



**INDIAN INSTITUTE OF TECHNOLOGY MADRAS
ENGINEERING UNIT
CHENNAI – 600 036.**

ITEM RATE TENDER

TENDER NO. 66 / 2012 – 13 / Civil

FINANCIAL BID: COVER – 2

Name of the work : Construction of additional floor for Nano technology lab at MSRC building in IIT Madras.

Approximate Value put to Tender (for reference only) : Rs. 160.00 Lakhs.

Earnest Money Deposit : Rs. 3.2 Lakhs.

Cost of Tender Schedule : Rs. 1500.00
VAT @ 5% Rs. 75.00

Rs. 1575.00

Date of publish in IITM website : From: 17 – 12 - 2012

Pre-Bid Meeting : Date: 24 – 12 - 2012
Time: 10:30 AM

Last date of receipt : Date: 31– 12 - 2012
Time: 3:00 PM

Date and Time of Opening of Tenders of Eligibility bid (Cover – 1) : Date: 31 – 12 – 2012
Time: 3:10 PM

Date and Time of Opening of Tenders of Financial bid (Cover – 2) : Will be intimated separately to for those who have qualified based on eligibility criteria specified in the tender document

Place of Receipt : Office of the EXECUTIVE ENGINEER (CIVIL)
Administrative Building,
3rd Floor, Engineering Unit,
IIT Madras, Chennai – 600 036.

Certified that the tender document contains 135 (One Thirty Five) pages only and that the tender documents downloaded is the exact replica of the document published by the IITM and no alterations and additions have been made by me /us in the tender document.

EXECUTIVE ENGINEER (CIVIL)

INDIAN INSTITUTE OF TECHNOLOGY MADRAS

ENGINEERING UNIT

CHENNAI – 600 036

Notice inviting Tender

EXECUTIVE ENGINEER (CIVIL), Engineering Unit, IITM, on behalf of the Indian Institute of Technology Madras, Chennai, invites Eligibility documents and Item rate tenders, in two cover system {Eligibility document and Financial bid (Tender)}, for the work of “Construction of additional floor for Nano technology lab at MSRC building in IIT Madras.” from eligible contractors.

The work is estimated to cost Rupees 160.00 Lakhs.

This estimate, however, is given merely for a general guidance.

The Eligibility documents of the tenderers shall be evaluated considering the various criteria detailed in Eligibility documents.

The tenders (Financial bids) of only those tenderers, who are found to satisfy the requirements spelt out in Eligibility document shall be opened.

Agreement shall be drawn with successful tenderer on prescribed form of CPWD which is available as Govt. of India priced publication.

Tenderer shall quote his rate as per various terms and conditions of the said form which shall be form part of the agreement.

The time allowed for carrying out the work is 8 months from the 15th day after the date of written order to commence the work or from the first date of handing over of the site whichever is later in accordance with the phasing, if any, indicated in the tender document.

The Tender documents consisting Eligibility document and Tender (Financial bid) including schedule of quantities, special conditions etc may be down loaded from the web site of IITM (<http://tenders.iitm.ac.in>) on or after 17 – 12 – 2012.

At the time of submission of the tender an amount of Rs.1575/- (non-refundable) shall be paid in the form of a crossed demand draft, drawn in favour of IITM Chennai – 600 036 and payable at Chennai, covering the cost of the documents.

The Eligibility document and Tender should also be accompanied by Earnest Money Deposit (EMD) of Rs 3.2 Lakhs in the form of Demand draft of a schedule bank issued in favour of Indian Institute of Technology and payable at Chennai.

The Eligibility document in the prescribed form, with all the details filled shall be put in a cover marked as – “COVER – 1 – Eligibility Document”. **The two drafts, one for the cost of tender documents and another for the EMD shall also be enclosed in this cover.**

The tender (Financial bid) after filling the scheduled of quantities etc should be put in second cover and marked as – “COVER – 2 – TENDER” (Financial bid).

Both cover 1 and 2 shall be placed in a third cover and shall be marked with the name of work and date of opening.

Completed tender documents shall be received up to 03:00 PM on 31 –12– 2012 at the office of the EXECUTIVE ENGINEER (CIVIL), Administrative building, IIT Campus and the cover containing the Eligibility document shall be opened at 03:10 PM on the same date.

If cost of tender document and EMD are not enclosed then the Eligibility document shall not be evaluated and the tender (Financial bid) shall be returned unopened.

The contractor whose tender is accepted shall be required to deposit an amount equal to 5% of the tendered value of the work as performance guarantee in the form of an irrevocable bank guarantee bond of any scheduled bank or state bank of India in accordance with the form prescribed. Description of work is as detailed in Bill of Quantities. Copies of tender drawings and other documents pertaining to the work will be open for inspection by the tenderers at the office of the EXECUTIVE ENGINEER (CIVIL).

Tenderers are advised to inspect and examine the site and its surroundings and satisfy themselves before submitting their tenders as to the nature of the ground and sub soil (so far as is practicable), the form and nature of the site and in general shall themselves obtain all necessary information as to risks, contingencies and other circumstances which may influence or affect their tender. A tenderer shall be deemed to have full knowledge of the site whether he inspects or not and no extra charges consequent on any misunderstanding of or otherwise shall be allowed. The tenderer shall be responsible for arranging and maintaining at his own cost all materials, tools, water, electricity, access facilities for workers and all other services required for executing the work otherwise specifically provided for in the contract documents. Submission of a tender by a tenderer implies that he has read this notice and all other contract documents and has made himself aware of the conditions, specification of the work to be done and of conditions and rates at which stores, tools and plants etc will be issued to him by the Institute and local conditions and other factors having a bearing on the execution of work. The competent authority does not bind itself to accept the lowest or any other tender and reserve itself the authority to reject any or all the tenders received without the assignment of any reason. Tenders in which any of the prescribed conditions is not full filled or any conditions including that of conditional rebate put forth by the tender shall be summarily rejected.

The competent authority also reserves its right to allow to the central / public sector venture holding 51 % equity or more, purchase preference with reference to the lowest price bid where the quoted price is within 10% of such lowest price in the tender, other things being equal.

Canvassing whether directly or indirectly, in connection with tender is strictly prohibited and the tenders of the contractors who resort to canvassing will be liable to rejection.

The competent authority reserves to himself the right of accepting part or whole of the tender and the tenderer shall be bound to perform the same at the rate quoted.

The contractor shall not be permitted to tender for works in IIT in which his near relative is posted as divisional accountant, Asst. Registrar or as an officer in any capacity from the grades of EXECUTIVE ENGINEER (CIVIL) to Junior Engineer (All inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any office in IITM. Any violation by the contractor would render him liable to be removed from the approved list of contractor and the tender is liable to be rejected.

Tender for the work shall remain open for acceptance for a period of **90 days** from the date of opening of tender. Any tenderer withdraws his tender before the said period or issue of acceptance, whichever is earlier or makes any modification in the terms and conditions of the tender which are not acceptable to the institute, then the IIT Madras shall without prejudice to any other right or remedy, be at liberty to forfeit 50 % of the said earnest money aforesaid.

This notice inviting tender shall form a part of the contract document. The successful contractor on acceptance of his tender, shall within 14 days from the stipulated date of start of the work, sign the contract consisting of Notice inviting tender, all the document including additional conditions.

Specifications and drawings, if any, forming the tender as issued at the time of invitation and acceptance there of together with any correspondence there to and General Conditions of contract for CPWD works 2008 (Standard CPWD form 8).

Even though the tenderer has furnished the name of an associate for carrying out the Electrical works, contractually it is the tenderer who is responsible for completion of the work as per contract. No agreement is created between the agency furnished by the tenderer and IITM in this regard.

EXECUTIVE ENGINEER (CIVIL)

**INDIAN INSTITUTE OF TECHNOLOGY MADRAS
ENGINEERING UNIT
CHENNAI – 600 036**

Item Rate Tender & Contract for Works

Tender for the work: “Construction of additional floor for Nano technology lab at MSRC building in IIT Madras”

- (i) To be submitted by _____ hours on _____ to _____
- (ii) To be opened in presence of tenderers who may be present at _____ hours _____ on _____ in the office of _____.

T E N D E R

I / We have read and examined the notice inviting tender, schedules A & B, specifications applicable, drawings, Conditions of contract and other documents and rules referred to in the conditions of contract and all other contents in the tender documents for the work.

I / We hereby tender for the execution of the work specified for the Indian Institute of Technology Madras, within the time specified in Schedule – ‘F’ and in accordance in all respects with the specifications, designs, drawings and instructions in writing referred to in General Rules and Directions and in Clause 11 of form 8 (General conditions of contract) and with such materials as are provided for, by, and in all respects in accordance with such conditions so far as applicable.

We agree to keep the tender open for Ninety (90) days from the date of opening thereof and not to make any modifications in its terms and conditions.

A sum of Rs. 9,35,000/- Lakhs is enclosed in the form of demand draft towards EMD.

or

A sum of Rs1,60,000/- should be enclosed in the form of demand draft of a scheduled bank towards 50% of the Earnest Money and for the balance sum of Rs. 1,60,000/-of the Earnest Money by a Bank Guarantee issued by a schedule bank should be enclosed. If I / We, fail to furnish the prescribed performance guarantee as mentioned elsewhere within prescribed period, I / we agree that IITM shall, without prejudice to any other right or remedy, be at liberty to forfeit the said earnest money absolutely. Further, if I/we fail to commence work as specified, I/we agree that IITM shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and the performance guarantee absolutely, otherwise the said earnest money shall be retained by IITM towards Security Deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to therein and to carry out such deviations as may be ordered, upto a maximum of the percentage mentioned in Schedule ‘F’ and those in excess of that limit at the rates to be determined in accordance with the provision contained in Clause 12.2 and 12.3 of the tender form. Further I / we agree that in case of forfeiture of earnest money and performance guarantee as aforesaid, I / we shall be debarred from participation in the re-tendering process of the work.

I/we hereby declare that I/we shall treat the tender documents, drawings and other records connected with the work as secret / confidential documents and shall not communicate the information derived there from to any person other than a person to whom I/we am / are authorised to communicate the same or use the information in any manner prejudicial to the safety of the State.

Dated

Signature of the Tenderer

Postal Address

Witness Signature

Name

Postal Address

Occupation

ACCEPTANCE

The above tender (as modified by you as provided in the letters mentioned hereunder) is accepted by me for an on behalf of the President of India for a sum of Rs. _____
(Rupees _____)

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

- a)
- b)
- c)

For & on behalf of the President of India
Signature _____
Designation _____

Date _____

INDIAN INSTITUTE OF TECHNOLOGY MADRAS
General Rules and Directions

1. The tender must be signed by the person / persons competent to sign as indicated in Eligibility Document. Same stipulations will also apply in the case of Receipt for payments made on account of work to the successful Contractor who has signed the Contract Agreement.
2. This form will state the work to be carried out, as well the date for submitting and opening tenders and the time allowed for carrying out the work, also the amount of earnest money to be deposited with the tender, and the amount of the security deposit to be deposited by the successful tenderer and the percentage, if any to be deducted from bills. Copies of the specifications, designs and drawings and any other documents required in connection with the work signed for the purpose of identifications by the officer inviting tender, shall also be open for inspection by the contractor at the office of officer the inviting tender, during office hours.
3. Any person who submits a tender shall fill up the form, stating at what item rate & amount he is willing to undertake the full work. Only one rate shall be given in words & figures for each item. 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 condition of any sort including conditional rebates, will be summarily rejected. Tender shall have the name and number of the work to which they refer, written on the envelopes. Amount must be quoted in full rupees by ignoring fifty paise and considering more than fifty paise as rupee one.
4. The officer inviting tender or his duly authorized assistant will open Financial Bids of those Tenderers whose, Eligibility Document have been found acceptable, in the presence, of any intending Contractors or their authorized agents who may be present at the time, and will enter the amounts of the several tenders in a comparative statement in a suitable form. In the event of a tender being accepted, a receipt for the Earnest Money forwarded therewith shall thereupon be given to the Contractor. In the event of a tender being rejected, the Earnest Money forwarded with such unaccepted tender shall thereupon be returned to the Contractor remitting the same, without any interest.
5. The officer inviting tenders shall have the right of rejecting all or any of the tenders and will not be bound to accept the lowest or any other tender.
6. The memorandum of work tendered for and the schedule of materials to be supplied by the institute and their issue-rates, shall be filled and completed in the office of the officer inviting tender before the tender form is published. If a form is published without having been so filled in and incomplete, the intending tenderer shall request the officer to have this done before he completes and delivers his tender.
7. The tenderers shall sign a declaration under the Official Secret Act, 1923, for maintaining secrecy of the tender documents, drawings or other records connected with the work given to them.
8. In the case of item Rate Tenders, only rates quoted shall be considered. Any tender containing percentage below/above the rates quoted is liable to be rejected. Rates quoted by the contractor in item rate tender in figures and words shall be accurately filled in so that there is no discrepancy in the rates written in figures and words. However, if a discrepancy is found, the rates which correspond with the amount worked out by the contractor shall unless otherwise proved, be taken as correct. If the amount of an item is not worked out by the contractor or it dose not correspond with the rates written either in figures or in words, then the rates quoted by the contractor in words shall be taken as correct. Where the rates quoted by the contractor in figures and in words tally but the amount is not worked out correctly, the rates quoted be the contractor, will, unless otherwise proved, be taken as correct and not the amount. In event no rate has been quoted for any item(s), leaving space both in figure(s), words(s) and amount blank, it will be presumed that the contractor has included the cost of this / these item(s) in other items and rate for such items(s) will be considered as zero and work will be required to be executed accordingly.
9. In the case of any tender where unit rate of any item/items appear unrealistic, such tender will be considered as unbalanced and in case the tendered is unable to provide satisfactory explanation, such a tender is liable to be disqualified and rejected.

10. All rates shall be quoted on the tender form. The amount for each item should be worked out and the requisite totals given. Special care should be taken to write the rates in figures as well as in words and the amount in figures only in such a way that interpolation is not possible. The total amount should be written both in figures and in words. In case of figures, the word 'Rs' should be written before the figure of 'Rupees' and the word 'P' after the decimal figures, eg. 'Rs 2.15P' and in case of words the word, "Rupees" should precede and the word 'Paise' should be written at the end. Unless the rate is in whole rupees and followed by the word 'only', it should invariably be up to two decimal places. While quoting each rate in schedule of tender, the word 'only' should be written closely following the rate and it should not be written in the next line.
11. a. The Contractor, whose tender is accepted, will be required to furnish performance guarantee of 5% (five percent) of the tendered amount within specified period. This guarantee shall be in the form of Government Securities or fixed deposit receipt of any scheduled bank, guarantee bonds of any scheduled bank or state bank of India.
- b. The contractor whose tender is accepted will be required to furnish by way of Security Deposit for the fulfillment of his contract, an amount equal to 5 % of the tendered value of the work. The Security deposit will be collected by deductions from the running bill of the contractor at the rates mentioned above and the earnest money if deposited in cash at the time of tender will be treated as a part of this Security Deposit. The SD amount will also be accepted in cash or in the shape of Government securities. Fixed deposit receipt of a scheduled bank or State bank of India will also be accepted for this purpose. Provided confirmatory advice is enclosed.

On acceptance of the tender, the name of the accredited representative(s) of the Contractor who would be responsible for taking instructions from the Engineer in Charge shall be communicated in writing to the Engineer in Charge.

12. Sales-tax (VAT), service tax, purchase tax, turnover tax, Service tax, works contract tax or any other tax on material, labour and works in respect of this contract shall be payable by the contractor and IITM will not entertain any claim whatsoever in respect of the same.
13. The Contractor shall give a list of both gazetted and non-gazetted IITM employees related to him.
14. The tender for the work shall not be witnessed by a Contractor or Contractors who himself / themselves has/have tendered for the same work. Failure to observe this condition would render tenders of the Contractor tendering, as well as witnessing the tender, liable to summary rejection.
15. The contractor shall submit list of works which are in hand (progress) in the following form:-

Name of Work	Name and particulars of Division Where work is being executed	Value of work	Position of works in progress	Remarks
1.	2.	3.	4.	5.

16. The contractor shall comply with the provisions of the Apprentices Act 1961, and the rules and orders issued there under from time of time. If he fails to do so, his failure will be a breach of the contract and the Engineer-in-charge may in his discretion, without prejudice to any other right or remedy available in law, cancel the contract. The contractor shall also be liable for any pecuniary liability on account of any violation by him of the provisions of the said Act.

Signature of Contractor

EXECUTIVE ENGINEER (CIVIL)

CONDITIONS OF CONTRACT

1. The Contract means the documents forming the tender and acceptance thereof and the formal agreement executed between the competent authority on behalf of the IIT and the Contractor, together with the documents referred to therein including these conditions, the specifications, designs, drawings and instructions issued from time to time by the Engineer-in-charge and all these documents taken together, shall be deemed to form one contract and shall be complementary to one another.
2. In the contract, the following expressions shall, unless context otherwise requires, have the meanings, hereby respectively assigned to them:-
 - (i) The expression works or work shall, unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional.
 - (ii) The Site shall mean the land/or other places on, into or through which work is to be executed under the contract or any adjacent land, path or street through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.
 - (iii) The contractor shall mean the individual, firm or company, whether incorporated or not, undertaking the works and shall include the legal personal representative of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company.
 - (iv) The Engineer-in-charge means the Engineer officer who shall supervise and be in-charge of the work and who shall sign the contract on behalf of IIT as mentioned in Schedule 'F' hereunder.
 - (v) Accepting Authority shall mean the authority mentioned in Schedule 'F'.
 - (vi) Excepted Risk are risks due to riots (other than those on account of contractor's employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, military or usurped power, IITM, damages from aircraft, acts of God, such as earthquake, lightening and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the Accepting Authority or causes solely due to use or occupation by IITM of the part of the works in respect of which a certificate of completion has been issued or a caused solely due to IITM faulty design of works.
 - (vii) Market Rate shall be the rate as decided by the Engineer-in-charge on the basis of the cost of materials and labour at the site where the work is to be executed plus the percentage mentioned in Schedule 'F' to cover, all overheads and profits.
 - (viii) Schedules(s) referred to in these conditions shall mean the relevant schedule(s) annexed to the tender papers or the standard schedule of Rates of the CPWD mentioned is schedule 'F' hereunder, with the amendments thereto issued upto the date of receipt of the tender.
 - (ix) Department means IITM which invites tenders.
 - (x) District specification means the specifications followed by the state of Tamil Nadu in the area where the work is to be executed.
 - (xi) Tendered value means the value of the entire work as stipulated in the letter of award.
3. Where the context so requires, words imparting the singular only also include the plural and vice versa. Any reference to masculine gender shall whenever required include feminine gender and vice versa.

4. Headings and marginal notes to the General Conditions of contract shall not be deemed to form part thereof be taken into consideration in the interpretation or construction thereof of the contract.
5. The contractor shall be furnished, free of cost one certified copy of the contract documents except standard specification, Schedule of Rates and such other printed and published documents, together with all drawings as may be forming part of the tender papers. None of these documents shall be used for any purpose other than that of his contract.
6. The work to be carried out under the contract shall, except as otherwise provided in these conditions, include all labour, materials, tools, plants, equipments and transport which may be required in preparation of and for and in the full and entire execution and completion of the works. The descriptions given in the Schedule of quantities (Schedule-A) shall, unless otherwise states, be held to include wastage on materials, carriage and cartage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labours necessary in and for the full and entire execution and completion of the work as aforesaid in accordance with good practice and recognized principles.
7. The contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the schedule of Quantities, which rates and prices shall except as otherwise provided cover all his obligation under the contract and all matters and things necessary for the proper completion and maintenance of the works.
8. The several documents forming the contract are to be taken as mutually explanatory of one another, detailed drawings being following in preference to small scale drawing and figured dimensions in preference to scale and special conditions in preference to General conditions.
- 8.1 In the case of discrepancy between the schedule of Quantities, the specifications and/or the Drawings, the following order of preference shall be observed.
 - (i) Description of Schedule of Quantities.
 - (ii) Particular Specification and special condition, if any
 - (iii) Drawings.
 - (iv) C.P.W.D Specifications
 - (v) Indian Standard specifications of B.I.S.
- 8.2 If these are varying or conflicting provisions made in any one document forming part of the contract, the Accepting Authority shall be the deciding authority with regard to the intention of the documents and his decision shall be final and binding on the contractor.
- 8.3 Any error in description, quantity or rate in schedule of Quantities or any omission there from shall not vitiate the contractor or release the contractor from the execution of the whole or any part of the works comprised therein according to drawings and specifications or from any of his obligations under the contract.
9. The successful tenderer/contractor, on acceptance of his tender by the Accepting Authority, shall within 14 days from the stipulated date of start of the work sign the contract consisting of:-
 - (i) The notice inviting tender, all the documents including drawings, if any, forming the tender as issued at the time invitation of tender and acceptance thereof together with any correspondence leading thereto.
 - (ii) Standard C.P.W.D Form as mentioned in Schedule 'F' consisting of:-
 - (a) Various standard clauses with corrections upto the date stipulated in schedule 'F' along with annexure thereto.
 - (b) C.P.W.D Safety code.
 - (c) Model Rules for the protection of health, sanitary arrangements for workers employed by CPWD of its contractors.
 - (d) CPWD contractor's Labour Regulations.
 - (e) List of Acts omissions for which fines can be imposed.

ADDITIONAL CONDITIONS

1. The Electrical power shall be made available at a near by location of the proposed site. Contractor shall make arrangement for laying cables etc to the site of work and make necessary payments for the electrical consumptions at the rate of Rs.10.50/- per unit. The rate shall be varied as per the TNEB tariff.
2. Other agencies doing works related with this project will also simultaneously execute works and the contractor shall afford necessary facilities for the same. The contractor shall leave such necessary holes, openings etc, for laying / burying of pipes, cable, conduits, clamps, boxes and hooks for fans etc. as may be required for other agencies. Conduits for electrical wiring will be laid in a way that they leave enough space for concreting and do not adversely affect the structural members. Nothing extra over the agreement rates shall be paid for the same.
3. Some restrictions may be imposed by the security staff etc., on the working and on movement of labour, materials etc. The contractor shall be bound to follow all such restrictions/instructions and nothing extra shall be payable on this account. Necessary entry passes have to be obtained for entry of labour and materials. Contractor should take advance action for obtaining such passes and no claim on this account shall be entrained.
 - 3.1 The building work will be carried out in the manner complying in all respects with the requirements of relevant bye-laws of the local body under the jurisdiction of which the work is to be executed or as directed by the Engineer-in-Charge and nothing extra will be paid of this account.
 - 3.2 The work of water supply, internal sanitary installations and drainage work etc. shall be carried out as per local Municipal Corporation or such local body bye-laws and the contractor shall produce necessary completion certificate from such authorities after completion of the work, if required.
 - 3.3 Where CPWD specifications are not available water tanks, taps, sanitary, water supply and drainage pipes, fitting and accessories should conform to bye-laws and specification of the Municipal Body / Corporation. The contractor should engage licensed plumbers for the work and get the materials (fixtures / fittings) tested by the Municipal Body / Corporation authorities, wherever required, at his own cost.
 - 3.4 The contractor shall comply with proper and legal orders and directions of the local or public authority or municipality and abide by their rule and regulations and pay all fees and charge, which he may be liable.
4. The contractor shall give a performance test of the installation(s) as per standing specifications before the work is finally accepted and nothing extra whatsoever shall be payable to the contractor for the test.
5. Any cement slurry added over base surface (or) for continuation of concreting to obtain better bond between old and new concrete is deemed to have been in built in the items and nothing extra shall be payable or extra cement considered in consumption on this account.
6. The contractor shall furnish along with the tender his proposed methodology and programme of construction in a comprehensive manner of executing and completing the work with in the stipulated period. The programme shall consist of the various components for each part of the work stipulated to be completed and a bar chart may be submitted in this connection.
7. The contractor shall take instructions from the Engineer-in-Charge for stacking of materials. No excavated earth or building materials shall be stacked on areas where other buildings, roads, services compound walls are to be constructed.
8. Construction labour shall not be permitted (except staff for watch and ward) to stay inside the campus. The contractor has to arrange for necessary photo identity passes for the labour for entry in to the campus. The labour movement should be restricted to the areas where work is carried out.

9. Royalty at the prevalent rates shall have to be paid by the contractor on all the boulders, metals, shingles, sand, bajri etc., collected by him for the execution of the work direct to the Revenue authority or authorized agent of the State Government concerned or Central Government.
10. The Rate for RCC works include cost of concreting in sloped & curved roof, chajjas & beams and no extra rate shall be payable.
11. The rate for Centering & shuttering under concrete items include cost of Centering & shuttering in curves & arches unless specified either in the BOQ.
12. The contractor should construct proper mortar bands of lean mix with adequate depth & smaller size over the curved roof for flooding with water & proper curing. In case of Arches, wet gunny bags shall be used for a period of two weeks.
13. A complete set of Architectural Drawings are available with the EXECUTIVE ENGINEER (CIVIL), Engineering Unit. Tenderers are advised to study the drawing before tendering.
14. Samples of various materials, finishes, etc are available in the office of the EXECUTIVE ENGINEER (CIVIL). The same may be seen by the tenderers before submission of the tender.
15. Sample of all materials, fixtures, fittings like flooring tiles, wall tiles, doors, windows, sanitary fittings, roofing sheets electrical fittings etc, shall be got approved in advance from the Engineer-in-Charge before taking up the work.

The contractor shall produce all the materials in advance so that there is sufficient time for testing and approving the material and clearance of the same before use in work.

EXECUTIVE ENGINEER (CIVIL)

SCHEDULES

SCHEDULE – ‘A’

The Bill of Quantities enclosed in this document.

SCHEDULE – ‘B’

Schedule of materials proposed to be issued to the tenderer

NO MATERIAL SHALL BE ISSUED TO THE TENDERER BY IITM

SCHEDULE – ‘C’

Schedule of tools and plants proposed to be hired to the tenderer

NO TOOLS AND PLANTS SHALL BE HIRED TO THE CONTRATOR BY IITM

SCHEDULE – ‘D’

Extra schedules for specific requirements / documents for the work, if any.

1. No labour shall be permitted to stay in the campus
2. The construction activities should be restricted within the area earmarked around the proposed building, which shall be barricaded with G.I sheets as approved by IITM for which additional payment shall be made as per schedule of item no. 72.
3. Contractor shall make his/her own arrangement for access to the first and higher floors through temporary steel staircase using properly designed and applying best safety standards as approved by IIT M. No separate payment will be made for the temporary staircase. No access will be permitted through existing staircase inside the existing MSRC building unless approved by the Engineer-in-charge..

SCHEDULE – ‘E’

Price escalation will be as per CLAUSES – 10C and 10 CA of the tender Form - 8

SCHEDULE – ‘F’

Reference to CPWD General Conditions of contract 2010

Name of work : “Construction of additional floor for Nano technology lab at MSRC building in IIT Madras.”

Estimated cost of work : Rs. 160.00 Lakhs (For general guidance only)

- i). Earnest money : Rs. 3.2 Lakhs
ii). Performance Guarantee: : 5% of tendered value
iii). Security Deposit : 5% of tendered value

General Rules and Directions:

Officer inviting tender EXECUTIVE ENGINEER (CIVIL), IITM

Maximum percentage for quantity of items work to be executed beyond which rates are to be determined in accordance with clause 12.2 and 12.3. } See below

Definition

Engineer-in-charge EXECUTIVE ENGINEER (CIVIL)

Accepting authority Director, IIT Madras

Percentage on cost of material and labour to cover all overheads and profits. 15%

Standard schedule of rates CPWD DSR 2012

Department

IIT Madras

Standard CPWD contract form

CPWD form 8 with modification and correction up to till date.

Clause 1

1. Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance in days. 7 (seven) Days
2. Maximum allowable extension beyond the period provided above 7(Seven) Days.

Clause 2

Authority for fixing compensation under clause 2 EXECUTIVE ENGINEER (CIVIL).

Clause 2a

Whether clause 2a shall be applicable Yes applicable.

Clause 5

Number of days from the date of issue of letter of acceptance for reckoning date of start 14 Days

Milestone to be achieved shall be as per table given below.

SI no	Cumulative physical progress of work	Cumulative Time allowed from date of start	Amount to be with held in case of non-achievement of mile stone
1.	Completion of Foundation work and work up to Plinth level. a. Earth work / PCC b. RCC in footing and column stem. c. Plinth Beam.	One month	In the event of not achieving the necessary progress assessed from the running payments, 1% of the tendered value of work will be with held for failure of each milestone.
2.	Completion of RCC frame works	Three months	
3.	Completion of Masonry work, Plastering – Internal and external including fixing joinery, handing over of lift machine room, waterproofing work in toilet sunken floors and terrace, internal flooring, finishing, plumbing and water supply works.	Five months	
4.	Internal and External painting, all internal and external services, road work and handing over of building.	Eight months	

Time allowed for execution of work

8 (Eight) months

Authority to give fair and reasonable Extension of work for completion of work

EXECUTIVE ENGINEER (CIVIL)
IITM

Clause 6, 6A

Clause 6A shall be applicable.

Clause 7

Gross work to be done together with net Payment / adjustment of advances for material Collected, if any, since the last such payments for being eligible to interim payment.

Rs. 25 Lakhs

Clause 10A

List of testing equipments to be provided as listed in this document.

Whether Clause 10B (ii) shall be applicable

Yes

Clause 10 CA and 10C

Clause 10 CA and 10C are applicable to this work. (Cement and Steel)

Materials covered under this clause

1. Cement
2. Steel

Nearest material for which all India wholesale price index is to be followed

1. Cement
2. Bars and Rods

Clause 10CC

Not applicable.

Clause 11

Specification to be followed for execution of work:

Particular specifications CPWD Specifications 2009 Volume I to II and revised CPWD Specifications up to till date, IS codes, Manufacturer's specifications, General Engineering Practice. (The specification mentioned earlier will prevail over the one mentioned later unless decided otherwise by the Engineer in Charge)

Clause 12

12.2 & 12.3 Deviation limit beyond which clauses 12.2 & 12.3 shall apply for building Work (Excluding foundation) 30%

12.5 Deviation limit beyond which clauses 12.2 & 12.3 shall apply for foundation work. } 100%

Clause 16 Competent Authority for Deciding reduced rates. EXECUTIVE ENGINEER (CIVIL)
IITM

Clause 18

List of mandatory machineries, tools & plants to be deployed by the contractor

Mixer machines with weighing machines – 1 No.	MS pipe scaffolding materials – 1000 sqm
Vibrators – 3 nos	Steel shuttering materials – 1000 sqm
Plate vibrators – 1 no	Lifts / hoists – 1 no
Trucks - 1no	Computers – 1 no
Tippers - 1no	Laser jet printer (A4 size) – 1 no

Clause 36(i)

Designation	Minimum qualification and experience required	Discipline	Rate of recovery per month
Principal Technical Representative	Graduate with 10 years experience - 1 No.	Civil Engg.	Rs. 40000
Technical Representatives	Graduate with minimum 5 years of experience - 1 No.	Civil Engg.	Rs. 30000
	Diploma in Engineering with minimum 5 years of experience – 1 No.	Civil Engg.	Rs. 20000

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

Clause 42

- i) Schedule for determining theoretical quantity of cement Published by CPWD DSR 2012
- ii) Variations permissible on theoretical quantities

- | | |
|--|-------------------------------------|
| a) Cement : | 3% minus |
| b) Steel reinforcement :
and structural steel sections for
each diameter, sections and category. | 2 % minus |
| c) Bitumen all works: | 2.5% plus only & nil on minus side. |
| d) All other materials: | NIL |

In case of less consumption than the above recovery at the market rates prevailing at the time of execution of the work plus 10 % shall be effected from the bills of the contractor, if the work is acceptable to IITM. However for over consumption no additional payment shall be made.

ADDITIONAL SPECIFICATIONS

The additional specification given below are not substitute to CPWD specifications or IS specifications. These shall be read along with CPWD specifications or IS specifications.

GENERAL

1. The work shall be carried out using metric dimensions only and shall be measured and paid in metric dimensions. F.P.S. units, if any, mentioned in drawings etc are for guidance only.
2. Wherever any reference to any Indian Standard Specification occurs in the documents relating to this contract the same shall be inclusive of all amendments issued there to or revision there of if any, up to the date of receipt of tenders.
3. Unless otherwise specified in the schedule of quantities the rates for the various items are for all heights, levels and locations.
4. Unless otherwise specified in the schedule of quantities the rate for the items of the work shall be considered as inclusive of pumping out or bailing out water, if required, for which no extra payments will be made. This will include water encountered from any source, such as rains, floods, sub-soil water table being high or due to any other cause whatsoever.
5. The tender shall study the item description, the relevant drawings and satisfy himself the item of work to be carried.

EARTH WORK AND FILLING

In respect of item pertaining to filling in foundations, plinth and the area wherever required with earth brought from out side, the rate is inclusive for all Lifts and leads of filling and nothing extra shall be payable. The rate for earthwork in excavation includes pumping out water on account of rain, ground water; springs etc and nothing extra shall be paid

WOOD WORK

1. The timber to be used in the work should be best quality specified.
2. All glass panes used for doors and windows shall be single sheet. The make of the glass shall be got approved from the Engineer-in-charge

RCC WORK

The work in general shall be carried out as per the CPWD specifications.

The mixing of concrete shall be done in the mechanical mixer. The mixer should also have arrangement for weighing water so that water cement ratio can be controlled more effectively. For all RCC works concrete OPC 53 grade cement and with fly ash content of 15% by weight of cement shall be used. For masonry works and all other works PPC super grade shall be used.

CONCRETE

All the concrete for the construction of cast- in –situ RCC works and specified plain cement concrete works shall be procured from a Ready Mix Concrete Suppliers (plants) approved by the Engineer-in-charge. Site produced concrete shall not be permitted to be used in such cases. The mix design and other parameters of the RMC including transporting and placing etc. shall be strictly as per REVISED CPWD SPECIFICATIONS FOR CEMENT MORTAR, CEMENT CONCRETE AND RCC WORKS, unless specified otherwise and shall be conveyed to the RMC supplier by the contractor. The contractor shall be wholly responsible for ensuring the proper quality of concrete as required, at the site, irrespective of the fact that the RMC plant / supplier shall be approved by the Engineer in charge. Engineer in charge or his representatives shall be at liberty to inspect the operation, quality of various ingredients, materials, take samples, if required, verify quantity of various ingredients being used at the RMC plant and take samples of concrete at the RMC plant and also at site, as desired. The contractor shall satisfy himself that the quality of materials including various ingredients is as per the specifications. In case the aggregates tested do not comply with the any requirements of specification, the source for the same shall be rejected. The aggregates at the RMC plant shall be stored in such a way as to prevent mixing with foreign material as well intermixing amongst them. Different size of coarse aggregate shall be stored in separate compartments to prevent intermixing at the partition.

BATCHING OF CONCRETE

Various ingredients of the cement concrete and Reinforced Cement Concrete shall be mixed by weight batching only. The measuring equipments shall be maintained in clean and serviceable conditions. The calibration certificate shall be made available from RMC supplier and calibration shall be mandatory and binding on the contractor and his RMC supplier. The weigh batching shall be done by converting the proposition of ingredients into their masses considering their specific gravity, density, sizes, absorption, bulking etc, The decision of Engineer-in-Charge in this regard shall be final and binding. The various grade of concrete to be procured from RMC supplier shall be as specified in item and as directed by the Engineer-in-charge. The contractor has to procure the concrete from a Ready mix concrete plant having the computerized weigh batching plants conforming to IS: 4925 with arrangement for automatic dosing of admixture and adequate production capacity. The minimum cement content in concrete shall be as specified in IS: 456. The target mean strength shall be as per CPWD specification. Suitable adjustments shall be available for allowing variation in respects of quantity of aggregates/water to allow for variations due to surface moisture in the aggregates.

MIX DESIGN

The concrete mix shall be suitably designed for the required strength and slump. The contractor will submit the mix design and get the same approved before execution

CONCRETE TESTING:

Samples from fresh concrete shall be taken as per IS: 1199. One sample consisting of six cubes 15 cm X 15 cm X 15 cm. shall be taken as specified in the CPWD Specifications and tested at 28 days in accordance with specification IS 9103. Random sampling procedure shall be adapted to ensure that each concrete batch shall have a reasonable chance of being tested. At least one sample shall be taken from each shift of work. Samples of concrete for each batch of concrete should be taken by the RMC supplier also and tested for 28 days and results submitted to the Engineer in charge for record. Procedure for testing and acceptance shall be in general as per CPWD specifications

TRANSPORTING

The period between mixing of concrete and placing it in final position shall be kept to a minimum and the delivery of concrete shall be coordinated with the rate of placement, to avoid delays in delivery and placement. The concrete shall be supplied / transported through transit mixers and general construction of transit mixer and other requirements shall conform to IS: 5892. Concrete shall be handled from the place of mixing to the place of final deposit by methods, which prevent segregation, or loss of any ingredients and contamination. Where concrete is conveyed by chute, the chutes shall be made of metal or fitted with metal lining. The approval of the Engineer-in-charge shall be obtained for the use of chutes in excess of 3 meters long and in such cases the concrete shall be remixed if so required by the Engineer-in-charge or closed bottom buckets shall be used. If concrete is placed by pumping, the conduit shall be primed properly. Once pumping is started, it shall not be interrupted as far as possible. Concrete shall not be dropped in to place from an height more that 1.5m.

PLACING

Concreting of any portion of the work shall be done in presence of the representative of the Engineer-in-charge and shall be done after approval of the Engineer-in-charge. Concreting shall be carried out continuously between constructions joints shown on the drawings or as agreed by the Engineer-in-charge. The contractor shall closely follow the sequence of concreting where it is specified in the drawings. If concreting is interrupted before reaching the predetermined point an approved construction joint shall be provided. Construction joints shall be minimized as far as possible. These shall be set at right angles to the general direction of the member. The surface film of the first placed concrete should be removed while the concrete is still green to expose the aggregate and leave a sound irregular surface. However care shall be taken not to disturb the concrete already laid. Concrete shall be deposited as nearby as practicable in its position to avoid re-handling and shall not be dumped in a large quantity at any point. Care shall be taken to prevent honey combed concrete or bleeding or segregation of concrete.

CHEMICAL ADMIXTURES AND ADDITIVES

Chemical admixtures shall not be used unless permitted by the Engineer-in-charge. However, admixtures procured from the manufactures and of brand as approved by the Engineer-in-charge may be allowed on specific request of the contractor for imparting special characteristics to the concrete. Only those admixtures which conform to IS: 6925 and IS: 9103 shall be allowed to. Admixtures generating hydrogen and nitrogen etc, shall not be allowed. Nothing extra shall be payable on account of use of admixtures and additives in concrete.

DEMOULDING AGENT

Approved de-molding agents shall be used on shuttering work. Use of used oil/diesel shall not be permitted.

COVER BLOCK

Approved cover blocks shall be used in all concreting works. The samples of blocks for use in slab, column and beams shall be got approved from the Engineer-in-charge before use in the work

FLY ASH CONCRETE BLOCK

- 1.1 Terminology Connected with this work shall be same as those applicable for Brick Work.
- 1.2 The contractor whose tender is accepted shall furnish the name(s) of the manufacturer from whom he proposes to procure the blocks and get the same approved from the Engineer in Charge before procuring the material. The Engineer in Charge may inspect / get inspected the factory from where the contractor proposes to procure the blocks before accord of approval. The contractor shall arrange for the inspections.
- 1.3 The contractor shall furnish the following and obtain prior approval of the Engineer before procuring the blocks
 - a. The size and grading of stone aggregate to be used
 - b. The grading of fine aggregate
 - c. Details of fines obtained from stone crushing proposed to be used in the manufacture of the blocks
 - d. The type of cement proposed to be used
 - e. The type of fly ash proposed to be used and % proposed
 - d. Details of additives etc if any to be used.
- 1.2 The proportion of the ingredients may be decided by the contractor / manufacturer to obtain the required strength and other required qualities and got approved in advance.
- 1.3 Concrete Blocks shall be manufactured in a factory equipped with weigh batching arrangements for weighing the various ingredients and the blocks shall be manufactured using machinery equipped with vibratory / mechanical compaction arrangements.
- 1.4 The blocks shall have smooth rectangular faces with sharp corners and shall be uniform in colour and shall emit a ringing sound when struck
- 1.5 Necessary quality control and testing facilities should be available in the factory for conducting routine tests on each batch of the blocks and necessary records should be available.
- 2.0 Dimension of the Blocks

The blocks shall be if size 225 x 115 x 70 MM
The blocks shall be tested as per procedure detailed in IS 2185 (Part I) – 2005
The tolerances shall be as given below
Length = +or - 5MM, Width / Thickness = + or – 3 MM
- 3.0 Strength of the Blocks

The class designation of the blocks shall be M10. The average compressive strength shall not be less than 10 N per sqmm and strength of individual units shall not be less than 8 N per sqmm.
The blocks shall be tested as per procedure detailed in IS 2185 (Part – I) - 2005
- 4.0 Water absorption

The blocks shall be tested as per procedure detailed in IS 2185 (Part – I) – 2005 for water absorption and the absorption shall not exceed 10 %.
- 5.0 Drying Shrinkage

The blocks shall be tested as per procedure detailed in IS 2185 (Part – I) – 2005.
The drying shrinkage shall not exceed 0.06 %
- 6.0 Moisture Movement

The blocks shall be tested as per procedure detailed in IS 2185 (Part – I) – 2005.
The moisture movement shall not exceed 0.09 %
- 7.0 Masonry Work

The method of construction, the bonds, width of joints, curing, measurements, tolerances in masonry work, etc shall be as per CPWD specifications detailed for “Brick work”

WATER PROOFING TREATMENT

GENERAL :-

All the water proofing treatment shall be got executed through one of the approved special agencies.

1. The contractor shall furnish the following particulars immediately after the issue of acceptance by the department
2. The name of specialized firm
3. The trade names of the product, which would be used.
4. List of works where the treatment had been used
5. Quantity of chlorides and sulphides used in the product.

INTEGRAL CEMENT BASED WATER PROOFING TREATMENT

TREATMENT FOR ROOF SURFACE:

The brick bats shall be from well-burnt bricks. The proprietary water proofing compound shall bear ISI mark and shall conformed to IS 2645. Before execution of work, water proofing compound shall be procured and brought to site from which random sample would be got tested for its conformance to IS code in an approved laboratory. The proprietary water proofing compound shall be added at the rate recommended by the specialist firms. The finished surface after water proofing treatment shall have minimum slope of 1 in 80 and at no point the thickness of water proofing treatment shall not be less than 65 mm. While treatment of roof surface is done, it shall be ensured that the outlet drain pipes have been fixed and mouths at the entrance have been eased and rounded of properly for easy flow of water.

The surface where the water proofing is to be done shall be prepared by thoroughly cleaning with wire brush. All loose scales, laitance shall be removed and dusted off and washed clean with water. The surface shall then be treated with neat cement slurry @ 2.75 kg per Sq.m, admixed with proprietary water proofing compound, (prior approval of W.P. compound to be obtained by the contractor from Engineer-in-charge) in proportion as recommended by the reputed manufacturer, to penetrate into crevices and fill up all the pores in the surface. The cement slurry shall be applied at the junction of parapet and terrace slab including the vertical face of the parapet up to 300mm.

After the slurry coat is applied, a 20mm thick layer of cement mortar not leaner than 1:5 (1cement:5coarse sand) admixed with proprietary water proofing compound conforming to IS 2645 shall be laid. Then a layer of burnt brick bats shall be laid in cement mortar of mix as specified by the specialist firm but not leaner than 1:5 (1cement: 5Coarse sand) admixed with proprietary water proofing compound. This layer shall be laid to required gradient and joints filled to half the depth. The brick bat layer shall be rounded at the junction with the parapet and tapered towards top for a height of 300mm. Curing of this layer shall be done for two days. After curing the surface shall be applied with a coat of cement slurry admixed with proprietary water proofing compound. Joints of brick bat layer shall then be filled fully with cement mortar of mix as specified by the specialist firm but not leaner than 1:4 (1 cement,4 Coarse sand) admixed with proprietary water proofing compound and finally top finished with averages 20 mm thick layer of joint less cement mortar of same mix and finished smooth with cement slurry admixed with proprietary water proofing compound .The finished surface shall have marking of 300 x 300mm false squares to give the appearance of tiles .where the water proofing treatment is to be finished with china mosaic tile flooring, the top surface of water proofing treatment shall be finished rough and false squares shall not be made. Curing and final test of water proofing treatment shall be done for a minimum period of two weeks by ponding water. .Water of this purpose shall be arranged by the contractors at his own cost. Nothing extra shall be payable on this account.

MEASUREMENTS:

The measurements shall be taken along the finished surface of treatment including the rounded and tapered portion at junction of parapet wall. Length and Breadth shall be measured correct to 1cm and area shall be worked out to nearest 0.01Sq.m.No deduction in measurements shall be made for either opening or recesses for chimneys, stacks, roof lights, and lights for the area up to 0.40Sq.m.Nor any thing Extra shall be payable for Forming such openings. For similar areas exceeding 0.40 Sq.m deductions shall be made in measurements for full openings and nothing extra shall be paid for making such openings.

RATES

The rate shall include the cost of all labour and materials involved in all the operations described above and as per the item description.

TREATMENT TO SUNKEN FLOOR SLABS

Providing and laying water proofing treatment to vertical and horizontal surfaces of depressed portions of W.C.kitchen and the like consisting of:

- (i) Ist course of applying cement slurry @4.40 Kg/Sqm mixed with water proofing compound conforming to IS 2645 in recommended proportions including rounding off junction of vertical and horizontal surface.
- (ii) IInd course of 20mm cement plaster 1:3 (1 Cement: 3 Coarse sand) mixed with water proofing compound in recommended proportion including rounding off junction of vertical and horizontal surface.
- (iii) IIIrd course of applying blown or residual bitumen applied hot at 1.70 Kg per Sqm of area.
- (iv) IVth course of 400 micron thick PVC sheet (Overlaps at joints of PVC sheet should be 100mm wide and pasted to each other with bitumen @ 1.70Kg/Sqm.)

The height up to which this treatment is to be extended on the sides shall be as directed by the Engineer-in-charge. The surface shall be finished smooth with cement slurry admixed with proprietary water proofing compound. No cheques or false squares shall be marked on the finished surfaces. While the water proofing treatment is done, it shall be ensured that the outlet pipes are properly fixed and the gaps between the wall and the pipes are properly filled with brick/stone aggregate and cement mortar admixed with proprietary water proofing compound and grouted with cement slurry admixed with proprietary water proofing compound. Water proof treatment shall be cured for a minimum period of two weeks.

MEASUREMENTS

Measurements for the floor treatment shall be taken on the plan area of floor treated nothing extra shall be paid for rounding off at junctions and taking the treatment along the sides of beams and walls

RATE

The rate shall include the cost of all labour and materials involved in all the operations described above.

GUARANTEE FOR WATER PROOFING TREATMENT

Ten years guarantee in prescribed performa attached shall be given by the contractor for the water proofing treatment. In addition 10 %(ten percent) of the cost of the items pertaining to water proofing shall be retained as guarantee to watch the performance of work executed. However, half of this amount (with held) would be released after 2 years from the date of completion of the work, if the performance of the water proofing works is satisfactory. The remaining with held amount shall be released after completion of 10 years from the date of completion of work, if the performance of the water proofing works is satisfactory. If any defect is noticed during the guarantee period, it should be rectified by the contractor with in 7days of issuing of notice by Engineer-in-charge. If not attended to, the same shall be got done through other agency at the risk and cost of the contractor and recovery shall be effected from the amount retained towards guarantee. In any case the contractor and the specialist agency during the guarantee period shall inspect and examine the treatment once in every year and make good any defect observed and conform the same in writing. The security deposit can be released in full, if bank guarantee of equivalent amount, valid for the duration of guarantee period, is produced and deposited with the Institute.

GUARANTEE AGAINST ANTITERMITE TREATMENT WORKS

The contractor shall carry out the work of anti-termite treatment through a specialized firm and shall submit 10years guarantee against termite attack on building on a stamp paper of the required value to the Employer as per proforma attached. The guarantee shall include provision for rectification of works within the guarantee period of 10 years free of cost if termite attack on the building is reported by the Employer

ELECTRICAL CONDUITS LAYING

For fixing electrical conduits in walls the required chase should be cut using only electrically operated circular saw. Using of hammer and chisel is completely prohibited

FIELD LABORATORY :

The tenderer shall at his own cost, equip and establish a field laboratory at the site of work with requisite man power for carrying out some of mandatory tests. The apparatus, instrument and equipment to be provided in the laboratory are detailed below

List of equipments for field testing laboratory

1. Balances
2. 7 kg to 10 kg capacity, semi-self indicating type – accuracy 10 gm.
3. 500 gm capacity, semi-self indicating type – accuracy 1 gm.
3. Pan balance – 5 kg capacity – accuracy 10 gm.
4. Ovens – electrically operated, thermostatically controlled up to 110⁰ C – sensitivity 1⁰ C.
5. Sieves: as per IS 460 - 1962
6. IS sieves – 450 mm internal dia, of sizes 100 mm, 80 mm, 63 mm, 50 mm, 40 mm, 25 mm, 20 mm, 12.5 mm, 10 mm, 6.3 mm, 4.75 mm, complete with lid and pan.
7. IS sieves–200 mm internal dia (brass frame)consisting of 2.36 mm, 1.18mm, 600microns, 425microns, 300microns, 212 microns, 150 microns, 90 microns, 75 microns with lid and pan.
8. Sieve shaker capable of 200 mm and 300 mm dia sieves, manually operated with timing switch assembly
9. Equipment for slump test – slump cone, steel plate, tamping rod, steel scale, and scoop.
10. Dial gauges, 25 mm travel – 0.01 mm / division least count – 2 nos.
11. 100 tones compressing testing machine, electrical-cum-manually operated.
12. Graduated measuring cylinders 200 ml capacity – 3 Nos.
13. Steel tapes – 3 m
14. Vernier calipers
15. Micrometer screw 25 mm gauge
16. A good quality plump bob
17. Spirit level, minimum 30 cms long with 3 bubbles for horizontal vertical
18. Wire gauge (circular type) disc
19. Foot rule
20. Long nylon thread
21. Rebound hammer for testing concrete
22. Magnifying glass
23. Screw driver 30 cms long
24. Ball pin hammer, 100 gms
25. Plastic bags for taking samples
26. Moisture meter for timber.

Other mandatory tests shall be set carried out from a laboratory approved by the Engineer-in-charge

Stainless steel handrail

Stainless steel, tubes, bars, etc., bright polished including matching stainless items such as plates, screws, etc., welding and forming units with best workmanship, set in position using special hardware, expansion fasteners of Hilti make, etc., in all floors and all levels, and without painting, all complete as per IS 304 Salem Stainless Steel and as per architectural drawings.

CONDITIONS FOR CEMENT AND STEEL BROUGHT BY THE TENDERER FOR USE IN THE WORK

CEMENT

1. The contractor shall procure OPC grade 53 / PPC super grade from reputed manufactures of cement having a production capacity of one million tones per annum or more, such as ACC, Ultratech (L & T), Ramco, Chettinad, Zuari, Birla, Cement Corporation of India, etc or any manufacturer approved by the Ministry of Industry, Government of India and holding license to use ISI Certification mark for their product whose name shall be got approved from the Engineer-in-Charge. The contractor may submit a list of names of cement manufactures whose product they propose to use. The Engineer-in-charge has right to accept or reject the names of the manufactures which the contractor propose to use in the work. No change in tendered rates will be accepted if the tendered accepting authority does not accept the list of cement manufactures given by the contractor, fully or partly. Supply of cement shall be in 50 kg bags bearing manufacture's name and ISI marking. Samples of cement arranged by the contractor shall be got tested in accordance with provisions of relevant BIS codes. In case test results indicate that the cement arranged by the contractor does not confirm to the relevant BIS codes, the same shall stand rejected and shall be removed from the site by the contractor at his own cost with in a week's time of written order form the Engineer-in-charge to do so.
2. The cement shall be brought at site in bulk supply of approximately 100 tonnes or as decided by the Engineer- in- charge The cement go-down of the capacity to store a maximum of 4000 bags of cement shall be constructed by the contractor at site of work for which no extra payment shall be done. Double lock provision shall be made in the door of the cement go-down, the keys of one lock shall remain with the engineer-in-charge or his authorized representative and the key of the other lock shall remain with the contractor. The contractor shall be responsible for the watch and ward and safety of the cement go-down. The contractor shall facilitate the inspection of the cement go-down by the Engineer-in-Charge or his authorized representative at any time.
3. The contractor shall supply free of charge the cement required for testing. The frequency and the details of the test shall be decided by the Engineer-in-Charge depending on the quantum of supply in each batch. The cost of tests shall be born by the contractor /Institute in the manner indicated below
 - 3.1 by the contractor, if the results show that the cement does not conform to the relevant BIS Codes.
 - 3.2 by the Institute, if the results show that the cement conforms to relevant BIS Codes.
4. The actual issue and consumption of cement on work shall be regulated and proper accounts maintained as provided in the contract. The theoretical consumption of cement shall be worked out as per procedure prescribed in the contract and shall be governed by conditions laid there in. Items for which standard coefficients of cement consumption are not available in DSR 2002, the same shall be decided by the Engineer-in-charge. If the cement consumed is less than the theoretical quantity (after allowing for wastage and variation) the cost of the cement consumed less at market rate plus 10% and cartage charges to site of work shall be recovered from contractor provided the work carried out is acceptable to the Institute.
5. Cement brought to site and cement remaining unused after completion of work shall not be removed from site without written permission of the Engineer-in-charge.
6. The cement bags shall be stacked on proper floors consisting of two layers of dry bricks laid on well consolidated earth at a level of at least one foot above ground level. The stacks shall be in rows of two and 10 bags high with a minimum of 0.6 m clear space all round. The bags should be placed horizontally continuous in each line actual size / shape of go-down shall be as per site requirements and nothing shall be paid on this account. The decision of Engineer-in-charge regarding the capacity of the godown shall be final.
7. Cement register for the cement shall be maintained at site. The account of daily receipt and issue of cement shall be maintained in register in the proforma prescribed and signed daily by the contractor or his authorized agent.

STEEL

The contractor shall procure steel/TMT reinforcement bars of grade Fe 500 conforming to relevant BIS codes from main producers (viz) SAIL, TISCO or RINL and producers approved by Ministry of steel. The contractors shall have to obtain and furnish test certificate to the Engineer-in-charge in respect of all supplies of steel brought by him to the site of work. Samples shall also be taken and got tested by the Engineer-in-charge as per the provisions in this regard in relevant BIS codes. In case the test results indicate that the steel arranged by the contractor does not conform to BIS codes, the same shall stand rejected and shall be removed from the site of work by the contractor at his cost with in a week's time from written orders from the Engineer-in-charge to do so.

1. The Steel reinforcement shall be brought to the site in bulk supply of 10 tonnes or more as decided by the Engineer-in-charge
2. The steel reinforcement shall be stored by the contractor at site of work in such a way as to prevent distortion and corrosion and nothing extra shall be paid on this account. Bars of different size and length shall be stored separately to facilitate easy counting and shifting.
3. For checking nominal mass, tensile strength, bend test, rebend test. Etc specimen of sufficient length shall be cut from each size of the bar at random at frequency not less then specified below.

Size of Bar	For Consignment below 100 tonnes	For Consignment over 100 tonnes
Under 10 mm dia	One sample for each 25 tonnes or part there of	One sample for each 40 tonnes or part there of
10mm to 16 mm	One sample for each 35 tonnes or part there of	One sample for each 45 tonnes or part there of
Over 16 mm dia	One sample for each 45 tonnes or part there of	One sample for each 50 tonnes or part there of

4. The contractor shall supply free of charge the steel required for the testing. The cost of test shall be borne by the contractor / Institute in the manner indicated below
 - 4.1 By the contractor, if the results show that the steel does not conform to relevant BIS codes
 - 4.2 By the Institute if the results, show that the steel conforms to relevant BIS codes.
5. The actual issue and consumption of steel on work shall be regulated and proper accounts maintained as provided in the contract. The theoretical consumption of steel shall be worked out as per procedure prescribed in the contract and shall be governed by conditions laid therein.
6. Steel brought to site and steel remaining unused shall not be removed from site without the written permission of the Engineer-in-charge.
7. The standard section weights referred to as standard tables of CPWD Specifications shall be considered for conversions of length of various sizes of MS bars and cold Twisted bars/high yield strength deformed bars/thermo-mechanically treated bars into weight are as under:

Size (dia in mm)	Weight in kg/m	Size (dia in mm)	Weight in kg/m
6	0.222	25	3.855
8	0.395	28	4.836
10	0.617	32	6.316
12	0.888	36	7.994
16	1.579	40	9.869
18	1.999	45	12.490
20	2.467	50	15.424
22	2.985		

For steel, measurement will be regulated on sectional weight basis, weight being calculated with help of above tables. The weight shall also be taken as per actual basis. If actual weight is found lower than the standard weight but within tolerance limits as per relevant IS codes, nothing extra shall be paid for over weight of steel section than given in the table. The mild steel to be used shall conform to IS 432 - Cold twisted bars/High yield strength deformed bars and thermo-mechanically treated bars shall conform to IS 1786. The contractor shall submit challan / bill / gate pass /cash memo in support of material purchased from manufactures/their authorized dealers/authorized producer. Over the theoretical quantity of materials so computed, a variation shall be allowed as specified in schedule F. if the quantities of materials actually used are less than the theoretical Quantities including authorized variations, the cost at market rates plus 10% including cartage to the site of such quantities of materials as determined by Engineer-in-charge, which shall be final and binding, shall be recovered from the contractor without prejudice to department rights/remedies available under the contractor, for action against substandard work.

FORM OF PERFORMANCE SECURITY (GUARANTEE)
BANK GUARANTEE BOND

In consideration of the Indian Institute of Technology Madras (hereinafter called "The Institute") Having offered to accept the terms and conditions of the proposed agreement betweenand.....(hereinafter called "the said contractor (s))for the work..... (hereinafter called "the said agreement") having agreed to production of a irrevocable bank Guarantee for Rs.....(Rupees.....only) as security / guarantee from the contractor (s) for compliance of his obligations in accordance with the terms and condition in the said agreement.

1). We..... (Indicate the name of the Bank).....(hereinafter referred to as "the Bank") hereby Undertake to pay to the Institute an amount not exceeding Rs..... (Rupees.....only) on demand by the Institute.

2). We.....do hereby undertake to pay the amounts due and payable under this Guarantee without any demure, merely on a demand from the Institute stating that the amount claimed is required to that recovers due or likely to be due from the contractor (s). Any such demand on the Bank shall be conclusive as regard the amount due and payable by the bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs..... (Rupees.....only).

3). We, the said bank further undertake to pay to IITM any money so demanded notwithstanding any dispute or disputes raised by the contractor (s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present guarantee being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability payment therein under and the contractor (s) shall have no claim against us for making such payment.

4). We.....(indicate the name of the bank).....further agree that the guarantee herein contained shall remain in full force and effect during the period that would be taken for the said performance of the said agreement and that it shall continue to be enforceable till all the dues of the Institute under or by virtue of the said agreement have been fully paid and claims satisfied or discharged or till Engineer-in-charge on behalf of the Institute certifies that the terms and conditions of the said agreement have been fully and properly carried out by the said contractor (s) and accordingly discharges this guarantee.

5). We.....(Indicate the name of the Bank).....further agree with the Institute that the Institute shall have the fullest liberty without our consent without effecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor (s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Institute against the said contractor (s) and to forebear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said contractor (s) or for any forbearance, act of omission on the part of the Institute on any indulgence by the Institute to the said contractor (s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6). This guarantee will not be discharged due to the change in the constitution of the bank or the contractor (s).

7). We.....(Indicate the name of the Bank).....lastly undertake not to revoke this Guarantee except with the previous consent of the Institute in writing.

8). This guarantee shall be valid up to.....unless extended on demand by Institute. Notwithstanding anything mentioned above, our liabilities under this guarantee is restricted to Rs ... (Rupees) and unless a claim of writing is lodged with us within six month of the date of expiry or extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharge. Dated the.....day of.....for.....(Indicate the name of the Bank).

FORM OF GUARANTEE BOND FOR EMD

In consideration of the Indian Institute of Technology Madras (hereinafter called "The Institute") Having offered to accept the terms and conditions of the proposed tender for the work ofhaving agreed to production of a irrevocable bank Guarantee for Rs.....(Rupees.....only) as security from the contractor (s) for compliance of his obligations in accordance with the terms and condition in the tender.

1). We.....(Indicate the name of the Bank).....(hereinafter referred to as "the Bank") hereby Undertake to pay to the Institute an amount not exceeding Rs..... (Rupees.....only) on demand by the Institute.

2). We.....do hereby undertake to pay the amounts due and payable under this Guarantee without any demure, merely on a demand from the Institute stating that the amount claimed is required to that recoveries due or likely to be due from the contractor (s). Any such demand on the Bank shall be conclusive as regard the amount due and payable by the bank under this Guarantee. However, our liability under this guarantee shall be restricted to an amount not exceeding Rs.....(Rupees.....only).

3). We, the said bank further undertake to pay to IITM any money so demanded notwithstanding any dispute or disputes raised by the contractor (s) in any suit or proceeding pending before any court or Tribunal relating thereto, our liability under this present guarantee being absolute and unequivocal. The payment so made by us under this bond shall be a valid discharge of our liability payment therein under and the contractor (s) shall have no claim against us for making such payment.

4). We.....(indicate the name of the bank).....further agree that the guarantee herein Contained shall remain in full force during the **SIX months period**.

5). We.....(Indicate the name of the Bank).....further agree with the Institute that the Institute shall have the fullest liberty without our consent without effecting in any manner our obligations hereunder to vary any of the terms and conditions of the said agreement or to extend time of performance by the said contractor (s) from time to time or to postpone for any time or from time to time any of the powers exercisable by the Institute against the said contractor (s) and to forbear or enforce any of the terms and conditions relating to the said agreement and we shall not be relieved from our liability by reason of any such variation or extension being granted to the said contractor (s) or for any forbearance, act of omission on the part of the Institute on any indulgence by the Institute to the said contractor (s) or by any such matter or thing whatsoever which under the law relating to sureties would, but for this provision, have effect of so relieving us.

6). This guarantee will not be discharged due to the change in the constitution of the bank or the contractor (s).

7). We.....(Indicate the name of the Bank).....lastly undertake not to revoke this Guarantee except with the previous consent of the Institute in writing.

8). This guarantee shall be valid up to **SIX months** unless extended on demand by Institute. Notwithstanding anything mentioned above, our liabilities under this guarantee is restricted to Rs ... (Rupees) and unless a claim of writing is lodged with us within six month of the date of expiry or extended date of expiry of this guarantee all our liabilities under this guarantee shall stand discharge. Dated the.....day of.....for.....(Indicate the name of the Bank)

GUARANTEE TO BE EXECUTED BY TENDERERS FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF WATER PROOFING WORKS

The Agreement made this..... day of Two thousand andbetween Son of hereinafter called the guarantor of the one part and the Indian Institute of Technology (hereinafter called Institute) of the other part datedand made between the GUARANTOR OF THE ONE part and the Institute of the other part, whereby the contractor, inter alia, undertook to render the buildings and structures in the said contract recited completely water and leak-proof.

AND WHEREAS GUARANTOR agreed to give a guarantee to effect that the said structures will remain water and leak-proof for ten years from the date of giving of water proofing treatment.

NOW THE GUARANTOR hereby guarantees that water proofing treatment given by him will render the structures completely leak-proof and the minimum life of such water proofing treatment shall be ten years to be reckoned from the date after the maintenance period prescribed in the contract.

Provided that the guarantor will not be responsible for leakage caused by earthquake or structural defects or misuse of roof or alteration and for such purpose:

- (a) Misuse of roof shall mean any operation which will damage proofing treatment, like chopping of firewood and things of the same nature which might cause damaged to the roof.
- (b) Alteration shall mean construction of an additional storey or a part of the roof or construction adjoining to existing roof where by water proofing treatment is removed in parts.
- (c) The decision of the Engineer-in-charge with regard to cause of leakage shall be final.

During this period of guarantee the guarantor shall make good all defects and in case of any defect being found, render the building waterproof to the satisfaction of the Engineer-in-charge at his cost ad shall commence the work for such rectification with in 7 days from the date of issue of the notice by the Engineer-in-charge calling upon him to rectify the defects failing which the work shall be got done by the Institute by some other contractor at the GUARANTOR'S cost and risk, and the decision of Engineer-in-charge as to the cost, payable by the guarantor shall be final and binding.

That if the guarantor fails to execute the water proofing or commits breach there under then the guarantor will indemnify the Institute and his successors against all loss, damage, cost, expense or otherwise which may be incurred by him by reason of any default on the part the GUARANTOR in formance and observance of this supplementary agreement. As to the amount of loss and or charge and / or cost incurred by the Institute the decision of the Engineer-in-charge will be final and binding on the parties.

IN WITNESS WHEREOF those present have been executed by theand by.....and for and on behalf of the Indian Institute of Technology Madras on the day, month and year first above written.

SIGNED SEALED and delivered by OBLIGOR in the presence of

- 1.
- 2.

SIGNED For and on behalf of the Indian Institute of Technology Madras by.....in the presence of

- 1.
- 2.

GURANTEE TO BE EXECUTED BY TENDERERS FOR REMOVAL OF DEFECTS AFTER COMPLETION IN RESPECT OF ANTITERMITE TREATMENT WORKS.

(On stamp paper of specified value)

THIS AGREEMENT is made on.....day of between Indian Institute of Technology Madras representing through Director hereinafter called the employer (which expression shall, wherever the context so demands or requires, includes their successor in office and assigns) of the one part, and M/s.....hereinafter called the contractor (which expression shall, wherever the context so demands or requires, includes his/her successor and assigns) of the other part.

WHEREAS this agreement is supplementary to the Contract Agreement (hereinafter called "the contractor") no.....dated..... made between the Employer on the one part and the contractor of the other part, whereby the contractor, inter-alia, undertook to render the building and structure in the said contract rendered completely termite proof.

AND WHEREAS THE contractor agreed to give a guarantee to the effect that the said structure will remain without any termite for 10 years.

NOW THE contractor hereby guarantee that termite proof treatment given by him will render the structure completely termite proof and the minimum life of such termite proofing treatment shall be ten years to be reckoned from the date after the maintenance period prescribed in the contract is over.

The decision of the Employer with regard to cause of termite attack shall be final.

During this period of guarantee the guarantor shall make good all defects and in case of any defect being found, render the building termite proof to the satisfaction of the Engineer-in-charge at his cost ad shall commence the work for such rectification with in 7 days from the date of issue of the notice by the Engineer-in-charge calling upon him to rectify the defects failing which the work shall be got done by the Institute by some other contractor at the GUARANTOR'S cost and risk, and the decision of Engineer-in-charge as to the cost, payable by the guarantor shall be final and binding.

That if the guarantor fails to execute the termite proofing or commits breach there under then the guarantor will indemnify the Institute and his successors against all loss, damage, cost, expense or otherwise which may be incurred by him by reason of any default on the part the GUARANTOR in formance and observance of this supplementary agreement. As to the amount of loss and or charge and / or cost incurred by the Institute the decision of the Engineer-in-charge will be final and binding on the parties.

IN WITNESS WHEREOF those present have been executed by theand by.....and for and on behalf of the Indian Institute of Technology Madras on the day, month and year first above written.

SIGNED SEALED and delivered by OBLIGOR in the presence of

- 1.
- 2.

SIGNED For and on behalf of the Indian Institute of Technology Madras by.....in the presence of

- 1.
- 2.

ADDITIONAL CONDITIONS II

CONTENTS OF TENDER (BID) DOCUMENT

Each set of Tender or Bidding Document will comprise the Documents listed below:

- (a.) Cover 1 – Eligibility document and forms (Eligibility Document)
- (b.) Cover 2 – Tender (Financial bid)

AGREEMENT

Agreement shall be drawn with the successful Tenderer as per General Conditions of Contract for CPWD works. This document is a priced publications and interested tenderers may purchase the and study the various clauses before submitting the tender.

TIME FOR COMPLETION OF WORK

The time allowed for carrying out the work will be 8 months from the 14th day after the date of written order to commence the work or from the first day of handing over the site, whichever is later, in accordance with the phasing if any indicated in the Tender documents.

AVAILABILITY OF SITE

The site for the work is available.

ISSUE OF TENDER DOCUMENTS

Tender Document with each set comprising of one copy each of Eligibility document and item rate tender may be downloaded from iitm web site from 17 -12 - 2012. The cost of tender document amounting to Rs. 1575/- shall be paid in the form of Demand Draft drawn in favour of IITM Chennai – 600 036 on any Scheduled Bank payable at Chennai and should be enclosed in cover – 1 (Eligibility document– Eligibility Document)

A complete set of Tender Document (Eligibility document(Eligibility Document) and Tender (financial bid)) can be seen in the Office of the EXECUTIVE ENGINEER (CIVIL), IITM between hours of 11.00 A.M. and 04.00 P.M. everyday except on Saturdays, Sundays and Public Holidays.

CLARIFICATIONS ON TENDER DOCUMENTS

A prospective Tenderer requiring any clarification on the Tender Document may notify EXECUTIVE ENGINEER (CIVIL), IITM at Chennai. The EXECUTIVE ENGINEER (CIVIL) will respond to any request for clarification, which he receives earlier than 8 days prior to the deadline or submission of Tenders. Copies of the response shall be forwarded who have attended the meeting.

PRE-BID MEETING

The Tenderer or his authorized official representative is invited to attend a Pre-bid Meeting & which will take place at III Floor, Admin. Block IITM, Engineering Unit, Chennai on 24.12.2012 at 10:30 AM. The purpose of the Meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage. The Tenderers are required to submit any question in writing so as to reach the EXECUTIVE ENGINEER (CIVIL), IITM before the pre bid meeting. Minutes of the Meeting, including the text of the questions raised (without identifying the source of enquiry) and the responses given will be transmitted without delay to all who have attended the Pre bid meeting. Any modification of the Tender Documents which may become necessary as a result of the Pre-bid meeting shall be made exclusively through the issue of an Addendum Non-attendance at the Pre-bid Meeting will not be a cause for disqualification of a Tenderer.

AMENDMENT OF TENDER DOCUMENTS

Before the deadline for submission of tenders, the tender document may be modified by issue of addenda. Any Addendum issued shall be part of the Tender Documents and shall be communicated in writing to all who have attended the pre-bid meeting. The prospective Tenderers shall acknowledge receipt of each Addendum in writing to the EXECUTIVE ENGINEER (CIVIL)/IITM. To give prospective Tenderers reasonable time in which to take the

Addenda into account in preparing their tenders, extension of the deadline for submission of Tenders may be given as necessary.

EARNEST MONEY

Tenders should be accompanied by an EMD for an amount of **Rs. 3.2 Lakhs** in the form of demand draft drawn in the name of Indian Institute of Technology Madras, Chennai on any scheduled bank and payable at Chennai.

The tenderer, if he so wishes, may pay 50 % of the above amount in the form a demand draft drawn in the name of Indian Institute of Technology Madras, Chennai on any scheduled bank and payable at Chennai and for the balance amount furnish a bank guarantee of a scheduled bank. Any Tender not accompanied by Earnest Money in an acceptable form shall be rejected by the Employer as non-responsive.

The Earnest Money of the Tenderers whose Eligibility Document is found not acceptable will be returned as soon as scrutiny of Eligibility Document has been completed by the Employer. After evaluation of the Financial Bids, the Earnest Money of unsuccessful Tenders will be returned within 28 days of the end of Tender Validity period.

The Earnest Money of the successful Tenderer will be taken as part of the Security Deposit as stipulated in Clause 1A of "General conditions of Contract".

The Earnest Money will be forfeited to an extent of 50%, if during the period of Tender Validity, the tenderer

- (a) Withdraws his Tender
Or
- (b) Makes any modifications in the terms and conditions of the Tender which are not acceptable to the Employer.

The Earnest Money will be forfeited in full if the successful Tenderer.

- (i) Fails to furnish the Performance Guarantee within the period specified under Clause 1 of "General Conditions of Contract"
Or
- (ii) Fails to commence the work on 10th day after the date on which the Employer issues written order to commence the work/ handing over the site which ever is later. .

ALTERNATIVE PROPOSALS BY THE TENDERERS

The Tenderers shall submit offers, which comply strictly with the requirements of the Tender Document. Alternatives or any modification shall render the Tender invalid.

SUBMISSION OF TENDER

The tender shall be submitted in two covers

Cover 1 (Named as Eligibility Document) shall contain the Eligibility document with all the prescribed forms duly filled in. The cost of tender document, EMD and authority to sign shall be enclosed to this cover.

Cover 2 – The Tender for the work (Named as Financial bid or Price bid) shall contain the rates for the various items of the work in the prescribed in Bill of quantities. Other special conditions, specifications, drawings etc enclosed shall also be submitted after signing each page.

Both Cover 1 and Cover 2 shall be put in a third cover and sealed. The name of work and date of opening shall be written on the cover.

AUTHORITY TO SIGN

- (a) If the Applicant is an individual, he should sign above his full type written name and current address.
- (b) If the Applicant is a proprietary firm, the Proprietor should sign above his full type written name and the full name of his firm with its current address.
- (c) If the Applicant is a firm in partnership, the Documents should be signed by all the Partners of the firm above their full type written names and current addresses. Alternatively the Documents should be signed by a Partner holding Power of Attorney for the firm and in this case a certified copy of the Power of Attorney should accompany the Documents. In both cases a certified copy of the Partnership Deed and current address of all the partners of the firms should be furnished.
- (d) If the Applicant is a limited Company, or a Corporation, the Documents shall be signed by a duly authorized person holding Power of Attorney for signing the Documents, accompanied by a copy of the Power of Attorney. The Applicant should also furnish a copy of the Memorandum of Articles of Association duly attested by a Public Notary.

POINTS TO BE KEPT IN MIND WHILE FURNISHING DETAILS

While filling the Eligibility Documents and the Tender (Financial Bid), the following should be kept in mind:

- (i) Details should be typed or written in indelible ink.
- (ii) All corrections or writing shall be initialed by the person or persons signing the document.
- (iii) There shall be no additions or alterations except those to comply with the instructions issued by the Employer or as necessary to correct errors, if any, made by the Tenderers.

DEADLINE FOR SUBMISSION OF TENDER

Tenders must be received by the Employer at the following address not later than 3.00 PM of the receipt date mentioned. In the event of the specified date for the submission of the Tender being declared a holiday by the Employer, the Tenders will be received up to the appointed time on the next working day.

Address for Submission of Tender

**The EXECUTIVE ENGINEER (CIVIL)
Engineering Unit, Administrative Building, 3rd floor,
Indian Institute of Technology Madras
Chennai – 600 036.**

The Employer may extend the deadline for submission of Tenders by issuing an amendment in writing in accordance with para 7.3 in which case all rights and obligations of the Employer and the Tenderer previously subject to the original deadline will be subject to new deadline.

LATE TENDER

Late tender will not be entertained.

NOTE ON GENERAL CONDITION OF CONTRACT AND SCHEDULE A TO F

1. The general condition of contract for CPWD works 2010 comprising of general rules and directions, conditions of contract, and the contract clauses in Form 8 should be read in conjunction with all Correction Slip (C.S.) issued by the DG (Works), CPWD, New Delhi up to till date.
2. Wherever the expression “The President of India” or “The Government” or “The CPWD” appears in the clauses it should be substituted by the expression “IITM” representing “Indian Institute of Technology Madras”.
3. Wherever the expression “divisional Officer” appears in the Clauses, it should be substituted by the expression “EXECUTIVE ENGINEER (CIVIL)”.
4. “Engineer in Charge” means EXECUTIVE ENGINEER (CIVIL), IITM, and the Engineer means the officer representing the Engineer-in-Charge of the Project.

SPECIAL CONDITIONS

1. No plot rent shall be charged for materials stocked in the institute land during the course of construction with the prior approval the engineer provided all such materials are removed within one month after the works are completed.
2. Royalty or charges due for use of private quarries and private land shall be paid by the Contractor.
3. No labour camps shall be permitted in side the IIT campus. Workers should be made to confine themselves to the work areas and should not wander in to the near by areas / buildings/ forests.
4. If night work is required to be carried out to fulfill the agreed rate of progress all arrangement shall be made by the Contractor inclusive of lighting the area without any claim for extra rate. To the extent possible engaging women labour in the night shift should be avoided.
5. The works shall be carried as per C.P.W.D specifications with Addenda and Corrigenda issued up to till date and as per best Engineering practice.
6. No variations from, additions to and omissions from in the items of work shall vitiate the contract. All such variations, additions, substitutions etc shall be decided as per the terms of the contract agreement.
7. Child Labour is strictly prohibited.
8. Water will not be supplied by I.I.T Madras and the contractors themselves will arrange water suitable for construction work.
9. Holes and chasis for water supply and drainage, etc, shall be provided as directed during progress of work without any claim for extra for finishing.
10. The work shall be carried out with least hindrance to the adjoining building and offices and the contractors will be responsible for any damages, caused to the existing fixtures, electric fitting, etc. in the course of execution and the contractor shall make good any such, damages without any claim for extra.
11. For wall tiling works wall corners should be bevel edged or provided with PVC corner strips no additional payment will be made towards the same.
12. Access should be from the external side of the building using temporary stairs etc.
13. The contractor should arrange water supply for the construction work.
14. Contractor should provide adequate safety measures like safety nets, barricades etc as per the NIT conditions.
15. Since the work is to be carried out near ladies hostel premises, necessary precautionary measures should be taken during the construction.
16. Any dispute arises out in the agreement; the legal jurisdiction will be at Chennai in Tamil Nadu only.

SPECIAL CONDITION FOR PROTECTION FOR ENVIRONMENT

1. The debris / construction waste and other waste generated from the work spot should not be thrown inside the campus. All waste material should be taken out of the campus or should be dumped at a place earmarked by the Engineer in charge.
2. All construction material should be stored only at places earmarked by the engineer in charge. Material like cement, aggregate, steel etc should not be stored in buildings that are in use. If any material stored in unauthorized location the same shall got removed at the cost of contractor and necessary rent shall be levied for the area used for storage.
3. Necessary display boards indicating the following shall be displayed in a conspicuous place near the work spot.
 - a. Name of the work
 - b. Name of the contractor and Contact Number
 - c. Tendered cost
 - d. Date of start and stipulated date of completion
 - e. AEE and JE in charge for the work and Contact number
4. A Suggestion box should be kept near the above said board.
5. For Intercarting of various materials animal drawn vehicles are strictly prohibited.
6. Preparation of concrete, mortars in the roads, pavements, under the building bare floors is strictly prohibited.
7. While transporting the materials along the road, spillage of material should be avoided. If any spillage occurs the same should be got cleaned immediately.
8. No vegetation inside the campus should be damaged.
9. Drinking water requirement of the labour should be arranged by the contractor and they should be instruct no to misuse the facilities available in the various buildings.
10. All labour should be dressed properly attending to work wearing dhotis, lungies should be avoided to the extend possible.
11. The workmen shall wear suitable protection devices like mask, gloves, shows etc,
12. Any violation of above will attract levy of compensation by the engineer in charge on the contractor.

SPECIAL CONDITON FOR SAFETY AT THE SITE

- ✓ The contractor must appoint a qualified person (full time) for taking care of implementation of Safety systems
- ✓ The Contractor shall submit the Project Safety Plan stating the methodology of implementation of systems to ensure the safe and environment friendly work place. The Safety Plan must include the following:
 - ❖ Organization Chart
 - Reporting relationship of the safety function in a flow chart
 - ❖ Safety Committee
 - Structure – Chairman, secretary and committee members – Roles & Responsibilities
 - ❖ Applicable Statutory requirements, standards and codes related to safety and its adherence
 - ❖ General safety rules and regulations concerning
 - Use of personal protective equipment and safety devices relevant to site activities
 - Awareness and Training Programs
 - Motivational schemes and programs
 - Access, Egress and workstation safety
 - Safe use of construction power supply and upkeep / maintenance of installations
 - Work permit systems
 - Use, maintenance and inspection of Plant & machinery
 - Scaffold & formwork norms
 - Use, maintenance and inspection of Lifting Tools
 - Fire Protection and prevention
 - Emergency preparedness

Status of Safety implementation at site will be discussed in the Weekly Review meeting. Contractor must submit the safety statistics every month in the enclosed format. Merit Certificate will be issued for the achievement of safety mile stones like 0.5 million safe man hours, one million safe man hours, 1.5 million safe man hours and so on.

The General Guidelines governing the safety implementation shall include the following Rules. While preparing the safety plan.

1. No workmen below 18 years and above 58 years of age shall be engaged for a job.
2. All the workmen shall undergo Safety Induction, screening before engaging them on the job. Physical fitness of the person to certain critical jobs like working at height or other dangerous locations to be ensured before engaging the person on work.
3. Smoking is strictly prohibited at workplace.

4. Sub-contractors shall ensure adequate supervision at workplace. They shall ensure that all persons working under them shall not create any hazard to self or to co-workers.
5. Nobody is allowed to work without wearing safety helmet. Chinstrap of safety helmet shall be always on. Drivers, helpers and operators are no exception.
6. No one is allowed to work at or more than three meters height without wearing safety belt and anchoring the lanyard of safety belt to firm support preferably at shoulder level.
7. No one is allowed to enter into workplace and work at site without adequate foot protection.
8. Usage of eye protection equipment shall be ensured when workmen are engaged for grinding, chipping, welding and gas-cutting. For other jobs as and when site safety co-coordinator insists eye protection has to be provided.
9. All PPE like Safety shoes, Safety helmet, Safety belt, Safety goggles etc. shall be arranged before starting the job.
10. All excavated pits shall be barricaded & barricading to be maintained till the backfilling is done. Safe approach to be ensured into every excavation.
11. Adequate illumination at workplace shall be ensured before starting the job at night.
12. All the dangerous moving parts of the portable / fixed machinery being used shall be adequately guarded.
13. Ladders being used at site shall be adequately secured at bottom and top. Ladders shall not be used as work platforms.
14. Erection zone and dismantling zone shall be barricaded and nobody will be allowed to stand under suspended loads.
15. Contractors should spray water using Water browser periodically in the site to reduce the dust rising due to wind.
16. Horseplay is completely prohibited at workplace. Running at the site is completely prohibited, except in the case of emergency.
17. Material shall not be thrown from the height. If required, the area shall be barricaded and one person shall be posted outside the barricading for preventing the tre-passers from entering the area.
18. Other than electricians with red helmet no one is allowed to carry out electrical connections, repairs on electrical equipment or other jobs related thereto.
19. All electrical connections shall be made using 3 or 4 core cables, having a earth wire.
20. Proper Earthing pits at site to be constructed. And the sensitivity must be maintained less than 1 ohm
21. Main panel boards should have MCB's and RCCB / ELCB's (30 mA sensitivity).
22. Inserting of bare wires for tapping the power from electrical sockets is completely prohibited.
23. All major, minor accidents and near misses to be recorded and reported to the IITM and the management must take necessary steps to avoid the recurrence.
24. Scaffoldings used should be of proper construction. No Casurina pole / bamboo scaffolding is permitted. It should be inspected by competent person(s) before use

25. All tools and tackles shall be inspected before use. Defects to be rectified immediately. No lifting tackle to be used unless it is certified by the competent authority.
26. All tools and tackles shall be tested and have a Identification no., SWL and date of next test marked on them.
27. A tools and tackles inspection register must be maintained and updated regularly.
28. Good housekeeping to be maintained. Passages shall not be blocked with materials. Materials like bricks shall not be stacked to the dangerous height at workplace.
29. Must have a reverse horn on all the Earth moving vehicles and Equipments used at site.
30. Debris, scrap and other materials to be cleared from time to time from the workplace and at the time of closing of work everyday.
31. Adequate fire fighting equipment shall be made available at workplace and persons are to be trained in fire fighting techniques with the co-ordination of site safety co-ordinator.
32. All the unsafe conditions, unsafe acts identified by contractors, reported by site supervisors and / or safety personnel to be corrected on priority basis.
33. No children shall be allowed to enter the workplace.
34. Other than the Driver / operator, no one shall travel in a tractor / tough rider etc.
35. All the lifting tools and tackles shall be stored properly when not in use.
36. Clamps shall be used on Return cables to ensure proper earthing for welding works.
37. Return cables shall be used for earthing.
38. All the pressure gauges used in gas cutting apparatus shall be in good working condition.
39. Proper eye washing facilities shall be made in areas where chemicals are handled.
40. Connectors and hose clamps are used for making welding hose connections.
41. Proper warning boards and caution notices to be displayed at required areas inside the site.
42. All cranes must have a trained signal man for signaling.
43. All underground cables for supplying construction power shall be routed using conduit pipes.
44. Spill trays shall be used to contain the oil spills while transferring / storing them.
45. Tapping of power by cutting electric cables in between must be avoided. Proper junction boxes must be used.

INSURANCE TO BE TAKEN BY THE CONTRACTOR AND EMPLOYER TO BE INDEMNIFIED

Insurance of Works

The Contractor shall effect Contractor's all risk insurance policy (CAR policy) in the joint names of the Employer and the Contractor, the name of the former being placed first in the policy, covering the following:

- (a) The Works at the contract price together with the materials for incorporation in the works at their replacement value.
- (b) All plants and equipment and other things brought to the site by the Contractor at their replacement value.

The insurance shall be against all losses or damages from whatever causes, other than excepted risks, as defined in Clause 2 of Conditions of Contract, for which the Contractor is responsible under the Contract. The insurance cover shall be for the period of contract and also for the period of maintenance, for loss or damage arising from a cause prior to commencement of the period of maintenance, and for any loss or damage, occasioned by the Contractor in the course of any operations carried out for the purpose complying with his course of any operations carried out for the purpose of complying with his obligations during maintenance period under Clause 17 of Clauses of Contract.

Such insurance shall be effected with an insurer and with terms approved by the Employer. The Contractor shall, whenever required, produce the policy or policies and the receipts for payment of the current premiums.

Third Party Insurance

Before commencing the execution of the Works, the contractor shall insure against the liability for any material or physical damage, loss or injury which may occur to any property or life including that of the Employer or to any person, including any employee of the Employer, by or arising out of the execution of the works or in the carrying out of the Contract. The cum insured will be for Rs.5 lakhs,

Such insurance shall be effected with an insurer and in terms approved by the Employer. The Contractor shall, whenever required, produce before the Engineer-in-charge the policy or policies of insurance and the receipts of payment of the current premiums.

Workmen's Insurance

The Employer's shall not be liable for any payment in respect of any damages or compensation payable according to law in respect or in consequence of any accident or injury or loss of life to any workman or other person in the employment of the Contractor or any sub-contractor, except an accident or injury resulting from any act or default of the Employer, his agents or servants. The Contractor shall insure against such liability with an insurer approved by the Employer for sum of the established norms during the entire period till completion of Period of Maintenance.

Recovery from the Contractor

Without prejudice for the other rights of the Employer against the Contractor in respect of such default, the Employer shall be entitled to deduct from any sums payable to the Contractor the amount of any damages, compensation costs, charges and other expenses paid by the Employer and which are payable by the Contractor under this clause.

Extension of time.

The Contractor, in case of rebuilding or reinstatement, shall be entitled to such extension of time for completion as the Engineer-in-charge may deem fit, but shall, however not be entitled to reimbursement by the Employer of any shortfall or deficiency in the amount finally paid by the insurer in settlement of any claim arising as set out herein.

Insurance by Sub-Contractors

Without prejudice to his liability under this clause the Contractor shall also cause all Sub-Contractors to effect, for their respective portions of the works, similar policies of insurance in accordance with the provisions of this clause and shall produce or cause to produce to the Employer such policies. The Contractor shall not permit a Sub-Contractor to commence work at the site unless the said insurance policies are submitted. In the event of failure of the Sub-Contractor to take out such a policy of insurance before commencing the works at the site, the Contractor shall be responsible for any claim or damage attributable to the said Sub-Contractor.

Period of Policies

All the insurance covers mentioned above shall be kept alive during the complete period of the contract.

Remedy on Contractor's Failure to Insure

If the Contractor shall fail to effect and keep in force the insurance referred to above, or any other insurance which he may be required to effect under the terms of the Contract, then and in any such case the Employer on advice of the Engineer-in-Charge may effect and keep in force any such insurance and pay such premium or premiums as may be necessary for that purpose and from time to time deduct the amount so paid by the Employer as aforesaid from any moneys due or which may become due to the Contractor, or recover the same as debt due from the Contractor.

Damage to Persons and Property – Employer to be Indemnify

The Contractor shall indemnify the Employer against all losses and claims in respect of injuries or damages to any person or material or physical damage to any property whatsoever which may arise out of or in consequence of the execution and maintenance of the works and against all claims, proceedings, damages, costs, charges and expenses whatsoever in respect of or in relation thereto, except any compensation or damages for or with respect to:

- (a) The permanent use or occupation of land by the works or any part thereof.
- (b) The right of the Employer to execute the works or any part thereof on, over, under, in or through any land.
- (c) Injuries or damage to persons or property resulting from any act or neglect of the Employer, his agents, servants or other contractors, not being employed by the Contractor or for or in respect of any claims, proceedings, damages, costs, charges and expenses in respect thereof or in relation thereto or where the injury or damage was contributed to by the contractor, his servants or agents, such part of the compensations as may be just and equitable having regard to the extent of the responsibility of the Employer, his servant or agent or other Contractors, for the damage or injury.

Signature of Contractor

EXECUTIVE ENGINEER (CIVIL)

MONTHLY SITE SAFETY STATISTICS

TOTAL MANHOURS WORKED DURING THE MONTH

Sl. No.	Description	Number	Man-hours worked	OT Performed	Total
1	Company Staff				
2	Subcontractor's Workmen (including security personnel)				
GRAND TOTAL OF MANHOURS WORKED DURING THE MONTH					

Total Man-hours worked since inception : _____
 Safe man hours from last reportable Lost time injury : _____

Details of Reportable Lost Time Injury

Sl No	Name of Injured	Date of Accident	Resumed duty on	Man days lost			Claim Status
				Up to last month (1)	This month (2)	Total (1+2)	
Man days Lost during the month (Cumulative of 2)							

Number of Dangerous Occurrences : _____
 No of Near Miss Cases : _____

Routed through Site In charge Signature: _____ Date: _____
 Site Safety Co-ordinator/Time Keeper Signature: _____ Date: _____

Progress Reports to be submitted by the contractor

The contractor shall submit monthly progress report of the work in a computerized form. The progress report shall contain the following.

1. Project information giving the broad features of the contract.
2. Introduction, giving a brief scope of the work under the contract and the broad structural or other details.
3. Construction schedule of the various components of the work through bar chart for the next 3 quarters, showing the milestones, targeted tasks and up to date progress.
4. Progress chart of the various components of the work that are planned and achieved for the month as well as cumulative up to the month with reasons for deviations, if any, in a tabular format.
5. Plant and machinery statement, indicating those deployed in the work, and their working status.
6. Man power statement, indicating the labour and staff employed in the work and the details of work carried out.
7. Financial statement, indicating the broad details of all the running account payments received up to date, such as gross value of work done. Advances taken, recoveries effected, amounts withheld, net payments, details of cheque payments received, etc.
8. A statement showing the extra and substituted items submitted by the contractor and the payments received against them, items pending for sanctions / decisions by the Institute , broad details of the bank guarantees, indicating their validity period, board details of the insurance policies taken by the contractor, if any, advances received and adjusted from the department etc.
9. Progress photographs in colour of the various items / components of the work done up to date to indicate visually the actual progress of the work.
10. Quality assurance and quality control tests conducted during the month with results thereof.
11. Other details asked for by the engineer-in-charge.

The contractor has to furnish monthly progress report, both physical and financial, as per proforma given below;

PHYSICAL

Name of Item	Quantity as per Agreement	Quantity executed during the month	Total up to date quantity executed	Anticipated balance quantity
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FINANCIAL

Total tendered amount	Amount of work done during the month	Total amount of work done up to date	Anticipated amount of balance work
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The contractor has to submit the progress report to the Assistant Executive Engineer in triplicate by 10th day of every month as per the above proforma along with photographs of the work done during that month. The contractor shall be charged @ Rs.5000 (Rupees five thousand only) in the event of non-receipt of monthly progress report on due date (i.e. on 10th of every month) in the manner prescribed above. In case 10th day happens to be a closed holiday then the progress report will be submitted on the next working day.

A videography of the work should be undertaken at various stages of construction right from the day of start of work to date of completion / occupation covering all major events inspections etc. The videography shall be reviewed time to time by the Engineer in charge.

CLAUSES OF CONTRACT**CLAUSE 1**

- (i) The contractor shall submit an irrevocable performance guarantee of 5 % (Five percent) of the tendered amount in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (not withstanding and / or without prejudice to any other provisions in the contract) within the period specified in schedule 'F' from the date of issue of letter of acceptance. This period can be further extended by the Engineer-in-charge upto a maximum as specified in schedule 'F' on written request of contractor stating the reason for delays in procuring the performance guarantee, to the satisfaction of the Engineer-in-charge. This guarantee shall be in the form of cash (in case guarantee amount is less than Rs.10,000/-) or Deposit at call receipt of any scheduled bank / Banker's Cheque of any scheduled bank / Demand Draft of any scheduled / Pay order of any scheduled bank (in case guarantee amount is less than Rs.1,00,000/-) or Government securities or fixed deposit receipts or guarantee bonds of any scheduled bank or the State Bank of India in accordance with the form annexed hereto. In case of fixed deposit receipt of any Bank is furnished by the contractor to the Institute as part of the performance Bank guarantee and the Bank is unable to make payment against said fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the Institute to make good the deficit.
- (ii) The performance guarantee shall be initially valid upto the stipulated date of completion plus 60 days beyond that. In case the time for completion of work gets enlarged, the contractor shall get the validity of performance guarantee extended to cover such enlarged time for completion of work. After recording of the completion certificate for the work by the competent authority, the performance guarantee shall be returned to the contractor, without any interest.
- (iii) The Engineer-in-charge shall not make a claim under the performance guarantee except for amounts to which the Institute is entitled under the contract (not withstanding and / or without prejudice to any other provisions in the contract agreement). In the event of:
 - a. Failure by the contractor to extend the validity of the Performance guarantee as described herein above, in which event the Engineer-in-charge may claim the full amount of the performance guarantee.
 - b. Failure by the contractor to pay the Institute any amount due, either as agreed by the Contractor or determined under any of the clauses / conditions of the agreement, within 30 days of the service of the notice to this effect by Engineer-in-charge.
- (iv) In the event of contract being determined or rescinded under provision of any of the Clause / Condition of the agreement, the performance guarantee shall stand forfeited in full and shall be absolutely at the disposal of the Institute.

CLAUSE 1 A

The person/persons whose tender(s) may be accepted (herein after called the contractor) shall permit Institute at the time of making any payment to him for work done under the contract to deduct a sum at the rate of 5 % of the gross amount of each running bill till the sum along with the sum already deposited as earnest money, will amount to security deposit of 5 % of the tendered value of the work. Such deductions will be made and held by Institute by way of Security Deposit unless he/ they has / have deposited the amount of Security at the rate mentioned above in cash or in the form of Government Securities or fixed deposit receipts. In case a fixed deposit receipt of any bank is furnished by the contractor to the Institute as part of Security Deposit and the bank is unable to make payment against the fixed deposit receipt, the loss caused thereby shall fall on the contractor and the contractor shall forthwith on demand furnish additional security to the Institute to make good the deficit.

All compensations or the other sums of money payable by the contractor under the terms of this contract may be deducted from, or paid by the sale of a sufficient part of his security deposit or from the interest arising there from, or from any sums which may be due to or may become due to the contractor by the Institute on any account whatsoever and in the event of his Security Deposit being reduced by reason of any such deductions or sale as aforesaid, the contractor shall within 10 days make good in cash or fixed deposit receipt tendered by the State Bank of India or by the scheduled banks or Government securities (if deposited for more than 12 months) endorsed in favour of the Engineer-in-charge, any sum or sums which may have been deducted from, or raised by sale of his security deposit or any part thereof. The security deposit shall be collected from the running bill of the contractor at the rates mentioned above and the earnest money deposited at the time of tenders will be treated a part of security deposit.

The Security deposit as deducted above can be released against bank guarantee issued by a scheduled bank, on its accumulations to a minimum of Rs 5 Lakhs subject to the condition that amount of such bank guarantee, except last one shall not be less than Rs 5 Lakhs.

Note : 1. Government papers tendered as security will be taken at 5 % (Five percent) below its market price or at its face value, whichever is less. The market price of Government paper would be ascertained by the Engineer-in-charge at the time of collection of interest and the amount of interest to the extent of deficiency in value of paper will be withheld, if necessary.

Note : 2. Government securities will include all forms of securities mentioned in Rule 274 of the GF Rules except fidelity bond. This will be subject to the observance of the conditions mentioned under the rules against each form of security.

Note : 3. Note 1 and Note 2 above shall be applicable for both clause 1 and clause 1 A.

CLAUSE 2

If the contractor fails to maintain the required progress in terms of clause 5 or fails to complete the work and clear the site on or before the contract or extended date of completion, he shall, without prejudice to any other right or remedy available under the law to the Institute on account of such breach, pay as agreed compensation the amount calculated at the rates stipulated below by the authority specified in schedule 'F' (whose decision in writing shall be final and binding) may decided on the amount of tendered value of the work for every completed day / month (as applicable) that the progress remains below the specified in clause 5 or that the work remains incomplete. This will also apply to items or group of items for which a separate period of completions has been specified.

Compensation for delay of work @ 1.5 % per month of delay to be computed on per day basis.

Provided always that the total amount of compensation for delay to be paid under this condition shall not exceed 10 % of the tendered value of work or of the tendered value of the item or group of items of work for which a separate period of completion is originally given.

The amount of compensation may be adjusted or set-off against any sum payable to the Contractor under this or any other contract with the Institute. In case, the contractor does not achieve a particular milestones mentioned in schedule 'F', or the re-scheduled milestone(s) in terms of clause 5.4, the amount shown against that milestone shall be withheld, to be adjusted against the compensation levied at the final grant of Extension of Time.

With-holding of this amount on failure to achieve a milestone, shall be automatic without any notice to the contractor. However, if the contractor catches up with the progress of work on the subsequent milestone(s), the withheld amount shall be released. In case the contractor fails to make up for the delay in subsequent milestones, amount mentioned against each milestone missed subsequently also shall be withheld. However, no interest, whatsoever, shall be payable on such withheld amount.

CLAUSE 2A

In case, the contractor completes the work ahead of scheduled completion time, a bonus @ 1 % (one percent) of the tendered value per month, computed on per day basis shall be payable to the contractor, subject to a maximum limit of 5 % (five percent) of the tendered value. The amount of bonus, if payable, shall be paid along with final bill after completion of work. Provided always that provision of the clause 2 A shall be applicable only when so provided in schedule 'F'.

CLAUSE 3

Subject to other provisions contained in this clause, the Engineer-in-charge may, without prejudice to his any other rights remedy against the contractor in respect of any delay, inferior workmanship, any claims for damages and / or any other provisions of contract or otherwise, and whether the date of completion has or has not elapsed, by notice in writing absolutely determine to contract in any of the following cases:

- i. If the contractor having been given by the Engineer-in-charge a notice in writing to rectify, reconstruct or replace any defective work or that work is being performed in an inefficient or otherwise improper or unworkman like manner shall omit to comply with tht requirement of such notice for a period of 7 days thereafter.
- ii. If the contractor has, without reasonable cause, suspended the progress of the work or has failed to proceed with the work with due diligence so that in the opinion of the Engineer-in-charge (which shall be final and binding) he will be unable to secure completion of the work by the date for completion and continues to do so after a notice in writing of seven days from the Engineer-in-charge.
- iii. If the contractor fails to complete the work within the stipulated date or items of work with individual date of completion, if any stipulated, on or before such date(s) of completions and does not complete them within the period specified in a notice given in writing in that behalf by the Engineer-in-charge.

- iv. If the contractor persistently neglects to carry out his obligations under the contract and / or commits default complying with any of the terms and conditions of the contract and does not remedy it or takes effective steps to remedy it within 7 days after a notice in writing is given to him in that behalf by the Engineer-in-charge.
- v. If the contractor shall offer to give or agree to give to any person in Government service or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for doing or for bearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract for Government.
- vi. If the contractor shall enter into a contract with the Institute in connection with which commission has been paid or agreed to be paid by him or to his knowledge, unless the particulars of any such commission and the terms of payment thereof have been previously disclosed in writing to the Engineer – in – Charge.
- vii. If the contractor shall obtain a contract with the Institute as a result of wrong tendering or other non – bonafide methods or competitive tendering.
- viii. If the contractor being an individual or if a firm any partner thereof shall at any time be adjudged insolvent or have a receiving order or order for administration of his estate made against him or shall take any proceedings for liquidation or composition (other than a voluntary liquidation for the purpose of amalgamation or reconstruction) under any insolvency Act of the time being in force or make any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditor or purport so to do, or if any application be made under insolvency act for the time being in force for the sequestration of his estate or if a trust deed be executed by him for benefit of his creditors.
- ix. If the contractor being a company shall pass a resolution or the court shall make an order that the company shall be wound up or if a receiver or a manager on behalf of a creditor shall be appointed or if the circumstances shall arise which entitle the court or the creditor to appoint a receiver or a manager or which entitle the court to make a winding up order.
- x. If the contractor shall suffer an execution being levied on his good and allow it to be continued for a period of 21 days.
- xi. If the contractor assigns transfers, sublets (engagement of labour on piece – work basis or of labour with materials not to be incorporated in the work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer, sublet or otherwise parts with the entire works or any portion thereof with out the prior written approval of the Engineer – in – charge.
- xii. If the work is not started by the contractor within 1/8th of the stipulated time.

When the contractor has made himself liable for action under any of the cases aforesaid, the Engineer-in-charge on behalf of the Institute shall have powers.

- a. To determine the contract as aforesaid (of which termination notice in writing to the contractor under the hand of the Engineer-in-charge shall be conclusive evidence). Upon such determination, the Earnest Money Deposit, Security Deposit already recovered and performance guarantee under the contract shall be liable to be forfeited and shall be absolutely at the disposal of the Institute.
- b. After giving notice to the contractor to measure up the work of the contractor and to take such whole, or the balance or part there of, as shall be un-executed out of his hands and to give it to another contractor to complete the work. The contractor, whose contract is determined or rescind as above, shall not be allowed to participate in the tendering process for the balance work.

In the event of above courses being adopted by the Engineer-in-charge, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any material or entered into any engagements or made any advance on account or with a view to the execution of the work or the performance of the contract. And in case action is taken under any of the provision aforesaid, the contractor shall not be entitled to recover or be paid any sum for any work thereof actually performed under this contract unless and until the Engineer-in-charge has certified in writing the performance of such work and value payable in respect thereof and he shall only be entitled to be paid the value so certified.

CLAUSE 3A

In case, the work cannot be started due to reason not within the control of the contractor within 1/8th of the stipulated time for the completion of the work, either party may close the contract. In such an eventuality, the earnest money deposit and performance guarantee of the contractor shall be refunded, but no payment on account of interest, loss of profit or damages etc. shall be payable at all.

CLAUSE 4

In any case in which any of the powers conferred upon Engineer-in-charge by clause 3 thereof, shall have become exercisable and the same are not exercised, the non exercise thereof shall not constitute a waiver of any of the conditions hereof and such powers shall notwithstanding be exercisable in the event of any future case of default by the contractor and the liability of the contractor for compensations shall remain unaffected. In the event of Engineer-in-charge putting in force all or any of the powers vested in him under the preceding clause he may, if he so desires after giving a notice in writing to the contractor, take possession of (or at the sole discretion of the Engineer-in-charge which shall be final and binding on the contractor) use as on hire, (the amount of the hire money being also in the final determination of the Engineer-in-charge) all or any tools, plants, materials and stores in or upon the works, or the site thereof belonging to the contractor, or procured by the contractor 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 this not being applicable, at current market rates to be certified by the Engineer-in-charge, whose certificate thereof shall be final, and binding on the contractor, clerk of the works, foreman or other authorized agent to remove such tools, plant, materials, or stores from the premises (within a time to be specified in such notice) in the event of the contractor failing to comply with any such requisition, the Engineer-in-charge may remove them at the contractor's expense or sell them by auction or private sale on account of the contractor on his risk in all respects and certificate of the Engineer-in-charge as to the expenses of any such removal and the amount of the proceeds and expenses of any such sale shall be final and conclusive against the contractor.

CLAUSE 5

The time allowed for execution of the works as specified in schedule 'F' or the extended time in accordance with these conditions shall be the essence of the contract. The execution of the work shall commence from such time period as mentioned in schedule 'F' or from the date of handing over of the site whichever is later. If the contractor commits default in commencing the execution of the work as aforesaid, Institute shall without prejudice to any other right to remedy available in law, be at the liberty to forfeit the earnest money & performance guarantee absolutely.

5.1 As soon as possible after the contract is concluded the contractor shall submit a time and progress chart for each mile stone and get it approved by the Engineer-in-charge. The chart shall be prepared in direct relation to the time slated in the contract documents for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and may be amended as necessary by agreement between the Engineer-in-charge and the contractor within the limitations of time imposed in the contract documents, and further to ensure good progress during the execution of the work, the contractor shall in all cases in which the time allowed for any work, exceeds one month (save for special jobs for which a separate programme has been agreed upon) complete the work as per mile stones given in Schedule 'F'.

5.2 If the work(s) be delayed by:

- i. force majeure, or
- ii. abnormally bad weather, or
- iii. serious loss or damage by fire, or
- iv. civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the work, or
- (v) delay on the part of other contractors or tradesmen engaged by Engineer-in-charge in executing work not forming part of the contract, or
- (vi) non-availability of stores, which are the responsibility of Institute to supply or
- (vii) non-availability or break down of tools and plant to be supplied or supplied by Institute or
- (viii) any other cause which, in the absolute discretion of the Engineer in charge is beyond the Contractor's control.

then upon the happening of any such event causing delay, the contractor shall immediately give notice thereof in writing to the Engineer-in-charge but shall nevertheless use constantly his best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Engineer-in-charge to proceed with the works.

5.3 Request for rescheduling of milestones and extension of time, to be eligible for consideration, shall be made by the contractor in writing within fourteen days of the happening of the event causing delay on the prescribed form. The contractor may also, if practicable, indicate in such a request the period for which extension is desired.

5.4 If any such case the Engineer in Charge may give a fair and reasonable extension of time and reschedule the mile stone for completion of work. Such extension shall be communicated to the contractor by the Engineer-in-charge in writing, within 3 months of the date of receipt of such request. Non-application by the contractor for extension of time shall not be a bar for giving a fair and reasonable extension by the Engineer-in-charge and this shall be binding on the contractor.

CLAUSE 6

Engineer - in - Charge shall, except as otherwise provided, ascertain and determine by measurement, the value in accordance with the contract of work done. All measurement of all items having financial value shall be entered in Measurement Book and / or level field book so that a complete record is obtained of all works performed under the contract. All measurement and levels shall be taken jointly by the Engineer-in- Charge or his authorized representative and by the contractor or his authorized representative from time to time during the progress of the work and such measurements shall be signed and dated by the Engineer – in – Charge and the contractor or their representatives in token of their acceptance. If the contractor objects to any measurements recorded, a note shall be made to that effect with reason and signed by both the parties.

If for any reason the contractor or his authorized representative is not available and the work of recording measurements is suspended by the Engineer-in-charge or his representative, the Engineer-in-charge and the Department shall not entertain any claim from contractor for any loss or damages on this account. If the contractor or his authorized representative does not remain present at the time of such measurements after the contractor or his authorized representative has been given a notice in writing three (3) days in advance or fails to countersign or to record objection within a week from the date of the measurement, then such measurements recorded in his absence by the Engineer – in – Charge or his representative shall be deemed to be accepted by the Contractor.

The contractor shall, without extra charge, provide all assistance with every appliance, labor and other things necessary for measurements and recording levels. Except where any general or detailed description of the work expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in the specifications notwithstanding any provision in the relevant Standard method of measurement or any general or local custom. In the case of items which are not covered by specifications, measurements shall be taken in accordance with the relevant standard method of measurement issued by the Bureau of Indian Standards and if for any item no such standard is available, then a mutually agreed method shall be followed.

The contractor shall give, not less than seven days notice to the Engineer - in - Charge or his authorized representative 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 be taken before the same is covered up or placed beyond the reach of measurement and shall not cover up and place beyond reach of measurement any work without consent in writing of the Engineer - in - Charge or his authorized representative in charge of the work who shall within the aforesaid period of seven days inspect the work, and if work shall be covered up or placed beyond the reach of measurements without such notice having been given or the Engineer - in - Charge's consent being obtained in writing , the same shall be uncovered at the Contractor's expense, or in default thereof no payment or allowance shall be made for such work or the materials with which the same was executed.

Engineer - in - Charge or his authorized representative may cause either themselves or through another officer of the department to check the measurements recorded jointly or otherwise as aforesaid and all provisions stipulated herein above shall be applicable to such checking of measurements or levels. It is also a term of this contract that recording of measurements of any item of work in the measurement book and/or its payment in the interim, on account or final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it release the contractor from liabilities from any over measurement or defects noticed till completion of the defects liability period.

CLAUSE 6A

Conventional measurement book shall be replaced by a bound volume of computerized measurements to be furnished by the contractor, duly machine numbered for the pages, and with MB number given by the Institute. The pages of these measurements books shall be of A4 size. All these measurements books shall be serially numbered and a record of these computerized measurements book shall be maintained in a separate register. The same format as in existing measurement books shall be used for the computerized measurement books. The measurements shall be carried forward from the previous recorded measurement as per the existing procedure.

The measurements shall be recorded and entered in the computerized format in the first instance by the contractor and a hard copy shall be submitted to the Institute. All entries shall be made as per the existing procedure. This measurements shall then be 100% checked by the Junior Engineer / Assistant Engineer, and test checked by the Asst. Executive Engineer and Executive Engineer/ EXECUTIVE ENGINEER (CIVIL) as per the existing procedure. If Junior Engineer is not available, then the Asst Executive Engineer shall perform 100% check of the measurements. The contractor shall incorporate all such changes or corrections, as may be done during the checks / test checks, to his draft computerized measurements and submit the final computerized measurements in the form of a book, duly hard bound in red colour on the lines of the conventional measurements books now in use with its pages machine numbered.

The Junior Engineer / Asst. Engineer, Assistant Executive Engineer, Executive Engineer/ EXECUTIVE ENGINEER (CIVIL) shall check the computerized measurements to ensure that all the changes or corrections made by them earlier in the draft measurements are correctly incorporated in the final measurements. This book shall be treated as computerized measurement. The Junior Engineer/ Asst. Engineer, Assistant Executive Engineer and Executive Engineer shall record the necessary certificate for their checks and test checks as per the existing procedure in this computerized measurement books. The computerized measurements book shall be allotted a serial number as per the register of computerized measurement books maintained by IITM. Cuttings / over writing/ insertions in the computerized measurements books are not allowed.

The computerized measurements books given by the contractor, duly bound, with its pages numbered, shall have no cutting or over writing. In case of any error, computerized misprints shall be canceled and the contractor shall re submit a fresh computerized measurements books. This should be done before submission of corresponding computerized billing. The contractor shall submit as many copies of computerized measurement books as may be required and as specified in the NIT / contract for the purpose of reference and recording the various office of the department.

The contractor shall submit his running and final bill in a computerized form in the same format as the existing conventional bills with all the pages machine numbered and hard bound made and with all the entries as per the existing procedure. The contractor shall submit as many copies of the computerized bills as may be required for the purpose of reference and record. The bill shall be carried forward from the previous running account bill as per the existing procedure.

CLAUSE 7

No payment shall be made for work, estimated to cost Rs.25 Lakhs/- or less till after the whole of the work shall have been completed and certificate of completion given. For works estimated to cost over Rs.25 Lakhs/- the interim of running account bill shall be submitted by the contractor for the work executed on the basis of such recorded measurements on the format of the Institute in triplicate on or before the date of every month fixed for the same by the Engineer-in-charge. The contractor shall not be entitled to be paid any such interim payment if the gross work done together with net payment / adjustment of advances for material collected, if any, since the last such payment is less than the amount specified in schedule 'F' in which case the interim bill shall be prepared on the appointed date of the month after the requisite progress is achieved. Engineer-in-charge shall arrange to have the bill verified by the taking or causing to be taken, where necessary, the requisite measurement of the work. In the event of the failure of the contractor to submit the bills Engineer-in-charge shall prepare or cause to be prepared such bills in which the events no claims whatsoever due to delays on payment including that of interest shall be payable to the contractor. Payment on account of amount admissible shall be made by the Engineer-in-charge certifying the sum to which the contractor is considered entitled by way of interim payment of such rates as decided by the Engineer-in-charge. The amount admissible shall be paid by 10th working day after the day of presentation of the bill by the contractor to the Engineer-in-charge or his Asst. Engineer together with the account of the material issued by the Institute or dismantled materials, if any.

All such interim payments shall be recorded as payment of advance against final payment. Only and shall not preclude the recurring of bad, unsound and imperfect or unskilled work to be rejected, removed, taken away and reconstructed or re-erected. Any certificate given by the Engineer-in-charge relating to the work done or materials delivered forming part of such payments, may be modified or corrected by any subsequent such certificate(s) or by the final certificate and shall not by itself be conclusive evidence that any work or materials to which it relates is / are in accordance with the contract and specifications. Any such interim payment, or any part thereof shall not be in any respect conclude determine or affect in any

way powers of Engineer-in-charge under the contract or any of such payments be treated as final settlement and adjustments of accounts or in any way vary or affect the contract.

Pending consideration of extension of date of completion, interim payments shall continue to be made as herein provided without prejudice to the right of the department to take action under the terms of this contract for delay in the completion of the work, if the extension of date of completion is not granted by the competent authority.

The Engineer-in-charge in his sole discretion on the basis of a certificate from the Assistant Executive Engineer to the effect that work has been completed up to the level in question make interim advance payments without detailed measurement for work done (other than foundation, item, to be covered under finishing items) upto lintel level (including sunshade etc) and slab level for each floor working out at 75 % of the assessed value. The advance payment so allowed shall be adjusted in the subsequent interim bill by taking detailed measurement thereof.

CLAUSE 8

Within 10 days of the completion of the work the contractor shall give notice of such completion to the Engineer-in-charge and within 30 days of the receipt of such notice the Engineer-in-charge shall inspect the work and if there is no defect in the work shall furnish the contractor a final certificate of completion, otherwise a provisional certificate of physical completion indicating defects (a) to be rectified by the Contractor and / or (b) for which payment will be made at reduced rates, shall be issued. But no final certificate of the completion shall be issued, nor shall the work be considered to be completed until the contractor shall have removed from the permission on which the work shall be executed all scaffolding, surplus materials, rubbish, all huts and sanitary arrangements required his / their work people on the site in connection with the execution of the works as shall have been erected or constructed by the contractor(s) and clean of the dirt from all wood work, doors, windows, walls, floor, other part of the buildings, in, upon, or above which the work is to be executed or which he may have had positions for the purpose of the execution thereof, and not until the work shall have been measured by the Engineer-in-charge. If the contractor shall fail to comply with the requirement of this clause as to removal of scaffoldings, surplus materials and rubbish and all huts and sanitary arrangements as aforesaid and cleaning of dirt on or before the date fixed for the completion of the work. The Engineer-in-charge may at the expense of the contractor remove such scaffoldings, surplus materials and rubbish etc. and dispose of the same as he thinks fit and clean of such dirty as aforesaid and the contractor shall have no claim in respect of scaffolding surplus materials as aforesaid except for any some actually realized by the sale thereof.

CLAUSE 8A

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CLAUSE 8 B

The contractor shall submit completion plan as required vide general specification for electrical works (Part I – Internal) 2005 and (Part II – External) 1994 as applicable within 30 days of the completion of the work. In case the contractor fails to submit the completion plan as aforesaid, he shall be liable to pay a sum equivalent to 2.5 % of the value of the work subject to a ceiling of Rs.15000/- (Rupees fifteen thousand only) as may be fixed by the EXECUTIVE ENGINEER (CIVIL) concerned and in this respect the decision of the EXECUTIVE ENGINEER (CIVIL) shall be final and binding on the contractor.

CLAUSE 9

The final bill shall be submitted by the contractor in the same manner as specified in interim bills within three months of physical completion of the work or within one month of the date of the final certificate of completion furnished by the Engineer-in-charge whichever is earlier. No further claim shall be made by the contractor after submission of the final bill and these shall be deemed to have been waived and extinguished. Payments of those items of this bill in respect of which there is no dispute and of items in dispute, for quantities and rates as approved by Engineer-in-charge, will, as far as possible be made within the period specified herein under, the period being reckoned from the date of receipt of the bill by the Engineer-in-charge or his authorized Assistant Executive Engineer, complete with account of materials issued by the Department and dismantled materials.

- i. if the tendered value of work is upto Rs.15 Lakhs : 3 months.
- ii. if the tendered value of work exceeds Rs.15 Lakhs : 6 months.

CLAUSE 9 A

Payments due to the contractor may, if so desired by him, be made to his bank registered financial co-operative or thrift societies or recognized financial institutions instead of direct to him provide that the contractor furnish the Engineer-in-charge (1) an authorization in the form of a legally valid document such as a power of attorney conferring authority on the bank. Registered, Financial, Co-operative or Thrift Societies or recognized financial institutions to receive payments and (2) his own acceptance of the correctness of the amount made out as being due to him by Institute or his signature on the bill or other claim performed against Institute before settlement by the Engineer-in-charge of the account of claim by payment to the Bank, registered, financial, co-operative or thrift society, recognized financial institutions. While the receipt given by such banks, registered, financial, co-operative or thrift societies or recognized financial institutions shall constitute a full and sufficient discharge for the payment the contractor shall whenever possible present his bills duly receipted and discharged through his bank, registered financial, co-operative or thrift society, recognized financial institutions.

Nothing herein contained shall operate to create in favour of the bank; registered financial co-operative or thrift society, recognized financial institutions any rights or equities vis-à-vis the Institute.

CLAUSE 10

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CLAUSE 10 A

The contractor shall at his own expense, provide materials, required for the works other than those, which are stipulated, to be supplied by the Institute. The contractor shall, at his own expense and without delay, supply to the Engineer-in-charge samples of materials to be used on the work and shall get his approval in advance. All such materials to be provided by the contractor shall be in conformity with specifications laid down or referred to in the contract. The contractor shall, if requested by the Engineer-in-charge furnish proof, to the satisfaction of the Engineer-in-charge that the materials so comply. The Engineer-in-charge shall within 30 days of supply of samples or within such further period as he may require intimate to the contractor in writing whether samples are approved by him or not. If samples or not approved the contractor shall forthwith arrange to supply to the Engineer-in-charge for his approval fresh samples complying with the specifications laid down in the contract. When materials are required to be tested in accordance with the specifications, approval of the Engineer-in-charge shall be issued after the test results are received.

The contractor shall at his risk and cost submit the sample of materials to be tested or analysed and shall not make use of or incorporate in the work any materials represented by the samples until the required tests are analysis have been made and materials finally accepted by the Engineer-in-charge. The contractor shall not be eligible for any claim or compensation either arising out of any delay in the work or due to any corrective measures required to be taken on account of and as a result of testing of materials.

The contractor shall, at his risk and cost make all arrangements and shall provide all facilities as the Engineer-in-charge may required for collecting and preparing the required number of samples for each tests at such time and to such place or places as may be directed by the Engineer-in-charge and bear all charges and cost of testing unless specifically provided for otherwise elsewhere in the contract or specifications. The Engineer-in-charge or his authorized representatives shall at all times have access to the work and to all workshop and places where work is being prepared or from their materials, manufactured articles or machinery are being obtained for the work and the contractor shall afford every facility and every assistance in obtaining the rights to the such access.

The Engineer-in-charge shall have full powers to require the removal from premises of all materials which in this opinion or not in accordance with the specifications and in case of default, the Engineer-in-charge shall be at liberty to employ at the expense of the contractor, other persons to remove the same without being answerable or accountable for a loss or damage that may happen or arise to such materials the Engineer-in-charge shall also have full powers require other proper materials to be substituted thereof and in case of default, the Engineer-in-charge may cause the same to be supplied and all cost which may attend such removal and substitutions shall be borne by the contractor. The contractor shall at his own expense provide a material testing lab a the site for conducting routine field tests. The lab shall be equipped at least with testing equipments as specified in schedule – 'F'

CLAUSE 10 B

(i) The contractor, on signing an indenture in the form to be specified by the Engineer-in-charge, shall be entitled to be paid during the progress of the execution of the work upto 90 % of the work assessed value of any materials which are in the opinion of the Engineer-in-charge non-perishable, non-fragile and noncombustible and are in accordance with the contract and which have been brought on the site in connection therewith and are adequately stored and / or protected against damage by weather or other causes but which have not at the time of advance, been incorporated in the works. When materials on account of which an advance has been made under this sub-clause are incorporated in the work, the amount of such advance shall be recovered / deducted from the next payment made under any of the clause or clauses of this contract.

Such secured advance shall also be payable on other items of perishable nature, fragile and combustible with the approval of the Engineer-in-charge provided the contractor provides a comprehensive insurance cover for the full cost of such materials. The decision of the Engineer-in-charge shall be final and binding on the contractor in this matter. No secured advance, shall however, be paid on high-risk materials such as ordinary glass, sand, petrol diesel etc.

(ii) Mobilization advance not exceeding 10 % of the tendered value may be given, if requested by the contractor in writing within one month of the order to commence the work. IN such a case, the contractor shall a Bank Guarantee Bond from a Schedule Nationalized Bank as Specified by the Engineer-in-charge for the full amount of mobilization advance before such advance is released. Such advance shall be in two or more installments to be determined by the Engineer-in-charge at his sole discretion. The first installment of such advance shall be released by the Engineer-in-charge to the contractor on a request made by the contractor to the Engineer-in-charge in this behalf. The second and subsequent installments shall be released by the Engineer-in-charge only after the contractor furnishes a proof of the satisfactory utilization of the earlier installment to the entire satisfaction of the Engineer-in-charge. Provided always that the provision of clause 10B (ii) shall be applicable only when so provided in 'Schedule F'.

(iii) An advance for plant, machinery & shuttering material required for the work and brought to site by the contractor may be given, if requested by the contractor in writing, within one month of bringing such plant and machinery to site. Such advance shall be given on such plant and machinery, which in the opinion of the Engineer-in-charge will add to the expeditious execution of work and improve the quality of work. The amount of advance shall be restricted to 5 % (five percent) of the tender value. In the case of new plant and equipment to be purchased for the work, the advance shall be restricted to 90 % of the price of such new plant and equipment paid by the contractor for which the contractor shall produce evidence satisfactory to the Engineer-in-charge. In the case of second hand and used plants and equipment, the amount of such advance shall be limited to 50 % of the depreciated value of plant and equipment as may be decided by the Engineer-in-charge. The contractor shall, if so required by the Engineer-in-charge submit the statement of value of such old plant and equipment duly approved by a Registered Value recognized by the Central Board of Direct Taxes under the Income-Tax Act, 1961. No such advance shall be paid on any plant and equipment of perishable nature and on any plant and equipment of a value less than Rs.50,000/- seventy five per cent of such amount of advance shall be paid after the plant & equipment is brought to site and balance twenty five percent on successfully commissioning the same.

Leasing of equipment shall be considered at par with purchase of equipment and shall be covered by tripartite agreement with the following:

1. Leasing company, which gives certificate of agreeing to lease equipment to the contractor.
2. Engineer-in-charge and
3. The contractor.

This advance shall further be subject to the condition that such plant and equipment (a) are considered by the Engineer-in-charge to be necessary for the works; (b) and are in and are maintained in working order; (c) hypothecated to the Institute as specified by the Engineer-in-charge before the payment of advance is released. The contractor shall not be permitted to remove from the site such hypothecated plant and equipment without the prior written permission of the Engineer-in-charge. The contractor shall be responsible for maintaining such plant and equipment in good working order during the entire period of hypothecation failing which such advance shall be entirely recovered in lump sum. For this purpose, steel scaffolding and form work shall be treated as plant and equipment.

The contractor shall insure the plant and machinery for which mobilization advance is sought and given, for a sum sufficient to provide for their replacement at site. Any amounts not recovered from the insurer will be borne by the contractor.

iv) The mobilization advance and plant and machinery advance in (ii) & (iii) above bear simple interest at the rate of 10 percent per annum and shall be calculated from the date of payment to the date of recovery, both days inclusive, on the outstanding amount of advance. Recovery of such sums advanced and interest shall be made by the deductions from the contractors bills commencing after first 10% of the Gross value of the work is executed and paid, on prorata percentage basis to the Gross value of the work build beyond 10% in such a way that the entire advance is recovered by the time 80% of the Gross value of the contract is executed and paid, together with interest due on the entire outstanding amount up to the date of recovery of the installment.

v) If the circumstances are considered reasonably by the Engineer-in-charge, the period mentioned in (ii) and (iii) for request by the contractor in writing for grant of mobilization advance and plant and equipment advance may be extended in the discretion of the Engineer-in-charge.

vi) The said bank guarantee for advances shall initially be made for the full amount and valid for the contract period, and be kept renewed from time to time to cover the balance amount and likely period of complete recovery together with interest.

CLAUSE 10 C

If after submission of the tender, the price of any material incorporated in the works (not being a material supplied from the Engineer-in-Charge's stores in accordance with Clause 10 thereof) and / or wages of labour increases as a direct result of the coming into force of any fresh law, or statutory rule or order (but not due to any changes in sales tax) and such increase in the price and / or wages prevailing at the time of the last stipulated date for receipt of the tenders including extensions if any for the work, and the contractor thereupon necessarily and properly pays in respect of that material (incorporated in the works) such increased price and / or in respect of labour engaged on the execution of the work such increased wages, then the amount of the contract shall accordingly be varied and provided further that any such increase shall not be payable if such increase has become operative after the stipulated date of completion of the work in question.

If after submission of the tender, the price of any material incorporated in the works (not being a material supplied from the Engineer-in-Charge's stores in accordance with Clause 10 thereof) and / or wages of labour is decreased as a direct result of the coming into force of any fresh law or statutory rules or order (but not due to any changes in sales tax) and such decrease in the prices and / or wages prevailing at the time of receipt of the tender for the work. Institute shall in respect of materials incorporated in the works (not being materials supplied from the Engineer-in-Charge's stores in accordance with Clause-10 hereof) and / or labour engaged on the execution of the work after the date of coming into force of such law statutory rule or order be entitled to deduct from the dues of the contractor, such amount as shall be equivalent to the difference between the prices of the materials and / or wages as prevailed at the time of the last stipulated date for receipt of tenders including extensions if any for the work and the prices of materials and / or wages of labour on the coming into force of such law, statutory rule or order.

The contractor shall, for the purpose of this condition, keep such books of account and other documents as are necessary to show the amount of any increase claimed or reduction available and shall allow inspection of the same by a duly authorized representative of the Institute, and further shall, at the request of the Engineer-in-Charge may require any documents so kept and such other information as the Engineer-in-Charge may require.

The contractor shall, within a reasonable time of his becoming aware of any alteration in the price of any such materials and / or wages of labour, give notice thereof to the Engineer-in-Charge stating that the same is given pursuant to this condition together with all information relating thereto which he may be in position to supply.

Clause 10 CA

If after submission of the tender, the price of materials specified in schedule 'F' increases / decreases beyond the price(s) prevailing at the time of the last stipulated date for receipt of tenders (including extension, if any) for the work, then the amount of the contract shall accordingly be varied and provided further that any such variations shall be effected for stipulated period of contract including the justified period extended under the provisions of clause 5 of the contract without any action under clause 2. However for work done / during the justified period extended as above it will be limited to indices prevailing at the time of stipulated date for completion or as prevailing for the period under consideration, whichever is less. The increase / decrease in prices shall be determined by the All India wholesale price indices of Materials as published by Economic Advisor to Government of India, Ministry of Commerce and Industry and base price for material as issued under the authority of Director General (Works), CPWD as valid on the last stipulated date of receipt of tender, including extension if any and for the period under consideration. In case price index of a particular material is not issued by the Ministry of Commerce and Industry the price of nearest similar material as indicated in schedule F shall be followed.

The amount of the contract shall accordingly be varied for all such materials and will be worked out as per the following formula given below:

a) Adjustment for component of 'Cement'

$$V = P \times Q \times \frac{CI - CI_0}{CI_0}$$

Where,

V = Variation in material cost i.e. increase or decrease in the amount in Rupees to be paid or recovered.

P = Base Price of materials as issued under authority of DG (W), CPWD valid at the time of the last stipulated date of receipt of tender including extensions, if any.

Q = Quantity of materials used in the works since previous bill.

CI₀ = All India wholesale Price Index for the material as published by the Economic Advisor to Government of India, Ministry of Industry and Commerce as valid on the last stipulated date of receipt of tenders including extensions, if any.

CI = All India wholesale Price Index for the material for period under consideration as published by the Economic Advisor to Government of India, Ministry of Industry and Commerce.

(In respect of the justified period extended under the provisions of clause 5 of the contract with out any action under clause 2, the index prevailing at the time of stipulated date of completion or the prevailing index of the period under consideration whichever is less shall be considered)

b) Adjustment for component of 'Steel'

$$Vs = Ps \times Q_s \times \frac{SI - SI_0}{SI_0}$$

Where,

Vs = Variation in cost of steel reinforcement bars i.e. increase or decrease in the amount in rupees to be paid or recovered.

Ps = Base Price of steel reinforcement bars, as issued under authority of DG (W), CPWD at the time of the last stipulated date of receipt of tender including extensions, if any.

Qs = Quantity of steel paid either by way of secured advance or used in the works since previous bill. (Whichever is earlier)

SI₀ = All India wholesale Price Index for Steel (bars & rods) for the period under consideration as published by the Economic Advisor to Government of India, Ministry of Industry and Commerce as valid on the last stipulated date of receipt of tenders including extensions, if any.

SI = All India wholesale Price Index for Steel (bars & rods) for the period under consideration as published by the Economic Advisor to Government of India, Ministry of Industry and Commerce.

(In respect of the justified period extended under the provisions of clause 5 of the contract with out any action under clause 2, the index prevailing at the time of stipulated date of completion or the prevailing index of the period under consideration whichever is less shall be considered)

Provided always that provisions of the preceding Clause 10 C shall not be applicable in respect of steel reinforcement bars.

CLAUSE 10 CC

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CLAUSE 10 D

The contractor shall treat all materials obtained during dismantling of a structure, excavation of the site for a work, etc. as Institute's property and such materials shall be disposed off to the best advantage of Institute according to the instructions in writing issued by the Engineer-in-charge.

CLAUSE 11

The contractor shall execute the whole and every part of the work in the most substantial and work manlike manner both as regards materials and otherwise in every respect in strict accordance with the specifications. The contractor shall also confirm exactly, fully and faithfully to the design, drawings and instructions in writing in respect of the work signed by the Engineer-in-charge and the contractor shall be furnished free of charge one copy of the contract documents together with specifications, designs, drawings and instructions as are not included in the standard specification of Central Public Works Department specified in Schedule 'F' or in any Bureau of Indian Standard or any other, published standard or code or, schedule of rates or any other printed publication referred to elsewhere in the contract.

The contractor shall comply with the provisions of the contract and with the care and diligence execute and maintain the works and provide all labour and materials, tools and plants including for measurements and supervisions of all works, structural plans and other things of temporary or permanent nature required for such execution and maintenance in so far as the necessity for providing these, is specified or is reasonably inferred from the contract. The contractor shall take full responsibility for adequacy, suitability and safety of all the works and methods of construction.

CLAUSE 12

The Engineer-in-charge shall have power (i) to make alteration in, omissions from, additions to, or substitutions for the original specifications, drawings, designs and instructions that may appear to him to be necessary or advisable during the progress of the work, and (ii) to omit a part of the works in case of non-availability of a portion of the site or for any other reasons and the contractor shall be bound to carry out the works in accordance with any instructions given to him in writing signed by the Engineer-in-charge and such alterations, omissions, additions or substitutions shall form part of the contract as if originally provided therein any in any altered, additional or substituted work which the contractor may be directed to do in the manner specified above as part of the works, shall be carried out by the contractor on the same conditions in all respects including price on which he agreed to do the main work except as hereafter provided.

12.1 The time for completion of the works shall, in the event of any deviations resulting in additional cost over the tendered value sum being ordered, be extended, if requested by the contractor, as follows :

- i) In the proportion which the additional cost of the altered, additional or substituted work, bears to the original tendered value plus.
- ii) 25 % of the time calculated in (i) above or such further additional time as may be considered reasonable by the Engineer-in-charge.

12.2 In the case of extra item(s) the contractor may within fifteen days of receipt of order or occurrence of the item(s) claim rates, supported by proper analysis, for the work and the Engineer-in-charge shall within one month of the receipt of the claims supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates so determined.

In the case of substituted items, the rate for the agreement item (to be substituted) and substituted item shall also be determined in the manner as mentioned in the aforesaid para.

- a. If the market rate for the substituted item so determined is more than the market rate of the agreement item (to be substituted), the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so increased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted).

- b. If the market rate for the substituted item so determined is less than the market rate of the agreement item (to be substituted), the rate payable to the contractor for the substituted item shall be the rate for the agreement item (to be substituted) so decreased to the extent of the difference between the market rates of substituted item and the agreement item (to be substituted).

In the case of contract items, substituted items, contract cum substituted items, which exceed the limits laid down in schedule 'F', the contractor may within fifteen days of receipt of order or occurrence of the excess, claim revision of the rates, supported by proper analysis, for the work in excess of the above mentioned limits, provided that if the rates so claimed are in excess of the rates specified in the schedule of quantities the Engineer-in-charge shall within one month of receipt of the claim supported by analysis, after giving consideration to the analysis of the rates submitted by the contractor, determine the rates on the basis of the market rates and the contractor shall be paid in accordance with the rates to be determined.

12.3 The provisions of the preceding paragraph shall also apply to the decrease in the rates of items for the work in excess of the limits laid down in Schedule 'F', and the Engineer-in-charge shall after giving notice to the contractor within one month of occurrence of the excess and after taking into consideration any reply received from him within fifteen days of the receipt of the notice, revise the rates for the work in question within one month of the expiry of the said period of fifteen days having regard to the market rates.

12.4 The contractor shall send to the Engineer-in-charge once every three months an upto date account giving complete details of all claims for additional payments to which the contractor may consider himself entitled and of all additional work ordered by the Engineer-in-charge which he has executed during the preceding quarter failing which the contractor shall be deemed to have waived his right. However, the EXECUTIVE ENGINEER (CIVIL) may authorize consideration of such claims on merits.

12.5 For the purpose of operation of Schedule 'F', the following works shall be treated as works relating to foundation:

- i) For buildings, compound walls plinth level or 1.2 meters (4 feet) above ground level whichever is lower excluding items of flooring and D.P.C. but including base concrete below the floors.
- ii) For abutments, piers, retaining walls of culverts and bridges, walls of water reservoirs the bed of floor level.
- iii) For retaining walls where floor level is not determinate 1.2 meters above the average ground level or bed level.
- iv) For roads all items of excavation and filling including treatment of sub-base.

12.6 Any operation incidental to or necessarily has to be in contemplation of tenderer while filing tender, or necessary for proper execution of the item included in the Schedule of quantities or in the schedule of rates mentioned above, whether or not, specifically indicated in the description of the item and the relevant specifications, shall be deemed to be included in the rates quoted by the tenderer or the rate given in the said schedule of rates, as the case may be. Nothing extra shall be admissible for such operations.

CLAUSE 13

If at any time after acceptance of the tender, the Institute shall decide to abandon or reduce the scope of the works for any reason whatsoever and hence not require the whole or any part of the works to be carried out, the Engineer-in-charge shall give notice in writing to that effect to the contractor and the contractor shall act accordingly in the matter. The contractor shall have no claim to any payment of compensation or otherwise whatsoever, on account of any profit or advantage which he might have derived from the execution of the works in full but which he did not derive in consequence of the foreclosure of the whole or part of the works.

The contractor shall be paid at contract rates full amount for works executed at site and, in addition, a reasonable amount as certified by the Engineer-in-charge for the items hereunder mentioned which could not be utilized on the work to the full extent in view of the foreclosure:

- (i) Any expenditure incurred on preliminary site work, e.g. temporary access roads, temporary labour huts, staff quarters and site office; storage accommodation and water storage tanks.

- (ii) Institute shall have the option to take over contractor's materials or any part thereof either brought to site or of which the contractor is legally bound to accept delivery from suppliers (for incorporation in or incidental to the work) provided, however, Institute shall be bound to take over the materials or such portions thereof as the contractor does not desire to retain. For materials taken over or to be taken over by Institute, cost of such materials as detailed by Engineer-in-charge shall be paid. The cost shall, however, take into account purchase price, cost of transportation and deterioration or damage which may have been caused to materials whilst in the custody of the contractor.
- (iii) If any materials supplied by Institute are rendered surplus, the same except normal wastage shall be returned by the contractor to Institute at rates not exceeding those at which these were originally issued less allowance for any deterioration or damage which may have been caused whilst the materials were in the custody of the contractor. In addition, cost of transporting such materials from site to Institute stores, if so required by Institute, shall be paid.
- (iv) Reasonable compensation for transfer of T & P from site to contractor's permanent stores or to his other works, whichever is less. If T & P are not transported to either of the said places, no cost of transportation shall be payable.
- (v) Reasonable compensation for repatriation of contractor's site staff and imported labour to the extent necessary.

The contractor shall, if required by the Engineer-in-charge furnish to him books of account, wage books, time sheets and other relevant documents and evidence as may be necessary to enable him to certify the reasonable amount payable under this condition. The reasonable amount of items on (i), (iv) and (v) above shall not be in excess of 2 % of the cost of the work remaining incomplete on the date of closure, i.e. total stipulated cost of the work as per accepted tender less the cost of work actually executed under the contract and less the cost of contractor's materials at site taken over by the Institute as per item (ii) above. Provided always that against any payments due to the contractor this account or otherwise the Engineer-in-charge shall be entitled to recover or be credited with any outstanding balances due from the contractor for advance paid in respect of any tool, plants and materials and any other sums which at the date of termination were recoverable by the Institute from the contractor under the terms of the contract.

CLAUSE 14

Deleted (Merged with clause 3)

CLAUSE 15

- (i) The contractor shall, on receipt of the order in writing of the Engineer-in-charge, (whose decision shall be final and binding on the contractor) suspend the progress of the works or any part thereof for such time and in such manner as the Engineer-in-charge may consider necessary so as not to cause any damage or injury to the work already done or endanger the safety thereof for any of the following reasons :
 - (a) on account of any default on the part of the contractor or;
 - (b) for proper execution of the works or part thereof for reasons other than the default of the contractor; or
 - (c) for safety of the works or part thereof. The contractor shall, during such suspension, properly protect and secure the works to the extent necessary and carry out the instructions given in that behalf by the Engineer-in-charge.
- (ii) If the suspension is ordered for reasons (b) and (c) in sub-para (i) above;
 - (a) the contractor shall be entitled to an extension of time equal to the period of every such suspension PLUS 25 % for completion of the item or group of items of work for which a separate period of completion is specified in the contract and of which the suspended work forms a part, and ;
 - (b) If the total period of all such suspensions in respect of an item or group of items or work for which a separate period of completion is specified in the contract exceeds thirty days, the contractor shall, in addition, be entitled to such compensation as the Engineer-in-charge may consider reasonable in respect of salaries and / or wages paid by the contractor to his employees and labour at site, remaining idle during the period of suspension, adding thereto 2 % to cover indirect expenses of the contractor. Provided the contractor submits his claim supported by details to the Engineer-in-charge within fifteen days of the expiry of the period of 30 days.

(iii) If the works or part thereof is suspended on the orders of the Engineer-in-charge for more than three months at a time, except when suspension is ordered for reason (a) in sub-para (i) above, the contractor may after receipt of such order serve a written notice on the Engineer-in-charge requiring permission within fifteen days from receipt by the Engineer-in-charge of the said notice, to proceed with the work or part thereof in regard to which progress has been suspended and if such permission is not granted within that time, the contractor, if he intends to treat the suspension, where it affects only a part of the works as an omission of such part by Institute or where it affects whole of the works, as an abandonment of the works by Institute shall within 10 days of expiry of such period of 15 days give notice in writing of his intention to the Engineer-in-charge. In the event of the contractor treating the suspension as an abandonment of the contract by Institute, he shall have no claim to payment of any compensation on account of any profit or advantage which he might have derived from the execution of the work in full but which he could not derive in consequence of the abandonment. He shall, however, be entitled to such compensation, as the Engineer-in-charge may consider reasonable, in respect of salaries and / or wages paid by him to his employees and labour at site, remaining idle in consequence adding to the total thereof 2 % to cover indirect expenses of the contractor provided the contractor submits his claim supported by details to the Engineer-in-charge within 30 days of the expiry of the period of 3 months. Provided, further, that the contractor shall not be entitled to claim any compensation from Institute for the loss suffered by him on account of delay by Institute in the supply of materials in schedule 'B' where such delay is covered by difficulties relating to the supply of wagons, force majeure including non-allotment of such materials by controlling authorities, acts of God, acts of enemies of the state / country or any reasonable cause beyond the control of the Institute.

CLAUSE 16

All works under or in course of execution or executed in pursuance of the contract shall at all times be open and accessible to the inspection and supervision of the Engineer-in-charge, his authorized subordinates in charge of the work and all the superior officers, officer of the Quality Assurance unit of the Institute or any organization engaged by the Institute for Quality Assurance and of the Chief Technical Examiner's Office, and the contractor shall, at all times, during the usual working hours and all at other time at which reasonable notice of the visit of such officers has been given to the contractor, either himself be present to receive orders and instructions or have a responsible agent duly accredited in writing, present for that purpose. Orders given to the Contractor's agent shall be considered to have the same force as if they had been given to the contractor himself.

If it shall appear to the Engineer-in-charge or his authorized subordinates in charge of the work or to the Chief Engineer in charge of Quality Assurance or his subordinate officers or officers of the organization engaged by the Institute for quality assurance to the Chief Technical Examiner or his subordinate officers, that any work has been executed with unsound, imperfect, or unskillful workmanship, or with materials or articles provided by him for the execution of the work which are unsound or of a quality inferior to that contracted or otherwise not in accordance with the contract, the contractor shall, on demand in writing which shall be made within twelve months (six months in case of work costing Rs. 10 Lac and below except road work) of the completion of the work from the Engineer-in-charge specifying the work, materials or articles complained of notwithstanding that the same may have been passed, certified and paid for forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost. In the event of the failing to do so within a period specified by the Engineer-in-charge in his demand aforesaid, then the contractor shall be liable to pay compensation at the same rate as under clause 2 of the contract (for non-completion of the work in time) for this default.

In such case the Engineer-in-charge may not accept the item of work at the rates applicable under the contract but may accept such items at reduced rates as the competent authority may consider reasonable during the preparation of on account bills or final bill if the item is so acceptable without detriment to the safety and utility of the item and the structure or he may reject the work outright without any payment and / or get it and other connected and incidental items rectified, or removed and re-executed at the risk and cost of the contractor. Decision of the Engineer-in-charge to be conveyed in writing in respect of the same will be final and binding on the contractor.

CLAUSE 17

If the contractor or his working people or servants shall break, deface, injure or destroy any part of building in which they may be working, or any building, road, road kerb, fence, enclosure, water pipe, cables, drains, electric or telephone post or wires, trees, grass or grass land, or cultivated ground contiguous to the premises on which the work or any part is being executed, or if any damage shall happen to the work while in progress, from any cause whatever or if any defect, shrinkage or other faults appear in the work within twelve months (six months in the case of work costing Rupees Ten lacs and below except road work) after a certificate final or otherwise of its completion shall have been given by the Engineer-in-charge as aforesaid arising out of defect or improper materials or workmanship the contractor shall upon receipt of a notice in writing on that behalf make the same good at his own expense or in default the Engineer-in-charge as cause the same to be made good by other workmen and deduct the expense from any sums that may be due or at any time thereafter may become due to the contractor, or from his security deposit or the proceeds of sale thereof or of a sufficient portion thereof. The security deposit of the contractor shall not be refunded before the expiry of twelve months (six months in the case of work costing Rupees Ten lakhs and below except road work) after the issue of the certificate final or otherwise of completion of work or till the final bill has been prepared and passed whichever is later. Provided that in case of road work, in the opinion of the Engineer in charge, half of the security deposit is sufficient, to meet all liabilities of the contractor under this contract, half of the security will be refundable after six months and the remaining half after twelve months of the issue of the said certificate of completion or till the final bill has been prepared and passed whichever is later. In case of Maintenance and Operation works of E & M services, the security deposit deducted from contractors shall be refunded within one month from the date of final payment or within one month from the date of final payment or within one month from the date of completion of the maintenance contract whichever is earlier.

CLAUSE 18

The contractor shall provide at his own cost all materials (except such special materials if any as may in accordance with the contract be supplied from the Engineer – in – Charge stores), machinery, tools & Plants as specified in schedule 'F'. In addition to this appliances, implements, ladders, cordage, tackle, scaffolding and temporary works required for the proper execution of the work, whether original, altered or substituted and whether included in the specifications or other documents forming part of the contract or referred to in these conditions or not, or which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer-in-charge as to any matter as to which under these conditions he is entitled to be satisfied, or which he is entitled to require together with carriage therefore 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 the measurement for examination at any time and from time to time of the work or materials. Failing his so doing 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 this contract or otherwise and/or from his security deposit or the proceeds of sale thereof, or of a sufficient portions thereof.

CLAUSE 18 A

In every case in which by virtue of the provision sub-section (1) of Section 12, of the Workmen's Compensation Act, 1923, Institute is obliged to pay compensation to a workman employed by the contractor, in execution of the works, Institute will recover from the contractor, the amount of the compensation so paid; and without prejudice to the rights of the Institute under sub-section (2) of section 12, of the said Act, Institute shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by Institute to the contractor whether under this contract or otherwise. Institute shall not be bound to contest any claim made against it under sub-section (1) Section 12, of the said Act, except on the written request of the contractor and upon his giving to Institute full security for all costs for which Institute might become liable in consequence of contesting such claim.

CLAUSE 18 B

In every case in which by virtue of the provisions Contract Labour (Regulation and Abolition) Act 1970, and of the Contract Labour (Regulation and Abolition) Central Rules, 1971, Institute is obliged to pay any amount of wages to a workman employed by the contractor in execution of the works, or to incur any expenditure in providing welfare and health amenities required to be provided under the above said Act and the rules under clause 19H or under the C.P.W.D. contractors, labour regulations, or under the rules framed by Government of India from time to time for the protection of health and sanitary arrangements for workers employed by contractors, Institute will

recover from the contractor, the amount of wages so paid or the amount of expenditure so uncured; and without prejudice to the rights of the Institute under sub-section(2) of Section 20, and sub-section (4) of Section 21, of the Contract Labour (Regulation and Abolition) Act, 1970, Institute shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due by Institute to the contractor whether under this contract or otherwise Institute shall not be bound to contest any claim made against it under sub-section (1) of Section 20, sub-section (4) of section 21, of the said Act, except on the written request of the contractor and upon his giving to the Institute full security for all costs for which Institute might become liable in contesting such claim.

CLAUSE 19

The contractor shall obtain a valid licence under the Contract Labour (R&A) Act 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971, before the commencement of the work, and continue to have a valid license until the completion of the work. The contractor shall also abide by the provisions of the Child Labour (Prohibition and Regulation) Act, 1986.

The contractor shall also comply with the provision of the building and other construction workers (Regulation of Employment & Conditions of Service) Act, 1996 and the building and other Construction Workers Welfare Cess Act, 1996.

Any failure to fulfill these requirements shall attract the penal provisions of this contract arising out of the resultant non-execution of the work.

CLAUSE 19A

No labour below the age of fourteen years shall be employed on the work.

CLAUSE 19B

Payment of Wages:

- i) The contractor shall pay to labour employed by him either directly or through sub-contractors, wages not less than fair wages as defined in the C.P.W.D. Contractor's Labour Regulations or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970 and the contract Labour (Regulation and Abolition) Central Rules, 1971, wherever applicable.
- ii) The contractor shall, notwithstanding the provisions of any contract to the contrary, cause to be paid fair wage to labour indirectly engaged on the work, including any labour engaged by his sub-contractors in connection with the said work, as if the labour had been immediately employed by him.
- iii) In respect of all labour directly or indirectly employed in the works for performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied with the Central Public Works Department contractor's Labour Regulations made by Government of India from time to time in regard to payment of wages, wage period, deductions from wages recovery of wages not paid and deductions unauthorizedly made, maintenance of wage books or wage slips, publication of scale of wages and other terms of employment, inspection and submission of periodical returns and all other matters of the like nature or as per the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and the Contract labour (Regulation and Abolition) Central Rules 1971, wherever applicable.
- iv) a) The Engineer-in-Charge concerned shall have the right to deduct from the moneys due to the contractor any sum required or estimated to be required for making good the loss suffered by a worker or workers by reason of non-fulfillment of the conditions of the contract for the benefit of the workers, non-payment of wages or of deductions made from his or their wages which are not justified by their terms of the contract or non-observance of the regulations.
a) Under the provision of Minimum wages (Central) Rules, 1950, the contractor is bound to allow to the labours directly or indirectly employed in the works one day rest for 6 days continuous work and pay wages at the same rate as for duty. In the event of default, the Engineer-in-charge shall have the right to deduct the sum or sums not paid on account of wages for weekly holidays to any labors and pay the same to the persons entitled thereto from any money due to the contractor by the Engineer-in-charge concerned.
- v) The contractor shall comply with the provisions of the Payment of Wages Act, 1936, Minimum Wages Act, 1948, Employees Liability Act, 1938, Workmen's Compensation Act, 1923, Industrial Disputes Act, 1947 Maternity Benefits Act, 1961, and the Contractor's Labour (Regulation and Abolition) Act 1970, or the modifications thereof or any other laws relating thereto and the rules made there under from time to time.
- vi) The Contractor shall indemnify and keep indemnified institute against payments to be made under and for the observance of the laws aforesaid and the C.P.W.D. Contractor's labour Regulations without prejudice to this right to claim indemnity from his sub-contractors.

- vii) The laws aforesaid shall be deemed to be a part of this contract and any breach thereof shall be deemed to be a breach of this contract.
- viii) Whatever is the minimum wage for the time being, or for the wage payable is higher than such wage, such wage shall be paid by the contractor to the workman directly without the intervention of Jamadar and that Jamadar shall not be entitled to deduct or recover any amount from the minimum wage payable to the workmen as and by way of commission or otherwise.
- ix) The contractor shall ensure that no amount by way of commission or otherwise is deducted or recovered by the Jamadar from the wage of workmen.

CLAUSE 19 C

In respect of all labour directly or indirectly employed in the work for the performance of the contractor's part of this contract, the contractor shall at his own expense arrange for the safety provisions as per C.P.W.D. Safety Code framed from time to time and shall at his own expense provide for all facilities in connection therewith. In case the contractor fails to make arrangement and provide necessary facilities as aforesaid, he shall be liable to pay a penalty of Rs.200/- for each default and in addition the Engineer-in-Charge shall be at liberty to make arrangement and provide facilities as aforesaid and recover the costs incurred in that behalf from the contractor.

CLAUSE 19 D

The Contractor shall submit by the 4th and 19th of every month, to the Engineer-in-charge a true statement showing in respect of the second half of the preceding month and the first half of the current month respectively.

- (1) The number of labourers employed by him on the work,
- (2) Their working hours,
- (3) The wages paid to them,
- (4) The accidents that occurred during the said fortnight showing the circumstances under which they happened and the extent of damage and injury caused by them, and
- (5) The number of female workers who have been allowed maternity benefit according to Clause 19F and the amount paid to them.

Failing which the contractor shall be liable to pay to Institute, a sum not exceeding Rs.200/- for each default or materially incorrect statement. The decision of the Engineer-in-charge shall be final in deducting from any bill due to the contractor; the amount levied as fine and be binding on the contractor.

CLAUSE 19 E

In respect of all labour directly or indirectly employed in the work for the performance of the contractor's part of this contract, the contractor shall comply with or cause to be complied with all the rules framed by Government of India/Institute from time to time for the protection of health and sanitary arrangements for workers employed by the Central Public Works Department and its contractors.

CLAUSE 19 F

Leave and pay during leave shall be regulated as follows :-

1. Leave :

- (i) In the case of delivery – maternity leave not exceeding 8 weeks, 4 weeks upto and including the day of delivery and 4 weeks following that day,
- (ii) In the case of miscarriage – upto 3 weeks from the date of miscarriage.

2. Pay :

- (i) In the case of delivery – leave pay during maternity leave will be at the rate of the women's average daily earnings, calculated on total wages earned on the days when full time work was done during a period of three months immediately preceding the date on which she gives notice that she expects to be confined or at the rate of Rupee one only a day whichever is greater.
- (ii) In the case of miscarriage – leave pay at the rate of average daily earning calculated on the total wages earned on the days when full time work was done during a period of three months immediately preceding the date of such miscarriage.

3. Conditions for the grant of maternity Leave.

No maternity leave benefit shall be admissible to a woman unless she has been employed for a total period of not less than six months immediately preceding the date on which she proceeds on leave.

4. The contractor shall maintain a register of Maternity (Benefit) in the prescribed Form as shown in annexure – I and II, and the same shall be kept at the place of work.

CLAUSE 19 G

In the event of the contractor(s) committing a default or breach of any of the provisions of the Central Public Works Department, Contractor's Labour Regulations and Model Rules for the protection of health and sanitary arrangements for the workers as amended from time to time or furnishing any information or submitting or filing any statement under the provisions of the above regulations and Rules which is materially incorrect, he / they shall, without prejudice to any other liability, pay to the Institute a sum not exceeding Rs.200/- for every default, breach or furnishing, making, submitting, filing such materially incorrect statements and in the event of the contractors defaulting continuously in this respect, the penalty may be enhanced to Rs.200/- per day for each day of default subject to a maximum of 5 per cent of the estimated cost of the work put to tender. The decision of the Engineer-in-charge shall be final and binding on the parties. Should it appear to the Engineer-in-charge that the contractor(s) is / are not properly observing and complying with the provisions of the C.P.W.D. Contractor's Labour Regulations and Model Rules and the provisions of the Contract Labour (Regulation and Abolition) Act 1970, and the Contract Labour (R&A) Central Rules 1971, for the protection of health and sanitary arrangements for work-people employed by the contractor(s) (hereinafter referred as 'the said Rules') the Engineer-in-charge shall have power to give notice in writing to the contractor(s) requiring that the said Rules be complied with and the amenities prescribed therein be provided to the work-people within a reasonable time to be specified in the notice. If the contractor(s) shall fail within the period specified in the notice to comply with and / observe the said Rules and to provide the amenities to the work-people as aforesaid, the Engineer-in-charge shall have the power to provide the amenities herein before mentioned at the cost of the contractor(s). The contractor(s) shall erect, make and maintain at his/their own expense and to approved standards all necessary huts and sanitary arrangements required for his / their work-people on the site in connection with the execution of the works, and if the same shall not have been erected or constructed, according to approved standards, the Engineer-in-charge shall have power to give notice in writing to the contractor(s) requiring that the said huts and sanitary arrangements be remodeled and/or reconstruct such huts and sanitary arrangements according to approved standards, and if the contractor(s) shall fail to remodel or reconstruct such huts and sanitary arrangements according to approved standards within the period specified in the notice, the Engineer-in-charge shall have the power to remodel or reconstruct such huts and sanitary arrangements according to approved standards at the cost of the contractor(s).

CLAUSE 19 H

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CLAUSE 19 I

The Engineer-in-charge may require the contractor to dismiss or remove from the site of the work any person or persons in the contractors employ upon the work who may be incompetent or misconduct himself and the contractor shall forthwith comply with such requirements.

CLAUSE 19 J

It shall be the responsibility of the contractor to see that the building under construction is not occupied by any body unauthorisedly during construction, and is handed over to the Engineer-in-charge with vacant possession of complete building, If such building through completed is occupied illegally, then the Engineer-in-charge shall have the option to refuse to accept the said building / buildings in that position. Any delay in acceptance on this account will be treated as the delay in completion and for such delay a levy upto 5% of tendered value of work may be imposed by the EXECUTIVE ENGINEER (CIVIL) whose decision shall be final both with regard to the justification and quantum and be binding on the contractor.

However, the , through a notice, may require the contractor to remove the illegal occupation any time on or before construction and delivery.

CLAUSE 19K

The contractor shall, at all stages of work, deploy skilled / semi skilled tradesmen who are qualified and possess certificate in particular trade from CPWD training institute / Industrial Training Institute / national Institute of Construction Management and Research (NICMAR) / National Academy of Construction / CIDC or any similar reputed and recognized institute managed ./ certified by State / Central Government. The number of such qualified tradesmen shall not be less than 20 % of total skilled / semi skilled workers required in each trade at any stage of work. The contractor shall submit number of man days required in respect of each trade, its scheduling and the list of qualified tradesmen along with requisite certificate from recognized institute to Engineer – in – charge for approval. Notwithstanding such approval, if the tradesmen are found to have inadequate skill to execute the work of respective trade the contractor shall substitute such tradesmen within two days of written notice from Engineer in charge. Failure on the part of the contractor to obtain approval of Engineer – in – charge or failure to deploy qualified tradesmen will attract a compensation to be paid by contractor at the rate of RS 100 per such tradesman per day. Decision of the Engineer – in – charge as to whether particular tradesman possesses requisite skill and amount of compensation in case of default shall be final and binding. Provided always, the provisions of this clause, shall not be applicable for works with estimated cost put to tender being less than Rs 5 crores

CLAUSE 20

The contractor shall comply with all the provisions of the Minimum Wages Act, 1948, and Contract Labour (Regulation and Abolition) Act, 1970, amended from time to time and rules framed there under and other labour laws affecting contract labour that may be brought into force from time to time.

CLAUSE 21

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 to do so, or become insolvent or commence any insolvency proceedings or make any composition with his creditors or attempt to do so, or if any bribe, gratuity, gift, loan, perquisite, reward or advantage pecuniary or otherwise, shall either directly or indirectly, be given, promised or offered by the contractor, or any of his servants or agent to any public officer or person in the employ 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 on behalf of the Institute shall have power to adopt the course specified in Clause 3 hereof in the interest of Institute and in the event of such course being adopted, the consequences specified in the said Clause 3 shall ensue.

CLAUSE 22

All sums payable by way of compensation under any of these conditions shall be considered as reasonable compensation to be applied to the use of Institute without reference to the actuals, loss or damage sustained and whether or not any damage shall have been sustained.

CLAUSE 23

Where the contractor is a partnership firm, the previous approval in writing of the Engineer-in-Charge shall be obtained any change is made in the constitution of the firm. Where the contractor is an individual or a Hindu undivided family business concern such approval as aforesaid shall likewise be obtained before the contractor enters into any partnership agreement where under the partnership firm would have the right to carry out the works hereby undertaken by the contractor. If previous approval as aforesaid is not obtained, the contract shall be deemed to have been assigned in contravention of Clause 21 hereof and the same action may be taken, and the same consequences shall ensue as provided in the said Clause 21.

CLAUSE 24

All works to be executed under the contract shall be executed under the direction and subject to the approval in all respects of the Engineer-in-Charge who shall be entitled to direct at what point or points and in what manner they are to be commenced, and from time to time carried on.

CLAUSE 25

Except where otherwise provided in the contract all question and disputes relating to the meaning of the specifications, designs, drawings and instructions here-in before mentioned and as to the quality of workmanship or materials used or as to any other question, claim, right, matter or thing whatsoever in any way arising out of or relating to the contract, designs, drawings, specifications, estimates, instructions, orders of these conditions or otherwise concerning the works or the execution or failure to executes the same whether arising during the progress of work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned herein after.

1.1 If the contractor considers any work demanded of him to be outside the requirements of the contract, or disputed any drawings, record or decision given in writing by the Engineer-in-charge or any matter in connection with or arising out of the Contract or carrying out of the work, to be unacceptable, he shall promptly within 15 days request the EXECUTIVE ENGINEER (CIVIL) in writing for written instruction or decision. Thereupon, the EXECUTIVE ENGINEER (CIVIL) shall give his written instructions or decisions within a period of one month from the receipt of the contractor's letter.

If the EXECUTIVE ENGINEER (CIVIL) fails to give his instructions or decisions in writing within the aforesaid period or if the contractor is dissatisfied with the instructions or decision of the EXECUTIVE ENGINEER (CIVIL), the contractor may, within 15 days of the receipt of EXECUTIVE ENGINEER (CIVIL)'s decision appeal to the Chairman (Engineering Unit), IITM who shall afford an opportunity to the contractor to be heard, if the matter so desires and to offer evidence in support of his appeal. The Chairman (Engineering Unit), IITM shall give his decision within 30 days of receipt of contractor's appeal.

1.2 If the contractor is dissatisfied with the decision of the Chairman (Engineering Unit), he may within a period of 15 days of the receipt of the Chairman's decision appeal to the Director, IITM who shall afford an opportunity to the contractor to be heard, if the matter so desires and to offer evidence in support of his appeal. The Director, IITM shall give his decision within 30 days of receipt of contractor's appeal.

1.3 If the contractor is dissatisfied with the decision of the Director IITM, he shall within 30 days of the receipt of the decision shall give notice to the Director, IITM for appointment of an arbitrator to adjudicate his claims, failing which the said decision of the Director, IITM shall be final and binding on the contractor.

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

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

It is also a term of this contract that no person other than a person appointed by such Director, IITM, as aforesaid should act as arbitrator.

It is also a term of this Contract that if the contractor does not make any demand for appointment of arbitrator in respect of any claims in writing as aforesaid within 120 days of receiving the intimation from the Engineer-in-charge that the final bill is ready for payment, the claim of the contractor shall be deemed to have been waived and absolutely barred and IITM shall be discharged and released of all liabilities under the Contract in respect of these claims.

The arbitration shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act 1996 (26 of 1996) or any statutory modifications or re-enactment thereof and the rules made there under and for the time being in force shall apply to the arbitration proceeding under this clause.

It is also term of this Contract that the arbitrator shall adjudicate on only such disputed as are referred to him by the Director, IITM and give separate award against each dispute and claim referred to him and in all cases where the total amount of the claims by any party exceeds **Rs.1,00,000/-** the arbitrator shall give reasons for the award.

It is also a term of the Contract that if any fees are payable to the arbitrator, these shall be paid equally by both the parties.

It is also a term of the Contract that the arbitrator shall be deemed to have entered on the reference on the date of issues notice to both the parties calling them to submit their statement of claims and counter statement of claims. The venue of the arbitration shall be such place as may be fixed by the arbitrator in his sole discretion. The fees, if any, of the arbitrator shall, if required to be paid before the award is made and published, be paid half and half by each of the parties. The cost of the reference and of the award (including the fees, if any, of the arbitrator) shall be in the discretion of the arbitrator who may direct to any by whom and in what manner, such costs or any part thereof shall be paid and fix or settle the amount of costs to be so paid.

CLAUSE 26

The contractor shall fully indemnify and keep indemnified the Institute against any action, claim or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay any royalties which may be payable in respect of any article or part thereof included in the contract. In the event of any claims made under or action brought against Institute in respect of any such matters as aforesaid, the contractor shall be immediately notified thereof and the contractor shall be at liberty, at his own expense, to settle any dispute or to conduct any litigation that may arise there from, provided that the contractor shall not be liable to indemnify the Institute if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by the Engineer-in-Charge this behalf.

CLAUSE 27

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CLAUSE 28

In the case of any class of work for which there is no such specifications as referred to in Clause 11, such work shall be carried out in accordance with the Bureau of Indian Standards Specifications. In case there are no such specifications in Bureau of Indian Standards, the work shall be carried out as per manufacturer's specifications, if not available then as per District Specifications. In case there are no such specifications as required above, the work shall be carried out in all respects in accordance with the instructions and requirements of the Engineer-in-Charge.

CLAUSE 29

i) Whenever any claim or claims for payment of a sum of money arises out of or under the contract or against the contractor, the Engineer-in-Charge or the Institute shall be entitled to withhold and also have a lien to retain such sum or sums in whole or in part from the security, if any deposited by the contractor and for the purpose aforesaid, the Engineer-in-Charge or the Institute shall be entitled to withhold the security deposit, if any, furnished as the case may be and also have a lien over the same pending finalization or adjudication of any such claim. In the event of the security being insufficient to cover the claimed amount or amounts or if no security has been; taken from the contractor, the Engineer-in-Charge or the Institute shall be entitled to withhold and have a lien to retain to the extent of such claimed amount / or amounts referred to above, from any sum or sums found payable or which may at any time thereafter become payable to the contractor under the same contract or any other contract with the Engineer-in-Charge of the Institute or any contracting person through the Engineer-in-Charge pending finalization of adjudication of any such claim.

It is an agreed term of the contract that the sum of money or moneys so withheld or retained under the lien referred to above by the Engineer-in-Charge or Institute will be kept withheld or retained as such by the Engineer-in-Charge or Institute till the claim arising out of or under the contract is determined by the arbitrator (if the contractor is govern by the arbitration clause) by the competent court, as the case may be and that the contractor will have no claim for interest or damages whatsoever on any account in respect of such withholding or retention under the lien referred to above and duly notified as such to the contractor. For the purpose of this clause, where the contractor is a partnership firm or a limited company, the Engineer-in-Charge or the Institute shall be entitled to withhold and also have a lien to retain towards such claimed amount or amounts in whole or in part from any sum found payable to any partner/ limited company as the case may be, whether in his individual capacity or otherwise.

ii) Institute shall have the right to cause an audit and technical examination of the works and the final bills of the contractor including all supporting vouchers, abstract, etc., to be made after payment of the final bill and if as a result of such audit and technical examination any sum is found to have been overpaid in respect of any work done by the contractor under the contract or any work claimed to have been done by him under the contract and found not to have been executed, the contractor shall be liable to refund the amount of over-payment and it shall be lawful for Institute to recover the same from him in the manner prescribed in sub-clause (i) of this clause or in any other manner legally permissible; and if it is found that the contractor was paid less than what was due to him under the contract in respect of any work executed by him under it, the amount of such under payment shall be duly paid by Institute to the contractor, without any interest thereon whatsoever.

Provided that the Institute shall not be entitled to recover any sum overpaid, nor the contractor shall be entitled to payment of any sum paid short where such payment has been agreed upon between the EXECUTIVE ENGINEER (CIVIL) on the one hand and the contractor on the other under any term of the contract permitting payment for work after assessment by the .

CLAUSE 29A

Any sum of money due and payable to the contractor (including the security deposit returnable to him) under the contract may be withheld or retained by way of lien by the Engineer-in-Charge or the Institute or any other contracting person or persons through Engineer-in-Charge against any claim of the Engineer-in-Charge or Institute or such other person or persons in respect of payment of a sum of money arising out of or under any other contract made by the contractor with the Engineer- in-Charge or the Institute or with such other person or persons.

It is an agreed term of the contract that the sum of money so withheld or retained under this clause by the Engineer-in-Charge or the Institute will be kept withheld or retained as such by the Engineer-in-Charge or the Institute or till his claim arising out of the same contract or any other contract is either mutually settled or determined by the arbitration clause or by the competent court, as the case may be and that the contractor shall have no claim for interest or damages whatsoever on this account or on any other ground in respect of any sum of money withheld or retained under this clause and duly notified as such to the contractor.

CLAUSE 30

The contractor shall not employ coal mining or controlled area labour falling under any category whatsoever on or in connection with the work or recruit labour from area within a radius of 32 km (20 miles) of the controlled area. Subject as above the contractor shall employ imported labour only i.e., deposit imported labour or labour imported by contractors from area, from which import is permitted.

Where ceiling price for imported labour has been fixed by State or Regional Labour Committees not more than that ceiling price shall be paid to the labour by the contractor.

The contractor shall immediately remove any labourer who may be pointed out by the Engineer-in-Charge as being a coal mining or controlled area labourer. Failure to do so shall render the contractor liable to pay to Institute a sum calculated at the rate of Rs.100/- per day per labourer. The certificate of the Engineer-in-Charge about the number of coal mining or controlled area labourer and the number of days for which they worked shall be final and binding upon all parties to this contract.

It is declared and agreed between the parties that the aforesaid stipulation in this clause is one in which the public are interested within the meaning of the exception in Section 74 of Indian Contract Act, 1872.

Explanation : Controlled Area means the following areas :

Districts of Dhanbad, Hazaribagh, Jamtara – a Sub-division under Santhal Pargana Commissioner, Districts of Bankuara, Birbhum, Burdwan, District of Bilaspur.

Any other area which may be declared a controlled area by or with the approval of the Central Government.

CLAUSE 31

The contractor(s) shall make his / their own arrangements for water required for the work and nothing extra will be paid for the same. This will be subject to the following conditions.

- i) That the water used by the contractor(s) shall be fit for construction purposes to the satisfaction of the Engineer-in-charge.
- ii) The Engineer-in-Charge shall make alternative arrangements for supply of water at the risk and cost of contractor(s) if the arrangements made by the contractor(s) for procurement of water are in the opinion of the Engineer-in-Charge, unsatisfactory.
- iii) No bore wells / open wells shall be constructed inside the IITM Campus for drawl of water.

CLAUSE 31 A

Deleted

CLAUSE 32

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CLAUSE 33

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CLAUSE 34

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CLAUSE 35

- i) The contractor undertakes to make arrangement for the supervision of the work by the firm supplying the tar or bitumen used.
- ii) The contractor shall collect the total quantity of tar or bitumen required for the work as per standard formula, before the process of painting is started and shall hypothecate it to the Engineer-in-Charge. If any bitumen or tar remains unused on completion of the work on account of lesser use of materials in actual execution for reasons other than authorized changes of specifications and abandonment of portion of work, a corresponding deduction equivalent to the cost of unused materials as determined by the Engineer-in-Charge shall be made and the material returned to the contractors. Although the materials are hypothecated to Institute, the contractor undertakes the responsibility for their proper watch, safe custody and protection against all risks. The materials shall not be removed from site of work without the consent of the Engineer-in-Charge in writing.
- iii) The contractor shall be responsible for rectifying defects noticed within a year from the date of completion of the work and the portion of the security deposit relating to asphaltic work shall be refunded after the expiry of this period.

CLAUSE 36

Contractors Superintendence, Supervision, Technical Staff & Employees

i) The contractor shall provide all necessary superintendence during execution of the work and as along thereafter as may be necessary for proper fulfilling of the obligations under the contract.

The contractor shall immediately after receiving letter of acceptance of the tender and before commencement of the work, intimate in writing to the Engineer-in-Charge, the name(s), qualifications, experience, age, address(s) and other particulars along with certificates, of the principal technical representative to be in charge of the work and other technical representative(s) who will be supervising the work, minimum requirement of such technical representative(s) and their qualifications and experience shall not be lower than specified in Schedule 'F'. The Engineer-in-Charge shall within 3 days of receipt of such communication intimate in writing his approval or otherwise of such a representative(s) to the contractor. Any such approval may at any time be withdrawn and in case of such withdrawal, the contractor shall appoint another such representative(s) according to the provisions of this clause. Decision of the tender accepting authority shall be final and binding on the contractor in this respect. Such a principal technical representative shall be appointed by the contractor soon after receipt of the approval from Engineer-in-Charge and shall be available at site before start of work.

If the contractor (or any partner in case of firm/company) who himself has such qualifications, it will not be necessary for the said contractor to appoint such a principal technical representative but the contractor shall designate and appoint a responsible agent to represent him and to be present at the work whenever the contractor is not in a position to be so present. All the provisions applicable to the principal technical representative under the clause will also be applicable in such a case to contractor or his responsible agent. The principal technical representative and/or the contractor shall on receiving reasonable notice from the Engineer-in-Charge or his designated representative(s) in charge of the work in writing or in person or otherwise, present himself to the Engineer-in-Charge and/or at the site of work, as required, to take instructions. Instructions given to the principal technical representative of the responsible agent shall be deemed to have the same force as if these have been given to the contractor. The principal technical representative and/or the contractor or his responsible authorised agent shall be actually available at site especially during important stages of execution of work, during recording of measurement of works and whenever so required by the Engineer-in-Charge by a notice as aforesaid and shall also note down instructions conveyed by the Engineer-in-Charge or his designated representative in the site order book and shall affix his signature in token of noting down the instructions and in token of acceptance of measurements.

If the Engineer-in-Charge, whose decision in this respect is final and binding on the contractor, is convinced that no such technical representative(s) is / are effectively appointed or is / are effectively attending or fulfilling the provision of this clause, a recovery (nonrefundable) shall be effected from the contractor as specified in Schedule 'F' and the decision of the Engineer-in-Charge as recorded in the site order book and measurement recorded checked / test checked in Measurement Books shall be final and binding on the contractor. Further if the contractor fails to appoint a suitable technical representative and / or other technical representative(s) and if such appointed persons are not effectively present are absent by more than two days without duly approved substitute or do not discharge their responsibilities satisfactorily, the Engineer-in-Charge shall have full powers to suspend the execution of the work until such date as suitable other technical representative(s) is / are appointed and the contractor shall be held responsible for the delay so caused to the work. The contractor shall submit a certificate of employment of the technical representative(s) along with every on account bill/final bill and shall produce evidence if at any time so required by the Engineer-in-Charge.

(ii) The contractor shall provide and employ on the site only such technical assistants as are skilled and experienced in their respective fields and such foremen and supervisory staff as are competent to give proper supervision to the work.

The contractor shall provide and employ skilled, semiskilled and unskilled labour as is necessary for proper and timely execution of the work.

The Engineer-in-Charge shall be at liberty to object to and require the contractor to remove from the works any person who in his opinion misconducts himself, or is incompetent or negligent in the performance of his duties or whose employment is otherwise considered by the Engineer-in-Charge to be undesirable. Such person shall not be employed again at works site without the written permission of the Engineer-in-Charge and the persons so removed shall be replaced as soon as possible by competent substitutes.

CLAUSE 37

- i) Sales Tax / VAT or any other tax on materials in respect of this contract shall be payable by the contractor and Institute shall not entertain any claim whatsoever in this respect.
- ii) The contractor shall deposit royalty and obtain necessary permit for supply of the red bajri, stone, kankar, etc. from local authorities.
- (iii) If pursuant to or under any law, notification or order any royalty, cess or the like becomes payable by the Institute and does not any time become payable by the contractor to the State Government / Local authorities in respect of any material used by the contractor in the works then in such a case, it shall be lawful to the Institute and it will have the right and be entitled to recover the amount paid in the circumstances as aforesaid from dues of the contractor.

CLAUSE 38

- i) All tendered rates shall be inclusive of all taxes and levies payable under respective statutes. However, pursuant to the Constitution (46th Amendment) Act, 1982, if any further tax or levy is imposed by Statute, after the last stipulated date for the receipt of tender including extensions if any and the contractor thereupon necessarily and properly pays such taxes/levies, the contractor shall be reimbursed the amount so paid. provided such payments, if any, is not, in the opinion of the EXECUTIVE ENGINEER (CIVIL)(whose decision shall be final and binding on the contractor) attributable to delay in execution of work within the control of the contractor.
- ii) The contractor shall keep necessary books of accounts and other documents for the purpose of this condition as may be necessary and shall allow inspection of the same by a duly authorised representative of the Institute and/or the Engineer-in-Charge and further shall furnish such other information/document as the Engineer-in-Charge may require from time to time.
- iii) The contractor shall, within a period of 30 days of the imposition of any such further tax or levy, pursuant to the Constitution (Forty Sixth Amendment) Act 1982, give a written notice thereof to the Engineer-in-Charge that the same is given pursuant to this condition, together with all necessary information relating thereto.

CLAUSE 39

Without prejudice to any of the rights or remedies under this contract if the contractor dies, the Engineer-in-charge on behalf of the Institute shall have the option of terminating the contract without compensation to the contractor.

CLAUSE 40

The contractor shall not be permitted to tender for works in the Institute (responsible for award and execution of contracts) of which his near relative is posted as Divisional Accountant or as an officer in any capacity between the grades of the EXECUTIVE ENGINEER (CIVIL)and Junior Engineer (both inclusive). He shall also intimate the names of persons who are working with him in any capacity or are subsequently employed by him and who are near relatives to any Gazetted Officer in the Institute. or in the Ministry of Urban Development. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of the Institute. If however the contractor is registered in any other department, he shall be debarred from tendering in Institute for any breach of this condition

NOTE: By the term "near relatives" is meant wife, husband, parents and grand parents, children and grand children, brothers and sisters, uncles, aunts and cousins and their corresponding in-laws.

CLAUSE 41

No engineer of gazetted rank or other gazetted officer employed in engineering or administrative duties in an engineering department of the Government of India shall work as a contractor or employee of a contractor for a period of one year after his retirement from government service without the previous permission of Government of India in writing. This contract is liable to be cancelled if either the contractor or any of his employees is found at any time to be such a person who had not obtained the permission of Government of India as aforesaid, before submission of the tender or engagement in the contractor's service, as the case may be.

CLAUSE 42

Refer Page. No. ___ of this tender document.

CLAUSE 43

The work (whether fully constructed or not) and all materials, machines, tools and plants, scaffolding, temporary buildings and other things connected therewith shall be at the risk of the contractor until the work has been delivered to the Engineer-in-Charge and a certificate from him to that effect obtained. In the event of the work or any materials properly brought to the site for incorporation in the work being damaged or destroyed in consequence of hostilities or warlike operation, the contractor shall when ordered (in writing) by the Engineer-in-Charge to remove any debris from the site, collect and properly stack or remove in store all serviceable materials salvaged from the damaged work and shall be paid at the contract rates in accordance with the provision of this agreement for the work of clearing the site of debris, stacking or removal of serviceable material and for reconstruction of all works ordered by the Engineer-in-Charge, such payments being in addition to compensation upto the value of the work originally executed before being damaged or destroyed and not paid for. In case of works damaged or destroyed but not already measured and paid for, the compensation shall be assessed by the EXECUTIVE ENGINEER (CIVIL) concerned. The contractor shall be paid for the damages/destruction suffered and for the restoring the material at the rate based on analysis of rates tendered for in accordance with the provision of the contract. The certificate of the Engineer-in-Charge regarding the quality and quantity of materials and the purpose for which they were collected shall be final and binding on all parties to this contract.

Provided always that no compensation shall be payable for any loss in consequence of hostilities or warlike operations (a) unless the contractor had taken all such precautions against air raid as are deemed necessary by the A.R.P. Officers or the Engineer-in-Charge (b) for any material etc. not on the site of the work or for any tools, plant, machinery, scaffolding, temporary building and other things not intended for the work.

In the event of the contractor having to carry out reconstruction as aforesaid, he shall be allowed such extension of time for its completion as is considered reasonable by the Engineer-in-charge.

CLAUSE 44

The contractor shall comply with the provisions of the Apprentices Act, 1961 and the rules and orders issued there under from time to time. If he fails to do so, his failure will be a breach of the contract and the EXECUTIVE ENGINEER (CIVIL) 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 provisions of the said Act.

CLAUSE 45

Security Deposit of the work shall not be refunded till the claims, if any regarding non payment / short payment to labourers is settled and no complaint any labour or objection of the labour enforcement authorities are pending. The Engineer-in-charge may obtain necessary clause from the labour law enforcement authorities.

C.P.W.D. SAFETY CODE

1. Suitable scaffolds should be provided for workmen for all works that cannot safely be done from the ground, or from solid construction except such short period work as can be done safely from ladders. When a ladder is used, an extra mazdoor shall be engaged for holding the ladder and If the ladder is used for carrying materials as well suitable footholds and hand-hold shall be provided on the ladder and the ladder shall be given an inclination not steeper than 1/4 to 1 (1/4 horizontal and 1 vertical.)
2. Scaffolding of staging more than 3.6 mt. (12ft.) above the ground or floor, swung or suspended from an overhead support or erected with stationary support shall have a guard rail properly attached or bolted, braced and otherwise secured at least 90 cm. (3ft.) high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends there of with only such opening as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the building or structure.
3. Working platforms, gangways and stairways should be so constructed that they should not sag unduly or unequally, and if the height of the platform or the gangway or the stairway is more than 3.6 m (12ft.) above ground level or floor level, they should be closely boarded, should have adequate width and should be suitably fastened as described in (2) above.
4. Every opening in the floor of a building or in a working platform shall be provided with suitable means to prevent the fall of person or materials by providing suitable fencing or railing whose minimum height shall be 90 cm.(3ft.)
5. Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9m. (30ft.) in length while the width between side rails in rung ladder shall in no case be less than 29 cm. (11 1/2") for ladder upto and including 3 m. (10 ft.) in length. For longer ladders, this width should be increased at least 1/4" for each additional 30 cm/1 foot of length. Uniform step spacing of not more than 30 cm shall be kept. Adequate precautions shall be taken to prevent danger from electrical equipment. No materials on any of the sites or work shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The contractor shall provide all necessary fencing and lights to protect the public from accident and shall be bound to bear the expenses of defence of every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the above precautions and to pay any damages and cost which may be awarded in any such suit, action or proceedings to any such person or which may, with the consent of the contractor, be paid to compensate any claim by any such person.
6. Excavation and Trenching - All trenches of 1.2 m. (4ft.) or more in depth, shall at all times be supplied with at least one ladder for each 30 m. (100 ft.) in length or fraction thereof Ladder shall extend from bottom of the trench to at least 90 cm. (3ft.) above the surface of the ground. The side of the trenches which are 1.5 m. (5ft.) or more in depth shall be stepped back to give suitable slope or securely held by timber bracing, so as to avoid the danger of sides collapsing. The excavated materials shall not be placed within 1.5 m. (5ft.) of the edges of the trench or half of the depth of the trench whichever is more. Cutting shall be done from top to bottom. Under no circumstances, undermining or undercutting shall be done.
7. Demolition - Before any demolition work is commenced and also during the progress of the work,
 - (i) All roads and open areas adjacent to the work site shall either be closed or suitably protected.
 - (ii) No electric cable or apparatus which is liable to be a source of danger or a cable or apparatus used by the operator shall remain electrically charged.
 - (iii) All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render it unsafe.
8. All necessary personal safety equipment as considered adequate by the Engineer-in-Charge should be kept available for the use of the person employed on the site and maintained in a condition suitable for immediate use, and the contractor should take adequate steps to ensure proper use of equipment by those concerned:-
The following safety equipment shall invariably be provided.
 - i. Workers employed on mixing asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective gloves and goggles.
 - ii. Those engaged in white washing and mixing or stacking of cement bags or any material which is injurious to the eyes, shall be provided with protective gloves and goggles.

- iii. Those engaged in welding works shall be provided with welder's protective eye-shields.
- iv. Stone breaker shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
- v. When workers are employed in sewers and manholes, which are in active use, the contractors shall ensure that the manhole covers are opened and ventilated atleast for an hour before the workers are allowed to get into the manholes, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to the public. In addition, the contractor shall ensure that the following safety measure are adhered to :
 - a) Entry for workers into the line shall not be allowed except under supervision of the JE or any other higher officer.
 - b) At least 5 to 6 manholes upstream and downstream should be kept open for at least 2 to 3 hours before any man is allowed to enter into the manhole for working inside.
 - c) Before entry, presence of Toxic gases should be tested by inserting wet lead acetate paper which changes colour in the presence of such gases and gives indication of their presence.
 - d) Presence of Oxygen should be verified by lowering a detector lamp into the manhole. In case, no Oxygen is found inside the sewer line, workers should be sent only with Oxygen kit.
 - e) Safety belt with rope should be provided to the workers. While working inside the manholes, such rope should be handled by two men standing outside to enable him to be pulled out during emergency.
 - f) The area should be barricaded or cordoned off by suitable means to avoid mishaps of any kind. Proper warning signs should be displayed for the safety of the public whenever cleaning works are undertaken during night or day. .
 - g) No smoking or open flames shall be allowed near the blocked manhole being cleaned.
 - h) The malba obtained on account of cleaning of blocked manholes and sewer lines should be immediately removed to avoid accidents on account of slippery nature of the malba.
 - i) Workers should not be allowed to work inside the manhole continuously. He should be given rest intermittently. The Engineer-in-Charge may decide the time up to which a worker may be allowed to work continuously inside the manhole.
 - j) Gas masks with Oxygen Cylinder should be kept at site for use in emergency.
 - k) Air-blowers should be used for flow of fresh air through the manholes. Whenever called for portable air blowers are recommended for ventilating the manholes. The Motors for these shall be vapour proof and of totally enclosed type. Non sparking gas engines also could be used but they should be placed at least 2 metres away from the opening and on the leeward side protected from wind so that they will not be a source of friction on any inflammable gas that might be present.
 - l) The workers engaged for cleaning the manholes/sewers should be properly trained before allowing to work in the manhole.
 - m) The workers shall be provided with Gumboots or non sparking shoes bump helmets and gloves non sparking tools safety lights and gas masks and portable air blowers (when necessary). They must be supplied with barrier cream for anointing tile limbs before working inside the sewer lines.
 - n) Workmen descending a manhole shall try each ladder stop or rung carefully before putting his full weight on it to guard against insecure fastening due to corrosion of the rung fixed to manhole well.
 - o) If a man has received a physical injury, he should be brought out of the sewer immediately and adequate medical aid should be provided to him.
 - p) The extent to which these precautions are to be taken depend on individual situation but the decision of the Engineer-in-Charge regarding the steps to be taken in this regard in an individual case will be final.
- (vi) The following precaution should be taken while painting:
 - a) White lead, sulphate of lead or product containing these pigment, shall not be used in painting operation except in the form of pastes or paint ready for use.
 - b) Measures shall be taken, wherever required in order to prevent danger arising from the application of a paint in the form of spray.
 - c) Measures shall be taken, wherever practicable, to prevent danger arising out of from dust caused by dry rubbing down and scraping.
 - d) Adequate facilities shall be provided to enable working painters to wash during and on cessation of work.
 - e) Overall shall be worn by working painters during the whole of working period.
 - f) Suitable arrangement shall be made to prevent clothing put off during working hours being

- spoiled by painting materials.
- g) Cases of lead poisoning and suspected lead poisoning shall be notified and shall be subsequently verified by medical man appointed by Institute.
 - h) Institute may require, when necessary medical examination of workers.
 - i) Instructions with regard to special hygienic precautions to be taken in the painting trade shall be distributed to working painters.
9. When the work is done near any place where there is risk of drowning, all necessary equipments should be provided and kept ready for use and all necessary steps taken for prompt rescue of any person in danger and adequate provision, should be made for prompt first aid treatment of all injuries likely to be obtained during the course of the work.
10. Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following standards or conditions
- a. These shall be of good mechanical construction, sound materials and adequate strength and free from patent defects and shall be kept repaired and in good working order.
 - b.
 - (i) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength and free from patent defects.
 - (ii) Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years should be in charge of any hoisting machine including any scaffolding winch or give signals to operator.
 - (iii) In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or as means of suspension, the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of a hoisting machine having a variable safe working load each safe working load and the condition under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.
 - iv) The contractor shall notify the safe working load of the machine to the Engineer-in-Charge whenever he brings any machinery to site of work who may get it verified.
11. Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards. Hoisting appliances should be provided with such means as will reduce to the minimum the risk of accidental descent of the load. Adequate precautions should be taken to reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energised, insulating mats, wearing apparel, such as gloves, sleeves and boots as may be necessary should be provided. The worker should not wear any rings, watches and carry keys or other materials which are good conductors of electricity.
12. All scaffolds, ladders and other safety devices mentioned or described herein shall be. Maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near places of work.
13. These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place at work spot. The person responsible for compliance of the safety code shall be named therein by the contractor.
14. To ensure effective enforcement of the rules and regulations relating to safety precautions the arrangements made by the contractor shall be open to inspection by labour officer or other department or Engineer-in-Charge or their representatives.
15. Notwithstanding the above clauses from (1) to (15) there is nothing in these to exempt the contractor from the operations of any other Act or Rule in force in the Republic of India.

1. APPLICATION

These rules shall apply to all buildings and construction works in IITM in which twenty or more workers are ordinarily employed or are proposed to be employed in any day during the period during which the contract work is in progress.

2. DEFINITION

Work place means a place where twenty or more workers are ordinarily employed in connection with construction work on any day during the period during which the contract work is in progress

3. FIRST AID FACILITIES

- i) At every work place there shall be provided and maintained, so as to easily accessible during working hours, first-aid boxes at the rate of not less than one box for 150 contract labour or part thereof ordinarily employed..
 - ii) The first-aid box shall be distinctly marked with a red cross on white back ground and shall contain the following equipment
- a) For work places in which the number of contract labour employed does not exceed 50
Each first-aid box shall contain the following equipments :-
1. 6 small sterilised dressings
 2. 3 medium size sterilized dressings.
 3. 3 large size sterilized dressings.
 4. 3 large sterilized burn dressings.
 5. 1 (30ml) bottle containing a two per cent alcoholic solution of iodine
 6. 1 (30 ml) bottle containing salvolatile having the dose and mode of administration indicated on the label.
 7. 1 snakebite lancet.
 8. 1 (30 gms.) bottle of potassium permanganate crystals
 9. 1 pair scissors
 10. 1 copy of the first-aid leaflet issued by the Director General, Factory Advice Service and Labour Institutes, Government of India.
 11. 1 bottle containing 100 tablets (each of 5 gms) of aspirin.
 12. Ointment for burns
 13. A bottle of suitable surgical antiseptic solution
- b) For work places in which the number of contract labour exceed 50.
Each first-aid box shall contain the following equipments.
1. 12 small sterilised dressings.
 2. 6 medium size sterilised dressings.
 3. 6 large size sterilised dressings.
 4. 6 large size sterilised burn dressings.
 5. 6 (15 gms.) packets sterilised cotton wool.
 6. 1 (60 ml.) bottle containing a two per cent alcoholic solution iodine.
 7. 1 (60 ml.) bottle containing salvolatile having the dose and mode of administration indicated on the label.
 8. 1 roll of adhesive plaster.
 9. 1 snake bite lancet.
 10. 1 (30 gms) bottle of potassium permanganate crystals.
 11. 1 pair scissors
 12. 1 copy of the first-aid leaflet issued by the director General Factory Advice Service and labour Institutes / government of India.
 13. A bottle containing 100 tablets (each of 5 gms) of aspirin.
 14. Ointment for burns.
 15. A bottle of suitable surgical antiseptic solution.
- (iii) Adequate arrangements shall be made for immediate recoument of the equipment when necessary.
 - (iv) Nothing except the prescribed contents shall be kept in the First-aid box.
 - (v) The first-aid box shall be kept in charge of a responsible person who shall always be readily available during the working hours of the work place.
 - (vi) A person in Charge of the First aid box shall be a person trained in First-aid treatment, in the work places where the number of contract labour employed is 150 or more.
 - (vii) In work places where the number of contract labour employed is 500 or more and hospital facilities are not available within easy distance from the works. First-aid posts shall be established and run by a trained compounder. The compounder shall be on duty & shall be available at all hours when the workers are at work.
 - (viii) Where work places are situated in places which are not towns or cities, a suitable motor transport shall be kept readily available to carry injured person or person suddenly taken ill to the nearest hospital.

4. DRINKING WATER

- (i) In every work place, there shall be provided and maintained at suitable places, easily accessible to labour, a sufficient supply of cold water fit for drinking.
- (ii) Where drinking water is obtained from an intermittent public water supply, each work place shall be provided with storage where such drinking water shall be stored.
- (iii) Every water supply or storage shall be at a distance of not less than 50 feet from any latrine drain or other source of pollution. Where water has to be drawn from an existing well which is within such proximity of latrine, drain or any other source of pollution, the well shall be properly chlorinated before water is drawn from it for drinking. All such wells shall be entirely closed in and be provided with a trap door which shall be dust and waterproof.
- (iv) A reliable pump shall be fitted to each covered well, the trap door shall be kept locked and opened only for cleaning or inspection which shall be done at least once a month.

5. WASHING FACILITIES

- I. In every work place adequate and suitable facilities for washing shall be provided and maintained for the use of contract labour employed therein.
- II. Separate and adequate cleaning facilities shall be provided for the use of male and female workers.
- III. Such facilities shall be conveniently accessible and shall be kept in clean and hygienic condition.

6. LATRINES AND URINALS

- i) Latrines shall be provided in every work place on the following scale namely:
 - a) Where female are employed there shall be at least one latrine for every 25 females.
 - b) Where males are employed, there shall be at least one latrine for every 25 males.Provided that where the number of males or females exceeds 100, it shall be sufficient if there is one latrine for 25 males or females as the case may be upto the first 100, and one for every 50 thereafter.
- ii. Every latrine shall be under cover and so partitioned off as to secure privacy, and shall have a proper door and fastenings.
- iii. Construction of latrines: The inside walls shall be constructed of masonry or some suitable heat-resisting non-absorbent materials and shall be cement washed inside and outside at least once a year, Latrines shall not be of a standard lower than borehole system.
- iv. (a) Where workers of both sexes are employed, there shall be displayed outside each block of latrine and urinal, a notice in the language understood by the majority of the workers "For Men only" or "For Women Only" as the case may be.
 - (b) The notice shall also bear the figure of a man or of a woman, as the case may be.
- v) There shall be at least one urinal for male workers upto 50 and one for female workers upto fifty employed at a time, provided that where the number of male or female workmen, as the case may be exceeds 500, it shall be sufficient if there is one urinal for every 50 males or females upto the first 500 and one for every 100 or part thereafter.
- vi) a) The latrines and urinals shall be adequately lighted and shall be maintained in a clean and sanitary condition at all times.
 - b) Latrines and urinals other than those connected with a flush sewage system shall comply with the requirements of the Public Health Authorities.
- vii) Water shall be provided by means of tap or otherwise so as to be conveniently accessible in or near the latrines and urinals.
- viii) Disposal of excreta: Unless otherwise arranged for by the local sanitary authority, arrangements for proper disposal of excreta by incineration at the work place shall be made by means of a suitable incinerator. Alternately excreta may be disposed of by putting a layer of night soil at the bottom of a pucca tank prepared for the purpose and covering it with a 15 cm. layer of waste or refuse and then covering it with a layer of earth for a fortnight (when it will turn to manure).
- ix) The contractor shall at his own expense, carry out all instructions issued to him by the Engineer-in-Charge to effect proper disposal of night soil and other conservancy work in respect of the contractor's workmen or employees on the site. The contractor shall be responsible for payment of any charges which may be levied by Municipal or Cantonment Authority for execution of such on his behalf.

7. PROVISION OF SHELTER DURING REST

At every place there shall be provided, free of cost, four suitable sheds, two for meals and the other two for rest separately for the use of men and women labour, The height of each shelter shall not be less than 3 meters (10ft.) from the floor level to the lowest part of the roof. These shall be kept clean and the space provided shall be on the basis of 0.6 sqm. (6 sft) per head provided that the Engineer-in-Charge may permit subject to his satisfaction, a portion of the building under construction or other alternative accommodation to be used for the purpose.

8. CRECHES

- (i) At every work place, at which 20 or more women worker are ordinarily employed, there shall be provided two rooms of reasonable dimensions for the use of their children under the age of six years. One room shall be used as a play room for the children and the other as their bedroom. The rooms shall be constructed with specifications as per clause 19H (ii) a, b & c.
- (ii) The rooms shall be provided with suitable and sufficient openings for light and ventilation. There shall be adequate provision of sweepers to keep the places clean.
- (iii) The contractor shall supply adequate number of toys and games in the play room and sufficient number of cots and beddings in the bed room.
- (iv) The contractor shall provide one ayaal to look after the children in the creche when the number of women workers does not exceed 50 and two when the number of women workers exceeds 50.
- (v) The use of the rooms earmarked as creches shall be restricted to children, their attendants and mothers of the children.

9. CANTEENS

- (i) In every work place where the work regarding the employment of contract labour is likely to continue for six months and where in contract labours numbering one hundred or more are ordinarily employed, an adequate canteen shall be provided by the contractor for the use of such contract labour.
- (ii) The canteen shall consist of at least a dining hall, kitchen, store room, pantry and washing places separately for workers and utensils.
- (iii) The canteen shall be sufficiently lighted at all times when any person has access to it.
- (iv) The floor shall be made of smooth and impervious materials and inside walls shall be lime-washed or colour washed at least once in each year.
- (v) Provided that the inside walls of the kitchen shall be lime-washed every four months.
- (vi) The premises of the canteen shall be maintained in a clean and sanitary condition.
- (vii) Waste water shall be carried away in suitable covered drains and shall not be allowed to accumulate so as to cause a nuisance.
- (viii) Suitable arrangements shall be made for the collection and disposal of garbage.
- (ix) The dining hall shall accommodate at a time 30 per cent of the contract labour working at a time.
- (x) The floor area of the dining hall, excluding the area occupied by the service counter and any furniture except tables and chairs shall not be less than one square meter (10 sft) per diner to be accommodated as prescribed in sub-Rule 9.
- (xi) a) A portion of the dining hall and service counter shall be partitioned off and reserved for women workers in proportion to their number.
b) Washing places for woman shall be separate and screened to secure privacy.
- (xii) Sufficient tables, stools, chair or benches shall be available for the number of diners to be accommodated as prescribed in sub-Rule 9.
- (xiii) a) 1. There shall be provided and maintained sufficient utensils crockery, furniture and any other equipment necessary for the efficient running of the canteen.
2. The furniture utensils and other equipment shall be maintained in a clean and hygienic condition.
b) 1. Suitable clean clothes for the employees serving in the canteen shall be provided and maintained.
2. A service counter, if provided, shall have top of smooth and impervious material.
3. Suitable facilities including an adequate supply of hot water shall be provided for the cleaning of utensils and equipments.
- (xiv) The food stuffs and other items to be served in the canteen shall be in conformity with the normal habits of the contract labour.

- (xv) The charges for food stuffs, beverages and any other items served in the canteen shall be based on 'No profit, No loss' and shall be conspicuously displayed in the canteen.
- (xvi) In arriving at the price of foodstuffs, and other article served in the canteen, the following items shall not be taken into consideration as expenditure namely:
 - a) The rent of land and building.
 - b) The depreciation and maintenance charges for the building and equipments provided for the canteen.
 - c) The cost of purchase, repairs and replacement of equipments including furniture, crockery, cutlery and utensils.
 - d) The water charges and other charges incurred for lighting and ventilation.
 - e) The interest and amounts spent on the provision and maintenance of equipments provided for the canteen
- (xvii) The accounts pertaining to the canteen shall be audited once every 12 months by registered accountants and auditors.

10. ANTI-MALARIAL PRECAUTIONS

The contractor shall at his own expense, conform to all anti-malarial instructions given to him by the Engineer-in-Charge including the filling up of any borrow pits which may have been dug by him.

11. The above rules shall be incorporated in the contracts and in notices inviting tenders and shall form an integral part of the contracts.

12. AMENDMENTS

Institute may, from time to time, add to or amend these rules and issue directions - it may consider necessary for the purpose of removing any difficulty which may arise in the administration thereof.

C.P.W.D. Contractor's Labour Regulations

1. SHORT TITLE

These regulations may be called the CPWD/PWD (DA Contractors Labour Regulations).

2. DEFINITIONS

i) Workman means any person employed by contractor directly or indirectly through a subcontractor with or without the knowledge of the Institute to do any skilled, semiskilled or unskilled manual, supervisory, technical or clerical work for hire or reward, whether the terms of employment are expressed or implied but does not include any person:

- a) Who is employed mainly in a managerial or administrative capacity: or
 - b) Who, being employed in a supervisory capacity draws wages exceeding five hundred rupees per mensem or exercises either by the nature of the duties attached to the office or by reason of powers vested in him, functions mainly of managerial nature: or
 - c) Who is an out worker, that is to say, person to whom any article or materials are given out by or on behalf of the principal employers to be made up cleaned, washed, latered, ornamental finished, repaired adopted or otherwise processed for sale for the purpose of the trade or business of the principal employers and the process is to be carried out either in the home of the out worker or in some other premises, not being premises under the control and management of the principal employer.
- No person below the age of 14 years shall be employed to act as a workman.

ii) Fair wages means wages whether for time or piece work fixed and notified under the provisions of the Minimum Wages Act from time to time.

iii) Contractors shall include every person who undertakes to produce a given result other than a mere supply of goods or articles of manufacture through contract labour or who supplies contract labour for any work and includes a subcontractor.

iv) Wages shall have the same meaning as defined in the Payment of Wages Act.

- i) Normally working hours of an adult employee should not exceed 9 hours a day. The working day shall be so arranged that inclusive of interval for rest, if any, it shall not. spread over more than 12 hours on any day.
- ii) When an adult worker is made to work for more than 9 hours on any day or for more than 48 hours in any week, he shall be paid over time for the extra hours put in by him at double the ordinary rate of wages.
- iii) a) Every worker shall be given a weekly holiday normally on a Sunday, in accordance with the provisions of the Minimum Wages (Central) Rules 1960 as amended from time to time irrespective of whether such worker is governed by the Minimum Wages Act or not.
b) Where the minimum wages prescribed by the Government under the minimum Wages Act are not inclusive of the wages for the weekly day of rest, the worker shall be entitled to rest day wages at the rate applicable to the next preceding day, provided he has worked under the same contractor for a continuous period of not less than 6 days.
c) Where a contractor is permitted by the Engineer-in-Charge to allow a worker to work on a normal weekly holiday, he shall grant a substituted holiday to him for the whole day on one of the five days immediately before or after the normal weekly holiday and pay wages to such worker for the work performed on the normal weekly holiday at overtime rate.

3. DISPLAY OF NOTICE REGARDING WAGES ETC.

The contractor shall before he commences his work on contract, display and correctly maintain and continue to display and correctly maintain in a clear and legible condition in conspicuous places on the work, notices in English and in the local Indian languages spoken by the majority of the workers giving the minimum rates of wages fixed under Minimum Wages Act, the actual wages being paid, the hours of work for which such wage are earned, wages periods, dates of payments of wages and other relevant information as per Appendix 'III'.

4. PAYMENT OF WAGES

- i) The contractor shall fix wage periods in respect of which wages shall be payable.
- ii) No wage period shall exceed one month.
- iii) The wages of every person employed as contract labour in an establishment or by a contractor where less than one thousand such persons are employed shall be paid before the expiry of seventh day and in other cases before the expiry of tenth day after the last day of the wage period in respect of which the wages are payable.
- iv) Where the employment of any worker is terminated by or on behalf of the contractor the wages earned by him shall be paid before the expiry of the second working day from the date on which his employment is terminated.
- v) All payment of wages shall be made on a working day at the work premises and during the working time and on a date notified in advance and in case the work is completed before the expiry of the wage period, final payment shall be made within 48 hours of the last working day.
- vi) Wages due to every worker shall be paid to him direct or to other person authorised by him in this behalf.
- vii) All wages shall be paid in current coin or currency or in both.
- viii) Wages shall be paid without any deductions of any kind except those specified by the Central Government by general or special order in this behalf or permissible under the Payment of Wages Act 1956.
- ix) A notice showing the wages period and the place and time of disbursement of wages shall be displayed at the place of work and a copy sent by the contractor to the Engineer-in-Charge under acknowledgment.
- x) It shall be the duty of the contractor to ensure the disbursement of wages in the presence of the Junior Engineer or any other authorised representative of the Engineer-in-Charge

who will be required to be present at the place and time of disbursement of wages by the contractor to workmen.

The contractor shall obtain from the Junior Engineer or any other authorised representative of the Engineer-in-Charge as the case may be, a certificate under his signature at the end of the entries in the "Register of Wages" or the "Wage-cum Muster Roll" as the case may be in the following form:

"Certified that the amount shown in column No..... has been paid to the workman concerned in my presence on..... at....."

5. FINES AND DEDUCTIONS WHICH MAY BE MADE FROM WAGES

- (i) The wages of a worker shall be paid to him without any deduction of any kind except the following:
- a) Fines
 - b) Deductions for absence from duty i.e. from the place or the places where by the terms of his employment he is required to work. The amount of deduction shall be in proportion to the period for which he was absent.
 - c) Deduction for damage to or loss of goods expressly entrusted to the employed person for custody, or for loss of money or any other deduction which he is required to account, where such damage or loss is directly attributable to his neglect or default.
 - d) Deduction for recovery of advances or for adjustment of overpayment of wages, advances granted shall be entered in a register.
 - e) Any other deduction which the Central Government may from time to time allow.
- ii) No fines should be impose on any worker save in respect of such acts and omissions on his part as have been approved of by the Chief Labour Commissioner.
- Note:** An approved list of Acts and omissions for which fines can be imposed is enclosed. Appendix- X
- iii) No fine shall be imposed on a worker and no deduction for damage or loss shall be made from his wages until the worker has been given an opportunity of showing cause against such fines or deductions.
- iv) The total amount of fine which may be imposed in anyone wage period on a worker shall not exceed an amount equal to three paise in a rupee of the total wages, payable to him in respect of that wage period.
- v) No fine imposed on any worker shall be recovered from him by installment, or after the expiry of sixty days from the date on which it was imposed.
- vi) Every fine shall be deemed to have been imposed on the day of the act or omission in respect of which it was imposed.

6. LABOUR RECORDS

- i) The contractor shall maintain a Register of persons employed on work on contract in Form XIII of the CL (R &A) Central Rules 1971 (Appendix IV)
- ii) The contractor shall maintain a **Muster Roll** register in respect of all workmen employed by him on the work under Contract in Form XVI of the CL (R&A) Rules 1971 (Appendix V).
- iii) The contractor shall maintain a **Wage Register** in respect of all workmen employed by him on the work under contract in Form XVII of the CL (R&A) Rules 1971 (Appendix VI)
- (iv) Register of accident : The contractor shall maintain a register of accidents in such form may be convenient at the work place but the same shall include the following particulars :
 - a) Full particulars of the labourers who met with accident
 - b) Rate of wages
 - c) Sex
 - d) Age
 - e) Nature of accident and cause of accident
 - f) Time and date of accident
 - g) Date and time when admitted in Hospital
 - h) Date of discharge from the Hospital
 - i) Period of treatment and result of treatment.
 - j) Percentage of loss of earning capacity and disability as assessed by Medical officer.
 - k) Claim required to be paid under Workmen's Compensation Act.

- l) Date of payment of compensation
- m) Amount paid with details of the person to whom the same was paid.
- n) Authority by whom the compensation was assessed.

Remarks

v) The contractor shall maintain a **Register of Fines** in the Form XII of the CL (R &A) Rules 1971 (Appendix-XI)

The contractor shall display in a good condition and in a conspicuous place of work the approved list of acts and omissions for which fines can be imposed (Appendix-X)

vi) The contractor shall maintain a **Register of deductions for damage or loss** in Form XX of the CL (R&A) Rules 1971 (Appendix-XII)

vii) The contractor shall maintain a **Register of Advances** in Form XXIII of the CL (R&A) Rules 1971 (Appendix-XIII)

viii) The contractor shall maintain a **Register of Overtime** in Form XXIII of the CL (R&A) Rules 1971 (Appendix-XIV)

7. ATTENDANCE CARD-CUM-WAGE SLIP

- i) The contractor shall issue an **Attendance card – cum – wage slip** to each workman employed by him in the specimen form at (Appendix-VII)
- ii) The card shall be valid for each wage period.
- iii) The contractor shall mark the attendance of each workman on the card twice each day, once at the commencement of the day and again after the rest interval, before he actually starts work..
- iv) The card shall remain in possession of the worker during the wage period under reference.
- v) The contractor shall complete the wage slip portion of the reverse of the card at least a day prior to the disbursement of wages in respect of the wage period under reference.
- vi) The contractor shall obtain the signature or thumb impression of the worker on the wage slip at the time of disbursement of wages and retain the card with himself.

8. EMPLOYMENT CARD

The contractor shall issue an Employment Card in Form XIV of the CL (R&A) Central Rules 1971 to each worker within three days of the employment of the worker (Appendix-VIII).

9. SERVICE CERTIFICATE

On termination of employment for any reason whatsoever the contractor shall issue to the workman whose services have been terminated, a Service certificate in Form XV of the CL (R&A) Central Rules 1971 (Appendix-IX)

10. PRESERVATION OF LABOUR RECORDS

All records required to be maintained under Regulations Nos. 6&7 shall be preserved in original for a period of three years from the date of last entries made in them and shall be made available for inspection by the Engineer-in-Charge or Labour Officer or any other officers authorised by the Ministry of Urban Development in this behalf,

11. POWER OF LABOUR OFFICER TO MAKE INVESTIGATIONS OR ENQUIRY

The labour officer or any person authorised by Institute on their behalf shall have power to make enquiries with a view to ascertaining and enforcing due and proper observance of Fair Wage clauses and the Provisions of these Regulations. He shall investigate into any complaint regarding the default made by the contractor or subcontractor in regard to such provision.

12. REPORT OF LABOUR OFFICER

The labour officer or other persons authorised as aforesaid shall submit a report of result of his investigation or enquiry to the Engineer-in-charge concerned indicating the extent, if any, to which the default has been committed with a note that necessary deductions from the contractor's bill be made and the wages and other dues be paid to the labourers concerned, In case an appeal is made by the contractor under Clause 13 of these regulations, actual payment to labourers will be made by the Engineer-in-charge after a decision has been given on such appeal

i) The Engineer-in-charge shall arrange payments to the labour concerned within 45 days from the receipt of the report.

13. APPEAL AGAINST THE DECISION OF LABOUR OFFICER

Any person aggrieved by the decision and recommendations of the labour officer or other person so authorised may appeal against such decision to the Chairman (EU) concerned within 30 days from the date of decision, forwarding simultaneously a copy of his appeal to the EXECUTIVE ENGINEER

(CIVIL)concerned but subject to such appeal, the decision of the officer shall be final and binding upon the contractor.

14. PROHIBITION REGARDING REPRESENTATION THROUGH LAWYER

- i) A workman shall be entitled to be represented in any investigation or enquiry under these regulations by :-
 - a) An officer of a registered trade union of which he is a member.
 - b) An officer of a federation of trade unions to which the trade union referred to in clause (a) is affiliated.
 - c) Where the employer is not a member of any registered trade union, by an officer of a registered trade union, connected with the industry in which the worker is employed or by any other workman employed in the industry in which the worker is employed.
- ii) An employer shall be entitled to be represented in any investigation or enquiry under these regulations by :-
 - a) An officer of an association of employers of which he is a member
 - b) An officer of a federation of associations of employers to which association referred to in clause (a) is affiliated.
 - c) Where the employers is not a member of any association of employers, by an officer of association of employer connected with the industry in which the employer is engaged or by any other employer, engaged in the industry in which the employer in engaged.
- (iii) No party shall be entitled to be represented by a legal practitioner in any investigation or enquiry under these regulations.

15. INSPECTION OF BOOKS AND SLIPS

The contractor shall allow inspection of all the. prescribed labour records to any of his workers or to his agent at a convenient time and place after due notice is received or to the Labour Officer or any other person, authorised by the Central Government on his behalf.

16. SUBMISSIONS OF RETURNS

The contractor shall submit periodical returns as may be specified from time to time.

17. AMENDMENTS

The Central Government may from time to time add to or amend the regulations and on any question as to the application/Interpretation or effect of those regulations the decision of the EXECUTIVE ENGINEER (CIVIL)concerned shall be final.

REGISTER OF MATERNITY BENEFITS (Clause 19 F)

Name and address of the Contractor

Name and location of the work

Name of the Employee	Father's / Husband's Name	Nature of Employment	Period of actual employment	Date on which notice of confinement given
1	2	3	4	5
<u>Date on which maternity leave commenced and ended</u>				
Date of Delivery / miscarriage	<u>In case of Delivery</u>		<u>In case of miscarriage</u>	
	Commenced	Ended	Commenced	Ended
6	7	8	9	10
<u>Leave pay paid to the employee</u>				
<u>In case of Delivery</u>		<u>In case of miscarriage</u>		Remarks
Rate of leave pay	Amount paid	Rate of leave pay	Amount paid	
11	12	13	14	15

SPECIMEN FORM OF THE REGISTER, REGARDING MATERNITY BENEFIT ADMISSIBLE TO THE CONTRACTOR'S LABOUR IN CENTRAL PUBLIC WORKS DEPARTMENT WORKS.

Name and address of the contractor.....

Name and location of the work

1. Name of the woman and her husband's name.
2. Designation.
3. Date of appointment.
4. Date with months and years in which she is employed.
5. Date of discharge/dismissal, if any.
6. Date of production of certificates in respect of pregnancy.
7. Date on which the woman informs about the expected delivery.
8. Date of delivery/miscarriage/death
9. Date of production of certificate in respect of delivery/miscarriage.
10. Date with the amount of maternity/death benefit paid in advance of expected delivery.
11. Date with amount of subsequent payment of maternity benefit.
12. Name of the person nominated by the woman to receive the payment of the maternity benefit after her death.
13. If the woman dies, the date of her death, the name of the person to whom maternity benefit amount was paid, the month thereof and the date of payment.
14. Signature of the contractor authenticating entries in the register.
15. Remarks column for the use of Inspecting Officer.

LABOUR BOARD

Name of work

Name of Contractor

Address of Contractor

Name and address of C.P.W.D. Division

Name of C.P.W.D. Labour Officer

Address of C.P.W.D. Labour Officer

Name of Labour Enforcement Officer

Address of Labour Enforcement officer

SI. No.	Category	Minimum wage fixed	Actual wage paid	Number present	Remarks

Weekly holiday

Wage period

Date of payment of wages

Working hours

Rest interval

Appendix 'IV'

Register of Workmen Employed by Contractor

Name and address of contractor

Name and address of establishment under which contract is carried on

Nature and location of work

Name and address of Principal Employer

Sl. No.	Name and surname of workman	Age and Sex	Father's/ Husband's name	Nature of employment /designation	Permanent home address of the workman (Village and Tehsil, Taluk and Districts)	Local address	Date of commencement of employment	Signature or thumb impression of the workman	Date of termination of employment	Reasons for terminations	Remarks
1	2	3	4	5	6	7	8	9	10	11	12

Form-XVI (See Rule 78(2)(a))

Muster Roll

Name and address of contractor

Name and address of establishment under which contract is carried on

Nature and location of work

Name and address of Principal EmployerFor the Month of fortnight.....

Sl. No.	Name of Workman	Sex	Father's / Husband's name	Dates					Remarks
1	2	3	4	5					6
				1	2	3	4	5	

Form-XVII (See Rule 78(2)(a))

Register of wages

Name and address of contractor

Name and address of establishment under which contract is carried on

Name and location of work

Name and address of Principal Employerwages period : Monthly / Fortnightly

Sl. No	Name of Workman	Serial No. in the register of workman	Designation nature of work done	No. of days worked	Units of work done	Daily rate of wages/piece rate	Basic wages	Earnings allowances	Overtime	Other cash payments (indicate nature)	Total	Deductions if any, (indicate nature)	Nett amount paid	Signature or thumb impression of the workman	Initial of contractor or his representative
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Wage Card No.

Wage Card

Name and address of contractor

Date of Issue

Name and location of work

Designation

Name of workman

Month / Fortnight

Rate of Wages

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31

Morning

Rate

Evening

Amount

Initial

Received from

the sum of Rs.

on account of my wages

The Wage card is valid for one month from the date of issue

Signature.

Employment card

Name and address of the contractor:

Name and address of the establishment under which contract is carried on:

Name of work and location of work:

Name and address of the principal employer:

- 1) Name of the workman:
- 2) Sl.no in the register of workman employed:
- 3) Nature of employment / designation:
- 4) Wage rate (with particulars of unit incase of piece work):
- 5) Wage period:
- 6) Tenure of employment:

Remarks:

Form-XV (See Rule 77)

Service Certificate

Name and address of contractor

Nature and location of work

Name and address of workman

Age or date of birth

Identification marks

Father's/ Husband's name

Name and address of establishment in under which contract is carried on

Name and address of Principal Employer

Sl. No.	Total period for which employed		Nature of work done	Rate of wages (with particulars of unit in case of piece work)	Remarks
	From	To			
1	2	3	4	5	6

Signature

LIST OF ACTS AND OMISSIONS FOR WHICH FINES CAN BE IMPOSED

1. Willful in-subordination or disobedience, whether alone or in combination with other.
2. Theft, fraud or dishonesty in connection with the contractors beside a business or property of Institute.
3. Taking or giving bribes or any legal gratifications.
4. Habitual late attendance.
5. Drunkenness lighting, riotous or disorderly or indifferent behavior.
6. Habitual negligence.
7. Smoking near or around the area where combustible or other materials are locked.
8. Habitual indiscipline.
9. Causing damage to work in the progress or to property of the Institute or of the contractor.
10. Sleeping on duty.
11. Malingering or slowing down work.
12. Giving of false information regarding name, age, father's name etc.
13. Habitual lose of wage cards supplied by the employer.
14. Unauthorized use of employer's property of manufacturing or making of unauthorized particles at the work place.
15. Bad workmanship in construction and maintenance by skilled workers, which is not approved by the Institute and for which the contractors are, compelled to take rectifications.
16. Making false complaints and / or misleading statements.
17. Engaging in trade within the premises of the establishments.
18. Any unauthorized divulgence of business affairs of the employees.
19. Collection or canvassing for the collection of any money within the premises of an establishment unless authorized by the employer.
20. Holding meeting inside the premises without previous sanction of the employers.
21. Threatening or intimidating any workman or employer during the working hours with in the premises.

Form XII (See rule 78 (2)(d))

Register of Fines

Name and address of contractor

Name and address of establishment in under which contract is carried on

Nature and location of work

Name and address of Principal Employer

Sl.No	Name of Workman	Father's/Husband's name	Designation/nature of employment	Act/Omission of which fine imposed	Date of Offence	Whether workman showed cause against fine	name of person in whose presence employee's explanation was heard	wage period and wages payable	Amount of fine imposed	Date on which fine realised	Remarks
1	2	3	4	5	6	7	8	9	10	11	12

Form XX (See rule 78 (2)(d))

Register of Deduction for Damage or Loss

Name and address of contractor

Name and address of establishment in under which contract is carried on

Nature and location of work

Name and address of Principal Employer

Sl.No.	Name of Workman	Father's / Husband's name	Designation /nature of employment	Particulars of damage or loss	Date of damage or loss	Whether workman showed cause against deduction	name of person in whose presence employee's explanation was heard	Amount of deduction imposed	No. of installments	Date of recovery		Remarks
										1 ST installment	Last installment	
1	2	3	4	5	6	7	8	9	10	11	12	13

Form XXII (See rule 78 (2)(d))

Register of Advances

Name and address of contractor

Name and address of establishment in under which contract is carried on

Nature and location of work

Name and address of Principal Employer

Sl.No.	Name of Workman	Father's/Husband's name	Designation/nature of employment	wage period and wages payable	Date and amount of Advance given	Purpose(s) for which Advance made	Number of installments by which advance to be repaid	Date and amount of each installment repaid	Date on which last installment was repaid	Remarks
1	2	3	4	5	6	7	8	9	10	11

Form XXIII (See rule 78 (2)(e))

Register of Overtime

Name and address of contractor

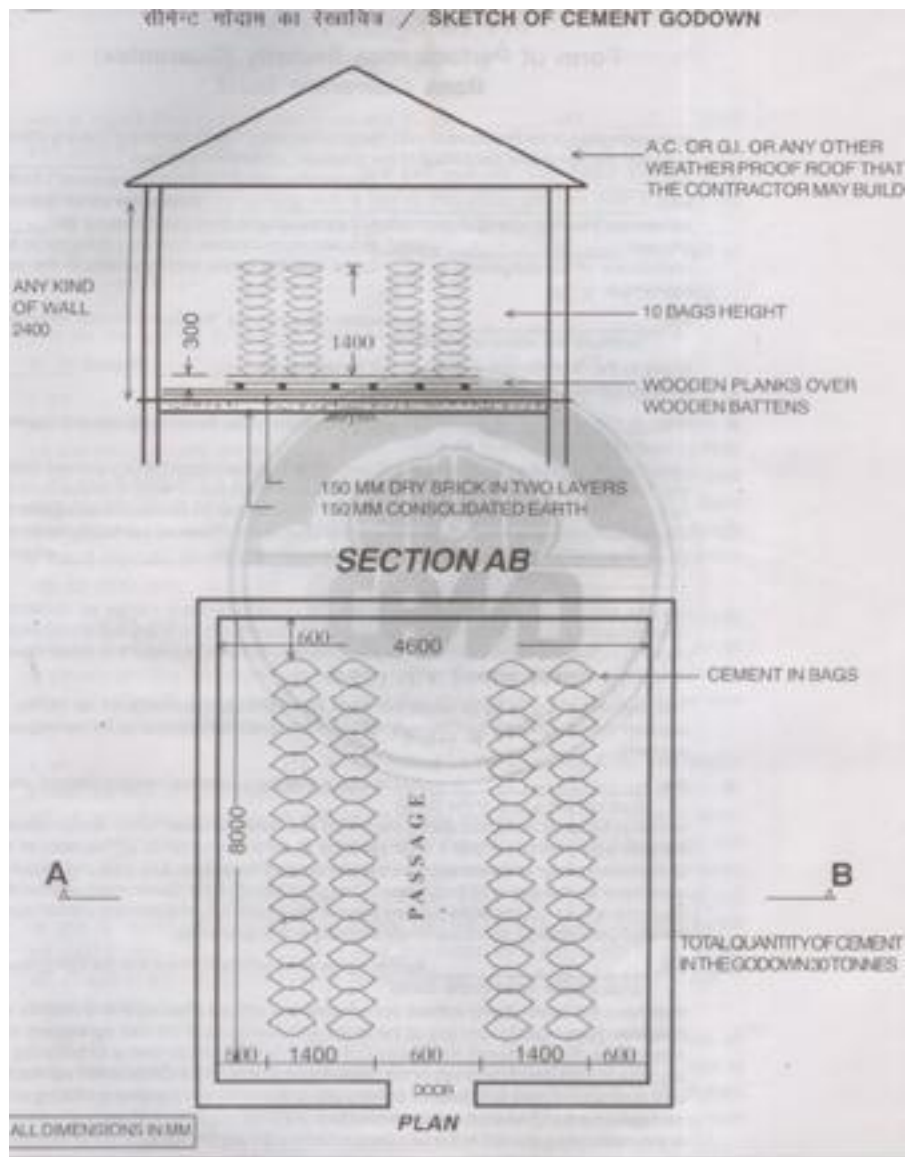
Name and address of establishment in under which contract is carried on

Nature and location of work

Name and address of Principal Employer

Sl.No	Name of Workman	Father's/Husband's name	Sex	Designation/nature of employment	Date on which Overtime worked	Total overtime worked or production in case of piece rated	Normal rate of wages	Overtime rate of wages	Overtime earnings	Rate on which overtime wages paid	Remarks
1	2	3	4	5	6	7	8	9	10	11	12

I. SKETCH OF CEMENT GODOWN



LIST OF APPROVED MAKE / BRAND – Civil Works

Sl no	MATERIAL	BRAND / MANUFACTURER NAME
BUILDING MATERIALS		
1	Cement OPC 53 grade / PPC super grade	ACC / Ramco / Ultra Tech / Chettinad
2	Steel Fe 500 grade	TATA / SAIL / TISCO / RINL
3	Fly ash concrete block	Confirming to IS 2185
4	Wood	First class red padak / Kongu/ Second class teak
JOINERY		
1	Paneled single door shutters	Century ply board, Bajaj, Archid Ply, Green ply - eco tech products
2	Particle board exterior grade	Novaban, Ecoboard, Bhutan board Archidply, Green ply
3	Stainless steel butt hinges	Godrej, ISI Appd brand
4	MS Piano hinges	ISI marked, IS 3818
5	Stainless steel Tower bolts	Godrej, ISI Approved brand
6	Brass mortice lock and other brass fittings	Godrej, ISI Approved brand
7	Satin nickel door lock	Godrej LKUDWICN ultra twin bolt / ISI Approved brand
8	Stainless steel cylindrical keyed door lock with knob	Godrej, ISI Approved brand
9	Multi purpose round lock	Godrej, ISI Approved brand
10	Brass hanging type floor door stopper / Casement stays and other brass fittings	Godrej / Imax
11	Aluminium fittings	Jal /crown / classic
12	Aluminium extrusions	Indal / Jindal
13	Glass	Saintgobain / Modifloat/ Pilkington
14	Door closer	Everite / Hardwyn / Dorma
15	Floor stopper	Godrej / Everite/Dorma
16	Rubber wood	RUBCO / ISI Approved brand
17	PVC Rigid foam sheet	M/s Rajshri / ISI approved Brand

PAINTS		
1	Water proofing cement paint	Snowcem plus / Durocem, White Cement - Birla white / J.K.White/ Asian white
2	Interior emulsion paint	Asian, Berger - Bison, ICI - Supercote, Shalimar, Nippon & Jenson & Nicholson.
3	Weather seal matt finish paint (Exterior)	Asian, Berger - Weather coat all guard, ICI - Weather shield, Shalimar, Nippon & Jenson & Nicholson.
4	Synthetic enamel paint	Dulux ICI, Berger, Shalimar, Nippon & Jenson & Nicholson
5	Acrylic / Cement based putty	Asian / ICI / Berger / JK / Birla
6	French polish	Sheenlac / Asian/ Berger
FLOORING MATERIALS		
1	Rectified ceramic floor tile	Nitco-avana std & Bianco beige std /Jhonson / Kajaria/ Nitco/ Somany
2	Ceramic glazed floor tile	Nitco-country café std / Jhonson / Kajaria/ Nitco/ Somany
3	Ceramic glazed wall tile	Johnson , Kajaria - Emilia Crema Std, Burma Walnut, Nitco) & 450 X 300MM (Johnson , Kajaria - Dona Beige Std, Nitco)
4	Granite for urinal partition	Jet black/ Black galaxy/ Tiger brown/ Ruby red
5	Granite for table top	Jet black/ Black galaxy/ Tiger brown/ Ruby red
WATERPROOFING		
1	Water proofing material	Impermo – Snowcem / Roff / Fosroc /BASF/ CICO
STEEL MATERIALS		
1	Stainless steel pipe	IS 304 Grade Salem Stainless steel/ Vizag

LIST OF APPROVED MAKE / BRAND – Plumbing Works

Sl. No	MATERIALS	MODEL NO	MAKES
	(B) Plumbing and Sanitary Works		
	(i) Sanitary wares		
1	EWC-cascade wallvitpan	0220	Parry ware ,hind ware, neycer & cera
2	IWC- Orissa Pan-580X440mm	0117	Parry ware ,hind ware, neycer & cera
3	Wash basin-rectangular-cascade 560X440mm	0427	Parry ware ,hind ware, neycer & cera
4	Urinal-aquaseal-330X290X460mm	0508	Parry ware ,hind ware, neycer & cera
5	Water Heater-50 litre capacity		Elac, Venus,& bajaj
6	Ceramic 'P' traps for IWC	2101	Parry ware ,hind ware, neycer & cera
	(ii) Valves		
1	Brass ball valve	20 to 50 dia	Leader, RB (Italian) & Audco
2	CI Butterfly Valve	65 to 100 dia	Leader, RB (Italian) & Audco
3	Check valve/ Non return valve	50 to 100 dia	Leader, RB (Italian) & Audco
4	Pressure reducing valve	25 to 65 dia	Leader, RB (Italian) & Audco
5	Foot valve		Leader, RB (Italian) & Audco
6	Y Stainer	50 to 100 dia	Leader, RB (Italian) & Audco
7	Water level monitor		JKN or equivalent
8	CI Cover	As per drawing	NECO or equivalent
9	SFRC Cover	As per drawing	PRECON/GPI
10	Pumps	As per drawing	GRUNDFOS, KIRLOSKAR, KSB

Sl. No	MATERIALS	MODEL NO	MAKES
	(iii) CP Fittings		
1	Swan neck tap with left hand operating knob for wash basin	123	JAQUAR-CONTINENTAL ,Metro& marc
2	32mm Bottle trap with 190mm long for wash basin	767	JAQUAR-CONTINENTAL ,Metro& marc
3	32mm Half threaded waste coupling for rectangular wash basin	709	JAQUAR-CONTINENTAL ,Metro& SS molar
4	32mm Full threaded waste coupling for Oval wash basin	705	JAQUAR-CONTINENTAL ,Metro& marc
5	Angle valve for wash basin & Aqua guard	053	JAQUAR-CONTINENTAL ,Metro& marc
6	Short body bibcock for IWC area	037	JAQUAR-CONTINENTAL ,Metro& marc
7	Long body bibcock for bath area	107	JAQUAR-CONTINENTAL ,Metro& marc
8	20mm concealed stop cock with adjustable wall flange for bath area	087	JAQUAR-CONTINENTAL ,Metro& marc
9	Shower arm with shower rose	447 & 493	JAQUAR-CONTINENTAL ,Metro& marc
10	600mm long towel rod for bath area & wash basin area	1111	JAQUAR-CONTINENTAL ,Metro& marc
11	Coat hook for IWC area	1191	JAQUAR-CONTINENTAL ,Metro& marc
12	Push cock for IWC/EWC/Urinal	27012	JAQUAR-CONTINENTAL ,Metro& marc
13	Automatic urinal flushing system	X-TERNAL MODEL	AOS SYSTEM, Parry ware & hind ware
14	Stainless steel gratings		CHILLY or metro & JAQUAR

Sl. No	LOCATIONS	PIPE SPECIFICATION	SIZE	IS-CODE	MAKE OF THE PIPE
(iv) INTERNAL DRAINAGE					
1	Inside toilet soil & waste line Rain Water Pipe	6kg/sqcm PVC pipe with PVC fittings 4 kg/sqcm	40 dia to 160 dia	IS-4985	SUPREME / FINOLEX / PRINCE
2	Shaft vertical line-soil, waste & rain water line	Centrifugally Upvcpipes & fittings	75, 100 & 150 dia	IS-3989	SUPREME / FINOLEX / PRINCE
3	PVC floor trap inside toilet	Fabricated from 4kg PVC pipes PVC floor trap one outlet and multi inlet	110 dia	-	FINOLEX / PRINCE / TRUEBORE
(v) INTERNAL WATER SUPPLY					
1	Domestic water supply pipe (for wb, shower, Bibcock etc.,)	GI 'B' Class pipe with 'R' brand Fittings	15 to 80 dia	IS-1239	TATA, OSWAL APOLLO / TNT
2	Hot water supply pipe (from geyser to Bibcock)	GI 'B' Class pipe with 'R' brand Fittings	15 to 80 dia	IS-1239	TATA, OSWAL APOLLO / TNT
3	Flushing water supply (for EWC, IWC and urinal flushing)	PVC blue threaded pipe with 'R' brand Fittings	15 to 80 dia	ASTM	SUPREME / PRINCE / FINOLEX
4	Flushing water supply (from push cock to IWC/EWC)	PE-al-pe composite Pressure pipes & fittings	32 to 50 dia	ASTM-F-1282	KITEC INDUSTRIES
PUMPING MAIN WATER SUPPLY					
1	Domestic water supply pipe – from pump to OHT (for wb, shower, bibcock etc.,)	GI 'C' Class pipe with 'R' brand Fittings	50 to 100 dia	IS-1239	TATA / OSWAL / APOLLO / TNT
2	Flushing water supply pipe- from pump to OHT (for urinal/IWC/EWC flushing)	CPVC / PVC blue threaded pipe with 'R' brand Fittings	50 to 100 dia	ASTM	SUPREME / FINOLEX / PRINCE
EXTERNAL DRAINAGE					
1	From gully chamber to inspection chamber	6kg/sqcm PVC pipe with PVC fittings	75 to 110 dia	IS-4985	SUPREME / FINOLEX / PRINCE
2	From inspection chamber to inspection chamber	6kg/sqcm PVC pipe with fittings	160 to 300 dia	IS-4985	SUPREME / FINOLEX / PRINCE
3	If crossing road use as insulation	RCC-NP3 (Carrying heavy traffic)	150 to 350 dia	IS-458	VEEYEL ENTERPRISES or equivalent

INDIAN INSTITUTE OF TECHNOLOGY MADRAS

Bill of Quantities

CIVIL WORKS

Name of the work: **Construction of additional floor for Nano technology lab at MSRC building in IIT Madras.**

Tender No : **66 / 2012 - 13 / Civil.**

S.No.	Description	Qty.	Rate	Unit	Amount
A)	BARRICADING WORKS				
1	Providing and erecting 2.00 metre high temporary barricading at site as per drawing/ direction of Engineer-in-Charge which includes writing and painting, arrangement for traffic diversion such as traffic signals during construction at site for day and night, glow lamps, reflective signs, marking, flags, caution tape as directed by the Engineer-in-Charge. The barricading provided shall be retained in position at site continuously i/c shifting of barricading from one location to another location as many times as required during the execution of the entire work till its completion. Rate include its maintenance for damages, painting, all incidentals, labour materials, equipments and works required to execute the job. The barricading shall not be removed without prior approval of Engineer-in-Charge. (Note :- One time payment shall be made for providing barricading from start of work till completion of work i/c shifting. The barricading provided shall remain to be the property of the contractor on completion of the work).	200		Sqm	

S.No.	Description	Qty.	Rate	Unit	Amount
2	Providing, tying and spreadout fall protection safety wire net as per IS 11057-1984; reaffirmed 2007. The rate shall be inclusive of all materials and labour, fixing accessories required, testing, attending repair and service work if required during the contract period, removing and taking away of the MS pipe and net on completion of the construction work all complete as per the direction of Engineer in charge.	250		Sqm	
B)	DISMANTLING WORKS				
1	Demolishing lime concrete in terracing and disposal of material within 50 metres lead.	200		Cu.m	
2	Demolishing cement concrete manually/ by mechanical means including disposal of material within 50 metres lead as per direction of Engineer - in - charge. Nominal concrete 1:3:6 or richer mix (i/c equivalent design mix)-R.C.C. Stub column	8		Cu.m	
3	Demolishing R.C.C. work manually/ by mechanical means including stacking of steel bars and disposal of unserviceable material within 50metres lead as per direction of Engineer - in- charge.(R.C.C. Slab)	2		Cu.m	
4	Extra for cutting reinforcement bars manually/ by mechanical means in R.C.C. or R.B. work (Payment shall be made on the cross sectional area of R.C.C. or R.B. work) as per direction of Engineer - in -charge - Reinforcement cutting	12		Sq.m	

S.No.	Description	Qty.	Rate	Unit	Amount
5	Demolishing brick work manually/ by mechanical means including stacking of serviceable material and disposal of unserviceable material within 50 metres lead as per direction of Engineer-in-charge.In cement mortar - Brick wall parapet	5		Cu.m	
6	Demolishing brick tile covering in terracing including stacking of serviceable material and disposal of unserviceable material within 50 metres lead.	900		Sq.m	
7	Charges for intercarting all kinds of building rubbish / debris to outside IIT Madras campus. The rate quoted shall be inclusive of loading, unloading, transporting and obtaining approval from local authorities etc. complete. Voids will be deducted @ 20%. The contractor should produce the approval obtained from the local authorities for disposal of rubbish at the location approved by the Chennai Corporation. The contractor will be permitted to dispose the building rubbish excluding saleable scraps and junks. Animal driven transportation will not be permitted.	350		Cum	
C	EXCAVATION				
1	Earth work in excavation by mechanical means (Hydraulic excavator) / manual means in foundation trenches or drains (not exceeding 1.5 m in width or 10 sqm on plan) including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. All kinds of soil.	150		Cum	

S.No.	Description	Qty.	Rate	Unit	Amount
2	Supplying and filling in plinth with filling sand as approved by Engineer-in-charge under floors, including watering, ramming, consolidating and dressing complete	18		Cum	
D	PLAIN CEMENT CONCRETE:				
1	Providing and laying in position cement concrete of specified grade excluding the cost of centering and shuttering - All work in up to basement level::4:8 (1 Cement : 4 coarse sand : 8 graded stone aggregate 40 mm nominal size).	15		Cum	
E	REINFORCED CEMENT CONCRETE				
1	Providing and laying in position machine batched and machine mixed design mix M-35 grade cement concrete for reinforced cement concrete work, using cement content as per approved design mix, including pumping of concrete to site of laying but excluding the cost of centering, shuttering, finishing and reinforcement, including fly ash, admixtures in recommended proportions as per IS: 9103 to accelerate, retard setting of concrete, improve workability without impairing strength and durability as per direction of Engineer-in-charge. (Note :- Cement content considered in this item is @ 350 kg/cum. Excess/less cement used as per design mix is payable/recoverable separately).				
a	All works upto plinth level	26		Cum	
b	All works above Plinth upto floor V Level	395		Cum	

S.No.	Description	Qty.	Rate	Unit	Amount
c	Add for using extra cement in the items of design mix over and above the specified cement content there in.	4000		kg	
d	Extra for providing and mixing water proofing material in cement concrete work in doses by weight of cement as per manufacturer's specification.	300		per 50kgs	
F	FORM WORK				
	Centering and shuttering including strutting, propping etc. and removal of form including approved demolding agent for :				
a	Foundations, footings, bases of columns, etc. for mass concrete.	25		sqm	
b	Suspended floors, roofs, landings, balconies and accessplatform.(Labs table slab)	1030		sqm	
c	Lintels, beams, plinth beams, girders, bressumers and cantilevers.	620		sqm	
d	Columns, Pillars, Piers, Abutments, Posts and Struts.	525		sqm	

S.No.	Description	Qty.	Rate	Unit	Amount
e	Stairs, (excluding landings) except spiral-staircases.	50		sqm	
f	Walls (any thickness) including attached pilasters, buttermesses, plinth and string courses etc.	285		sqm	
G	MASONRY WORKS:				
1	Masonry work with flyash concrete block M10 grade in foundation and plinth in :Cement mortar 1:5 (1 cement : 6 Coarse sand): For foundation and plinth.	9		Cum	
2	Masonry work with flyash concrete block M10 grade in foundation and plinth in :Cement mortar 1:5 (1 cement : 5 Coarse sand): above plinth and upto floor V level	180		cum	
3	Half brick masonry work with flyash concrete block M10 grade in foundation and plinth in :Cement mortar 1:4 (1 cement : 4 Coarse sand): above plinth and upto floor V level.	50		sqm	
H	JOINERY				
1	Providing wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position with hold fast lugs or with dash fasteners of required dia & length (hold fast lugs or dash fastener shall be paid for separately): Second class teak wood.	0.5		Cum	

S.No.	Description	Qty.	Rate	Unit	Amount
2	Providing and fixing panelled or panelled and glazed shutters for doors, windows and clerestory windows including ISI marked M.S. pressed butt hinges bright finished of required size with necessary screws excluding, panelling which will be paid for separately, all complete as per direction of Engineer-in-charge: 30 mm thick shutters	20		Sqm	
3	Providing and fixing aluminium work for doors, windows, ventilators and partitions with extruded built up standard tubular sections/ appropriate Z sections and other sections of approved make conforming to IS: 733 and IS: 1285, fixing with dash fasteners of required dia and size, including necessary filling up the gaps at junctions, i.e. at top, bottom and sides with required EPDM rubber/ neoprene gasket etc. Aluminium sections shall be smooth, rust free, straight, mitred and jointed mechanically wherever required including cleat angle, Aluminium snap beading for glazing / paneling, C.P. brass/ stainless steel screws, all complete as per architectural drawings and the directions of Engineer-in-charge. (Glazing, paneling and dash fasteners to be paid for separately) :For fixed portion Polyester powder coated aluminium (minimum thickness of polyester powder coating 50 micron): Powder coated aluminium (minimum thickness of powder coating 50 micron).	2700		kg	
4	Providing and fixing 12mm thick prelaminated particle board flat pressed three layer or graded wood particle board conforming to IS:12823 Grade I Type II, in panelling fixed in aluminum doors, windows shutters and partition frames with C.P. brass / stainless steel screws etc. complete as per architectural drawings and directions of engineer-in-charge. Pre-laminated particle board with decorative lamination on both sides	30		Sqm	

S.No.	Description	Qty.	Rate	Unit	Amount
5	Providing and fixing glazing in aluminium door, window, ventilator shutters and partitions etc. with EPDM rubber / neoprene gasket etc. complete as per the architectural drawings and the directions of engineer-in-charge . (Cost of aluminium snap beading shall be paid in				
a	With float glass panes of 4.0 mm thickness	80		Sqm	
b	With float glass panes of 5.50 mm thickness	30		Sqm	
6	Providing and fixing double action hydraulic floor spring of approved brand and manufacture conforming to IS : 6315, having brand logo embossed on the body / plate with double spring mechanism and door weight upto 125 kg., for doors, including cost of cutting floors , embedding in floors as required and making good the same matching to the existing floor finishing and cover plates with brass pivot and single piece M.S. sheet outer box with slide plate etc. complete as per the direction of Engineer-in-charge. stainless steel cover plate minimum 1.25 mm.	30		each	
7	Filling the gap in between aluminium frame & adjacent RCC/ Brick/ Stone work by providing weather silicon sealant over backer rod of approved quality as per architectural drawings and direction of Engineer-in-charge complete. Upto 5mm depth and 5 mm width.	300		metre	

S.No.	Description	Qty.	Rate	Unit	Amount
8	Providing and fixing double glazed hermetically sealed glazing in aluminium windows, ventilators and partition etc. with 6 mm thick clear float glass both side, having 12 mm air gap, including providing EPDM gasket, perforated aluminium spacers, desiccants, sealant (Both primary and secondary sealant) etc. as per specifications, drawings+B91 and direction of Engineer-in-charge complete.L.S	28		Sqm	
9	Providing and fixing stainless steel (SS 304 grade) adjustable friction windows stays of approved quality with necessary stainless steel screws etc. to the side hung windows as per direction of Engineer-in-charge complete. 510 X 19 mm	15		each	
10	Providing and fixing aluminium casement windows fastener of required length for aluminium windows with necessary screws etc. complete. Polyester powder coated minimum thickness 50 micron aluminium.	20		each	
11	Providing and fixing stainless steel (Grade 304) railing made of Hollow tubes, channels, plates, pipes etc. including welding, grinding, buffing, polishing and making curvature (wherever required) and fitting the same with necessary stainless steel nuts and bolts complete i/c fixing the railing with necessary accessories & stainless steel dash fasteners , stainless steel bolts etc., of required size, on the top of the floor or the side of waist slab with suitable arrangement as per approval of Engineer-in-charge.(for payment purpose only weight of stainless steel members shall be considered excluding fixing accessories such as nuts, bolts, fasteners etc.). The rate quoted shall be inclusive of wastages during fabrication and wastage quantity should not be measured.	125		kg	

S.No.	Description	Qty.	Rate	Unit	Amount
12	Providing and fixing ISI marked aluminium butt hinges anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete:				
a	75x63x4 mm	47		each	
b	100x75x4 mm	36		each	
c	125x75x4 mm	36		each	
13	Providing and fixing aluminium tower bolts ISI marked anodised (anodiccoating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete :				
a	100x10 mm	47		each	
b	250x10 mm	50		each	

S.No.	Description	Qty.	Rate	Unit	Amount
c	200x10 mm	18		each	
14	Providing and fixing bright finished brass 100 mm mortice latch and lock ISI marked with six levers and a pair of anodised (anodic coating not less than grade AC 10 as per IS : 1868) aluminium lever handles with necessary screwsetc. complete (Best make of approved quality).	20		each	
15	Providing and fixing aluminium handles ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour or shade with necessary screws etc. complete :125 mm	24		each	
16	Providing and fixing aluminium hanging floor door stopper ISI marked anodised (anodic coating not less than grade AC 10 as per IS : 1868) transparent or dyed to required colour and shade with necessary screws etc. complete. Single rubber stopper heavy duty	30		each	
17	Providing 40x5 mm flat iron hold fast 40 cm long including fixing to frame with 10 mm diameter bolts, nuts and wooden plugs and embedding in cement concrete block 30x10x15cm 1:3:6 mix (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size).	180		each	
I	FLOORING WORKS				
1	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement including cement slurry, but excluding the cost of nosing of steps etc. complete. 40mm thick with 20mm nominal size stone aggregate.	50		Sqm	

S.No.	Description	Qty.	Rate	Unit	Amount
2	Providing and laying Vitrified floor tiles in different sizes (thickness to be specified by manufacturer) with water absorption less than 0.08 % and conforming to I.S. 15622, of approved make in all colours & shade in skirting, riser of steps, over 12 mm thick bed of cement mortar 1:3 (1 cement: 3 coarse sand), including grouting the joint with white cement & matching pigments etc. complete. Size of Tile 600x600 mm. The rate quoted shall be inclusive of supplying and laying approved spacers between the joints / as per the tile manufacturer specifications.	600		Sqm	
3	Providing and laying rectified Glazed Ceramic floor tiles 300x300 mm or more (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours White, Ivory, Grey, Fume Red Brown, laid on 20mm thick cement mortar 1:4 (1Cement : 4 Coarse sand) including grouting the joints with white cement and matching pigments etc., complete. The rate quoted shall be inclusive of supplying and laying approved spacers between the joints / as per the tile manufacturer specifications.	52		Sqm	
4	Providing and fixing 1st quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer) of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge, in skirting, risers of steps and dados over 12 mm thick bed of cement Mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete.	220		Sqm	
5	Cement plaster skirting (up to 30 cm height) with cement mortar 1:3 (1cement : 3 coarse sand) finished with a floating coat of neat cement.18 mm thick. L.S	20		Sqm	

S.No.	Description	Qty.	Rate	Unit	Amount
6	Chequerred precast cement concrete tiles 22 mm thick in footpath & courtyard, jointed with neat cement slurry mixed with pigment to match the shade of tiles including rubbing and cleaning etc. complete, on 20 mm thick bed of cement mortar 1:4 (1 cement: 4 coarse sand). Using ordinary cement without any pigment. The tread and riser should be joint free.	50		sqm	
7	Providing and fixing table top with 18 mm thick gang saw cut, mirror polished, premoulded and prepolished, machine cut for kitchen platforms, vanity counters, window sills, facias and similar locations of required size, approved shade, colour and texture laid over 20 mm thick base cement mortar 1:4 (1 cement : 4 coarse sand), joints treated with white cement, mixed with matching pigment, epoxy touch ups, including rubbing, curing, moulding and polishing to edges to give high gloss finish etc. complete at all levels. Granite of ruby red or any other colour as approved by IIT M and approved shade for area of slab more than 0.50sqm and wherever possible it should be free from joints. The rate quoted shall be inclusive of making 150mm dia circular openings in the granite slab and covering it with good quality cable manager.	100		sqm	
J	IRON AND STEEL WORKS				
1	Providing and fixing M.S. fan clamp type I or II of 16 mm dia M.S. bar bent to shape with hooked ends in R.C.C. slabs, beams during laying including painting the exposed portion of loop, all as per standard design complete.	20		each	
2	Steel reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete upto plinth level & above plinth level. Thermo mechanically treated bars.	50000		kg	

S.No.	Description	Qty.	Rate	Unit	Amount
3	Supplying and fixing rolling shutters of approved make, made of required size M.S. laths, interlocked together through their entire length and jointed together at the end by end locks, mounted on specially designed pipe shaft with brackets, side guides and arrangements for inside and outside locking with push and pull operation complete, including the cost of providing and fixing necessary 27.5 cm long wire springs manufactured from high tensile steel wire of adequate strength conforming to IS: 4454 – part 1 and M.S. top cover of required thickness for rolling shutters. 80x1.25 mm M.S. laths with 1.25 mm thick top cover.	5		sqm	
4	Providing and fixing M.S. grills of required pattern in frames of windows etc. with M.S. flats, square or round bars etc. including priming coat with approved steel primer all complete: Fixed to openings /wooden frames with rawl plugs screws etc.	2000		kg	
K	ROOFING				
1	Providing and fixing on wall face unplasticised Rigid PVC rain water pipes conforming to IS : 13592 Type A including jointing with seal ring conforming to IS : 5382 leaving 10 mm gap for thermal expansion.(i) Single socketed pipes.				
a	110 mm diameter	136		metre	

S.No.	Description	Qty.	Rate	Unit	Amount
L	PLASTERING WORKS				
1	6 mm cement plaster in. cement of mix :1:3 (1 cement: 3 fine sand) - (ceiling)	900		Sqm	
2	12 mm cement plaster on brick wall of mix :1:6 (1 cement: 6 finesand) (internal)	1960		Sqm	
3	15 mm thick cement plaster in CM 1: 6.(External)	850		Sqm	
M	PAINTING WORKS				
1	Providing and applying white cement based putty of average thickness 1 mm, of approved brand and manufacturer, over the plastered wall surface to prepare the surface even and smooth complete.	1960		sqm	
2	Applying priming coats with primer of approved brand and manufacture, having low VOC (Volatile Organic Compound) content.				
a	With ready mixed pink or grey primer on wood work (hard and soft wood) having VOC content less than 50 grams/ litre.	20		sqm	
b	With ready mixed red oxide zinc chromatic on steel /iron works having VOC content less than 250 grams/litre.	120		sqm	

S.No.	Description	Qty.	Rate	Unit	Amount
c	With water thinnable cement primer on wall surface having VOC content less than 50 grams/litre	2860		sqm	
2	Wall painting with premium acrylic emulsion paint of interior grade, having VOC (Volatile Organic Compound) content less than 50 grams/ litre. of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour. Two or more coats for inner walls.	2860		Sqm	
3	Wall painting with premium acrylic emulsion paint of exterior grade of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour. For exterior walls, new work (Two or more coats applied @ 1.43 ltr/ 10 sqm over and including priming coat of exterior primer applied @ 2.20 kg/ 10 sqm as per the paint manufacturer specifications)	850		Sqm	
4	Painting with synthetic enamel paint, having VOC (Volatile Organic Compound) content less than 150 grams/ litre, of approved brand and manufacture, including applying additional coats wherever required to achieve even shade and colour. Two or more coats.	140		Sqm	

S.No.	Description	Qty.	Rate	Unit	Amount
N	PARTITION WORKS				
1	<p>Providing and fixing partition upto ceiling height consisting of G.I. frame and required board including providing and fixing of frame work made of special section power pressed/ roll form G.I. sheet with zinc coating of 120 gms/sqm(both side inclusive), consisting of floor and ceiling channel 50mm wide having equal flanges of 32 mm and 0.50 mm thick, fixed to the floor and ceiling at the spacing of 610 mm centre to centre with dash fastener of 12.5mm dia meter 50 mm length or suitable anchor fastener or metal screws with nylon plugs and the studs 48 mm wide having one flange of 34 mm and other flange 36 mm and 0.50 mm thick fixed vertically within flanges of floor and ceiling channel and placed at a spacing of 610mm centre to centre by 6 mm dia bolts and nuts, including fixing of studs along both ends of partition fixed flush to wall with suitable anchor fastener or metal screws with nylon plugs at spacing of 450 mm centre to centre, and fixing of boards to both side of frame work by 25 mm long dry wall screws on studs, floor and ceiling channels at the spacing of 300 mm centre to centre. The boards are to be fixed to the frame work with joints staggered to avoid through cracks, M.S. fixing channel of 99 mm width (0.9 mm thick having two flanges of 9.5 mm each) to be provided at the horizontal joints of two boards, fixed to the studs using metal to metal flat head screws, including jointing and finishing to a flush finish with recommended jointing compound, jointing tape, angle beads at corner (25 mm x 25 mm x 0.5 mm), joint finisher and two coats of primer suitable for board as per manufacture's specification and direction of engineer in charge all complete. 66mm overall thickness Partition with 8mm thick double skin Calcium Silicate Board made with Calcareous & Siliceous materials reinforced with cellulose fiber manufactured through autoclaving process with Compressive Strength 225 kg/sq.cm, Bending Strength 100 kg./ sq.cm.</p>	152		sqm	

S.No.	Description	Qty.	Rate	Unit	Amount
0	WATER PROOFING WORKS				
1	Lime concrete terracing on roofs average thickness 10cm laid to fall with 25mm nominal size brick aggregate and 50% lime mortar 1:2 (1 lime putty : 2 surkhi) rammed and finished with gur and belgiri treatment complete including rounding of junctions with parapet wall complete.	900		Sqm	
2	Providing and fixing Heat Resistant Terrace Tiles (300 mm x 300 mm x 20 mm) with SRI (solar refractive index) > 78, solar reflection > 0.70 and initial emittance > 0.75 on waterproof and sloped surface of terrace, laid on 20 mm thick cement sand mortar in the ratio of 1:4 (1 cement : 4 coarse sand) and grouting the joints with mix of white cement & marble powder in ratio of 1:1, including rubbing and polishing of the surface upto 3 cuts complete, including providing skirting upto 150 mm height along the parapet walls in the same manner.	900		Sqm	
3	Providing and laying water proofing treatment in sunken portion of WCs,bathroom etc., by applying cement slurry mixed with water proofing cement compound consisting of applying : a) First layer of slurry of cement @ 0.488 kg/sqm mixed with water proofing cement compound @ 0.253 kg/sqm. This layer will be allowed to air cure for 4 hours. b) Second layer of slurry of cement @ 0.242 kg/sqm mixed with water proofing cement compound @ 0.126 kg/sqm. This layer will be allowed to air cure for 4 hours followed with water curing for 48 hours. The rate includes preparation of surface, treatment and sealing of all joints, corners, junctions of pipes and masonry with polymer mixed slurry.	25		sqm	

S.No.	Description	Qty.	Rate	Unit	Amount
P	ANTI - TERMITE TREATMENT				
1	Diluting and injecting chemical emulsion for POST-CONSTRUCTIONAL anti- termite treatment (excluding the cost of chemical emulsion) : With Chlorpyriphos/Lindane E.C. 20% with 1% concentration.	60		sqm	
2	Supplying chemical emulsion in sealed containers including delivery as specified. Chlorpyriphos/ Lindane emulsifiable concentrate of 20%.	10		ltr	
Q	STRUCTURAL GLAZING WORKS				
Q1	SEMI UNITIZED STRUCTURAL GLAZING SYSTEM				
1	Vision panel & Vision on spandrel panel (System with Glass): Designing, providing and fixing Semi Unitized structural glazing system with aluminium anodized extruded frames, HDG brackets & SS 316 Grade anchors with vision panel, spandrel panel and vision on spandrel panel glass shall be Insulated Glass - 24 mm thick having 6 mm thick Reflective coated glass on # 2 surface - ST 750 Blue of Saint Gobain make or Glacier SH 21/26 of Asahi make as outer pane and 12 mm airgap and 6 mm thick uncoated clear glass as inner pane of same make. Both panes are heat strengthened.	50		Sqm	
2	Spandrel panel (System with Glass): Designing, providing and fixing Semi Unitized structural glazing system with aluminium anodized extruded frames, HDG brackets & SS 316 Grade anchors with Spandrel panel glass shall be Monolithic glass - 6 mm thick Reflective coated Glacier ST 750 Blue of Saint Gobain make or Glacier SH 21/26 of Asahi make. All panes are heat strengthened. Rate include the cost of supplying and fixing the glass.	65		Sqm	

S.No.	Description	Qty.	Rate	Unit	Amount
3	Hardware for top hung window: Quote extra rate over & above the Semi Unitized structural glazing item for designing, providing and fixing hardwares for top hung openable outward shutter having Multi point lock with required points based on the window panel size and handle with key of Model no 610 K or Alan key type model of Alualpha make, SS friction hinges of Model no SPT 26, Corner Transmission Model no 9312, corner locking point model no 9313 and restrictor stay arm assembly model no SR 8 (Opening with restrict to 200mm from the frame plan) with release key of model no R 7437 of Securestyle (UK) make or approved equivalent make and as per particular specification. Rate shall exclude cost for supplying and fixing of glass and main frame, but include cost of hardwares and sub frame for shutter.	11		Each	
4	Insulation for Spandrel: Rock wool slab - 64 Kg/cum and having 'K' value of 0.033 w/Mok - 50 mm thick wrapped with factory pressed Black glass tissue and using 1.2mm thick Aluminium anodized tray with fold around to a height of 100mm minimum as thermal insulation to be fixed behind Spandrel glass / Composite panel cladding area as mentioned. All the edges between aluminium anodized tray and frame to be sealed with Non-Staining weather silicon sealant of approved make.	65		Sqm	
5	Aluminium Grill over Glazing : Designing, providing and fixing Aluminium Grille of Fameline make or approved equivalent make with specified product code of 1050 RT with PVDF finish and the louver system shall be designed to with stand the design wind pressure with pitch not less than 50 mm as shown in the drawing. The louver frames shall be fixed in to the glazing mullion by using Aluminium bracket with suitable spacing as per structural criteria. Louver thickness not less than 0.8mm. Rate shall include louver Panel, aluminium frame, aluminium brackets / clamps, SS 316 grade anchors, bolts and accessories etc.	20		Sqm	

S.No.	Description	Qty.	Rate	Unit	Amount
Q2	Laminated sandwiched composite panel (ACP)				
1	<p>Dry wall cladding : Providing and fixing the system to clad the Laminated sandwiched composite panel of Durabuild or Aludecor make with approved colour and shade (4 mm (0.5 + 3.0 + 0.5) ACP with Polyethylene 100% Virgin Core) as per the specification, on the external surface the external surface like column, wall, jambs, sills, projected area, ceiling or any surface to any profile and shape, horizontally, vertically, sloped, curved, circular etc complete.</p> <p>Rate shall include the cost of supplying and fixing of Laminated sandwiched composite panel (ACP), Non staining weather for Vertical & horizontal joints in general the frame work for ACP cladding consists of aluminium box frame with thickness of not less than 2.0mm with suitable size of box frame to satisfying the design criteria with 'Z' cleat having thickness not less than 2.0mm, the ACP fold at corners shall be provided with 'L' cleat of 1.5mm thick at suitable interval and HDG bracket etc, complete. All anchors, bolts and screws shall be SS 316 grade of Hilti / Fischer make. Aluminium stiffener to be provided behind the ACP panel to avoid the permanent deformation over a period.</p>	30		Sqm	
R	SANITARYWARE AND CP FITTINGS				
1	<p>Providing & fixing white vitreous china clay pedestal type Water closet (European type W.C.pan) with seat & lid, 10litre low level white PVC flushing cistern with manually controlled device (handle lever) confirming to IS :7231 (coral) with fittings & fixtures complete including cutting & making good the walls & floors where ever required . W.C pan with ISI marked white solid plastic seat & lid</p>	5		Each	

S.No.	Description	Qty.	Rate	Unit	Amount
2	Providing and fixing wash basin with C.I./M.S.Brackets,15mm C.P.brass pillar cock taps ,32mm C.P.brass waste of standard pattern, including painting of fittings and brackets, cutting and making good the walls wherever required; Wash basin size 550X400 mm with single 15mm,C.P brass pillar cock	6		set	
4	Providing & fixing of concealed stop cock of standard design and approved make confirming to IS : 8931. 150 mm nominal bore	2		Each	
6	Providing & fixing white vitreous china flat back type lipped front urinal basin of 430x260X350mm size.	6		Each	
6.1	providing &fixing of PTMT 15MM Urinal spreader size 95x69x100 mm with 1/2"BSP thread and shape as per BIS specification, weight not less than 60gms (prayag or equivalent)	6		Each	
6.2	Supplying and fixing urinal auto closing valve.	6		Each	
7	Providing &fixing C.P.brass angle valve for basin mixer & geyser points/water cooler of approved make confirming IS:8931a. 15mm nominal bore.	29		Each	
8	Providing & Fixing Health Faucet of approved make and model. Health faucet wall flange,Make-Jaquar, Range-Florentine,Model no-5041	4		Each	

S.No.	Description	Qty.	Rate	Unit	Amount
9	Accessories like coat hook of Jaquar make supplying by the Client, receiving and fixing of CP Brass Double coat hook fixing with necessary screws etc., complete. CP brass Coat Hook, Make-Jaquar, Range-Continental, Model no-1161N.	4		Each	
10	providing & fixing of white vitreous china laboratory sink with C.I.brackets, C.P.brass chain with rubber plug 40mm C.P.Brass waste and 40mm C.P.brass trap with necessary C.P.Brass union complete including painting of fittings & brackets ,cutting & making good the wall where ever required. size 600x450x200.	4		Each	
11	Supplying and fixing Lab/swan neck cock with necessary fittings for lab sink etc. complete. Jaquar / Parryware : Two way cock	4		Each	
12	Providing &fixing of brass bib cock of approved quality. 15mm nominal bore.	8		Each	
13	Providing & fixing PTMT towel rail complete with brackets fixed to wodden cleats with CP brass screws with concealed fitting arrangement of approved quality colour & make (prayog or equivalent). 600mm long towel rail with length of 645 mm width 78mm and effective height of 88mm ,weighing not less than 190gms.	4		Each	
14	Supplying and fixing Jaquar soap dish, fixing in the bathroom wall etc., complete. Jaquqr -model no:11131	4		Each	
15	Supplying, fixing and commissioning of Urinal Granite partition allround polished of size 450x900x18mm thick minimum (shape as per architectural drawing)using 2 nos ss clamps embedded in 150 x 150 PCC pocket etc.complete	5		Each	

S.No.	Description	Qty.	Rate	Unit	Amount
16	Providing and fixing 600 x 450 mm bevelled edge mirror of superior glass (of approved quality) complete with 6 mm thick hardboard ground fixed to wooden cleats with Cp brass screws and washers complete.	4		Each	
S	INTERNAL DRAINAGE				
1	Supplying, fixing and testing of Finolex/Supreme make of 6kg PVC pipes confirming to IS 4985-2000. and fittings (moulded and fabriacted fittings) such as tee, elbow, 'y' , coupler, etc confirming to IS 7834 with latest amendment for soil and waste pipe works in toilets and utility area,etc. Pipes shall be laid in sunken floors as per approved drawings with gradient mentined in the drawings with proper brick pedestal supprts. For laying the pipes in walls, before chasing, the pipe line routing shall be marked using chalk line with help of tupe level, wall cutting shall be done using wall cutting machine, and chasing to be done using electric jack hammer machine. Cutting and chasing with hammer shall not be permitted. Pipes and fittings shall be cleaned with pipe cleaners and joined by approved approved make solvent cement. After laying the pipes, before cloasing tthe pipes, gravity test to be conducted and got the approval from the site engineers. chased portitions shall be covered with cement mortar. Work includes making required size holes in brick walls wherever necessary and re do same with water proofing components to the entire satisfaction of site engineer.etc complete. All the stub outs shall be closed with proper end caps till of installation of sanitraywares and accessories etc. complete.				
1.1	50mm dia	20		RM	

S.No.	Description	Qty.	Rate	Unit	Amount
2	Supplying, fixing and testing of Finolex/Supreme make of SWR - B- Class PVC pipes and fittings confirming to IS 13592-1992. and fittings (available fittings in market and fabricated fittings) such as tee, elbow, 'y' , coupler, etc. confirming to 14735 with latest amendment for soil and waste pipe works in toilets and utility area,etc. Pipes shall be laid in (sunken for ground floor toilets)suspended level as per approved drawings with gradient mentioned in the drawings with proper split clamp,anchor fastener and10mm thread rod supports.Wall cutting shall be done using wall cutting machine, and chasing to be done using electric jack hammer machine. Cutting and chasing with hammer shall not be permitted. Pipes and fittings shall be cleaned with pipe cleaners and joined by approved approved make solvent cement. After laying the pipes, before closing the pipes, gravity test to be conducted and got the approval from the site engineers. chased portions shall be covered with cement mortar. Work includes making required size holes in brick walls wherever necessary and re do same with water proofing components to the entire satisfaction of site engineer.etc complete. All the stub outs shall be closed with proper end caps till of installation of sanitarywares and accessories etc. complete.				
2.1	75mm dia	41		RM	
2.2	110mm dia	72		RM	

S.No.	Description	Qty.	Rate	Unit	Amount
3	<p>Supplying, fixing and testing of Finolex/Supreme make of SWR PVC- B Class pipe confirming to IS 13592-1992, and fittings (moulded and fabricated fittings) such as tee, elbow, 'Y', coupler etc . confirming to IS 15735 with latest amendments for soil,waste and vent pipe works etc. Pipes shall be stacked as shown in the approved drawings, in perpendicular with help plumb ball. Joints to be done using rubber ring joints. Rubber rings confirming to IS 5382 with latest amendments. Pipes shall be supported with proper rigid supports with help of MS angles, channels etc.(Cost of pipe supports shall be paid as separate items) . After installation, pipes shall be protected with polyethylene sheet roll till the commissioning stage.Gravity test to be conducted and got approval from the site engineers. Work includes making required size holes in brick walls etc., and re do same to the entire satisfaction of site engineer. Identification mark and direction of flow mark to be marked by paint on the pipes which are exposed. Before handing over, all the pipes should be cleaned up from mortar and duct particles. etc. complete.</p>				
3.1	110mm dia pipe	33		RM	

S.No.	Description	Qty.	Rate	Unit	Amount
4	<p>Supplying, fixing and testing of Reliance/Kissan make HDPE (6 mtr length) pipe PN-6 PE 100 range with same specials, pipes confirming to IS 4984:1995 (available fittings in market and fabricated fittings) such as tee, 45'bend, 90'bend 'y' , P-trap, reducer, reducing bush, nipple, coupler, adapter etc. for waste pipe works in growth chamber drain area, external all laboratory blocks effluent drain etc. Pipes shall be laid in sunken for ground floor level as per approved drawings with gradient mentioned in the drawings with proper pipe supports. Wall cutting shall be done using wall cutting machine, and chasing to be done using electric jack hammer machine. Cutting and chasing with hammer shall not be permitted. Pipes and fittings shall be cleaned with pipe cleaners and using fusion butt welding joints/electro fusion jointing/detachable joints/inserted transition joints/socket fusion joint, Pvc saddle type joint with the fittings.. After laying the pipes, before closing the pipes, gravity test to be conducted and got the approval from the site engineers. chased portions shall be covered with cement mortar. Work includes making required size holes in brick walls wherever necessary and re do same with water proofing components to the entire satisfaction of site engineer. etc complete. All the stub outs shall be closed with proper end caps till of installation of sanitarywares and accessories etc. complete.</p>				
4.1	50mm dia	9		RM	
4.2	75mm dia	44		RM	

S.No.	Description	Qty.	Rate	Unit	Amount
4.3	110mm dia	30		RM	
5	Providing & laying of cement concrete 1:5:10 (1 cement : 5 coarse sand :10 graded stone aggregate 40mm nominal size)all around pipes including bed concrete as per standards design.				
5.1	110mm	70		RM	
6	Fabricating, supplying, and fixing of approved make UPVC Floor traps in group toilet area, made out of 110mm dia UPVC Pipe with single or multiple inlets of size 40mm to 75mm dia.(boss tee), outlets of sizes 63 mm to 75mm, with min.2" water seal, fixing in position, using cement concrete 100 mm alround to full depth of trap, including providing FRP matting at bottom, inlet and outlet etc, complete.	16		Each	
7	Supplying and fixing of Chilly make CP Anti cockroach floor trap gratings which consisting floor drain grating, inner filter and outfilter and rim, fixed over the floor trap. Works including cleaning of floor traps befor fixing the gratings. While fixing the gratings, flooring should be cutted to required size of grating,(not more than 2mm of the grating sizes) using tile cutter etc. complete. The gap should be fillied with colored white cement to match the flooring colour. The colour and shape of the gratings shall be got the approval from the architects/consultants. To avoid damage of the cp gratings, acid cleaning of flooring shall be done before fixing of gratings.	24		Each	

S.No.	Description	Qty.	Rate	Unit	Amount
8	Supplying,fixing and testing of PVC 'P' trap used in Sunken floor level,110mm dia extension boss tee arrangements with female thread fix with the Staninless steel heavy duty clean out in male thread with gascet and three ss screws/PVC heavy duty clean out for urinals, etc., complete	2		Each	
9	Supplying,fixing and testing of Heavy duty Floor Clean Out which are provided in floors slab,with female thread fix with the SS/Pvc heavy duty clean out plug in male thread with gasket and 110 mm dia boss tee arrangements etc. complete				
9.1	75mm dia-upvc pipe	2		Each	
9.2	110 mm dia-upvc pipe	7		Each	
9.3	75mm dia-upvc pipe	1		Each	
9.4	110mm dia-HDPE pipe	3		Each	

S.No.	Description	Qty.	Rate	Unit	Amount
10	G.I "U"Bolts, with nuts & washers				
10.1	25mm dia	10		Nos	
10.2	25mm dia	5		Nos	
10.3	40mm dia	10		Nos	
10.4	75mm dia	14		Nos	
10.5	110mm dia	30		Nos	

S.No.	Description	Qty.	Rate	Unit	Amount
11	Fabricating, supplying, and fixing of Geberit make HDPE Floor drain in all laboratory area made out of 75mm dia HDPE Pipe with single inlets of size 40mm to 75mm dia.(boss tee), outlets of sizes 75mm, with min.2" water seal, fixing in position, using cement concrete 100 mm alround to full depth of trap, including providing FRP matting at bottom, inlet and outlet with sealed ss/cp grating etc, complete.	8		Each	
12	Fabricating brackets using Mild Steel flats or angles,10mm thick ms plate, cutting, welding, forming shapes, providing hot dip galvanizing for brackets, cutting pockets in masonry / concrete surfaces, grouting brackets in concrete of 1:2:4 mix, restoring the damaged portion to their original condition required materials etc. complete.	72		Kg	
T	INTERNAL AND EXTERNAL WATER SUPPLY				
	TOILET WATER SUPPLY				
1	Providing and fixing Chlorinated polyvinyl chloride (CPVC) pipes having thermal stability for HOT & cold water supply including all CPVC plain & brass threaded fittings ,including the pipe with clamps at 1.0m spacing . This includes jointing of pipes & fittings with one step CPVC solvent cement and cost of cutting chases making good the same including testing of joints complete as per direction of Engineer in charge.				
1.1	20mm dia	68		RM	
1.2	25mm dia	44		RM	

S.No.	Description	Qty.	Rate	Unit	Amount
1.3	32mm dia	29		RM	
2	TERRACE FLOOR WATER SUPPLY				
	Providing and fixing Chlorinated polyvinyl chloride (CPVC) pipes having thermal stability for HOT & cold water supply including all CPVC plain & brass threaded fittings ,including fixing the pipe with clamps at 1.00m spacing .This icludes jointing ofpipes & fittings with one step CPVC solvent cement & testing of joints complete as per direction of Engineer in charge.				
2.1	1" dia/25mm dia-SDR-11 pipes	7		RM	
2.2	1 1/4" dia/32mm dia-SDR-11 pipes	18		RM	
2.3	1 1/2" dia/40mm dia-SDR-11 pipes	118		RM	
2.4	2" dia/50mm dia-SDR-11 pipes	46		RM	

S.No.	Description	Qty.	Rate	Unit	Amount
3	LAB WATER SUPPLY				
	Providing and fixing Chlorinated polyvinyl chloride (CPVC) pipes having thermal stability for HOT & cold water supply including all CPVC plain & brass threaded fittings ,including the pipe with clamps at 1.0m spacing . This includes jointing of pipes & fittings with one step CPVC solvent cement and cost of cutting chases making good the same including testing of joints complete as per direction of Engineer in charge.				
3.1	3/4" dia/20mm dia-SDR-11 pipes	11		RM	
3.2	1" dia/25mm dia-SDR-11 pipes	25		RM	
5	Supplying,fixing of RB make Brass 'Y' strainer on delivery line with necessary accessories etc., complete				
5.1	40mm dia	1		Each	
5.2	50mm dia	1		Each	

S.No.	Description	Qty.	Rate	Unit	Amount
6	Supplying,fixing,testing and commissioning of OR/VB make 3/4" (20mm)dia Air release valve of brass body nickel plated automatic air release valves with brass spindle, NBR and joinfranteelastomer,staniless steel spring polypropylenic float at the top most points of watersupply distribution ringmain, fixing the same to pipework with control valve, testing for leakproof, etc., complete.	3		Each	
7	Fabricating and fixing pipe inserts making in G.I 'C' Class pipe with Hot Dip Galvanizing 6mm thick plate alround 3" with proper thread on the pipes/G.I welded joints/flanaged coupling located on utility ug sump and necessary flanges for bigger diameter pipes, etc. complete.				
7.1	40mm dia	9		Each	
7.2	50mm dia	5		Each	
9	Providing and fixing of Gunmetal gate valve with C.I. wheel of approved quality (screwed end)				
9.1	25mm dia	2		Each	

S.No.	Description	Qty.	Rate	Unit	Amount
9.2	32mm dia	2		Each	
9.3	40mm dia	4		Each	
9.4	50mm dia	2		Each	
10	Fabricating brackets using Mild Steel flats or angles, 10mm thick ms plate, cutting, welding, forming shapes, providing hot dip galvanizing for brackets, cutting pockets in masonry / concrete surfaces, grouting brackets in concrete of 1:2:4 mix, restoring the damaged portion to their original condition required materials etc. complete.	120		Kg	
11	Making connection of GI distribution with G.I. main of following sizes by providing & fixing tee, including cutting & threading the pipe etc., complete,				
	50-80mm nominal bor	1		Each	
12	Removing of existing connection from the first floor terrace level near the water tank to the shaft removing of the existing water supply pipes, and clean the area to the entire satisfaction of the concern site engineer	1		lumpsum	

S.No.	Description	Qty.	Rate	Unit	Amount
13	Supplying and fixing "Peco make Brass Float valve with pvc ball including necessary fittings in over head sintex tank etc. complete				
13.1	50mm dia	2		Each	
14	cutting Holes up to 15X150cm in RCC slab floors & roofs for passing drain pipes etc & repairing the hole after insertion of drain pipe etc with cement concrete 1:2:4 (1 cement : 2 coarse sand :4 graded tone aggregate 20mm nominal size) including finishing complete so as to make it leak proof.	4		Each	
U	EXTERNAL DRAINAGE				
1	Supplying, laying and testing SWR PVC- B Class pipe confirming to IS 13592-1992 and 6kg UPVC Pipes for 200/250/315/400 mm dia confirming to IS 4985 - 2000 for underground drainage and sewerage systems - pipes in trenches to required gradients,burried in ground level etc., complete. Rates to include excavation in all kinds/types of soils including hard laterites but except hardrock for laying pipes,forming bottom surface to required level, refilling selected excavated earth around the encasing, watering, consolidating and disposing off the surplus earth within the site or as directed by Architects/Consultants within a lead of 300M. etc.,Rate to include pumping out water from the trenches using required nos of dewatering pumps with complete shoring arrangements wherever necessary.Works to include storm water drainage,pipes burried in ground level to required gradients etc complete.				

S.No.	Description	Qty.	Rate	Unit	Amount
1.1	110mm dia - 450 to 1000 depth	3		RM	
1.2	160mm dia - 500 to 1000 depth	3		RM	
2	Providing & laying of cement concrete 1:5:10 (1 cement : 5 coarse sand :10 graded stone aggregate 40mm nominal size)all around pipes including bed concrete as per standards design.				
2.1	110mm	3		RM	
2.2	160mm dia	3		RM	

S.No.	Description	Qty.	Rate	Unit	Amount
3	construction of brick masanory manhole in cement mortar 1:4:(1 cement : 4 coarse sand) with RCC top slab RCC top slab with 1:2:4 mix (1 cement :2 corase sand : 4 graded stone aggregate 20mm nominal size) foundation concrete 1:5: 10 (1 cement : 5 fine corase sand :10 graded aggregate 40mm nominal size) inside plastering 12mm thick with cement mortaor 1:3 (1 cement : 3 corase sand) finished smooth with a floating coat of neat cement on walls and bed conctere etc,complete as per standards design . Inside dimension size 90X80 cm and 45cm deep including CI cover with frame (light duty) 455 x610 mm internal dimension ,total weight of cover & frame to be not less than 38 kg (weight of cover 23 kg and weight of frame 15 kg) with common burnt clay F.P.S.(non modular) bricks of class designation 7.5.	2		Each	
4	Square mouth S.W.Gully trap class SP-1 complete with CI grating brick masanory chamber with water tight C.I.cover with frame of 300X300 mm size (inside) the weight of cover to be not less than 4.5 kg and frame not less than 2.7 kg as per standard design. 150 X100 mmsize "p" type with common burnt clay F.P.S.(non modular) bricks of class designation 7.5	2		Each	
5	Construction of Neutralization chamber 1500x900mm inside with best quality bricks to 230mm thick in Cement mortar including necessary excavation, foundation concrete 1:5:10 and inside plastering finished with acid resistant tiles set in cement mortar 1:3 with suitable depth for neutralize laboratory waste. supply and fixing 2 nos of 600x600mm size SFRC cover,excavating refilling etc.,complete etc., complete	1		Each	
6	Supply & fixing of CI cover frame for manholes 455 X 610 mm rectangular C.I cover (light duty) the weight of the cover to be not less than 23 kg.	2		Each	

S.No.	Description	Qty.	Rate	Unit	Amount
7	Making connection of drain or sewer line with existing manhole including breaking into and making good the walls ,floors with cement concrete 1:2:4 mix (1 cement :2 coarse sand : 4 graded stone aggregate of 20mm nominal size)cement plastered on both sides with cement mortar 1:3 (1cement :3 coarse sand) finished with a floating coat of neat cement & making necessary channels for the drain etc complete : For pipes 100 to 250 mm diameter	1		Each	
Total amount in Rs					

Total amount (Rs. In words).....

Signature of Contractor

EXECUTIVE ENGINEER (CIVIL)