



*DELHI TRANSIT*

## **Delhi Integrated Multi Modal Transit System Ltd.**

**( A Joint Venture of Govt. of Delhi & IDFC Ltd.)**

**Subject: Implementation of BRT Corridor from Ambedkar Nagar to Delhi Gate.**

**Sub Head: Providing & Fixing of Signage for left turn at intersections on BRT Corridor- Ambedkar Nagar to Delhi Gate.**

### **BID DOCUMENTS**

#### **VOLUME 1**

#### **PART 3 : GENERAL CONDITIONS OF CONTRACT(GCC)**

**Delhi Integrated Multi Modal Transit System Ltd.**

**(A Joint Venture of Government of Delhi & IDFC Ltd.)**

**1<sup>st</sup> Floor, Maharana Pratap Inter State Bus Terminus,**

**Kashmere Gate, Delhi-110006**

## **GENERAL CONDITIONS OF CONTRACT**

### **A. Definitions**

- I. The Contract means the documents comprising the bid and acceptance thereof and the formal agreement executed between DIMTS 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 DIMTS and all these documents taken together, shall be deemed to form one contract.
  
- II. In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them:-
  - (i) The expression 'works or work' shall, unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted, or additional.
  - (ii) The 'Site' shall mean the land/or other places on, into or through which work is to be executed under the contract or any adjacent land, path or street through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the, purpose of carrying out the contract.
  - (iii) The 'Contractor' shall mean the individual, firm or company, whether incorporated or not, undertaking the works and shall include the authorised representatives/employees of such individual or the persons composing such firm-or company, or the successors of such firm or company and the permitted assigns of such individual, firm or company.
  - (iv) DIMTS's Representative means the Engineer/Officer of DIMTS who shall supervise and be incharge of the work.
  - (v) 'Government' shall mean the Government of National Capital Territory of Delhi or Government of India as the case may be.
  - (vi) 'Accepting Authority' shall mean the Managing Director cum CEO, DIMTS Ltd.
  - (vii) 'Excepted Risk' are risks due to riots (other than those on account of contractor's employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, military or usurped power, any acts of Government, damages from aircraft, acts of God, such as earthquake, lightening and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the Accepting Authority or causes solely due to use or occupation by DIMTS/Government of the part of the works in respect of which a certificate of completion has been issued or a cause solely due to DIMTS's faulty design of works.
  - (viii) 'Market Rate' shall be the rate as decided by DIMTS/DIMTS's Representative 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 Appendix to Bid to cover, all overheads and profits.
  - (ix) Tendered value/Contract Value/Contract Price means the value of the entire work as stipulated in the letter of acceptance.

### **III. Scope and Performance**

Where the context so requires, words imparting the singular only also include the plural and vice versa. Any reference to masculine gender shall whenever required include feminine gender and vice versa.

- IV.** Headings 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.
- V.** 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 descriptions given in the Bill of Quantities shall, unless otherwise stated, be held to include wastage on materials, carriage and cartage, carrying and return of empties, hoisting, setting, fitting and fixing in position and all other labour necessary in and for the full and entire execution and completion of the work as aforesaid in accordance with good practice and recognized principles.
- VI.** The Contractor shall be deemed to have satisfied himself before bidding as to the correctness and sufficiency of bid for the works and of the rates and prices quoted in the Schedule of Quantities, which rates and prices shall, except as otherwise provided, cover all his obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the works.

#### **VII Discrepancies and Adjustment of Errors**

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 drawing and figured dimensions in preference to scale and special conditions in preference to General Conditions.

In the case of ambiguities or discrepancies, the priority of the documents forming the contract shall be as follows:

- (i) The Contract Agreement
- (ii) The letter of acceptance
- (iii) The Tender
- (iv) Special/Additional Conditions of Contract
- (v) General Conditions of Contract
- (vi) The Technical Specifications
- (vii) Drawings
- (viii) Priced Bill of Quantities
- (ix) Any other document forming part of contract as may be specified in the contract agreement

If there are varying or conflicting provisions made in any one document forming part of the contract, the Accepting Authority shall be the deciding authority with regard to the intention of the document and his decision shall be final and binding on the contractor.

Any error in description, quantity or rate in Bill of Quantities(BOQ) 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 obligations under the contract.

**B. CLAUSES OF CONTRACT**

**1. Performance Guarantee :**

- 1.1 The contractor shall Submit an irrevocable Performance Guarantee of 5% (Five percent) of the contract price 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 07 days from the date of issue of letter of acceptance. This period can be further extended by DIMTS up to a maximum period as specified in Appendix to Bid on written request of the contractor stating the reason for delays in procuring the Performance Guarantee, to the satisfaction of DIMTS. This guarantee shall be in the form of in cash (if the guarantee amount is less than Rs.10,000/-); or in the form of Demand Draft of any Nationalized/Scheduled Indian Bank payable at New Delhi/Delhi in favour of DIMTS Ltd. (in case the guarantee amount is less than Rs.1,00,000/-); or in the form of Government Securities or Fixed Deposit Receipts of any scheduled Indian Bank pledged in favour of DIMTS Ltd. or in the form of Bank Guarantee from any Nationalized Indian Bank/any RBI approved Scheduled Indian Bank. The format of Bank Guarantee shall be strictly in accordance with the format of Performance Security as provided in "Instructions to Bidders".
- 1.2 The performance guarantee shall be valid upto a period 30 days beyond the Completion of the work. In case the time for completion of work gets enlarged, the contractor shall extend performance guarantee to cover such enlarged time for completion of work. The performance guarantee shall be returned to Contractor (without any interest) after 30 days from the Completion of the work or till final bill has been paid whichever is later.
- 1.3 DIMTS shall not make a claim under the performance guarantee except for amounts to which DIMTS is entitled under the contract (not withstanding and/or without prejudice to any other provisions in the contract) in the event of:
- (a) Failure by the contractor to extend the validity of the Performance Guarantee as described herein above, in which event DIMTS may claim the full amount of the Performance Guarantee.
  - (b) Failure by the contractor to pay DIMTS 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 DIMTS.
  - (c) In the event of the contract being determined or rescinded under any of provisions of the agreement, the performance guarantees shall stand forfeited in full and shall be absolutely at the disposal of DIMTS.

## **2. Recovery of Security Deposit-**

The successful bidder (hereinafter called the contractor) shall permit DIMTS at the time of making any payment to him for work done under the contract to deduct a sum at the rate of 5% of the gross amount of each running bill till the sum deposited reaches the 5% of the contract price of the work. Such deductions will be made and held by DIMTS by way of Security Deposit.

All compensations or the other sums of money payable by the contractor to DIMTS under the terms of this contract may be deducted from his security deposit or from any sums which may be due to or may become due to the contractor by DIMTS on any account whatsoever and in the event of his Security Deposit being reduced by reason of any such deductions, the contractor shall within 10 days make good or replenish any sum or sums which may have been deducted.

The security deposit as deducted above can be released against irrevocable bank guarantee issued by a scheduled bank on its accumulation 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.

50% of the security deposit as deducted above shall be released to contractor after issue of Completion Certificate by DIMTS and balance 50% of security deposit shall be released to contractor after issue of Performance Certificate after end of defects liability period or till the final bill has been paid whichever is later.

## **3. Compensation for Delay**

If the contractor fails to maintain the required progress in terms of clause 8 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 DIMTS on account of such breach, pay as agreed compensation the amount calculated at the rates stipulated below as DIMTS (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 8 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 the contract price per month of delay to be computed on per day basis

Provided always that the total amount of compensation for delay to be paid by the Contractor under this Condition shall not exceed 10% of the contract price of work or of

the contract price 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 DIMTS. In case, the contractor does not achieve a particular milestone mentioned in the Appendix to Bid or the re-scheduled milestone(s) in terms of Clause 8 hereof, the amount shown against that milestone (in the appendix to Bid) 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.

#### **4. Incentive for early completion**

In case, the contractor completes the work ahead of scheduled completion time, a bonus @ 1% (one per cent) of the contract price per month computed on per day basis, shall be payable to the contractor, subject to a maximum limit of 5% (five per cent) of the contract price. The amount of bonus, if payable, shall be paid along with final bill after completion of work. Provided always that provision of this Clause shall be applicable only when so provided in Appendix to Bid.

#### **5. When Contract can be Determined**

5.1 Subject to other provisions contained in this clause, DIMTS may, without prejudice to its 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 served by DIMTS 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-workmanlike 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 DIMTS (which shall be final and binding) he will be unable to secure completion of the work by the scheduled date for completion and continues to do so after a notice in writing of seven days from DIMTS.
- (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 DIMTS.
- (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 DIMTS.
  - (v) If the contractor shall offer or give or agree to give to any person in service of DIMTS, or to any other person on its 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 DIMTS.
  - (vi) If the contractor shall enter into a contract with DIMTS, 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 DIMTS.
  - (vii) 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.
  - (viii) 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.
  - (ix) If the contractor shall suffer an execution being levied on his goods and allow it to be continued for a period of 21 days.
  - (x) If the contractor assigns, transfers, sublets (engagement of labour on a piecework 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 DIMTS.
  - (xi) If the work is not started by the contractor within 1/8th of the stipulated time for completion of work.

5.2 When the contractor has made himself liable for action under any of the cases aforesaid, DIMTS shall have powers:

- (i) To determine the contract as aforesaid (of which termination notice in writing to the contractor by DIMTS shall be conclusive evidence). Upon such determination, the Security Deposit already recovered and Performance Guarantee under the contract shall be liable to be forfeited and shall be absolutely at the disposal of DIMTS.
- (ii) To award the unexecuted work to another contractor after giving notice to the

contractor to measure up the work already executed (if any) within given timeframe as may be specified by DIMTS. The contractor, whose contract is determined as above, shall not be allowed to participate in the bidding process, if any, for the balance work.

- 5.3 In the event of above courses being adopted by DIMTS, 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 DIMTS's Representative 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.
6. 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, either party may terminate/close the contract. In such eventuality, the Performance Security of the contractor shall be refunded but no payment on account of interest, loss of profit or damages etc. shall be payable at all.
7. Contractor liable to pay Compensation even if action not taken under Clause 5

In any case in which any of the powers conferred upon DIMTS by Clause-5 hereof, 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 DIMTS exercising all or any of the powers vested in it under the preceding clause it may, if it so desires, after giving a notice in writing to the contractor, take possession of (or at the sole discretion of DIMTS 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 DIMTS) 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 DIMTS, whose certificate thereof shall be final, and binding on the contractor, 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, DIMTS may remove them at the contractor's expense or sell them by auction or private sale on account of the contractor's risk in all respects and the certificate of DIMTS 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.

8. Time and Extension for Delay

The time allowed for execution of the Works as specified in the Appendix to Bid or the extended time in accordance with these conditions, as the case may be, shall be essence of the Contract. The execution of the works shall commence from such time period as mentioned in Appendix to Bid 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, DIMTS shall, without prejudice to any other right or remedy available in law or under the contract, be at liberty to forfeit the performance guarantee absolutely.

8.1 Within 07 days of issue of letter of acceptance, the Contractor shall submit a Time and Progress Chart/Work programme for each mile stone and get it approved by DIMTS. 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 DIMTS 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 Appendix to Bid.

8.2 If the work(s) be delayed by any of the force majeure events as below -

- (i) riots (other than those on account of contractor's employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, military or usurped power, any acts of Government, damages from aircraft, acts of God, such as earthquake, lightening and unprecedented floods
- (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 DIMTS in executing work not forming part of the Contract, or
- (vi) any other cause which, in the absolute discretion of DIMTS 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 DIMTS 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 DIMTS to proceed with the works.

8.3 Request for rescheduling of Mile stones and extension of time, to be eligible for consideration, shall be made by the Contractor in writing within fifteen days of the happening of the event causing delay. The Contractor may also, if practicable, indicate in such a request the period for which extension is desired.

8.4 In any such case DIMTS may give a fair and reasonable extension of time and reschedule the mile stones for completion of work. Such extension shall be communicated to the Contractor by DIMTS in writing within a reasonable time of receipt of such request. Non application by the contractor for extension of time shall not be a bar for giving a fair and reasonable extension by DIMTS and this shall be binding on the contractor.

9. Measurement of work done

DIMTS 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 shall be taken jointly by DIMTS's Representative or his authorised representative and by the contractor or his authorised representative from time to time during the progress of the work and such measurements shall be signed and dated by DIMTS's Representative 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 DIMTS's Representative or his representative, DIMTS 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 DIMTS's Representative 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.

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 five days' notice to DIMTS or its 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 DIMTS 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 DIMTS'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.

DIMTS or his authorized representative may cause either themselves or through another officer of DIMTS 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 the completion of the defects liability period.

#### 10. Computerized Measurement Book

DIMTS 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 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 DIMTS's Representative. After the necessary corrections made by DIMTS's Representative, the measurement sheets shall be returned to the contractor for incorporating the corrections and for resubmission to DIMTS's Representative for the dated signatures by DIMTS's Representative and the contractor or their representatives in token of their acceptance.

The final & fair computerized measurements shall be bound and paginated. This should be done before the corresponding bill is submitted for payment.

The contractor shall also submit to the department separately his computerized Abstract of Cost and the bill based on these measurements along with two spare copies of the bill. Thereafter, this bill will be processed by DIMTS's Representative.

The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for checking of measurements/levels by DIMTS's Representative.

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 detects liability period.

11. Payment on Intermediate Certificate to be regarded as Advances

No payment shall be made for work, estimated to cost Rs. twenty thousand or less till after the whole of the work shall have been completed and certificate of completion given. For works estimated to cost over Rs. Twenty thousand, the interim or running account bills shall be submitted by the contractor for the work executed on the basis of such recorded measurements in triplicate on or before the date of every month fixed for the same by DIMTS. The contractor shall not be entitled to be paid any such interim payment if the gross amount of work done together with net payment/adjustment of advances for material collected, if any, since the last such payment is less than the amount specified in Appendix to Bid, in which case the interim bill shall be prepared on the appointed date of the month after the requisite progress is achieved. DIMTS 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, DIMTS or his representative 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 DIMTS's Representative certifying the sum to which the contractor is considered entitled by way of interim payment at such rates as decided by DIMTS. The amount admissible shall be paid by 14<sup>th</sup> working day after the day of presentation of the bill by the Contactor to DIMTS.

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 DIMTS's Representative 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 DIMTS 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 DIMTS 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 DIMTS.

## 12. Completion Certificate and Completion Plans

Within ten days of the completion of the work, the contractor shall give notice of such completion to DIMTS and within thirty days of the receipt of such notice, DIMTS's Representative 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 labour 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 DIMTS's Representative. If the contractor shall fail to comply with the requirements of this clause, DIMTS's Representative 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.

## 13. 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, DIMTS's Representative 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, DIMTS's Representative shall give ten days notice in writing to the contractor.

14. Completion Plans to be submitted by the Contractor

The contractor shall submit completion plans (as built drawings) for the work executed 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.50,000/- (Rs. Fifty Thousand only) as may be fixed by DIMTS and in this respect the decision of DIMTS shall be final and binding on the contractor.

15. Payment of Final Bill

The final bill shall be submitted by the contractor in the same manner, as specified for 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 DIMTS 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 DIMTS, 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 DIMTS.

- |      |   |            |
|------|---|------------|
| (i)  | If the Contract Price/Value of work is upto Rs.15 lakhs | :3 months  |
| (ii) | If the Contract Price/Value of work exceeds Rs.15 lakhs | : 6 months |

16. -Deleted-

17. Materials to be provided by the Contractor

The contractor shall, at his own expense, provide all materials, required for the works.

The contractor shall, at his own expense and without delay, supply to DIMTS's Representative 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 DIMTS's Representative furnish proof, to the satisfaction of DIMTS's Representative, that the materials so comply. DIMTS's Representative 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 DIMTS's Representative 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 DIMTS's Representative 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 DIMTS's Representative. 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 DIMTS's Representative 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 DIMTS's Representative and bear all charges and cost of testing unless specifically provided for otherwise elsewhere in the contract or specifications. DIMTS's Representative 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.

DIMTS's Representative 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, DIMTS's Representative 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. DIMTS's Representative shall also have full powers to require other proper materials to be substituted thereof and in case of default, DIMTS's Representative 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 Special/Additional conditions of contract.

18.

18.1 Mobilization Advance

If requested by Contractor in writing, DIMTS will make an interest bearing advance payment not exceeding 10% of the tendered value (in two equal installments) to Contractor exclusively for mobilization for works. The first installment of such advance shall be released by DIMTS to the Contractor on a written request after signing of agreement. The second installment shall be released by DIMTS only after the contractor furnishes the proof of the satisfactory utilization of the earlier installment to the entire

satisfaction of DIMTS. All withdrawals under mobilization advance should be affected before the gross value of work done reaches 25% of contract amount or 4 months from the date of commencement of works whichever is earlier.

The contractor shall submit a bank guarantee from a scheduled bank for the full amount of mobilization advance before such advance is released.

Provided always that provision of this clause shall be applicable only when so provided for in Appendix to Bid.

## 18.2 Interest & Recovery

The mobilization advance in clauses 18.1 above bear simple interest at the rate of 10 per cent per annum and shall be calculated from the date of payment to the date of recovery, both days inclusive, on the outstanding amount of advance. Recovery of such sums advanced shall be made by deduction from the contractors bills commencing after first ten per cent of the gross value of the work is executed and shall be recovered at the rate of 25% of gross value of interim payments in such a way that the entire advance is recovered by the time eighty per cent of the gross value of the contract is executed and paid, together with interest due on the entire outstanding amount up to the date of recovery of the installment.

If the circumstances are considered reasonable by DIMTS, the period mentioned in clauses 18.1 for request by the contractor in writing for grant of mobilization advance and plant and equipment advance may be extended in the discretion of DIMTS.

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

## 19. Payment on Account of Increase in Prices/Wages Due to Statutory Orders.

If after submission of bid, the price of any material incorporated in the works(excluding the materials covered under clause 20) and/or wages of labour increases, as a direct result of the coming into force of any fresh/new law or statutory rule or order (but not due to any changes in rates of sales tax/VAT or any other existing tax/levy at the last stipulated date for receipt of bids) beyond the prices/wages prevailing at the time of last stipulated date for receipt of the bids including extensions if any for the work during contract period including the justified period extended under provision of Clause –8 of the contract without any action under clause-3, then the amount of the contract shall accordingly be varied and provided further that any such increase shall be limited to the price /wages prevailing at the time of stipulated date of completion or as prevailing for the period under consideration, whichever is lower.

If after submission of the bid, the price of any material incorporated in the works(excluding the materials covered under clause 20) and/or wages of labour, prevailing at the time of last stipulated date for receipt of the bids including extensions, if any, is decreased as a direct result of the coming into force of any fresh law or statutory rules or order (but not due to any changes in sales tax/VAT or any other existing tax/levy as per law/statutory rule ), DIMTS shall in respect of materials incorporated in the works(excluding the materials covered under clause 20) and/or labour engaged on the execution of the work after the date of coming into force of such laws statutory rule or order be entitled to deduct from the dues of the contractor, such amount as shall be equivalent to-the difference between the prices of the materials and/or wages as prevailed at the time of the last stipulated date for receipt of bids including extensions if any for the work and the prices of materials and/or wages of labour on the coming into force of such law, statutory rule or order. This will be applicable for the contract period including the justified period extended under the provisions of clause –8 of the contract without any action under clause-3. DIMTS may call books of account and other relevant documents from Contractor to satisfy himself about reasonability of increase in prices of materials and wages

The contractor shall, within a reasonable time of his becoming aware of any alteration in the price of any such materials and/or wages of labour, give notice thereof to DIMTS stating that the same is given pursuant to this condition together with all information relating thereto which he may be in position to supply. For this purpose, the labour component of work executed during period under consideration shall be 15(fifteen) percent of the value of work done during that period and the increase and decrease in labour shall be considered on the minimum daily wages in rupees of any unskilled adult male mazdoor, fixed under any law, statutory rule or order.

20. Deleted

21. Deleted

22 . Dismantled Material DIMTS' Property

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

23 . Work to be executed in Accordance with Specifications, Drawings, 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 issued by DIMTS in writing in respect of the work.

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.

#### 24. Deviations/ Variations, Extent and Pricing

DIMTS 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 DIMTS's Representative 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.

24.1 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 DIMTS.

#### 24.2 Deviation, Extra Items and Pricing

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

#### 24.3 Deviation, Substituted Items, Pricing

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

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

#### 24.4 Deviation, Deviated Quantities, Pricing

In the case of contract items, substituted items, Contract cum substituted items which exceed the limits laid down in Appendix to Bid, 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 bill of quantities, DIMTS shall within one month 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.

24.5 The provisions of the preceding paragraph shall also apply to the decrease in the rate of items for the work in excess of the limits laid down in Appendix to Bid and DIMTS 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.

24.6 The contractor shall send to DIMTS 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 DIMTS which he has executed during the preceding quarter failing which the contractor shall be deemed to have waived his right. However DIMTS may authorize consideration of such claims on merits.

24.7 Any operation incidental to or necessarily has to be in contemplation of Bidder while filing bid, or necessary for proper execution of the item included in the bill of quantities 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. Nothing extra shall be admissible for such operations.

25. Foreclosure of contract due to Abandonment or Reduction in Scope of work

If at any time after acceptance of bid, DIMTS 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, DIMTS 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 DIMTS for the items hereunder mentioned which could 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) DIMTS shall have the option, at its sole discretion, 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). For materials taken over by DIMTS, if any, cost of such materials as detailed by DIMTS 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) 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.
- (iv) Reasonable compensation for repatriation of contractor's site staff and imported labour to the extent necessary.

The contractor shall, if required by DIMTS 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), (iii) and (iv) 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 DIMTS as per item (ii) above. Provided always that against any payments due to the contractor on this account or otherwise, DIMTS 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 DIMTS from the contractor under the terms of the contract.

26. Deleted

27. Suspension of Work

- (i) The contractor shall, on receipt of the order in writing of DIMTS (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 DIMTS may consider necessary so as not to cause any damage or injury to the work already executed 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 DIMTS.

- (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 DIMTS 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 DIMTS 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 DIMTS 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 DIMTS requiring permission within fifteen days from receipt by DIMTS 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 DIMTS or where it affects whole of the works, as an abandonment of the works by DIMTS, shall within ten days of expiry of such period of 15 days, give notice in writing of his intention to DIMTS. In the event of the contractor treating the suspension as an abandonment of the contract by DIMTS, 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 DIMTS 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 DIMTS within 30 days of the expiry of the period of 3 months.

28. 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 DIMTS or any organization engaged by DIMTS for Quality Assurance, 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 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, 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 six months of the completion of the work from DIMTS specifying work, materials or articles, 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 Contractor failing to do so within a period specified by DIMTS in his demand aforesaid, then the contractor shall be liable to pay compensation at the same rate as under clause 3 of the contract (for non-completion of the work in time) for this default.

In such case DIMTS may not accept the item of work at the rates applicable under the contract but may accept such items at reduced rates as DIMTS 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 DIMTS to be conveyed in writing in respect of the same will be final and binding on the contractor.

29. Contractor Liable for Damages, defects during maintenance period (Defects Liability Period)

If the contractor or his working people or servants shall break, deface, injure or destroy any part of building/work 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 the period specified in Appendix to Bid(defects liability period) after a certificate final or otherwise of its completion shall have been given by DIMTS 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 DIMTS shall 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 Contract shall not be considered to be completed until the Performance Certificate has been issued by DIMTS after the end of defects liability period and delivered to the Contractor, stating the date on which the Contractor completed his obligations under defects liability period to DIMTS' satisfaction. Only the Performance Certificate shall be deemed to constitute approval of the Works.

After the Performance Certificate has been issued, the Contractor and the Employer shall remain liable for the fulfillment of any obligation, which remains unperformed at that time. For the purposes of determining the nature and extent of any such obligation, the Contract shall be deemed to remain in force.

30. Contractor to Supply Tools & Plant etc.

The contractor shall provide at his own cost all materials, tools & plants for proper execution of work. 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 DIMTS 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 DIMTS 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.

### 31 Labour Laws To Be Complied By Contractor

31.1 During continuance of the contract, the Contractor and his Subcontractors shall abide at all times by all existing labour enactments and rules made there under, regulations, notifications and bye laws of State or Central Government or local authority and any other labour law (including rules), regulations, bye laws that may be passed or notification that may be issued under any labour law in future either by the State or the Central Government or the local authority. The Contractor shall keep DIMTS indemnified in case any action is taken against DIMTS by the competent authority on account of contravention of any of the provisions of any Act or rules made there under, regulations or notifications including amendments. If DIMTS is caused to pay or reimburse, such amounts as may be necessary to cause or observe, or for non-observance of the provisions stipulated in the notifications / bye-laws / acts / rules / regulations including amendments, if any, on the part of the Contractor, DIMTS shall also have right to recover from the Contractor any sum required or estimated to be required for making good the loss or damage suffered by DIMTS.

The employees of the Contractor and the Sub-contractor shall in no case be treated as the employees of DIMTS at any point of time.

List of some major Labour Laws applicable to establishments engaged in construction works are given in Annexure A-1 for reference purpose. However, the said list is merely indicative and the Contractor shall also comply with all/any other law that may be applicable.

The contractor and sub contractors shall comply with the provisions related to welfare, safety, health & environmental protection as given in Special/Additional Conditions of Contract.

### 31.2 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, DIMTS is obliged to pay compensation to a

workman employed by the contractor in execution of the works, DIMTS will recover from the contractor, the amount of the compensation so paid; and, without prejudice to the rights of DIMTS under sub-section (2) of Section 12, of the said Act. DIMTS' 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 DIMTS to the contractor whether under this contract or otherwise. DIMTS shall not be bound to contest any claim made against it under sub-section (1) of Section 12, of the said Act.

### 31.3 Claims on account of violation of Labour Laws:

If, as a result of any instructions, directions or decisions from the concerned authorities or claim or application made under any of the labour laws or regulations due to violation of labour laws by Contractor, DIMTS has to pay any money, such money shall be deemed to be money payable by Contractor to DIMTS. In case of failure on part of Contractor to repay this money to DIMTS within seven days of demand made by DIMTS, DIMTS shall be at liberty to recover such amount or any part thereof by deducting it from the security deposit or from any sum due to the contractor whether under this contract or otherwise. DIMTS shall not be bound to contest any claim made against it under any of the labour laws.

31.4 The contractor shall obtain a valid licence under the Contract Labour (R&A) Act, 1970, and the Contract Labour (Regulation and Abolition) Central Rules, 1971 and under any/all other labour statutes as may be required thereunder, before the commencement of the work, and continue to have a valid license until the completion of the work .

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

31.6 The contractor shall pay to labour employed by him either directly or through sub-contractors, wages not less than fair wages 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, including any labour engaged by his sub-contractors in connection with the said work, as if the labour had been immediately employed by him. 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.

31.7 The contractor shall indemnify and keep indemnified DIMTS against payments to be made under and for the observance of the laws aforesaid.

**31.8** 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.

**31.9** The contractor shall ensure that no amount by way of commission or otherwise is deducted or recovered from the wages of workmen.

- 31.10** In respect of all labour directly or indirectly employed in the work for the performance of the contractor's obligations under this contract, the contractor shall at his own expense arrange for the safety provisions as per the provisions for safety, health & environmental protection given in Special/Additional Conditions of Contract and other statutory guidelines/rules and shall at his own expense provide for all facilities in connection therewith.
- 31.11 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 him.
- 31.12 The contractor(s) shall at his/their own cost provide his/their labour with the following facilities:
- (a) Sufficient number of huts/tents
  - (b) Sufficient number of latrines and urinals.
  - (c) Sufficient quantity of potable water for drinking and other purposes
  - (d) Proper drainage and sanitation
  - (e) The contractor shall make necessary arrangements for keeping the camp area sufficiently lighted to avoid accidents to the workers.
- 31.13 DIMTS may require the contractor to dismiss or remove from the site of the work any person or persons in the contractors' employment who may be incompetent or misconducts himself and the contractor shall forthwith comply with such requirements.
- 31.14 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.
- 31.15 It shall be the responsibility of the contractor to see that the building/work under construction is not occupied by anybody unauthorized during construction, and is handed over to DIMTS with vacant possession of complete building. If such building/work though completed is occupied illegally, then DIMTS shall have the option to refuse to accept the said building/work in that position. Any delay in acceptance on this account will be treated as the delay in completion and for such delay, a levy up to 5% of tendered value

of work maybe imposed by DIMTS whose decision shall be final both with regard to the justification and quantum and be binding on the contractor.

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

### 32 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 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 DIMTS 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 DIMTS. Failure on the part of contractor to obtain approval of DIMTS 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 DIMTS 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.

### 33. Work not to be sublet/Action in case of insolvency

The contract shall not be assigned or sublet without the written approval of DIMTS 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 officer of DIMTS in any way relating to his office or employment, or if any such officer shall become in any way directly or indirectly interested in the contract, DIMTS shall have power to adopt the course specified in Clause 5, hereof in the interest of DIMTS and in the event of such course being adopted, the consequences specified in the said Clause 3 shall ensue.

The sub-contracting shall be generally limited to 50% of the contract price(excluding the cost of escalators).

It will be obligatory on the part of the Contractor to obtain consent of DIMTS to the identity of the sub-contractor. Not less than 28 days before the intended date of each Sub-contractor commencing work, the Contractor shall notify DIMTS of such intention DIMTS will give his consent after assessing and satisfying itself of the capability, experience and equipment resources of the sub-contractor. In case DIMTS intends to withhold its consent, it should inform the Contractor within 15 days to enable him to make alternative arrangements to fulfil his works programme.

The Contractor shall not be required to obtain consent for purchases of Materials which are in accordance with the standards specified in the Contract or provisions of labour or for the sub-contracts for which the Sub-contractor is named in the Contract;

The provision of labour and material and for petty Contractors / piece Works under direct supervision of Contractor's Representatives shall not come under the perview of this clause.

The value of a sub-contract as and when awarded, should be intimated by the Contractor to DIMTS and it should also be certified that the cumulative value of the sub-contracts awarded so far is within the aforesaid limit of 50%. A copy of the contract between the Contractor and Sub-Contractor shall be given to DIMTS within 15 days of signing and in any case 7 days before the Sub Contractor starts the Work and thereafter the Contractor shall not carry any modification without the consent in writing of DIMTS. The terms and conditions of sub-contracts and the payments that have to be made to the sub-contractors shall be the sole responsibility of the Contractor.

The Contractor shall provide sufficient superintendence, whether on the site or elsewhere, to ensure that the work to be carried out by a sub-contractor complies with the requirements of the Contract.

In the case of sub-contracts for electrical and mechanical works, which the Contractor intends to procure, the Contractor shall, prior to inviting tenders from sub-contractors, submit such documents to DIMTS for review.

The proposed sub-contract terms and conditions shall impose on the sub-contractor such terms of the Contract as are applicable and appropriate to the part of the Works to be sub-contracted, to enable the Contractor to comply with his obligations under the Contract.

Notwithstanding any consent to sub-contract given by DIMTS, if in his opinion he considers it necessary, the Engineer shall have full power to order the removal of any sub-contractor from the Site or off-Site place of manufacture or storage, which power shall not be exercised unreasonably.

The Contractor shall be responsible for observance by all Sub-contractors of all the provisions of the Contract. The Contractor shall be responsible for the acts or defaults of any Sub-contractor, his representatives or employees, as fully as if they were the acts or defaults of the Contractor, his representatives or employees.

34. 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 DIMTS without reference to the actual loss or damage sustained and whether or not any damage shall have been sustained.
35. Changes in firm's Constitution to be intimated

Where the contractor is a partnership firm, the previous approval in writing of DIMTS 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 33 hereof and the same action may be taken, and the same consequences shall ensue as provided in the said Clause 33.

All works to be executed under the contract shall be executed under the direction and subject to the approval in all respects of DIMTS/DIMTS's Representative 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.

## 36 Settlement of Disputes & Arbitration

### 36.1 Amicable Resolution

- (a) Save where expressly stated to the contrary in this Agreement, any dispute, difference or controversy of whatever nature between the Parties, howsoever arising under, out of or in relation to this Agreement (the "Dispute") shall in the first instance be attempted to be resolved amicably in accordance with the procedure set forth in clause (b) below.

The Contractor shall keep such contemporary records as may be necessary to substantiate any claim, either on the Site or at any other location acceptable to the Engineer.

No action at law concerning or arising out of any Dispute shall be commenced unless and until all applicable Dispute resolution procedures set out in Clauses 36.1 & 36.2 shall have been finally exhausted in relation to that Dispute or any

Dispute out of which that Dispute shall have arisen with which it may be or may have been connected.

- (b) If either party considers any action of other party to be outside the requirements of the contract, or disputes any drawings, record or decision given in writing 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 refer the matter to the Managing Director & CEO, DIMTS or his nominee, for amicable settlement. Upon such reference, both the Parties shall meet at the earliest mutual convenience and in any event within fifteen (15) days of such reference to discuss and attempt to amicably resolve the Dispute. If the Dispute is not amicably settled within thirty (30) days of such meeting between the Parties, either Party may refer the Dispute to arbitration in accordance with the provisions of Clause 36.2 below.

## 36.2 Arbitration

### a) Procedure

Subject to the provisions of Clause 36.1, any Dispute, which is not resolved amicably, shall be finally settled by binding arbitration under the Arbitration and Conciliation Act, 1996.

The Arbitration proceedings shall be conducted by the Sole Arbitrator to be appointed or nominated by the MD& CEO, DIMTS Ltd. The Party invoking the arbitration clause shall give a notice of its intention to proceed for the arbitration to MD & CEO, DIMTS Ltd., with copy to other party, requesting for appointment of Arbitrator. Such notice shall provide details for the claims along with the amount therefore and supporting documents. If within 30 (thirty) days of receipt of such notice/intimation, MD & CEO, DIMTS Ltd. fails to appoint arbitrator, the Party seeking appointment of arbitrator may take further steps in accordance with Arbitration Act.

The arbitrators shall always give item-wise and reasoned awards in all cases where the value of total claims exceeds Rs.1.00 million.

The award of the sole Arbitrator shall be binding on all parties.

- b) Neither party shall be entitled to bring a claim for arbitration, if it is not filed within four months of the following:-
- (i) Of the date of completion of the work as certified by DIMTS Or
  - (ii) Of the date of abandonment of the work or breach of contract under any of its clauses. Or
  - (iii) Of its non-commencement or non resumption of work within 10 days of written notice for commencement or resumption as applicable. Or
  - (iv) Of the cancellation, termination or withdrawal of the work from the

contractor in whole or in part and/or revision or foreclosure of the contract.  
Or

If the claim pertains to rates or recoveries introduced in the final bill, the reference to the Arbitrator shall be made within four months from the date of payment of the final bill to the contractor or from the date a registered notice is sent to the contractor to the effect that his final bill is ready by DIMTS (whose decision in this respect shall be final and binding) whichever is earlier.

If the claim pertains to any action by either parties during defects liability period, the reference to the Arbitrator shall be made within two months from the date of end of defects liability period

If the matter is not referred to arbitration within the period prescribed above, all the rights and claims of either party under the contract shall be deemed to have been forfeited and absolutely barred by time for arbitration.

(c) Place of Arbitration

The place of arbitration shall be at Delhi.

(d) English Language

The language of arbitration shall be English and the Award shall be a speaking award.

(e) Performance during Arbitration

Pending the submission of and/or decision on a dispute and until the arbitration award is published, the Parties shall continue to perform their respective obligations under this Agreement without prejudice to a final adjustment in accordance with such award.

(f) Costs

Each of the Parties to this Agreement shall bear their own respective costs for and during the Arbitration and shall not raise any claim in respect thereof as against the other Party. The fees, if any, of the arbitrator and other expenses incurred by Arbitrator shall be shared in equal proportion by both the parties and shall be paid before the award is made and published.

(g) No Suspension of Work on Account of Arbitration

The reference to Arbitration shall proceed notwithstanding that the Works shall not then

be or be alleged to be complete, provided always that the obligations of the Employer, Engineer and the Contractor shall not be altered by reasons of arbitration being conducted during the progress of the Works. Neither party shall be entitled to suspend the work or part of the work to which the dispute relates on account of arbitration and payments to the Contractor shall continue to be made in terms of the Contract.

(h) Interest on Arbitration Award

Where the arbitral award is for the payment of money, no interest shall be payable on whole or any part of the money for any period, till the date on which the award is made.

(i) Jurisdiction of Courts

Where recourse to a Court is to be made in respect of any matter, the court at Delhi/ New Delhi shall have the exclusive jurisdiction to try all disputes between the parties.

37. Contractor to indemnify DIMTS against Patent Rights.

The contractor shall fully indemnify and keep indemnified DIMTS 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 DIMTS 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 DIMTS if the infringement of the patent or design or any alleged patent or design right is the direct result of an order passed by DIMTS in this behalf.

38. 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 DIMTS payable of measurement, DIMTS may at his discretion pay the lump-sum amount entered in the estimate, and the certificate in writing of DIMTS shall be final and conclusive against the contractor with regard to any sum or sums payable to him under the provisions of the clause.

39. Action 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 23, such work shall be carried out in accordance with the Bureau of Indian Standards Specifications. In case there are no such specifications of Bureau of Indian Standards, the work shall be carried out as per manufacturers' 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 DIMTS.

40. With-holding and lien in respect of sums 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, DIMTS 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, DIMTS 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, DIMTS 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, if any, with DIMTS 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 DIMTS will be kept withheld or retained as such by DIMTS till the claim arising out of or under the contract is determined by the arbitrator(if the contract is governed by the arbitration clause)or 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, DIMTS 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) DIMTS 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 DIMTS 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, such amount shall be duly paid by DIMTS to the contractor, without any interest thereon whatsoever.

Provided that DIMTS 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 DIMTS on the one hand and the contractor on the other under any term of the contract permitting payment for work after assessment by DIMTS.

41 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 DIMTS against any claim of DIMTS in respect of payment of a sum of money arising out of or under any other contract made by the contractor with DIMTS.

It is an agreed term of the contract that the sum of money so withheld or retained under this clause by DIMTS will be kept withheld or retained as such by DIMTS till its 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.

42. Supply of Water & Electricity

The contractor(s) shall make his/their own arrangements for water & electricity required for the work and nothing extra will be paid for the same. This will be subject to the condition that the water used by the contractor(s) shall be fit for construction purposes to the satisfaction of DIMTS.

43. –deleted-

44. –deleted-

45. -deleted-

46. -deleted-

47. Contractor's 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 execution 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 DIMTS, 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 qualification and experience shall not be fewer than as specified elsewhere in the bid documents. DIMTS shall within 3 days of receipt of such communication intimate in writing its 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 DIMTS 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 DIMTS 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 DIMTS 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 at all times during all stages of execution of work, during recording/checking/test checking of measurements of works and whenever so required by DIMTS and shall also note down instructions conveyed by DIMTS or its 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. In the event of absence of any of the representative(s) for more than two days, Substitutes duly approved by DIMTS in similar manner as aforesaid shall be provided by the Contractor.

If DIMTS, 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 Appendix to Bid and the decision of DIMTS 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), such appointed persons are not effectively present or are absent for more than two days without duly approved substitute being deployed or do not discharge their responsibilities satisfactorily, DIMTS shall have full powers to suspend the execution of the work until such date as suitable other technical

representative(s) is/are appointed and the contractor shall be held responsible for the delay so caused to the work. The contractor shall submit a certificate of employment of the technical representative(s) along with every on account bill/final bill and shall produce evidence if at any time so required by DIMTS.

- (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.

DIMTS 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 DIMTS to be undesirable. Such person shall not be employed again at works site without the written permission of DIMTS and the persons so removed shall be replaced as soon as possible by competent substitutes.

48. Levy/Taxes payable by Contractor.

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

49. Conditions for reimbursement of levy/taxes if levied after receipt of bids.

- (i) All bid prices rates shall be inclusive of all taxes and levies payable under respective statutes. However, pursuant to the Constitution (46th Amendment Act, 1982), if any new tax or levy is imposed by Statute, after the last stipulated date for the receipt of bid(including extensions if any) and the contractor thereupon necessarily and properly pays such taxes/levies, the contractor shall be reimbursed the amount so paid, provided such payments, if any, is not, in the opinion of DIMTS(whose decision shall be final and binding on the contractor) attributable to delay in execution of work within the control of the contractor.
- (ii) The contractor shall keep necessary books of accounts and other documents for the purpose of this condition as may be necessary and shall allow inspection of the same by a

duly authorized representative of DIMTS and further shall furnish such other information/document as may be required from time to time.

- (iii) The contractor shall, within a period of 30 days of the imposition of any such further tax or levy, pursuant to the Constitution (Forty Sixth Amendment Act 1982), give a written notice thereof to DIMTS that the same is given pursuant to this condition, together with all necessary information relating thereto.

50. Termination of Contract on death of contractor (in case of an individual).

Without prejudice to any of the rights or remedies under this contract, if the contractor dies, DIMTS shall have the option of terminating the contract without compensation to the contractor.

51. If the Relation Working in DIMTS

The contractor shall not be permitted to bid for works in DIMTS if he has any near relative posted in DIMTS in any capacity (any breach of this condition by the bidder would render him liable to be debarred for taking up works in DIMTS)

The term "near relatives" means wife, husband, parents and grand parents, children and grand children, brothers and sisters, uncles, aunts and cousins and their corresponding in-laws.

52. –deleted-

53. -deleted-

54. 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 DIMTS and a certificate from DIMTS 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 DIMTS 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 work ordered by DIMTS, such payments being in addition to compensation up to 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 DIMTS. 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 DIMTS 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 DIMTS (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 DIMTS.

55. 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 thereunder from time to time. If he fails to do so, his failure will be a breach of the contract and DIMTS 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.

56. Release of Security Deposit only after Labour clearance

As soon as the work is virtually complete the contractor shall apply for the clearance certificate to the Labour Officer under intimation to DIMTS. Security Deposit of the work shall not be refunded till the contractor produces a clearance certificate from the Labour Officer.

57. Miscellaneous provisions

- i) Nothing contained in this Contract shall be construed as establishing or creating between the Parties, a relationship of master and servant or principal and agent.
- ii) Any failure or delay on the part of any Party to exercise right or power under this Contract shall not operate as waiver thereof.
- iii) The Contractor shall notify DIMTS of any material change in their status, in particular, where such change would impact on performance of obligations under this Contract.
- iv) The Contractor, shall be responsible for all obligations towards DIMTS/Government for performance of works/services including that of its Associates/ Sub Contractors under the Contract.
- v) The Contractor shall at all times indemnify and keep indemnified DIMTS against all claims/damages etc. for any infringement of any Intellectual Property Rights (IPR) while providing is services under the Project.
- vi) The Contractor shall at all times indemnify and keep indemnified DIMTS against any claims in respect of any damages or compensation payable in consequences of any accident or injury sustained or suffered by the Contractor's employees or agents or by

any other third party resulting from or by any action, omission or operation conducted by or on behalf of the Contractor.

- vii) The Contractor shall at all times indemnify and keep indemnified DIMTS against any and all claims by Employees, Workmen, Contractors, sub-contractors, suppliers, agent(s), employed engaged or otherwise working for the Contractor, in respect of wages, salaries, remuneration, compensation or the like.
- viii) All claims regarding indemnity shall survive the termination or expiry of the Contract.
- ix) It is acknowledged and agreed by all parties that there is no representation of any type, implied or otherwise, of any absorption, regularization, continued engagement or concession or preference for employment of persons engaged by the Contractor for any engagement in service or employment in any capacity in any office or establishment of the DIMTS.

58. Laws Governing the Contract:-

This contract shall be governed by the Laws of India for the time being in force.

**Annexure-AI**

**List of major Labour Laws applicable to establishments engaged in Construction of Civil Works**

Workmen Compensation Act, 1923

Payment of Gratuity Act, 1972

Employees' PF and Miscellaneous Provisions Act, 1952

Maternity Benefit Act, 1951

Contract Labour (Regulation and Abolition) Act, 1970

Minimum Wages Act, 1948

Payment of Wages Act, 1936

Equal Remuneration Act, 1979

Payment of Bonus Act, 1965

Industrial Disputes Act, 1947

Industrial Employment (Standing Orders) Act, 1946

Trade Unions Act, 1926

Child Labour (Prohibition and Regulation) Act, 1986

Inter-State Migrant Workmen's (Regulation of Employment and Conditions of Service) Act, 1979

The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996 and the Cess Act of 1996

The Factories ACT. 1948.

**Annexure-A II****Provisions Related to Safety, Health & Environment Protection to be complied/followed by Contractor**

1. The provisions given here should be read in conjunction with;
  - (a) The Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act 1996. Delhi Rules, 2002
  - (b) The Factories Act, 1948
  - (c) Other Laws of India, Regulations, Rules and Codes of Practice on Safety Health and the Environment that may be applicable.
  - (d) The Conditions of Contract in respect of Health and Safety
  - (e) The Employer's Requirements as given in the documents of the Contract.
  - (f) The important applicable Indian Standards
- 1A. Cost of complying with these provisions shall be deemed to be included in the bid prices quoted by Contractor, shall be considered incidental to work and nothing extra shall be paid to Contractor except what has been specifically provided under relevant items (pertaining to barricades, traffic marshals & signboards) of BOQ for this work.
2. The provisions given herewith outline the minimum health and safety, standards that shall be required during the construction. These provisions represent the minimum standards required. and each Contractor is encouraged to expand and improve upon it. These provisions are not intended to replace existing standards that are currently in force in India. However, it is intended to support the standards and to highlight to Contractors the areas of concern that shall be addressed in their respective Site Safety Plans in order to establish good health and safety practices. The obligations and requirements for Health, Safety and environment protection set out within this document are entirely without prejudice and do not derogate from the Contractor's obligations with respect to the Contract and his statutory obligations with respect to Health, Safety & environment protection.
3. The Contractor is fully responsible for the safety of the Works, his personnel, subcontractors' personnel, the public and all persons directly or indirectly associated with the Works or on or in the vicinity of the Site.
4. The provisions given herewith provide relevant information and procedures to assist the Contractor to ensure that his employees and sub contractors work within a safety-conscious and safety-regulated environment. Compliance with the procedures set out in these provisions shall not relieve the Contractor of any of his Statutory Duties or his responsibilities under the Contract.

Notwithstanding anything contained herein, the Contractor shall remain liable to comply with the provisions of all acts, rules, regulations and bylaws for the time being in force in India and applicable in the matter of Safety, Health & Environment Protection.

## 5 GENERAL DUTIES OF CONTRACTORS

- 5.1 Every person employed by Contractor on construction sites are obliged to comply with the general duties imposed on them under the Contract. Every person employed should, not only avoid careless or reckless behaviour, but should also take positive steps to understand workplace hazards. They must follow all necessary safety and environment rules and procedures, and ensure that their acts or omissions at work do not put the health and safety of self or others at risk.
- 5.2 Contractors shall be responsible for complying with all statutory and contractual requirements on construction safety, health and environment including the general duties imposed on them under the Laws and Regulations of the Government of India, Government of the National Capital Territory of Delhi and other relevant authorities.
- 5.3 The Employer/Engineer shall only deal with health and safety matters through the Contractor and shall hold the Contractor responsible for all his and his approved Sub-contractors, actions. All approved Sub-contractors shall be responsible to the Contractor.
- 5.4 Contractor shall ensure that an adequate level of competent supervision is maintained at the workplace at all times with all supervisory staff having the relevant knowledge, training, and experience to enable them to supervise the work in a proper manner.
- 5.5 Any major breach of the Site Safety measures, relevant Statutory Provisions and Safety Codes, or any other blatant disregard for the health and safety by any person directly or indirectly associated with the works may result in the Employer/Engineer exercising their authority in requiring the removal from the Site of the Contractor's Site Manager and/or other personnel. Any person who is removed from the site for breach of safety measures shall not be allowed to be reemployed on any other worksite.
- 5.6 The Contractor shall provide all necessary measures to protect the public from accidents and shall be bound to bear the expenses of defending every suit, action or other proceedings at law that may be brought by any person for injury sustained owing to neglect of the safety precautions and to pay any damages and costs which may be awarded in any such suit, action or proceedings to any such person or which may with the consent of the Contractor be paid to compromise any claim by any such person.
- 5.7 The safety provisions shall be brought to the notice of all concerned by displaying on a notice board at a prominent place at the work location. Persons responsible for ensuring compliance with the Safety Code shall be named therein by the Contractor.
- 5.8 To ensure effective enforcement of the rules and regulations relating to safety precautions, arrangements made by the Contractor shall be open to inspection by the

Engineer or his Representative.

## **6 REPORTING OF ACCIDENTS AND DANGEROUS OCCURRENCES**

- 6.1 All accidents and dangerous occurrences shall be recorded by Contractor, regardless of whether or not personnel injury occurs.
- 6.2 The Employer/Engineer shall be notified by the quickest possible means, for example by telephone of the following classifications of accidents and incidents and by subsequent written notification within twenty four hours:
- (a) Fatal Accident
  - (b) Major Injury Accident – Any fracture, other than to the fingers or toes, any loss of limb or part of a limb, dislocation of shoulder, hip, knee or spine, loss of sight, any other injury that leads to unconsciousness, requires resuscitation, requires admittance to hospital for more than 24 hours or which causes more than 10 days absence from work.
  - (c) Dangerous Occurrence
  - (d) Any Incident Involving A Member Of The Public
- 6.3 The Contractor shall report immediately, orally and in writing, all fatal accidents, and other occurrences requiring reporting, to the police, at the police station in whose jurisdiction the accident occurred.
- 6.4 An accident shall also become reportable to the Employer/Engineer if it causes incapacity for more than three days excluding the day of the accident.
- 6.5 The following information is required in reporting an accident to the Employer/Engineer
- (a) particulars of the Contractor or approved Sub-contractor employing the injured person;
  - (b) particulars of the deceased or injured person: name, address, occupation, sex, and age;
  - (c) the date, cause or circumstances of the accident; and
  - (d) the nature of the injury, stating whether death or incapacity was caused by the injury.
- 6.6 All dangerous occurrences on site must be reported in writing to Employer/Engineer within 24 hours, irrespective of whether there are casualties or not. The following information has to be provided:
- (a) the time of the occurrence;
  - (b) damage to any building, machinery or plant; and
  - (c) the circumstances in which the accident occurred.

If no one is injured, the above notification is sufficient. In the case of death or serious injury, the accident reporting procedure outlined in para 6.5 must also be followed.

## **7 REPORTING OF FIRES BY CONTRACTOR**

7.1 The Contractor shall report to the Engineer all fires which occur on site including any fires that have been extinguished by the Contractor himself, and the Engineer may send staff to investigate such fires. The following information should be provided :-

- (a) time of fire;
- (b) location of fire;
- (c) means of extinguishing the fire;
- (d) injury to any person/damage to any property; and
- (e) the probable cause of fire.

This action is in addition to reporting the incident to the Chief Fire Officer Delhi, and Police in accordance with local regulations.

## **8. SAFETY SIGNS**

8.1 All safety signage that is displayed in and around the sites shall be in both Hindi and English. Examples of signs that shall be required shall include amongst others the following:

- (a) Wear Safety Helmets.
- (b) Permit to Work areas
- (c) Wear Safety Footwear.
- (d) Wear Hearing Protection.
- (e) Wear Eye Protection.
- (f) Danger Electricity.
- (g) Danger Crane Overhead.
- (h) Stop Look and Listen
- (i) No Smoking.
- (j) First Aid.
- (k) No Entry signs
- (l) Fire precautions.
- (m) Emergency Exit from underground works

8.2 All safety signs shall comply with the Internationally recognized Safety Colors as indicated below:-

## **9 INDUSTRIAL HEALTH AND LABOUR WELFARE**

- 9.1 The Contractor shall be responsible for maintaining healthy working conditions for all his, and his subcontractors, workers. In particular he shall pay attention to the effects of noise, dust, air pollution and the use of chemicals. If it is not possible to remove the cause of harm then suitable and sufficient Personal Protective Equipment (PPE) should be provided to those workers who could be affected.
- 9.2 If the use of PPE is the only means of providing protection the Contractor shall ensure that all the workers affected are properly trained in the use of the PPE and that adequate supervision is provided to ensure its proper use.
- 9.3 The Contractor shall carry out noise assessments to establish what noise levels his workers are being exposed to. If excessive noise levels above 90dB(A) are found then the contractor shall attempt noise reduction measures. Where it is not possible to reduce the noise level, the Contractor shall provide the workers with suitable hearing protectors, which effectively reduce the sound level at the user's ear to, or below, 90dB(A). The Contractor shall ensure that all the workers affected are properly trained in the use of hearing protection equipment.
- 9.4 Contractor shall ensure that no worker lifts by hand or carries overhead or over his back or shoulders any material, article, tool or appliances exceeding in weight the maximum limits set out below unless aided by another worker or a mechanical device:-

(i) Adult-Male : 55 kg.

(ii) Adult- Female : 30 kg.

#### 9.5 Toilets

The Contractors shall ensure that an adequate number of toilets are made available at the work site with the ratio being no less than one toilet for every 50 workers or part thereof. The toilets shall be located so that persons do not have to walk more than five hundred meters to use them.

The toilets shall have adequate water supply and be kept in a clean and tidy condition at all times.

#### 9.6 Drinking Water

The Contractors shall ensure that effective arrangements are made to provide and maintain at suitable points at work site a sufficient supply of wholesome drinking water. All such points shall be legibly marked "Drinking Water" in Hindi and English and no such point shall be situated within six meters of any washing place, urinal or latrine.

### 10 EXCAVATIONS

- 10.1 The contractor shall ensure that all excavations are supervised by workers with thorough knowledge and experience of excavation work.

- 10.2 The integrity of the excavation and the support system shall be inspected prior to the commencement of any works on a daily basis with the results of the inspections being formally recorded. All such records shall be kept available for inspection by the Engineer's Representative.
- 10.3 Where there is the possibility of any ingress of water then pumping sumps shall be established with pumps being readily available for use and additional ladders placed for use in the event of an emergency evacuation.
- 10.4 Before digging any excavations, Contractor shall plan against the following;
- (a) collapse of the sides;
  - (b) materials falling onto people working in the excavation;
  - (c) people and vehicles falling into the excavation;
  - (d) people being struck by plant;
  - (e) undermining nearby structures;
  - (f) Contact with underground services;.
  - (g) fumes; and
  - (h) Make sure the necessary equipment needed such as trench sheets, props, etc, are available on site before work starts.
- 10.5 The following general precautions should be observed;
- (a) Prevent the sides and the ends from collapsing by battering them to a safe angle or supporting them with timber, sheeting or proprietary support systems.
  - (b) Do not go into unsupported excavations.
  - (c) Never work ahead of the support.
  - (d) Remember that even work in shallow trenches can be dangerous. Proper support may be required to be provided if the work involves bending or kneeling in the trench.
  - (e) Prevention of materials falling into excavations
  - (f) No spoil or other materials should be stored within one metre of the sides of excavations. The spoil may fall into the excavation and the extra loading will make the sides more prone to collapse.
  - (g) It may be made sure that the edges of the excavation are protected against falling materials. Toe boards may be provided, where necessary.
  - (h) Wear a hard hat when working in excavations.
  - (i) Take steps to prevent people falling into excavations. If the excavation is 2 m or more deep, provide substantial barriers, e.g. guard rails and toe boards.
  - j) Keep vehicles away from excavations wherever possible. Use brightly painted baulks or barriers where necessary.
  - (k) Where vehicles have to tip materials into excavations, use stop blocks to prevent them from over-running. Remember that the sides of the excavation may need extra support.
- 10.6 Undermining nearby structures

To prevent the undermining of nearby structures; it shall be ensured that excavations do not affect the footings of scaffolds or the foundations of nearby structures. Walls may have very shallow foundations, which can be undermined by even small trenches. If required, temporary supports may be provided before digging starts.

## 11. **LIFTING OPERATIONS**

### 11.1 Lifting Appliances:

Contractor shall ensure that all lifting appliances, including synchronised mobile jacks, pit jacks, mobile cranes, tower cranes, gantry cranes, launching beams and lorry mounted cranes, prior to being allowed to work on site shall have available for inspection by the Engineer's Representative a current Certificate of Inspection issued by a Competent Person.

All lifting appliances with a lifting capacity of more than one tonne shall, where practicable, be fitted with Automatic Safe Load Indicators and Audible Warning Devices which shall be kept in an operable condition at all times the lifting appliance is in use. Checks should be made to ensure that the Automatic Safe Load Indicator is properly calibrated and is functioning properly.

All lifting appliances shall be maintained in accordance with the manufacturer's instructions and shall be subject to a regular preventative maintenance programme.

All lifting appliances shall be inspected every three months by a third party competent person. Certificates of Inspection shall be available with the lifting appliance.

The operators of lifting appliances shall conduct daily inspections of their respective lifting appliances with the results of the inspections being recorded and kept available for inspection.

The Contractor shall ensure that only thoroughly trained and experienced persons aged twenty-one years and over are allowed to operate lifting appliances.

### 11.2 Lifting Gear:

Lifting Gear includes chain slings, rope slings, or similar gear and a ring, link, hook, plate clamp, shackle, swivel or eye bolt.

The Contractor shall ensure that all lifting gear shall be in good condition and shall be tested and certified every six months, with the Safe Working Load being stamped or clearly displayed upon it. Records of test shall be kept available for inspection.

All lifting gear shall be visually inspected before any use and if any defects are found then it shall be removed from site or dismantled / disabled in order to ensure that it is not used in a defective state.

All lifting gear shall be properly stored and not left lying on the ground where it could be damaged or used in an unsafe manner.

### 11.3 Lifting Operations:

The Contractor shall ensure that during the course of any lifting operations the following minimum requirements shall be followed:

- (a) All lifting operations shall be under the control of a competent "Lifting Supervisor" appointed by the contractor.
- (b) Only thoroughly trained and experienced crane drivers shall be allowed to operate cranes.
- (c) Only thoroughly trained and experienced slingers and riggers shall be allowed to sling loads and give directions to crane operators.
- (d) A standard code of hand signals shall be adopted for controlling the movements of the crane and both the driver and the signaller shall be thoroughly familiar with the signals.
- (e) The driver of the crane shall respond to signals from only the appointed signaller but shall obey the stop signal at any time no matter who gives it.
- (f) Before commencing any lifting operations the ground conditions on which the crane is to stand shall be investigated in order to ensure that the load bearing capabilities are adequate.
- (g) The weight of the load must be known to the crane driver and the stinger/rigger before lifting commences.
- (h) No loads are to be stowed over public areas without stopping pedestrians and vehicles first. No unauthorised persons are allowed into the lifting zone. No person is allowed to ride the hook of the crane or the loads being lifted.
- (i) Any areas where a minimum clearance of six hundred millimetres from the rear of the stowing kentledge of the crane cannot be achieved and where persons could be trapped against obstacles then a fence shall be erected to prevent access.
- (j) All crane hooks shall be fitted with an operable safety catch.
- (k) Wherever practicable all loads shall have tag-lines attached in order to ensure that the load can be controlled at all times.
- (l) Provision shall be made to ensure that the lifting slings or chains can be safely removed from the loads once they have been landed.
- (m) All lifted loads and stacked materials shall be left in a secure and stable condition at all times.
- (n) Whenever working close to isolated overhead power-lines the lifting appliances shall be grounded to earth as a secondary precaution against accidental energisation.
- (o) No close working to any live overhead power-lines is permitted without the operation of a strict Permit to Work system being in place.

### 11.4 WORK IN CONFINED SPACES

11.4.1 The term 'confined space' has two defining features. Firstly, it is a place which is substantially (though not always entirely) enclosed and, secondly, there will be a reasonably foreseeable risk of serious injury from hazardous substances or conditions within the space or nearby.

11.4.2 Some confined spaces are fairly easy to identify, for example, closed tanks and sewers. Others are less obvious but may be equally dangerous, for example closed and unventilated or inadequately ventilated rooms and silos, ducts, culverts, tunnels, boreholes, bored piles, manholes, shafts, excavations, sumps, inspection pits, cofferdams ,and building voids.

11.4.3 The most likely hazards of working in confined spaces are as follows:

- (a) Flammable Substances and Oxygen Enrichment;
- (b) Toxic Gas, Fume or Vapour;
- (c) Oxygen deficiency;
- (d) The Ingress or Presence of Liquids;
- (e) Presence of Excessive Heat,
- (f) Excessive Humidity

11.4.4 Entry Procedures

Contractors will ensure that only persons, who have been thoroughly trained, experienced and are physically fit shall be allowed to work in Confined Spaces.

Persons with any of the following medical conditions shall not be allowed to work in confined spaces:

- (a) a history of fits, blackouts or fainting attacks,
- (b) a history of heart disease or disorder,
- (c) high blood pressure,
- (d) asthma bronchitis, or shortness of breath on exertion,
- (e) deafness
- (f) meniers disease or disease involving giddiness or loss of balance,
- (g) claustrophobia or nervous or mental disorder,
- (h) back pain or joint trouble that would limit mobility in confined spaces,
- (i) deformity or disease of the lower limbs limiting movement.
- (j) Chronic skin disease,
- (k) Serious defects in eye sight or lack of sense of smell

11.4.5 No smoking shall be allowed in or within 2 meters of the opening to any confined space and suitable warning signs shall be positioned.

11.4.6 Before any confined space work commences the following equipment shall be available for use:

- (a) Multi Gas Monitor; or other suitable gas monitoring equipment.
- (b) Self contained breathing apparatus.
- (c) Full body type harness for each worker
- (d) Flame proof Lighting
- (e) Ventilation equipment
- (f) Tripod and Lifeline Hoist Rope for work in situations where a vertical exit from the confined space is required

11.4.7 The persons involved in confined space working operations shall be trained in use of above mentioned equipments.

11.4.8 When workers are employed in sewers and manholes, which are in use, the Contractor shall ensure that manhole covers are open and manholes are ventilated at least for an hour before workers are allowed to go into them. Manholes so open shall be cordoned off with suitable railing and provide warning signals or boards to prevent accidents to the public.

## 12 SITE ELECTRICITY

12.1 The Contractor shall nominate a qualified representative who shall be solely responsible for ensuring the safety of all temporary electrical equipment on Site. The name and contact telephone number of the representative shall be displayed at the main distribution board for the temporary electrical supply so that he can be contacted in case of an emergency.

12.1 All electrical installation work on Site shall be carried out in accordance with the requirements laid down in the Specification. All work shall be supervised or executed by qualified and suitably categorized electricians.

12.3 All Temporary Electrical Site installations and distribution systems shall be in accordance with Indian Electrical Regulations, The Power Companies' Supply Rules, BS 7671 Requirements for electrical installation, the IEE Wiring Regulations (16<sup>th</sup> Edition), BS 7375 Distribution of Electricity on Construction and Building Sites; BS 4363 Distribution Assemblies for Electricity Supplies for Construction and Building Sites.

12.4 Distribution equipment utilised within the temporary electrical distribution system shall incorporate the following features:-

- (a) flexibility in application for repeated use;
- (b) suitability for transport and storage;
- (c) robust construction to resist moisture and damage; and
- (d) Safety in use.

12.5 All cabling shall be run at high level whenever possible and firmly secured to ensure it does not present a hazard or obstruction to people and equipment.

12.6 Protection shall be provided for all main and sub-circuits against excess current, residual current and earth faults. The protective devices shall be capable of interrupting (without damage to any equipment or the mains or sub-circuits) any short circuit current that may occur.

12.7 Earthing and bonding shall be provided for all electrical installations and equipment to prevent the possibility of dangerous voltage rises and to ensure that faults are rapidly cleared by installed circuit protection.

12.8 Only plugs and fittings of the weatherproof type shall be used.

- 12.9 Cables shall be selected after full consideration of the conditions to which they will be exposed and the duties for which they are required. For supply cables up to 3.3kV the cable armouring shall be used as the earth return in conditions where the cable is continuously extended and not subject to continuous movement after installation.
- 12.10 When workers are employed on electrical installations which are already energised, insulating mats, working apparel such as gloves, sleeves and boots, as may be necessary, shall be provided. Workers shall not wear any rings, watches and carry keys or other material which are good conductors of electricity.

### 13 WELDING AND CUTTING

- 13.1 Contractors shall ensure that all welding, cutting and gouging is carried out so that the risks are kept at a minimum.
- 13.2 All equipment must be in good condition & properly installed.
- 13.3 Flexible hoses, cables and connections must be free from damage or risk of damage in service. Cables and hoses shall have adequate carrying capacity.
- 13.4 Welders shall wear the correct personal protective equipment which includes the following;
- (a) face and eye protection with correct grade of shield;
  - (b) gauntlet gloves;
  - (c) safety footwear
  - (d) welders apron or fire retardant overalls;
  - (e) The atmosphere in the vicinity of work must be known to be safe to breathe and free from flammable gases.
- 13.5 Adequate ventilation and fume extraction must be provided and used as required by the risk assessment and especially in enclosed areas and pits.
- 13.6 Surfaces to be heated by the process must be cleaned of contaminants that may be degraded by heat or give off noxious fumes (e.g. paints, plastics, zinc coating).
- 13.7 Naked flames or high temperature surfaces must not be allowed in the vicinity of volatile solvents.
- 13.8 All moveable flammable materials must be removed from the vicinity of work and fireproof covers placed over all flammable materials that cannot be removed.
- 13.9 During all welding the work piece and any access equipment must be safely secured.
- 13.10 Oxy-fuel Gas Processes**
- 13.10.1 Handle cylinders carefully, keep outside enclosed areas and secure in an upright position. Keep oxygen cylinders away from fuel gas cylinders where possible.

- 13.10.2 Flash back arresters shall be fitted to both the fuel gas and oxygen cylinders.
- 13.10.3 Non return valves shall be fitted to the torch or cutting torch;
- 13.10.4 Ensure screwed fittings and hoses are correct and keep screwed and sealed surfaces free of contaminants, such as oil and grease.
- 13.10.5 Close cylinder valves when flame is extinguished.
- 13.10.6 Ensure any vessel, drum or tank that has contained flammable or toxic substances has been properly cleaned and inspected before subjecting it to hot work.
- 13.10.7 Checks for gas leaks should be carried out using soapy water.
- 13.10.8 Remove all torches from enclosed areas when not in use.
- 13.10.9 Suitable fire extinguisher to be available at all places where hot work is being carried out.
- 13.10.10 Use firewatchers if there is a possibility of ignition unobserved by the operator (e.g. on the other side of bulkheads).

### **13.11 Arc Cutting, Gouging and Welding Processes**

- 13.11.1 Connect the welding current return cable to the workpiece close to the arc point or to a well electrically conductive support structure in good contact with the workpiece. Also, connect the workpiece or the support structure to a separate earth terminal.
- 13.11.2 Take precautions against the risk of increased fume hazards when welding with chrome containing fluxed consumables or high current metal inert gas (MIG) or tungsten inert gas (TIG) processes.
- 13.11.3 Avoid being in contact with water or wet floors when welding. Use duckboards or rubber protection. 21.3.4 Provide screens to limit exposure of others to glare from arcs.
- 13.11.3 Use the correct eye and face protection with the correct filter glass.
- 13.11.5 Use a low voltage open circuit relay device if welding with alternating current in constricted or damp places.

## **14 HEAVY PLANT OPERATIONS**

- 14.1 The contractor shall ensure that only safe and well-maintained plant and equipment shall be allowed to operate on any of the sites.
- 14.2 All operators of heavy plant such as, earth movers, piling rigs, etc. shall be medically fit, over eighteen years of age and be thoroughly trained and experienced to operate the equipment.

- 14.3 No unauthorised person shall be permitted to ride on plant.
- 14.4 The operators shall conduct daily inspections of their respective items of plant with the results of these inspections being recorded and the records kept available for inspection.
- 14.5 All mobile heavy plant shall be equipped with at least one 5kg Dry Powder Fire Extinguisher, carried at a suitable position so as to ensure its easy availability.
- 14.6 Whenever heavy plant is operating in congested areas, thoroughly trained and experienced banksmen shall be deployed to control the plant and personnel movement and interface.
- 14.7 Any waste engine oil and filters following any on site servicing and maintenance shall be removed from the sites and disposed of in an environmentally conscious manner at authorised disposal locations. .
- 14.8 All drums of fuel oil shall be stored on drip trays or the fuel shall be kept in bunded bulk storage fuel tanks, with quantities stored being kept to a minimum.
- 14.9 The storage areas shall have dry powder fire extinguishers positioned in close proximity to their location for use in an emergency.

## 15 **DEMOLITION**

- 15.1 The Contractor shall ensure that all demolition works shall be carried out in a controlled manner under the management of experienced and competent supervision.
- 15.2 Prior to any demolition commencing, a survey shall be conducted to identify if there are any hazardous materials present, for example the presence of materials such as asbestos and lead.
- 15.3 If any hazardous materials are found, then consideration shall be given as to whether they shall need to be removed by a Specialist Agency or Sub-contractor prior to the main demolition works commencing.
- 15.4 Before the demolition commences all relevant notifications will need to be given to the local authorities and media.
- 15.5 Measures for protection to the public shall be required to be put into place in order to give protection from any possible falling debris and dust generation.
- 15.6 All power supplies and services shall be disconnected before any demolition work commences.
- 15.7 Before any demolition work is commenced and also during the process of the work, all roads and open areas adjacent to the work site shall either be closed or suitably protected.

## 16A **FALSEWORK/FORMWORK**

- 16A.1 The contractor shall ensure that all falsework / formwork-has been properly designed and is suitable for the purpose.
- 16A.2 All designed falsework / formwork shall be erected in strict accordance to the design.
- 16A.3 Prior to the loading and subsequent striking of falsework / formwork, the same shall be inspected to ensure that they have been erected in the prescribed manner.
- 16A.4 Adequate provision shall be made on the working platforms for the concrete placement operations, these shall include locations for vibrators and the unobstructed movement of personnel controlling the rubber hose during the concrete pumping operations or the concrete skip during any skipping operations.
- 16A.5 The Contractor shall use the following checklist to check that falsework / formwork is being used safely;
- (a) have the design and the supports for shuttering and falsework / formwork been checked?
  - (b) is it being erected safely from steps or proper platforms?
  - (c) are the props plumb and properly set out?
  - (d) are the bases and ground conditions adequate for the loads?
  - (e) are the correct pins used in the props?
  - (f) are the timbers in good condition?
  - (g) is it inspected by a competent person against the agreed design before permission is given to pour concrete?

## 16B **WORKING AT HEIGHT**

Suitable scaffolds shall be provided for workmen for all work that cannot safely be done from the ground, or from solid construction except for such short period work as can be done safely from ladders. When a ladder is used, an extra labourer shall be engaged for holding the ladder and if the ladder is used for carrying materials as well, suitable foot-holds and hand-holds shall be provided on the ladder, which shall be given an inclination not steeper than 1/4 to 1.

Scaffolding or staging more than 3.25 meters above the ground or floor, swung or suspended from an overhead support or erected with stationary support, shall have a guard rail properly attached, bolted, braced and otherwise secured at least 1 meter high above the floor or platform of such scaffolding or staging and extending along the entire length of the outside and ends thereof with only such openings as may be necessary for the delivery of materials. Such scaffolding or staging shall be so fastened as to prevent it from swaying from the support or structure.

Working platforms, gangways, and stairways shall be so constructed that they do not sag unduly or unequally, and if the height of any platform or gangway or stairway

is more than 3.25 meters above ground level or floor level, it shall have closely spaced boards, have adequate width and be suitably provided with guard rails as described in (ii) above.

Every opening in the floor of a structure or in a working platform shall be provided with suitable means to prevent fall of persons or materials by providing suitable fencing or railing with a minimum height of one metre.

Safe means of access and egress shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 metres in length. The width between side rails in a rung ladder shall in no case be less than 30 cm for ladders up to and including 3 metres in length. For longer ladders the width shall be increased at least 6 mm for each additional 30 cm of length. Spacing of steps shall be uniform and shall not exceed 30 cm.

**17A Deleted**

**17B WORK ADJACENT TO/ON LIVE ROADWAYS**

Whenever working adjacent to any live roadways, Whenever working adjacent to any live roadways, the Contractor shall consider the following aspects :

- (a) Close liaison with the Police and Municipal Authorities.
- (b) Production of an agreed traffic management scheme in accordance with the local traffic laws ( Barriers, signs, lights and road markings. ). This shall include adequate provision for pedestrians.
- (c) The provision and wearing of high visibility clothing by all personnel engaged in the activities.
- (d) Traffic Marshals shall be appointed and deployed to ensure that all road movement is carried out safely.

Immediately after the issue of letter of acceptance (not later than 21 days from the issue of letter of acceptance), the Contractor shall develop a detailed Traffic Management Plan for the work under the contract to cope with the traffic disruption as a result of construction activities and shall implement the Traffic Management Plan throughout the whole period of the Contract.

The basis for the Plan shall take into consideration the need to to minimise the inconvenience of road users and the interruption to surface traffic through the area impacted by the construction activities; to ensure the safety of road users in the impacted area to facilitate access to the construction site, and to maintain reasonable construction progress & to ensure traffic safety at construction site.

The Contractor shall manage the vehicular and pedestrian right of way during the period of construction and shall take account of the need to maintain essential traffic requirements, as these may influence the construction process. Where it becomes necessary to close a road or intersection, or supplementary lanes are required to satisfy

the traffic demands, traffic diversion schemes to adjacent roadways shall be developed with quantitative justifications. The Contractor shall co-ordinate with all relevant authorities.

The overall fabrication/erection plan of the Contractor shall take into account the need to ensure that any roads or intersections that have no alternative access shall not be fully closed for construction, emergency access to all properties shall be maintained at all times, access to business premises and property shall be maintained to the extent that normal activities are not seriously disrupted.

The Contractor shall make all arrangements with and obtain the necessary approval from the transport authorities and the Police Department for temporary traffic arrangements and control on public roads. In the event that the Contractor, having used its best endeavours, fails to secure the necessary approval from the transport authorities and the Traffic Police Department for temporary traffic arrangements and control on public roads, then the Employer will use its best endeavours to assist the Contractor to secure such approval but without responsibility on the part of the Employer to do so. This shall be considered incidental to work and nothing extra shall be paid to contractor in this regard.

#### **TEMPORARY TRAFFIC ARRANGEMENTS AND CONTROL**

Temporary traffic diversions and pedestrian routes shall be surfaced and shall be provided where work on roads or footpaths obstruct the existing vehicular or pedestrian access. The relevant work shall not be commenced until the approved temporary traffic arrangements and control have been implemented.

Temporary traffic arrangements and control for work on public roads and footpaths shall comply with the requirements of the Traffic Police. Copies of documents containing such requirements shall be kept on the Site at all times.

Temporary traffic signs, including road marking, posts, backing plates and faces, shall comply with the requirements of the Traffic Police and should be in accordance with the requirements of Ministry of Surface Transport. All overhead traffic management signs that are fixed to bridges and gantries shall be illuminated at night. Pedestrian routes shall be illuminated at night to a lighting level of not less than 50 lux.

Adequate number of traffic marshals shall be deployed for smooth regulation of traffic.

Temporary traffic arrangements and control shall be inspected and maintained regularly, both by day and night. Lights and signs shall be kept clean and legible. Equipment which are damaged, dirty, incorrectly positioned or not in working order shall be repaired or replaced promptly.

This shall be considered incidental to work and nothing extra shall be paid to contractor in this regard.

**PARTICULARS OF TEMPORARY TRAFFIC ARRANGEMENTS AND CONTROL**

The following particulars of the proposed temporary traffic arrangements and control on public roads shall be submitted to the DIMTS for consent at least 14 days before the traffic arrangements and control are implemented:

- (a) details of traffic diversions and pedestrian routes;
- (b) details of lighting, signage, guarding and traffic control arrangements and equipment;
- (c) any conditions or restrictions imposed by Traffic Police or any other relevant authorities, including copies of applications, correspondence and approval.

Where concrete barriers are used to separate flows of traffic, the barriers shall be in a continuous unbroken line. No gaps shall be left between any section of the barrier.

Site perimeter fencing and barriers along the roadway, shall have flashing amber lights positioned on the top of them every 10 metres apart and at every abrupt change in location. Directly below the flashing light shall be fixed, in the vertical position, a white fluorescent light with a waterproof cover.

**USE OF ROADS AND FOOTPATHS**

Public roads and footpaths on the Site in which the work is not being carried out shall be maintained in a clean and passable condition.

Measures shall be taken to prevent the excavated materials, silt or debris from entering gullies on roads and footpaths; entry of water to the gullies shall not be obstructed.

Surfaced roads on the Site and leading to the Site shall not be used by tracked vehicles unless protection against damage is provided.

Contractor's Equipment and other vehicles leaving the Site shall be loaded in such a manner that the excavated material, mud or debris will not be deposited on roads. All such loads shall be covered or protected to prevent dust being emitted. The wheels of all vehicles shall be washed when necessary before leaving the Site to avoid the deposition of mud and debris on the roads.

**REINSTATEMENT OF PUBLIC ROADS AND FOOTPATHS**

Temporary diversions, pedestrian access and lighting, signing, guarding and traffic control equipment shall be removed immediately when they are no longer required. Roads, footpaths and other items affected by temporary traffic arrangements and control shall be reinstated to the same condition as existed before the work started or as permitted by the DIMTS immediately after the relevant work is complete or at other times permitted by the DIMTS. The Contractor shall submit his design for the reinstatement to the relevant authorities and obtain their prior approval to carrying out the work. Reinstatement works shall include:

- Parking bays

- Footpath and kerbs
- Road Signage
- Street Lighting
- Landscaping
- Traffic Lights and Control Cable

This shall be considered incidental to work and nothing extra shall be paid to contractor in this regard.

Whenever working adjacent to any live roadways, the Contractor shall consider the following aspects :

- a) Close liaison with the Police and Municipal Authorities.
- b) Production of an agreed traffic management scheme in accordance with the local traffic laws ( Barriers, signs, lights and road markings. ). This shall include adequate provision for pedestrians.
- c) The provision and wearing of high visibility clothing by all personnel engaged in the activities.
- d) Traffic Marshals shall be appointed and deployed to ensure that all road movement is carried out safely.

## 18 PERSONAL PROTECTIVE EQUIPMENT

18.1 The Contractor shall at all times keep and maintain an adequate supply of suitable personnel protective equipment which shall be readily available for use at all times on the sites, and would include amongst others the following items:

- (a) Safety Helmets.
- (b) Hearing Protection.
- (c) Respiratory Protection.
- (d) Eye Protection.
- (e) Protective Gloves.
- (f) Safety Footwear.
- (g) High Visibility Clothing to BS EN 471 Class 3 standard

18.2 All sites shall be designated as HARD HAT and SAFETY BOOTS SITES and as such an adequate supply of safety helmets and safety boots shall be kept available for use by all staff, workers and authorised visitors to the sites.

18.3 The Contractor shall remove from the site any worker who consistently refuses to wear the appropriate personal protective equipment.

18.4 All workmen at site shall be provided with safety helmets and yellow/orange jackets. Workmen required on site during night hours shall be provided with fluorescent yellow jackets with reflective lopes. Workers employed on mixing asphaltic materials, cement, lime mortars, concrete etc. shall be provided with protective footwear, protective goggles. Those engaged in handling any material, which is injurious to the eyes, shall be provided with protective goggles. Those engaged in welding works

shall be provided with welder's protective eye-shield. Stone breakers shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.

## 19 **FIRST AID**

At every workplace, there shall be maintained in a readily accessible place first aid appliances including an adequate supply of sterilised dressings, bandages, sterilised cotton wool, eye irrigation sterile solution, disposable gloves, ointments for burns/cuts, pressure dressings, paper towels, general purpose medicines etc. as prescribed in the Factory Rules of the State in which the work is carried on. The appliances shall be kept in good order and, in large work places, they shall be placed under the charge of a responsible person who shall be readily available during working hours. In each site office and location one employee, suitably trained in first aid, should be available at all working hours for the purpose of attending to emergencies.

## 20 **FIRE PRECAUTIONS**

20.1 The Contractor shall be responsible for supplying and maintaining adequate fire precaution facilities on all his sites. The following minimum standards should be adhered to :

- (a) The Contractor shall ensure that specially trained personnel are available to deal with fires due to electrical causes, gas explosions etc.
- (b) A good standard of housekeeping shall be maintained at all times on the sites.
- (c) No accumulations of rubbish shall be allowed to gather.
- (d) Combustible scrap and other construction debris shall be disposed off site on a regular basis. If scrap is to be burnt on site, the burning site should be specified and located at a distance no less than 12 metres from any construction work or any other combustible material.
- (e) Signage shall be erected at prominent positions showing the correct use of portable first aid fire extinguishers.
- (f) Emergency plans and Fire Evacuation plans shall be prepared and issued . Mock drills should be held on a regular basis to ensure the effectiveness of the arrangements.

### 20.2 **Fire Fighting Equipment**

At various locations around the site clearly visible fire points shall be established for use in an emergency and each fire point should have available as a minimum the following type of equipment:-

- (a) Dry Powder Extinguisher.
- (b) Water Type Extinguisher.
- (c) Bucket of Sand.

Recharging of fire extinguishers and their proper maintenance should be ensured and as a

minimum should meet Indian National Standards.

The Telephone Number of the local fire brigade should be prominently displayed near each telephone on site. Supervisors and workmen at the site should be trained in the use of fire fighting equipment provided at the site.

### 20.3 Storage of Flammable Liquids

All flammable liquids shall be kept in a secure fire resistant store protected from electrical sparks welding sparks open flames and smoking.

Only such amounts of flammable liquids should be issued as are required for immediate use.

Cans for carrying flammable liquids should be leakproof and properly stoppered and clearly marked "FLAMMABLE LIQUID".

Rags soaked in paints, kerosene and other flammable liquids should be disposed of daily under supervision. Large quantities of such rags should not be allowed to accumulate.

All Diesel fuel storage tanks shall be bunded around in order to control any spillage or leakage that may occur.

"NO SMOKING" signs shall be prominently displayed at all areas where flammable materials are stored.

## 21 SITE PERIMETER HOARDING

21.1 The Contractor shall be required to keep the site as safe and secure as possible at all times, including the erection of site perimeter Hoarding which shall also deter trespassers both adult and children alike.

21.2 The Contractor shall provide a solid two metre high securely erected barricade around the perimeter of the site, with agreed and guarded access and egress points for both personnel and vehicles.

21.3 At each entrance to the site the Contractor shall erect a large billboard warning all persons who enter the site that they are required to wear the appropriate Personal Protective Clothing and that no unauthorised access is allowed.

21.4 Wherever the fence runs adjacent to the highway with no buffer-zones then the fence shall have traffic warning lights duly affixed to it.

21.5 Wherever the fence borders on pedestrian footpaths lighting shall be provided to illuminate the pedestrian routes. The positioning of the fence-line shall not reduce the width of the pedestrian footpath to less than 900 mm in order to be able to accommodate disabled persons in wheelchairs.

21.6 Site perimeter fencing shall be washed at least once a month and repainted at least annually.

21.7 The site fencing shall need to be inspected on a regular basis in order to ensure that the integrity of the fencing is maintained at all times as far as is practicable.

## 22 TRAFFIC MANAGEMENT

- 22.1 The contractor shall ensure that all traffic management schemes shall be in accordance with the agreed schemes following consultation with the Local Traffic Police and the Metropolitan and other Authorities in charge of the area.
- 22.2 Adequate and clear warning signs shall be displayed at appropriate distances before the commencement of the site workings. In addition prior warning shall be given concerning the location of the approaching site entry and exit points.
- 22.3 All traffic signs, barriers, cones and lighting shall be kept maintained and clean at all times.
- 22.4 Vehicles exiting the site shall observe caution at all times, if the vehicles are exiting directly onto the live carriageway then they shall be directed by an identifiable Traffic Marshal.
- 22.5 Regular inspections of the traffic management schemes shall be conducted by the Contractors in both the daytime and night time hours with the results of these inspections being recorded. These records shall be kept available for inspection by the Employer's Representative.

22.6 Vehicle Control

Traffic Marshals shall be available for directing vehicles that are exiting the sites directly onto the live carriageways. Any vehicles entering the sites that are required to execute reversing manoeuvres shall do so under the strict control of a trained and designated banksman.

22.7 Spoil Removal

Only well maintained and licensed vehicles shall be allowed to be used for the removal of excavated spoil from the sites.

All drivers shall be medically fit and in possession of a valid and current driving licence.

No vehicles, which are overloaded, shall be allowed to leave the site.

Any vehicles leaving the sites carrying loads which are liable to produce airborne contaminants shall prior to leaving the site securely sheet the load over in order to effectively contain any dispersment during transportation on the public highway.

Vehicles exiting the site directly onto the live carriageway shall do so under the control of the clearly identified Traffic Controller.

Any vehicles that are required to reverse whilst on the site shall do so under the control of a trained banksman.

Any vehicles prior to leaving the site shall have their wheels washed and any loose material removed.

Any spoil that is removed from the work-sites shall be disposed of only at authorized dumping sites.

## 23 VISITORS TO SITE

All visitors to site shall report to the Contractors site offices where they shall be issued with appropriate Personal Protective Equipment if they are to go out onto the site work areas. Any visitors going out to the site work areas shall be accompanied at all times by a member of the site personnel.

## 24 ENVIRONMENTAL FRIENDLY CONSTRUCTION PRACTICES

### 24.1 Containment of Air Pollution

#### 24.1.1 During Transport of Material

- (a) The Contractor shall take precautions, to minimize visible particulate matter from being deposited upon public roadways as a direct result of his operations. Precautions include removal of particulate matter from equipment before movement to paved streets or prompt removal of material from paved streets onto which such material has been dropped.
- (b) All construction equipment should be washed clean of visible dirt/mud before exiting the construction sites. Any deposition of material on public streets by construction equipment should be removed by manual sweeping, or by deploying electro — mechanical devices.
- (c) The Contractor shall provide a wash pit or a wheel washing and/or vehicle cleaning facility at the exits from work sites such as construction depots and batching plants. At such facility, high-pressure water jets will be directed at the wheels of vehicles to remove all spoil and dirt. Water shall be pumped through an electrically operated pump set, to hydrants attached with rubber hoses, by activation of push button located at the hydrant, allowing for upto 10 minutes of wash time.
- (d) Wheel washing facilities will be provided with efficient drainage, incorporating silt traps to prevent any excessive build up of water. These facilities could include water re-circulation apparatus to minimize water consumption. At the wheel wash facility, water, dirt, gravel etc. shall be drained into precast trench drains with removable grated cover. This dirty water shall flow, through a piping, into solids separator and from there to oil separator before final discharge.
- (e) Where wheel-washing facility is not possible, the contractor shall ensure manual cleaning of wheels by wire brushes or similar suitable means.
- (f) The Contractor shall ensure that vehicles with an open load carrying area used for moving potentially dust-producing materials shall have properly fitting side and tailboards. Materials having the potential to create dust shall not be loaded to a level higher than the side and tail boards, and shall be carried in vehicles fitted with covers.

#### 24.1.2 During Dumping of Materials At Site

- (a) The Contractor shall place material in a manner that will minimise dust production. Material shall be stabilized each day by watering or other accepted dust suppression

- techniques.
- (b) The heights from which materials are dropped shall be the minimum practical. height to limit fugitive dust generation.
  - (c) The Contractor shall stockpile material in the designated locations by the Employer with suitable slopes. Access to the site shall be regulated for entry of men, material and machine.
  - (d) During dry weather, dust control methods such as water sprinkling must be used daily especially on windy, dry day to prevent any dust from blowing. During rains, the stockpile may be covered with tarpaulin or similar material to prevent run off.
  - (e) The Contractor shall provide water sprinkling at any time that it is required for dust control use.
  - (f) Dust control activities shall continue even during work stoppages

#### 24.1.3 At Construction Site

- (a) At each construction site, the Contractor shall provide storage facilities for dust generating materials and shall be closed containers/bins or wind protected shelters or mat covering or walled or any combination of the above to the satisfaction of the Employer. The Contractor shall spray water at construction sites as required to suppress dust, during handling of excavation soil or debris or during demolition.
- (b) Stockpiles of sand and aggregate greater than 20m<sup>3</sup> for use in concrete manufacture shall be enclosed on three sides, with walls extending above the stockpile and two (2) metres beyond the front of the stockpile.
- (c) Effective water sprays shall be used during the delivery and handling of all raw sand and aggregate and other similar materials, when dust is likely to be created and to dampen all stored materials during dry and windy weather.
- (d) Areas within the Site such as construction depots and batching plants, where there is a regular movement of vehicles shall have an approved hard surface that is kept clear of loose surface material.
- (e) Unless the Employer has given consent otherwise, the Contractor shall restrict all motorized vehicles on the Site to a maximum speed of 15 kilometers per hour and confine haulage and delivery vehicles to the designated roadways inside the site.
- (f) At the Batching plant the following additional conditions shall be complied with:
  - ◆ The Contractor shall undertake at all times the prevention of dust nuisance as a result of his activities.
  - ◆ The Contractor shall frequently clean and water the concrete batching plant and crushing plant sites and ancillary areas to minimise any dust emission.
- (g) The Contractor shall erect hoardings as specified in Employer's Requirements — Construction, securely around all construction work sites during the main construction activity, to contain dust within the site area and also to reduce air turbulence caused by passing traffic. The hoarding shall be safely secured to the ground to prevent from toppling with minimum gap between the base of hoarding and ground surface.

#### 24.1.4 During Drilling and Blasting

- (a) Water spray should be used to control dust during breaking of rock/concrete.
- (b) During blasting operations, appropriate precautions should be taken to minimise dust such as the use of blast nets, canvas covers and watering.

- (c) Wire mesh made of heavy-duty tyres or sand bags should be used over blast area on each shot to prevent flying rock and reduce dust.
- (d) Blasting technique should be consistent not only with nature and quantity of rock to be blasted but also the location of blasting.
- (e) The contractor shall give due preference to explosives with better environmental characteristics.

#### 24.2 Containment of Water Pollution

- (a) At construction sites, depots and batching plants temporary drainage works should be maintained, removed and reinstated as necessary and all other necessary precautions should be taken for avoidance of damage by flooding and silt.
- (b) Sedimentation tanks or other acceptable measures, of sufficient capacity to trap silt-laden water before discharge into the outlet drain should be provided. The system should be flexible and be able to handle multiple inputs from a variety of sources.
- (c) Temporary open storage of excavated materials from cut and cover-tunneling work used for backfill on site should be covered with tarpaulin or similar fabric during rainy season or at any time of the year when rainstorms are likely. Washout of construction or excavated materials should be diverted to drainage system through appropriate sediment traps.
- (d) Bentonite slurries or other grouts used in diaphragm wall construction piling and other concrete works should be collected in a separate slurry collection system. If reuse is not practicable then it should be disposed off at nearest landfill site after obtaining permission from agency owning the landfill and under the conditions imposed by the agency concerned, or to a different disposal location as advised by the Employer.
- (e) The Contractor shall discharge wastewater arising from site offices, canteens or toilet facilities constructed by him into sewers after obtaining prior approval of agency controlling the system. A wastewater drainage system shall be provided by the Contractor to drain wastewater into the sewerage system.
- (f) Surface run-off from construction sites, depots should be discharged into storm drains via adequately designed sand/silt removal facilities such as sand traps silt traps or sediment basins.
- (g) Perimeter channels/drains should be constructed in advance of site formation works and earthworks. Silt removal facilities, channels and manholes should be maintained and the deposited silt and grit should be removed regularly, to ensure that these facilities are functioning properly at all times.
- (h) Construction works should be programmed to minimize soil excavation works in rainy seasons (July to September). If excavation in soil could not be avoided in these months or at any time of year when rain are likely, for the purpose of preventing soil erosion, temporarily exposed slope surfaces should be covered e.g. by tarpaulin, and temporary access roads should be protected by crushed stone or gravel, as excavation proceeds. Arrangement should always be in place to ensure that adequate surface protection measures can be safely carried out well before the arrival of rains.

- (i) Measures should be taken to minimize the ingress of rainwater into trenches. If excavation of trenches in wet seasons is necessary, they should be dug and backfilled in short sections.
- (j) Rainwater pumped out from trenches or foundation excavation should be discharged into storm drains via silt removal facilities.
- (k) Open stockpiles of construction materials (e.g. aggregates, sand and fill material) on sites should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.
- (l) Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris from getting into the drainage system, and to prevent storm run-off from getting into sewers. Discharge of surface run-off into sewers must always be prevented in order not to unduly overload the sewerage system.
- (m) Groundwater pumped out of wells, etc. for the lowering of ground water level in basement of foundation construction, and groundwater seepage pumped out of tunnels under construction should be discharged into storm drains after the removal of silt in silt removal facilities.

#### 24.3 Containment of Noise

- (a) To the extent required to meet the noise limits, the Contractor shall use reasonable efforts to include noise reduction measures listed below to minimize construction noise emission levels. Noise reduction measures include, but not limited to the following:
  - (i) Minimize the use of impact devices, such as jackhammers, and pavement breakers. Where possible, use concrete crushers or pavement saws for tasks such as concrete deck removal and retaining wall demolition.
  - (ii) Equip noise producing equipment such as jackhammers and pavement breakers with acoustically attenuating shields or shrouds recommended by the manufacturers thereof, to meet relevant noise limitations.
  - (iii) Use construction equipment manufactured or modified to dampen noise and vibration emissions, such as:
    - Use electric instead of diesel-powered equipment.
    - Use hydraulic tools instead of pneumatic impact tools.
  - (iv) Maximize physical separation, as far as practicable, between noise generators and noise receptors. Separation includes following measures:
    - Provide enclosures for stationary items of equipment and barriers around particularly noisy areas on site.
    - Locating stationary equipment so as to minimize noise and vibration impact on community.
  - (v) To the extent feasible, configure the construction site in a manner that keeps noisier equipment and activities as far as possible from noise sensitive locations and nearby buildings. Plant and equipment known to emit noise strongly in one direction should where possible, be oriented in a direction away from noise sensitive receptor and reduce the number of plant and equipment operating in critical areas close to noise sensitive receptors.

- (vi) Scheduling truck loading, unloading, and hauling operations so as to minimize noise impact near noise sensitive locations and surrounding communities.
  - (vii) Minimize noise intrusive impacts during most noise sensitive hours. Plan noisier operations during times of highest ambient noise levels. Keep noise levels relatively uniform; avoid excessive and impulse noises.
  - (viii) Equipment and plant are not to be kept idling when not in use.
  - (ix) Schedule work to avoid simultaneous activities that both generate high noise levels.
- (b) For diesel generator sets, the noise from the DG set shall be controlled by providing an acoustic enclosure or acoustic treatment of the room for DG sets. Such acoustic enclosures/acoustically treated rooms, shall be so designed for minimum 25 dB(A) insertion loss or for meeting the ambient noise standards, whichever is on higher side.

#### 24.4 Containment of Waste

24.4.1 Handling and disposal of waste like General refuse, Construction Waste including waste from excavated material etc. may cause environmental degradation and nuisance. To prevent it, such waste shall be handled and disposed properly. As such, transportation and disposal of all waste shall be strictly managed by the Contractor.

##### 24.4.2 General Refuse

Handling and disposal of general refuse shall cope with the peak construction workforce during the construction period. Provided the refuse is stored and transported in accordance with good practice and disposed at licensed landfills, the negative environmental impacts would be minimal.

General refuse shall be stored in enclosed bins or units separate from construction and chemical wastes. An authorised waste collector should be employed by the contractor to remove general refuse from the site, on a daily basis to minimize odour, pest and litter impacts.

##### 24.4.3 Construction Waste

(i) Construction Waste arising from the project construction activities and from the demolition of existing structures where necessitated shall be regularly sent for dumping in nearest sanitary landfill sites.

##### 24.4.4 Chemical Waste

Chemical waste is likely to be generated by construction activities shall be stored in the suitable containers. Containers used for the storage of chemical waste should:

- Be suitable for the substances they are holding, resistant to corrosion, maintained in good condition, and securely closed.
- Be of adequate capacity and

- Display a label in English and Hindi as to the contents, quantity and safe method of disposal in accordance with instructions contained in MSDS.

The storage area for chemical waste should:

- Be clearly labeled and used solely for the storage of chemical waste;
- Be enclosed on at least three sides;
- Have an impermeable floor and bunding, of capacity to accommodate 110% of the volume of the largest container or 20% by volume of the chemical waste stored in that area, whichever is the greatest;
- Have adequate ventilation;
- Be covered to prevent rainfall entering and
- Be arranged so that incompatible materials are adequately separated.

Disposal of chemical waste should be via a licensed waste collector; duly authorized by MOEF or State Pollution Control Board as the case may be. License of the waste collector shall be shown to the employer/engineer on demand.

#### 24.4.5 Hazardous Waste

Classification of waste as Hazardous shall be in accordance with Hazards Waste Management & Handling) Rules 1989, and 2003 or its latest amendment.

The contractor shall identify all the hazardous waste generated as a result of his activities. If such waste is generated then the contractor shall apply to State Pollution Control Board for 'authorization' and dispose the same only to currently authorised recyclers( a list of which can be obtained from state pollution control board) under intimation to the Employer/Engineer.

The Rules given above shall govern the Classification, Handling, Storage and disposal of such Hazardous Waste.

Hazardous waste would mainly arise from the maintenance of equipment which may include, but not be limited to, used engine oils, hydraulic fluids and waste fuel;spent mineral oils/cleaning fluids from mechanical machinery;scrap batteries or spent acid/alkali; and spent solvents/solutions, some of which may be derived, from equipment cleaning activities.

For disposal of waste requiring special attention and hazardous waste the contractor shall enter into agreement with authorised agencies dealing with the same.

The Contractor is responsible for the correct storage and handling of waste oil/waste chemical containers unit such a time that they are transported to the chosen disposal area or waste oil containers.

All waste collection containers shall be of appropriate size with a closed lid. Each container will be clearly labeled both with a color code system and labeled in Hindi and English. Original labels of empty containers should be,completely covered over and the contents of the type of waste stored in the used containers clearly indicated.

#### 24.5 Transportation of Waste

The transportation of construction spoil shall be allowed only to officially designated dumpsites after obtaining necessary permission from appropriate authority. In order to avoid dust or odour impacts, vehicles leaving a site carrying excavate should have their load covered. Vehicles should be routed as far as possible to avoid sensitive receivers in the area.

### 25 HOUSEKEEPING

Work site shall be kept reasonably clean, kept free from obstruction and any construction equipment, tools, and materials etc. shall be properly stored. Any wreckage, rubbish shall be temporarily stored in wreckage and rubbish bins. These wreckage and rubbish bins shall be cleaned at frequent intervals.

General House keeping shall be carried out and ensured at all times at work sites, Labour Camps, Stores and Offices.

Full height fence, barriers etc. will be installed at the site in order to preserve the surrounding area from excavated soil, rubbish etc which may cause inconvenience to public.

Every individual would be responsible for house keeping in his work area i.e.

- At Work Site: All workers shall clean their work place after completion of their job. Supervisor shall ensure good house keeping of their respective work area through their workers.
- At Labour Camp: All workers shall be responsible to maintain good house keeping and hygienic condition in their respective rooms/dormitories. The Contractor shall ensure the availability of dustbins at required place and regular cleaning of rooms, kitchens, toilet blocks and dustbins. Safe disposal of all waste materials, shall also be ensured. Arrangement for regular fumigation shall be made by the contractor.
- At Store: Proper access and stacking shall be ensured at the Stores. A list will display daily stock of materials. All work material should be stored in clearly marked containers or at designated storage area.

#### 26 Avoidance of Nuisance

The Contractor shall take all precautions to avoid any nuisance arising from his operations. This shall be accomplished, wherever possible by suppression of nuisance at source rather than abatement of the nuisance once generated.

Following site clearing and before construction, the Contractor shall remove all trash, debris and other weeds.

The Contractor shall ensure that the work place is free of trash, garbage, debris and weeds.

The Contractor shall provide at site, metal or heavy-duty plastic 'Refuse Containers'

with tight fitting lids for disposal of all garbage or trash associated with food. The containers shall not have openings that allow access by rodents.

To keep the area free of litter and garbage, specific locations shall be designated for consuming food and snacks to prevent random disposal of waste. All waste shall be deposited in the refuse containers. Suitable all weather signage shall be prominently displayed for compliance of these requirements.

The refuse containers shall be kept upright with their lids shut. These containers shall be emptied at least once daily by the Contractor to maintain site sanitation. There shall be different containers for bio-degradable/recyclable and hazardous (flammable) wastes.

All plants/equipment/machinery shall be well maintained by regular servicing and kept free from oil/grease dripping. Drip pans of suitable size shall be used to collect oil leakages and spills. The area shall be cleaned after completion of maintenance/repair and generated waste disposed off in approved manner.

#### 27 Accommodation for Labour:

The Contractor, shall, at his own expense, make adequate arrangements for the housing, supply of drinking water and provision of bathrooms, latrines and urinals, with adequate water supply, for his staff and workmen directly or through sub-contractors employed on the Works. No labour camp shall be allowed at work site or any unauthorized place.

The Contractor shall during the progress of the work provide, erect and maintain necessary temporary living accommodation and ancillary facilities for labour at his own expense.

The Contractor at his own cost shall maintain all campsites in a clean and sanitary condition. The Contractor shall obey all health and sanitary rules and regulations, and carry out at his cost all health and sanitary measures that may from time to time be prescribed by the Local/Medical Authorities and permit inspection of all health and sanitary arrangements at all times by DIMTS and the staff of the local municipality or other authorities concerned.

The Contractor shall provide living accommodation that is equal to or exceeds the minimum criteria established in the following sub-sections, needed to house his staff, workers employed directly or through sub-contractors. The buildings shall be constructed so as to have a minimum life of not less than the length of the Contract.

- (a) The roofs shall be watertight and laid with suitable non-flammable materials permissible for residential use under local regulations.
- (b) Each hut shall have suitable ventilation. All doors, windows, and ventilators shall be provided with security leaves and fasteners. Back to back units may be avoided.

- (c) The minimum height of each unit shall be 2.10m and shall have separate cooking place.
- (d) Suitable no. of common toilet/bath shall be provided.

The Contractor shall provide an adequate supply of water for the use of labourers in the Camp. The provision 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 be of metal or masonry shall be provided. The Contractor shall also at his expense make arrangements for the provision and laying of water pipe lines from the existing mains wherever available and shall pay for all the fees and charges therefor.

The Contractor shall provide efficient arrangements for draining away sullage water so as to keep the camp neat and tidy. Surface water shall be drained away from paths and roads and shall not be allowed to accumulate into ditches or ponds where mosquitoes can breed.

The Contractor shall make arrangements for conservancy and sanitation in the labour camps according to the rules and regulations of the Local Public Health and Medical Authorities.

The Contractor shall provide a sewage system that is adequate for the number of residents in the camp, and which meets the requirements of the Municipality Authorities.

The Contractor shall at his own cost, provide First Aid and Medical facilities at the Labour Camp and at work sites on the advice of the Medical Authority in relation to the strength of the Contractor's staff and workmen, employed directly or through sub-contractors.

The Contractor shall at his own cost, provide the following minimum requirements for fire precautions:

- Portable Fire Extinguishers.
- Manual Fire Alarms.
- Water Supply for use by the Fire Service.

The Contractor at his own cost shall provide necessary arrangements for keeping the camp area sufficiently lighted to avoid accidents to the workers. He should also ensure that electrical installations are done by Trained Electricians. These installations shall be maintained and daily maintenance records must be made available for inspection of the DIMTS.

#### CAMP DISCIPLINE

The Contractor shall take requisite precautions, and use his best endeavours to prevent any riotous or unlawful behaviour by or amongst his workmen, and others, employed directly or through sub-contractors. These precautions shall be for the preservation of the peace and protection of the inhabitants and security property in the neighbourhood of the Works. In the event of the Employer requiring the maintenance of a Special

Police Force at or in the vicinity of the site, during the tenure of the work, the expenses thereof shall be borne by the Contractor and if paid by the Employer, shall be recoverable from the Contractor.

The sale of alcoholic drinks or other intoxicating drugs or beverages upon the work, in any labour camp, or in any of the buildings, encampments or tenements owned or occupied by, or within the control of, the Contractor or any of his employees directly or through sub-contractors employed on the work, shall be forbidden, and the Contractor shall exercise his influence and authority to secure strict compliance with this condition. The Contractor shall also ensure that no labour or employees are permitted to work at the site in an intoxicated state or under the influence of drugs.

The Contractor shall remove from his camp such labour and their families, as refuse protective inoculation and vaccination when called upon to do so on the advice of the Medical Authority. Should Cholera, Plague or any other infectious disease break out, the Contractor shall at his own cost burn the huts, bedding, clothes and other belongings of or used by the infected parties. The Contractor shall promptly erect new huts on healthy sites as required by the Employer, within the time specified by the Employer, failing which the work may be done by the Employer and the cost recovered from the Contractor.

28. Anti-malarial precautions:

The Contractor shall, at his own expense, conform to all anti malarial measures including filling up any borrow pits which may have been dug by him.

29. Awareness and Education of HIV/AIDS

The contractor shall provide/carryout HIV/AIDS awareness and training programme to its labour and management, at least twice per year during the construction period.

30. Child Labour Prohibition

The contractor shall not employ Child Labour for any works or in any manner under the Contract at any time. In the event that the Contractor uses child labour, DIMTS may terminate the Contract.