

## **HLL INFRA TECH SERVICES LIMITED (HITES)**

(Subsidiary of HLL Lifecare Limited

A Government of India Enterprise)

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## **TENDER DOCUMENT**

**Tender Notice No. :** HITES/FM/JIP/HVAC/2018-19/003 Dated: 20.09.2018

**NAME OF WORK:** Providing Air Conditioning System for labs and Faculties at Jawaharlal Institute of Postgraduate Medical Education And Research (JIPMER), Pondicherry

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# HLL INFRA TECH SERVICES LIMITED (HITES)

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## NOTICE INVITING TENDER

**Tender Notice No. :** HITES/FM/JIP/HVAC/2018-19/003 Dated: 20.09.2018

HLL Infra Tech Services Limited on behalf of JIPMER invites item rates tenders under Two Bid System for the following works from the appropriate class who have satisfactorily completed similar works during the last five years, ending last day of the month previous to the one in which the Tenders are invited at least three similar works\*\* of costing not less than the amount equal to 40% of the estimated cost put to Tender or two similar works\*\* costing not less than the amount equal to 60% of the estimated cost put to Tender or one similar work\*\* of aggregate cost not less than the amount equal to 80% of the estimated cost put to Tender.

\*\* Similar works means relevant HVAC Works.

### SALIENT FEATURES OF THE BID:

Sl. No.	Particulars	Detailed of Tender
1	<b>Tender Notice No.</b>	HITES/FM/JIP/HVAC/2018-19/003 Dated: 20.09.2018
2	<b>Name of the Work</b>	Providing Air Conditioning System for labs and Faculties at Jawaharlal Institute of Postgraduate Medical Education And Research (JIPMER), Pondicherry
3	<b>Tender Fee [Non refundable]</b>	<b>Rs. 590/-</b> By D.D. of Nationalized/Scheduled Bank only in favour of 'HLL Infra Tech Services Limited', payable at Trivandrum and to be enclosed along with technical bid only , failing which tender will not be considered as a valid tender
4	<b>Availability of tender</b>	Tender documents downloaded from <a href="http://www.hllhites.com">www.hllhites.com</a> or CPP portal
5	<b>Approximate Cost of work</b>	<b>Rs. 70,11,562.00/-</b>

<b>6</b>	<b>Earnest Money Deposit</b>	<b>Rs. 70,000/-</b> By D.D. of Nationalized/Scheduled Bank only in favour of 'HLL Infra Tech Services Limited', payable at Trivandrum and to be enclosed along with technical bid only , failing which tender will not be considered as a valid tender
<b>7</b>	<b>Performance Guarantee (for the successful bidder)</b>	5% of contract value
<b>8</b>	<b>Security Deposit (for the successful bidder)</b>	Security Deposit will be deducted from RA bills @ 5% of the value of the contract amount.
<b>9</b>	<b>Completion period of the Work</b>	90 (Ninety) days from the date of issue of letter of acceptance.
<b>10</b>	<b>Date of Issue of Bid Documents</b>	From 20.09.2018 to 10.10.2018 during office hour
<b>11</b>	<b>Date of Submission of Bid Documents</b>	Up to 10.10.2018, Time: 3.30 pm
<b>12</b>	<b>Date of Opening of Technical Bid</b>	On 10.10.2018, Time: 4.00 pm
<b>13</b>	<b>Address for tender submission</b>	Dy Manager (FM), HITES project office, JIPMER, Puducherry
<b>14</b>	<b>Venue of tender opening</b>	HITES Project office , Super Specialty Block, JIPMER, Puducherry

HITES reserves the right to reject any or all the tenders without assigning any reason thereof and also not bound to accept lowest tender. Tenders in whom any of the prescribed conditions are not fulfilled or found incomplete in any respect are liable to be rejected.

Canvassing, whether directly or indirectly in connection with tender is strictly prohibited and the tender submitted by the contractors who resort canvassing will be liable to be summarily rejected.

**Sd/-**

**Signature of Chief Engineer  
Facility Management Division  
For and behalf of HITES**

## **SUBMISSION OF TENDER**

The tender document shall be submitted in two parts.

### **1. Part I - TECHNICAL BID.**

The following documents are to be submitted within the period of bid submission furnished by the Contractor along with Technical Bid as per the tender document:

- i) Demand Drafts towards the cost of Tender Document and Earnest Money Deposit.
- ii) Copy of valid registration certificate of appropriate value issued by any Organisation as Specified in Tender Notice.
- iii) Copies of Registration certificate under Indian Partnership Act in case of Partnership Firm/Company Incorporation certificate in case of Ltd. Company/Affidavit in case of proprietary firm along with power of attorney and other documents as per the conditions stipulated under the General Rules & directions for the guidance of contractors in the tender document.
- iv) Copies of experience/work completion certificates of required amount as per the conditions of Tender Notice.
- v) Tender Acceptance Letter in the firm/Company letterhead duly filled & signed by the Authority with a seal of Firm/Company.
- vi) Copy of PAN Card.
- vii) Copy of Goods and Services Tax registration certificate.
- viii) Copy of balance sheets / Profit and Loss statement for previous three years duly certified by Chartered Accountant.

### **2. Part II - PRICE BID.**

Completed Price bid

## **TENDER ACCEPTANCE LETTER**

(To be given on Company Letter Head)

Date:

To,

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**Sub: Acceptance of Terms & Conditions of Tender**

Tender Reference No: \_\_\_\_\_

Name of Tender / Work: -

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Dear Sir,

1. I/ We have downloaded / obtained the tender document(s) for the above mentioned 'Tender/Work' from the web site(s) namely:

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As per your advertisement, given in the above mentioned website(s),

2. I / We hereby certify that I / we have read the entire terms and conditions of the tender documents from Page No. \_\_\_\_\_ to \_\_\_\_\_ (including all documents like annexure(s), schedule(s), etc .), which form part of the contract agreement and I / we shall abide hereby by the terms / conditions / clauses contained therein.

3. The corrigendum(s) issued from time to time by your department/ organizations too have also been taken into consideration, while submitting this acceptance letter.

4. I / We hereby unconditionally accept the tender conditions of above mentioned tender document(s) / corrigendum(s) in its totality / entirety.

5. In case any provisions of this tender are found violated , then your department/ organization shall without prejudice to any other right or remedy be at liberty to reject this tender/bid including the forfeiture of the full said earnest money deposit absolutely.

**Yours Faithfully,**

**(Signature of the Bidder, with Official Seal)**

## **PART- I**

### **GENERAL RULES & DIRECTIONS FOR THE GUIDANCE OF CONTRACTORS**

#### **1. AREA OF OPERATION:**

The area of operation / work site is located at JIPMER, Dhanvantri Nagar, Gorimedu, Puducherry. The bidders are advised to visit the site to acquaint themselves with the working conditions before submitting the tender document.

#### **2. ELIGIBILITY CRETERIA:**

- a) The Bidder should have Successfully completed one similar works costing not less than **Rs. 56 Lakhs** for State Govt., Central Govt., corporate or any reputed institutional in the last five years.

OR

Should have completed two similar works costing not less **Rs. 42 Lakhs** each, for State Govt., Central Govt., corporate or any reputed institutional in the last five years.

OR

Should have completed three similar works costing not less **Rs. 28 Lakhs** each, for State Govt., Central Govt., corporate or any reputed institutional in the last five years.

- b) The minimum average annual turnover of the bidder shall be 50% of the estimated cost for the last 3 consecutive financial years ending on 31.03.2018.

#### **3. CONTRACT PERIOD:**

The entire work shall have to be completed within 90 (Ninety) days from the date of acceptance of work order.

#### **4. DATE OF COMMENCEMENT OF WORK:**

The contractor shall commence the above work within 7 (seven) days from the date of issue of work order.

## **5. TENDER SUBMISSION:**

- a) The bidder shall submit the Tender in envelope duly sealed and super scribed with the Tender Notice Number.
- b) Tenders can be submitted either by post, courier service or deposited in the Tender box in this office.
- c) Tenders not received in prescribed form will be liable to be summarily rejected.
- d) Conditional Bids not adhering to the Tendered terms and conditions are liable to be rejected.
- e) Tenders will be received up to 3.30 P.M. on 10.10.2018 and will be opened on the same day at 4.00 P.M. in the presence of bidders or their authorized representatives.
- f) HITES reserves the right to accept or reject any or all tenders or distributes the work amongst different bidders without assigning any reason thereof.
- g) The tender document shall have to be signed by the bidder in each page and the terms & conditions must not be altered; failing which, the tender will be rejected.

## **6. TENDER OPENING DATE & TIME:** On 10.10.2018, Time: 4.00 pm

## **7. PERIOD OF VALIDITY:**

The Price quoted by the bidder shall remain valid for a minimum period of 180 days from the date of submission of the Tender.

## **8. PRICE BID:**

- a) The bidders are required to quote their unit rate in figures as per the “**B.O.Q.**” format enclosed in Annexure-I of the Tender Schedule. In case of change in the taxes by the Government during the contract period, the same shall be considered to be paid extra.
- b) The L-1 bidder will be evaluated on the basis of lowest quoted rate in the price bid. The rate quoted in the price bid should be the same as per the total value

quoted in the B.O.Q. However, in case of discrepancy between these two amounts, the derived amount of B.O.Q. shall be considered for evaluation.

- c) Non-mentioning of any price component by the bidder in any item of the BOQ will be taken as 'Nil' and the evaluation will be done accordingly. The concerned price element will be assumed to be included in the total price quoted by the bidder.
- d) Tenders containing overwriting, corrections without authentication with full signature on the pages of "B.O.Q." will be liable for rejection. In case there is any discrepancy between figures and words, then the amount quoted in words will be considered for evaluation.
- e) In case the quoted rate is abnormally lower than the estimate, the company reserves the right to call justification from the L-1 bidder. Further the bidder may have to submit a performance guarantee in form of Bank Guarantee towards the differential amount.

## 9. PAYMENT METHOD

The contractor shall submit the bill within one month of the date of the final certificate of completion furnished by HITES. No further claims shall be made by the contractor after submission of the bill. Payments will be made within one month; the period being reckoned from the date of receipt of the bill.

## 10. EARNEST MONEY DEPOSIT (EMD) / SECURITY DEPOSIT (SD) / PERFORMANCE GUARANTEE

Each tender must be accompanied by an Earnest Money @ 1 % Value of contract amounting **Rs.70,000/-** in the form of Demand Draft in favour of '**HLL Infra Tech Services Limited**'. Any of the information furnished by him/her is found to be incorrect or false, the Earnest Money Deposited by him shall stand forfeited, without prejudice to any other rights and remedies of the HITES under the contract and Law, and the Tenderer will be liable for any loss suffered by the HITES on account of its withdrawal/modification etc. besides forfeiture of EMD. He will also be debarred from participating in any other Tender Enquiry with HITES for a period of five years.

The contractor whose Tender is accepted will be required to furnish by way of Security Deposit for the due fulfillment of his contract sum as under :-

- I. @ 5% of the Tendered value of contract put to Tender without limit. The Security Deposit will be collected by deduction @ 5% (five percentage) from the running bills of the contractor and the Earnest Money, if deposited at the time of Tender will be treated a part of Security Deposit. The Security Deposit will be in addition to the Performance Guarantee.
- II. The Security Deposit shall not earn any interest. If the successful tenderer had previously held any contract and furnished security deposit, the same shall not be adjusted against this tender and a fresh security deposit will be required to be furnished.

The successful Tenderer has to deposit an amount equal to @ 5% of the Tendered and accepted value of the work (without any limit) as Performance Guarantee in the form of:

- I. Cash in case of guarantee amount is less than Rs.10, 000/- (Rupees Ten Thousand only)
- II. Deposit of Call Receipt/Banker's cheque/Demand Draft/Pay Order of Scheduled Bank in case the guarantee amount is less than Rs.1, 00,000/- (Rupees One lakh).
- III. An Irrevocable Bank Guarantee bond of any Scheduled Bank or State Bank of India in the prescribed Form in case the guarantee amount is more than Rs.1,00,000/- (Rs. One Lakh).

The time allowed for submission of the Performance Guarantee by the contractor shall be 7 Days of issue of the Letter of Acceptance. This period can be further extended, if required by the Engineer-in-Charge for a maximum period ranging from 3 to 7 days at the written request of the contractor. The date of start of work may accordingly be fixed reckoning it after 7 days from the date of issue of letter of acceptance.

**NOTE:** - If the Tenderer who's Tender considered for acceptance fails to furnish the prescribed Performance Guarantee with in prescribed period the EMD will be absolutely forfeited by HITES.

## **11. PENALTY/ FOREFEITURE, ETC.:**

In case the successful bidder fails to take up the work after issuance of LOI/Work Order/Agreement, HITES may at its discretion, impose upon any or all of the following penalties

- (a) 2% of the total contracted value for the extended period up to 7 days and up to 10% contracted value for the extended period of more than 7 days.
- (b) Cancellation of LOI/Work Order/ Agreement in part or full.
- (c) Recovery of extra cost incurred by the company for getting the work done through other sources which may be without notice.
- (d) Blacklisting of the Contractor.
- (e) Recovery from any of the other present/future pending bills of the contractor.

## **12. DEFECT LIABILITY PERIOD:**

If any defect in the work is detected by the concerned engineer, the agency shall make necessary rectification of such defects during the defect liability period of 12 (twelve) months from the date of completion of work. All such work shall be carried out by the agency at his own expenses.

## CONDITIONS OF CONTRACT

### Definitions

1. The **Contract** means the documents forming the tender and acceptance thereof and the formal agreement executed between the competent authority as indicated in **Schedule 'F'** on behalf of the Ministry of Health & Family Welfare, Govt. of India 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 the context otherwise requires, have the meanings, thereby respectively assigned to them:-
  - i) The expressions **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) **Accepting Authority** shall mean the authority mentioned in **Schedule 'F'**.
  - 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) **Department** means M/s HLL Infra Tech Services Ltd. (**HITES**) as Executing Agency of Ministry of Health & Family Welfare, Govt. of India and shall include their legal representatives, nominee, employees and Officials.
  - v) M/s HLL Infra Tech Services Ltd. (**HITES**) as Executing Agency for the project.
  - vi) **District Specifications** means the specifications followed by the State Government in the area where the work is to be executed.
  - vii) The **Engineer-in-charge** means the Engineer Officer as mentioned in Schedule 'F' hereunder, authorized by the Department, who shall supervise and be in charge of the work.
  - viii) **Expected risk(s) are** risks due to riots (other than those on account of the contractor's employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, military or usurped power, any act of Government, damage 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 Government of the part of the works in respect of which a certificate of completion has been issued or a cause solely due to Government's faulty design of work.
  - ix) The **Government or Government of India** shall mean the President of India represented by officials of MoHFW.
  - x) **Market rate** shall be the rate as decided by 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.

- xi) **Schedule(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 Government mentioned in Schedule 'F' hereunder, with the amendments thereto issued upto the date of receipt of the tender.
- xii) The **Site** shall mean the land/ or place 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 located or used for the purpose of carrying out the contract.
- xiii) **"Tendered Value"/"Contract Price"** means the value of the entire work as stipulated in the letter of award.
- xiv) **MoHFW** means Ministry of Health & Family Welfare, Government of India.
- xv) **GST** shall mean Goods and Service tax – Central, State and Inter State.

### **Scope and performance**

- 3. Where the context so requires, words imparting the singular only also include the plural or vice versa. Any reference to masculine gender shall whenever required include feminine gender and vice versa
- 4. Heading and Marginal notes to these General Conditions of Contract shall not be deemed to form part thereof or be taken into consideration in the interpretation or construction thereof or of the contract.
- 5. The contractor shall be furnished, free of cost one certified copy of the contract documents except standard specifications, 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 this contract.

### **Works to be carried out**

- 6. The work to be carried out under the contract shall, except as otherwise provided in these conditions include all labour, materials, tools, plants, equipment and transport which may be required in preparation of and for and in the full and entire execution and completion of the works. The description given in the Schedule of Quantities shall, unless otherwise stated, be held to include wastage of materials, cartage and carriage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labour necessary in and for the full entire execution and completion of the work as aforesaid in accordance with good practice and recognized principles.

### **Sufficiency of tender**

- 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 price quoted in the Schedule of Quantities, which rates and price shall, except as otherwise provided, cover all his obligations under the contract and all matters and things necessary for the proper completion and maintenance of the works.

### **Discrepancies and Adjustment of errors**

8. The several documents forming the contract are to be taken as mutually explanatory of one another, detailed drawings being followed in preference to small scale drawings and figured dimensions in preference to scale and specific 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 –
- a) Description of Schedule of Quantities
  - b) Particular specification and Specific Condition, if any.
  - c) Drawings
  - d) CPWD Specifications
  - e) Indian Standard Specifications of B.I.S.
- 8.2 If there are varying or conflicting provisions made in any one document forming Part of the contract, Accepting Authority shall be deciding authority with regard to the intention of the document and his decision shall be final and binding on the Contractor.

Any error in description, quantity or rate in schedule of quantities or any omission there from shall not vitiate the contract 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 obligation under the contract.

### **Signing of Contract**

9. The successful bidder/contractor, on acceptance of his tender by the Accepting Authority, shall, within 15 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, amendments, corrigendum etc, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.
  - ii. Standard 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) CPWD Safety Code.
    - (c) Model Rules for the protection of health, sanitary arrangements for workers employed by the Client or its contractors, which are applicable for the workers employed by the Contractor for this Project.
    - (d) CPWD Contractor's Labour Regulations, to be followed by the Contractor for this Project.
    - (e) List of Acts and omissions for which fines can be imposed.
  - iii. No payment for the work done will be made
    - (a) Unless contract is signed by the contractor.
    - (b) Till the copy of registration with EPFO and ESI is submitted by the contractor.

# CLAUSES OF CONTRACT

## CLAUSE 1 PERFORMANCE GUARANTEE

- (i) The contractor shall submit an irrevocable Performance Guarantee of 5% (Five percent) of the tendered value 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 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 up to a maximum period as specified in schedule 'F' on written request of the 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 Banker's Cheque of any scheduled bank/Demand Draft of any scheduled bank/Pay Order of any scheduled bank (in case guarantee amount is less than Rs. 1,00,000/-) or Guarantee Bonds of any Scheduled Bank or the State Bank of India in accordance with the form annexed hereto.
- (ii) The Performance Guarantee shall be initially valid up to the stipulated date of completion plus sixty 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 Client 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 Client 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 notice to this effect by Engineer-in-Charge.
- (iv) In the event of the 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 Client.

## CLAUSE 1 A RECOVERY OF SECURITY DEPOSIT

The person/persons whose tender(s) may be accepted (hereinafter called the contractor) shall permit Government/HITES 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 and final bill till the sumdeductedwill amount to security deposit of 5% of the tendered value of the work. Such deductions will be made and held by Government/ HITES 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 Government/HITES as part of the security deposit and the Bank is unable to make payment against the 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 Government/HITES 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 Government/HITES 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 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 bills of the contractor at the rates mentioned above.

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 lakh subject to the condition that amount of such bank guarantee, except last one, shall not be less than Rs.5 lakh provided further that the validity of bank guarantee including the one given against the earnest money shall be in conformity with provisions contained in clause 17 which shall be extended from time to time depending upon extension of contract granted under provisions of Clause 2 and Clause 5.

Note-1: Government papers tendered as security will be taken at 5% (five per cent) 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 the Government paper will be withheld if necessary.

Note-2: Government Securities will include all forms of Securities mentioned in Rule No. 274 of the G.F. Rules except fidelity bond. This will be subject to the observance of the condition mentioned under the rule against each form of security.

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

## **CLAUSE 2 COMPENSATION FOR DELAY**

If the contractor fails to maintain the required progress in terms of clause 5 or 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 Government/HITES on account of such breach, pay as agreed compensation the amount calculated at the rates stipulated below as the authority specified in schedule 'F' (whose decision in writing shall be final and binding) may decide on the amount of tendered value of the work for every completed day/month (as applicable) that the progress remains below that 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 completion has been specified.

- (i) Compensation for delay of work @ 1.5 % of tendered value 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 Government/HITES. In case, the contractor does not achieve a particular milestone 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 milestone(s), amount mentioned against each milestone missed subsequently also shall be withheld. However, no interest, whatsoever, shall be payable on such withheld amount.

## **CLAUSE 2A INCENTIVE FOR EARLY COMPLETION**

Not Applicable

## **CLAUSE 3 WHEN CONTRACT CAN BE DETERMINED**

Subject to other provisions contained in this clause, the Engineer-in-Charge may, without prejudice to his any other rights or remedy against the contractor in respect of any delay, inferior workmanship, any claims for damages and/or any other provisions of this contract or otherwise, and whether the date of completion has or has not elapsed, by notice in writing absolutely determine the 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 the work is being performed in an inefficient or otherwise improper or un workman like manner shall omit to comply with the requirement of such notice for a period of seven 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 completion 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 in complying with any of the terms and conditions of the contract and does not remedy it or take 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 or 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 forbearing 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/HITES.
- (vi) If the contractor shall enter into a contract with Government/HITES 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 Government/HITES as a result of wrong tendering or other non-bonafide methods of competitive tendering or commits breach of integrity pact.
- (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 for the time being in force or make any conveyance or assignment of his effects or composition or arrangement for the benefit of his creditors or purport so to do, or if any application be made under any 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 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 goods and allow it to be continued for a period of 21 days.
- (xi) If the contractor assigns, transfers, sublets (engagement of labour on a 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 without the prior written approval of the Engineer -in-Charge.

When the contractor has made himself liable for action under any of the cases aforesaid, the Engineer-in-Charge on behalf of the HITES 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 Government/HITES.
- (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 thereof, 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 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 reasons of his having purchased or procured any materials or entered into any engagements or made any advances 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 or actually performed under this contract unless and until the Engineer-in-Charge has certified in writing the performance of such work and the 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 reasons not within the control of the contractor within 1/8th of the stipulated time for completion of work or one month whichever is higher, either party may close the

contract. In such eventuality, the Earnest Money Deposit and the Performance Guarantee of the contractor shall be refunded.

In case contractor wants to close the contract, he shall give notice to the department stating the failure on the part of department. In such eventuality, the Performance Guarantee of the contractor shall be refunded within the following time limits:

- (i) If the tendered value of work is upto Rs.45 lakhs : 15 days
- (ii) If the tendered value of work is more than Rs.45 lakhs & upto Rs.2.5Cr. : 21 days
- (iii) If the tendered value of work exceeds Rs.2.5 Crore : 30 days

If the PG is not released within prescribed time limit, then a simple interest @0.25% per month shall be payable on PG to the Contractor from the date of expiry of prescribed time limit.

A compensation for such eventuality, on account of damages etc. shall be payable @ 0.25% of tendered value subject to maximum limit of Rs.10 lacs.

#### **CLAUSE 4 CONTRACTOR LIABLE TO PAY COMPENSATION EVEN IF ACTION NOT TAKEN UNDER CLAUSE 3**

In any case in which any of the powers conferred upon the 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 compensation shall remain unaffected. In the event of the Engineer-in-Charge putting in force all or any of the power 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, plant, 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 these 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 and his risk in all respects and the 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 TIME AND EXTENSION FOR DELAY**

The time allowed for execution of the Works as specified in the Schedule 'F' or the extended time in accordance with these conditions shall be the essence of the Contract. The execution of the works 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, Government/HITES shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the earnest money & performance guarantee absolutely.

- 5.1 The Contractor shall submit a Programme Chart (Time and Progress) for each mile stone along with the Performance Guarantee and get it approved by the Executing Agency. The Chart shall be prepared in direct relation to the time stated 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'.

- a) Project Management shall be done by using project management software for works costing up to Rs.5 Crores.
- b) The project management shall be done using M.S.Project software for works costing more than Rs.5 Crores and upto Rs.20 Crores.
- c) For works costing more than Rs.20 Crores, project management shall be done using Primavera software.

#### PROGRAMME CHART

- (I) The Contractor shall prepare an integrated programme chart in MS Project/ Primavera Software for the execution of work showing clearly all activities from the start of work to completion, with details of manpower, equipment and machinery required for the fulfillment of the programme within the stipulated period or earlier and submit the same for approval to the Engineer-in-Charge within ten days of award of the Contract. A recovery of Rs.2500/- (for works costing upto Rs.20 Crores)/ Rs.5000 (for works costing more than Rs.20 Crores) shall be made on a per day basis in case of delay in submission of the above programme.
- (II) The Programme chart should include the following:
  - a) Descriptive note explaining the sequence of the various activities.
  - b) Network (PERT / CPM / BAR CHART).
  - c) Programme for procurement of materials by the contractor. Programme of procurement of machinery/equipment having adequate capacity, commensurate with the quantum of work to be done within the stipulated period, by the contractor. In addition to above to achieve the progress of Work as per programme, the contractor must bring at site adequate shuttering material required for cement concrete and R.C.C. works etc. for three floors within one month from the date of start of work till the completion of RCC work as per requirement of work. The contractor shall submit shuttering schedule adequate to complete structure work within laid down physical milestone(s).
- (iii) If at any time, it appears to the Engineer-in-charge that the actual progress of work does not conform to the approved programme referred above or after rescheduling of milestones, the contractor shall produce a revised programme within 7 (seven) days, showing the modifications to the approved programme to ensure timely completion of the work. The modified schedule of programme shall be approved by the Engineer in Charge. A recovery of Rs. 2500/- (for works costing upto Rs. 20 Crores) / Rs. 5000/- (for works, costing more than Rs. 20 Crores) shall be made on per day basis in case of delay in submission of the modified programme.
- (iv) The submission for approval by the Engineer-in-Charge of such programme or such particulars shall not relieve the contractor of any of the duties or responsibilities under the contract. This is without prejudice to the right of Engineer-in-Charge to take action against the

contractor as per terms and conditions of the agreement.

- (v) The contractor shall submit the progress report using MS Project/ Primavera software with base line programme referred above for the work done during previous month to the Engineer-In-charge on or before 5th day of each month failing which a recovery Rs. 2500/-, (for works costing upto Rs. 20 Crores) / Rs. 5000, (for works costing more than Rs. 20 Crores) shall be made on per day basis in case of delay in submission of the monthly progress report.

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 Government/ HITES to supply or
- (vii) Non-availability or break down of tools and Plant to be supplied or supplied by Government/ HITES 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 authority as indicated in Schedule 'F' 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 Mile stones 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 to the authority as indicated in Schedule 'F'. The Contractor may also, if practicable, indicate in such a request the period for which extension is desired.
- 5.4 In any such case the authority as indicated in Schedule 'F' may give a fair and reasonable extension of time and reschedule the mile stones for completion of work. Such extension or rescheduling of the milestones shall be communicated to the Contractor by the authority as indicated in Schedule 'F' in writing, within 3 months of the date of receipt of such request. Non application by the contractor for extension of time/rescheduling of milestones shall not be a bar for giving a fair and reasonable extension/rescheduling of milestones by the authority as indicated in Schedule 'F' and this shall be binding on the contractor.

## CLAUSE 6 MEASUREMENTS OF WORK DONE

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 measurements 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 of the 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, labour 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 any 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 relieve the contractor from liabilities from any over measurement or defects noticed till completion of the defects liability period.

## **CLAUSE 6A                      COMPUTERIZED MEASUREMENT BOOK**

Engineer-in-Charge shall, except as otherwise provided, ascertain and determine by measurement the value of work done in accordance with the contract. All measurements of all items having financial value shall be entered by the contractor and compiled in the shape of the Computerized Measurement Book

having pages of A-4 size as per the format of the department so that a complete record is obtained of all the items of works performed under the contract.

All such measurements and levels recorded by the contractor or his authorized representative from time to time, during the progress of the work, shall be got checked by the contractor from the Engineer-in-Charge or his authorized representative as per interval or program fixed in consultation with Engineer-in-Charge or his authorized representative. After the necessary corrections made by the Engineer-in-Charge, the measurement sheets shall be returned to the contractor for incorporating the corrections and for resubmission to the Engineer-in-Charge for the dated signatures by the Engineer-in-Charge and the contractor or their representatives in token of their acceptance.

Whenever bill is due for payment, the contractor would initially submit draft computerized measurement sheets and these measurements would be got checked/test checked from the Engineer-in-Charge and/or his authorized representative. The contractor will, thereafter, incorporate such changes as may be done during these checks/test checks in his draft computerized measurements, and submit to the department a computerized measurement book, duly bound, and with its pages machine numbered. The Engineer-in-Charge and/or his authorized representative would thereafter check this MB, and record the necessary certificates for their checks/test checks.

The final, fair, computerized measurement book given by the contractor, duly bound, with its pages machine numbered, should be 100% correct, and no cutting or over-writing in the measurements would thereafter be allowed. If at all any error is noticed, the contractor shall have to submit a fresh computerized MB with its pages duly machine numbered and bound, after getting the earlier MB cancelled by the department. Thereafter, the MB shall be taken in the Engineer-in-charge's Office records, and allotted a number as per the Register of Computerized MB's. This should be done before the corresponding bill is submitted to the Division Office for payment. The contractor shall submit two spare copies of such computerized MB's for the purpose of reference and record by the various officers of the department.

The contractor shall also submit to the department separately his computerized Abstract of Cost and the bill based on these measurements, duly bound, and its pages machine numbered along with two spare copies of the bill. Thereafter, this bill will be processed by the Division Office and allotted a number as per the computerized record in the same way as done for the measurement book meant for measurements.

The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for checking of measurements/levels by the Engineer-in-Charge or his representative.

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 checking and/or test checking the measurement of any work in order that the same may be checked and/or test checked and correct dimensions thereof be taken before the same is covered up or placed beyond the reach of checking and/or test checking 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 any work shall be covered up or placed beyond the reach of checking and/or test checking 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 by contractor 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 checking and/or test checking the measurements of any item of work in the measurement book and/or its payment in the interim, on account of 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 relieve the contractor from liabilities from any over measurement or defects noticed till completion of the defects liability period.

## **CLAUSE 7 PAYMENT ON INTERMEDIATE CERTIFICATE TO BE REGARDED AS ADVANCES**

- A. For DG Sets:- The following percentages of contract rates shall be payable against the stages of work shown herein:

Stage	Stage of Work	Engine- Alternator Set & AMF Panel	All other items
I	After initial inspection (wherever specified) and delivery at site in good condition on pro-rata basis	80%	75%
II	After completion of pro-rata installation	10%	15%
III	On commissioning and completion of successful running in period and taking over of DG Sets by the MoHFW/ HITES	10%	10%

- B. For Sub Station:- The following percentages of contract rates shall be payable against the stages of work shown herein:

- i. 80% after initial inspection and delivery at site in good condition on pro-rata basis.
- ii. 10% after completion of installation in all respects.
- iii. Balance 10% will be paid after testing, commissioning and handing over to the MoHFW/ HITES for beneficial use.

- C. For all other specialized works i.e; other tailor made equipment, panels etc:- The following percentages of contract rates (on pro rata basis) shall be payable against the stages of work shown herein:

- i. 75% after initial inspection and delivery at site in good condition on pro-rata basis.
- ii. 10% after completion of installation in all respects.
- iii. 10% after testing, commissioning equipment.
- iv. Balance 5% on completion of work & handing over to the MoHFW/ HITES for beneficial

use.

Engineer-in-Charge shall arrange to have the bill verified by taking or causing to be taken, where necessary, the requisite measurements 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 event 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 at such rates as decided by the Engineer-in-Charge. The amount admissible shall be paid by 10<sup>th</sup> working day after the day of presentation of the bill, along with all supporting documents by the Contractor to the Engineer-in-Charge or his authorized representative together with the account of the material issued by the department, or dismantled materials, if any. In the case of works outside the headquarters of the Engineer-in-Charge, the period of ten working days will be extended to thirty days.

In case of delay in payment of intermediate bills after 45 days of submission of bill by the contractor provided the bill submitted by the contractor found to be in order, a simple interest @ 7.5% per annum shall be paid to the contractor from the date of expiry of prescribed time limit which will be compounded on yearly basis.

All such interim payments shall be regarded as payment by way of advances against final payment only and shall not preclude the requiring 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 payment, 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 in any respect conclude, determine or affect in any way powers of the Engineer-in-Charge under the contract or any of such payments be treated as final settlement and adjustment 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 work, if the extension of date of completion is not granted by the competent authority.

## **CLAUSE 7A**

The Contractor shall submit proof of having valid ESI registration for Construction site workers located in the ESI implemented areas for every construction site workers before his/her engagement on the HITES/HLL site of works as per requirement of ESI act, 1948 amended upto date and rules made there under.

The contractors are required to ensure that in ESI implemented areas, every construction site worker has been registered online and they are required to ensure that these workers and their families have got their photography and capturing of biometrics at nearest ESIC branch office and got their respective Identity cards (from ESIC office) issued for extension of ESI benefits to all the engaged construction site workers.

The contractors are required to submit proof of having registered/got issued Identity cards in respect of every Construction site workers in ESI implemented areas before engagement on HITES/HLL site of works.

The contractors are required to comply with all the relevant provisions of ESI act, 1948 as amended from time to time and deposit of his contribution as may be required under the above said act to the ESI authorities at required intervals/ time of deposit and submit the proof to HITES/HLL.

The contractor shall at all times indemnify HITES/HLL and owner against all claims, damages or compensation under the provision of ESI Act, 1948 or any modifications thereof or as consequence of any accident or injury to any workman or other persons in or about the works, whether in the employment of the contractor or not, against all costs, charges and expenses of any suit, action or proceedings arising out of such incident or injury and against all sum or sums which may with the consent of the contractor be paid to compromise or Compound any such claim.

No running account bill shall be paid for the work till the applicable labour licenses, registration with EPFO, ESIC and BOCW Welfare Board, whatever applicable are submitted by the contractor to the Engineer-in-charge.

## **CLAUSE 8 COMPLETION CERTIFICATE AND COMPLETION PLANS**

Within ten days of the completion of the work, the contractor shall give notice of such completion to the Engineer-in-Charge and within thirty 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 with 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 completion shall be issued, nor shall the work be considered to be complete until the contractor shall have removed from the premises on which the work shall be executed all scaffolding, surplus materials, rubbish and all huts and sanitary arrangements required for 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 cleaned off the dirt from all wood work, doors, windows, walls, floor or other parts of the building, in, upon, or about which the work is to be executed or of which he may have had possession 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 requirements of this Clause as to removal of scaffolding, surplus materials and rubbish and all huts and sanitary arrangements as aforesaid and cleaning off dirt on or before the date fixed for the completion of work, the Engineer-in-Charge may at the expense of the contractor remove such scaffolding, surplus materials and rubbish etc., and dispose of the same as he thinks fit and clean off such dirt as aforesaid, and the contractor shall have no claim in respect of scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale thereof.

## **CLAUSE 8A CONTRACTOR TO KEEP SITE CLEAN**

When the annual repairs and maintenance of works are carried out, the splashes and droppings from white washing, colour washing, painting etc., on walls, floor, windows, etc shall be removed and the surface cleaned simultaneously with the completion of these items of work in the individual rooms, quarters or premises etc. where the work is done: without waiting for the actual completion of all the other items of work in the contract. In case the contractor fails to comply with the requirements of this clause, the Engineer-in-Charge shall have the right to get this work done at the cost of the contractor either departmentally or through any other agency. Before taking such action, the Engineer-in-Charge shall give ten days' notice in writing to the contractor.

## **CLAUSE 8B COMPLETION PLANS TO BE SUBMITTED BY THE CONTRACTOR**

The contractor shall submit completion plan as required vide General Specifications for HVAC as applicable within thirty 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.5,00,000 (Rs. Five Lakhs only) as may be fixed by the Engineer- in- charge concerned and in this respect the decision of the Engineer- in- charge shall be final and binding on the contractor.

The Contractor shall submit completion plan for water, sewerage and drainage line plan within thirty days of the completion of the work.

In case, the contractor fails to submit the completion plan as aforesaid, HITES will get it done through other agency at his cost and actual expenses incurred for the same shall be recovered from the contractor.

## **CLAUSE 9 PAYMENT OF FINAL BILL**

The final bill shall be submitted by the contractor, along with all supporting documents, 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 claims 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 the 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 Engineer, complete with account of materials issued by the Department and dismantled materials.

- |       |  |          |
|-------|--|----------|
| (i)   | If the Tendered value of work is up to Rs. 45 lac:                             | 2 Months |
| (ii)  | If the Tendered value of work is more than Rs. 45 lac and up to Rs. 2.5 Crore: | 3 Months |
| (iii) | If the Tendered value of work exceeds Rs. 2.5 Crore:                           | 6 Months |

In case of delay in payment of final bills after prescribed time limit, a simple interest @ 7.5% per annum shall be paid to the contractor from the date of expiry of prescribed time limit, provided the final bill submitted by the contractor found to be in order.

## **CLAUSE 9A PAYMENT OF CONTRACTOR'S BILLS TO BANKS**

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 provided that the contractor furnishes to 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 Government/ HITES or his signature on the bill or other claim preferred against Government/ HITES before settlement by the Engineer-in-Charge of the account or claim by payment to the bank, registered financial, co-operative or thrift societies or 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 societies or recognized financial institutions.

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

## **CLAUSE 10 MATERIALS SUPPLIED BY GOVERNMENT/HITES**

Materials which Government/HITES will supply are shown in Schedule 'B' which also stipulates quantum, place of issue and rate(s) to be charged in respect thereof. The contractor shall be bound to procure them from the Engineer-in-Charge.

As soon as the work is awarded, the contractor shall finalize the programme for the completion of work as per clause 5 of this contract and shall give his estimates of materials required on the basis of drawings/or schedule of quantities of the work.

The Contractor shall give in writing his requirement to the Engineer-in-Charge which shall be issued to him keeping in view the progress of work as assessed by the Engineer-in-Charge, in accordance with the agreed phased programme of work indicating monthly requirements of various materials. The contractor shall place his indent in writing for issue of such materials at least 7 days in advance of his requirement.

Such materials shall be supplied for the purpose of the contract only and the value of the materials so supplied at the rates specified in the aforesaid schedule shall be set off or deducted, as and when materials are consumed in items of work (including normal wastage) for which payment is being made to the contractor, from any sum then due or which may therefore become due to the contractor under the contract or otherwise or from the security deposit. At the time of submission of bills, the contractor shall certify that balance of materials supplied is available at site in original good condition.

The contractor shall submit along with every running bill (on account or interim bill) material- wise reconciliation statements supported by complete calculations reconciling total issue, total consumption and certified balance (diameter/section-wise in the case of steel) and resulting variations and reasons thereof. Engineer-in-Charge shall (whose decision shall be final and binding on the contractor) be within his rights to follow the procedure of recovery in clause 42 at any stage of the work if reconciliation is not found to be satisfactory.

The contractor shall bear the cost of getting the material issued, loading, transporting to site, unloading, storing under cover as required, cutting assembling and joining the several parts together as necessary. Notwithstanding anything to the contrary contained in any other clause of the contract and (or the CPWA Code) all stores/materials so supplied to the contractor or procured with the assistance of the Government/ HITES shall remain the absolute property of Government/ HITES and the contractor shall be the trustee of the stores/materials, and the said stores/materials shall not be removed/disposed off from the site of the work on any account and shall be at all times open to inspection by the Engineer-in-Charge or his authorized agent. Any such stores/materials remaining unused shall be returned to the Engineer-in-Charge in as good a condition in which they were originally supplied at a place directed by him, at a place of issue or any other place specified by him as he shall require, but in case it is decided not to take back the stores/materials the contractor shall have no claim for compensation on any account of such stores/materials so supplied to him as aforesaid and not used by him or for any wastage in or damage to in such stores/materials.

On being required to return the stores/materials, the contractor shall hand over the stores/ materials on being paid or credited such price as the Engineer-in-Charge shall determine, having due regard to the condition of the stores/materials. The price allowed for credit to the contractor, however, shall be at

the prevailing market rate not exceeding the amount charged to him, excluding the storage charge, if any. The decision of the Engineer-in-Charge shall be final and conclusive. In the event of breach of the aforesaid condition, the contractor shall in addition to throwing himself open to account for contravention of the terms of the licenses or permit and/or for criminal breach of trust, be liable to Government/ HITES for all advantages or profits resulting or which in the usual course would have resulted to him by reason of such breach. Provided that the contractor shall in no case be entitled to any compensation or damages on account of any delay in supply or non-supply thereof all or any such materials and stores provided further that the contractor shall be bound to execute the entire work if the materials are supplied by the Government/ HITES within the original scheduled time for completion of the work plus 50% thereof or schedule time plus 6 months whichever is more if the time of completion of work exceeds 12 months, but if a part of the materials only has been supplied within the aforesaid period, then the contractor shall be bound to do so much of the work as may be possible with the materials and stores supplied in the aforesaid period. For the completion of the rest of the work, the contractor shall be entitled to such extension of time as may be determined by the Engineer-in-Charge whose decision in this regard shall be final and binding on the contractor.

The contractor shall see that only the required quantities of materials are not issued. Any such material remaining unused and in perfectly good/original condition at the time of completion or determination of the contract shall be returned to the Engineer-in-Charge at the stores from which it was issued or at a place directed by him by a notice in writing. The contractor shall not be entitled for loading, transporting, unloading and stacking of such unused material except for the extra lead, if any involved, beyond the original place of issue.

## **CLAUSE 10A MATERIALS TO BE PROVIDED BY THE CONTRACTOR**

The contractor shall, at his own expense, provide all materials, required for the works other than those which are stipulated to be supplied by the Government/ HITES.

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 these approved in advance. All such materials to be provided by the Contractor shall be in conformity with the 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 thirty 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 are 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 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 samples of materials to be tested or analyzed and shall not make use of or incorporate in the work any materials represented by the samples until the required tests or 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 require for collecting, and preparing the required number of samples for such 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 representative shall at all times have access to

the works and to all workshops and places where work is being prepared or from where materials manufactured articles or machinery are being obtained for the works and the contractor shall afford every facility and every assistance in obtaining the right to such access.

The Engineer-in-Charge shall have full powers to require the removal from the premises of all materials which in his opinion are 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 any loss or damage that may happen or arise to such materials. The Engineer-in-Charge shall also have full powers to 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 costs which may attend such removal and substitution shall be borne by the Contractor.

The contractor shall, at his own expense, provide a material testing lab at the site for conducting routine field tests. The lab shall be equipped at least with the testing equipment as specified in schedule F.

#### **CLAUSE 10B**

**(i) SECURED ADVANCE ON NON-PERISHABLE MATERIAL**

Not Applicable

**(ii) MOBILISATION ADVANCE**

Not Applicable

**(iii) PLANT MACHINERY & SHUTTERING MATERIAL ADVANCE**

Not Applicable

#### **CLAUSE 10C PAYMENT ON ACCOUNT OF INCREASE IN PRICES/WAGES DUE TO STATUTORY ORDER(S)**

Not Applicable

#### **CLAUSE 10 CA PAYMENT DUE TO VARIATION IN PRICES OF MATERIALS AFTER RECEIPT OF TENDER**

Not Applicable

#### **CLAUSE 10 CC PAYMENT DUE TO INCREASE/DECREASE IN PRICES/ WAGES (EXCLUDING MATERIALS COVERED UNDER CLAUSE 10 (CA) AFTER RECEIPT OF TENDER FOR WORKS)**

Not applicable

#### **CLAUSE 10 D DISMANTLED MATERIAL GOVT. PROPERTY**

The contractor shall treat all materials obtained during dismantling of a structure, excavation of the site for a work, etc. as Government/ HITES's property and such materials shall be disposed off to the best

advantage of Government/ HITES according to the instructions in writing issued by the Engineer-in-Charge.

## **CLAUSE 11 WORKS TO BE EXECUTED IN ACCORDANCE WITH SPECIFICATIONS, DRAWINGS and ORDERS ETC.**

The contractor shall execute the whole and every part of the work in the most substantial and workmanlike manner both as regards materials and otherwise in every respect in strict accordance with the specifications. The contractor shall also conform 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 specifications 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 supervision 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 DEVIATIONS/ VARIATIONS EXTENT AND PRICING**

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 and 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.

### **Deviation, Extra Items and Pricing**

12.2 In the case of extra item(s) (items that are completely new, and are in addition to the items contained in the contract), 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 prescribed time limit 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.

### **Deviation, Substituted Items& Pricing**

In the case of substituted items (items that are taken up with partial substitution or in lieu of items of work in the contract), the rate for the agreement item (to be substituted) and substituted item shall also be determined in the manner as mentioned in the following 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).

### **Deviation, Deviated Quantities& Pricing**

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 prescribed time limit of 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.

The prescribed time limits are:

- (i) If the Tendered value of work is up to Rs. 45 lakhs: 30 Days
- (ii) If the Tendered value of work is more than Rs. 45 lakhs and up to Rs. 2.5 Crores: 45 Days
- (iii) If the Tendered value of work exceeds Rs. 2.5 Crores: 60 Days

- 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 up to 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 Engineer- in- charge 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 unless & otherwise defined in the contract:

- (i) For Buildings : All works up to 1.2 metres above ground level or up to floor 1 level whichever is lower.
  - (ii) For abutments, piers and well staining: All works up to 1.2 m above the bed level.
  - (iii) For retaining walls, wing walls, compound walls, chimneys, overhead reservoirs/tanks and other elevated structures: All works up to 1.2 metres above the ground level.
  - (iv) For reservoirs/tanks (other than overhead reservoirs/tanks): All works up to 1.2 metres above the ground level.
  - (v) For basement: All works up to 1.2 m above ground level or up to floor 1 level whichever is lower.
  - (vi) 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 FORECLOSURE OF CONTRACT DUE TO ABANDONMENT OR REDUCTION IN SCOPE OF WORK**

If at any time after acceptance of the tender, Government/ HITES 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) Government /HITES 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 Government/ HITES 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 Government/ HITES, 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 Government/ HITES are rendered surplus, the same except normal wastage shall be returned by the contractor to Government/ HITES 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 Government/ HITES stores, if so required by Government/ HITES, 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 Government/ HITES as per item (ii) above. Provided always that against any payments due to the contractor on 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 Government /HITES from the contractor under the terms of the contract.

A compensation for such eventuality, on account of damages etc. shall be payable @ 0.5% of cost of work remaining incomplete on date of closure i.e. total stipulated cost of the work less the cost of work actually executed under the contract shall be payable.

## **CLAUSE 14 CARRYING OUT PART WORK AT RISK & COST OF CONTRACTOR**

If contractor:

- (i) At any time makes default during currency of work or does not execute any part of the work with due diligence and continues to do so even after a notice in writing of 7 days in this respect from the Engineer-in-Charge; or
- (ii) Commits default in 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 even after a notice in writing is given in that behalf by the Engineer-in-Charge; or
- (iii) Fails to complete the work(s) or items of work with individual dates of completion, on or before the date(s) so determined, and does not complete them within the period specified in the notice given in writing in that behalf by the Engineer-in-Charge.

The Engineer-in-Charge without invoking action under clause 3 may, without prejudice to any other right or remedy against the contractor which have either accrued or accrue thereafter to Government/ HITES, by a notice in writing to take the part work/ part incomplete work of any item(s) out of his hands and shall have powers to:

- (a) Take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/or
- (b) Carry out the part work / part incomplete work of any item(s) by any means at the risk and cost of the contractor.

The Engineer-in-Charge shall determine the amount, if any, is recoverable from the contractor for completion of the part work/ part incomplete work of any item(s) taken out of his hands and execute at the risk and cost of the contractor, the liability of contractor on account of loss or damage suffered by

Government/HITES because of action under this clause shall not exceed 10% of the tendered value of the work.

In determining the amount, credit shall be given to the contractor with the value of work done in all respect in the same manner and at the same rate as if it had been carried out by the original contractor under the terms of his contract, the value of contractor's materials taken over and incorporated in the work and use of plant and machinery belonging to the contractor. The certificate of the Engineer-in-Charge as to the value of work done shall be final and conclusive against the contractor provided always that action under this clause shall only be taken after giving notice in writing to the contractor. Provided also that if the expenses incurred by the department are less than the amount payable to the contractor at his agreement rates, the difference shall not be payable to the contractor.

Any excess expenditure incurred or to be incurred by Government/ HITES in completing the part work/ part incomplete work of any item(s) or the excess loss of damages suffered or may be suffered by Government /HITES as aforesaid after allowing such credit shall without prejudice to any other right or remedy available to Government/ HITES in law or per as agreement be recovered from any money due to the contractor on any account, and if such money is insufficient, the contractor shall be called upon in writing and shall be liable to pay the same within 30 days.

If the contractor fails to pay the required sum within the aforesaid period of 30 days, the Engineer-in-Charge shall have the right to sell any or all of the contractors' unused materials, constructional plant, implements, temporary building at site etc. and adjust the proceeds of sale thereof towards the dues recoverable from the contractor under the contract and if thereafter there remains any balance outstanding, it shall be recovered in accordance with the provisions of the contract.

In the event of above course 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 materials or entered into any engagements or made any advance on any account or with a view to the execution of the work or the performance of the contract.

## **CLAUSE 15 SUSPENSION OF WORK**

(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 Government/ HITES or where it affects whole of the works, as an abandonment of the works by Government/ HITES, shall within ten 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 Government/ HITES, 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.

## **CLAUSE 15A**

The Contractor shall not be entitled to claim any compensation from HITES/Government for the loss suffered by him on account of delay by HITES/ Government in the supply of materials in schedule 'B' where such delay is covered by difficulties relating to the supply of wagons, force majeure or any reasonable cause beyond the control of the HITES/ Government.

This Clause 15A will not be applicable for works where no material is stipulated.

## **CLAUSE 16 ACTION IN CASE WORK NOT DONE AS PER SPECIFICATIONS**

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 Department or any organization engaged by the Department for Quality Assurance and of the Chief Technical Examiner's Office, and the contractor shall, at all times, during the usual working hours and at all other times at which reasonable notice of the visit of during the usual working hours and at all other times 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 the officers of the organization engaged by the Department for Quality Assurance or 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 the 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 authority specified in schedule 'F' 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 CONTRACTORS LIABLE FOR DAMAGES, DEFECTS DURING MAINTENANCE PERIOD**

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 grassland, 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 Rs. 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 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 Rs. Ten lacs 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 the case of road work, if 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 deposit 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 completion of the maintenance contract whichever is earlier.

## **CLAUSE 18 CONTRACTORS TO SUPPLY TOOLS & PLANTS ETC.**

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's stores), machinery, tools & plants as specified in schedule F. In addition to this, appliances, implements, other plants, 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 18A RECOVERY OF COMPENSATION PAID TO WORKMEN**

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

## **CLAUSE 18B ENSURING PAYMENT AND AMENITIES TO WORKERS IF CONTRACTOR FAILS**

In every case in which by virtue of the provisions of the Contract Labour (Regulation and Abolition) Act, 1970, and of the Contract Labour (Regulation and Abolition) Central Rules, 1971, Government / HITES is obliged to pay any amounts 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 Contractor's Labour Regulations, or under the Rules framed by Government / HITES from time to time for the protection of health and sanitary arrangements for workers employed by Contractors, Government/ HITES will recover from the contractor, the amount of wages so paid or the amount of expenditure so incurred; and without prejudice to the rights of the Government / HITES under sub-section(2) of Section 20, and sub-section (4) of Section 21, of the Contract Labour (Regulation and Abolition) Act, 1970, Government / HITES 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 Government / HITES to the contractor whether under this contract or otherwise Government / HITES 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 Government full security for all costs for which Government might become liable in contesting such claim.

## **CLAUSE 19                      LABOUR LAWS TO BE COMPLIED BY THE CONTRACTOR**

The contractor shall obtain a valid license 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 provisions 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.

The contractor shall also comply with provisions of the Inter-State migrant Workmen (Regulation of Employment and Conditions of Service) Act, 1979.

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 19 B                      PAYMENTS OF WAGES**

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 CPWD 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 from time to time in regard to payment of wages, wage period, deductions from wages recovery of wages not paid and deductions made unauthorized, 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.

- (b) 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 labours and pay the same to the persons entitled thereto from any money due to the contractor by the Engineer-in-Charge concerned.

In the case of Union Territory of Delhi, however, as the all-inclusive minimum daily wages fixed under Notification of the Delhi Administration No.F.12 (162)MWO/ DAB/43884-91, dated 31-12-1979 as amended from time to time are inclusive of wages for the weekly day of rest, the question of extra payment for weekly holiday would not arise.

- (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 Government / HITES against payments to be made under and for the observance of the laws aforesaid and the CPWD Contractor's Labour Regulations without prejudice to his 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 if the wage payable is higher than such wage, such wage shall be paid by the contractor to the workmen 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 19C**

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 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 laborers 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 Government / HITES, 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 19E**

In respect of all labour directly or indirectly employed in the works 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 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 up to 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 appendix -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 CPWD 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 Government / HITES 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 contractor(s) 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 CPWD 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 hereinbefore 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 reconstructed 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 19H

The contractor(s) shall at his/their own cost provide his/their labour with a sufficient number of huts (hereinafter referred to as the camp) of the following specifications on a suitable plot of land to be approved by the Engineer-in-Charge.

- (i) (a) The minimum height of each hut at the eaves level shall be 2.10m (7 ft.) and the floor area to be provided will be at the rate of 2.7 sq.m. (30 sq.ft.) for each member of the worker's family staying with the labourer.
- (b) The contractor(s) shall in addition construct suitable cooking places having a minimum area of 1.80m x 1.50m (6'x5') adjacent to the hut for each family.
- (c) The contractor(s) shall also construct temporary latrines and urinals for the use of the labourers each on the scale of not less than four per each one hundred of the total strength, separate latrines and urinals being provided for women.
- (d) The contractor(s) shall construct sufficient number of bathing and washing places, one unit for every 25 persons residing in the camp. These bathing and washing places shall be suitably screened.
- (ii) (a) All the huts shall have walls of sun-dried or burnt-bricks laid in mud mortar or other suitable local materials as may be approved by the Engineer-in-Charge. In case of sun-

dried bricks, the walls should be plastered with mud gobi on both sides. The floor may be kutcha but plastered with mud gobi and shall be at least 15 cm (6") above the surrounding ground. The roofs shall be laid with thatch or any other materials as may be approved by the Engineer-in-Charge and the contractor shall ensure that throughout the period of their occupation, the roofs remain water-tight.

- (b) The contractor(s) shall provide each hut with proper ventilation.
  - (c) All doors, windows, and ventilators shall be provided with suitable leaves for security purposes.
  - (d) There shall be kept an open space of at least 7.2m (8 yards) between the rows of huts which may be reduced to 6m (20 ft.) according to the availability of site with the approval of the Engineer-in-Charge. Back to back construction will be allowed.
- (iii) Water Supply - The contractor(s) shall provide adequate supply of water for the use of labourers. The provisions shall not be less than two gallons of pure and wholesome water per head per day for drinking purposes and three gallons of clean water per head per day for bathing and washing purposes. Where piped water supply is available, supply shall be at stand posts and where the supply is from wells or river, tanks which may be of metal or masonry, shall be provided. The contractor(s) shall also at his/ their own cost make arrangements for laying pipe lines for water supply to his/ their labour camp from the existing mains wherever available, and shall pay all fees and charges therefore.
- (iv) The site selected for the camp shall be high ground, removed from jungle.
- (v) Disposal of Excreta - The contractor(s) shall make necessary arrangements for the disposal of excreta from the latrines by trenching or incineration which shall be according to the requirements laid down by the Local Health Authorities. If trenching or incineration is not allowed, the contractor(s) shall make arrangements for the removal of the excreta through the Municipal Committee/authority and inform it about the number of labourers employed so that arrangements may be made by such Committee/authority for the removal of the excreta. All charges on this account shall be borne by the contractor and paid direct by him to the Municipality/authority. The contractor's hall provides one sweeper or every eight seats in case of dry system.
- (vi) Drainage - The contractor(s) shall provide efficient arrangements for draining away sullage water so as to keep the camp neat and tidy.
- (vii) The contractor(s) shall make necessary arrangements for keeping the camp area sufficiently lighted to avoid accidents to the workers.
- (viii) Sanitation - The contractor(s) shall make arrangements for conservancy and sanitation in the labour camps according to the rules of the Local Public Health and Medical Authorities.

## **CLAUSE 19I**

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. In respect of maintenance/repair or renovation works etc. where the labour have an easy access to the individual houses, the contractor shall issue identity cards to the labourers, whether temporary or permanent and he shall be responsible for any untoward action on the part of such labour. The Engineer-in-Charge will display a list of contractors working in the colony/Blocks on the notice board in the colony and also at the service centre, to apprise the residents about the same.

## **CLAUSE 19J**

It shall be the responsibility of the contractor to see that the building under construction is not occupied by anybody unauthorized during construction, and is handed over to the Engineer-in-Charge with vacant possession of complete building. If such building though 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 Engineer-in-Charge whose decision shall be final both with regard to the justification and quantum and be binding on the contractor.

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

## **CLAUSE 19K            EMPLOYMENT OF SKILLED/SEMI SKILLED WORKERS**

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, National Skill Development Corporation certified training institute 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 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 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, that the provisions of this clause shall not be applicable for works with estimated cost put to tender being less than Rs. 5 Crores.

## **CLAUSE 19L**

The ESI and EPF contributions on the part of the HITES in respect of this Contract shall be paid by the Contractor. These contributions on the part of the HITES paid by the contractor shall be reimbursed by the Engineer-in-charge to the Contractor on actual basis.

## **CLAUSE 20            MINIMUM WAGES ACT TO BE COMPLIED WITH**

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                      WORK NOT TO BE SUBLET. ACTION IN CASE OF INSOLVENCY**

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 / HITES 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 Client shall have power to adopt the course specified in Clause 3 hereof in the interest of Government / HITES 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 Government / HITES without reference to the actual loss or damage sustained and whether or not any damage shall have been sustained.

## **CLAUSE 23                      CHANGES IN FIRM'S CONSTITUTION TO BE INTIMATED**

Where the contractor is a partnership firm, the previous approval in writing of the Engineer- in-Charge shall be obtained before 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                      SETTLEMENTS OF DISPUTES & ARBITRATION**

Except where otherwise provided in the contract, all questions and disputes relating to the meaning of the specifications, design, drawings and instructions here-in before mentioned and as to the quality of workmanship or materials used on the work 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 or these conditions or otherwise concerning the works or the execution or failure to execute the same whether arising during the progress of the work or after the cancellation, termination, completion or abandonment thereof shall be dealt with as mentioned hereinafter:

- (i) If the contractor considers any work demanded of him to be outside the requirements of the contract, or disputes any drawings, record or decision given in writing by the Engineer-in-Charge on 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 authority indicating in schedule 'F' (Reviewing Authority) in writing for written instruction or decision. Thereupon, the Reviewing

Authority shall give his written instructions or decision within a period of one month from the receipt of the contractor's letter.

If the Reviewing Authority fails to give his instructions or decision in writing within the aforesaid period or if the contractor is dissatisfied with the instructions or decision of the Reviewing Authority, the contractor may, within 15 days of the receipt of the Reviewing Authority's decision, appeal to the authority as indicated in schedule 'F' (Appealing Authority) who shall afford an opportunity to the contractor to be heard, if the latter so desires, and to offer evidence in support of his appeal. The Appealing Authority shall give his decision within 30 days of receipt of contractor's appeal.

If the contractor is dissatisfied with the decision of the Appealing Authority, the contractor may within 30 days from the receipt of the Appealing Authority's decision, appeal before the Dispute Redressal Committee (DRC) along with a list of disputes with amounts claimed in respect of each such dispute and giving reference to the rejection of his disputes by the Appealing Authority. The Dispute Redressal Committee (DRC) shall give his decision within a period of 90 days from the receipt of Contractor's appeal. The constitution of Dispute Redressal Committee (DRC) shall be as indicated in Schedule 'F'.

If the Dispute Redressal Committee (DRC) fails to give his decision within the aforesaid period or any party is dissatisfied with the decision of Dispute Redressal Committee (DRC), then either party may within a period of 30 days from the receipt of the decision of Dispute Redressal Committee (DRC), give notice to the Client for appointment of arbitrator on prescribed proforma as per Appendix XV, failing which, the said decision shall be final binding and conclusive and not referable to adjudication by the arbitrator.

- (ii) Except where the decision has become final, binding and conclusive in terms of Sub Para (i) above, disputes or difference shall be referred for adjudication through arbitration by a sole arbitrator appointed by the Chairman and Managing Director, HLL Lifecare Limited. 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 be entitled to 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 a 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 Appealing Authority of the appeal.

It is also a term of this contract that no person, other than a person appointed by the Chairman and Managing Director, HLL Lifecare Limited., as aforesaid, should act as arbitrator and if for any reason that is not possible, the matter shall not be referred to arbitration at all.

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 the HITES 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) / The Jammu and Kashmir Arbitration and Conciliation Act, 1997 (35 of 1997) (as the case may be) 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 a term of this contract that the arbitrator shall adjudicate on only such disputes as are referred to him by the appointing authority 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 he 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 CONTRACTORS TO INDEMNIFY GOVT.AGAINST PATENT RIGHTS**

The contractor shall fully indemnify and keep indemnified the HITES 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 HITES 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 HITES 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 in this behalf.

## **CLAUSE 27 LUMPSUM PROVISIONS IN TENDER**

When the estimate on which a tender is made includes lump sum in respect of parts of the work, the contractor shall be entitled to payment in respect of the items of work involved or the part of the work in question at the same rates as are payable under this contract for such items, or if the part of the work in question is not, in the opinion of the Engineer-in-Charge payable of measurement, the Engineer-in-Charge may at his discretion pay the lump-sum amount entered in the estimate, and the certificate in writing of the Engineer-in-Charge shall be final and conclusive against the contractor with regard to any sum or sums payable to him under the provisions of the clause.

## **CLAUSE 28 ACTIONS WHERE NO SPECIFICATIONS ARE SPECIFIED**

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 manufacturers' 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 WITHHOLDING AND LIEN IN RESPECT OF SUM DUE FROM CONTRACTOR**

- (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 Government/ HITES 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 Government/ HITES 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 Government / HITES 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 HITES 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 HITES will be kept withheld or retained as such by the Engineer-in-Charge or HITES till the claim arising out of or under the contract is determined by the arbitrator(if the contract is governed 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 HITES 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) Government/ HITES 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 Government / HITES 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 Government / HITES to the contractor, without any interest thereon whatsoever.

Provided that the Government/ HITES 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 Engineer-in-charge on the one hand and the contractor on the other under any term of the contract permitting payment for work after assessment by the Engineer-in-charge.

## **CLAUSE 29A LIEN IN RESPECT OF CLAIMS IN OTHER CONTRACTS**

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 HITES or any other contracting person or persons through Engineer-in-Charge against any claim of the Engineer-in-Charge or HITES 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 HITES 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 HITES will be kept withheld or retained as such by the Engineer-in-Charge or the Government 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      EMPLOYMENT OF COAL MINING OR CONTROLLED AREA LABOUR NOT PERMISSIBLE**

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 maybe 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 Government/ HITES a sum calculated at the rate of Rs.10/- 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 Commissionery, Districts of Bankura, 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      UNFILTERED WATER SUPPLY**

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.

### **CLAUSE 31 A      DEPARTMENTAL WATER SUPPLIES, IF AVAILABLE**

Water if available may be supplied to the contractor by the department subject to the following conditions:-

- (i) The water charges @ 1 % shall be recovered on gross amount of the work done.

- (ii) The contractor(s) shall make his/their own arrangement of water connection and laying of pipelines from existing main of source of supply.
- (iii) The Department do not guarantee to maintain uninterrupted supply of water and it will be incumbent on the contractor(s) to make alternative arrangements for water at his/ their own cost in the event of any temporary break down in the Government water main so that the progress of his/their work is not held up for want of water. No claim of damage or refund of water charges will be entertained on account of such break down.

## **CLAUSE 32                    ALTERNATE WATER ARRANGEMENTS**

- (i) Where there is no piped water supply arrangement and the water is taken by the contractor from the wells or hand pump constructed by the Government / HITES , no charge shall be recovered from the contractor on that account. The contractor shall, however, draw water at such hours of the day that it does not interfere with the normal use for which the hand pumps and wells are intended. He will also be responsible for all damage and abnormal repairs arising out of his use, the cost of which shall be recoverable from him. The Engineer-in-Charge shall be the final authority to determine the cost recoverable from the contractor on this account and his decision shall be binding on the contractor.
- (ii) The contractor shall be allowed to construct temporary wells in Government / HITES land for taking water for construction purposes only after he has got permission of the Engineer- in-Charge in writing. No charges shall be recovered from the contractor on this account, but the contractor shall be required to provide necessary safety arrangements to avoid any accidents or damage to adjacent buildings, roads and service lines. He shall be responsible for any accidents or damage caused due to construction and subsequent maintenance of the wells and shall restore the ground to its original condition after the wells are dismantled on completion of the work.

## **CLAUSE 33                    RETURNS OF SURPLUS MATERIALS**

Notwithstanding anything contained to the contrary in this contract, where any materials for the execution of the contract are procured with the assistance of HITES either by issue from HITESs stocks or purchase made under orders or permits or licenses issued by Government / HITES , the contractor shall hold the said materials economically and solely for the purpose of the contract and not dispose of them without the written permission of the Government / HITES and return, if required by the Engineer-in-Charge, all surplus or unserviceable materials that may be left with him after the completion of the contract or at its termination for any reason whatsoever on being paid or credited such price as the Engineer-in-Charge shall determine having due regard to the condition of the materials. The price allowed to the contractor however shall not exceed the amount charged to him excluding the element of storage charges. The decision of the Engineer-in-Charge shall be final and conclusive. In the event of breach of the aforesaid condition, the contractor shall in addition to throwing himself open to action for contravention of the terms of the license or permit and/or for criminal breach of trust, be liable to Government / HITES for all moneys, advantages or profits resulting or which in the usual course would have resulted to him by reason of such breach.

## **CLAUSE 34                    HIRE OF PLANT & MACHINERY**

- (i) The contractor shall arrange at his own expense all tools, plant, machinery and equipment (hereinafter referred to as T&P) required for execution of the work except for the Plant & Machinery listed in Schedule 'C' and stipulated for issue to the contractor. If the contractor

requires any item of T&P on hire from the T&P available with the Government / HITES over and above the T&P stipulated for issue, the HITES will, if such item is available, hire it to the contractor at rates to be agreed upon between him and the Engineer-in-Charge. In such a case, all the conditions hereunder for issue of T&P shall also be applicable to such T&P as is agreed to be issued.

- (ii) Plant and Machinery when supplied on hire charges shown in Schedule 'C' shall be made over and taken back at the departmental equipment yard/shed shown in Schedule 'C' and the contractor shall bear the cost of carriage from the place of issue to the site of work and back. The contractor shall be responsible to return the plant and machinery with condition in which it was handed over to him, and he shall be responsible for all damage caused to the said plant and machinery at the site of work or elsewhere in operation and otherwise during transit including damage to or loss of plant and for all losses due to his failure to return the same soon after the completion of the work for which it was issued. The Engineer-in-Charge shall be the sole judge to determine the liability of the contractor and its extent in this regard and his decision shall be final and binding on the contractor.
- (iii) The plant and machinery as stipulated above will be issued as and when available and if required by the contractor. The contractor shall arrange his programme of work according to the availability of the plant and machinery and no claim, whatsoever, will be entertained from him for any delay in supply by the Department.
- (iv) The hire charges shall be recovered at the prescribed rates from and inclusive of the date the plant and machinery made over upto and inclusive of the date of the return in good order even though the same may not have been working for any cause except major breakdown due to no fault of the contractor or faulty use requiring more than three working days continuously (excluding intervening holidays and Sundays) for bringing the plant in order. The contractor shall immediately intimate in writing to the Engineer-in-Charge when any plant or machinery gets out of order requiring major repairs as aforesaid. The Engineer-in-Charge shall record the date and time of receipt of such intimation in the log sheet of the plant or machinery. Based on this if the breakdown before lunch period or major breakdown will be computed considering half a day's breakdown on the day of complaint. If the breakdown occurs in the post lunch period of major breakdown will be computed starting from the next working day. In case of any dispute under this clause, the decision of the Engineer-in-Charge shall be final and binding on the contractor.
- (v) The hire charges shown above are for each day of 8 hours (inclusive of the one hour lunch break) or part thereof.
- (vi) Hire charges will include service of operating staff as required and also supply of lubricating oil and stores for cleaning purposes. Power fuel of approved type, firewood, kerosene oil etc. for running the plant and machinery and also the full time chowkidar for guarding the plant and machinery against any loss or damage shall be arranged by the contractor who shall be fully responsible for the safeguard and security of plant and machinery. The contractor shall on or before the supply of plant and machinery sign an agreement indemnifying the Department against any loss or damage caused to the plant and machinery either during transit or at site of work.
- (vii) Ordinarily, no plant and machinery shall work for more than 8 hours a day inclusive of one hour lunch break. In case of an urgent work however, the Engineer-in-Charge may, at his discretion, allow the plant and machinery to be worked for more than normal period of 8 hours a day. In that case, the hourly hire charges for overtime to be borne by the contractor shall be 50% more than the normal proportionate hourly charges (1/8th of the daily charges) subject to a minimum of half day's normal charges on any particular day. For working out hire charges for

over time, a period of half an hour and above will be charged as one hour and a period of less than half an hour will be ignored.

- (viii) The contractor shall release the plant and machinery every seventh day for periodical servicing and/or wash out which may take about three to four hours or more. Hire charges for full day shall be recovered from the contractor for the day of servicing/ wash out irrespective of the period employed in servicing.
- (ix) The plant and machinery once issued to the contractor shall not be returned by him on account of lack of arrangements of labour and materials, etc. on his part, the same will be returned only when they are required for major repairs or when in the opinion of the Engineer-in-Charge, the work or a portion of work for which the same was issued is completed.
- (x) Log Book for recording the hours of daily work for each of the plant and machinery supplied to the contractor will be maintained by the Department and will be countersigned by the contractor or his authorized agent daily. In case the contractor contests the correctness of the entries and/or fails to sign the Log Book, the decision of the Engineer-in-Charge shall be final and binding on him. Hire charges will be calculated according to the entries in the Log Book and will be binding on the contractor. Recovery on account of hire charges for road rollers shall be made for the minimum number of days worked out on the assumption that a roller can consolidate per day and maximum quantity of materials or area surfacing as noted against each in the annexed statement (see attached annexure).
- (xi) In the case of concrete mixers, the contractors shall arrange to get the hopper cleaned and the drum washed at the close of the work each day or each occasion.
  - (a) In case rollers for consolidation are employed by the contractor himself, log book for such rollers shall be maintained in the same manner as is done in case of departmental rollers, maximum quantity of any items to be consolidated for each roller-day shall also be same as in Annexure to Clause 34(x). For less use of rollers, recovery for the less roller days shall be made at the stipulated issue rate.
- (xii) The contractor shall be responsible to return the plant and machinery in the condition in which it was handed over to him and he shall be responsible for all damage caused to the said plant and machinery at the site of work or elsewhere in operation or otherwise or during transit including damage to or loss of parts, and for all losses due to his failure to return the same soon after the completion of the work for which it was issued. The Engineer-in-Charge shall be the sole judge to determine the liability of the contractor and its extent in this regard and his decision shall be final and binding on the contractor.
- (xiii) In the event of the contractor not requiring any item of plant and machinery issued by Government / HITES though not stipulated for issue in Schedule 'C' any time after taking delivery at the place of issue, he may return it after two days written notice or at any time without notice if he agrees to pay hire charges for two additional days without, in any way, affecting the right of the Engineer-in-Charge to use the said plant and machinery during the said period of two days as he likes including hiring out to a third party.

## **CLAUSE 35 CONDITIONS RELATING TO USE OF ASPHALTIC MATERIALS**

- (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 return to the contractors. Although the materials are hypothecated to Government / HITES, 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      EMPLOYMENTS OF TECHNICAL STAFF AND EMPLOYEES**

### **Contractors Superintendence, Supervision, Technical Staff & Employees**

- (i) The contractor shall provide all necessary superintendence during execution of the work and all 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 below 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 and other technical representative(s) 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.

All the provisions applicable to the principal technical representative under the Clause will also be applicable to other technical representative(s) The principal technical representative and other technical representative(s) shall be present at the site of work for supervision at all times when any construction activity is in progress and also present himself/themselves, as required, to the Engineer-in-Charge and/or his designated representative to take instructions. Instructions given to the principal technical representative or other technical representative(s) shall be deemed to have the same force as if these have been given to the contractor. The principal technical representative and other technical representative(s) shall be actually available at site fully during all stages of execution of work, during recording/checking/test checking of measurements of works and whenever so required by the Engineer-in-Charge and shall also note down instructions conveyed by the Engineer-in- Charge or his designated representative(s) in the site order book and shall affix his/their signature in token of noting down the instructions and in token of acceptance of measurements/ checked measurements/test checked measurements. The representative(s) shall not look after any other work. Substitutes, duly approved by Engineer-in-Charge of the work in similar manner as aforesaid shall be provided in event of absence of any of the representative(s) by more than two days.

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 (non-refundable) 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 suitable Principal technical representative and/or other technical representative(s) and if such appointed persons are not effectively present or 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) alongwith every one account bill/final bill and shall produce evidence if at any time so required by the Engineer-in-Charge. The contractor shall submit a certificate of employment of the technical representative(s) (in the form of copy of Form-16 or CPF deduction issued to the Engineers employed by him) along with every one 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                      LEVY/TAXES PAYABLE BY CONTRACTOR**

- (i) GST, Building and other Construction Workers Welfare Cess or any other tax, levy or Cess in respect of input for or output by this contract shall be payable by the contractor and Government / HITES shall not entertain any claim whatsoever in this respect except as provided under clause 38.
- (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 Government of India 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 Government of India 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                      CONDITIONS FOR REIMBURSEMENT OF LEVY/TAXES IF LEVIED AFTER RECEIPT OF TENDERS**

- (i) All tendered rates shall be inclusive of any tax, levy or cess applicable on last date of receipt of tender including extension if any. No adjustment ie., increase or decrease shall be made for any variation in the rate of GST, Building and other Construction Workers Welfare Cess or any other

tax, levy or Cess applicable on inputs. However effect of variation in rates of GST or Building and other Construction Workers Welfare Cess or imposition or repeal of any other tax, levy or cess applicable on output of the works contract shall be adjusted on either sides, increase or decrease. Provided for Building and other Construction Workers Welfare Cess or any tax (other than GST), levy or cess varied or imposed after the last date of receipt of tender including extension if any, any increase shall be reimbursed to the contractor only if the contractor necessarily and properly pays such increased amount of taxes/ levies/ cess. Provided further that such adjustment including GST shall not be made in the extended period of contract for which the contractor alone is responsible for delay as determined by authority for extension of time under clause 5 in Schedule F.

- (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 authorized representative of the Government / HITES and/or the Engineer-in-Charge and shall also 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 or cess, 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      TERMINATION OF CONTRACT ON DEATH OF CONTRACTOR**

Without prejudice to any of the rights or remedies under this contract, if the contractor dies, the authority indicated in schedule “F” on behalf of the HITES shall have the option of terminating the contract without compensation to the contractor.

#### **CLAUSE 40      IF RELATIVE WORKING IN OFFICE OF CLIENT/DEPARTMENT THEN THE CONTRACTOR NOT ALLOWED TO TENDER**

The contractor shall not be permitted to tender for works in the MoHFW/ HITES in which his near relative is posted as Divisional Accountant or equivalent or as an officer in any capacity between the grades of the General Manager/ Chief Engineer and Site 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 in the Ministry of Health & Family Welfare. Any breach of this condition by the contractor would render him liable to be removed from the approved list of contractors of this Department. If however the contractor is registered in any other department, he shall be debarred from tendering in the Department in future for any breach of this condition.

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

#### **CLAUSE 41      NO GAZETTED ENGINEER TO WORK AS CONTRACTOR WITHIN ONE YEAR OF RETIREMENT**

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      RETURNS OF MATERIAL & RECOVERY FOR EXCESS MATERIAL USED**

- (i) After completion of the work and also at any intermediate stage in the event of non-reconciliation of materials issued, consumed and in balance - (see Clause 10), theoretical quantity of materials issued by the MoHFW/HITES for use in the work shall be calculated on the basis and method given hereunder:-
  - (a) Quantity of cement & bitumen shall be calculated on the basis of quantity of cement & bitumen required for different items of work as shown in the Schedule of Rates mentioned in Schedule 'F'. In case any item is executed for which standard constants for the consumption of cement or bitumen are not available in the above mentioned schedule/statement or cannot be derived from the same shall be calculated on the basis of standard formula to be laid down by the Engineer-in-Charge.
  - (b) Theoretical quantity of steel reinforcement or structural steel sections shall be taken as the quantity required as per design or as authorized by Engineer-in-Charge, including authorized lap pages, chairs etc. plus 3% wastage due to cutting into pieces, such theoretical quantity being determined and compared with the actual issues each diameter wise, section wise and category wise separately.
  - (c) Theoretical quantity of G.I. & C.I. or other pipes, conduits, wires and cables, pig lead and G.I./M.S. sheets shall be taken as quantity actually required and measured plus 5% for wastage due to cutting into pieces (except in the case of G.I./M.S. sheets it shall be 10%), such determination & comparison being made diameter wise & category wise.
  - (d) For any other material as per actual requirements.
- (ii) Over the theoretical quantities of materials so computed a variation shall be allowed as specified in Schedule 'F'. The difference in the net quantities of material actually issued to the contractor and the theoretical quantities including such authorized variation, if not returned by the contractor or if not fully reconciled to the satisfaction of the Engineer-in-Charge within fifteen days of the issue of written notice by the Engineer-in-charge to this effect shall be recovered at the rates specified in Schedule 'F', without prejudice to the provision of the relevant conditions regarding return of materials governing the contract. Decision of Engineer-in-Charge in regard to theoretical quantities of materials, which should have been actually used as per the Annexure of the standard schedule of rates and recovery at rates specified in Schedule 'F', shall be final & binding on the contractor. For non-scheduled items, the decision of the Engineer-in-Charge regarding theoretical quantities of materials which should have been actually used, shall be final and binding on the contractor.
- (iii) The said action under this clause is without prejudice to the right of the MoHFW/HITES to take action against the contractor under any other conditions of contract for not doing the work according to the prescribed specifications.

## **CLAUSE 43      COMPENSATION DURING WARLIKE SITUATIONS**

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 Engineer-in-charge or his authorized representative. The contractor shall be paid for the damages/destruction suffered and for 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                      APPRENTICES ACT PROVISIONS TO BE COMPLIED WITH**

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 Client 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                      RELEASE OF SECURITY DEPOSIT AFTER LABOUR CLEARANCE**

Deposit of the work shall not be refunded till the contractor produces a clearance deposit after labour certificate from the Labour Officer. As soon as the work is virtually complete the contractor clearance shall apply for the clearance certificate to the Labour Officer under intimation to the Engineer-in-Charge. The Engineer-in-Charge, on receipt of the said communication, shall write to the Labour Officer to intimate if any complaint is pending against the contractor in respect of the work. If no complaint is pending, on record till after 3 months after completion of the work and/or no communication is received from the Labour Officer to this effect till six months after the date of completion, it will be deemed to have received the clearance certificate and the Security Deposit will be released if otherwise due.

Sd/

**Signature of Chief Engineer (FMD)  
For and on behalf of the HITES**

## **ADDITIONAL CONDITIONS AND SPECIFICATIONS**

### **1. GENERAL SPECIFICATIONS**

#### **1.1 SCOPE OF WORK**

The complete scope of work shall cover providing and fixing Air Conditioning System at JIPMER Puducherry which includes of split and VRF type air conditioner with Copper pipes routing, Laying drain pipe, providing Stabilizer, Indoor to outdoor cabling and civil works. The contractor shall submit the design & drawings for approval and obtain approval from Consultant/Client before commencement of works.

#### **1.2 Basis of Design**

The entire system has been designed based on climatological data available as given under the section basis of Design. The technical requirements given under here are only indicative and not descriptive and the contractor shall ensure that the whole system supplied is complete in all respects for the smooth operation of the plant and should be suitable for the rated performance.

#### **1.3 Terms and Definitions**

The following terms have been used in the tender specifications, drawings, etc.

- 1) BIS- Bureau of Indian Standards
- 2) ASHRAE- American society of Heating, Refrigeration and Air-conditioning Engineers, USA.
- 3) ASME - American Society of Mechanical Engineers.
- 4) ASA- American Standard Association.
- 5) B.S -British Standards
- 6) CMH -Cubic Meter per Hour
- 7) CFM- Cubic Feet per Minute
- 8) US GPM US Gallons per Minute
- 9) IGPM - Imperial Gallons per Minute.
- 10) RPM- Revolutions per Minute
- 11) BTU/Hr. British Thermal Unit per Hour
- 12) KCal/Hr. Kilo Calories per Hour
- 13) HZ Hertz
- 14) H.P. Horse Power
- 15) Kg/CM2 Kilo Gram per Square Centimeter
- 16) SG - Supply Air Grilles
- 17) SD- Supply Air Diffuser
- 18) SAF- Supply Air Filters
- 19) FD- Fire Damper
- 20) VCD - Volume Control Damper
- 21) RG - Return Air Grilles
- 22) RD - Return air diffuser
- 23) FAD - Fresh Air Damper
- 24) RH - Relative Humidity
- 25) DB - Dry Bulb Temperature
- 26) WB - Wet Bulb Temperature
- 27) MV - Mechanical Ventilation
- 28) DP - Drain Point.
- 29) RO - Rate Only

The design, manufacture, identification of material and testing of the equipment covered in this specification shall comply with the latest edition of the appropriate standard of the following:

- 1) Duct Work - IS:655 (latest edition)
- 2) Welding - IS:3589
- 3) Refrigeration and Air-conditioning - As per ASHRAE/ISI air-conditioning and refrigeration institute standards.
- 4) Sluice Valves for Water Lines - IS:778-1980
- 5) Copper alloy Gate/ Globe / Check Valve for water lines - IS:778
- 6) Colour code for the identification of pipe lines - IS:2379-1963
- 7) Specific requirements for the direct switching of the individual motors - IS:4064 (Part-II)-1978
- 8) PVC insulated (HD) Electric Cables for working voltage up including 1100 Volts - IS:1554 (Part I)
- 9) Starters - IS:8554 (Part-I) 1979
- 10) HRC Cartridge fuse links upto 650 Volts - IS:2208
- 11) Inspection and testing of installation IS:732 (Part-III) 1979
- 12) Galvanized steel wire for fencing - IS:277-1977
- 13) Three phase induction motors - IS:325
- 14) Horizontal centrifugal pumps - IS:1620
- 15) Wrought aluminum and aluminum alloy sheet and strip for general engineering purposes - IS:737
- 16) Bourdan tube pressure & vacuum gauges - IS:3624
- 17) Glossary of terms used in refrigeration and air-conditioning - IS:3615
- 18) Code for practice for standard for selection of standard worm and helical gears - IS:7403
- 19) PVC insulated (heavy duty) electric cables for working voltage upto and including 1100 watts: - IS:1554 (Part-I)
- 20) Expanded Polystyrene (EPS) : - IS 4671.
- 21) Resin bonded glass wool: - IS 8183.

#### **1.4 Safety Codes**

- 1) Safety code for mechanical refrigeration - IS:660
- 2) Safety code for air-conditioning - IS:659
- 3) Safety code for scaffolds & ladders -IS:3696
- 4) Code of practice for fire precautions in welding & cutting operations - IS:3016
- 5) Code for safety procedures and practices in electrical works - IS:5216
- 6) Code of practice for safety and health requirements in electrical & gas welding and cutting operations - IS:3696
- 7) Indian Electricity Act 1910
- 8) Electricity Supply Act and Indian Electricity Rules.

#### **1.5 MACHINERY**

##### **AIR COOLED PACKAGED/DUCTABLE AIR CONDITIONING UNIT**

##### **1) Cabinet**

The packaged split air conditioning units shall have metal cabinet of min 1.6mm thick (16 gauge) galvanized sheet steel. The body should be machine pressed and adequately stiffened. The body should be chemically treated for corrosion resistance and Polyester powder coated.

##### **2) Compressor**

All compressors shall be hermetically sealed scroll type of suitable capacities. Compressor shall be suitable for R410 refrigerant. The compressor shall be electrically interlocked with indoor and outdoor fan motors, HP/LP cutouts and thermostat in the evaporator. The compressor shall be housed inside the Condenser.

3) **Outdoor Unit**

The outdoor unit shall be factory assembled, weather proof casing (Material of construction of casing shall be OEM's standard design), constructed from heavy gauge GI sheets/rust proof mild steel in duly enamel/powder coated paint finished steel panels and coated with baked enamel finish. The outdoor unit shall be completely factory wired, tested with all necessary controls & filled with first charge of refrigerant before delivering at site. The inverter technology based/Digital Scroll VRV/VRF equipment should be capable so that refrigerant piping between indoor units and outdoor unit shall be Extendable upto 50m with maximum height difference between outdoor & indoor unit of 10m & level difference between two indoor units shall be maximum up to 5m.

4) **Evaporator coil**

The coils shall be made of copper hydraulically bonded with aluminium fins. The coils shall be hydrophilic in nature. The tubes shall have a minimum of 9.5 mm outer diameter, firmly bonded with aluminium fins spaced at 12-14 fins/inch. The air velocity across the face of the coil shall not exceed 170 m/min. The coils shall be designed for a maximum working pressure of 35 kg/sq.cm. The circuit should include a thermostatic expansion valve/capillary tube, distributor, liquid strainer, suction line shut off valve and liquid line shut off valve.

5) **Condenser motor**

The condenser motor shall be of IP-55 rating.

6) **Refrigeration piping and accessories**

All refrigerant piping for the air conditioning system shall be constructed from soft seamless copper pipe with copper fittings and silver-soldered joints. The refrigerant piping arrangements shall be in accordance with good practice and within the air conditioning industry, and are to include charging connections, suction line insulation and all other items normally forming part of proper refrigerant circuits. All joints in copper piping shall be sweat joints using low temperature brazing and or silver solder. Before joining any copper pipe or fittings, its interiors shall be thoroughly cleaned by passing a clean cloth via wire or cable through its entire length. The piping shall be continuously kept clean of dirt etc. while constructing the joints. Subsequently, it shall be thoroughly blown out using nitrogen. After the refrigerant piping installation has been completed, the refrigerant piping system shall be pressure tested using nitrogen at pressure of 5Kg per sq.cm for both high and low side. Pressure shall be maintained in the system for 24 hours. The system shall then be evacuated to minimum vacuum of 700mm hg and held for 24 hours. The air-conditioning system supplier shall design sizes and erect proper interconnections of the complete refrigerant circuit

7) **Drain Piping**

Drain pipe shall be of 32mm dia. PVC pipes. All Ductable Split units shall be provided with independent drain lines. And all the drain line above false ceiling shall be insulated. The drain shall be taken to the nearest exit points.

8) **Fan**

Fan section including wheel and housing shall be of heavy gauge steel/aluminum. Fans shall be centrifugal, forward curved multi-blade type. Fan housing shall have inlets and guide vanes for smooth air flow. Fans shall be complete with drive motor. The fans should be statically and

dynamically balanced. The fan motor should be resilient mounted. The fan should deliver a static pressure of 125 mm.

9) **Filters**

All evaporator units shall be provided with air filters capable for filtration unto 20 microns. The filters shall be of washable synthetic fiber type.

10) **Control Panel**

All units shall have independent electrical control panels housing contactors, overload relays, voltage cutouts, time delays, interlocks, strip connectors, indication lamps, and control fuse. All these have to be housed inside the Outdoor unit of each circuit.

11) **Thermostat**

The Thermostat shall be control wired with the control panel and shall be placed in the return air path inside the boxing.

12) **Installation**

Adequate vibration isolation using rubber/neoprene pads/vibration springs in order to reduce transmission of vibrations to the floor shall be provided for all condensing units.

13) **Testing**

A/C units after installation shall be tested for its conformity to specifications. Units shall also be tested for the rated capacity and power consumption.

14) **Electric motor**

The electric motor driving the compressor shall be as per manufacturer's standard for this compressor and motor shall be suitable for operation on A.C. supply. The motor shall be continuous duty rated for the application. The motor shall be selected such a way that the motor rating is for actual requirement.

The motor shall be provided with suitable bearing to take care of loads/thrust. Necessary lubricators shall be provided to enable the bearings to be correctly greased as required. The tenderer shall also calculate KW/TR.

## **1.6 THERMAL / ACOUSTIC INSULATION**

### **1.6.1 Material**

- 1) Insulation material shall be Closed Cell Elastomeric Nitrile Butadiene Rubber.
- 2) Insulation material shall have anti-microbial product protection. The antimicrobial product protection shall be an integral part of insulation that is built-in during the manufacturing process and the product protection should not allow the microbes to function, grow and reproduce.
- 3) Resistance towards microbiological growth on insulation surface should confirm to following standards: Fungi Resistance – ASTM G21 where the fungal growth on the surface is NIL after 28 days of incubation at 28 – 30 deg C and Bacterial resistance – ASTM E 2180 where the reduction of bacterial growth is minimum 99.9% after 24 hours of incubation at 34 – 38 deg C.
- 4) Thermal conductivity of Elastomeric Nitrile rubber shall not exceed 0.035 W/m<sup>2</sup>K at an average temperature of 20°C in accordance to EN12667

- 5) The insulation shall have fire performance such that it passes Class 1 as per BS476 Part 7 for surface spread of flame as per BS 476 and also pass Fire Propagation requirement as per BS476 Part 6 to meet the Class 'O' Fire category as per 1991
- 6) Water vapour permeability shall not exceed  $1.74 \times 10^{-14}$  Kg/m.s.Pa, i.e. Moisture Diffusion Resistance Factor or ' $\mu$ ' value should be minimum 10,000 according to EN12086.
- 7) Density of Material shall be between 40 to 60 Kg/m<sup>3</sup>.

#### **1.6.4 Piping Insulation**

All chilled water, refrigerant and condensate drain pipe shall be insulated in the manner specified herein. An air gap of 25 mm shall be present between adjacent insulation surfaces carrying chilled water or refrigerant. Before applying insulation, all pipes shall be brushed and cleaned. All Pipe surfaces shall be free from dirt, dust, mortar, grease, oil, etc. Nitrile Rubber insulation shall be applied as follows:

#### **1.6.5 Recommended Adhesive**

In all cases, the manufacturer's recommended Adhesive should be used for the specified purpose.

### **2. Mode of Measurement of Electrical Items**

The Works shall be measured, as prescribed in the specification of work, notwithstanding any general or local custom, except where otherwise specifically described or prescribed in the Contract. Wherever not specifically mentioned in the Contract, the mode of measurement as prescribed in the relevant IS codes shall be applicable and binding to the Contract. Only the latest editions of all the codes of practices including all latest official amendments and revisions shall be applicable.

### **3. TESTING OF AIR-CONDITIONING SYSTEM**

- 1) Routine and type tests for the various items of equipment of the system shall be performed at the Contractor's own cost and test certificates are to be submitted.
- 2) The performance tests to determine whether or not the full intent of the specification is met shall be conducted by the contractor. After notification to Purchaser that the installation has been completed and the system has run continuously for a period of at least one week, the contractor shall conduct under the direction and the presence of Purchaser such tests as specified to establish the capacity of various equipment supplied and installed by the contractor.
- 3) The contractor shall operate, test and adjust the air-conditioning system units, fan, motors, all air handling appliances including adjustment of regulators, dampers, etc. All testing equipments, labour, operating personnel, oil, refrigerant or any other item required for these tests shall be provided by the contractor to enable the plant to be put in a continuous running test.

#### **4.4 TEST PROCEDURE:**

##### **4.4.1 Design Conditions:**

The inside and outside conditions shall be recorded on hourly basis. The outside and inside dry bulb and wet bulb temperatures shall be recorded by means of a sling psychrometer with mercury thermometers. The relative humidity shall be computed from the psychrometric chart. The inside dry bulb temperature and relative humidity shall fall within the specified limits.

The contractor should conduct performance such tests as indicated in the rated Technical Part and produce sufficient documentary proof that the plant is operating at the rated capacity.

- 4.5 The following readings shall be recorded hourly during the tests and capacity of the plant shall be computed.

<b>Compressor</b>			
a.	Suction pressure	Kg/cm <sup>2</sup> (psi)	
b.	Suction temperature	°C (°F)	
c.	Discharge pressure	Kg/cm <sup>2</sup> (psi)	
d.	Condensing Tempr.	°C (°F)	
e.	Oil pressure	Kg/cm <sup>2</sup> (psi)	
f.	Compressor Speed	RPM	

<b>Compressor motor</b>			
a	Rated capacity		
b	Rated volts		
c	Rated current		
d	Starting current		

<b>Inside unit</b>			
a.	Air velocity	M/Hr. (FPM)	
b.	Face area	M <sup>2</sup> (SFT)	
c.	Air quantity	M <sup>3</sup> /Hr. (CFM)	
d	Entering air temp. DB		
e	Entering air temp. WB		
f	Leaving air temp. DB		
g	Leaving air temp. WB		

<b>Filters</b>			
a	Total area		
b.	Effective area		
c.	Velocity of air		
d	Quantity of air		

## 5. TECHNICAL DATA

(To be submitted along with the tender)			
The following data shall be furnished along with the offer: (REFER LIST OF APPROVED MAKES)			
(Attach catalogues, brochures, etc.)			
<b>Split unit and VRF</b>			
	Manufacturer		
	Model		
	Actual capacity TR		
	Overall dimensions		
	Over all weight		
	Operating weight		
	Refrigerant		
<b>Compressor</b>			
	Manufacturer		
	Model		
	Type		
	Capacity at the specified water temp. and flow rates - in TR		
	Type of capacity control provided		
	Type of lubrication		
	KW / TR		
<b>Inside units</b>			
	Manufacturer		
	Model		
	Type of fan		
	Fan speed (R.P.M.)		
	No. of fans.		
	Fan wheel diameter (mm)		
	Drive arrangement		
	Material and thickness of fan wheel and blades.		
	Materials and thickness of housing.		
	Fan outlet area		
	Outlet velocity.		
	Total air quantity		
	Static pressure at outlet. (mm. of water)		
	Whether statically and dynamically balanced.		
	B.H.P. Consumed		

	Total weight of all items		
<b>Cooling Coil</b>			
	Material of Tubes		
	Material of fins		
	Tube diameter		
	Tube thickness		
	Fin thickness		
	Method of bonding of fins		
	No. of fins/cm.		
	Total tube surface outside		
	Test pressure		
	Coil face area		
<b>Motor</b>			
	Manufacturer		
	Model		
	Number of motors		
	Capacity	HP	
	Type		
	Class of insulation		
	Speed	RPM	
	Characteristics		
	Type of starter		
	Rating		
<b>Whether the following protections are provided.</b>			
	i) Overload	Yes/No	
	ii) Under voltage	Yes/No	
	iii) Single phase protection (for three phase motor starters)	Yes/No	
<b>Filter</b>			
	Manufacturer		
	Type of filters		
	Filter medium		
	Material of frame work and its thickness		
	Face area		
	Face velocity across filters		
	Pressure drop across filters (mm of water)		

Technical Data Split			
1	Model No.		
2	Manufacturer		
3	Cooling Capacity		
4	Compressor type		
5	Suction pressure		
6	Discharge pressure		
7	Rated Power Supply		
8	Total Power Input		
9	COP		
10	Current drawn		
11	Fan Speed		
12	Air Flow		
13	Sound level (DB)		
14	Dimensions (IDU)		
15	Dimensions (ODU)		
16	Dimensions (panel)		
17	Refrigerant		
18	Refrigerant pipe size		
19	Net Weight		

Note : Any other data relevant to each equipment shall also be furnished.

## 6. PARTICULAR SPECIFICATIONS

2.1 For new items for which specifications are not available as stated above, the specifications decided by the Engineer-in-charge based on the contractor. Where materials are specified by reference to brand and make names and use of their equivalents permitted use of such equivalents shall only be allowed after the contractor satisfy the Engineer-in-charge that at the appropriate time, material of the brand or make specified are not available, and the adequacy or the equivalent materials.

Approved make of items -HVAC		
Sl No	Products	Makes
1	Split AC/VRF	Blue star/ Carrier /Hitachi/Daikin
2	Copper Pipes	Totaline/Mandev/Piyush
3	Three phase motors	Siemens/Kirloskar/Crompton/ ABB
4	Copper Conductor Cables	Finolex / Havells/ Polycab
5	Stabilizer	V Guard/VOLTAS/Everest
6	Nitrile Rubber Insulation	Armaflex/K Flex
7	Pressure gauges	Feibig/H-Guru/Jaspin
8	Industrial type thermometers	Feibig/H-Guru/Jaspin
9	PVC pipe	Any ISI marked
10	Metal Clad Box	Legrand, Norwood, L&T

### Approved make List