shall only be entitled to be paid in-respect if the work carried out or expenditure incurred by him prior to the date of the determination of the rate as aforesaid according to such rate or rates as shall be fixed by the Engineer-in-charge. In the event of a dispute the decision of the Superintending Engineer of the Circle will be final. Where however, the work is to be executed according to the designs, drawings, and specification recommended by the contractor and accepted by the competent authority the alterations above referred to shall be within the scope of such designs, drawing and specifications to the tender.</td>
</tr>
<tr>
<td>Extension of time in consequence of addition or alteration.</td>
<td>The time limit for the completion of work shall be extended in the proportion that the increase in its cost occasioned by alterations or additions bears to the cost of the original contact work and the certificate of the Engineer-in-charge as to such proportion shall be conclusive.</td>
</tr>
<tr>
<td>No claim to any payment or compensation for alteration in work specified in the tender.</td>
<td>Clause 15: (1) If at any time after the execution of the contract documents, the engineer shall for any reason whatsoever (other than default on the part of the contractor and for which Government is entitled to rescind the contract) desire that the whole or any part of the work specified in the tender should be suspended for any period or that the whole or part of</td>
</tr>
</tbody>
</table>
the work should not be carried out at all he shall give to the contractor a notice in writing of such desire and upon the receipt of such notice the contractor shall forthwith suspend or stop the work wholly or in part as required, after having due regard to the appropriate stage at which the work should be stopped or suspended so as not to cause any damage or injury to the work already done or endanger the safety thereof provided the decision of the Engineer as to the stage at which the work or any part of it could be or could have been safely stopped or suspended shall be final and conclusive against the contractor. The contractor shall have no claim to any payment or compensation what-so-ever by reason of or in pursuance of any notice as aforesaid on account of any suspension, stoppage or curtailment except to the extent specified here-in-after.

(2) Where the total suspension of the work ordered as aforesaid continued for a continuous period exceeding 90 days the contractor shall be at liberty to withdraw from the contractual obligations under the contract so far as it pertains to the unexecuted part of the work by giving a 10 days prior notice in writing to the Engineer, within 30 days of the expiry of the said period of 90 days of such Intention and requiring the Engineer to record the final measurements of the work already done and to pay the final bill. Upon given such notice, the contractor shall be deemed to have been discharged from his obligation to complete the remaining unexecuted work under this contract. On receipt of such notice the Engineer shall proceed to complete the measurement and make such payment as may be finally due to the contractor within a period of 90 days from the receipt of such notice in respect of the work already done by the contractor. Such payment shall not in any manner prejudice the right of the contractor to any further compensation under the remaining provision of this clause.

(3) Where the Engineer requires the contractor to suspend the work for a period in excess of 30 days at anytime or 60 days in the aggregate, the contractor shall be entitled to apply to the Engineer within 30 days of the resumption of the work after such suspension for payment of compensation to the extent of pecuniary loss suffered by him in respect of working machinery rendered idle on the site or on account of his having, had to pay the salary or wages of labour engaged by him during the said period of suspension. Provided always that, the contractor shall not be entitled to any claim in respect of any such working machinery, salary or wages for the first 30 days whether consecutive or in the aggregate of such suspension or in respect of any suspension what-so-ever occasioned by unsatisfactory work or any other default on his part. The decision of the Engineer in this regard shall be final and conclusive against the contractor.

(4) In the event of

| (i) | Any total stoppage of work on notice from the engineer under sub-clause (1). |
| (ii) | Withdrawal by the contractor from the contractual obligation to complete the remaining unexecuted work under sub-clause (2) on account of continued suspension of work for a period exceeding 90 days. |
| (iii) | Curtailment in the quantity of any item or items originally tendered on account of any alteration, omission or substitution in the specifications, drawings, designs or instructions under clause 14(1) where such curtailment exceeds 25% in quantity and the value of the quantity curtailed beyond 25% at the rate for the items specified in the tender is more than Rs. Five Thousand (Rs. 5000/-) |

It shall be open to the contractor within 90 days from the service of (i) the notice of stoppage of work or (ii) the notice of withdrawal from the contractual obligation under the contract on account of the continued suspension of the work (iii) notice under clause 14(1) resulting such curtailment or produce to the Engineer satisfactory
<table>
<thead>
<tr>
<th>Time limit for unforeseen claims.</th>
<th><strong>Clause 16</strong>: Under no circumstance whatsoever shall the contractor be entitled to any compensation from Government on any account unless the contractor shall have submitted claim in writing to the Engineer - in Charge within one month of the cause of such claim occurring.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Action and compensation payable in case of bad work.</td>
<td><strong>Clause 17</strong>: If any time before the security deposit or any part thereof is refunded to the contractor it shall appear to the Engineer - in Charge or his subordinate in-charge or the work, that any work has been executed with unsound, imperfect unskilled workmanship or with materials of inferior quality, or that any materials or articles provided by him for the execution of the work are unsound or of a quality inferior to that contracted for or are otherwise not in accordance with the contractor, it shall be lawful for the Engineer-in-charge to intimate this fact in writing to the contractor and then not withstanding the fact that the work, materials or articles complained of may have been inadvertently passed, certified and paid for, the contractor shall be bound forthwith to rectify, or remove and reconstruct the work so specified in whole or in part, as the case may be require or if so required, shall remove the materials or articles so specified and provided other proper and suitable materials or article at his own charge and cost and in the event of his failing to do so within a period to be specified by the Engineer-in-charge in the written intimation aforesaid, the contractor shall be liable to pay compensation at the rate of 1% on the amount of the estimate for every day not exceeding 10 days, during which the failure so continues and in the case of any such failure, the Engineer-in-charge may rectify or remove and re-execute the work or remove and replace the materials or article complained of, as the case may be, at the risk and expense in all respects of the contractor. Should the Engineer-in-charge consider that any such inferior work or materials as described above may be accepted or made use of it shall be within his discretion to accept the same at such reduced rates as he may fix therefor.</td>
</tr>
<tr>
<td>Work to be open to inspection. Contractor or responsible agent to be present.</td>
<td><strong>Clause 18</strong>: All works under or in course of execution or executed in pursuance of the contract shall at all times be open to the inspection to inspection and supervision of the Engineer-in-charge and his subordinates and the contractor shall at all times during the usual working hours, and at all other times at which reasonable notice of the intention of the Engineer-in-charge of his subordinates to visit the works shall have been given to the contractor, either himself be present to receive order and instructions, or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the contractor’s duly authorised agent shall be considered to have the same force and effect as if they had been given to the contractor himself.</td>
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<tr>
<td>Contractor</td>
<td>Contract</td>
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<tr>
<td>Notice to be given before the work is covered up.</td>
<td><strong>Clause 19</strong>: The contractor shall give not less than 5 days notice in writing to the Engineer-in-charge or his subordinates in charge of the work before covering up or otherwise placing beyond the reach of measurement any work in order that the same may be measured and correct dimensions thereof taken before the same is so covered up or placed beyond the reach of measurement and shall not cover up or placed beyond the reach of measurement any work without the consent in writing of the Engineer-in-charge or his subordinate in charge of the work, and if any work shall be covered up or placed beyond the reach of measurement without such notice having been given or consent obtained the same shall be uncovered at the contractors expense and in default thereof payment or allowance shall be made for such work or for the materials with which the same was executed.</td>
</tr>
<tr>
<td>Contractor liable for damage done and for imperfection.</td>
<td><strong>Clause 20</strong>: If during the period of 24 (Twenty four) months from the date of completion as certified by the Engineer-in-charge pursuant to the clause 7 of the contract or 30 (Thirty) months after commissioning of the work whichever is earlier in the opinion of the Executive Engineer, the said work is defective in any manner whatsoever, the contractor shall forthwith on receipt of the notice in that behalf from the Executive Engineer, duly commence execution and completely carry out at his cost in every respect all the work that may be necessary for rectifying and setting right the defects specified therein including dismantling and reconstruction of unsafe portions strictly in accordance with and in the manner prescribed and under the supervision of the Executive Engineer. In the event of the contractor failing and neglecting to commence execution of the said rectification work within the period prescribed therefore in the said notice the Executive Engineer may get the same executed and carried out departmentally or by other agency at the risk on account and at the cost of the contractor. The contractor shall forthwith on demand pay to the government the amount of such costs, charges and expenses sustained or incurred by the government of which the certificate of the Executive Engineer shall be final and binding on the contractor. Such costs, charges and expense shall be deemed to be arrears of land revenue and in the event of contractor failing or neglecting to pay the same on demand as aforesaid without prejudice to any other rights and remedies of the Government, the same may be recovered from the contractor as arrears of land revenue. The government shall also be entitled to deduct the same from any amount which may then be payable or which may thereafter becomes payable by government to the contractor either-in-respect of the said work or any other work whatsoever, or from the amount of the security deposit retained by government.</td>
</tr>
<tr>
<td>Contractors to supply plant, ladders, scaffolding etc.</td>
<td><strong>Clause 21</strong>: The contractor shall supply at his own cost all materials (except such special material if any) as may be supplied from the Public Works Department Stores, in accordance with the contract, plant, tolls, appliances, implements, ladders, cordage, tackle, scaffolding and any temporary works which may be required for the proper execution of the work, in the original, altered or substituted form, whether included in the specification or other documents forming part of the contract or referred to in these conditions or not and which may be necessary for the purpose of satisfying or complying with requirements of the Engineer-in-charges as to any matter on which</td>
</tr>
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</table>
And is liable for damages arising from non-provisions of lights, fencing etc.

under these Conditions he is entitled to be satisfied, or which be entitled to require together with carriage therefor, to and from the work. The contractor shall also supply without charge the requisite number of persons with the means and materials necessary for the purpose of setting out works and counting, weighing and assisting in the measurement or examination at any time and from time to time of the work or materials. Failing this the same may be provided by the Engineer-in-charge at the expense of the contractor and the expenses may be deducted from any money due to the contractor under the contract or from his security deposit or the proceeds of sale thereof or of sufficient portion thereof. The contractor shall provide all necessary fencing and lights required to protect the Public from accident and shall also be bound to bear the expenses of defense every suit, action or other legal proceedings at law that may be brought by any person for injury sustained owing to the neglect of the above precautions, and to pay damages and cost such person or which may with the consent of the contractor be paid in compromising any claim by any such person.

**Clause 21A:** The contractor shall provide suitable scaffolds and working platforms, gangways, and stairways and shall comply with the following regulations in connection therewith:

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<tr>
<td>a)</td>
<td>Suitable scaffolds shall be provided for workmen for all work that cannot be safely done from a ladder or by other means.</td>
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<tr>
<td>b)</td>
<td>A scaffold shall not be constructed, taken down substantially altered except -</td>
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<td></td>
<td>i) Under the supervision of a competent and responsible. Person, and</td>
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<td></td>
<td>ii) As far as possible by competent workers possessing adequate experience in this kind of work.</td>
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<td>c)</td>
<td>All scaffolds and appliance connected therewith and all leaders shall -</td>
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<td>i) Be of sound material</td>
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<td>ii) Be of adequate strength having regard to the loads and strains to which they will be subjected, and</td>
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<td></td>
<td>iii) Be maintained in proper condition.</td>
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<td>d)</td>
<td>Scaffolds shall be so constructed that no part there of can be displaced in consequence of normal use.</td>
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<tr>
<td>e)</td>
<td>Scaffolds shall not be overloaded and as far as practicable the load shall be evenly distributed.</td>
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<td>f)</td>
<td>Before installing lifting gear on scaffolds special precaution shall be taken to ensure the strength and stability of the scaffolds.</td>
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<td>g)</td>
<td>Scaffolds shall be periodically inspected by a competent person.</td>
</tr>
<tr>
<td>h)</td>
<td>Before allowing a scaffold to be used by his workmen, the contractor shall check whether the scaffold has been erected by his workmen or not take steps and to ensure that it complies fully with the regulations herein specified.</td>
</tr>
<tr>
<td>i)</td>
<td>Working platforms, gangways, and stairways shall -</td>
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<tr>
<td>Clause</td>
<td>Description</td>
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<tr>
<td><strong>i)</strong></td>
<td>Be so constructed that no part thereof can sag unduly or unequally.</td>
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<tr>
<td><strong>ii)</strong></td>
<td>Be so constructed and maintained having regard to the prevailing conditions as to reduce as far as practicable risks of persons tripping or slipping, and</td>
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<tr>
<td><strong>j)</strong></td>
<td>In the case of working platforms, gangways, working places and stairways at a height exceeding 3 meters.</td>
</tr>
<tr>
<td><strong>i)</strong></td>
<td>Every working platform and every gangways shall have to be closely boarded unless other adequate measures are taken to ensure safety.</td>
</tr>
<tr>
<td><strong>ii)</strong></td>
<td>Every working platform, gangways, working places, stairway shall be suitably fenced.</td>
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<tr>
<td><strong>k)</strong></td>
<td>Every opening in the floor of the building or in working platform shall except for the time and to the extent required to allow the access or persons or the transport or shifting of materials be provided with suitably means to prevent the fall of persons or material.</td>
</tr>
<tr>
<td><strong>l)</strong></td>
<td>When persons are employed on a roof where there is danger of falling from a height exceeding 3 meters suitable precaution shall be taken to prevent the fall of persons or materials.</td>
</tr>
<tr>
<td><strong>m)</strong></td>
<td>Suitable precautions shall be taken to prevent persons being struck by articles, which might fall from scaffolds or other working place. Safe means of access shall be provided to all working platforms and other working places.</td>
</tr>
<tr>
<td><strong>n)</strong></td>
<td>Safe means of access shall be provided to all working platform and other working places.</td>
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</tbody>
</table>

**Clause 21 B**: The contractor shall comply with the following regulations as regards the Hoisting Appliances to be used by him.

<table>
<thead>
<tr>
<th>a)</th>
<th>Hoisting machines and tackle, including their attachment, anchorage’s and sports shall -</th>
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<tr>
<td>i)</td>
<td>Be of good mechanical construction, sound material and adequate strength and free from patent defect, and</td>
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<tr>
<td>ii)</td>
<td>Be kept in good repair and in good working order.</td>
</tr>
<tr>
<td>b)</td>
<td>Every rope used in hoisting or lowering material or as a means of suspension shall be of suitable quality and adequate strength and free from patent defect.</td>
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<tr>
<td>c)</td>
<td>Hoisting machines and tackle shall be examined and adequately tested after erected on the site and before use and be reexamined in position at intervals to be prescribed by the government.</td>
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<tr>
<td>d)</td>
<td>Every chain, ring, hook, shackle, swivel and pulley block used in hoisting or lowering of materials or as a means of suspension shall be periodically examined.</td>
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<tr>
<td>e)</td>
<td>Every crane driver or hoisting appliance operator shall be properly qualified.</td>
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<td>f)</td>
<td>No person who is below the age of 21 years shall be in control of any hoisting machine, including any scaffolds, which give signals to the operator.</td>
</tr>
<tr>
<td>Measure for prevention of fire</td>
<td>Clause 22: The contractor shall not set fire to any standing jungle, trees, bush wood or grass without a written permit from the Executive Engineer.</td>
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<td>When such permit is given and also in all cases when destroying cut or dug up trees, bush wood grass etc. by fire, the contractor shall take necessary measures to prevent such fire spreading to or otherwise damaging surrounding property.</td>
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<td></td>
<td>The contractor shall make his own arrangement for drinking water for the labour employed by him.</td>
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<tr>
<td>Liability of contractors for any damage done in or outside work area</td>
<td>Clause 23: Compensation for all damage done intentionally or unintentionally by contractors labour whether in or beyond the limits of contractor for government property including any damage caused by the spreading of any damage fire mentioned in clause 22 shall be estimated by the Engineer-in-charge or such other officer as he may appoint and the estimates of the Engineer-in-charge subject to the decision of the Superintending Engineer on appeal shall be final and the contractor shall be bound to pay the amount of the assessed compensation on demand, failing which the same will be recovered from the contractor as damages in the manner prescribed in clause 1 or deducted by the Engineer-in-charge from any sum that may be due to or become due from government to the contractor under this contract or otherwise. The contractor shall bear the expenses of defending any action or other legal proceeding that may be brought by any person for injury sustained by him owing to neglect of precautions to prevent the spread of fire and he shall also pay any damages and cost that may be awarded by the court in consequence.</td>
</tr>
<tr>
<td>Employment of female labour</td>
<td>Clause 24 : The employment of female labourers on works in the neighborhood of soldier’s barracks should be avoided as far as possible.</td>
</tr>
<tr>
<td>Work on Sunday</td>
<td>Clause 25 : No work shall be done on a Sunday without the sanction in writing of the Engineer-in-charge.</td>
</tr>
<tr>
<td>Work not to be sublet. Contract may rescind and security deposit forfeited for subletting it without approval or for bribing a public officer or if contractor becomes insolvent.</td>
<td><strong>Clause 26 :</strong> The contract shall not be assigned or sublet without the written approval of the Engineer-in-charge. And if the contractor shall assign or sublet his contract, or attempt so to do, or become insolvent or commence any proceedings to be adjudicated and insolvent or make any composition with his creditors, or attempt so to do the Engineer-in-charge may be notice in writing rescind the contract. Also if any bribe, gratuity, gift, loan, perquisite, reward or advantage, pecuniary or otherwise, shall either directly or indirectly be given, promised by the contractor or any of his servants or agents to any public officer or person in the employment of government in any way relating to his office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Engineer-in-charge may be giving notice in writing rescind the contract. In the event of a contract being rescinded, the security deposit of the contractor shall thereupon stand forfeited and be absolutely at the disposal of the Government and same consequences shall as ensure as if the contract has been rescinded under clause 3 hereof and in addition the contractor shall not be entitled to recover or be paid for any work therefore actually performed under the contract.</td>
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<td>Sum payable by way of compensation to be considered as reasonable compensation without reference to actual loss.</td>
<td><strong>Clause 27 :</strong> All sum payable by a contractor by way of compensation under any of these condition shall be considered as a reasonable compensation to be applied of the use of Government without reference to the actual loss or damage sustained and whether any damage has or has not been sustained.</td>
</tr>
<tr>
<td>Changes in the constitution of the firm to be notified.</td>
<td><strong>Clause 28 :</strong> In the case of a tender by partners any change in the construction of a firm shall be forthwith notified by the contractor to the Engineer-in-charge for his information.</td>
</tr>
<tr>
<td>Work to be under direction and control of Superintending Engineer.</td>
<td><strong>Clause 29 :</strong> All works to be executed under the contact shall be executed under the direction and subject to the approval in all respects of the Superintending Engineer of the Circle for the time being, who shall be entitled to direct at what point or points and in what manner they are commenced and from time to time carried out.</td>
</tr>
<tr>
<td>Clause 30 (1) : Except where otherwise specified in the contract and subject to the power delegated to him by Government under the code rules then in force, the decision of the Superintending Engineer of the Circle for the time being shall be final, conclusive and binding on all parties to the contract upon all questions relating to the meaning of the specifications, designs, drawings and instructions herein before mentioned and as to the quality of the workmanship or material used on the work or as to any other question, claim, right, matter or things whatsoever, in any way arising out of or relating to the contract designs, drawing, specifications, estimates, instructions, orders of these conditions or otherwise concerning the works or the execution or failure to execute the same whether arising during the progress of the work or after the completion or abandonment thereof.</td>
<td><strong>(2) The contractor may within thirty days of receipt by him of any order passed by the Superintending Engineer of the Circle as aforesaid appeal against it to the Chief Engineer concerned with the contract, work or project provided that -</strong></td>
</tr>
<tr>
<td>(a) The accepted value of the contract exceeds Rs. 10 lacks (Rupees Ten Lakhs)</td>
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<tr>
<td>(b) Amount of claim is not less than Rs. 1.00 lakh (Rupees one lakh)</td>
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</tbody>
</table>
(3) If the contractor is not satisfied with the order passed by the Chief Engineer as aforesaid the contractor may within thirty days of receipt by him of any such order, appeal against it to the concerned Secretary, Public Works Department who, if convinced the prima-facie the contractor's claim rejected by the Superintending Engineer / Chief Engineer is not frivolous and that there is some substance in the claim of the contractor as would merit a detailed examination and decision by the Standing Committee, shall put up to the Standing Committee at Government level for suitable decision.

<table>
<thead>
<tr>
<th>Store of European or American manufactures to be obtained from the Government</th>
<th>Clause 31: The contractor shall obtain from the P.W.D. stores all stores and article of European or American manufacture which may be required for the work, or any part of the work or in making up any article required therefore or in connection therewith unless he has obtained permission in writing from the Engineer-in-charge to obtain such stores and articles elsewhere. The value of such stores and articles as may be supplied to the contractor by Engineer-in-charge will be debited to the contractor in his account at the rates shown in the Schedule in form “A” attached to contract and if they are not entered in the said Schedule, they shall be debited to him at cost price which for the purpose of this contract shall include the cost of carriage and all other expenses whatsoever, which may have to be incurred in obtaining delivery of the same as the stores aforesaid.</th>
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</thead>
<tbody>
<tr>
<td>Lump sums in estimates.</td>
<td>Clause 32: When the estimate on which a tender is made includes lump sums in respect of parts of the work the contractor shall be entitled to payment in respect of items of work involved or the part of the work in question at the same rates as are payable under this contract for such items, or if part of the work question is not in the opining of the Engineer-in-charge capable of measurement the Engineer-in-charge may at his discretion pay lump sum amount entered in the estimate, and the certificate in writing of the Engineer-in-charge shall be final and conclusive against the contractor with regard to any sum or sums payable to him under the provision of this clause.</td>
</tr>
<tr>
<td>Action where no specification.</td>
<td>Clause 33: In the case of any class of work for which there is no such specification as in mentioned in Rule-1, such work shall be carried out in accordance with the Divisional specifications, and in the event of there being no Divisional specification, then in such case the work shall be carried out in all respects in accordance with the instruction and requirement of the Engineer-in-charge.</td>
</tr>
<tr>
<td>Definition of work.</td>
<td>Clause 34: The expression 'works' or 'work' where used in these condition shall, unless there be something in the subject or context repugnant to such construction be constructed to mean the work or the work contractor to be executed under or in virtue of the contract, whether temporary or permanent and whether original altered substituted or additional.</td>
</tr>
<tr>
<td>Contractor's percentage whether applied to net or gross amount of bill.</td>
<td>Clause 35: The percentage referred to in the tender shall be deducted from / added to the gross amount of the bill before deducting the value of any stock issued.</td>
</tr>
<tr>
<td>Quarry fees and royalties</td>
<td>Clause 36: All quarry fees, royalties, octroi dues and ground rent for stacking materials if any, should be paid by the contractor.</td>
</tr>
<tr>
<td>Compensatory under Workman's Compensation Act</td>
<td><strong>Clause 37</strong>: The contractor shall be responsible for and shall pay compensation to his Workmen payable under the Workmen's compensation Act, 1923 (VIII of 1923), (hereinafter compensation is payable and or paid by Government as principal under the subsection 91) of section 12 of the said Act on behalf of the contractor this shall be recoverable by Government from the contractor under sub section 92) of the said section. Such compensation shall be recovered in the manner laid down in clause 1 above.</td>
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<td></td>
<td><strong>Clause 37 A</strong>: The contractor shall be responsible for and shall pay expenses of providing Medical aid to any workmen who may suffer a bodily injury as a result on an accident. If such expenses are incurred by Government the same shall be recoverable from the contractor forthwith and be deducted without prejudice to any other remedy of Government from any amount due or that may become due to the contractor.</td>
</tr>
<tr>
<td></td>
<td><strong>Clause 37 B</strong>: The contractor shall provide all necessary personal safety equipment and first-aid apparatus available for the use of the persons employed on the site and shall maintain the same in condition suitable for immediate use at any time and shall comply with the following regulation in connection therewith:</td>
</tr>
<tr>
<td></td>
<td>(a) The worker shall be required to use the equipment so provided by the contractor and the contractor shall take adequate steps to ensure proper use of the equipment by those concerned.</td>
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<td></td>
<td>(b) When work carried on in proximity to any place where there is no risk of drawing, all necessary equipment’s shall be provided and kept ready for use and all necessary steps shall be taken prompt rescue of any person in danger.</td>
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<td></td>
<td>(c) Adequate provision shall be made for prompt first-aid treatment for all injuries likely to be sustained during the course of the work.</td>
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<td></td>
<td><strong>Clause 37 C</strong>: The contractor shall duly comply with the provision of “The Apprentices Act 1961 (III of 1961) the rules made there under and the orders that may be issued from time under the said Act and the said Rules and on his failure or neglect to do so he shall be subject to all the liabilities and penalties provided by the said Act and said Rules”.</td>
</tr>
<tr>
<td>Claim for quantity of works entered in the tender or estimate.</td>
<td><strong>Clause 38</strong>: (1) Quantities in respect of the several items shown in the tender are approximate and no revision in the tendered rates shall be permitted in respect of any of the items so long as, subject to any special provision contained in the specification prescribed a different percentage of permissible variation, the quantity of the items does not exceed the tender quantity by more than 25% and so long as the value of excess quantity beyond this limit at the rate of the items specified in the tender, is not more than Rs. 5,000/-</td>
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<td></td>
<td>(2) The contractor shall if ordered in writing by the Engineer, so to do also carry out any quantities in excess of the limit mentioned in Sub Clause (1) hereof on the same conditions as and in accordance with the specifications in the tender and at the rates (i) derived from the rates entered in the current schedule of rates and in the absence of such rates (ii) at the rate prevailing in the market, the said rates being increased or decreased as the case may be, by the percentage which the total tendered amount bears to the estimated cost of the work as put to tender based upon the Schedule rates of applicable to the year in which the tenders were invited (for the purpose of operation of this clause, this cost shall be taken to Rs. 65,00,941/-)</td>
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<td></td>
<td>(3) Claim arising out of reduction in the tendered quantity of any item beyond 25 percent will be governed by the provisions of clause 15 only when the amount reduction beyond 25% at the rate of the item specified in the tender is more than Rs. 5000/-</td>
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<tr>
<td>Employment of</td>
<td><strong>Clause 39</strong>: The contractor shall employ any female, convict or other labour of a particular</td>
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<td>female or other labour.</td>
<td>kind of class if ordered in writing to do so by the Engineer-in-charge.</td>
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<tr>
<td>Claim for compensation for delay in starting work</td>
<td><strong>Clause 40</strong>: No compensation shall be allowed for any delay caused in the starting of the work on account of acquisition of land and in the case of the clearance work of any delay in accordance sanction to estimates.</td>
</tr>
<tr>
<td>Claim for compensation for delay in the execution of work</td>
<td><strong>Clause 41</strong>: No compensation shall be allowed for any delay in execution of the work on account of water standing in borrow pits or compartments. The rates are inclusive for hard or cracked soil excavation in mud, subsoil water or water standing in borrow pits and no claim for an extra rate shall be entertained unless otherwise expressly specified.</td>
</tr>
<tr>
<td>Entering upon or commencing any portion of work.</td>
<td><strong>Clause 42</strong>: The contractor shall not enter upon or commence any portion of work except with the written authority and instructions of the Engineer-in-charge or of his subordinate in charge of the work failing such authority the contractor shall have no claim to ask for measurements of or payment for work.</td>
</tr>
<tr>
<td>Minimum age of persons employed, the employment of donkey and/or other animals and the payment of fair wages.</td>
<td><strong>Clause 43</strong>: (i) No contractor shall employ any person who is under the age of 18 years. (ii) No contractor shall employ donkeys or other animals with breeching of string or thin rope. The breeching must be at least 3 inches wide and should be of tape (Newar) (iii) No animals suffering from sores, lameness or emaciation or which is immature shall be employed on the work. (iv) The Engineer-in-charge or his agent authorised to remove from the work any person or animal found working which does not satisfy these conditions and no responsibilities shall be accepted by the Government for any delay caused in the completion of the work by such removal. (v) The contractor shall pay fair and reasonable wages to the workmen employed by him in the contract undertaken by him. In the event of any disputes arising between the contractor and his workmen on the grounds that the wages paid are not fair and reasonable the dispute shall be referred without delay to the Executive Engineer who shall decide the same. The decision of the Executive Engineer shall be conclusive and binding on the contractor, but such decision shall not in any way affect the condition in the contract regarding the payment to be made by the Government at the sanctioned tender rates. (vi) The contractor shall provide drinking water facilities to the workers. Similar amenities shall be provided to the workers engaged on large work in urban areas.</td>
</tr>
<tr>
<td>Method of payment.</td>
<td><strong>Clause 44</strong>: Payments to contractor shall be made by cheques drawn on any treasury within the Division convenient to them. Provided the amount exceeds Rs. 100/- Amount not exceeding Rs. 100/- will be paid in cash.</td>
</tr>
<tr>
<td>Acceptance of conditions compulsory before tendering the work.</td>
<td><strong>Clause 45</strong>: Any contractor who does not accept these conditions shall not be allowed to tender for works.</td>
</tr>
</tbody>
</table>
| Employment of scarcity labour. | **Clause 46**: If Government declares a state of scarcity or famine to exist in any village situated within 1 Kms. of work, the contractor shall employ upon such parts of the work as suitable for unskilled labour any person certified to him by the Executive Engineer or by any
Clause 47: The price quoted by the contractors shall not in any case exceed the control price, if any, fixed by Government or reasonable price which is permissible for him to charge as private purchaser for the same class and description of goods under the provisions of Hoarding and profiteering Prevention Ordinance 1984 as amended from time to time. If the price quoted exceeds the controlled price or the price permissible under Hoarding and Profiteering Prevention Ordinance, the contractor will specifically mention this fact in his tender along with reasons for quoting such higher price. The purchaser at his tender along with reasons for quoting such higher price. The purchaser at his discretion will in such higher price. The purchaser at his discretion will in such case exercises the right of revising the price at any stage so as to confirm with the controlled price on the permissible under the Hoarding and Profiteering Ordinance. This discretion will be exercised without prejudice to any other action that may be taken against the contractor.

Clause 48: The rates to be quoted by the contractor must be inclusive of sales tax No extra payment on this account will be made to the contractor.

Clause 48 A : The contractors are bound to pay to the labourers wages according to the Minimum Wages Act 1948 applicable to the Zone in accordance with the order issued in Government P.W.D./Circular No. MWA/ 1063, dated 07/12/1968.

Clause 49: In case of materials that remains surplus with the contractor for those issued for the work contracted from the date of ascertainment of the materials being surplus be taken as the date of sale for the purpose of sales tax and the sale tax will be recovered on such sale.

Clause 50: The contractor shall employ the unskilled labour to be employed by him on the said work only from locally available labours and shall give preference to those persons enrolled under Maharashatra Government Employment and Self Employment Department Scheme. Provided, however, that if the required unskilled laboured are not available locally, the contractor shall in the first instance employ such number of persons as is available and thereafter may with previous permission, in writing of the Engineer-in-charge of the said work obtained the rest of requirement of unskilled the labour from outside the above scheme.

Clause 51: Deleted

Clause 52: All amount whatsoever which the contractor is liable to pay to the Government in connection with the execution of the work including the amount payable in respect of (1) Material and / or stores supplied / issued hereunder by the Government to the contractor, (2) Hire charges in-respect of heavy plant machinery and equipment given on hire by the Government to the contractor, for execution by him of the work and / or on which the advance have been given by the Government to the contractor shall be deemed to be arrears of the lands revenue and the Government may without prejudice to any other rights and remedies of the Government recover the same from the contractor as arrears of land revenue.

Clause 53: The contractor shall duly comply with all the provisions of the contract labour (Regulation and Abolition) Act 1970. (37 of 1970) and the Maharashtra Contract Labour (Regulation and Abolition) Rules 1971 as amended from time to time and all other relevant statutes and statutory provision concerning payment of wages particularly to workmen employed by the contractor and working on the site of the work. In particular the Contractor
shall pay wages to each worker employed by him on the site of the work at the rates prescribed under the Maharashtra Contract Labour (Regulation and Abolition) Rules 1971. If the contractor fails or neglects to pay wages at the said rates or make short payment and the Government makes such payment of wages in full or part thereof less paid by the contractor, as the case may be the amount so paid by the Government to such worker shall be deemed to be arrears of land revenue and the Government shall be entitled to recover the same as such from the contractor or deduct the same from the amount payable by the Government to the contractor hereunder or from any other amounts payable to him by the Government (Minimum Wages Act, as per Government Circular (AT / 1284 / (120) / Building, dated 14/08/1988).

Price Variation Clause 54: If during the operative period of the contract as defined in condition (i) below, there shall be any variation in the consumer price index (New series) for industrial Workers for Nagpur Center as per the Labour Gazette published by the Commissioner of Labour, Government of Maharashtra and or in the Wholesale Price index for all commodities, prepared by the office of Economic Advisor, Ministry of Industry, Government of India or in the price of petrol / Oil and Lubricants, and major construction material like bitumen, cement, steel, various type of metal, pipes, etc. then subject to the other conditions mentioned below, price adjustment on account of

(i) Labour component,
(ii) Material component,
(iii) Petrol Oil and Lubricants components
(iv) Bitumen component
(v) HYSD & Mild / T.M.T. / Structural Steel component
(vi) Cement component

Calculated as per formula hereinafter appearing shall be made. Apart from these, no other adjustment shall be made to the contract price for any reasons whatsoever. Component percentages as given below are as of the total cost of work put to tender. Total of Labour, Material & POL components shall be 100 and other components shall be as per actual.

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labour Component - K₁</td>
<td>25.54 %</td>
</tr>
<tr>
<td>Material Component - K₂</td>
<td>73.85 %</td>
</tr>
<tr>
<td>POL Component - K₃</td>
<td>0.61 %</td>
</tr>
<tr>
<td>Total</td>
<td>100 %</td>
</tr>
<tr>
<td>Bitumen Component</td>
<td>Actual</td>
</tr>
<tr>
<td>HYSD &amp; Mild / T.M.T. / Structural Steel component</td>
<td>Actual</td>
</tr>
<tr>
<td>Cement Component</td>
<td>Actual</td>
</tr>
</tbody>
</table>
(1) **FORMULA FOR LABOUR COMPONENT:**

\[ V_1 = 0.85 \times P \times \left( \frac{K_1}{100} \right) \times \left( \frac{L_1 - L_0}{L_0} \right) \]

**WHERE**

\[ V_1 = \] Amount of price variation in Rupees to be allowed for labour component

\[ P = \] Cost of work done during the quarter under consideration **Minus** the cost of Cement, Steel and Bitumen calculated at the basic star rates as applicable for the tender consumed during the quarter under consideration. These star rates are specified here

**Star Rates**

| (1) | Cement | 4800.00 | Per M.T. |
| (2) | Steel (TMT) | 38200 | Per M.T. |

\[ K_1 = \] Percentage of Labour Component as indicated above.

\[ L_0 = \] Basic Consumer Price Index for Nagpur centre shall be average consumer price index for the quarter preceding the month in which the last date prescribed for receipt of tender falls.

\[ L_1 = \] Average Consumer Price Index for Nagpur Centre for the quarter under Consideration.

(2) **FORMULA FOR MATERIAL COMPONENT :**

\[ V_2 = 0.85 \times P \times \left( \frac{K_2}{100} \right) \times \left( \frac{M_1 - M_0}{M_0} \right) \]

**WHERE**

\[ V_2 = \] Amount of price variation in Rupees to be allowed for material Component

\[ P = \] Same as worked out for labour component.

\[ K_2 = \] Percentage of Material Component as indicated above.

\[ M_0 = \] Basic Wholesale Price Index shall be average wholesale price index for the Quarter preceding the month in which the last date prescribed for receipt of tender falls.

\[ M_1 = \] Average Wholesale Price Index during the quarter under Consideration.
(3) FORMULA FOR PETROL, OIL & LUBRICANT COMPONENT

\[ V_3 = 0.85 \times P \times \left( K_3 \times \frac{P_1 - P_0}{P_0} \right) \]

WHERE

- \( V_3 \) = Amount of price variation in Rupees to be allowed for POL component
- \( P \) = Same as worked out for labour component.
- \( K_3 \) = Percentage of Petrol, Oil and Lubricant component
- \( P_0 \) = Average price of H S.D at Mumbai during the quarter preceding the month in which the last date prescribed for receipt of tender falls
- \( P_1 \) = Average Price of HSD at Mumbai during the quarter under consideration

(4) FORMULA FOR MILD STEEL/ TMT/ STRUCTURAL STEEL COMPONENT

\[ V_5 = S_0 \times \frac{(S_{l1} - S_{l0})}{S_{l0}} \times T \]

WHERE

- \( V_5 \) = Amount of price variation in Rupees to be allowed Mild Steel TMTSteel component.
- \( S_0 \) = Basic rate of T.M.T HYS/Mild Steel in rupees per metric tonne as considered for working out value of \( P \).
- \( S_{l1} \) = Average Steel Index published in the RBI Bulletin during the quarter under consideration.
- \( S_{l0} \) = Average of Steel Index published in the RBI Bulletin for the quarter preceding the month in which the last date prescribed for receipt of tender falls.
- \( T \) = Tonnage of steel used in the permanent works for the quarter under consideration.

(5) FORMULA FOR CEMENT COMPONENT

\[ V_6 = C_0 \times \frac{(C_{l1} - C_{l0})}{C_{l0}} \times T \]

WHERE

- \( V_6 \) = Amount of price variation in Rupees to be allowed for cement component.
- \( C_0 \) = Basic rate of cement in rupees per metric tonne as considered for working out value of \( P \).
- \( C_{l1} \) = Average cement Index published in the RBI Bulletin for the quarter under consideration.
- \( C_{l0} \) = Average of cement Index published in the RBI Bulletin for the quarter preceding the month in which the last date prescribed for receipt of tender falls.
- \( T \) = Tonnage of cement used in the permanent works for the quarter under consideration.
(6) FORMULA FOR BITUMEN COMPONENT:

\[ V_4 = Q_B (B_1 - B_0) \]

WHERE

- \( V_4 \) = Amount of price variation in Rupees to be allowed for Bitumen component.
- \( Q_B \) = Quantity of Bitumen (Grade) in metric tonnes used in the permanent works and approved enabling works during the quarter under consideration.
- \( B_1 \) = Current average ex-refinery price per metric tonne of Bitumen (Grade) under Consideration including taxes (octroi, excise, sales tax) during the quarter under consideration.
- \( B_0 \) = Basic rate of Bitumen in rupees per metric tonne as considered for working out value of \( P \) or average ex-refinery price in rupees per metric tonne including taxes (octroi, excise, sales tax) of Bitumen for the grade of bitumen under consideration prevailing quarter preceding the month in which the last date prescribed for receipt of tender, falls, whichever is higher.

The following conditions shall prevail:

i) The operative period of the contract shall mean the period commencing from the date of work order issued to the contractor and ending on the date on which the time allowed for the completion of work specified in the contract for work expires taking into consideration the extension of time if any for completion of the work granted by Engineer under the relevant clause of the conditions of contract in cases other than those where such extension is necessitated on account of default of the contractor. The decision of the Engineer as regards the operative period of the contract shall be final and binding on the contractor. Where any compensation for liquidated damages is levied on the contractor on account of delay in completion or inadequate progress under the relevant contract provisions the price adjustment amount for the balance work from the date of levy of such compensation shall be worked out by pegging the indices \( L_1, M_1, B_1, P_1, C_1, \) and \( S_1 \) to the levels corresponding to the date from which such compensation is levied.

ii) The price variation under this clause shall not be payable for the extra items required to be executed during the completion of the work and also on the excess quantities payable under the provisions of Clause 38 of the contract form B-1 since the rates payable for the extra items or the extra quantities under the clause 38 are to be fixed as per the current DSR or as mutually agreed subject to yearly revision till completion of such work. In other words, when the completion / execution of extra items as well as extra quantities under clause 38 of the contract form B-1 extends beyond the operative date of the DSR, from the rates payable for the same beyond the date shall be revised with reference to the next current DSR prevalent at that time on year to year basis or revised rates, in accordance with mutual agreement thereon, as provided for in the contract, whichever is less.

iii) This clause is operative both ways, i.e. if the price variation as calculated above is in on the plus side, payment on account of the price variation shall be allowed to the contractor and if it is on the negative side, the Government shall be entitled to recover the same from the contractor and amount shall be deductible from any amounts due and payable under the contract.

iv) To the extent that full compensation for any rise or fall in costs to the contractor is not entirely covered by the provision of this or other clauses in the contract, the unit rate and prices included in the contract shall be deemed to include amounts to cover the contingency of such other actual rise or fall in costs.
Clause 55: (A) The anti-malaria and other health measures shall be as directed by the Joint Director (Malaria and Filaria) of Health Services, Pune.

(B) Contractor shall see that mosquito conditions are not created so as to keep vector population for minimum level.

(C) Contractor shall carry out anti malaria measures in the areas as per guidelines prescribed under National Malaria Eradication Programme as directed by the Joint Director (M & F) of health Services, Pune.

(D) In case of a default in carrying out prescribed anti malaria measures, resulting in increase in malaria incidence the contractor shall be liable to pay to Government the amounts spent by Govt. on anti Malaria measures to control the situation in addition to fine.

(E) Relations with Public Authorities: The contractor shall make sufficient arrangement for draining away the sludge water as well as water coming from the bathing and washing places and shall dispose off this water in such a way so as not to cause any substance. He shall also keep the premise clean by employing sufficient number of sweepers. The contractor shall comply with all rules, regulation bylaws and directions given from time to time by any local or public authority in connection with this work and shall pay fees or charges which are leviable on him without any extra cost to Government.

Clause 56: The contractor shall comply with all the provision of the Apprentices Act, 1961 and Rules and Orders issued there under from time to time. If he fails to do so, his failure will be breach of the contract and the Superintending Engineer may in his discretion cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provision of the Act.

Clause 57: The tender rates are inclusive of all taxes, rates, cesses and are also inclusive of the leviable tax in respect if sale by transfer of property in goods involved in the execution of a work contract under the provision of Rules 58 of Maharashtra Value Added Tax Act-2005. For the purpose of levy of tax.

Clause 58: In case of material which become surplus with the contractor from those issued for the work contracted from the date of ascertainment of the materials as being surplus will be taken as the date of sale for the purpose of sales tax and sale tax will be recovered on such sale.

Clause 59(1): QUALITY ASSURANCE AND MAINTENANCE

To ensure the specific quality of work which will also include necessary surveys, temporary works, etc., the contractor shall prepare a quality assurance plan and get the same approved from the Engineer-in-charge within one month from the date of work order. For this, the contractor shall submit an organisation chart of his technical personnel to be deployed on the work along with their qualification, job description defining the function of reporting, supervising, inspecting and approving. The contractor shall also submit a list of tools, equipment and the machinery and instrumentation, which he proposes to use for the construction and for testing in the field and/or in the laboratory and monitoring. The contractor shall modify supplement the organisation chart and the list of Machinery/equipment etc. as per the direction of the Superintending Engineer and shall deploy the personnel and equipment on the field as per the approved chart and the list respectively.

The contractor shall submit written method statements dealing his exact proposal of execution of the work in accordance with the specification. He will have to get these approved from the Engineer-in-charge. The quality of the work shall be property documented through certificates, records, check lists and Log book of results etc. such records shall be compiled from the beginning of the work and be continuously updated subsequently and this will be the responsibility of the contractor. The form should be got approved from the Engineer in charge.
**Clause 59 (2)**: Where the work is to be on lump-sum basis on contractor's design the contractor shall also submit a maintenance manual giving procedure for maintenance, with the periodically of maintenance works including inspections to be used, means of accessibility for all parts of the structure. He shall also include in the manual, the specification, for maintenance works that would be appropriate for his design and technique of construction. This manual shall be submitting within the contract period.

**Clause 60**: It is obligatory on the part of agency to procure R.C.C. pipe (ISI marked) required for the work from the M.S.S.I.D.C. only. The proof of such procurement like bill of M.S.S.I.D.C. certification of the Divisional Manager M.S.S.I.D.C. to that effect will have to be enclosed along with the bill pertaining to the work concerned. The payment towards the procurement of R.C.C. pipes and also items, in which the use of R.C.C. pipes is contemplated, would be released only after fulfillment of the conditions, laid down as above.

*Note: In case provisions of this form B-1 conflicts with those in detailed cyclostyled provisions and conditions attached to this tender. The detailed cyclostyled provision and conditions would prevail over those in this form ‘B-1’*
GENERAL CONDITIONS OF CONTRACT

1. AUTHORITY OF ENGINEER - IN - CHARGE

Save in so far as it is legally or physically impossible, the contractor shall execute complete and maintain the works in strict accordance with the contract under the directions and to the entire satisfaction of the Engineer - in - charge and shall comply with and adhere strictly to the Engineer - in - charge instructions and directions on any matter (Whether mentioned in the contract or not) pertaining to this work.

The Engineer - in - charge shall decide all questions which may arise as to quality and acceptability of materials furnished and work executed, manner of executions, rate of progress of work, interpretations of the plans and specifications and acceptability of fulfillment of the contract on the part of contractor. He shall determine the amount and quality of work performed and materials furnished and his decision and measurements shall be final. In all such matters and in any technical questions which may arise touching the contract, his decision shall be binding on the contractor. The engineer in charge shall have power to enforce such decisions and orders if the contractor fails to carry out them promptly. If the contractor fails to execute the work order by the engineer in charge, the engineer in charge may give notice to the contractor specifying a reasonable period therein and on the expiry of that period proceed to execute such work as may be deemed necessary and recover the cost thereof from the contractor.

1.1 AUTHORITY OF ENGINEER-IN-CHARGE REPRESENTATIVE

The duties of the representative of the engineer in charge are to watch and supervise the work and to test and examine any material to be used or workmanship employed in connection with the works.

1.2 The Engineer in charge may from time to time in writing delegate to his representative any of the powers and authorities vested in the Engineer in charge and shall furnish to the contractor a copy of all such delegations of powers and authorities. Any written instructions of the approval given by the representative of the engineer in charge to the contractor within the terms of such delegations (but not otherwise) shall bind the contractor and department as though it had been given by the Engineer in charge provided always as follows.

(a) Failure of the representative of the engineer in charge to disapprove any work or materials shall not prejudice the power of the engineer in charge. Thereafter to disapprove such work or materials and to order pulling down, removal or breaking up thereof.

(b) If the contractor is dissatisfied with any decision of the representative of the engineer in charge he shall be entitled to refer the matter to the engineer in charge who shall thereupon confirm reverse or vary such decisions.

2. OTHER CONDITIONS FOR SUBMISSION OF TENDER

2.1 The contractor shall be deemed to have carefully examined the work and site conditions including labours, the general and he special conditions, the specification schedule and drawing and shall be deemed to have visited the site of the work and to have fully informed himself regarding the local conditions and carried out his own investigations to arrive at the rates quoted in the tender. In this regards he will be given necessary information to the best of the knowledge of Department but without any guarantee about it.

2.2 It is presumed that the contractor has carefully gone through the works specifications. P.W.D. Hand Book and the Schedule of rates of the division and studied the site conditions before arriving at the rates quoted by him.
3. **TREASURE TROVE:**

In the event of discovery by the contractor or his employees during the progress of the works of the any treasure, fossils, minerals or any other article of value or interest, the contractor shall give immediate intimation thereof to the Engineer. And forth with mark over to the Engineer his representative such treasure or things, which shall be the property of Government.

3 –A **LAYOUT OF WORK:**

Layout of the work will be done by the contractor in consultation with the Engineer in charge or his representative. Some permanent marks should be established to indicate the demarcation of the structures or any component thereof made to these permanent marks in measurement books and drawing, signed by the contractor and the departmental officer. Preparation of layout plan and marking it on site will be the responsibility of the contractor. Once the layout plan is prepared he should submit it to Engineer incharge or his authorised representative for approval and get it approved from the Engineer in charge. Once the layout plan is approved contractor shall proceed with marking it at site of work.

4. **AGENT AND WORK ORDER BOOK:**

4.1 The contractor shall himself engage an authorised all time agent on the work capable of managing and guiding the work and understanding the specifications and contract conditions. A qualified and experienced Engineer shall be provided by the contractor as his agent for technical matters. Site engineer can also be designated as an agent of the contractor. Agent will take orders as will be given by the Executive Engineer or his representative and shall be responsible for carrying them out. This agent shall not be changed without prior intimation of the Executive Engineer and his representative on the work site. The Engineer-in-charge has the unquestionable right to ask for changes in the quality and strength of supervisory staff of contractor and to order removal from work of any of such staff. The contractor shall comply with such order and effect replacements of the satisfaction of the Engineer-in-charge.

4.2 A work order book shall be maintained on site and it shall be the property of Government and the contractor shall promptly sign orders given therein by the Executive Engineer or his representative and his superior officer, and comply with them. The compliance shall be reported by contractor to the Engineer in good time so that it can be checked, the blank work order book, with machine numbered pages will be provided by the Department free of charge for this purpose. The contractor will be allowed to copy out the instruction therein from time to time.

5. **INITIAL MEASUREMENT OF RECORD:**

Where for proper measurements of the work it is necessary to have an initial set of levels or other measurements taken the same as recorded in the authorised field book or M.B. of Government by the Engineer or his authorised representative will be signed by the contractor who will be entitled to have a true copy of same made at his cost. Any failure on the part of the contractor to get such level etc. recorded before starting the work will render him liable to accept the decision of the Engineer as to basis of taking measurements and will be binding on contractor Likewise the contractor will not carry out any work which will render its subsequent measurement difficult or impossible without first getting the same jointly measured and recorded by himself and the authorised representative of the Engineer. The record of such measurement maintained by Government shall be signed by the contractor and he will be entitled to have a true copy of the same made at his cost.

6. **CUSTODY OF WORK:**

All work and materials before being finally taken over by Government will be the entire liability of the contractor for guarding, maintaining and making good any damages of any magnitude. It is however to be understood that before taking over such work, Government will not put it to its regular use as distinct from casual or incidental use except as specially mentioned elsewhere in this contract or as mutually agreed to.
7. **CO-ORDINATION:**

When several agencies for different sub works of the project are to work simultaneously on the project site, there must be full co-ordination between the contractors to ensure timely completion of the whole project smoothly. The scheduled dates for completion specified in each contract shall, therefore be strictly adhered to. Each contractor may make his independent arrangements for water, power, housing etc. if they so desire. On the other hand the Contractors are at liberty to come to mutual agreement on his behalf and make joint agreement with the approval of the Engineer. No contractor shall take or cause to take any steps or action that may cause destruction, discontent or disturbance to work, labour or arrangements etc.of other contractors in the project localities. Any action by any Contractors which the Engineer in his unquestioned discretion may consider as infringement of the above code would be considered as a breach of the contract conditions and shall be dealt with accordingly.

In case of any dispute or disagreement between the various contractors, the Engineer’s decision regarding the co-ordination, co-operation and facilities to be provided by any of the contractor shall be final and binding on the contractor concerned & such a decision shall not vitiate any contract nor absolve the contractor of his obligations under the contract nor form the grounds for any claim or compensation.

8. **PATENTED DEVICES, MATERIALS AND PROCESS:**

Whenever the contractor desires to use any designed device, materials or process covered by letter of patent or copyright, the right for such use shall be secured by suitable legal arrangement and agreement with patent owner and the copy of their agreement shall be filed with the Engineer-in-charge, if so desired by the later.

9. **RELATION WITH PUBLIC AUTHORITIES:**

The contractor shall comply with all rules, regulations, bye-laws and directions given from time-to-time by any local or public authority in connection with this work and shall him-self pay all charges which are leviable on him without any extra cost of Government.

10. **INDEMNITY:**

The contractor shall indemnify the Government against all actions, suits, claims, and demands brought or made against it in respect of anything done or committed to be done by the Contractor in execution of or in connection with the work of this contract and against any loss or damage to the Government in consequence to any action or suit being brought against the contractor for any thing done or committed to be done for the execution of this contract.

The Government may at its discretion and entirely at the cost of the contractor defend such suit, either jointly with the contractor or single in case the latter chooses not to defend the case.

11. **STACKING, STORAGE AND GUARDING OF MATERIALS:**

11.1 The stacking and storage of building materials at site shall be in such a manner as to prevent deterioration or inclusion of foreign materials and to ensure the preservation of the quantity, properties and fitness of the work, suitable precautions shall be taken by contractor to protect the materials against atmospheric action, fire and other hazards. The materials likely to be carried away by wind shall be stored in suitable stores or with suitable barricades and where there is likelihood of subsidence of soil, heavy materials shall be stored on paved platforms, suitable separating barricades and enclosure as directed shall be provided to separate materials brought by contractor and from different sources of supply.

11.2 The contractor shall at his own expenses, engage watchman for guarding the Materials and plant and machinery and the work during day and night against any pilferage or damage and also for prohibiting trespassers.

11.3 No Materials brought to site shall be removed from the site without prior approval of the Engineer –in-charge
12.1 The contractor shall inform the Engineer in charge in writing when any portion of the work is ready for inspection giving him sufficient notice to enable him to inspect these without affecting the further progress of the work.

12.2 The contractor shall provide at his cost necessary ladders and such arrangements as are considered safe by the Engineer in charge for proper inspection of all parts of the work.

12.3 The contractor shall extend his full co-operation and make all necessary arrangements when needed for carrying out inspection of the work or any part of the work by the local representative, M.L.A’s M.P.’s and officers and dignitaries / delegates of various Government department, local bodies, private sectors etc. no compensation shall be paid to the Contractor on this account.

13. **PRECAUTIONS TO BE TAKEN BY CONTRACTOR**: 

13.1 The work shall be carried out by the contractor without causing damage to the existing Govt. property and / or private property. If any such damages are caused the contractor shall pay for restoration of the property to the original condition and any other consequent damages.

13.2 In the event of an accident involving serious injuries or death of any persons, at site of work or quarry or at place in connection with the work the same shall be reported in writing within 24 hours of the occurrence to the Engineer in charge and the Commissioner of workmen’s compensation.

14. **CLEARANCE OF SITE ON COMPLETION OF WORK**: 

The contractor after completion of work shall clean the site of all debris and remove all unused materials other than those supplied by the department and all plant and machinery equipment, tolls, etc. belonging to him within one month from the date of completion of the work, or otherwise the same will be removed by the department at his cost or disposed off as per departmental procedure. In case the materials is disposed off by department, the sale proceeds will be credited to the contractor’s account after deducting the cost sale incurred. However no claim of the contractor regarding the price or amount credited will be entertained afterwards.

15. **REMOVAL OF CONSTRUCTIONAL PLANT WITH PRIOR PERMISSION**: 

All constructional plant, provided by the contractor shall when brought on the site be deemed to be exclusively intended for the construction and the contractor shall not remove the same or any part thereof (Save for the purpose of moving it from one part to the site to another) without the consent in writing of the engineer in charge who shall record the reasons for with holding the consent.

16. **RESTRICTIONS BECAUSE OF LOCAL TRAFFIC**: 

As there is local traffic by the side of construction of the work, the contractor will have to take proper precautions such as proper barricading, fencing, lighting, information and cautionary boards for safe and smooth flow of traffic, and keeping the concerned authorities informed about the work in progress.

17. **COMPLETION CERTIFICATE**: 

17.1 The work shall not be considered to have been completed in accordance with the terms of the contract until the Engineer in charge shall have certified in writing to that effect. No approval of material or workmanship or approval of part of that during the progress of execution shall bind the engineer in charge or any way prevent him for even rejecting the work which is claimed to be completed and to suspend the issue or his certificate of completion until such alterations and modification or reconstruction have been effected at the cost of the contractor as shall enable him to certify that the work has been completed to his satisfaction.

17.2 After the work is completed, the contractor shall give notice of such completion to the Engineer in charge and within 30 days of receipt of such a notice the Engineer in charge shall inspect the work and if
there is no defect in the work, shall furnish the contractor with a certificate indicating the date of completion. However, if there are defects which in the opinion of the engineer in charge are rectifiable he shall inform the contractor the defects noticed. The contractor after rectification of such defects shall then inform the engineer in charge and engineer in charge on his part shall inspect the work and issue the necessary completion certificate within 30 days if the defects are rectified to his satisfaction, and if not he shall inform the contractor indicating defects yet to be rectified. The time cycle as above shall continue.

17.3 In case defects noticed by the Engineer in charge which in his opinion are not rectifiable but otherwise work is acceptable at reduced payment, work shall be treated as completed. In such cases completion certificate shall be issued by the Engineer in charge within 30 days indicating the unrectifiable defects for which specified reduction in payment is being made by him.

17.4 The issue of completion certificate shall not be linked up with the site clearance on completion of the work.

17.5 Should regular, public traffic be allowed on the bridge, road at any stage prior to being taken over then the maintenance period shall be deemed to commence from the date of such traffic passing over the bridge, road & shall be upto 30 days after the date of issue of completion certificate by Engineer in charge but not more than 12 months after opening to traffic.

18. **ANCILLARY WORKS**:

The contractor shall submit to Engineer in charge in writing the details of all ancillary works including layout and specifications to be allowed for its construction. Ancillary work shall not be taken up in hand unless approved by Engineer in charge. The Engineer in charge reserves the right to suggest modification or make complete changes in the layout and specifications proposed by the Contractor at any stage to ensure the safety on the work site. The contractor shall carry out all such modifications to the ancillary works at his own expenses as ordered by the Engineer in charge.

19. **TEMPORARY QUARTER**:

The contractor shall at his own expense maintain sufficient experienced supervisory staff etc., required for the work and shall make his own arrangements for housing of such staff with all necessary amenities. General layout plan for such responsibility of the contractor to get his layout plan of temporary structure approved from the local competent authorities.

20. **SAFETY MEASURES**:

The contractor shall take all necessary precautions for the safety of the workers and preserving their health while working on such jobs as required special protection and precaution wherever required. The following are some of the requirements listed though not exhaustive. The contractor shall also comply with the directions issued by the Engineer in this behalf from time to time at all times.

The following are some of the requirements (The list is not exhaustive)

1. Providing protective footwear to workers in situations like mixing and placing of mortar of concrete, in quarries and place where the work is to be done under too much wet conditions as also for movements over surfaces tested with oyster growth.

2. Providing protective headwear to workers in quarries etc. to protect them against accidental fall of materials from above.

3. Providing handrails to the edges of the loading platforms of barrages ropeways, ladders not allowing rails of metal parts or unless timber to spread around etc.

4. Providing workmen with proper safety belts, ropes, etc. when working on any masts, cranes, circle hoist, dredges etc.

5. Taking necessary steps towards training the workers concerned of the use of machinery before they are allowed to handle it independently and taking all necessary precautions in and around the areas where machines, hoists and similar units are working. Wherever required by the law the persons handling the machinery shall have the required license, certificate etc.

6. Preventing over loading and over crowding of floating the land based machinery and equipment.
(7) Providing life belts to all men working at such situations from where they may accidentally fall into water, equipping the boats with adequate number of life boats etc.

(8) Avoiding bare live wires etc. as would cause electrocution to workers.

(9) Making all platforms, stagings and temporary structures sufficiently strong and not causing the workmen and supervisory staff to take undue risks.

(10) Providing sufficient first aid trained staff and equipment to be available quickly at the work site to render immediate first-aid treatment in case of accident due to suffocation, drowning and other injuries.

(11) Taking the all-necessary precautions wherever divers are engaged on work.

(12) Providing full length gum boots, leather hand gloves, leather jackets with fireproof aprons to cover the chest and back reaching up to knees, plain goggles for the eyes to the labour working with hot asphalt, handling, vibrators in cement concrete and also where use of any or all these items is, essential in the interest of health and well-being of the labourers in the opinion of the Engineer-in-charge

21. **Medical and sanitary arrangements to be provided for labour employed in the construction by the contractor.**

(a) The contractor shall provide an adequate supply of pure and wholesome water for the use of labourers on works and in camps.

(b) The contractor shall construct trenches, semi permanent latrines for the use of labourers. Separate latrine shall be provided for men and women.

(c) The contractor shall build sufficient number of huts on suitable plot of land for use of the labourers according to the following specifications.

1. Huts of bamboos and grass may be constructed.

2. There should be no over crowding. Floor space at the rate of 3 SQM (30 SQ.FT.) per head shall be provided. Care should be taken to see that the huts are kept clean and in good order.

3. The contractor must find his own land. If he wants Govt. land he should apply for it. Assessment for it if demanded will be payable by contractor. However the Department does not bind itself for making available the required land.

4. A good site not liable to submergence shall be selected on high ground remote from jungle but well provided with trees; shall be chosen wherever it is available. The neighborhood of tank, jungles, trees or woods should be particularly avoided. Camps should not be established close to large cutting of earthwork.

5. The lines of huts shall have open space of at least 10 meters between rows. When a good natural site cannot be procured particular attention should be given to the drainage.

(d) The contractor shall construct sufficient number of bathing places, sufficient number of washing places also be provided for the purpose of the washing cloths.

(e) The contractor shall make sufficient arrangement for draining away the surface and sewage water as well as water from the bathing and washing places and shall dispose of the waste water in such away as not cause any nuisance.

(f) The contractor shall engage a medical officer with a traveling dispensary for a camp containing 500 or more person if there is no Government or other dispensary situated within eight Kilometers from the camp. In case of an emergency contractor shall at his cost, free transport for quick medical help to his sick workers.
(g) The contractor shall provide the necessary staff for affecting the satisfactory conservancy and cleanliness of the camp to the satisfaction of the Engineer-in-charge. At least one sweeper per 200 person should engaged.

(h) The Assistant Director of public health shall be consulted before opening a labour camp and his instruction on matters such as water supply, sanitary, convenience, the camp site, accommodation and food supply shall be followed by the contractor.

(i) In addition to above all provision of the relevant labour act pertaining to basic amenities to be provide to the labour shall be applicable which will be arranged by the contractor.

(j) The contractor shall make arrangement for all anti malaria measures to be provided for the labour employed on the work. The anti malaria measures shall be as directed by the Public Health Officer.

22. The contractor except as provided in special conditions which follow shall if necessary construct at his cost temporary roads and maintain these in proper conditions till completion of the work at his own cost.

23. The contractor except as provided in special conditions which follow shall have to at his own expenses make all preliminary arrangements for labour, water, electricity and material etc. immediately after getting the work order. The Government may render necessary assistance in this regard by way of letters of recommendations, if so requested by the contractor. No claim for any extra payment or applications for extension of time on the grounds of any difficulty in connection with the above matters will be entertained.

24. **WORKING METHODS AND PROGRESS SCHEDULES**

24.1 The contractor shall submit within the time stipulated by the Engineer-in-charge in writing the details as actual methods that would be adopted by the contractor for the execution of any items as required by Engineer at each of the location supported by necessary detailed drawing and sketches including those of the plant and machinery that would be used their locations arrangement for conveying and handling materials etc., and obtain prior approval of the Engineer-in-charge well in advance of starting of such item of works. The Engineer-in-charge reserves the right to suggest modifications or make corrections in the method proposed by the contractor whether accepted previously or not at any stage of the work to obtain the desired accuracy, quality and progress which shall be binding on the contractor no claim on account of such change in method of execution will be entertained by Government so long as specification of the item remain unaltered.

24.2 The contractor shall furnish within one month of the order to start the work programme of work in quadruplicate indicating the date of actual start, the monthly progress expected to be achieved and anticipated completion date of each major item of work to be done by him also indicating dates of procurement of materials and setup of plant and machinery. The programme is to be such as practicable of achievement towards the completion of whole work in the time limit and of the particular items; if any of due dates specified in contract, planning and programme of work should be done by the mature decision between the Executive Engineer, PUBLIC WORKS DIVISION WARDHA, and the contractors representative in charge of work. The progress of work shall be reviewed in every two months and revised programmes shall be drawn if necessary. No revised programme shall be operative without the approval of engineer in charge in writing. The Engineer is further empowered to ask for more detailed schedule or schedules say weekly for any item or items. In case of urgency of work as will be directed by him and the contractor shall supply the same and when asked for. Acceptance of the programme or the revised programme by the Engineer in charge shall not relieve the contractor of his responsibility to complete the whole work by the prescribed time or the extended time if any.
24.3 The contractor shall employ sufficient plant, equipment and labour as may be necessary to maintain the progress schedule. The working and shift hours restricted to one shift a day for operations to be done under the Government supervision shall be such as may be approved by the Engineer in charge. They shall not be varied without prior approval of the Engineer. Night work which requires supervision shall not be permitted except when specially allowed by Engineer on each item if required by contractor. The contractor shall provide necessary lighting arrangement etc. for night work as directed by Engineer without extra cost to Government.

24.4 The contractor shall submit reports on progress of work in forms and statements etc. at periodical intervals in the form of progress chart, forms, statements and / or reports as may be approved by the Engineer in charge. Forms for the sending reports about the progress will be supplied by the Executive Engineer.

24.5 The contractor shall maintain proforma, charts, details regarding the machinery, equipments, labour, materials, periodical returns thereof, proforma to be got approved from the Engineer in charge.

25. **PAYMENTS**

The contractor must understand clearly that the rates quoted are for completed work and include all cost due to labour, all leads and lifts involved and if further necessitated, scaffolding, plants, machineries, supervision power, service works, royalties, octroies, taxes, etc. and should also include all expenses to cover the cost of lighting, night works if and when required & no claim for additional payment beyond the rates quoted will be entertained and the contractor will not be entitled subsequently to make any claim on the ground of any representation or on any promise by any person (whether member in the employment of any Public Works Department or not) or on the ground of any failure on his part to obtain all necessary information for the purpose of making his tender and fixing the several prices and rates therein relieve him from any risks or liabilities arising out of or consequences upon submission of the tender. Payment to the contractor will be made by the cheque drawn on any treasury within the division provided the amount to be paid exceeds Rs. 100/- shall amount will be paid in cash.

26. **CLAIM FOR EXTRA WORKS**

26.1 Claim for extra works shall be registered within 30 days of occurrence of the event. However, bills for these claims along with supporting data details may be submitted subsequently.

26.2 Bills for extra works or for any claim shall be paid separately apart from the interim bills for the main works. The payment of bills for the main work shall not be withheld for want of decision on extra claim not covered in the schedule of item for extra work.

27. **BILLS AND PAYMENT**

27.1 Two running payments in the month are permitted. First of the bills shall be submitted by the contractor by the 10th day of month. Second bill, if necessary, shall be submitted by the 25th day of the month.

27.2 The format of the running bill on which the bills are to be submitted by the contractor shall be supplied to the contractor by the department. Printed copies of the bills forms as per his format shall be arranged by the contractor at his cost. The bills in five copies shall be submitted to the concerned engineer’s representative in the standard proforma only.

27.3 The final bill shall be submitted by the contractor within one month of the date of issue of completion certificate. The final bill shall be paid within six months of initial submission.

27.4 Recovery of secured advance shall be effected through bills proportionately as per consumption of materials in the work billed for.

27.5 The contractor can have true copy of the bills paid to him after paying charges for photocopying the same.
CONTROLLED CONCRETE:
Acceptance criteria shall be as per IS: 456 – 2000 (With latest amendments)

NORMAL MIX CONCRETE:
Acceptance criteria shall be as per IS: 456 – 2000 (With latest amendments)

28. ASSISTANCE IN PROCURING PRIORITIES, PERMIT ETC.:
28.1 The engineer on written request by contractor, will if in his opinion the request is reasonable and in the interest of work and its progress, assist the contractor in securing, the priorities for deliveries, transport, permits for controlled materials etc. where such are needed. The department however will not be responsible for the non-availability of such facilities or delays in this behalf and no claims on account of such failure or delay, shall be allowed by the Department.

28.2 The contractor shall have to make his own arrangement for machinery required for the work. However if same is conveniently available with the department it may be spared as per rules in force on recovery of necessary security deposit and rent at the rate approved from time to time by the independent to this contract and the supply or non supply of machinery shall not form a ground for any claim or extension of time limit for this work.

29. WATER SUPPLY:
29.1 Availability of adequate water for work and sources thereof shall be confirmed by the contractor before submitting the tender.

29.2 The contractor shall make his own arrangements at his own cost for entering into contract with concerned authority for obtaining the connection and carry the water upto the work site as required by him. The location of the pipeline with respect to the road shall be decided by Engineer-in-charge and shall be binding on the contractor. The department shall not bear any responsibility in respect of any problems and contractor shall not be liable for getting the any compensation on any ground. The progress of work shall not hamper for the above reasons.

29.3 The contractor is advised to provide water storage tanks of adequate capacity to take care of possible shut down of water supply system.

29.4 The contractor shall have to supply water required by the department for its establishment at work site free of cost.

30. ELECTRICITY:
30.1 The contractor will have to make his own arrangement at his own cost for obtaining or providing electric supply at work site. The department shall not bear any responsibility in respect of any problems and contractor shall not be liable for getting any compensation on any ground. The progress of work shall not hamper for the above reasons.

30.2 Electrical supply for the Department’s use at work site shall be provided by the contractor on mutual agreed terms. The contractor may not abide by these conditions when power supply at the site fails.

31. TELEPHONE FACILITIES:
The contractor will have to make his own arrangement at his own cost for a telephone connection at work site if required.

32. MATERIAL SOURCES:
32.1 The contractor shall make their own independent investigation as to the availability as well as suitability of various materials required for construction as referred to in these paras.
32.2 If any quarry is in the possession of the department the contractor will be allowed to use the same on usual condition. In other cases, the contractor will have to make his own arrangement for procuring quarries or the quarry permits, necessary assistance for which will be given by the department.

32.3 Lime stone shall not be permitted for any concrete work.

33. LAND:

33.1 The contractor shall make all efforts to obtain land required for the ancillary works. In case the contractor is unable to obtain land and if requested, then the department may requisitioned land at his own cost.

33.2 Land as available with department for requisitioned by the department at the request of a contractor will be handed over to the contractor for such use as will be necessary for ancillary works, on payment of rent to the department. Plot development if any will have to be done by the contractor at his own cost. The development shall be in conformity with the regulations with the local authorities.

33.3 If for the purpose of construction of the work it becomes necessary for the contractors to occupy land not in possession of the department, the contractors will have to make his own arrangement with the land owners, and pay such compensation as a mutually agreed between them. on completion of work , all land mentioned in para 33.1 and 33.2 and 33.3 shall be handed back to the owners or the department as the case may be after cleaning the land as directed by the Engineer in charge.

33.4 Dismantling of building on a Govt. or department land shall be done only after the approval of Engineer-in-charge.

34. FLOODS AND ACCIDENTS:

The contractor shall take all precaution against damages by floods or from accidents etc. No compensation will be allowed to the contractor on this account or for correction and repairing any such damage to the work during construction. The contractor shall be liable to make good at his cost any plant or material belonging to the Govt. lost or damaged by floods or from any other cause while in his charge. The proof of occurrence of flood report with flood level will have to be furnished by the contractor. No compensation will be allowed for damages on ancillary items and equipments etc which are brought to the site by the contractor for effecting execution of work.

35. URGENT WORK:

If any “Urgent Works”(In respect where decision of the Engineer –in –Charge shall be final and binding) become necessary and contractor is unable or unwilling to carry it out at once, the Engineer in charge by his own or through the other people have it carried out as he may consider necessary. If the Urgent Work shall be such as in the opinion of the Engineer in charge the contractor is liable under the contract to carry out at his expenses. All expenses incurred on it by the department shall be recoverable from the contractor, and be adjusted or set off against any sum payable to him.

36. CHANGE OF CEMENT CONTENT ETC. : (Applicable for OPC Cement only)

THEORETICAL CONSUMPTION OF CEMENT FOR THE CONCRETE WORK:

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>Grade of concrete</th>
<th>Consumption of cement in bags / Cum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>M-10</td>
<td>4.40 bags</td>
</tr>
<tr>
<td>2</td>
<td>M-15</td>
<td>6.27 bags</td>
</tr>
<tr>
<td>3</td>
<td>M-20</td>
<td>7.10 bags</td>
</tr>
<tr>
<td>4</td>
<td>M-25</td>
<td>7.50 bags</td>
</tr>
<tr>
<td>5</td>
<td>M-30</td>
<td>8.00 bags</td>
</tr>
</tbody>
</table>
Note:

(i) The weight per bag of Cement is considered as 50 Kg.

(ii) If contractor desires to use any other type of cement, he should obtain permission for same from Engineer in charge. In the event he is permitted to do so, contractor should obtain mix design for the same from the laboratory approved by Engineer in charge. No payment will be made to contractor for obtaining the mix design. No extension will be given to contractor for the time lost in getting mix design.

The rate of consumption of cement for various grades of concrete referred above is a theoretical rate of consumption assumed for the estimate purpose. The contractor will have to obtain an economic mix design for grades of concrete M-20 and above and get it approved from the Engineer-in-charge. The specification for controlled cement concrete shall be as per standard specification No. B-7 Page 38, and IS 456-2000 (with latest amendments).

Immediately upon the receipt of the award of the contract, the contractor shall inform the Engineer the exact location of the sources of the acceptable material. The concrete mix to be used shall be got designed by P.W.D. laboratory or any other laboratory fully approved by Engineer in charge, by the contractor with a optimum quantity of cement to give the specified strength in the preliminary tests and the proportion got approved by the engineer in writing. These proportions shall be used so long as the materials continue to be of the same quality and from the same sources subject only to slight changes in the relative quantities of fine and course aggregate for the purpose of promoting workability provided the work tests also shows the required strength.

If such Mix design involve change in cement consumption upto 2 % on the higher or lower side, no adjustment in the cost of the item to be paid to the contractor shall be made. If such alterations, changes, theoretical consumption of cement by more than 2 % on the higher or lower side, the sources and quality of aggregate remaining the same, payment will be adjusted for or against the contractor in whatever amount the total cost of cement to the contractor has been increased or decreased by more than 2 %. The amount of such increase or decrease shall be calculated on the basis of quantity of cement determined and prescribed in the above table. In adjusting the cost only the cost of cement shall be considered and not handling or other charges, which shall be treated as incidental to the item for working out the cost towards adjustments in cement consumption the basic for cement shall be star rate as indicated in clause 54. If during the progress of work the contractor wishes to change the material, the proportions shall be fixed on the basis of fresh preliminary tests to give the required strength after the Engineer is satisfied that the material satisfy the specifications. No adjustment of the cost shall be made for a change of proportions of cement fixed in the original preliminary tests. For all concrete items only trap metal shall be used.

The above condition will not be applicable for thee items of dry lean concrete and Pavement Quality Concrete for rigid pavement.

37. **CONTRACTOR TO INFORM HIMSELF FULLY**

The contractor shall be deemed to have carefully examined the work and site conditions including labours, the general and the special conditions, the specifications schedule and drawing and shall be deemed to have visited the site of the work and to have fully informed himself regarding the local conditions and carried out his own investigations to arrive at the rates quoted in the tender. In this regards he will be given necessary information to the best of the knowledge of Department but without any guarantee about it. If he shall have any doubt as to the meaning of any portion of these general conditions, or the special conditions to the scope of working of the specification and drawings, or any other matter concerning the contract, he shall in good time before submitting his tender set forth the particulars thereof and submit them to the Engineer in writing in order that such doubt may be clarified authoritatively before tendering. Once a tender is submitted the matter will be decided in accordance to the tender conditions in absence of such authentic clarification.
38. **ERRORS, OMISSION & DISCREPANCIES**:

   a) In case of errors, omissions and / or disagreement between written and scaled dimensions in the drawing or between the drawing and specifications etc., the following order of preference shall apply.

      (i) Between actual scaled and written dimensions or description on a drawing the latter shall be adopted.

      (ii) Between the written description or dimensions in the drawing and the corresponding one in the specifications, the latter shall apply.

      (iii) Between the quantities shown in the schedule of quantities and those arrived at from the drawing the latter shall preferred

   b) In all cases of omissions and/or doubts or discrepancies in the dimensions or of any item or specification a reference shall be made to the engineer, whose elucidation, elaboration or decision shall be considered as authentic. The contractor shall be held responsible for any errors that may occur in the work through lack of such reference and precautions.

   c) The contractor should not sublet any part of work without written permission of the Engineer in charge.

39. **SAMPLES AND TESTING OF MATERIALS**:

   (i) All materials to be used on work, such as cement, steel, stones, bricks, aggregates, asphalt, wood, tiles, etc. shall be got approved in advance from the Engineer-in-charge and shall pass the tests and analysis required by him.

   (ii) The contractor shall at his risk and cost make all arrangement and / or shall provide for all such facilities as the Engineer in charge may require for collecting, preparing and forwarding required number of samples for tests or for analysis to the nearest approved laboratory and bear all charges and cost of testing. Such samples shall also be deposited with the Engineer-in-charge till sent for testing. Out of total number of tests as per frequency requirement 20 % of these tests shall be carried out in P.W. Department Laboratory.

   (iii) The contractor shall if and when required submit at his cost the samples of materials to be tested or analysed and if so directed shall not make use or incorporate in the work any material represented by the samples until the required tests or analysis have been made after the test of the materials finally accepted by the Engineer-in-charge.

   (iv) **Testing of Material**:

      (1) Frequency of testing of the construction material and the percentage of the testing from the Government laboratory shall be as under :

         (a) Where the field laboratory certified by the concerned Engineer in charge is established at the work site 70% test as per total frequency required shall be carried out in the said field laboratory and 30% tests shall be carried out at the Vigilance and Quality control laboratory of P.W.D. for the material not covered in the annexure III 50% tests shall be carried out in the field laboratory and remaining 50% tests need to be carried out in the vigilance and quality control laboratory of P.W. D Maharashtra. The entire responsibility of the sample testing as per required frequency including testing charges will be borne by the agency.

         (b) Where field laboratory is not established at the works site 100% tests as per frequency shall be carried out in the Vigilance and quality laboratory, Nagpur
(c) Testing of cement and steel 100% in Vigilance and quality laboratory, Nagpur is compulsory.

(d) It is mandatory to submit the test reports of materials/samples used for the work as per the frequency given in the specification with the bill. If the test results are not submitted along with the bill, amount equal to two times the prevailing VQC testing charges shall be deducted from the bill. Samples for the items for which testing is not done as per frequency shall be collected and submitted for testing by the engineer in charge or his representative for testing and testing charges for this sample shall be paid by engineer in charge through the amount deducted as above and balance amount shall be remitted to revenue. Till such results are received contractor shall be paid at part rate as decided by the Engineer in Charge.

(2) Mixing of concrete shall be done with concrete mixers.

(3) The Contractor shall make field arrangements for testing of all materials for cement concrete i.e. slump test, bulking test, etc. The concrete cube mould 3 Nos. of 15cm x 15cm x 15 cm. size shall be kept at site during concreting operation. One set of six 15 cm. (about 6” cubes shall be prepared from the concrete to be used in work for compression test on the first three days operation after therefor ever for every 60 cubic metre of concrete of three days work whichever is less. If source of aggregate or grading is changed, one set of six test cubes shall be taken for each changed batch. Three cubes shall be tested for test at 7 days age and 3 at 28 days in Regional Testing Lab of P.W.D. at Nagpur All the testing charges shall be paid by the contractor. The entire responsibilities of the testing of materials will be borne by the contractor.

(4) For providing Electric Wiring, Duct tubes of the required diameter and length shall be provided through walls, beams and floors, slabs as and when directed without any extra cost.

(5)  
(a) The contractor shall make his own arrangement for receiving all materials, tools, etc. required for the work.

(b) No extra charges for carriages of water will be allowed.

(c) The rates for all items are inclusive of all charges such as carting, lifting, etc. No extra payment for any lead and lift will be paid for any items.

(d) A frequency of testing shall be as per relevant works specification. In case such frequency is not specified in the works specification then the IS code will be referred and for other cases where IS code do not stipulate the frequency of testing, it will be as directed by Engineer in charge and should be furnished in specified test abstract Annexure III.

(e) The Contract should not be sublet without written permission of Executive Engineer.

(f) Tender condition of tender notice will be binding on contractor and etc tender notice will form a part of agreement.

40. **WEIGH BATCHING**: The following instructions shall be followed as regards to preliminary designs of mix and methods of batching of plain cement concrete and reinforced cement concrete. The preliminary mix design and batching for various grades of concrete shall be governed by the guidelines as per I.S. 456-2000. It will be the responsibility of the contractor to obtain the mix design for various cement concrete grades at his cost from the P.W.D laboratory.

41. **MISCELLANEOUS**:

<table>
<thead>
<tr>
<th>Contractor</th>
<th>No. of Corrections</th>
<th>Executive Engineer</th>
</tr>
</thead>
</table>
41.1 **ERASER:**

Person tendering are informed that no erasers or any alteration by them in the text of the documents set herewith will be allowed and any such eraser or an alteration will be disregarded. If there is any error in writing no overwriting should be done but the wrong words or figures should be struck out and the correct one written above or near it in an unambiguous way. Such correction should be initialed and dated.

41.2 **ACCEPTANCE:**

Intimation of acceptance of tender will be given by a telegram or a letter sent by registered post to the address given below the signature of the tenderer in the tenders. The tenders which do not fulfill any of the above conditions or those in the form and which are incomplete in any respect shall be liable for rejection.

41.3 **COMPETENCY OF TENDERERS:**

The work will be awarded only to those contractors who are considered to be responsive bidders, capable of performing the class of work to be completed. Before passing the final award any or all bidders may have to show that he has the necessary experience, facilities, ability and financial resources to execute the work in satisfactory manner and also within the stipulated time. The bidders may also be required to furnish to the Department a statement in respect of their experience and financial resources.

41.4 **PRECAUTIONS TO BE TAKEN BY THE CONTRACTOR TO PREVENT ACCIDENT:**

1) No live electric line should be allowed to run along the ground in the blasting zone and they should be at least 3 m above ground if not more.

2) The wiring cable should not be taken near the live electric line and it should be preferably shot firing cable as supplied by the supplier of explosives. If such a cable is not available a substitute cable made up of several pieces jointed and tapped should be used.

3) The blasting shed from where the exploder is to finally operate should be at least 150 m. away from the area to be blasted. It should have a strong roof, which can withstand the impact of flying stones at this range.

4) Only trained hands shall be allowed to handle explosive cable detonators etc.

41.5 **POLICE PROTECTION:**

For the police protection of the camp of the contractor’s work, the Deptt. will help the contractors as far as possible to arrange for such protection with the concerned authorities the cost shall be borne by the contractor.

41.6 For providing electric line and water line etc. recesses shall be provided. If necessary, through walls, slabs, beams, etc., and later on refilled it with a bricks or stones, chipping cement mortar without any extra cost.

41.7 In case it becomes necessary for the due fulfillment of the contractor for contractor to occupy land outside the department limits, the contractor will have to make his own arrangement with the land owners and pay such a rents, if any, which are payable as mutually agreed between them.

41.8 The contractor shall duly comply with the provisions of the Apprentices Act. 1961 (iii of 1961) and the rule and orders made there under from time to time under the said Act and the said Rules and on his failure or neglect to do so he shall be subject to all the liabilities and penalties provided by the said Act and Rules.
41.9 It is presumed that the contractor has gone carefully through the standard specification (Vol. I & II 1981 edition) and the schedule of rate of the Division, and studied of site conditions before arriving at rates quoted by him. The special provisions and detailed specification of wording of any item shall gain precedence over the corresponding contrary provisions (if any) in the standard specification given without reproducing the details in contract. Decision of Engineer-in-charge shall be final in case of interpretation of specification.

41.10 If the standard specifications fall short for the items quoted in the schedule of this contract reference shall be made to the latest Indian Standard Specifications, I.R.C. codes, and MOST specification if any of items of this contract do not fall in reference quoted above, the decision and specifications as directed shall be final.

42. **LOAD TESTING**

1. In case of doubts regarding grade of concrete used either due to poor workmanship or based on results of cube strength tests, the load testing of any part of the structure will have to be carried out by the Contractor at his own cost.

2. Before carrying out load test, the Contractor shall carryout the suitable non destructive testing of the structure which are in doubt, at his own cost. Non destructive testing is fully optional and at the discretion of the Contractor.

3. In such cases the Engineer-in-Charge shall inform the Contractor sufficiently in advance in writing along with the reasons for carrying out the load test, during execution of work or during maintenance period of the Contract.

4. The load test will have to be carried out as per the provisions contained in IS : 456-2000.

5. If the load test results do not meet the requirements as stipulated in relevant I.S. code the structure shall be deemed to be unacceptable.

43. **SPECIAL CONDITIONS :**

43.1 The contractors should ensure that all safety precautions are observed by their labours, working closed to the State Highway and while closing the state Highway precautions are taken including insurance etc., for their labour at the cost of the contractor etc. if any accident occur to the labour etc., no claim in this regard on whatsoever account shall be entertained and the decision of the Department will be final and conclusive.

43.2 During the execution if there is any change in:

   (i) Span Arrangement.

   (ii) Height of substructure and superstructure above ground level.

   (iii) Change in the depth of foundation, tendered rate for respective items will hold good and no extra claims shall be entertained on this account.

43.3 Contractor shall observe the rules and regulations empowered by traffic police for smooth flow of traffic on the diversion road and shall not be entitled for claim any compensation arising thereof.

44. **DEFINITIONS:**

   (a) Government : Unless included by or repugnant to the contents the expression “Government” as used in the tender documents shall mean the Public Works Department of the Government of Maharashtra.

   (b) Chief Engineer: The expression ‘The Chief Engineer’ as used in the tender papers shall mean Chief Engineer P.W .Region Nagpur.
(c) The expression ‘Superintending Engineer’ as used in the tender papers shall mean the officer of Superintending Engineer’s ranks (by whatever designation he may be known) under whose control the work lies for the time being.

(d) The expression Engineer-in-charge as used in the tender paper shall mean the Engineer-in-charge of the work.

(e) The expression ‘Contractor’ as used in the tender papers shall mean the successful tenderer that is the tenderer whose tender has been accepted and who has been authorised to proceed with the work.

(f) The expression ‘Contract’ as used in the tender papers shall mean the deed of contract together with all its original accompaniments and those later incorporated in it by mutual consent.

(g) The expression ‘Plant’ as used in the tender papers shall mean every temporary accessory necessary or considered necessary by the Engineer to execute, construct, complete and maintain the work and all altered, modified, substituted and additional works ordered in the time and the manner herein provided and all temporary materials and special and other articles and appliance of every sort kind and description whatsoever intended or used therefore.

45. **MIX DESIGN**

45.1 The following instructions shall be followed as regards preliminary design of mix and methods of batching of plain cement concrete and reinforced cement concrete. These instructions should be treated as supplementary to the relevant provision in the specifications for the respective items contained in the book of standard specifications and will override the provisions contained therein wherever they are contrary to the following instructions.

The preliminary mix design and batching for various grades of concrete shall be governed by the following guidelines.

<table>
<thead>
<tr>
<th>Concrete Grade</th>
<th>Guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Upto M-15</td>
<td>This should only be ordinary concrete. No change may be prescribed in the present practice as regards preliminary design of mix and permitting volume batching. Only cement to be weight batched.</td>
</tr>
<tr>
<td>2) M-20 to M-25</td>
<td>Preliminary mix design must be carried out for these mixes. However, weight batching shall be insisted for cement only for concrete M-20 and above</td>
</tr>
<tr>
<td>3) M-25 and above</td>
<td>Preliminary mix design must be prepared for such mixes weigh batching shall be insisted for cement fine aggregate and course aggregate.</td>
</tr>
</tbody>
</table>

45.2 For the grades of concrete M-20 and above the preliminary mix design shall be carried out from the approved laboratory.

(1) The charges for preliminary design, of concrete mix shall be entirely borne by the contractor.

(2) For grades of concrete M-20 and above where cement is to be used by weight, the cost of extra cement required to make-up the under-weight bags shall be borne by the contractor.

(3) For the items of concrete of grades lower than M-20 and other items in the agreement, where cement is not to be used by weighment, the cement bags as received from the manufacturer and supplied to the contractor under Schedule ‘A’ shall contain cement of 50 Kg. net weight.

45.3 The admixtures such as plasticizers/super plasticizers for concrete grade M-20 and above shall be used as directed by Engineer in charge depending upon specific requirements. No extra payment on this account will be admissible.
ADDITIONAL TENDER CONDITIONS

(1) The contractor should produce the no objection certificate obtained from the Maharashtra Pollution Control Board before starting Crusher / Drum Mix Plant on the work site.

(2) **SUPPLY OF COLOUR RECORDS PHOTOGRAPHS AND ALBUM.**

The Contractor shall arrange to take Color Photograph at various stage / facets of the work including interesting and novel features as desired by the Engineer in charge. Photographs shall be of and taken to the standard post card size marked in album of acceptable quality. Also the negative film in 35 mm size shall be supplied for each photograph in the Album shall be suitably captioned. The Contractor shall arrange for taking video films of important activities of the work as directed by the Engineer in charge during the currency of the project & editing them to a video film of playing time not less than 60 minutes & upto 180 minutes as directed by Engineer in charge. It shall contain narration of the activities in English / Marathi by a competent narrator. Videocassette shall be of acceptable quality & film shall be capable of producing color picture. It shall be considered as incidental to the work and no additional payment whatsoever will be made for the same.

(3) After award of contract, contractor will have to provide and fix the information boards showing name, tender cost, period of completion, name and telephone number of agency and Executive Engineer and other details as directed by Engineer in charge. No extra payment is admissible on this account.

(4) **Insurance of Contract Work:**

Contractor shall take out necessary insurance Policy/Policies (viz Contractor’s all risk Insurance Policy, Erection all risk insurance policy etc as decided by the Directorate of insurance) so as to provide adequate insurance cover for execution of the awarded contract work for total contract value and complete contract period compulsorily from the “Directorate of insurance, Maharashtra State, Mumbai” only. Its Postal address for correspondence is 264, MHADA, First floor, Opp. Kalamagar, Bandra (E), Mumbai 400051 (Telephone Nos. 26590403 / 26590690 and Fax No. 26592461 / 26590403). Similarly all workmen’s appointed to complete the contract work are required to insure under workmen’s compensation Insurance policy. Insurance Policy/Policies taken out from any other company will not be accepted. If any Contractor has effected Insurance with any insurance company, the same will not be accepted and the amount of premium calculated by the Government Insurance fund will be recovered directly from the amount payable to the contractor for executed contract work and paid to the Directorate of Insurance Fund, Maharashtra State, Mumbai. The Director of Insurance reserves the right to distribute the risk of Insurance among the other insurees.
(5) A board 0.90 m x 0.60 m showing following information shall be provided by contractor at no extra cost to the Government.

(6) **Field Laboratory:** The contractor shall arrange to provide fully furnished and adequately equipped field laboratory with adequate qualified technical staff. Preferably to located adjacent to the site of Engineer-in-charge and provided amenities like water supply, electric supply etc. The laboratory equipment shall confirm I.S. specifications and MOST specifications. 

It shall be considered as incidental to the work, and no extra payment will be made whatsoever will not be made for the same.

**List of machineries to be provided at site laboratory as per Annexure – IV**

After completion of work laboratory equipments will be the property of the contractor. After completion of work, the contractor shall clean all site by dismantling site office / laboratory and by removing all the debris from the site of work.

(7) The Contractor shall have to supply 2 (two) Set of All-in-One computer, Printer & Scanner with accessories and other peripherals as stated below. **(For laboratory use)**

- **Make:** Compaq/H.P./Dell
- **Processor:** Intel Core I-5 Processor
- **Memory:** 4 GB DDR-3 RAM
- **Hard Drive:** 500 GB SATA II Hard drive.
- **Optical Drive:** 52 x Super Multi drive with light scribe, Double layer.
- **Network card:** Integrated 10/100 Base T (Broad band ready)
- **Audio:** Up to 5.1 surround sound ready with Speaker
- **Key board and Mouse:** Keyboard, Mouse (Codeless)
- **Monitor:** 22.00" Colour LED Monitor
- **Warranty:** 1 Years of computer & above peripherals.
- **Pendrive:** Capacity 16 GB of approved make.
- **UPS:** I-BALL MAKE – 800 VA (45 Minutes Backup)
- **Printer:** Canon 2600
Antivirus - Antivirus Net Protector Licensed for 3 (Three) Year
Scanner - H.P. legal paper Size Scanner
Computer Table - 2 Nos Size 3’ x 2’1/2” of approved make
Executive Chairs - 2 Nos of Godrej Model No. PECH 701 or equivalent
“S” Type Chairs - 4 Nos of Godrej Model No. CHR 6 or equivalent
Air Cooler - 4 Nos having 24 “(60 cm) size fan with suitable pump and shall be or GEC, Khetan or Cool Home make or equivalent.

8) The Contractor shall have to supply 1 (One) Set of Automatic Dumpy Level and other peripherals as stated below.

(For day to day field work use)
Within one month of work order of the work, the contractor shall have to supply above material as directed in the office of the Executive Engineer, Public Works Wardha. The computers accessories & peripherals shall be the property of Govt. and contractor shall not be paid any amount whatsoever on supplying & installing the same.
The responsibility supplying is of contractor failure of which the amount of Rs 1,00,000/- (Rs. One Lakh only) per Computer. Total Rs. 2,00,000/- (Rs Two Lakh Only) for all above set of computer, Printer, Scanner and Automatic Dumpy Level shall be recovered from First Running Bill of Contractor.
SPECIAL CONDITIONS

Construction Machinery / Equipments:

The following optimum Machinery required for execution of this work shall be made available by the contractor at site 15 days in advance before commencement of respective activity.

1) Ready Mix Concrete batching plants of minimum capacity 30 Cum/ Hr. One Numbers
2) Needle Vibrator Four Numbers
3) Screed Vibrator Two Numbers
4) Plate Vibrator Two Numbers
5) Weigh Batcher Electronic Type Two Numbers
6) Tippers having minimum capacity 7.5 tonne Four Numbers
7) Water tanker having capacity 5000 liters One Number
8) Static Roller having capacity 8 to 10 tonne One Number
9) Vibratory roller One Number
10) Brooming Machinery One Number
11) Compressor with gun One Number
12) Automatic Dumpy Level One Number
13) Wheel Borrows Four Numbers
14) 25 KV Generator One Number
15) Excavator One Number
16) Transit Mixer Four Numbers

(1) Construction Machinery / Equipments:

1.1 The methodology and equipments to be used on the project shall be furnished by the Contractor to the Engineer-In-Charge well in advance of commencement of work and approval of the Engineer-In-Charge obtained prior to its adoption and use.

1.2 The Contractor shall give, a trial run of the equipment for establishing its capability to achieve the laid down specifications and tolerance to the satisfaction of the Engineer-in-Charge before commencement of work, if so desired by the Engineer-In-Charge.

1.3 All equipments provided shall be of proven efficiency and shall be operated and maintained at all times in the manner acceptable to the Engineer-In-Charge.

1.4 No equipment or personnel shall be removed from the site without permission of the Engineer-In-Charge.

(2) Work Programme and Methodology of construction:

The Contractor shall furnish his programme of construction, for execution of the work within the stipulated time schedule together with methodology of construction of each item or work and obtain the approval of the Engineer-In-Charge to the revised programme, if necessary/

(3) Revised Programme of Work in case of slippage:

In case of slippage from the approved work programme at any stage, the contractor shall furnish revised programme to make up slippage within the stipulated time schedule and obtain the approval of the Engineer-in-charge to the revised programme.

(4) Action in case disproportionate progress:

In case of extremely poor progress of the work or any item at any stages of work which in the opinion of the Engineer-In-Charge can not be made good by the Contractor considering his available resources, the Engineer-In-Charge will get it accelerated to make up the lost time through any other agency, and
recover the additional cost incurred, if any, in getting the work done from the Contractor after informing him about the action envisaged by him.

(5) The responsibility of assuring the quality of work shall be on the contractor who shall take actions as stipulated in standard specification as per “Schedule C”.

(6) **Labour Licence**: It shall be obligatory on the part of the contractor to obtained the necessary labour License from the labour Department within fortnight of issue of work order.

(7) **Setting out**: Setting out the works as spelt out in clause 109 of Ministry’s specifications for Road and Bridge works (2nd Revision) will be carried out by the Contractor.

(8) **Public Utilities**:

8.1 Drawings scheduling the affected services like water pipes, sewers, oil pipelines, cables, gas ducts etc. owned by various authorities including Public Undertakings and Local Authorities included in the Contract Documents shall be verified by the Contractor for the accuracy of the information prior to the commencement of any work.

The Contractor shall notify all utility agencies who may have installation in the work area and secure their assistance in locating and identifying all utilities before starting any work that may cause any damage to such utilities.

The Contractor shall schedule work in such a manner as to protect existing utility facilities until they are relocated, abandoned or replaced.

The Contractor shall ensure that all utilities encountered within the Right of Way i.e. OFC Cable, telephone, power, water supply, sewerage or any others, remain operational at all times. Any utility, if damaged, due to construction operation, shall be promptly repaired by the Contractor at his cost.

8.2 Notwithstanding the fact that the information on affected services may not be exhaustive, the final position of these services within the works shall be supposed to have been indicated based on the information furnished by different bodies and to the extent the bodies are familiar with the final proposals. The intermediate stages of the works are, however, unknown at the design stage, these being dictated by the Contractor’s methods of working. Accordingly, the Contractor’s programme must take into account the period of notice and duration of diversionary works of each body as given on the Drawings and the Contractor must also allow for any effect of these services and alterations upon the Works and for arranging regular meetings with the various bodies at the commencement of the Contract and throughout the period of the Works, the Contractor shall have no objection if the public utility bodies vary their decisions in the execution of their proposals in terms of programme and construction, provided that, in the opinion of the Engineer, the Contractor has received reasonable notice thereof before the relevant alterations are put in hand.

8.3 No removal of alterations to the utility shall be carried out unless written instructions are issued by the Engineer.

8.4 Any services affected by the Works must be temporarily supported by the Contractor who must also take all measures reasonably required by the various bodies to protect their services and property during the progress of the Works.

8.5 The Contractor may be required to carry out certain works for and on behalf of various bodies, which he shall provide, with the prior approval of the Engineer.

8.6 The work of temporarily supporting and protecting the public utility services during execution of the Works shall be deemed to be part of the Contract and no extra payment shall be made for the same.

8.7 The Contractor shall be responsible to co-ordinate with the service providers for cutting of trees, shifting of utilities, removal of encroachments etc. to make site unencumbered for completion of work. This will include frequent follow-up meetings. Coordination for making project site unencumbered shall be deemed to be part of the Contract and no extra payment shall be made for the same.
8.8 In some cases, the Contractor may be required to carry out the removal or shifting of certain services/utilities on specific orders from the Engineer for which payment shall be made to him. Such works, however, shall be taken up by the Contractor only after obtaining clearance from the Engineer and ensuring adequate safety measures.

(9) **Maintenance and Arrangement for traffic during construction:**

Action for arrangement for traffic during construction will be taken by the Contractor as envisaged in the contract documents and spelt out in clause 112 of MORTH Specification for Road and Bridge Work (2013). This will be incidental to work.

(10) It shall be responsibility of the Contractor to achieve quality of work as stipulated in section 900 of MORTH Specification for Road and Bridge Work (2013)

(11) **MORTH Specification for Road and Bridges Work latest edition with all amendments:**

MORTH Specification for Road and Bridge Work (2013) shall form part of the contract documents and the Contractors shall be legally bound to the various provisions made therein unless and otherwise specifically relaxed or waived wholly or partly by any special clauses in the contract documents.

(12) **Special Condition for B.T. work:**

In respect of Black Top Work, 15% (Fifteen P.C.) payment of Block Top in a particular km will be retained till completion of side berms / C.D. Works in that km. After completion of other items satisfactorily, the withheld payment will be released finally.

(13) The Contractor has to ensure that the hot mix temperature is within the specified range as per MORTH specification at the time of laying of hot mix.

(14) (a) The aggregate required for the item of Hot Mix shall be screened in “mechanical Vibratory Screening Unit” so as to comply with the grading requirement as specified in MORT&H specification and then only shall be fed to the Hot Mix Plant for heating and mixing. The Mechanical Vibratory screening unit shall consist of main input hopper to receive raw metal, conveyor belt to transport it to the “Mechanical Vibratory Screening Unit.” The Mechanical Vibratory screening unit shall have required number of trays, sieves/decks as directed by Engineer In charge. The output of Mechanical Vibratory Screening unit shall be conveyed to the “storage unit /feeder”. The metal so supplied from the “Mechanical Vibratory Screening unit” at site shall not exempt the Contractor from carrying out tests as specified in the specifications.

(b) However, if the mechanical Vibratory Screening unit is installed at quarry site, the Contractor shall provide Vehicle Tracking System for all vehicles used for the particular work of PWD. The Contractor shall provide web application that will show all vehicles of the Contractor on a GIS map along with the hot mix plant. The Contractor shall also provide software that will update the entire mapping on the PWD’s e-governance works management system. The system of complete management of VTS for monitoring by the PWD staff shall have to be provided by Contractor at his own cost.

(c) The above condition of installation of Mechanical vibratory screening unit shall be exempted only, if the Contractor uses the batch mix plant with SCADA base e-monitoring system.

(15) For WMM work metal shall be supplied at site only after screening it on “mechanical vibratory screening unit”. The special “mechanical vibratory screening unit” arrangement shall consist of main input hopper to receive raw metal, conveyor belt to transport it to the “mechanical vibratory screening unit”. The “mechanical vibratory screening unit” shall have required number of trays, sieves/decks as directed by the Engineering in charge. The output of “mechanical vibratory screening unit” shall be conveyed to “storage Unit” where metal of different sizes, shall be stored separately. Metal so supplied shall undergo all the tests as per the specifications.
As a input to the main input hopper, Contractor may use hand broken metal or output of primary crusher of size not less than 24"x18"
The metal so supplied from the “mechanical Vibratory screening unit” at site shall not exempt the Contractor from carrying out tests as specified in the specifications.
ADDITIONAL SPECIFICATION

1) For Earthwork, Drain work, and Road work Contractor shall engage an experienced survey agency in consultation with Engineer-in-charge with all necessary modern instruments, equipments, tools etc. The Agency shall help departmental Engineers in carrying out survey work, collection of data plotting of "L" section, Cross section, Road plan, drainage plan, estimation of quantities etc. before start of the road work. If required and as directed by Engineers-in-charge, surveying, plotting, estimation etc. shall be done again and again for whole or part portion of the work till final solution to the satisfaction of the Engineers-in-charge is worked out. Contractor shall submit all surveyed data, plotting, plans & estimate in sort as-well-as in hard copy to the department. All submission in soft & hard copies shall be departmental property, under intellectual property rights. Contractor can not put any claims over it.
**SCHEDULE ‘A’**

**STATEMENT SHOWING (APPROXIMATELY) THE MATERIAL TO BE SUPPLYING TO THE CONTRACTOR FROM DEPT. STORES AND RATES AT WHICH THE MATERIALS ARE TO BE SUPPLIED**

**NAME OF WORK:** CONSTRUCTION OF THIRD FLOOR IN ADMINISTRATIVE BUILDING AT WARDHA

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of Material</th>
<th>Approximate Quantity to be stipulated</th>
<th>Unit</th>
<th>Rate at which the material will be charged to Contractor</th>
<th>Remarks</th>
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<tbody>
<tr>
<td></td>
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<td>In Figures</td>
<td>In words</td>
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- .....................NiL.............................................

**Contractor**  
**No. of Corrections**  
**Executive Engineer**
APPENDIX “A”

STATEMENT SHOWING (APPROXIMATELY) QUANTITY TO BE BROUGHT BY THE CONTRACTOR AT HIS OWN COST FOR THE WORK
NAME OF WORK :- CONSTRUCTION OF THIRD FLOOR IN ADMINISTRATIVE BUILDING AT WARDHA

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of Material</th>
<th>Approximate Quantity to be stipulated</th>
<th>unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cement 43 Grade of Land T/ A.C.C Opc IS 8112</td>
<td>89.88 MT</td>
<td>One Metric Tonne</td>
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<tr>
<td>2</td>
<td>T.M.T. Steel IS 1786</td>
<td>12.28 MT</td>
<td>One Metric Tonne</td>
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<tr>
<td>3</td>
<td>Bitumen 60/70</td>
<td>0.00</td>
<td>One Metric Tonne</td>
</tr>
<tr>
<td>4</td>
<td>Bitumen 80/100</td>
<td>0.00</td>
<td>One Metric Tonne</td>
</tr>
</tbody>
</table>

1) All the materials are to be procured and brought by the contractor at the site at his own risk and cost.
2) Physical properties shall be confirmed with M.O.S.T./I.S./I.R.C specification.
3) Stipulated test shall be carried out by the contractor at his own cost as per the frequency.
4) Custody of material shall be sole responsibility of the contractor.
5) The proof of purchase of all materials should be produced during the execution of work and along with bill.
6) The grade of cement shall be got approved from the Engineer – in- Charge.
CONDITIONS FOR THE MATERIALS TO BE PROCURED BY THE CONTRACTOR

(i) Cement:
Cement to be used for the work shall comply the following and shall be used with the prior approval of Engineer—in—charge

Ordinary Portland cement confirming to the I.S.: 8112 shall be used. Independent testing of cement used, shall be done by the contractor at site and in the laboratory approved by the Engineer before use. Any cement with lower quality than that shown in the manufactures certificate shall be debarred from use. In case of finally ground cement or imported cement, the Engineer may direct the contractor to satisfy him as to the acceptability of such cement, especially with regard to creep and shrinkage effect. Any consignment or part of a consignment of cement, which has deteriorated in any way, shall not be used in the works and shall be removed from the site by the contractor without charge to the employer. Cement shall be transported, handled and stored on the site in such a manner as to avoid deterioration and contamination. Each consignment shall be stored separately so that it may be readily identified and inspected and cement shall be used in the sequence in which is delivered at site. The contractor shall prepare and maintain proper records on site in respect of the delivery, handling storage and use of cement and these records shall be available for inspection by the Engineer at all times.

Use of fly ash to replace/ reduce standard quantity of cement content is not allowed

(2) H.Y.S.D./T.M.T Steel

High yield strength deformed (H.Y.S.D)/ TMT bars shall comply with IS: 1786 and “Mild Steel” bars shall comply with IS: 432.

All reinforcement shall be free from rust loose mill scale or coats of Oil, Paints etc. which may destroy bond and protected by anti corrosive treatment before placing in position for concreting.

The agency should use the steel manufactured by the Main Producers only. No re-rolled steel shall be incorporated in the work.

(3) Bulk / Packed Bitumen

(1) VG -30 ( 60/70 ),VG 10(80/100), grade bitumen as specified in respective items shall be used.

(2) Bitumen brought on site confirm to the requirement of the pertinent grade in I.S. 73 – 1992. (With latest Amendments)

(3) Testing has to be arranged by the contractor from recognized laboratory at his own cost for all tests mentioned in I.S. 73 – 1992. (With latest Amendments)

(4) The material brought by the agency will be open to check by Executive Engineer-in-charge or his representative at all times. The agency should draw the D.D. on the refinery on account of Engineer-in-charge He should submit bill from the refinery itself only. No. other bill than refinery unit will be accepted by department and no claim of contractor will be admissible. For other activities, like storage, weighments, specification number RD 42, Page 216 referred. Contractor has to arrange static tanks for storage of bulk bitumen. If it is decided to procure bulk bitumen contractor shall intimate Engineer in charge well in advance. Consignment will not be allowed to unload until its weight is checked on Weigh Bridge by department persons. Bitumen shall be procured from Govt. Refinery only.
(4) **Rejection of Materials not conforming to specification:**

Any Stock or batch of material(s) of which sample(s) does not confirm to the prescribed test and quality, shall be rejected by the Engineer or his representative and such materials shall be removed from site by the contractor at his own cost. Such rejected materials shall not be made acceptable by any modifications.

Materials not corresponding in character and quality with approved samples will be rejected by the Engineer or his representative and shall be removed from the site immediately and will not be allowed to use for any component of work.
ADDITIONAL CONDITIONS FOR CEMENT, STEEL, BITUMEN BROUGHT BY THE CONTRACTOR

1) All the materials required for construction of work shall be arranged by the contractor at his own cost. The samples of material to be procured shall be got approved by the Engineer-in-charge and material as per approved samples shall only be procured.

2) The contractor shall submit periodically as well as on completion of work, an account of all materials brought by him in a manner as directed by Engineer-in-charge. The contractor shall also furnish monthly account of materials; a separate register shall be maintained on site for recording daily item wise receipt and consumption of Cement, Steel and Asphalt used by him, also item wise consumption of other materials used. This register shall be signed daily by the contractor or his representative and representative of Engineer-in-charge.

3) All the materials required for the work shall be brought by the contractor at his own cost. In each case, certificate for its quality and quantity shall be produced by the contractor at his own cost and the test results of samples shall be supplied to the Department. The material not confirming to the required standard shall be removed at once from the site of the work by the Contractor at his own cost.

4) Testing of all construction material shall be carried out as per required frequency and specifications and the charges for testing shall be borne by the contractor.

5) All the testing charges for mix design etc. if necessary on construction work shall be borne by the contractor.

6) The contractor shall construct shed / sheds as per direction of the Engineer-in-charge of the work for storing the materials brought at site. The material shall be taken out for use in the presence of the departmental representative only.

7) The contractor shall make his own arrangement for the safe custody of the materials which are brought for construction of work.

8) The contractor shall not transfer any material once brought at work site without prior written permission from Engineer-in-charge and for bonafied reasons only.

9) In case the materials brought by the contractor become surplus owing to the change in the design of the work, the materials should be taken back by the contractor at his own cost after prior permission of the Engineer-in-charge.

10) The charge for conveyance of materials from the place of delivery to the site of work and the actual sport on work site shall be entirely borne by the contractor. No claims on his account shall be entertained.

11) The contractor shall furnish the account of cement, steel, asphalt brought by him at each time before placing orders for further supply. Also the same should submit on completion of the work, final account of the materials used by him to the Department. This account will be scrutinised by the Engineer-in-charge.

12) All empty cement bags or empty asphalt drums shall be the property of contractor and the same shall be removed immediately after completion of work.

13) The contractor shall procure the pipes if required for this work from M.S.S.I.D.C. only. Proof of purchasing of pipe should be submitted.

14) Agency shall ensure that the laying temperature of hot mix material shall be as specified and accordingly he shall make arrangements for preventing loss of temperature of hot mix material during transit from location of drum mix plant to work site.
ADDITIONAL CONDITIONS FOR SUPPLY OF BITUMEN

1) The contractor shall use Bulk Bitumen VG 30(60/70) grade, VG 10 (80/100) Grade received from the Refinery at Mumbai for the Hot mix treatment only. Bulk Asphalt received as above will be entirely consumed at Hot mix plant site.

2) Conveyance charges of Bulk Bitumen VG 30(60/70) grade, VG 10 (80/100) grade (including loading / unloading etc.) from refinery to the hot mix plant site will be borne by the Contractor.

3) The Contractor should be aware that delay may occur in getting the bulk asphalt to be supplied at the refinery. They are, therefore, advised to indent for their requirement, sufficiently in advance allow for the period usually taken for supplying Bulk Bitumen.

4) The contractor shall submit periodically as well as on completion of work, on account of all the material issued to him in a manner as instructed by the Engineer-in-charge. In addition, a separate register shall be maintained on site for recording daily item wise asphalt consumption of the work (Giving details of quantities of items of executed and asphalt required for each of them) as directed and shall be signed daily by the contractor or his representative, and got signed daily from the representative of the Engineer-in-charge.

5) The material-asphalt shall be made available on working days only during working hours. Bulk Asphalt will be delivered as per the rules of the concerned refinery. The contractors are expected to know all the rules and regulations framed by the refineries in this behalf.

6) Asphalt shall be obtained specified in Schedule 'A' only. Materials from other source in lieu of the materials in Schedule 'A' shall not be allowed except under written permission of the Executive Engineer.

7) Government does not undertake to take from the contractors whether before or after completion of determination of the contract, surplus material which were originally issued to them and charged to their accounts. Such material however, remains the property of the Department and can be taken over by the Department, if required for use on other works in progress only special arrangement and the prevailing market rate or the rates stipulated in Schedule 'A' excluding the element of storage charges of the issue rate of Division excluding the element of storage charges which is lowest.

8) The Contractor shall furnish unstamped receipted of the materials issued under Schedule 'A' on the spot in addition to the joint signature on such challans, charts, registers, as may be prescribed by the Engineer-in-charge.

9) In the event of the material issued to the contractor by the Department becoming surplus, to the requirement of works and not returned to the Department (inspite of instructions to return the surplus materials from the Department) recovery at penal rate i.e. the double the rate stipulated in Schedule 'A' shall be made from the contractor.

10) Delay in supply of material included in schedule 'A' shall not entitle the contractor to claim any compensation. The contractor will however, will be eligible for extension of time limit on this account.

11) In the event of Asphalt consumed being more than the quantity required as per specifications, recovery at penal rate i.e. double the rate stipulated in Schedule 'A' will be made from the Contractor for the excess quantity of Asphalt consumed.

12) The Contractor should note that the bouzars when received from Mumbai are always unloaded at the plant in the presence of the Jr. Engineer / other representative of the Deptt. during 8.00 A.M. to 6.00 P.M. only. He should arrange to give advance intimation in this behalf to Engineer-in-charge so the arrangement to depute the Jr.Engr. / Representative at the plant site can be made.

13) Since the work lies in busy area the contractor shall have to make adequate arrangement for regulating the traffic by providing barricading whenever necessary and by displaying adequate number of requisite sign, an caution board etc. The work shall have to the planned properly to avoid any inconvenience to the traffic.

14) A register shall be maintained on site regarding daily item wise bitumen consumption of the works (giving details of each item) as directed and shall be signed daily by the contractor or his representative and got signed daily from the representative of the Engineer-in-charge.

15) Contractor Should Submitted Voucher of Purchasing Asphalt.
DECLARATION

I / we hereby declare that, I / we have made myself/our selves thoroughly conversant with the local conditions regarding all materials and labour on which I/we have based my / our rates for this tender. The specification to condition and lead of materials for this work have been carefully studied and understood by me /us before submitting the tender. I/we undertake to use only the best material approved by the Engineer- in- charge or his duly representative before starting the work and to abide by his decision. I/We shall maintain /rectify the entire work as per as per standard specification of P.W.D (Red Book) I.R.C. Codes and M.O.R.T. & H. specification as soon as damage occurs up to the expiry defect liability period without putting forth any reasons.

I hereby undertake to pay the labourers engaged on the work as per Minimum Wages Act. 1948 applicable to the zone concerned.

CONTRACTOR’S SIGNATURE
FORM - 1
LIST OF MACHINERY AVAILABLE WITH TENDERER WHICH WILL BE USED ON THIS WORK

NAME OF TENDERER :-

NAME OF WORK :- CONSTRUCTION OF THIRD FLOOR IN ADMINISTRATIVE BUILDING AT WARDHA

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of Equipment</th>
<th>No. of Unit</th>
<th>Kind of Make</th>
<th>Capacity</th>
<th>Age of machinery</th>
<th>Present Conditions</th>
<th>Present location with name &amp; address of organisation where machinery under use at present</th>
<th>Whether machinery is hypothecated to any division / Bank or other institution etc.</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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</tr>
</tbody>
</table>

Notes :- The above machineries are readily available with me / us for use on this work

**Contractors :-**

**Name :-**

**Address :-**

Contractor No. of Corrections Executive Engineer
FORM - 2
LIST OF TECHNICAL PERSONNEL OF THE TENDERER LIKELY TO BE APPOINTED ON THIS WORK

NAME OF TENDERER :- _________________________________________________

NAME OF WORK :- CONSTRUCTION OF THIRD FLOOR IN ADMINISTRATIVE BUILDING AT WARDHA

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Designation</th>
<th>Name</th>
<th>Qualification</th>
<th>Professional Experience of work carried out</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
</tr>
</tbody>
</table>

Contractors :- _________________________________________________

Name :- _________________________________________________

Address :- _________________________________________________

Contractor No. of Corrections Executive Engineer
## FORM - 3

**DETAILS OF WORKS TENDERED FOR / IN HAND AS ON THE DATE OF SUBMISSION OF THE THIS TENDER**

### NAME OF TENDERER :-

### NAME OF WORK :- CONSTRUCTION OF THIRD FLOOR IN ADMINISTRATIVE BUILDING AT WARDHA

<table>
<thead>
<tr>
<th>Sr. No.</th>
<th>Name of Work</th>
<th>Name &amp; address of organisation for whom the work was done</th>
<th>Place and country</th>
<th>Works in hand</th>
<th>Works tendered for</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Tendered cost</td>
<td>Cost of remaining work</td>
<td>Anticipated date of completion</td>
</tr>
<tr>
<td>1</td>
<td></td>
<td></td>
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<td></td>
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</tr>
</tbody>
</table>

**Contractors :-**

**Name :-**

**Address :-**

Certificates from Heads of officers under whom the work are in progress should be enclose

**Contractor**

**No. of Corrections**

**Executive Engineer**
Annexure-I

(Format of Self declaration to be given on Plain paper.)

Affidavit

I, ..............................................................................................................

(Name of Contractor/ person,) Aged about .......... years, residing
at ...........................................................................................................

(Postal Address) do hereby declare that I am the proprietor/Partner of (Name of company/firm)
Registered at ..................

I do hereby declare that, the documents submitted in envelope No. 1 of the tender
document for the work of “CONSTRUCTION OF THIRD FLOOR IN ADMINISTRATIVE
BUILDING AT WARDHA” are true correct and complete.

In case, the contents of envelope No. 1 and other documents pertaining to the tender
submitted by me are found to be incorrect or false, I shall be liable for action under the relevant
provision of Indian Penal Code and other relevant laws.

Signature of Authorised person/Contractor

Applicant/Contractor Name

Address......................................................

Place:-

Date:-

E-mail......................

Mobile No..............

Website...............
ANNEXURE II
FINANCIAL RULE - FORM 2 A
(See Rule 51-4)

GUARANTEE BOND FOR SECURITY DEPOSIT

In consideration of the Governor of Maharashtra (hereinafter referred to as ‘THE GOVERNMENT’) having agreed to exempt (hereinafter referred to as ‘THE CONTRACT’) from depositing with the Government in cash, the sum of Rs. ______________ (Rs.________________________ only) being the amount of security deposit payable by the contractor to the Government under terms and conditions of the agreement dated the ______________ day of __________ and made between the Government on the one part and the contractor on the other part (hereinafter referred to as the “the observance and performance by the Government a Guarantee in the prescribed form from a scheduled Bank in India being in fact these present in the like sum of Rs. ______________________ (Rs._______________________________________). We _________________________ ______________________ Bank / Limited registered in India under ______________________ Act and having one or our local head office at _____________________ do hereby -

1. Guarantee of the Government -
   a) Due performance and observance by the contractor of the terms, covenants and conditions on the part of the contractor contained in the said agreement and
   b) Due and punctual payment by the contractor to the Government of all sums of money losses, damage, costs, charges, penalties and expenses payable to the Government by the contractor under or in respect of the said agreement.

2. Under to pay to the Government on demanded and without demure and notwithstanding any court or tribunal relating there to the said sum of Rs. __________ (Rs.__________________________________ only) or such less sum may be demanded by the Government from us our liability hereunder being absolute and unequivocal and agree that -
   (A) The guarantee herein contained shall remain in full force and effect during the subsistence of the said agreement and that same will continue to be enforceable till and all the dues of the Government under or by virtue of the said agreement have been duly paid and its claims satisfied or discharged and till the Government certifies that the terms and conditions of the said agreement have been fully property carried out by contractor.
   (B) We shall not be discharged or released from the liability under this Government by reasons of -
      (i) Any change in the constitution of the Bank or the Contractor or,  
      (ii) Any arrangement entered into between the Government and the Contractor with or without our consent.

Contractor______________ No. of Corrections______________ Executive Engineer______________
(iii) Any forbearance or including shown to the Contractor.
(iv) Any variation in the terms covenants or conditions contained in the said agreement.
(v) Any time given to the contractor or -

(C) Our liabilities hereunder shall be joint and several with that of the contract as if we were the principal debtors in respect of the said sum of Rs. __________
(Rs.________________________________________only.)

(D) We shall not revoke this guarantee during its currency except with the previous consent in writing of the Government IN WITHNEES WHERE OF The Common Seal of __________ has been here into affixed this day of ______________. The common seal of ______________ was pursuant to the resolution to of the Board of Directors of the company dated the ______________ day of ______________ herein affixed in the presence of who in token have here to set their respective hands in the presence of -

(1) .................................................................

(2) .................................................................
# ANNEXURE – IV

## QUALITY CONTROL TESTS & THEIR FREQUENCIES.

<table>
<thead>
<tr>
<th>S. N.</th>
<th>Material</th>
<th>Test</th>
<th>Frequency of Testing</th>
<th>Remarks.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sand</td>
<td>i) Fineness Modules ii) Silt Content</td>
<td>At the beginning &amp; if there is change in source.</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Cement</td>
<td>Comp. Strength</td>
<td>Upto 5 cum - 1 set 6 - 15 - 2 sets 16 – 30 - 3 sets 31 – 50 - 4 sets 51 &amp; Above - 4 sets + 1 additional set for each 50 cum or part thereof.</td>
<td>M.O.RT H. specification 1717 (Fifth revision Table No. 1700-9)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>M.O.RT H. specification 900 (Fifth revision Table No. 900-6)</td>
</tr>
<tr>
<td>4</td>
<td>Cement</td>
<td>i) Comp. Strength ii) Initial setting time iii) Final setting time iv) Specific Gravity v) Soundness vi) Fineness</td>
<td>One test for each consignment of 50 MT (1000 bags) or part thereof.</td>
<td>I.S. 8112 -1989</td>
</tr>
<tr>
<td>5</td>
<td>Steel</td>
<td>i) Weight per meter ii) Ultimate Tensile stress iii) Yield stress iv) Elongation</td>
<td>One test for every 5.0 METRIC TONNE or part thereof for each diameter.</td>
<td>I.S. 432 IS 1786-1985</td>
</tr>
<tr>
<td>6</td>
<td>Granular Sub Base</td>
<td>i) Gradation ii) Aturberg limits iii) Moisture content prior to compaction. iv) Density and compacted layer v) CBR</td>
<td>One test per 400cum. One test per 400 cum. One test per 400 cum. One test per 1000 sqm As required</td>
<td>M.ORTH.specification Table 900-3 (fifth revision 2013)</td>
</tr>
<tr>
<td>7</td>
<td>Water bound macadam</td>
<td>i) Aggregate Impact value ii) Gradation iii) Flakiness Index &amp;</td>
<td>One test per 1000 cum. One test per 250 cum. One test per 500 cum.</td>
<td>M.ORTH.specification Table 900-3 (fifth revision 2013)</td>
</tr>
</tbody>
</table>

Contractor No. of Corrections Executive Engineer
<table>
<thead>
<tr>
<th>S. N.</th>
<th>Material</th>
<th>Test</th>
<th>Frequency of Testing</th>
<th>Remarks.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Elongation Index.</td>
<td>1 test per 50 cum of binding material.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>iv) Atterberg limits of binding material.</td>
<td>One test per 100 cum. Of aggregate</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>V) Atterberg limits of portion of aggregates passing 425 Micron.</td>
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<tr>
<td>8</td>
<td>Wet Mix Macadam</td>
<td>i) Aggregate Impact value</td>
<td>One test per 1000 cum.</td>
<td>M.ORTH.specification Table 900-3 ,(fifth revision 2013)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii) Gradation</td>
<td>One test per 200 cum.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>iii) Flakiness Index &amp; Elongation Index</td>
<td>One test per 500 cum.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>iv) Atterberg limits of portion of aggregates passing 425 Micron.</td>
<td>1 test per 200 cum of binding material.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>v) Density of Compacted layer</td>
<td>One set of 3 test per 1000 Sqm</td>
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<tr>
<td>9</td>
<td>Prime coat / tack coat / Fog spray</td>
<td>i)Quality of binder</td>
<td>No. of samples per lot and tests as per I.S. 73, I.S. 217 and I.S. 8887 as applicable.</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii) Binder Temperature</td>
<td>At regular close intervals, three test per day</td>
<td>M.ORTH.specification Table 900-3 ,(fifth revision 2013)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iii) Rate of spread of binder</td>
<td></td>
<td></td>
</tr>
<tr>
<td>S. N.</td>
<td>Material</td>
<td>Test</td>
<td>Frequency of Testing</td>
<td>Remarks.</td>
</tr>
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</tr>
<tr>
<td>10.</td>
<td>Seal coat / surface dressing.</td>
<td>i) Quality of binder, ii) Impact value / Los Angles Abrasion value,</td>
<td>Same as mentioned under Sr.No.9 1 test per 200 cum of aggregate</td>
<td>M.ORTH.specification Table 900-3 (fifth revision 2013)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>iii) Flakiness &amp; elongation index, iv) Stripping value of aggr.,</td>
<td>1 test per 100 cum.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>v) Water absorption, vi) Water sensitivity of mix (if required),</td>
<td>1 test for each source of supply. Subsequently whenever there is change in the quality of aggregates</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>vii) Gradation, viii) Soundness, ix) Temp. of binder, x) Rate of</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>spread of materials</td>
<td></td>
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<tr>
<td>11.</td>
<td>Open graded premix surfacing / close</td>
<td>i) Quality of binder, ii) Impact / Abrasion value, iii) Flakiness &amp;</td>
<td>Same as per Sr. No. 9 Same as per Sr. No. 10</td>
<td>M.ORTH.specification Table 900-3 (fifth revision 2013)</td>
</tr>
<tr>
<td></td>
<td>graded premix surfacing.</td>
<td>elongation index, iv) Stripping value, v) Water absorption, vi)</td>
<td>-----do-----</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Gradation, vii) Water sensitivity of mix, viii) Soundness, ix) Temp</td>
<td>-----do-----</td>
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<tr>
<td></td>
<td></td>
<td>binder, x) Binder content</td>
<td>-----do-----</td>
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<td>-----do-----</td>
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<td>-----do-----</td>
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</tr>
<tr>
<td>12.</td>
<td>Bituminous Macadam</td>
<td>i) Quality of binder, ii) Impact / Abrasion value, iii) Flakiness &amp;</td>
<td>Same as per Sr. No. 9 Same as per Sr. No. 10</td>
<td>M.ORTH.specification Table 900-3 (fifth revision 2013)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>elongation index, iv) Stripping value, v) Water sensitivity</td>
<td>-----do-----</td>
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<td></td>
<td></td>
<td>of mix</td>
<td>-----do-----</td>
<td></td>
</tr>
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</table>

Contractor | No. of Corrections | Executive Engineer

91
<table>
<thead>
<tr>
<th>S. N.</th>
<th>Material</th>
<th>Test</th>
<th>Frequency of Testing</th>
<th>Remarks.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>mix</td>
<td>vi) Water absorption</td>
<td>-</td>
<td>-----do-----</td>
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<tr>
<td></td>
<td></td>
<td>vii) Soundness</td>
<td>-----do-----</td>
<td>-----do-----</td>
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<tr>
<td></td>
<td></td>
<td>viii) Percentage of fractured faces.</td>
<td>-----do-----</td>
<td>As per Sr. No. 11</td>
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<tr>
<td></td>
<td></td>
<td>lx) Gradation</td>
<td>-----do-----</td>
<td>At Regular interval.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>xi) Binder content &amp; aggrt. Grading.</td>
<td>At Regular interval.</td>
<td>one test per 700 sqm</td>
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<tr>
<td></td>
<td></td>
<td>xii) Rate of spread of mixed material</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>xiii) Density of compacted layer</td>
<td></td>
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</tr>
<tr>
<td>13</td>
<td>Dense Bituminous Macadam / Bituminous Concrete</td>
<td>i) Quality of binder</td>
<td>No. of samples as per I.S. 73, I.RC SP. 53 &amp; I.S. 15462.</td>
<td>M.ORTH.specification Table 900-3 (fifth revision 2013)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii) Impact / Abrasion value</td>
<td>One test per 350 Cum of aggregate for each source and whenever there is change in quality of aggregate.</td>
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<tr>
<td></td>
<td></td>
<td>iii) Flakiness &amp; elongation index</td>
<td>-----do-----</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>iv) Soundness</td>
<td>One test for each source and whenever there is change in quality of aggregate.</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>v) Water Absorption</td>
<td>-----do-----</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>vi) Sand equivalent test</td>
<td>-----do-----</td>
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</tr>
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<td></td>
<td></td>
<td>vii) Plasticity Index</td>
<td>-----do-----</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>viii) Polished stone value</td>
<td>-----do-----</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>ix) Percentage of fractured test</td>
<td>One test per 350 cum of aggregate when crushed gravel is used</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>x) Mix grading</td>
<td>One set for individual constituents and mixed aggregate for drier for each 400 tonnes of mix subject to minimum of 2 tests per day per plant.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>3 tests for stability, flow</td>
<td></td>
</tr>
<tr>
<td>S. N.</td>
<td>Material</td>
<td>Test</td>
<td>Frequency of Testing</td>
<td>Remarks.</td>
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<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td></td>
<td>xi) Stability and voids analyses of mix</td>
<td>value, density &amp; void contents for each 400 tonnes of mix subject to minimum of 2 tests per day per plant. At regular interval</td>
<td>One set for each 400 tonnes of mix subjected minimum of 2 tests per day per plant. One test per 700 sqm area</td>
</tr>
<tr>
<td></td>
<td></td>
<td>xi) Stability and voids analyses of mix</td>
<td>value, density &amp; void contents for each 400 tonnes of mix subject to minimum of 2 tests per day per plant. At regular interval</td>
<td>One set for each 400 tonnes of mix subjected minimum of 2 tests per day per plant. One test per 700 sqm area</td>
</tr>
<tr>
<td>14</td>
<td>Bitumen</td>
<td>.i) Penetration</td>
<td>2 test per lot as per I.S. 73</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii) Ductility</td>
<td></td>
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<td></td>
<td>iii) Softening Point</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>iv) Flash/Fire point</td>
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<tr>
<td></td>
<td></td>
<td>v) Specific gravity</td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Chequered Tiles</td>
<td>.i) Water absorption</td>
<td>Shall not exceed 10% The average width transverse strength shall not be less than 30 Kg/cm²</td>
<td>6th Tiles shall be tested per every 2000 tiles or part thereof.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>ii) Transverse strength</td>
<td></td>
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</tbody>
</table>
ANNEXURE - IV

Setting of Field Laboratory

The Contractor shall have to establish a field laboratory with following minimum equipments on the instant work at his own cost. These instruments are conforming to IS Specifications duly calibrated from competent agency. Contractor has to carry out the calibration of said instruments as directed by the Engineer – in- charge on expiry date of calibration. On completion of work in all respect, the equipments will be the sole property of the contractor.

1) Hydraulic Compression Testing Machine, hand operated 100 tonnes Capacity. Conform to the requirements of IS 516-1959, IS:4858-2000
   1 Nos

2) Cube Moulds 150 mm x 150 mm x 150 mm size conforming to IS: 516-1959, IS:10086-1982
   Cube Moulds 75 mm x 75 mm x 75 mm
   1 set of 12 Nos
   1 set of 6 Nos.

3) Slump apparatus conforming to IS:7320
   1 No

4) Test sieves of 100 mm, 80 mm, 63 mm, 50 mm, 25 mm, 12.5 mm, 10 mm, 7.75 mm, 2.36 mm, 1.18 mm, 600 micron, 300 micron, 90 micron, 150 micron and other required sieves.
   2 sets

5) 15 cm dia aggregate crushing value apparatus as per IS:2386 (Part IV)-1963
   1 No

6) Impact testing machine with cylinder of 75 mm dia and 50 mm depth and tampering rod of 10 mm dia and 230 mm long.
   1 No

7) Pycnometer with metal mould and dryer
   1 No

8) Le –chatelier apparatus as per IS:4031 with glass sheets
   1 No

9) Vicat apparatus as per IS:4031
   1 No

10) Vibration machine with 6 moulds as per IS:4031
    1 No

11) Graduated cylinder of glass 100, 250, 500 and 1000 ml capacity
    3 Nos each.

12) Electric oven, thermostatically controlled up to 200 °C, chamber
    Space 40 cm x40cm x40cm
    1 No

13) Concrete Test Hammer (rebound hammer) of impact energy 2.207 Nm (0.225 Kgm) as per IS:1331 (part -2)-1992
    1 No

14) Balance 1 kg, 5 kg and 15 kg capacity having sensitivity less than 0.1 gms.
    1 No each

15) Miscellaneous items such as mixing trays, rice trays, rice trays Karni, hot plate etc.
    1 No each

16) Thickness and length gauge as per IS:2386 (Part I)-1983
    1 No each

17) Bitumen extraction machine
    1 No

18) Density apparatus by sand replacement method
    1 No.

19) Sieves as per MOST for various bitumen activities
    1 Set for each

Contractor
No. of Corrections
Executive Engineer
Annexure -V
Format of Undertaking for similar type work, quantity and Calculation of Bid Capacity

I, the undersigned do hereby undertake that our firm M/s …………………………………… 
…………………………………………………………………………………………………………………………………… submit the tender for the work of “CONSTRUCTION OF THIRD FLOOR IN ADMINISTRATIVE BUILDING AT WARDHA”

1) For this tender we submit that a similar type work has been completed by us under ------------------ 
------------------------------------- (Name of the agency) during year -----------------. Work has been executed costing Rs -------------- (Certificate of Executive Engineer Enclosed in special condition template)

2) For this tender we submit following statement for Executed quantity in continuous twelve calendar months

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Item of work</th>
<th>Division</th>
<th>Name of Work</th>
<th>Executed Quantity</th>
<th>Period of Execution</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Cement Concrete</td>
<td>1)</td>
<td>1)</td>
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<td>2</td>
<td>Pavement concrete</td>
<td>1)</td>
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<td>3)....</td>
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</tr>
</tbody>
</table>

3) Calculation of Bid Capacity

a) A - Maximum Annual Turn Over with updated cost (Year---------) Rs---------(Scanned from original certificate by Charted Accountant Enclosed in Special condition template )

b) N - Number of Year 1 years

b) B - Value of existing commitments (as mentioned in clause 1.4.19 of instruction regarding submission of documents in Envelope and works (ongoing) to be completed in the period stipulated for completion of the work in the present tender

Contractor No. of Corrections Executive Engineer
Bid Capacity - Rs ….

Above information is true and correct.

..................................................................................................

(Signed by an Authorized person of the Firm)
Annexure VI

TESTING STATEMENT

<table>
<thead>
<tr>
<th>Sr No</th>
<th>Items</th>
<th>Qty as per execution</th>
<th>Specified frequency</th>
<th>Required test as per frequency</th>
<th>Test actual taken at</th>
<th>Total test</th>
<th>Deficiency in testing</th>
<th>Remarks</th>
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<td></td>
<td></td>
<td></td>
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<td>Site office</td>
<td>Labortory</td>
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</tbody>
</table>

Contractors :-                                                                                                                          

Name :-                                                                                                                                     

Contractor  No. of Corrections  Executive Engineer
ANNEXURE – IV
SPECIFICATIONS FOR RIGID PAVEMENT

1. **Scope**

1.1 The work shall consist of construction of an unreinforced dowel jointed plain cement concrete pavement in accordance with the requirements of these specifications and in conformity with the lines, grades and cross section shown on the drawing or as directed by the Engineer-in-Charge. The work shall include furnishing of all plants and equipments, materials and labour and performing all operations in connection with the work as approved by the Engineer-in-Charge.

1.2 The design parameters viz. thickness of pavement slab, grade of concrete, joint details etc. shall be as stipulated in the drawings.

The cross-section attached is tentative. The contractor shall prepare the design for rigid pavement and get it approved from by V.N.I.T. Nagpur within 30 days from date of work order. The cost of the design and drawings shall be incidental to the work and no extra payment will be made to contractor for it.

2. **Materials**

2.1 **Source of Materials:**

The Contractor shall indicate to the Engineer-in-Charge the source of all materials to be used in the concrete work sufficiently in advance, and the approval of the Engineer-in-Charge for the same shall be obtained before the scheduled commencement of the work. If the Contractor later proposes to obtain materials from a different source, he shall notify the same to Engineer-in-Charge for his approval before such materials are to be used.

2.2 **Cement:**

Ordinary Portland cement for use on the works shall comply in every respect with the requirements of the IS-8112 amended from time to time. The cement used in the works shall be of a make and quality approved by the Engineer-in-Charge. Only 43 grade Ordinary Portland Cement shall be used. The Contractor shall provide and maintain proper and sufficient storage sheds for the cement on the worksite. The floor of the stores shall be raised at least 23 cm. from the ground in order to protect the bags from moisture. Cement damaged by exposure or otherwise will not be allowed to be used in the Work and same shall be removed from the site at once.

2.3 **Admixtures:**

Admixtures conforming to IS : 9103 and IS : 6925 shall be permitted to improve workability of the concrete or extension of setting time on satisfactory evidence that it will not have any adverse effect on the properties of concrete with respect to strength, volume change, durability and has no deleterious effect on steel bars. The particulars of the admixture and the quantity to be used must be furnished to the Engineer-in-Charge in advance to obtain his approval before use.

2.4 **Coarse Aggregate:**

(i) Aggregates for pavement concrete shall be natural material complying with IS : 383 with a Los Angeles Abrasion Test limits not more than 30 percent. The combined flakiness and Elongation index of aggregate shall not be more than 30 percent. The
limits of deleterious materials shall not exceed the requirements set out in IS: 515. No aggregate having water absorption more than 2% shall be used.

(ii) Coarse aggregate shall consist of clean, hard, strong, dense, non porous and durable pieces of crushed stone or crushed gravel and shall be devoid of pieces of disintegrated stone, soft, flaky elongated, very angular or splintery pieces. The maximum size of coarse aggregate shall be 25 mm. for M-40 grade pavement concrete and for dry lean concrete (DLC) it shall also be 25 mm. Continuously graded or gap graded aggregates may be used as stipulated in IRC 44 and IRC 59 respectively, depending on the grading of the fine aggregate.

The aggregate shall not be alkali reactive. Dumping and stacking of aggregates shall be done in an approved manner. In case the Engineer-in-Charge considers that the aggregate are not free from dirt, the same may be washed and drained for at least 72 hours before batching as directed by the Engineer-in-Charge. In such situation the absorbed moisture content shall be carefully monitored for controlling water cement ratio.

2.5 Fine Aggregate:
(i) The fine aggregate shall consist of clean, natural sand conforming to IS:383. Fine aggregate shall be free from soft particles, clay, shale, loam, cemented particles, mica and organic and other foreign matter.

(ii) Sand shall be of approved quality with fineness modulus between 2.4 to 3.0 as per approved mix design. The same will have to be screened to remove the oversize particles and washed to reduce the silt contents below 4% by volume after 24 hour and to bring it within the permissible range of fineness modulus. Blending of sand of fine and coarse quality may be permitted to achieve the required FM if it is found necessary to give desired results. The fine aggregates will be tested and retested as directed by the Engineer-in-Charge till they satisfy the required norms as per IS and as specified above.

2.6 Fly ash:
Fly ash shall conforming to I.S. 3812 (Part I) and it shall be 25 % by weight.

2.7 Water :
Water used for mixing and curing of concrete shall be clean and free from injurious amount of oil, salt, acid, vegetable matter, or other substances harmful to the finished concrete. It shall meet the requirements stipulated in IS : 456-2000.

(i) The rate proposed in this tender for all concrete and allied works are inclusive of water cost. The Contractor shall have to make their own arrangements at their cost for bringing adequate water of potable quality for mixing concrete, curing purposes and for this no extra payment will be made.

(ii) The water brought for concreting and curing etc. shall be got tested from the laboratory as approved by Engineer-in-Charge to verify whether it is suitable for above purposes whenever directed. This testing will be done at Contractor’s cost.

2.8 Premoulded Joint Filler :
Premoulded joint filler for expansion joint shall be of thickness shown in the drawing with tolerance of ± 1.5 mm. It shall be 25 mm. less in depth than the thickness of the slab with tolerance of ± 3 mm. and provided to the full width between side forms. Holes to
accommodate dowel bars shall be accurately bored or punched out to give a sliding fit on the dowel bars.

The joint filler shall comply with the requirements of IS:1838 Part I and II “Specifications for Premoulded fillers for Expansion joint in concrete”.

2.9 Joint sealing compound:

Cold applied sealant Polysulphide base (Pouring Grade) conforming to BS-5212 Part II and IS 11433 and as per IRC 57 shall be used. If primers are recommended by the manufacturer, they shall be applied neatly with an appropriate brush.

The poly sulphide based sealant and its primer, shall be approved after the initial test on the samples supplied by the manufacturer. The approved material shall be procured from the same manufacturer under sealed packs. On each pack the manufacturer shall mention quality, basic name of the material & formulation date of packing, shelf life (use before – warning) and health warnings. With each lot of supply, manufacturer shall give certificates of quality, manufacturer’s test reports, properties of basic material (e.g. adhesion & tension modulus, plastic deformation etc.), the method of working at the site (recommended process), a copy of excise gate pass and the bill of sale of the material.

Weight of sealant in each pack shall be such that once the pack is opened the material can be used immediately within small period as permitted by the manufacturer.

The two part poly sulphide sealant (as per IS 12118 part 1&2) will be “AC-Poly seal” or Equivalent from a well reputed large manufacturer of construction chemical. Contractor has an option to use one part poly sulphide sealant (as per IS 11433 part 1&2) without any extra cost.

For use of sealant reference can be made to ASTM C1193 to the extent applicable.

The site tests are the appearance (colour & smoothness), which are part of regular inspection and supervision. The local tests will include pot life, tack free time, archeological properties at inclined position, resistance to plastic flow, % recovery, smoothness, specific gravity & loss of mass in 14 days.

Steel:

The steel shall conform to the requirement of IS : 432, IS : 1139 and IS : 1786 as relevant. The dowel bars shall conform to Grade S 240 and tie bars to grade S 425 of IS. If steel mesh is used, it shall conform to IS : 1566. The steel shall be coated with epoxy paint for protection against corrosion.

3. Proportion of concrete mix

3.1 Immediately upon the receipt of work order, the Contractor shall inform the Engineer-in-Charge the exact location of source of the accepted materials. After approval of all the materials to be used in Pavement Quality Concrete, the Contractor shall submit the mix design based on proportion by weight of all ingredients for the approval of Engineer-in-Charge. The mix design shall be submitted to the Engineer-in-Charge at least one month in advance of commencing the paving operation.
For design of cement concrete mixes guidance may be had from IRC-44 “Tentative guidelines for cement concrete mix design for road pavement and IS- 10262 and IS-SP-23 Hand book on concrete mixes”.

3.2 The Standard cement content for Concrete shall be as follows:

Dry Lean Concrete (DLC) Grade M-10 220 Kg. per Cum.
Concrete Grade M-30 with 25 % fly ash 320 Kg. per Cum.

The cement content mentioned above is theoretical and only for guidance. Actual minimum cement content will be as per MORT&H specification (Fifth Version)

If this minimum cement content is not sufficient to produce in the field, concrete of the strength specified in the design, it shall be increased as necessary without additional compensation under the Contract. The maximum cement content shall, however, not exceed the limits as specified in relevant IRC Codes.

3.3 If such Mix design involve change in cement consumption upto 2% on the higher or lower side, no adjustment in the cost of the item to be paid to the contractor shall be made. If such alterations, changes, theoretical consumption of cement by more than 2% on the higher or lower side, the sources and quality of aggregate remaining the same, payment will be adjusted for or against the contractor by the amount by which the total cost of cement has been increased or decreased by more than 2%. The amount of such increase or decrease shall be calculated on the basis of quantity of cement determined and prescribed in the above table. In adjusting the cost only the cost of cement shall be considered and not handling or other charges, which shall be treated as incidental to the item. For working out the cost towards adjustments in cement consumption the basic rate for cement shall be star rate as indicated in clause 54.

The Change in mix design in the contract period is permissible when source of material changes, provided materials meet the standard specifications. The cement contents so altered would again attract provision of adjustment of cement on higher or lower side on theoretical consumption to contractor as per fresh mix design.

3.4 Concrete Strength:

3.4.1 The cubes shall be tested for 7 days and 28 days strength at the Contractor's laboratory in the presence of Engineer-In-Charge or his representative. Whenever any material, cubes and beams are required to be sent to the Regional/District Laboratory, the same shall be transported to the Government Laboratory by the Contractor at his own cost. However, the Contractor shall cast cubes during concreting of each slab test the cubes at field laboratory in accordance with IS : 516 for 7 days and 28 day's strength. The acceptance criteria for test result shall be in accordance with IS–456–2000.
3.4.2 While designing the mix in the laboratory, correlation between flexural and compressive strength of concrete shall be established on the basis of tests on samples for any adjustment in design. However, be ensured that in such case the materials and mix proportions remain unaltered. The water content shall be the minimum required to provide the specified workability for full compaction of the concrete to the required density.

3.4.3 At least two cube specimens, one each for 7 days and 28 days strength testing, shall be casted for every 150 Cum, or part thereof of concrete placed during construction. On each day's work, not less than nine cubes shall be cast and the same shall be tested in presence of the Engineer-in-Charge or his representative in accordance with the testing procedure.

3.4.4 The ratio between the 7 and 28 days strength shall be established for the mix to be used in the slab in advance, by trial design mix. The average strength of the 7 days cubes shall be divided by the average strength of the 28 days for each work and the ratio ‘R’ shall be determined. The ratio ‘R’ shall be expressed to three decimal places.

3.4.5 If during the construction the value of 7 days test results fall below the required 7 days strength as per the design mix then the cement content of the concrete shall, without extra payment, be increased by 5%. The increased cement content shall be maintained at least until the 28 days strength have been assessed for its conformity with the requirements. Whenever the cement content is increased, the concrete mix shall be readjusted to maintain the required workability.

3.4.6 In case the cube test for 28 days period fails, cores shall be taken from the concrete slab and will be tested at Contractor's cost. The core will be 150 mm dia. If it fails, action as contemplated here under clause no 3.4.12 shall be taken.

3.4.7 All cores taken for density measurements shall also be checked for thickness. In case of doubt, additional cores may be ordered by the Engineer-in-Charge and taken at locations decided by him to check the depth or density of concrete slab without any compensation being paid for the same. Thickness of the slab at any point checked as mentioned above shall be within a tolerance of ± 5mm. of the specified thickness as per drawing. The cost of core samples to be taken and their testing shall be borne by the Contractor. The test samples shall be taken by the agencies approved by the Superintending Engineer.

3.4.8 Acceptance criteria for concrete

Average 28 days flexural strength of the batch of 4 beams should not be less than the specified characteristic strength plus 0.3 mpa. Any concrete that fails to meet the strength specified shall be removed and replaced at Contractor's expense.

3.5 Workability

3.5.1 The workability of the concrete at the point of placing shall be adequate for the concrete to be full compacted and finished without undue flow. The optimum workability for the mix to suit the paving plant being used shall be determined by the Contractor and approved by the Engineer-in-Charge. The control of workability shall be exercised by the slump test in accordance with IS 1199

3.5.2 The workability shall be determined by the compacting factor test or Vee-Bee test in accordance with IS 1199 at the minimum rate of one test per 50 cum of concrete or 5 times per day whichever is greater. Tests for workability shall be carried out at the point of placing in conjunction with tests for strength. The workability shall be maintained at the optimum within the range of Compacting factor as Specified in Work specific technical specifications.

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3.5.3 The workability requirement at the batching and mixed plant and paving site shall be established by slump tests carried during trial paving. These requirements shall be established from season to season and also when the lead from batching and mixing plant site to the paving site changes. The workability shall be established for the type of paving equipment available. A slump value in the range of 25 ± 15 mm is reasonable for paving works but this may be modified depending upon the site requirement and got approved by the Engineer. These tests shall be carried out to every tipping truck/dumper at batching and mixing plant site and paving site initially when the work commences but subsequently the frequency can be reduced to alternate tipping trucks or as per the instructions of the Engineer.

3.6 Design Mix

3.6.1 The Contractor shall carry out laboratory trials of design mixes with the materials from the approved sources to be used. Trial mixes shall be made in presence of the Engineer-in-Charge or his representative and shall be subject to the approval of the Engineer-in-Charge. They shall be repeated, if necessary until the proportions that will produce a concrete which complies in all respects with this specification, and conforms to the requirement of the design/drawings has been determined.

3.6.2 The proportions determined as a result of the laboratory trial mixes may be adjusted if necessary during start of the construction. Thereafter, neither the materials nor the mix proportions shall be varied in anyway except with the written approval of the Engineer-in-Charge.

3.6.3 Any change in the source of materials or mix proportions proposed by the Contractor during the course of work shall be assessed by making laboratory trial mixes unless approval is given by the Engineer-in-Charge for minor adjustments like compensation for moisture content in aggregates or minor fluctuations in the grading of aggregate.

4. Separation Membrane

A separation membrane shall be used between the concrete slab and the DLC. Separation membrane shall be impermeable plastic sheeting 125 microns thick laid flat without creases. Before placing the separation membrane, the DLC shall be swept clean of all the extraneous materials using air compressor. Where overlap of plastic sheet is necessary, the same shall be at least 300 mm and any damaged sheeting shall be replaced. The separation membrane may be stuck to the lower layer with patches of adhesives or appropriate tape or concrete nails with washer so that the sheet does not move during placement of concrete.

5. Joints

The location and type of joint shall be as shown in the drawing. Joint shall be constructed depending upon their functional requirement as detailed in the following paragraphs. The location of the joints should be transferred accurately at the site and mechanical saw cutting of joints done as per stipulated dimensions. It should be ensured that the full required depth of cut is made from edge to edge of the pavement. Transverse and longitudinal joints in the pavement and Dry Lean Concrete sub-base shall be staggered so that they are not coincident vertically and are at least 800 to 1000 mm and 300 to 400 mm apart respectively. Sawing of joints shall be carried out with diamond studded blades soon after the concrete has hardened to take the load of the sawing machine and personnel without damaging the texture of the pavement. Sawing operation could start as early as 6-8 hours depending upon the season.

5.1 Transverse joints

Transverse joints shall be contraction and expansion joints constructed at the spacing described in the Drawings. Transverse joints shall be straight within the following tolerances.
along the intended line of joints which is the straight line transverse to the longitudinal axis of the carriageway at the position proposed by the Contractor and agreed to by the Engineer-in-Charge except at road junctions or roundabouts where the position shall be as described in the drawings.

5.1.1 Deviations of the filler board in the case of expansion joints from the intended line of the joint shall not be greater than ± 10 mm.

5.1.2 The best fit straight line through the joint grooves as constructed shall be not more than 25 mm from the intended line of the joint.

5.1.3 Deviations of the joint groove from the best fit straight line of the joint shall not be greater than 10 mm.

5.1.4 Transverse joints on each side of the longitudinal joint shall be in line with each other and of the same type and width. Transverse joints shall have a sealing groove which shall be sealed in compliance with Clause 602.10 of MORT and H specifications (Fifth Revision)

5.2 Contraction joints

Contraction joints shall be placed transversely at pre-specified locations as per drawings/design using dowel bars. These joints shall be cut as soon the concrete has undergone initial hardening and is hard enough to take the load of joint sawing machine without causing damage to the slab. Construction joints shall consist of a mechanical sawn joint groove, 3 to 5 mm wide and one-fourth to one-third depth of the slab ± 5 mm or as stipulated in the drawings and dowel bars complying with Clause 602.6.5 of MORT&H Specifications. Construction joint shall be widened subsequently to accommodate the sealant as per Clause 602.10, to dimensions shown on drawings or as per IRC:57.

5.3 Expansion joints

The expansion joints shall consist of a joint filler board complying with Clause 602.2.9 of MORT and H specifications (Fifth Revision) and dowel bars complying with Clause 602.6.5 MORT and H of specifications (Fifth Revision) and as detailed in the drawings. The filler board shall be positioned vertically with the prefabricated joint assemblies along the line of the joint within the tolerances given in Clause 602.6.2.1 of MORT and H specifications (Fifth Revision) and at such depth below the surface as will not impede the passage of the finishing straight edges or oscillating beams of the paving machines. The adjacent slabs shall be completely separated from each other by providing joint filler board. Space around the dowel bars, between the sub-base and the filler board shall be packed with a suitable compressible material to block the flow of cement slurry.

5.4 Longitudinal joint

The longitudinal joints shall be saw cut as per details of the joints shown in the drawing. The groove may be cut after the final set of the concrete. Joints should be executed as per MORT&H specifications clause 602.6.4

6. Dowel bars

6.1 Dowel bars shall be mild steel rounds in accordance with MORT and H specifications (Fifth Revision) Clause 602.2.8 with details / dimensions as indicated in the drawing and free from oil, dirt, loose rust or scale. They shall be straight, free of irregularities and burring restricting slippage in the concrete. The sliding ends shall be sawn or cropped cleanly with no protrusions outside the normal diameter of the bar. The dowel bar shall be supported on cradles/dowel chairs in pre-fabricated joint assemblies positioned prior

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to the construction of the slabs or mechanically inserted with vibration into the plastic concrete by a method which ensures correct placement of the bars besides full compaction of the concrete around the dowel bars. The dowel used in contraction joint shall be provided with plastic sheath with closed end over 60 per cent of the length. The dowels also can be coated with polyethylene. The thickness of sheath or polyethylene coating shall not exceed 0.50 mm.

For details contractor shall refer MORT&H specification clause 602.6.5

7. **Tie bars**

7.1 The bars in longitudinal joints shall be deformed steel bars complying with IS: 1786 and in accordance with the requirements given below. The bars shall be free from oil, dirt, loose rust and scale.

Tie bars projecting across the longitudinal joint shall be protected from corrosion for 75 mm on each side of the joint by a protective coating of bituminous paint with the approval of the Engineer-in-Charge. The coating shall be dry when the tie bars are used.

7.2 Tie bars in longitudinal joints shall be made up into rigid assemblies with adequate supports and fixings to remain firmly in position during the construction of the slab. Alternatively, tie bars at longitudinal joints may be mechanically or manually inserted into the plastic concrete from above by vibration using a method which ensures correct placement of the bars and recompaction of the concrete around the tie bars.

Tie bars are also inserted mechanically or manually from sides. During side insertion in fixed form paving they may be bent so that half length remains along the form. After removal of forms, bars shall be straightened so that they extend into the concrete placed on the other side of the concrete.

7.3 Tie bars shall be positioned to remain within the middle third of the slab depth as indicated in the drawings and approximately parallel to the surface and approximately perpendicular to the line of the joint, with the centre of each bar on the intended line of the joints within a tolerance of ± 50 mm, and with a minimum cover of 30 mm below the joint groove.

8. **Weather and seasonal limitations**

8.1 Concreting during Monsoon Months

When concrete is being placed during monsoon months and when it may be expected to rain, sufficient supply of tarpaulin or other waterproof cloth shall be provided along the line of work in addition to the portable tents. Any time when it rains, all freshly laid concrete which had not been covered for curing purposes shall be adequately protected by means of tarpaulins or other waterproof cloth. Any damage caused to the surface or texture shall be corrected as decided by the Engineer.

8.2 Concreting in Hot Weather:

As placing of concrete in air temperatures above 35° C, is associated with defects, like loss of workability through accelerated setting, formation of plastic shrinkage cracks, etc. it is recommended that unless adequate precautions are taken no concreting shall be done in conditions more severe than the above. The procedures recommended for
adoption in case of hot weather concreting are given in IRC:61” Tentative Guidelines for
the Construction of Cement Concrete Pavements in Hot Weather."

8.3 The execution of work shall only be allowed for ambient temperature not exceeding
35°C. The time for execution of C.C. pavement i.e. the laying of DLC and PQC shall be
6 P.M. to 2 AM next day. The Contractor will have to ensure, adequate lighting
arrangement during the night working, and the execution of work shall only be allowed
for ambient temperature not below 5°C also.

9. Joint construction
The placement of concrete at construction joint is particularly critical Therefore, care
must be taken to ensure that only quality concrete is used in their construction. The
concrete used to construct these joints should be the same as for the remainder of the
slab. The practice of modifying the mix at the joints is not recommended. It should be
kept in mind that load transfer across a doweled joint is greatly affected by the quality of
concrete and compaction around the dowels. The placement of Dowels should be
carefully verified soon after paving begins.

9.1 Sawing-
9.1.1 Sawing operation could start as early as 4 to 8 hours after laying of concrete
pavement but not later than 8 to 12 hours depending upon the ambient temperature,
wind velocity, relative humidity and required maturity of concrete achieved for this
purpose.
9.1.2 It is recommended that all joints be sawed. The sawing of transverse, contraction and longitudinal joints should be a two phase operation. The initial sawing is
intended to cause the pavement to crack at the intended joint. It should be made to
required depth as directed. The second sawing provides the necessary shape factor for
the Sealant material.
9.1.3 When a lengthy period is anticipated between the initial sawing of the joint and the final
sawing and sealing, consideration should be given to filling the joint with temporary filler.
This filler material should keep any loose material out of the joint and reduce the
potential for spalling.

9.2 Cleaning joints
Air compressors use for cleaning joints shall be equipped with suitable traps capable of
removing all surplus water and oil in the compressed air. Immediately after sawing the
joint the resulting slurry shall be completely
removed from the joint and immediate area by flushing with a jet of water under
pressure.

9.3 Installing Backup material
A resilient rod type backup material will be installed in a manner that will produce the
shape factor specified. If the sealant bonds to the backup material, a bond breaking tape
is essential.

10. Surface Texture
After the final regulation of the slab and before the application of the curing
membrane, the surface of Concrete slab shall be brush textured in a direction at right
angles to the longitudinal axis of the carriageway. For details reference shall be made
to clause No. 9.9.4 of IRC-15-2002., and MORT&H specification clause 602.9.11.

11. Curing
The operation curing shall start immediately after initial finishing and original wet sheen
has nearly disappeared. Till the additional finishing is complete the initial curing shall be
done by fogging or mist spray. After finishing operation curing compound can be spread

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on all surfaces of concrete to prevent evaporation (desiccation) of water from the concrete. The dose of curing compound should be enough to avoid evaporation and facilitate the strength development as required by the specifications, the reliability of which shall be confirm by adequate number of core tests performed frequently. On tinned surface two passes one forward and other reverse for spaying curing compound is required.

Vattas shall be formed on concrete surface for ponding water for curing. This can be done by dykes in clay or cement mortar about 75 mm high. The clear length of vatta will not be more than 1 m (without vattas in cross direction). The contractor shall prepare the method statement with planning for doing curing and get it approved from department. Temporary vattas shall be removed soon after the curing operation is over, withouting damaging the texture and look of concrete. There is no separate payment for this work.

Based on maximum temperature in day time, curing shall be done for 14 days. There after for next 7 days concrete surface shall be made wet once in a day in morning hours in summer or winter season (not necessary in rainy days). Curing period shall be extended if it is found that if the cube cured in the field condition (as at the site) gives the strength less than 85% of characteristic compressive strength when tested within 24 hours of the curing time practiced at site.

In addition to above for additional guidance contractor shall refer to MORT&H specification Clause 602.9.12

12. Surface Tolerances

The levels of the subgrade and different pavement courses as constructed, shall not vary from those calculated with reference to the longitudinal and cross profile of the road shown on the drawings or as directed by the Engineer-in-Charge beyond the tolerances mentioned below for additional details contractor shall refer MORT&H specifications clause 902.3

13.1 Tolerances in surface levels.

<table>
<thead>
<tr>
<th>1</th>
<th>Cement concrete pavement</th>
<th>+ 5 mm</th>
</tr>
</thead>
</table>

*This may not exceed -8 mm at 0-30 cm from the edges.

Provided, however that the negative tolerance for wearing course shall not be permitted in conjunction with the positive tolerance for base/sub course.

13.2 For checking compliance with the above requirement for subgrade, sub base courses, measurements, of the surface levels shall be taken on a grid of point placed at 6.25 m longitudinally and 3.5 m transversely or any other grid approved by the Engineer-in-Charge. For any 10 consecutive measurements taken longitudinally or transversely, not more than one measurement shall be permitted to exceed the tolerance as above. This one measurement being not in excess of 5 mm greater than the permitted tolerance.

13.3 For checking compliance with the above requirement for concrete pavements measurements of the surface levels shall be taken on a grid of 6.25 m x 3.5 m or 3.75m or any other grid directed by the Engineer-in-Charge. In any length of pavement, compliance shall be deemed to be met for the final road surface, only if the tolerance given above is satisfied for any point on the surface.
14. Rectification
14.1 Where the surface regularity of subgrade and the various pavement courses fall outside the specified tolerances in Clause 902.4, the Contractor shall be liable to rectify these in the manner described below and to the satisfaction of the Engineer.

i) Dry Lean Concrete Sub-Base: The defective length of the course shall be removed to full depth and replaced with material confirming to Clause 601. The area treated shall be at least 3 m long, not less than 1 lane width and extend to the full depth. Before relaying the course the disturbed subgrade or layer below shall be corrected by leveling watering and compacting.

ii) Cement Concrete Pavement: The defective areas having irregularity exceeding 3 mm but not greater than 6 mm when tested with a 3 metre long straight edge may be rectified by scarblng or grinding using approved equipment. When required by the Engineer, areas which have been reduced in level by the above operation(s) shall be ret textured in an approved manner either by cutting grooves (5mm deep) or roughening the surface by hacking the surface. If high areas in excess 6 mm or low areas in excess of 3 mm occur, exceeding the permitted numbers and if the Contractor cannot rectify, the slab shall be demolished and reconstructed at the Contractor's expense and in no case the area removed shall be less than the full width of the lane in which the irregularity occurs and full length of the slab.

14.2.1 Combination of the above factors.
The slabs with full depth cracks are totally unacceptable as it amounts to structural failure. Besides, other cracks which are deep and are likely to progress in depth with time are also to be considered as serious in nature. Fine cracks, however, are not serious.

Contractor shall refer to the acceptance criteria as per MORT&H specification clause no. 602.14 & IRC SP-83 in case of Additional guidance for acceptance criteria in quality and distress.

15. Clean Up
The pavement surface shall be swept and/or washed down to remove all dirt, debris or foreign material prior to opening to traffic.

16. Opening to traffic
The Contractor shall not permit traffic on the pavement until the concrete has attained a desired compressive strength.

17. Fix Form Paving
For laying and finishing concrete mechanical pavers shall be used. The Contractor has option to use automated pavers like slip form paver. Option to use 'fixed form paver' or better equipment can be adopted in compelling cases. Use of fixed form paver will be permitted on roads of small paved width (Say < 7.50 m) or where slip form paver can not work. For use of Fixed form paver specific permission of Executive Engineer will be required for each stretch of road under consideration. Fixed form pavers unit is guided on steel channels, and these will also act as formwork. The unit should have arrangement for adjusting and controlling the profile of top surface and it
also works as screed vibrator. Other tools and equipment shall be as per the requirement of IRC 43 and as suggested in IRC 15. However contractor should have stand by arrangement of screed vibrators for emergencies. Each steel section utilized as side form, shall be checked for straightness and flatness of its surface to be used as shuttering for concrete. This also applies to top surface on which paver is guided.

18. Forms

18.1 Steel Forms

All side forms shall be of mild steel only. The steel forms shall be mild steel channel sections of depth equal to the thickness of the pavement or a few millimeters less than the thickness of the pavement to match with the plus level tolerances specified for sub-base. In the latter case, the forms shall be leveled by using metal wedges or shims. The thickness of flange and web shall not be less than 6 mm. and shall be capable of resisting all loads applied in the paving process. The length of form shall not be less than 3m except in the case of installations along curves. The sections shall have a length of at least 3 m except on curves of less than 45 m radius, where shorter sections may be used. When set to grade and staked in place, the maximum deviation of the top surface of any section from a straight line shall not exceed 2 mm in the vertical plane and 5 mm in the horizontal plane. The method of connection between sections shall be such that the joint formed shall be free from difference in level, play of movement in any direction. The use of bent, twisted or worn-out forms will not be permitted. At least three stake pockets for bracing pins of minimum 25 mm dia or stakes shall be provided for each 3m of form and the bracing and support must be ample to prevent springing of the forms under the pressure of concrete or the weight or thrust of machinery operating on the forms.

19.2 Setting of Forms

The forms shall be jointed neatly and shall be set with exactness to the required grade and alignment. Both before and after the forms are placed and set, the subgrade or sub-base under the forms shall be thoroughly tamped in an approved manner. Sufficient rigidity shall be obtained to support the forms in such a position till during the entire operation of compacting and finishing of concrete they shall not at any time deviate more than 3 mm from a straight edge 3 m in length. Forms which show a Variation from the required rigidity or alignment and levels shown in the drawing, shall be reset or removed, as directed. The length and number of stakes shall be such as to maintain the forms at the Correct line and grade. All forms shall be cleaned and oiled each time before they are used. Forms shall be set ahead of the actual placing of concrete for the entire day's work.

For laying PQC the operations of Fixed form paver shall be regulated by the instructions, guidelines and recommendations of the manufacturer of the paver. It shall also be guided by the successful implementation of processes described in the next section and the specifications in the tender document to be integrated in to an operational procedural planning prepare by contractor and dully approved by department. The contractor shall arrange a training programme before the regular operations of paver is started. The training will be conducted by the representative of the manufacturer of the paver or by an expert having a long experience of operating the paver for successful laying of PQC. The training will involve operators, supervisors, staff
of department. In addition to below points for Fix form paving contractor shall refer MORT&H specification Clause No. 602.8 and 602.9.6 shall be referred.

20. **Terminology & Processes with Fix Form Paving:**

Fix Form Paving: It is a process used to consolidate, form in to geometric shape and surface finish a PCC mass by pulling the form s continuously through and surrounding the plastic concrete mass.

20.1 **Steps in Fix Form Paving:**

a) Rough placement of PQC by placer / spreader
b) Final placement
c) Consolidation
d) Final finishing
e) Additional finishing (Texturing)
f) Curing

20.2 (i) Low slump PCC : PCC with low slump (0 to 75 mm) is low slump PCC which is able to hold its shape once the Fix form paver has passed. It has higher compression and flexural strength.

20.3 (i) Fix form paving production : Production of PQC required for Fix form paving can be at the rate of 20 to 100 m³ per hour for main line paving. For PQC surfaces up to 350mm thick the paving may be 25 to 90 m³ per hour for 5.50 m wide pavement. The rate of production will depend up on the capacity of Fix form paver, the width of pavement, the thickness of concrete and the capacity of concrete batching plant and transport arrangements.

(ii) Smooth riding surface : The Fix form paver shall produce a fairly smooth surface of concrete of the order of 0.9m/km or as directed by the design consultant. The surface should be without bumps and sudden change in profile.

(iii) Placer / spreader : The placer or spreader place a metered supply of PCC in front of Fix form paver using alternate from a series of conveyor belt, augur, plows, placers or dumpers and using a strike off device. It allows contractor to receive material from transport vehicles and place a uniform and adequate amount of PCC in front of the entire paver width while minimizing the segregation. They place a measured (as per requirement) supply of Concrete in front of paver, using different types of equipments and semi automatic and manual devises. The concrete received by transport arrangement shall be uniformly spread in front of paver without excessive buildup, such that the paver operation does not cause segregation.

(iv) Fix form paver : It usually performs screeding, consolidation and initial finishing. A typical paver operates at speeds between 1 to 2.5 m per minutes. Some pavers are equipped to place reinforcing steel (if needed), dowel bars and tie rods as well.

(a) The auger spreads the concrete in front of the strike off plate.
(b) The strike off plate shall be set such that after compaction the required thickness of pavement is obtained. Next the strike of plate (the screed) remove (by cutting /pushing) excess concrete to control the thickness of placement as per requirement.

(c) Then concrete is consolidated by a group of vibrators, followed by a tamping arrangement (if available) to push the protruding large size aggregate in to the concrete surface as well finally consolidating the concrete.

(d) Finally the profile pan level off slab at the right elevation and provide initial finish similar to a trowelling operation.

(v) Consolidation: Depending upon mix design (maximum size of aggregate & proportions) and slab thickness high frequency (usually 5000 to 9000 vibrations per minute) vibrators are set. The vibrators are positioned next to one another such that their zone of influence overlaps 50 – 75 mm at normal paver speed. The paver shall have adjustable vibrator spacing for different conditions and mix type. The consolidation shall be done such that the segregation is avoided. The range of frequency of vibration shall be decided by the manufacturer in consultation with department Engineer.

(vi) Initial Finishing : The initial finishing is accomplished by extruding PCC mass through a moving form made up of the –

(a) base course (bottom),
(b) the side forms (as side edges of paver), and
(c) the profile pan as top surface (flat paver piece mounted behind the vibrator).

Some Pavers are also equipped with a hydraulic tamper bar (called jitterbug) located just behind the vibrators. Hydraulic tamper bars for tamping which may be needed if concrete is not cohesive enough and has high proportion of large aggregates.

(vii) Additional finishing : This is done by floating operation. Micro texturing usually accomplished by dragging burlap or artificial turf behind the paver. Burlap / turf drag is not required if tinning is specified. Direction of drag shall be transverse unless specified otherwise. Where tinning is specified, it shall be performed with a suitable tool to achieve the specified roughness of the surface.

21. Other Equipment

Other tools and plants required to carry out pavement concrete work are as below.

21.1 All equipment necessary for the proper preparation of the subgrade, sub base and batching, mixing, placing, finishing and curing of the concrete pavement shall be on the project in good working conditions and shall have been inspected by the Engineer-in-Charge before the paving operations are permitted to start. Throughout the construction of the project, the construction agency shall maintain adequate equipment in first class working condition to ensure proper execution of the work.

21.2 Batchig Devices

All batching of materials should be by weight. Weighing equipment shall be of such design and construction that the materials for each batch can be quickly and accurately weighed. A weighing accuracy of a 1 percent may be considered satisfactory. The equipment shall conform to the requirement laid down in IS 2722-1964 ‘Specifications for portable swing weight Batchers for concrete (Single and Double bucket type)’. It shall be so constructed that the operator can readily shovel out the excess material in over charged hoppers and the material released all at one time when the hoppers are discharged.

Contractor No. of Corrections Executive Engineer
21.3 **Concrete Batch Mixer / Ready Mix Concrete Plant.**

21.3.1 Concrete mixer of adequate capacity shall be provided and it shall be of the non tilting type, conforming to the requirements of IS 1791 "Specification for Concrete Mixer and shall have a rated capacity of not less than **20 Cum per hour of mixed concrete**. The mixer shall be equipped with an approved water measuring device capable of accurate measurement of water required per batch, the mixer shall preferably be equipped with a mechanically operated pump for filling the mixer tank.

21.3.2 The mixer if specially specified, shall be equipped with an approved timing device which will automatically lock the discharge level during the full time to mixing and release it at the end of mixing period, the device shall also be equipped with a bell or adjusted to ring each time the lock is released.

If the timing device gets broken or out of order, the mixer will be permitted to be used while the same is being repaired, provided an approved time-piece equipped with minute and second hand, is provided and that each batch is mixed for one and half minutes.

21.3.3 All pavement quality concrete shall be produced in batch mixing plant of RMC. All the requirements of IS 4926 shall be complied in both cases, either of RMC supply or from contractors’ batch mixing plant. Requirements of IS 456 and IRC 15Clause 9.4.2 shall also be complied with. The Contractor shall install one or more batch mixing plants as may be required for the progress of work. Tilting drum mixer shall not be allowed in the plant. Mixing efficiency test shall be performed on the mixer. Samples from first 25% output of mixer, and last 25% output shall be compared for uniformity of mixing. For this test rest of details shall be as per IS 4634.

21.3.4 The details for concrete supplied by RMC or by contractor’s batch mixing plant such as mix proportions including standard deviation assumed, along with the results of trial mix, shall be submitted to department. The Contractor as a guarantor of quality of concrete, shall get the mix designed and inform the proportions to department and get the proportion approved. All the requirement of IS 5892 (Latest edition) shall be complied in case of concrete Transit mixers for RMC.

21.3.5 Transporting, placing, compaction, finishing and curing of concrete shall be accordance with I.S.456 and other relevant clauses and standards available. For all RMC concreting the concrete after discharge from batching plant will be loaded in Transit Mixers and kept continuously agitated while mix is in transit. High velocity discharge of concrete causing segregation of mix shall be avoided.

21.3.6 Following of documents from RMC manufacturers/Contractor shall be submitted

a) Design Mix

b) Manufacturer’s Test certificate for ingredients/ cement

c) Lab test certificate for all machinery, plant, ingredients.

d) Delivery docket sheet mentioning the grade of concrete, quality, slump, transit mixer vehicle no., placement, location, time of concrete production and placing etc.
ANNEXURE – VI

ii) The contractor at his shall have to make his own arrangement for bringing the water from outside.

ii) For R.C.C. items, the wording, finishing the formed surface with C.M. 1:3 of sufficient minimum thickness to give a smooth and even surface is meant only for repairing the honeycombed surfaces and it does not include plastering of the whole of the surface
NAME OF WORK:- CONSTRUCTION OF THIRD FLOOR IN ADMINISTRATIVE BUILDING AT WARDHA  
Schedule B

<table>
<thead>
<tr>
<th>ESTIMATED QUANTITY</th>
<th>Sr. No.</th>
<th>ITEM OF WORK</th>
<th>RATE</th>
<th>UNIT</th>
<th>AMOUNT</th>
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<tbody>
<tr>
<td>6.51 Cum</td>
<td>1</td>
<td>Dismantling the R.C.C. work 1:2:4 the materials such as steel etc. as directed and stacking them within the specified lead as directed.</td>
<td>1103.25</td>
<td>Rupees one thousand one hundred three and paise twenty-five only</td>
<td>One cubic metre</td>
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<td>0.98 Cum</td>
<td>2</td>
<td>Removing rich mix cement concrete including stacking the spoils as directed with all leads, lifts etc. complete.</td>
<td>926.50</td>
<td>Rupees nine hundred twenty-six and paise fifty only</td>
<td>One cubic metre</td>
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<td>15.68 Cum</td>
<td>3</td>
<td>Dismantling brick masonry in lime or cement mortar and stacking the materials as directed with all leads, lifts etc. complete.</td>
<td>223.85</td>
<td>Rupees two hundred twenty-three and paise eighty-five only</td>
<td>One cubic metre</td>
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<td>68.36 Sqm</td>
<td>4</td>
<td>Removing G.I. and A.C sheet roofing including purlins and rafters etc. including sorting out serviceable and unserviceable material and stacking the same as and where directed in the compound, including scaffolding etc. complete.</td>
<td>40.70</td>
<td>Rupees forty and paise seventy only</td>
<td>One Square Metre</td>
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<td>Contractor</td>
<td>No. of Corrections</td>
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<td>25.98</td>
<td>Cum 5</td>
<td>Providing and casting in situ cement concrete of required grade of trap / granite /quartzite/ gneiss metal for R.C.C. columns as per detailed design and drawings or as directed, including steel centering, plywood/steel formwork, compaction, finishing uneven and honeycombed surface with C.M. 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening the surface if special finish is to be provided and curing etc. complete. Including use of plastisizer wherever necessary as directed by Engineer (Excluding reinforcement, including cover block). The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed)</td>
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<td></td>
<td></td>
<td>Rupees seven thousand nine hundred eighty-nine and paise seventy-five only</td>
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<td>7989.75</td>
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<td>One cubic metre</td>
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<tr>
<td>27.66</td>
<td>Cum 6</td>
<td>Providing and casting in situ cement concrete of required grade of trap / granite /quartzite /gneiss metal for R.C.C. beams and lintels as per detailed design and drawings or as directed, including steel centering, plywood/steel formwork steel props, compaction, finishing uneven and honeycombed surface with C.M.1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete. Including use of plastisizer wherever necessary as directed by Engineer-In-charge (Excluding reinforcement, including cover block). The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed)</td>
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<td></td>
<td></td>
<td>Rupees eight thousand one hundred forty-five and paise forty only</td>
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<td>One cubic metre 225302.00</td>
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<td>8145.40</td>
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<td>One cubic metre</td>
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a) For C.C.M-20
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<tr>
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<td>4.32 Cum</td>
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<td>116</td>
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<tr>
<td>70.78 Cum</td>
<td>8</td>
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Providing and casting in situ cement concrete of required grade of trap / quartzite / granite/ gneiss metal for R.C.C. chajja as per detailed design and drawings including steel centering, plywood/steel formwork, steel props, compaction finishing uneven and honeycombed surface with C.M. 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement, including cover block) The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed)

- a) For C.C.M-20

| 8299.90  | Rs Eight Thousand Two Hundred Ninety Nine and Paise Ninety Only | One cubic metre | 35856.00 |
| 8352.10  | Rs Eight Thousand Three Hundred Fifty Two and Paise Ten Only   | One cubic metre | 591162.00 |

- a) For C.C.M-20
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<th>Remarks</th>
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<tr>
<td><strong>10.34</strong> Cum 9</td>
<td>Providing and casting in situ cement concrete of required grade of trap / quartzite /granite /gneiss metal for R.C.C. Waist slab, and steps of staircases as per detailed design and drawings or as directed including steel centering, plywood/ steel formwork, steel props, compaction, finishing uneven and honeycombed surface with C.M. 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement, including cover block) The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface only. (Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc.) (Wooden centering will not be allowed)</td>
<td><strong>9366.55</strong> Rs Nine Thousand Three Hundred Sixty Six and Paise Fifty Five Only</td>
<td>One cubic metre 96850.00</td>
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<td><strong>12.02</strong> M.T. 10</td>
<td>Providing and fixing in position reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams and columns, canopies, staircases, newels, chajjas, lintels, pardies, coping, fins, arches etc. as per detailed design and drawings and schedules including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required completed.</td>
<td><strong>65754.50</strong> Rs Sixty Five Thousand Seven Hundred Fifty Four and Paise Fifty Only</td>
<td>One Metric Tonne 790369.00</td>
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<td><strong>131.48</strong> Cum 11</td>
<td>Providing Fly ash lime Brick masonry ( Bricks conforming to I.S.12894 : 1990 and of size 19 cm x 9 cm x 9 cm)in cement mortar 1:6 in super structure including striking joints, racking out joints watering and scaffolding complete.</td>
<td><strong>4720.80</strong> Rs Four Thousand Seven Hundred Twenty and Paise Eighty Only</td>
<td>One cubic metre 620691.00</td>
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<td>22.55 Sqm</td>
<td>12</td>
<td>Providing Fly ash lime Brick masonry (Bricks conforming to I.S. 12894:1990 and of size 19 cm x 9 cm x 9 cm) bricks in cement mortar 1:4 in half brick thick wall including mild steel longitudinal reinforcement of 2 bars of 6 mm. diameter/2 hoop iron strips 25 mm x 1.6 mm placed at every third course, properly bent and bounded at ends scaffolding, racking out joints and watering complete</td>
<td>772.20</td>
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<tr>
<td>0.89 Cum</td>
<td>13</td>
<td>Providing and casting in situ cement concrete M-15 of trap/ granite/quartzite/gneiss metal for coping to plinth or parapet, moulded or chamfered as per drawing or as directed including steel centering, plywood/steel formwork compacting, roughening them if special finish is to be provided, finishing uneven and honeycombed surface and curing etc. complete. The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed.)</td>
<td>5007.40</td>
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<tr>
<td>16.00 Sqm</td>
<td>14</td>
<td>Providing and fixing in position after hoisting, precast 1:2 cement mortar reinforced jali 50 mm thick of approved design on both sides fixing in cement mortar 1:3 and curing complete. (with 3 mm diameter mild steel bar reinforcement)</td>
<td>550.95</td>
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<tr>
<td>678.38 Sqm</td>
<td>15</td>
<td>Providing internal cement plaster 6mm thick in a single coat in cement mortar 1:3 without neeru finish to concrete surface in all positions including scaffolding and curing. Providing groove at joint of B.B. Masonry and concrete members complete.</td>
<td>149.10</td>
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<tr>
<td>509.39 Sqm</td>
<td>16</td>
<td>Providing internal cement plaster 12 mm thick in a single coat to concrete or brick surface in all positions including scaffolding and curing complete. Providing groove at joint of B.B. Masonry and concrete members complete</td>
<td>176.60</td>
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A) Cement mortar 1:5
<table>
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<th>Description</th>
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<th>Amount</th>
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<tr>
<td>17</td>
<td>Providing internal cement plaster 20mm thick in a single coat to concrete, brick surfaces in all positions including scaffolding and curing. Providing groove at joint of B.B.Masonry and concrete members complete.</td>
<td>298.15</td>
<td>297724.00</td>
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<td>18</td>
<td>Providing sand faced plaster for external portion in cement mortar using Kharsalia / Kasaba or similar type of sand, in all positions including base coat of 15 mm. Thick in C.M. 1:4 using water proofing compound at 1 kg per cement bag, curing the same for not less than 3 days and keeping the surface of the base coat rough to receive the sand faced treatment 6 to 8 mm thick in C.M. 1:4 finishing the surface by taking out grains, making grooves and curing for fourteen days scaffolding etc. complete.</td>
<td>433.75</td>
<td>299999.00</td>
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<td>19</td>
<td>Providing and laying machine cut polished kota stone Flooring 20 mm to 25 mm thick plain pattern on a bed of C.M. 1:6 including cement float, filling joints with neat cement slurry, curing rubbing, polishing and cleaning complete.</td>
<td>1013.25</td>
<td>580815.00</td>
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<tr>
<td>20</td>
<td>Providing and fixing in required position skirting or dado of polished Kota stone slabs 20 mm to 25 mm thick and required width after making the wall portion to required level with C.M.1:4 and fixing tiles with ready made adhesive including cement float, filling joints with cement slurry, curing rubbing, polishing and cleaning complete.</td>
<td>1120.70</td>
<td>32310.00</td>
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<tr>
<td>21</td>
<td>Providing Mirror Polish to New/old Marble /Kota /granite stone flooring /dado by polishing machine using superior polishing stone of 0 to 6 no.of Suri Company and equivalent and applying superior quality of polishing material including necessary labour and cleaning the srface etc. complete.</td>
<td>186.35</td>
<td>112192.00</td>
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<td>Description</td>
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<td>22</td>
<td>23.51</td>
<td>Providing and Laying ceramic tiles of approved quality, required size and 5.5 mm thickness for flooring in required position laid on bed of C.M. 1:4 including cement float, filling joint with white/colour cement slurry, cleaning, curing, complete.</td>
<td>1246.10</td>
</tr>
<tr>
<td>23</td>
<td>65.21</td>
<td>Providing and fixing ceramic tiles of approved quality, required size and 5.5 mm thickness for dado and skirting in required position with ready made adhesive mortar of approved quality in required position after making the wall portion in level in plaster of C.M. 1:4 including joint filling with white/colour cement slurry, cleaning, curing, complete.</td>
<td>1293.65</td>
</tr>
<tr>
<td>24</td>
<td>16.09</td>
<td>Providing sills of polished Kota stone 20mm to 25mm thick, on a bed of cement mortar 1:4 including cement float, filling joints with slurry, curing, polishing, rounding edges, cleaning, complete.</td>
<td>1058.70</td>
</tr>
<tr>
<td>25</td>
<td>26.15</td>
<td>Providing and laying polished Kota Stone slabs 20mm to 25 mm thick for treads and risers of steps and staircases, with rounded nosing and groove at edge for the treads, on a bed of C.M. 1:4 including cement float filling joints with neat cement slurry, curing, polishing and cleaning, complete.</td>
<td>1243.85</td>
</tr>
</tbody>
</table>
| 26  | 42.25 | Providing and Laying vetrified tiles of double charged of approved make and quality of required size and thickness for flooring in required position laid on bed of C.M. 1:4 including cement float, filling joint with white/colour cement slurry, cleaning, curing, complete.  

i) 600 mm x 600 mm size  

A) for flooring | 1449.60 | Rs 1449.60 for One Square Metre | 61246.00       |
<table>
<thead>
<tr>
<th>No. of Corrections</th>
<th>Description</th>
<th>Rate</th>
<th>Amount</th>
<th>Rate</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.60</td>
<td>B) for dado and skirting</td>
<td>1499.70</td>
<td>Rs One Thousand Four Hundred Ninety Nine and Paise Seventy Only</td>
<td>One Square Metre</td>
<td>3899.00</td>
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<tr>
<td>20.64</td>
<td>Providing and fixing double leaf panelled door C.C.T.W. 60 mm x 100 mm frame with ventilator, shutters 32 to 35 mm thick as per detailed drawings consisting of C.C.T.W. vertical styles and top rail 100 mm x 35 mm and lock and bottom rail 200 mm x 35 mm including Iron oxidised fixtures and fastenings and T.W. beading at junctions of panels, inserted including three coats of oil painting complete. (Sample to be got approved from Ex.Engineer before use)</td>
<td>5365.15</td>
<td>Rs Five Thousand Three Hundred Sixty Five and Paise Fifteen Only</td>
<td>One Square Metre</td>
<td>110737.00</td>
</tr>
<tr>
<td></td>
<td>a) Panels of 12 mm thick 3 layered flat pressed teak wood particle board bonded with BWP type exterior grade phenol formaldehyde synthetic resin with commercial veneers on both sides (conforming to I.S. 3097-1980) Novateak or equivalent</td>
<td>4582.15</td>
<td>Rs Four Thousand Five Hundred Eighty Two and Paise Fifteen Only</td>
<td>One Square Metre</td>
<td>84724.00</td>
</tr>
<tr>
<td>18.49</td>
<td>Providing and fixing single leaf panelled door C.C.T.W. 60 mm x 100 mm frame with ventilator, shutters 32 to 35 mm thick as per detailed drawings consisting of C.C.T.W. vertical styles and top rail 100 mm x 35 mm and lock and bottom rail 200 mm x 35 mm including Iron oxidized fixtures and fastenings and T.W. beading at junctions of panels inserted including three coats of oil painting complete. (Sample to be got approved from Ex.Engineer before use)</td>
<td>4582.15</td>
<td>Rs Four Thousand Five Hundred Eighty Two and Paise Fifteen Only</td>
<td>One Square Metre</td>
<td>84724.00</td>
</tr>
<tr>
<td></td>
<td>Panels of 12 mm thick 3 layered flat pressed teak wood particle board bonded with BWP type exterior grade phenol formaldehyde synthetic resin with commercial veneers on both sides (conforming to I.S. 3097-1980) Novateak or equivalent</td>
<td>4582.15</td>
<td>Rs Four Thousand Five Hundred Eighty Two and Paise Fifteen Only</td>
<td>One Square Metre</td>
<td>84724.00</td>
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<tr>
<td>No.</td>
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<td>Cost</td>
<td>Currency</td>
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<tr>
<td>29</td>
<td>5.19</td>
<td></td>
<td>Providing and fixing M.S. grill doors weighing 22 to 24 kg per sq. meter of required size as per detailed drawing without hot dip coating with iron oxidised fixture and fastening and painting with 3 coats oil paints etc. complete. (Sample to be got approved from Ex. Engineer before use)</td>
<td>1816.60</td>
<td>Rs One Thousand Eight Hundred Sixteen and Paise Sixty Only</td>
</tr>
<tr>
<td>30</td>
<td>64.95</td>
<td></td>
<td>Providing and fixing steel windows of various sizes as per detailed drawings without hot dip zinc coating without/with ventilator including fabrication, glazing with non-acetinic/plain/obscured glass panels of approved type and quality, all fixtures and fastening without teak wood boxing, and architraves and finishing with one coat of primer complete. (Sample to be got approved from Ex. Engineer before use)</td>
<td>2472.10</td>
<td>Rs Two Thousand Four Hundred Seventy Two and Paise Ten Only</td>
</tr>
<tr>
<td>31</td>
<td>27.36</td>
<td>31</td>
<td>Providing and fixing steel ventilator fully glazed partly top hung and partly fixed as per detailed drawing without hot dip zinc coating including fabrication glazing with plain obscured glass panes of approved type and quality and fastening without teak wood boxing and architecture and oil painting two coats etc. complete. (Sample to be got approved from Ex.Engineer before use)</td>
<td>2618.85</td>
<td>Rs Two Thousand Six Hundred Eighteen and Paise Eighty Five Only</td>
</tr>
<tr>
<td>32</td>
<td>5.94</td>
<td></td>
<td>Providing and fixing steel Louvered windows / ventilators of various sizes as per detailed drawing without hot dip zinc coating including fabrication with approved type and quality all fixtures and fastening without teak wood boxing and architraves including finishing with one coat of primer and two coats of oil painting complete. (Sample to be got approved from Ex.Engineer before use)</td>
<td>3074.05</td>
<td>Rs Three Thousand Seventy Four and Paise Five Only</td>
</tr>
<tr>
<td>No. of Corrections</td>
<td>Contractor</td>
<td>Number of Sqm</td>
<td>B) Two coats</td>
<td></td>
<td></td>
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<td>-------------------</td>
<td>------------</td>
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<tr>
<td>33</td>
<td></td>
<td>2186.35</td>
<td>Providing and applying washable Acrylic emulsion paint of approved colour and shade to surface in two coats including scaffolding, preparing the surface to receive paint etc. complete. AND Providing and applying putty to old/new plastered surfaces in two coats to receive approved paint in all positions including all materials, labour, scaffolding and curing etc. complete.</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>191.75 Rs One Hundred Ninety One and Forty Seventy Five Only</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>One Square Metre 419233.00</td>
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</tr>
<tr>
<td></td>
<td></td>
<td>691.64</td>
<td>Providing and applying exterior emulsion water based water proof cement paint of approved colour and shade to exterior old/new surface in two coats including scaffolding preparing the surface to receive paint etc. complete</td>
<td></td>
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</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>125.30 Rs One Hundred Twenty Five and Forty Thirty Only</td>
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<td></td>
<td></td>
<td></td>
<td>One Square Metre 86662.00</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>20.88</td>
<td>Providing &amp; Fixing stainless steel railing with top and vertical pipe of 50mm dia at 0.90 m c/c or as required and horizontal pipes of 25mm dia in two rows, all pipes of 2 mm thick including buffing, fabricating fixtures and fastening including pipe base of appropriate diameter and ball base of 75 mm dia above one major post etc. complete (Prior approval of sample and brand by Ex. Engineer is necessary before use)</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>2370.35 Rs Two Thousand Three Hundred Seventy and Forty Thirty Five Only</td>
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<td></td>
<td></td>
<td></td>
<td>One Square Metre 49493.00</td>
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<td></td>
<td></td>
<td>36</td>
<td>Providing and laying medium grade (type) galvanised iron pipe having embossed ISI Mark on it, of required diameter with screwed, sockets, joints, necessary galvanised iron fittings such as sockets, back nuts, elbows, bends, tees, reducers, enlargers, plugs, clamps etc. including necessary excavation, back filling, fixing with clamps, testing etc. complete. (Prior approval of sample and brand by Ex. Engineer is necessary before use.)</td>
<td></td>
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</table>

B) On Walls/ceiling / floors
<table>
<thead>
<tr>
<th>Contractor</th>
<th>No. of Corrections</th>
<th>Executive Engineer</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>60.00 Rmt</td>
<td>(i) 15 mm dia.</td>
<td>297.75</td>
<td>Rs Two Hundred Ninety Seven and Paise Seventy Five Only</td>
</tr>
<tr>
<td>30.00 Rmt</td>
<td>(ii) 20 mm dia.</td>
<td>327.75</td>
<td>Rs Three Hundred Twenty Seven and Paise Seventy Five Only</td>
</tr>
<tr>
<td>20.00 Rmt</td>
<td>(iii) 25 mm dia.</td>
<td>403.80</td>
<td>Rs Four Hundred Thirty and Paise Eighty Only</td>
</tr>
<tr>
<td>30.00 Rmt</td>
<td>(iv) 32 mm dia.</td>
<td>450.95</td>
<td>Rs Four Hundred Fifty and Paise Ninety Five Only</td>
</tr>
<tr>
<td>15.00 Rmt</td>
<td>(v) 40 mm dia.</td>
<td>575.20</td>
<td>Rs Five Hundred Seventy Five and Paise Twenty Only</td>
</tr>
<tr>
<td>5.00 No</td>
<td>37 Providing and fixing screw down bib/stop tap of brass in required dia including necessary sockets, union nut, testing etc. complete. (Prior approval of sample and brand by Ex.Engineer is necessary before use.)</td>
<td>305.25</td>
<td>Rs Three Hundred Fifty and Paise Twenty Only</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>A) 15 mm dia.</td>
</tr>
<tr>
<td></td>
<td>38 Providing and fixing screw down required dia. wheeled stop tap of brass including necessary sockets, union nut, testing etc. complete. (Prior approval of sample and brand by Ex.Engineer is necessary before use.) CSR No. 7 / 109</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.00 No</td>
<td>a) 15 mm dia</td>
<td>417.75</td>
<td>Rs Four Hundred Seventeen and Paise Seventy Five Only</td>
</tr>
<tr>
<td>No</td>
<td>Contractor</td>
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</tr>
<tr>
<td>3.00</td>
<td>No</td>
<td>b) 20 mm dia</td>
<td>519.50</td>
</tr>
<tr>
<td>3.00</td>
<td>No</td>
<td>c) 25 mm dia</td>
<td>631.00</td>
</tr>
<tr>
<td>3.00</td>
<td>No</td>
<td>d) 32 mm dia</td>
<td>650.10</td>
</tr>
<tr>
<td>3.00</td>
<td>No</td>
<td>e) 40 mm dia</td>
<td>663.20</td>
</tr>
<tr>
<td>3.00</td>
<td>No</td>
<td>39 Providing and fixing fittings and accessories such as ball cock, over flow pipe with mosquito proof coupling, scour pipe with plug, manhole with cover and locking arrangement, connecting pipes and embedding intake and outflow pipes into the R.C.C. water reservoir</td>
<td>2403.55</td>
</tr>
<tr>
<td>3.00</td>
<td>No</td>
<td>40 Providing and fixing 1st class earthenware &quot;Orissa type&quot; W.C.Pan 600 x 400 mm size of required colour including 'P'or 'S'trap UPVC soil and vent pipe upto the outside face of the wall, 1:5:10 cement concrete bedding, , inlet pipe with stop tap, bracket for fixing the cistern, 32 mm dia. UPVC flush pipe with fitting and clamps, 20 mm dia. UPVC over flow pipe with mosquito proof coupling, chain and pulley, painting of the exposed pipe and cutting and making good walls and floor, testing etc. complete.(Prior approval of sample and brand by Ex.Engineer is necessary before use.)</td>
<td>5082.35</td>
</tr>
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</table>

A) White glazed

(i) With 10 litre fibre high level flushing cistern with fittings
<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Quantity</th>
<th>Unit Price</th>
<th>Total Price</th>
</tr>
</thead>
<tbody>
<tr>
<td>41</td>
<td>a) Providing and fixing European type earthenware W.C.PAN of required colour with UPVC seat and lid with chromium plated brass hinges and rubber buffers including UPVC and vent pipe up to the outside face of wall, 10 litre enamelled low level flushing cistern with fittings, pipe and stop tap brackets for fixing cistern 32 mm dia. UPVC flush pipe with fittings and clamps, 20 mm dia. UPVC overflow pipe, mosquito proof couplings, G.I. chain and pulley, cutting and making good to the walls and floors, testing etc. complete. (Prior approval of sample and brand by Ex.Engineer is necessary before use.) A) White glazed (i) With 10 litre enamelled low level flushing cistern with fittings</td>
<td>1</td>
<td>4679.65</td>
<td>Rs Four Thousand Six Hundred Seventy Nine and Paise Sixty Five Only</td>
</tr>
<tr>
<td>42</td>
<td>Providing and fixing white glazed earthenware semi stall type urinals without cistern, with inlet pipes, stop tap, UPVC flush pipe with fittings and flushing arrangement including UPVC soil pipe, UPVC trap and soil pipe connection up to outside face of wall, making good the damaged surface, testing etc. complete. (Prior approval of sample and brand by Ex.Engineer is necessary before use.)</td>
<td>1</td>
<td>3001.20</td>
<td>Rs Three Thousand One and Paise Twenty Only</td>
</tr>
<tr>
<td>43</td>
<td>Providing and fixing white glazed earthenware urinal squatting type without cistern with fitting, inlet pipes, stop tap, 32 mm dia. UPVC flush pipe with fittings and spreader arrangement including UPVC soil pipe, UPVC trap, soil pipe connection up to the outside face of the wall, making good the damaged surface, testing etc. complete. (Prior approval of sample and brand by Ex.Engineer is necessary before use.)</td>
<td>1</td>
<td>3035.50</td>
<td>Rs Three Thousand Thirty Five and Paise Fifty Only</td>
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<tr>
<td>Contractor</td>
<td>No. of Corrections</td>
<td>Executive Engineer</td>
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<tr>
<td>3.00</td>
<td>No</td>
<td>44</td>
<td></td>
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<tr>
<td>6.00</td>
<td>No</td>
<td>45</td>
<td></td>
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<td>46</td>
<td></td>
<td>46</td>
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<tr>
<td>50.00</td>
<td>Rmt</td>
<td>(a) 75 mm dia. Pipe</td>
<td>359.90</td>
<td>Rs Three Hundred Fifty Nine and Paise Ninety Only</td>
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<tr>
<td>100.00</td>
<td>Rmt</td>
<td>(b) 110 mm dia. Pipe</td>
<td>464.85</td>
<td>Rs Four Hundred Sixty Four and Paise Eighty Five Only</td>
</tr>
</tbody>
</table>

### Description

**Providing and fixing white glazed earthenware Wash Hand Basin of 55 cm x 40 cm size including cold water piller tap, brackets, rubber plugs and brass chain, stop tap, chromium plated bottle trap and necessary pipe connections including UPVC waste pipe and trap upto the outside face of the wall, making good the damaged surface, testing etc. complete. (Prior approval of sample and brand by Ex. Engineer is necessary before use.)**

**Cost:** Rs Two Thousand Six Hundred Forty Eight and Paise Eighty Five Only

**Quantity:** One Number

**Amount:** 7947.00

---

**Providing and fixing C.I. Nahani Trap (long arm) of required size including symet grating, bend, connecting piece of C.I. pipe upto the outside face of the wall, making good the damaged surface, testing etc. complete. (Prior approval of sample and brand by Ex. Engineer is necessary before use.)

**Cost:** Rs One Thousand One Hundred Three and Paise Twenty Five Only

**Quantity:** One Number

**Amount:** 6620.00

---

**Providing and fixing UPVC SOIL / VENT / WASTE SWR pipe of required diameter conforming to I.S.-13592, and I.S.-4985 to withstand continous internal hydraulic pressure of 4 kg/cm2 including necessary fixtures and fittings, such as bends, tees, single junctions, double junctions and joining with rubber rings and lubricants, on wall by means of clips or in ground including necessary excavation, laying refilling, trench testing etc. complete. (Prior approval of sample and brand by Ex. Engineer is necessary before use.)

**Cost:** Rs Three Hundred Fifty Nine and Paise Ninety Only

**Quantity:** One Running Metre

**Amount:** 17995.00

---

**Providing and fixing UPVC SOIL / VENT / WASTE SWR pipe of required diameter conforming to I.S.-13592, and I.S.-4985 to withstand continous internal hydraulic pressure of 4 kg/cm2 including necessary fixtures and fittings, such as bends, tees, single junctions, double junctions and joining with rubber rings and lubricants, on wall by means of clips or in ground including necessary excavation, laying refilling, trench testing etc. complete. (Prior approval of sample and brand by Ex. Engineer is necessary before use.)

**Cost:** Rs Four Hundred Sixty Four and Paise Eighty Five Only

**Quantity:** One Running Metre

**Amount:** 46485.00
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<tr>
<td></td>
<td>50.00 Rmt</td>
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<tr>
<td>47</td>
<td>Providing and fixing in position unplasticized polyvenyl-chloride (UPVC) ultra violet rays stabilised 110 mm outer diameter rain water SWR pipe conforming to I.S. 4985 and I.S.13592, including necessary fittings, such as PVC grating, bends, with door, PVC clamps, horse shoes at bottom, rubber ring and making connections water tight with solvent, cement including making holes in masonry concrete redoing the same in C.M. 1:3, curing, testing etc. complete. (Prior approval of sample and brand by Ex.Engineer is necessary before use.)</td>
<td>328.85 Rs Three Hundred Twenty Eight and Paise Eighty Five Only</td>
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<tr>
<td>501.30</td>
<td>Rs Five Hundred One and Paise Thirty Only</td>
<td></td>
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<tr>
<td>7.50</td>
<td>Rs Seven and Paise Fifty Only</td>
<td></td>
</tr>
<tr>
<td>16443.00</td>
<td>One Running Metre</td>
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<td></td>
<td>3.00 No</td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>Providing and fixing 450 mm x 550 mm size superior type mirror with 16 mm dia. Nickel plated towel rod etc. complete. (Prior approval of sample and brand by Ex.Engineer is necessary before use.)</td>
<td>501.30 Rs Five Hundred One and Paise Thirty Only</td>
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<tr>
<td>1504.00</td>
<td>One Number</td>
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<th>Executive Engineer</th>
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<tr>
<td></td>
<td>3000.00 Lit</td>
<td></td>
</tr>
<tr>
<td>49</td>
<td>Providing, hoisting and fixing in position of approved make high density polyethylene UV stabilized conforming to I.S.12701, water storage tank with necessary connections, testing etc. complete. (Prior approval of sample by Ex. Engineer is necessary before use.)</td>
<td>7.50 Rs Seven and Paise Fifty Only</td>
</tr>
<tr>
<td>22500.00</td>
<td>One Liter</td>
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<td></td>
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<td>128</td>
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<table>
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<th>No. of Corrections</th>
<th>Executive Engineer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>128</td>
</tr>
</tbody>
</table>
Providing water proofing treatment to newly laid fully cured concrete slab of terraces by applying first coat of polymer modified semi-viscous paste prepared by mixing polymer of approved make (such as Master Seal 550 / brush bond / RoffSupercrete /Webercrete /Monobond / Permashield / Hypercrete / Master Crete M 81) and Cement in 1:2 proportion (1 litre polymer : 2 Kg Cement) or Rohnex water proofing system in two coats (1kg powder, 700 ml water and polymer jelly for first coat & 1 kg powder, 500 ml water & polymer jelly for second coat) to a neatly cleaned and dust free concrete surface and upto 300 mm over parapet wall prepared by removing loose and deposited material with brush and water, laying glass fibre mesh of 10 x 10 specification of approved make over tacky surface of first coat of polymer followed by second coat in transverse direction, laying mechanical protective cover to polymer coating treatment with brick bat coba with burnt broken brick bats laid in C.M. 1:5 admixed with approved water proofing compound filling up to half depth of brick bats, curing this layer for 3 days, applying cement slurry over this layer, joints of Brick Bats with C.M. 1:3 admixed with approved water proofing compound and finally top finishing with average 20mm thick layer of same mortar added with polypropylene fibers at 125 gm per bag of cement including finishing the surface smooth with neat cement slurry admixed with approved water proofing compound, Marking finished surface by false squares of 300 mm x 300 mm, Making the junctions at the parapet rounded and tapered top for required height, with drip mould at the junction of plaster and parapet and curing and covering 10 years Guarantee against leakproofness on court fee stamp paper Rs. 100/- including ponding test etc. complete
<table>
<thead>
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<th>No. of Corrections</th>
<th>Executive Engineer</th>
</tr>
</thead>
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<td>0.26 M.T.</td>
<td>51</td>
<td></td>
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<tr>
<td>80033.35 Rs Eighty Thousand Thirty Three and Paise Thirty Five Only</td>
<td>One Metric Tonne</td>
<td>20809.00</td>
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<tr>
<td>(a) For 3 Km.</td>
<td></td>
<td></td>
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<tr>
<td>(a) Lead statement attached</td>
<td></td>
<td></td>
</tr>
<tr>
<td>76.13 Sqm</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>1436.35 Rs One Thousand Four Hundred Thirty Six and Paise Thirty Five Only</td>
<td>One Square Metre</td>
<td>109349.00</td>
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<td>23.18 Cum</td>
<td>53</td>
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<tr>
<td>164.10 Rs One Hundred Sixty Four and Paise Ten Only</td>
<td>One cubic metre</td>
<td>3804.00</td>
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<td>16.04 Sqm</td>
<td>54</td>
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<tr>
<td>3376.10 Rs Three Thousand Three Hundred Seventy Six and Paise Ten Only</td>
<td>One Square Metre</td>
<td>54153.00</td>
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<td>a) powder coated</td>
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<tr>
<td>No.</td>
<td>Sqm</td>
<td>No. of Corrections</td>
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<td>1</td>
<td>9.15</td>
<td>55</td>
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<tr>
<td>2</td>
<td>23.04</td>
<td>56</td>
</tr>
</tbody>
</table>

A) Three Track Sliding Windows

A - Civil cost Rs. 650941.00

Rupees sixty-five lakhs nine hundred forty-one and paise nil only

Sub Divisional Engineer
Public Works Sub Division No.1
Wardha

Executive Engineer
Public Works Division
Wardha

Contractor No. of Corrections Executive Engineer 131
## NAME OF WORK:- CONSTRUCTION OF THIRD FLOOR IN ADMINISTRATIVE BUILDING AT WARDHA

### SCHEDULE “C”

<table>
<thead>
<tr>
<th>Sr.No.</th>
<th>ITEM OF WORK</th>
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<th>Additional Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Dismantling the R.C.C. work 1:2:4 and sorting out the materials such as steel etc. as directed and stacking them within the specified lead as directed.</td>
<td>Spec.No.: As directed by Engineer-in-charge.</td>
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<td></td>
<td>CSR No. 8 / 131</td>
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<tr>
<td>2</td>
<td>Removing rich mix cement concrete including stacking the spoils as directed with all leads, lifts etc. complete.</td>
<td>Spec.No.: As directed by Engineer-in-charge.</td>
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<td>CSR No. 34 / 135</td>
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<td>3</td>
<td>Dismantling brick masonry in lime or cement mortar and stacking the materials as directed with all leads, lifts etc. complete.</td>
<td>Spec.No.: As directed by Engineer-in-charge.</td>
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<td>CSR No. 29 / 134</td>
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<td>4</td>
<td>Removing G.I. and A.C sheet roofing including purlins and rafters etc. including sorting out serviceable and unserviceable material and stacking the same as and where directed in the compound, including scaffolding etc. complete.</td>
<td>Spec.No.: As directed by Engineer-in-charge.</td>
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<td>CSR No. 6 / 130</td>
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<td>5</td>
<td>Providing and casting in situ cement concrete of required grade of trap / granite /quartzite/gneiss metal for R.C.C. columns as per detailed design and drawings or as directed, including steel centering, plywood/steel formwork, compaction, finishing uneven and honeycombed surface with C.M. 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening the surface if special finish is to be provided and curing etc. complete. Including use of plastisizer wherever necessary as directed by Engineer (Excluding reinforcement, including cover block). The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed)</td>
<td>spec.No.: Bd.F.5/Page No. 300/I.S. 456(2000)</td>
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<td>a) For C.C.M-20</td>
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<td>CSR No. 3 / 11</td>
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<td>6</td>
<td>Providing and casting in situ cement concrete of required grade of trap / granite /quartzite/gneiss metal for R.C.C. beams and lintels as per detailed design and drawings or as directed, including steel centering, plywood/steel formwork steel props, compaction, finishing uneven and honeycombed surface with C.M.1:3 of sufficient minimum thickness to give a smooth and even surface or roughening if special finish is to be provided and curing etc. complete. Including use of plastisizer wherever necessary as directed by Engineer-In-charge (Excluding reinforcement, including cover block). The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed)</td>
<td>Spec.No.: Bd.F.6/Page No.300/I.S. 456 (2000)</td>
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<td>a) For C.C.M-20</td>
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<td>CSR No. 5 / 12</td>
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<tr>
<td>7</td>
<td>Providing and casting in situ cement concrete of required grade of trap / quartzite / granite / gneiss metal for R.C.C. chajja as per detailed design and drawings including steel centering, plywood/steel formwork, steel props, compaction finishing uneven and honeycombed surface with C.M. 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening the surface if special finish is to be provided and curing etc. complete. (Excluding reinforcement, including cover block) The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed) Spec.No.: Bd.F.9/Page No.303/I.S. 456 (2000)</td>
<td>Spec.No.: Bd.F.9/Page No.303/I.S. 456 (2000)</td>
<td>a) For C.C.M-20 CSR No. 6 / 12</td>
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<tr>
<td>8</td>
<td>Providing and casting in situ cement concrete of required grade of trap / granite / quartzite / gneiss metal for R.C.C slabs and landings as per detailed design and drawings including steel centering, plywood/steel formwork, steel props, compaction, finishing uneven and honeycombed surface with C.M. 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening the surface if special finish is to be and painting to exposed surface and curing etc. complete (Excluding reinforcement, including cover block) The Cement Mortar 1:3 plaster is considered for rendering uneven and honey combed surface only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed) Spec.No.: Bd.F.8/Page No.302/I.S. 456 (2000)</td>
<td>Spec.No.: Bd.F.8/Page No.302/I.S. 456 (2000)</td>
<td>a) For C.C.M-20 CSR No. 11 / 15</td>
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<td>9</td>
<td>Providing and casting in situ cement concrete of required grade of trap / quartzite /granite /gneiss metal for R.C.C. Waist slab, and steps of staircases as per detailed design and drawings or as directed including steel centering, plywood/ steel formwork, steel props, compaction, finishing uneven and honeycombed surface with C.M. 1:3 of sufficient minimum thickness to give a smooth and even surface or roughening the surface if special finish is to be provided and curing etc. complete. (Excluding enforcement, including cover block) The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface only. (Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc.) (Wooden centering will not be allowed)</td>
<td>Spec.No.: Bd.F.13/Page No.305/I.S. 456 (2000)</td>
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<td>CSR No. 13 / 16</td>
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<td>10</td>
<td>Providing and fixing in position reinforcement of various diameters for R.C.C. pile caps, footings, foundations, slabs, beams and columns, canopies, staircases, newels, chajjas, lintels, paradies, coping, fins, arches etc. as per detailed design and drawings and schedules including cutting, bending, hooking the bars, binding with wires or tack welding and supporting as required completed.</td>
<td>Spec.No.: Bd.F.17/Page No.306</td>
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<td>a) Mild steel</td>
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<td>CSR No. 20 / 18</td>
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<td>11</td>
<td>Providing Fly ash lime Brick masonry (Bricks conforming to I.S.12894 : 1990 and of size 19 cm x 9 cm x 9 cm) in cement mortar 1:6 in super structure including striking joints, racking out joints watering and scaffolding complete.</td>
<td>Spec.No.: Bd.G.5/Page No.315</td>
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<td>CSR No. 3 / 20</td>
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<td>12</td>
<td>Providing Fly ash lime Brick masonry (Bricks conforming to I.S. 12894:1990 and of size 19 cm x 9 cm x 9 cm) bricks in cement mortar 1:4 in half brick thick wall including mild steel longitudinal reinforcement of 2 bars of 6 mm. diameter/2 hoop iron strips 25 mm x 1.6 mm placed at every third course, properly bent and bounded at ends scaffolding, racking out joints and watering complete</td>
<td>Spec.No.: Bd.G.7/Page No.316</td>
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<td>13</td>
<td>Providing and casting in situ cement concrete M-15 of trap/granite/quartzite/gneiss metal for coping to plinth or parapet, moulded or chamfered as per drawing or as directed including steel centering, plywood/steel formwork compacting, roughening them if special finish is to be provided, finishing uneven and honeycombed surface and curing etc. complete. The Cement Mortar 1:3 plaster is considered for rendering uneven and honeycombed surface only. Newly laid concrete shall be covered by gunny bag, plastic, tarpaulin etc. (Wooden centering will not be allowed.)</td>
<td>Spec. No.: Bd.E. 3/Page No. 288/I.S. 456 (2000)</td>
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<td>14</td>
<td>Providing and fixing in position after hoisting, precast 1:2 cement mortar reinforced jali 50 mm thick of approved design on both sides fixing in cement mortar 1:3 and curing complete. (with 3 mm diameter mild steel bar reinforcement)</td>
<td>Spec.No.: Bd.F.20 / Page No.307</td>
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<td>15</td>
<td>Providing internal cement plaster 6mm thick in a single coat in cement mortar 1:3 without nereu finish to concrete surface in all positions including scaffolding and curing. Providing groove at joint of B.B. Masonry and concrete members complete.</td>
<td>Spec.No.: Bd.L.1/Page No.367</td>
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<td>CSR No. 1 / 36</td>
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<td>16</td>
<td>Providing internal cement plaster 12 mm thick in a single coat to concrete or brick surface in all positions including scaffolding and curing complete. Providing groove at joint of B.B. Masonry and concrete members complete</td>
<td>Spec.No.: Bd.L.2/Page No.368</td>
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<td>A) Cement mortar 1:5</td>
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<td>CSR No. 2 / 36</td>
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<td>17</td>
<td>Providing internal cement plaster 20 mm thick in a single coat to concrete, brick surfaces in all positions including scaffolding and curing. Providing groove at joint of B.B. Masonry and concrete members complete</td>
<td>Spec.No.: Bd.L.4/Page No.368</td>
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<td></td>
<td>A) Cement mortar 1:5</td>
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<td>CSR No. 4 / 36</td>
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<td>18</td>
<td>Providing sand faced plaster for external portion in cement mortar using Kharsalia / Kasaba or similar type of sand, in all positions including base coat of 15 mm. Thick in C.M. 1:4 using water proofing compound at 1 kg per cement bag, curing the same for not less than 3 days and keeping the surface of the base coat rough to receive the sand faced treatment 6 to 8 mm thick in C.M. 1:4 finishing the surface by taking out grains, making grooves and curing for fourteen days scaffolding etc. complete.</td>
<td>Spec.No.: Bd.L.7/Page No.369</td>
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<td>CSR No. 6 / 37</td>
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<td>19</td>
<td>Providing and laying machine cut polished kota stone Flooring 20 mm to 25 mm thick plain pattern on a bed of C.M. 1:6 including cement float, filling joints with neat cement slurry, curing rubbing, polishing and cleaning complete</td>
<td>Spec.No.: Bd.M.3/Page No.380</td>
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<td>CSR No. 1 / 42</td>
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<td>20</td>
<td>Providing and fixing in required position skirting or dado of polished Kota stone slabs 20 mm to 25 mm thick and required width after making the wall portion to required level with C.M.1:4 and fixing tiles with ready made adhesive including cement float, filling joints with cement slurry, curing rubbing, polishing and cleaning complete.</td>
<td>Spec.No.: Bd.M.5/Page No.381</td>
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<td>CSR No. 3 / 42</td>
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<tr>
<td>21</td>
<td>Providing Mirror Polish to New/old Marble /Kota / granite stone flooring /dado by polishing machine using superior polishing stone of 0 to 6 no.of Suri Company and equivalent and applying superior quality of polishing material including necessary labour and cleaning the surface etc. complete.</td>
<td>Spec.No.: As directed by Engineer- in-charge.</td>
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<td>CSR No. 34 / 50</td>
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<td>22</td>
<td>Providing and Laying ceramic tiles of approved quality , required size and 5.5.mm thickness for flooring in required position laid on bed of C.M.1:4 including cement float, filling joint with white / colour cement slurry, cleaning, curing, complete.</td>
<td>Spec.No.: As directed by Engineer- in-charge.</td>
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<td>CSR No. 12 / 44</td>
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<td>23</td>
<td>Providing and fixing ceramic tiles of approved quality, required size and 5.5 mm thickness for dado and skirting in required position with ready made adhesive mortar of approved quality in required position after making the wall portion in level in plaster of C.M. 1:4 including joint filling with white/colour cement slurry cleaning curing complete.</td>
<td>Spec.No.: As directed by Engineer- in-charge.</td>
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<td>CSR No. 14 / 45</td>
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<td>24</td>
<td>Providing sills of polished Kota stone 20 mm to 25 mm thick, on a bed of cement mortar 1:4 including cement float, filling joints with slurry, curing, polishing, rounding edges, cleaning complete.</td>
<td>Spec.No.: Bd.M.29/Page No.391</td>
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<td>CSR No. 25 / 48</td>
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<td>25</td>
<td>Providing and laying polished Kota Stone slabs 20 mm to 25 mm thick for treads and risers of steps and staircases, with rounded nosing and groove at edge for the treads, on a bed of C.M. 1:4 including cement float filling joints with neat cement slurry, curing, polishing and cleaning complete.</td>
<td>Spec.No.: Bd.M.22/Page No.390</td>
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<td>CSR No. 21 / 47</td>
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<tr>
<td>26</td>
<td>Providing and Laying vitrified tiles of double charged of approved make and quality of required size and thickness for flooring in required position laid on bed of C.M.1:4 including cement float, filling joint with white / colour cement slurry, cleaning, curing, complete.</td>
<td>Spec.No.: As directed by Engineer- in-charge.</td>
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<td>CSR No. 35/51</td>
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<td></td>
<td>i) 600 mm x 600 mm. size</td>
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<td>A) for flooring</td>
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<td>B) for dado and skirting</td>
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<td>27</td>
<td>Providing and fixing double leaf panelled door C.C.T.W. 60 mm x 100 mm frame with ventilator, shutters 32 to 35 mm thick as per detailed drawings consisting of C.C.T.W. vertical styles and top rail 100 mm x 35 mm and lock and bottom rail 200 mm x 35 mm including Iron oxidised fixtures and fastenings and T.W. beading at junctions of panels, inserted including three coats of oil painting complete. (Sample to be got approved from Ex.Engineer before use)</td>
<td>Spec.No.: As directed by Engineer-in-charge.</td>
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<td></td>
<td>a) Panels of 12 mm thick 3 layered flat pressed teak wood particle board bonded with BWP type exterior grade phenol formaldehyde synthetic resin with commercial veneers on both sides (conforming to I.S. 3097-1980) Novateak or equivalent</td>
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<td>CSR No. 6 / 81</td>
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<td>28</td>
<td>Providing and fixing single leaf panelled door C.C.T.W. 60 mm x 100 mm frame with ventilator, shutters 32 to 35 mm thick as per detailed drawings consisting of C.C.T.W. vertical styles and top rail 100 mm x 35 mm and lock and bottom rail 200 mm x 35 mm including Iron oxidized fixtures and fastenings and T.W. beading at junctions of panels inserted including three coats of oil painting complete. (Sample to be got approved from Ex.Engineer before use)</td>
<td>Spec.No.: As directed by Engineer-in-charge.</td>
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<td></td>
<td>Panels of 12 mm thick 3 layered flat pressed teak wood particle board bonded with BWP type exterior grade phenol formaldehyde synthetic resin with commercial veneers on both sides (conforming to I.S. 3097-1980) Novateak or equivalent</td>
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<td>CSR No. 7 / 82</td>
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<td>29</td>
<td>Providing and fixing M.S. grill doors weighing 22 to 24 kg per sq. meter of required size as per detailed drawing without hot dip coating with iron oxidised fixture and fastening and painting with 3 coats oil paints etc. complete. (Sample to be got approved from Ex. Engineer before use)</td>
<td>Spec.No.: As directed by Engineer- in-charge.</td>
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<td>CSR No. 16 / 84</td>
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<td>30</td>
<td>Providing and fixing steel windows of various sizes as per detailed drawings without hot dip zinc coating without/with ventilator including fabrication, glazing with non-acetinic/plain/obscured glass panels of approved type and quality, all fixtures and fastening without teak wood boxing, and architraves and finishing with one coat of primer complete. (Sample to be got approved from Ex. Engineer before use)</td>
<td>Spec.No.: Bd.T.53/Page No.509</td>
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<td>A) with simple welding</td>
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<td>a) Without M.S. Box frame</td>
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<td>CSR No. 36 / 91</td>
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<td>31</td>
<td>Providing and fixing steel ventilator fully glazed partly top hung and partly fixed as per detailed drawing without hot dip zinc coating including fabricating glazing with plain obscured glass panes of approved type and quality and fastening without teak wood boxing and architecture and oil painting two coats etc. complete. (Sample to be got approved from Ex.Engineer before use)</td>
<td>Spec.No.: As directed by Engineer- in-charge.</td>
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<td>CSR No. 47 / 95</td>
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<tr>
<td>32</td>
<td>Providing and fixing steel Louvered windows / ventilators of various sizes as per detailed drawing without hot dip zinc coating including fabrication with approved type and quality all fixtures and fastening without teak wood boxing and architraves including finishing with one coat of primer and two coats of oil painting complete. (Sample to be got approved from Ex.Engineer before use)</td>
<td>Spec.No.: As directed by Engineer- in-charge.</td>
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<td>CSR No. 49 / 96</td>
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<td>33</td>
<td>Providing and applying washable Acrylic emulsion paint of approved colour and shade to surface in two coats including scaffolding, preparing the surface to receive paint etc. complete. AND Providing and applying putty to old / new plastered surfaces in two coats to receive approved paint in all positions including all materials,labour scaffolding and curing etc. complete.</td>
<td>Spec.No.: Bd.P.5/Page No.413</td>
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<td></td>
<td>B) Two coats</td>
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<td></td>
<td>ii) For New surface</td>
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<td></td>
<td>CSR No. 7 / 62 &amp; 9 / 63</td>
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<td>34</td>
<td>Providing and applying exterior emulsion water based water proof cement paint of approved colour and shade to exterior old/new surface in two coats including scaffolding preparing the surface to receive paint etc. complete</td>
<td>Spec.No. : As directed by Engineer- in-charge.</td>
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<td></td>
<td>CSR No. 17 / 60</td>
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<td>35</td>
<td>Providing &amp; Fixing stainless steel railing with top and vertical pipe of 50mm dia at 0.90 m c/c or as required and horizontal pipes of 25mm dia in two rows, all pipes of 2 mm thick including buffing, fabricating fixtures and fastening including pipe base of appropriate diameter and ball base of 75 mm dia above one major post etc. complete (Prior approval of sample and brand by Ex. Engineer is necessary before use)</td>
<td>Spec.No.: As directed by Engineer- in-charge.</td>
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<td>CSR No. 6 / 105</td>
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<td>36</td>
<td>Providing and laying medium grade (type) galvanised iron pipe having embossed ISI Mark on it, of required diameter with screwed, sockets, joints, necessary galvanised iron fittings such as sockets, back nuts, elbows, bends, tees, reducers, enlargers, plugs, clamps etc. including necessary excavation, back filling, fixing with clamps, testing etc. complete. (Prior approval of sample and brand by Ex. Engineer is necessary before use.)</td>
<td>Spec.No.: Bd.V.5/Page No.551</td>
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<td>B) On Walls/ceiling / floors</td>
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<td>CSR No. 2 / 106</td>
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<td></td>
<td>(i) 15 mm dia.</td>
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<td>(ii) 20 mm dia.</td>
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<td>(iii) 25 mm dia.</td>
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<td></td>
<td>(iv) 32 mm dia.</td>
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<td>(v) 40 mm dia.</td>
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<td>37</td>
<td>Providing and fixing screw down bib/stop tap of brass in required dia including necessary sockets, union nut, testing etc. complete. (Prior approval of sample and brand by Ex. Engineer is necessary before use.)</td>
<td>Spec.No.: Bd.V.8/Page No.554</td>
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<td></td>
<td>A) 15 mm dia.</td>
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<tr>
<td>CSR No. 5 / 108</td>
<td>Providing and fixing screw down required dia. wheeled stop tap of brass including necessary sockets, union nut, testing etc. complete. (Prior approval of sample and brand by Ex.Engineer is necessary before use.)</td>
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<tr>
<td>CSR No. 7 / 109</td>
<td>Providing and fixing fittings and accessories such as ball cock, overflow pipe with mosquito proof coupling, scour pipe with plug, manhole with cover and locking arrangement, connecting pipes and embedding intake and outflow pipes into the R.C.C. water reservoir</td>
<td>Spec.No.: Bd.V.18/Page No.558</td>
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<tr>
<td>CSR No. 11 / 110</td>
<td>Providing and fixing 1st class earthenware &quot;Orissa type&quot; W.C.Pan 600 x 400 mm size of required colour including 'P'or 'S'trap UPVC soil and vent pipe up to the outside face of the wall, 1:5:10 cement concrete bedding, , inlet pipe with stop tap, bracket for fixing the cistern, 32 mm dia. UPVC flush pipe with fitting and clamps, 20 mm dia. UPVC over flow pipe with mosquito proof coupling, chain and pulley, painting of the exposed pipe and cutting and making good walls and floor, testing etc. complete.(Prior approval of sample and brand by Ex.Engineer is necessary before use.)</td>
<td>Spec.No.: As directed by Engineer- in-charge.</td>
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A) White glazed
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<tbody>
<tr>
<td>(i)</td>
<td>With 10 litre fibre high level flushing cistern with fittings</td>
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<td>CSR No. 14 / 111</td>
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<tr>
<td>41</td>
<td>a) Providing and fixing European type earthenware W.C.PAN of required colour with UPVC seat and lid with chromium plated brass hinges and rubber buffers including UPVC and vent pipe upto the outside face of wall, 10 litre enamelled low level flushing cistern with fittings, pipe and stop tap brackets for fixing cistern 32 mm dia. UPVC flush pipe with fittings and clamps, 20 mm dia. UPVC overflow pipe, mosquito proof couplings, G.I. chain and pulley, cutting and making good to the walls and floors, testing etc. complete. (Prior approval of sample and brand by Ex.Engineer is necessary before use.)</td>
<td>Spec.No.: As directed by Engineer- in-charge.</td>
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<tr>
<td>42</td>
<td>Providing and fixing white glazed earthenware semi stall type urinals without cistern, with inlet pipes stop tap, UPVC flush pipe with fittings and flushing arrangement including UPVC soil pipe, UPVC trap and soil pipe connection upto outside face of wall, making good the damaged surface, testing etc. complete. (Prior approval of sample and brand by Ex.Engineer is necessary before use.)</td>
<td>Spec.No.: As directed by Engineer- in-charge.</td>
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<td>43</td>
<td>Providing and fixing white glazed earthenware urinal squatting type without cistern with fitting, inlet pipes, stop tap, 32 mm dia. UPVC flush pipe with fittings and spreader arrangement including UPVC soil pipe, UPVC trap, soil pipe connection upto the outside face of the wall, making good the damaged surface, testing etc. complete. (Prior approval of sample and brand by Ex.Engineer is necessary before use.)</td>
<td>Spec.No.: Bd.V.24/Page No.563</td>
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<td>44</td>
<td>Providing and fixing white glazed earthenware Wash Hand Basin of 55 cm x 40 cm size including cold water pillar tap, brackets, rubber plugs and brass chain, stop tap, chromium plated bottle trap and necessary pipe connections including UPVC waste pipe and trap upto the out side face of the wall, making good the damaged surface, testing etc. complete. (Prior approval of sample and brand by Ex. Engineer is necessary before use.)</td>
<td>Spec.No.: Bd.V.30/Page No. 565</td>
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<td>45</td>
<td>Providing and fixing C.I. Nahani Trap (long arm) of required size including symet grating, bend, connecting piece of C.I. pipe upto the outside face of the wall, making good the damaged surface, testing etc. complete. (Prior approval of sample and brand by Ex. Engineer is necessary before use.)</td>
<td>Spec.No.: Bd.V.32/Page No. 567</td>
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<td>46</td>
<td>Providing and fixing UPVC SOIL / VENT / WASTE SWR pipe of required diameter conforming to I.S.-13592, and I.S.-4985 to withstand continous internal hydraulic pressure of 4 kg/cm2 including necessary fixtures and fittings, such as bends, tees, single junctions, double junctions and joining with rubber rings and lubricants, on wall by means of clips or in ground including necessary excavation, laying refilling, trench testing etc. complete. (Prior approval of sample and brand by Ex. Engineer is necessary before use.)</td>
<td>Spec.No.: As directed by Engineer- in-charge</td>
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<td>47</td>
<td>Providing and fixing in position unplasticized poly venyl-chloride (UPVC) ultra voilet rays stabilised 110 mm outer diameter rain water SWR pipe conforming to I.S. 4985 and I.S.13592,including necessary fittings, such as PVC grating, bends, with door, PVC clamps, horse shoes at bottom, rubber ring and making connections water tight with solvent, cement including making holes in masonary concrete redoing the same in C.M. 1:3, curing, testing etc. complete. (Prior approval of sample and brand by Ex. Engineer is necessary before use.)</td>
<td>Spec.No.: As directed by Engineer- in-charge</td>
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<td>48</td>
<td>Providing and fixing 450 mm x 550 mm size superior type mirror with 16 mm dia. Nickel plated towel rod etc. complete. (Prior approval of sample and brand by Ex.Engineer is necessary before use.)</td>
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<td>49</td>
<td>Providing, hoisting and fixing in position of approved make high density polyethylene UV stabilized conforming to I.S.12701, water storage tank with necessary connections, testing etc. complete. (Prior approval of sample by Ex. Engineer is necessary before use.)</td>
<td>Spec.No.: As directed by Engineer- in-charge.</td>
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<td>50</td>
<td>Providing water proofing treatment to newly laid fully cured concrete slab of terraces by applying first coat of polymer modified semi-viscous paste prepared by mixing polymer of approved make (such as Master Seal 550 / brush bond/ RoffSupercrete /Webercrete /Monobond / Perma shield / Hypercrete / Master Crete M 81) and Cement in 1:2 proportion (1 litre polymer : 2 Kg Cement)or Rohnex water proofing system in two coats(1kg powder,700 ml water and polymer jelly for first coat &amp; 1 kg powder,500 ml water &amp; polymer jelly for second coat) to a neatly cleaned and dust free concrete surface and upto 300 mm over parapet wall prepared by removing loose and deposited material with brush and water, laying glass fibre mesh of 10 x 10 specification of approved make over tacky surface of first coat of polymer followed by second coat in transverse direction, laying mechanical protective cover to polymer coating treatment with brick bat coba with burnt broken brick bats laid in C.M. 1:5 admixed with approved water proofing compound filling up to half depth of brick bats, curing this layer for 3 days, applying cement slurry over this layer, joints of Brick Bats with C.M. 1:3 admixed with approved water proofing compound and finally top finishing with average 20mm thick layer of same mortar added with polypropylene fibers at 125 gm per bag of cement including finishing the surface smooth with neat cement slurry admixed with approved water proofing compound, Marking finished surface by false squares of 300 mm x 300 mm, Making the junctions at the parapet rounded and tapered top for required height, with drip mould at the junction of plaster and parapet and curing and covering 10 years Guarantee against leakproofness on court fee stamp paper Rs.</td>
<td>Spec.No.: As directed by Engineer- in-charge.</td>
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<td>100/-</td>
<td>including ponding test etc. complete</td>
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<td>51</td>
<td>Providing and fabricating structural steel work in rolled sections like joists, channels, angles, tees etc. as per detailed design and drawings or as directed including cutting, fabricating, hoisting, erecting, fixing in position making riveted / bolted / welded connections without connecting plates, braces etc. and including one coat of anticorrosive paint and over it two coats of oil painting of approved quality and shade complete.</td>
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<tr>
<td>52</td>
<td>Providing and fixing G.I. precoated metacolour sheet of 0.50 mm thick and 930 profile for roof including roof bolt and necessary fixing arrangements ( Prior approval of Sample and brand by Ex. Engineer is necessary before use)</td>
<td>Spec.No.: As directed by Engineer- in-charge.</td>
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<td>53</td>
<td>Transportation of material obtained from debris of various sorts including necessary excavation/ loosening including loading, unloading and conveying and disposing as directed.</td>
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<td>54</td>
<td>Providing and fixing in position anodised extruded aluminium partition having frame made out of aluminium extruded tubular section of size 65 mm x 40 mm with 12 mm thick three layered flat pressed teak wood particle board bonded with BWP type exterior grade phenol formaldehyde synthetic resin conforming to I.S.12823-1990, laminated on both sides, Novateak or equivalent, Laminated 5 mm thick selected quality of glass pannels fixed with aluminium glazing clips 12mm x 12mm (conical) rubber cushioning to glass as per detailed drawings etc. complete. (Sample to be got approved from Ex. Engineer before use)</td>
<td>Spec.No.: As directed by Engineer- in-charge.</td>
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<tr>
<td>55</td>
<td>Providing and fixing aluminium fully glazed doors including door frame with 5 mm thick sheet glass necessary fixtures and fastenings, neoprene type rubber plain gaskets as per detailed drawing and specifications etc. complete. (Sample to be got approved from Ex. Engineer before use)</td>
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<td>56</td>
<td>A) Supplying and fixing in position colour anodised aluminium extruded section Three/Four track sliding windows outer frame made from section of over all size 80 mm x 45 mm, bottom section with or without drain section track weighing 0.90 kg per metre and top and side section weighing 0.838 kg per running metre with shutter or sections made of 19 mm x 40 mm size having average weight of 0.6 kg per running metre (or as required size) with change in proportionate weight, with 5.0 mm selected quality plain sheet glass fixed with new neoprene gasket shutters to be provided with nylon encased stainless rollers, necessary locks and handles complete. (As per Architect's drawing no.Job No. T- MISC/5000 Drg.No.22 dated 3.2.1992)</td>
<td>Spec.No.: As directed by Engineer- in-charge.</td>
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