

**CONDITIONS OF CONTRACT**

**A PREFACE**

Intent and reference to Tamil Nadu Building Practice

1. It is intended by these Tamil Nadu Practice to describe.

(a) the character of the materials to be used;

(b) the method of execution of work and

(c) the contractor's responsibilities to the Public, Government and his workmen and general contract conditions which are to be accepted by every contractor who executes work entrusted to him by the Department.

1.2. Wherever the term "Standard Specifications" or "Specifications" or to the abbreviation T.N.B.P. No. or TNBP is used in the specifications or in estimates or contract documents, it shall refer to the relevant, specification in the Tamil Nadu Building Practice.

3. The Abbreviation "I.S." shall mean "Indian Standard-".

2. Applicability of the Tamil Nadu Building Practice.

2.1. It shall be unnecessary to include in any contract documents a specification for any item of work which is defined in the tender notice or in the contract schedule of work to be done by a Tamil Nadu Building Practice number (TNBP No.) The fact that the item is defined as specification, shall mean that the contractor is to execute the work according at such specification modified as may be necessary by an addendum specification for that particular item of work. In the absence of specification for any work or material in the T.N.B.P. such work should be carried out in accordance with the instruction given by the Executive Officer.

2.2. THESE GENERAL CONDITIONS OF CONTRACT SHALL APPLY TO ALL AGREEMENTS ENTERED INTO BY CONTRACTORS WITH THE HR & CE Department and shall form an inseparable condition of contract, and it shall not be necessary to append a copy of the same to the agreement.

3. Contractor to sign in the Region copy of the T.N.B.P.

3.1. Every contractor who executes work for the HR & CE Department shall carefully study the schedule for work to be done and his drawings, obligation under the "General Conditions of Contract" which apply to all agreements, and he shall sign in the Region Office copy of the T.N.B.P. if so arranged by the Executive Officer as evidence that he understands clearly the conditions of contract governing his agreement and accepts the same.

3.2. It shall not be necessary for the contractors to sign the Region Office copy of the T.N.B.P. for every contract awarded to him, but his signature therein will be evidence that he accepts the conditions of contract (which include the standard specifications) as detailed in the T.N.B.P. for every contract into which he enters. It shall also be the contractor's responsibility by frequent perusal of the Region Office copy to become conversant with sanctioned alterations or additions made to the T.N.B.P. as soon as they are made. A separate volume of addenda to the T.N.B.P. will be maintained in each Division (or sub division office) as the case may be, in which will be entered all sanctioned corrections and additions. This must also be studied and signed by every contractor before executing an agreement. Interleaving correction slips will not be made for his purpose. The contractor should purchase copy of, the T.N.B.P. for his reference while executing work.

4. Sub-specifications:

4.1 Works of similar nature having many common clauses in their specification are grouped under one specification number with a "General" preface thereto, and the sub-specification are therefore given an alphabetical affix.

5. Additions and alterations to the T.N.B.P.

5.1. Additions and alterations to the T.N.B.P. will be incorporated in the addenda volume as authorised by the Commissioner.

6. Powers of Superintending Engineers and Executive Officers to supplement or alter the T.N.B.P.

6.1 Divisional Engineer & Executive Officer may alter the specification for any particular which is within their respective powers of sanction, when such alteration is found necessary by attachment of a correction sheet to the contract form, bearing the T.N.B.P. number, the corrections and the signature of the Divisional Engineer or the Executive Officer as the case may be, together with the signature of the contractor. Similarly additional specifications, for items for which there are no standard specifications will be made by attachment to the contract documents of addendum specifications sheet bearing the signature of the Divisional or the Executive Officer as the case may be and the signature of the contractor.

## **A.I. DEFINITIONS AND INTERPRETATIONS.**

### **7. Definition of terms:**

7.1. Wherever the words and expression defined in this clause or pronouns used in their status occur in contract documents which includes the T.N.B.P, they shall have the meanings hereby assigned to them except where the context otherwise requires:

(a) "Executive Officer" means the Executive Officer for the time being in charge of the concerned work under execution or such other departmental assistants or subordinates to whom the Executive Officer may have delegated certain duties, acting severally within the scope of the particular duty entrusted to them.

(b) No delegation by Executive Officer which affects agreements. It is however, to be distinctly understood that the Executive Officer or the Divisional Engineer or the higher authority who is vested with the powers of acceptance of the particular agreement under reference will make no delegation of powers to such assistants or subordinates which in any affects the agreement and its contract condition when such agreement is to be or has been accepted by the "Executive Officer" or by the other higher authority respectively- The duties of such assistants or subordinates will be solely duties of supervision to ensure compliance with contract conditions.

(c) "Contractor" means the particulars persons, firm or corporation with whom an agreement has been made by the Executive Officer or higher authority as the case be, for executing work defined in the concerned agreement, and for purposes of instructions regarding compliance with contract conditions, it shall include the contractor's authorized agent, who is maintained on the work by the contractor.

(d) Works or work means the works by or by virtue of-the contractor contracted to the executed whether temporary or permanent and whether original, altered substituted or carriage or additional or connected, with the supply repairs or carriage of tools and plant and supply or manufacture of other stores.'

7.2. Words importing the singular only also include the plural and vice-versa where the context requires.

**NOTE:-** The forms Divisional Engineer. Executive Officer, used in the following clauses shall, where the context so requires, be construed as also including officers of the corresponding grade in the HR & CE Department.

**8. Evidence of experience** - Tenderer shall, if required, present satisfactory evidence to the Executive Officer that they have been regularly engaged in constructing such works, as the proposed to execute and that they are fully prepared with the necessary capital, machinery and materials to begin the work promptly and to conduct it as required by the T.N.B.P. and the other specifications for the particular work if tendered for, in the event of their tender being accepted,

### **9. Legal address Notices:**

9.1 . Tenderers should give in their tender their place of residence and postal address. The delivering at the above named place or posting in a post box regularly maintained by the Post Office Department or sending by letter registered for acknowledgement of any notice, letter or other communication to the contractor shall be deemed sufficient service thereof upon the contractor in writing as maybe changed at any time by an instrument executed by the contractor, and delivered to the Executive Officer.

9.2. Nothing contained in the agreement and its contract conditions shall be deemed to preclude or render inoperative the service of any notice, letter or other communications upon the contractor personally.

## **B. STATEMENT OF APPROXIMATE QUANTITIES IN SCHEDULE - A**

10.1 The quantities mentioned in tender notices and in agreement schedule A are worked out from the relevant drawings in office and may or may not be the actual required for execution. The Executive Officer does not expressly or by implication agree that the actual amount of work to be done will correspond therewith but reserves the right to increase or decrease the quantity of any class or portion of the work as he deems necessary.

10.2. Tenderers must satisfy themselves by a personal examination of the site of the proposed work by examination of the plans and specifications and by other means as they prefer as to the accuracy and sufficiency of the statement of quantities and all conditions affecting the work and shall not any time after the submission of their tender, dispute or complain of such statement of quantities or assert, that there was any misunderstanding in regard to the nature or amount of the work to be done nor in consequence apply for extension of time for completion beyond the agreement date.

### **11. Approximate not to mean deviation from drawings and specifications:**

11.1. This declaration of the approximate nature of the statement of quantities in Schedule. A does not, however, in any way imply that the quantities will be increased for departure by the contractor from strict compliance with sanctioned drawings and specifications to suit his own convenience or reduce his costs.

### **12. To compare tenders:-**

12.1. The quantities in Schedule A are given for a uniform comparison of lump-sum tenders.

## **C. DRAWINGS AND SPECIFICATIONS**

### **13. Purpose:**

13.1. The contract drawings if any, read together with the contract specifications are intended to show and explain the manner of executing the work and to indicate the type and class of materials to be used.

### **14. Conformance:**

14.1. The works shall be carried out in accordance with the drawings and specifications which form part of the contract and in accordance with the details and instructions, supplementing or explaining the same as may from time to time be given by the Executive Officer.

14.2. If the work shown on any such further

drawings or details, or other work necessary to comply with any such instructions, directions or explanations be in the opinion of the contractor, of a nature which the schedule rate in the contract does not legitimately cover he shall before proceeding with such work, give notice in writing to this effect to the Executive Officer. In the event of the Executive Officer and contractor failing to agree as to whether or not there is any excess rate to be fixed and the Executive Officer deciding that the contractor is to carry out the said work, the contractor shall accordingly do so, and the question whether or not there is any excess and if so the amount there of, shall failing agreement, be settled by an arbitrator as provided in the arbitration clause, unless the subject is one which is left to the sole discretion of the Executive Officer under the clauses of these conditions of contract and the contractor shall be paid accordingly.

14.3. It shall be the responsibility of the contractor to give timely notice to the Executive Officer regarding anything shown on the drawings and not mentioned in the specification, or mentioned in the specifications and not shown in the drawings or any error or discrepancy" drawings or specifications and obtain his orders thereon. Figure dimensions are to be taken and not those obtained from scaling the drawings. In any discrepancy between drawings and specifications, the latter shall prevail. In any such cases or in case any feature of the work is not fully described and set forth with the drawings and specifications the contractor shall forthwith apply to the Executive Officer for such further instructions, drawings or specifications as he requires it, being understood that the subject to be dealt with under the building procedure of best modern practice. The Executive Officer will furnish the further instructions, drawings or specifications if in his opinion, they are required by competent workmen, for the proper execution of the work.

### **15. Variations by way of modifications omission or additions.**

15.1. For all modifications, omissions from or additions to the drawings and specifications, the Executive Officer will issue revised plans, or written instructions or both, and no modifications, omissions of additions shall be made unless or authorized and directed by the Executive Officer in writing.

15.2. The Executive Officer shall have the privilege of ordering modifications, omissions or additions at any time before the completion of the work and such orders shall not operate to annul these portions of the specifications with which said changes do not conflict.

15.3. The contractor shall submit to the Executive Officer a statement giving details of the claims for any additional work with 30 days of the order of the work and no claim for any such work will be considered which has not been included in the statement.

#### **16. Copies of drawings and specifications:**

16.1. One copy of the available drawings and specifications (apart from the T.N.B.P. a copy of reference) shall be furnished free of cost to the contractor for his own use. Such copies and copies of supplementary details furnished by the Executive Officer shall be kept by the contractor on the work until the completion thereof, and the Executive Officer shall at all times have access to them.

#### **17. Signed drawings - No authority to the contractor.**

17.1. No signed drawing shall be taken as in itself and order for variation, unless either is it entered in the agreement schedule of drawings under proper attestation of the contractor and the Executive Officer, or unless it has been sent to the contractor by the Executive Officer, with a covering letter confirming that the drawing is an authority for variation of the contract under reference.

### **D. MATERIALS AND WORKMANSHIP**

#### **18. To be the best quality:**

18.1. All materials, articles and workmanship shall be the best of their respective kind for the class of work described in the contract specification and schedule, materials being obtained from sources approved by the Executive Officer. The word "best" as used in these specifications shall mean, that in the opinion of the Executive Officer there is no other superior quality of materials or finish of articles on the market and that there is no better class of workmanship available for the nature of the particular item described in the contract schedule. The contractor shall, upon the request of the Executive Officer, furnish him with the vouchers to prove that the materials are such as are specified.

18.2. Samples of materials shall be furnished at the contractor's expenses to the Executive Officer when called for in the tender notice or ordered to be furnished by the Executive Officer prior to execution of any work.

#### **19. Conventions for proportions:**

19.1. Wherever the proportions are written by figures without further description and where the meaning is otherwise clear as to which figure is intended to apply to each material, then the usual conventions will be understood to apply to each material then the usual conventions will be understood to apply.

#### **For example :**

1.2. Means 1 lime (or cement in accordance with the context) and 2 sand;

1.2.4. Means 1 lime (or cement in accordance with the context) 2 sand and 4 broken stone (or other aggregate in accordance with the context).

#### **20. Measurement and mixing:**

20.1. In the case of loose materials such as lime sand, cement, broken stone, surki, mortar, etc the proportions demanded by the specifications must be measured in properly constructed measuring boxes or weighed or in such other manner as shall be instructed by the Executive Officer. Measurement is not to be done in loose heaps when intimate mixtures such as mortar, concrete, etc., are to be formed. The mixing must always be done on closely constructed platforms. So that there will be no leakage of any of the materials through the floor of the platform and also that no foreign materials can be incorporated during the mixing. These platforms must be approved by the Executive Officer. The cost of such measuring boxes and platforms and all the work referred to herein shall be borne by the contractor.

#### **21. Data:**

21.1. The materials and labour utilised in the execution of work by the contractor shall not be less than that given in the Tamil Nadu P.W.D. Standard Data for the relevant item and HR&CE data.

**NOTE:** In case the contractor considers that the materials and labour provided in the T.N.P.W.D. standard data for the execution of particular items of work are in excess, the contractor may furnish detailed data for such items along with tender with reason for variations from P.W.D. Standard Data and HR&CE Data.

## **22. Layout of materials stocks:**

22.1. The contractor shall deposit materials for the purpose of the work on such parts only on the ground as may be approved by the Executive Officer. He shall submit for the approval of the Executive Officer before starting work, c: detailed site survey clearly indicating positions and areas where materials shall be stacked and sheds built.

## **23. Source of purchase of materials and stores**

23.1. The Executive Officer shall, during the progress of the work, have power to cause the contractor to purchase and use such materials or supplies from Government brick fields, stores or other sources as may be specified in the contract for the purposes therein specified.

## **24. Contractor liable for materials supplied by Government.**

24.1. The contractor shall be responsible for all materials and other articles and things which may be supplied by Government from the time he takes deliver.' thereof, and shall use them only for the purposes of this contract and shall make good any loss, damage, wastage or undue wear and tear that may take place from whatever cause and pay to Government for such loss, damage, wastage or undue wear and tear such sum as the Executive Officer may determine.

24.2. If at any time subsequent to the execution of the agreement Government materials other than those specified in the Agreement are to be supplied to the contractor for use on the work they will be charged at the market value prevailing at the time of supply or stock issue rate whichever is greater. The contractor will be informed in writing the rate which he demands for finished work in view of the fact that he is to use Government materials.

## **24.4. Storage charges:**

24.4. Govt. do not undertake to take over from contractors whether before or after the completion or determination of contract surplus materials which were originally procured by the contractors themselves or were issued to them and charged to their accounts. Such materials are the property of the contractor and can be taken over by Govt. if required for use on the works in progress only by special arrangement at the

prevailing market rates viz., the rate at which the article or articles of a similar description can be procured at a given time at the stores Godown J from public market suitable to the division for obtaining a supply therefore of the materials were originally supplied by the Govt. Price allowed to the contractors on requisition should not exceed the amount charged to the contractors excluding the element of storage charges if any. Contractors are however not at liberty to remove from the site of work, without the written permission of the Executive Officer, materials, which have been issued to them for use on works.

## **25. Test inspection and rejection of defective materials and works:-**

25.1. The contractor shall provide proper facilities at all for the testing of materials and inspection of the work by the Executive Officer, and the Executive Officer shall accordingly also have access at all times to the places of storage or manufacture where materials are being made for use. under the contract to determine that manufacture is proceeding in accordance with the drawings and specifications.

25.2. The contractor shall, upon demand, also forward for the Executive Officer's inspection, test certificate supplied by the vendors, when he is purchasing consignments of cement, steel and other materials in respect of which such certificates are usually available.

25.3. The Executive Officer shall have power to reject at any stage, any work which he considers to be defective in quality of material or workmanship and he shall not be debarred from rejecting rough materials by reasons of his having previously passed them in an unworked condition. Any portion of the work or materials rejected or pronounced to be inferior or not in accordance with the drawings and specifications, shall be taken down and removed from the work site at the contractor's expense, within 24 hours after written instructions to that effect have been given by the Executive Officer. Replacement shall at once be made in accordance with the specifications and drawings at the contractor's expense.

25.4. In case of default on the part of the contractor to carry out such orders the Executive Officer shall have power to employ and pay other persons to carry out the orders at the contractor's risk and all expenses consequent thereon and incidental thereto shall be borne by the contractor.

25.5. In lieu of rejecting work not done in accordance with the contract, the Executive Officer may allow such work to remain and in that case shall make such allowance for the difference in value, as in his opinion may be reasonable.

25.6. Works opened for inspection The Contractor shall at the request of the Executive Officer within such time as the Executive Officer shall name open for inspection any work covered up; and should the contractor refuse or neglect to comply with such a request, the Executive Officer may employ other workmen to open up the same. If the said work has been covered up in contravention of the Executive Officer's instructions or if on being opened up, it be found not in accordance with drawing and specifications of the written instructions of the Executive Officer the expenses of opening it and covering it up again, whether done by the contract or such other workmen, shall be borne by. or recovered from the contractors. If the work has not been covered up in contravention of such instructions or if on being opened up it be found i.e. he in accordance with the drawings and specifications or the written instructions of the Executive Officer, the expenses aforesaid shall be borne by Government and shall be added to the contract sum. provided always that in the case of foundations, or any other urgent works so opened up and requiring immediate attention the Executive Officer shall, within reasonable time after the receipt of a notice from the contractor that the work has been opened, make or cause the inspection there of to be made, and at the expiration of such time if such inspection shall not have been made, the contractor may cover up the same, and shall not be required to open it up again inspection except at the expense of Government.

#### **26. Defects, shrinkages, etc., after completion.**

26.1. Any defects, shrinkage or other faults which may appear within from the completion of the works arising in the opinion of the Executive Officer from faulty materials or workmanship not in accordance with the drawings and specification instructions of the Executive Officer shall open the directions in writing of the Executive Officer and within such reasonable time as shall be specified therein, be amended and made good by the contractor at his own cost unless the Executive Officer shall decide that the contractor ought to be paid for the same at the rates agreed on

such reduced or other rates as the Executive Officer may fix and in case of default, the Executive Officer may employ (and pay other persons to amend and make good such defects, shrinkage or other faults or damage. and all expenses consequent thereon and incidental thereto shall be borne by the contractor.

26.1. (A) The shrinkage period of six months referred to in main clause 26.1. above will be five years in respect of all contracts for construction of original buildings either semi-permanent or permanent to ensure structural stability of the building.

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26.2. Provided that in the event of Government taking over portions of the works as and when they are completed the liability of the contractor under this clause shall extend to a period of year's from the date of final taking over of the work irrespective of the actual dates on which portions the works were taken over,

#### **27. Executive Officer's decision:**

27.1. To prevent disputes and litigation, it shall be accepted as an inseparable part of the contract that in matters regarding materials workmanship, removal of improper work, interpretation of the contract drawings and contract specifications, mode of procedure and the carrying out of the work, the decision of the Executive Officer shall be final and binding on the contractor and in any technical question which they arise touching the contract the Executive Officer's decision shall be final and conclusive.

#### **28. Dismissal of Workmen:**

28.1. The contractor shall employ in and about execution of the works only such persons as are careful, skilled and experience in their several trades and callings and the Executive Officer shall be at liberty to object to and request the contractor to remove from the works any person employed by the contractor in or about the execution of the works '!'ho in the opinion of the Executive Officer misconducts himself or incompetent or negligent in the proper performance of his duties and such persons shall not be again employed upon the works without the permission of the Executive Officer.

## **D.1. GENERAL OBLIGATIONS**

### **29. Contractor's maistri or agent and contractor's staff:**

29.1. The contractor shall in his own absence keep constantly on the works a competent maistry or agent and any directions or explanations given by the Executive Officer or his representatives to suet". maistry or agent shall be held to have been given to the contractor.

29.2. The contractor shall further provide all staff which necessary for the proper supervision, execution and measurement of the work to ensure full compliance with the term of the contract.

### **30. Government maistries or agents:**

30.1. The Government may be represented on the work by an agent clerk of the works, or maistry who is not borne on the Official or officers and subordinates or the HR&CE Department. He (if appointed) shall, in the absence of the Executive Officer, furnish the contractor with the Executive Officer's or his representative's instructions of the works and the contractor shall duly comply with such instructions and directions and shall on the written requisition of the maistri Clerk of works or agent, stay the-further progress of any portion of the works which in his judgment is being constructed with unsound or improper matstry or workmanship, until the opinion and determination of the Executive Officer shall be obtained thereon, but such maistry, clerk of works or agent is to have no power whether to order any extra works or deviation from the specification and drawings.

## **E. INCLUDED IN CONTRACT RATES**

### **31. Defining contract schedule rates:**

31.1. The rate entered in a contract schedule for any class of work shall be for finished work in site and shall include all contingent expenses whether direct construction expense involved in the building in place in accordance with the drawings and specifications or whether they be expenses imposed by an outside authority such as a local body. Such contingent expenses snail not entitle the contractor to claim an extra in respect thereof. All rates quoted in the shall inclusive of all duties, taxes, royalties, fees, tolls, insurance, other levies if any except Goods and Service Tax (GST) payable by the contractor under the contract or for any other cause shall be included in the rates submitted by the tenderer

## **32. CARRIAGE.**

32.1. Rate's for finished work shall always include the cost of conveyance and all leads, lifts, loading, unloading and stacking in the manner and at the place ordered by the officer in immediate charge of the work, unless circumstances necessitate provisions for a separate schedule item, in which class such will be specified in the tender notice or schedule.

32.2. Wherever the term "Carriage" or "Conveyance" is used in a schedule item, it shall in the absence of other schedule provisions or modifying description, in the specification, be taken to include all leads, lifts, loading, unloading and stacking in uniform stocks to the satisfaction of the Executive Officer with careful attention to close packing in casa of materials which are to be measured in stacks as a basis of payment for finished work.

**NOTE- 1.** In the case of important leads and lifts as may occur in river conservancy and other such works, where lifts over flood banks and long leads may be involved, it is usual to make separate schedule item provision with a specification defining the exact work to be done for each tendered rate.

**NOTE - 2.** Payment for carriage will originally be by bulk or weight at a rate between specified places and on the basis of the method adopted in the standard schedule of rates for carriage of materials. The distances will be measured by the nearest practicable arid cheapest routes, whether metalled or unmetalled road or cart track.

32.3 when carts or vehicles of any sort are engaged by the day, the quantity of materials to be conveyed, the distance to be travelled and the number of trips to be made shall, if he considers necessary be fixed by the Executive Officer.

32.4. The contractor is responsible for making good all loss in transporting materials entrusted to him or his agents, whether caused by wastage, breakage, theft or any other cause.

32.5. No payment shall in any case be made or the return trips with carts. Where' there are loads also for the return trips the agreement rates should allow for the reduced cost thereby on each set of materials so conveyed,

### **33. Construction plant.**

33.1. The contractor shall include in his tendered price and shall provide and install all necessary construction plant and shall use such methods and appliances for the performances the operations connected with the work embraced under the contract as will secure a satisfactory quality of work and rate of progress which, in the opinion of the Executive Officer will ensure the completion of the work within the time specified. If at any time before the commencement, during the progress of the work or any part of it such methods or appliances appear to the Executive Officer to be insufficient or inappropriate for securing the quality of the work required or the said rates of progress, he may order the contractors to increase their efficiency or to improve their character, and the contractor shall comply with such orders, but the failure of the Executive Officer to demand such increase of efficiency or improvement shall not relieve the contractor from his obligation to secure the quality of work and the rate of progress required by the contract and the contractor alone shall be responsible for the efficiency and safety of his plant, appliances and methods.

33.2. It is however open to the Executive Officer to lend or supply to the contractor any tools, implement materials and machinery that the Executive Officer may consider desirable but for any such tools, implements materials and machinery that may be lent or supplied to contractor by Government the contractor shall be so lent or hired to the contractor shall be the Executive Officer before the final bill or work is paid and any shortage or damage shall be such rate as may be determined by the Executive Officer after making such allowance as he may consider suitable for fair wear and tear.

### **34. Scaffolding instructions:**

34.1. All requisite scaffolding shall be provided at the contractor's expense and shall be double, i.e. it must have two sets of upright supports care must be taken to ensure the safety of the work people and the contractor must comply with such instructions as the Executive Officer may issue to ensure safety. The contractor will be entirely responsible for any damage or injuries to persons or property resulting from ill erected scaffolding, defective ladders, or otherwise arising out of his default in this respect. The contractor's attention is also invited to the "safety code".

### **35. Temporary structure:**

35.1. The contractor shall erect and maintain at his own cost temporary weather proof sheds at such places and in a manner approved by the Executive Officer for keeping materials under cover. The contractor shall also provide and maintain at his own expenses such temporary fences, guards, bridges and roads as may be necessary for the execution of his contract work or for safeguarding or accommodating the public if the Executive Officer shall order any departure he shall comply with such orders as the Executive Officer may issue to safeguard or accommodate the public, sheds for housing workmen shall be provided at the contractor's expenses if, in the opinion of the Executive Officer, such are necessary or desirable.

### **36. Water and lighting**

36.1. The contractor shall pay all fees and provide water and light as required from municipal mains or other sources and shall pay all charges therefore (including storage tanks, meters, etc.) for the use of the work and workmen unless otherwise arranged and decided on, in writing with the Executive Officer. The water for the works shall be, so far as practicable, free from earthy vegetable, or organic matter and from salts or other substances likely to interfere with the setting mortar otherwise prove harmful to the work

If the Contractor reports the Executive Officer in writing about the non availability of suitable water required for the work in and around, the work site at the time of tender itself, the Executive Officer shall make necessary arrangements for adequate suitable water free from vegetable or organic matter and from salts or other substances likely to interfere with the setting of mortar otherwise prove harmful to the construction work except the items covered in standardized concrete mix of work after verifying the genuineness of contractor's obligation.

The expenditure if any due to the above shall be met out from the lumpsum provisions made in the sanctioned estimate towards the unforeseen items (or) contingencies, subject to the condition that the administratively sanctioned amount should not exceed at any cost.

### **37. Sun protection keeping dry and pumping**

37.1. The contractor shall at his own expense arrange all requisite protection of the work and materials against sun or rain effects and shall keep all portion of the work free from water to the satisfaction of the Executive Officer and shall use his own plant for the purpose unless otherwise specifically provided in the contract specification.

### **38 Tools and Seigniorage:**

38.1 The contractor shall, unless otherwise specifically stated in the tender notice and subsequently on this basis in the contract be responsible for the payment wherever payable of all import duties, tools octroi duties, seigniorages, quarry fees, etc., on all materials and articles that he may use.

38.2. The contractor shall be solely responsible for the payment of GST as in force for time being and the rates for the various items of the work shall remain unaffected by any change that may be made from time to time in the rate at such tax is payable.

The Government of India has notified vide notification No.20/2017 and notification no.24/2017 the concessional rate of GST at 12% (CGST 6% + SGST 6%) is leviable for any Government Contract whether Civil or Electrical irrespective of the GST rate applicable on purchase of goods used in the execution of Government contract works. The GST amount will be calculated at 12% of sum of tender value (excluding GST) entered by the tenderer for the construction cost specified in BOQ subject to GST rate applicable as amended from time to time.

As per notification 202 section 7 sub section 2 of the Tamilnadu Goods and Services act 2017 (Tamilnadu act 19/2017) activities or transaction under taken by State Government shall be treated neither as supply of goods nor supply of services.

As per Public Works Department Schedule of Rates under general note 8(ix), the contractor is eligible to get refund of excess tax paid or liable to pay tax for this contract.

As per chapter IX (Section 41) of Tamil nadu Goods and Services act 2017 every registered person may be entitled to the credit of eligible input tax, as self assessed, in his return and such amount shall be credited on provisional basis to his electronic credit ledger and the contractor need to pay the GST amount towards his GST Registration No.

The TDS at the rate of one percent for SGST and another one percent for CGST shall be deducted in each bill.

38.3. Notwithstanding anything contained in section 10 of the Indian Traffic Act of 1894, the rates for items involving, the use or supply of articles obtained by the contractor from outside India shall remain unaffected by any changes that may be introduced in Customs duties.

**NOTE:** For works carried out on behalf of the Government of India, Seigniorage fees, etc., referred to in this clause will have to be levied in every case

38.4. No seigniorage shall be charged where due for materials quarried, from the P.W.D. or other Government quarries. Assistance as necessary will be given to the contractor by the department to obtain access to quarries approved by the Executive Officer. No plot rent shall be charged for materials stacked on the Government land during the course of construction provided all such materials are removed within one month after the work is completed.

38.5. Seigniorage charges due for use of private quarries and private land shall be paid by the contractor.

38.6. The contractor shall from his own approach road to the work site for which no extra will be due to him. On completion the contractor shall not be permitted to remove the materials laid for formation of road. If the contractor is allowed to use the existing roads he shall maintain them in good condition at his own cost through out the period of the contract.

### **39. Setting out works:**

39.1. The contractor shall be responsible for the true and proper setting out of works and for the correctness of the position, levels, dimension and alignment of all parts of the works and for the provision of all materials, staff and labour in connection therewith.

### **40. Cleaning up during progress and delivery:**

40.1. All rubbish shall be burnt or removed from the site, as it accumulates. All floors, stairs, landing windows, surface and soil drains shall be cleaned down and put in a thoroughly complete clean, sound and workman like state to the satisfaction of the Executive Officer having first been removed by the contractor. The contractor shall give notice in writing to the Executive Officer before the work is finally handed over. All rubbish and surplus materials not required by the Executive Officer having first been removed by the contractor. The contractor shall give notice in writing to the

Executive Officer when the work is so ready to be handed over and shall be responsible for its maintenance until it is taken over by the Executive Officer.

## **F. RESPONSIBILITIES AND LIABILITIES OF THE CONTRACTORS.**

### **41. Observance of laws, focal regulations and notices. Attachments:**

41.1. The contractors shall conform to the regulations and by-laws of any local authority and or of any water or lighting companies with those systems the structure is proposed to be connected and shall, before making any variations from the drawings or specification that may be necessitated by so conforming, given to the Executive Officer written notice, specifying the variations proposed to be made and the reasons for making them, and apply for instructions thereon. In case the contractor shall not receive such instruction within seven days. he shall proceed with the work conforming to the provisions regulating or by-law in question and any variations in the drawings or specification so necessitated shall be dealt with under clause.

41.2. The contractor shall give all notices required by the said Act, regulation or by-laws and pay all fees in connection therewith unless otherwise arranged and decided on in writing with the Executive Officer. He shall also ensure that no attachments are made against materials of work forming part of or for the use of the contract. In every case referred to in this clause the contractor shall protect and indemnify Government against any claim or liability arising from or based on the violation, of any such law ordinance, regulations order, degree, a attachment whether by himself or by his employees.

### **42. Accidents - Hoarding - Lighting observation - Watchmen:**

42.1. When excavation have been made or obstacles have been put in public thorough fare or in places where there is any likelihood d accidents, the contractor shall comply with any requirement of law or the subject and shall provide suitable hoarding and watchmen a! necessary.

42.2. It shall be the contractor's sole responsibility to protect the public and hi! employees against accident from any cause and he shall indemnify Government against and claims for 'damages for injury to person a property, resulting from any such a claim and shall where the provisions of the Workmen's Compensation Act apply, take step to properly insure against any claims there under.

42.3. On the occurrence of accident which results in the death of any of the workmen employed by the contractor or which is so seriousness as to he likely to result in the death of any such workmen, the contractor shall, within 24 hours of the happening of such accident, intimate in writing to the concerned officer of the Department the fact of such accident. The contractor shall indemnify Government against al loss or damage sustained by Government resulting, directly or indirectly from his failure to give intimation in the manner aforesaid including the penalties of fines if any payable by Government as a consequence of Government's failure to give notice under the Workmen's Compensation Act or otherwise conform to the provisions of the said Act in regard to such accident.

42.4. In the event of an accident in respect of which compensation may become payable under the Workmen's Compensation Act VIII of 1923 whether by the contractor or by the Government as principal it shall be lawful for the Executive Officer to retain out of money due and payable to the Contractor such sum or sums of money as may, in the opinion of The Executive Officer shall be final in regard to all matters arising under, this clause.

42.5. The contractor shall indemnify Government from and against all claims and proceedings for or on account of infringement of any patent rights, design, trade mark, or name of other protected rights in respect of any constructional plant, machine work or material used for or in connection with the works or temporary works, or any of them and from and against all claims, demands, proceedings, damages, cost, charges and expenses whatsoever in respect thereof in relation thereto.

42.6. In respect of all labour directly or indirectly employed in the works for the performance of the contractor's part of this agreement, the contractor shall comply with or cause to complied with all the rules framed by the Government from time to time for the provision of health and sanitary arrangements to workers employed by HR & CE Department and their contractors Vide Appendix. In case the contractor fails to make arrangements and provide necessary facilities as aforesaid the Executive Officer shall be at liberty to make arrangements and provide facilities as aforesaid and recover the costs incurred in that behalf from the contractor.

42.7. In respect of all labour directly or indirectly employed in the works for the performance of the contractor's part of this agreement, the contractor at his own expense shall arrange for the safety provisions as per "Safety Code" framed from time to time and shall at his own expense provide for all facilities in connection therewith. In case the contractor fails to make arrangements and provide facilities as aforesaid and recover the costs incurred in that behalf from the contractor.

42.8. In respect of all labour directly or indirectly employed in the work for the performance of the contractor's part of this agreement the contractor shall arrange to furnish in triplicate particulars to each working the proforma Vide Appendix XXXVIII b) the end of every month to the Executive Officer in charge of the work.

### **43. Blasting:**

43.1. Blasting executed by contractors in connection with Government works shall be carried out in the manner described under "Blasting operations Instructions to Contractor of the TNBP.

44. The contractor is to protect the whole of the adjoining and where necessary, the existing premises and all works land and fittings to all buildings or and adjoining the site against the structural and decorative damages caused by the execution of these works and make good in all respects all such damage done or occurring to the same, and leave such reinstatement in perfect order. He is also to make good any damage done to private footways or roadways.

### **45. Permit other Workmen Co-operation Afford facilities:**

45.1. The Executive Officer shall have full power to send workmen upon the premises to execute fittings and other works not included in the contract for whose operations the contractor is to afford every reasonable facility during ordinary working hours, provided that such operations shall be carried on in such a manner as not to impede the progress of the work included in the contract, but the contractor is not to be responsible for any damage which may happen to or be occasioned by any such fittings or other works, provided he complies with the Executive Officer's instructions in connection therewith, and provided that the damage is not caused by himself or his workmen.

45.2. The contractor shall, at all times, cooperate, assist, attention, and afford facilities for such specialists as may be employed by the Executive Officer on other works in connection with the building, allowing them free of charge the use of all plant, light and water installed in the works. The contractor shall cause such special work or protect it as instructed to avoid injury during progress of the works. For failure so to protect, the contractor must make good any damage caused.

45.3. When two or more contractors are engaged on installation or construction work in the same vicinity, the Executive Officer shall have authority to direct the manner in which each shall conduct the work so far as it affects other contractors. :

### **46. Holes for water services, gas, electrical and sanitary fittings:**

46.1. The contractor shall leave all holes in masonry and floors for the insertion of water services, gas and electrical connections and sanitary fittings in the exact positions indicated by the Executive Officer during the progress of the work. These holes must be properly built up in a workmanlike manner at the contractor's cost, as soon as the fittings have been installed in cases, where the installations are made during the construction of the buildings and where in the opinion of the Executive Officer, delays in settlement of accounts will not thereby occur.

### **47. Contractor's risk and insurance:**

47.1. The work executed by the contractor under the contract shall be maintained at the contractor's risk until the work is taken over by the Executive Officer. The Govt. should not be liable to pay for any loss or damages occasioned by (or) arising out of fire, flood, volcanic eruptions, earthquake or other convulsion of nature and all other natural calamities, risks arising out of acts of God during such period and that the option whether to take Insurance coverage or not to cover risks, is left to the contractor.

47.2. Provided however, that the contractor, shall not be liable for all or any loss or damages occasioned by or arising out of acts of foreign enemies invasions hostilities or warlike operations (before or after declaration of war) rebellion military or usurped power.

#### **48. Holidays:**

48.1, Subject to any provision to the contrary contained in the contract none of the permanent work shall save as herein after provided be carried on during the night or on Sundays and other holidays without the permission in writing of the Executive Officer or of the officer in charge of the work: save when the work is un avoidable or absolutely necessary for the save of life or property or for the safety of the works in which case the contractor shall immediately advice the Executive Officer.

### **G. MISCELLANEOUS**

#### **49. Sand and gravel:**

49.1. The contractor shall not make any excavations upon the site for the purpose of obtaining gravel, sand or soil other than that shown or implied by the drawings, except with the previous permission of the Executive Officer.

#### **50. Old curiosities:**

50.1. All old curiosities, relics, coins, minerals, etc., found in excavating or pulling down, shall be the property of the Government and. be handed over to the Executive Officer. Should any ancient masonry, or other old work of interest be opened up, the Executive Officer's attention shall be called to the same before demolition or removal.

#### **51. Assignment or sub - lettings:**

51.1. The contractor shall not without the written consent of the Executive Officer, assign the contract nor sub-let any portion of the same. Ordinarily no sub-letting will be permitted, but in case such should be permitted by the Executive Officer, it shall in no way free the contractor from any of his responsibilities under any clause of these "Conditions of Contract" or of the "Articles of agreement"

#### **52. Specialties:**

52.1. The Executive Officer, shall, during the progress of the work have powers to select, -nominate or recommend tradesmen or specialists to supply material or execute such portion of the work as he may consider desirable in the interests of the Government.

53. Ratification of the orders of the Executive Officer

53.1. Should the acceptance oft he tenders be beyond the authorised powers of the Executive Officer as laid down in the HR &CE rules, the orders and decisions of such Executive Officer with regard to the employment of specialists for certain portion of the work as described in the previous clause will be subject to the ratification of the higher authority who accept the tender.

#### **Powers for sanction of Extension of time:**

53.1 .A. Should the acceptance of tender beyond the authorised powers of the Executive Officer as laid down in TN P.W.D. code, the orders or decisions of such Executive Officers with regard to the extension of time for completing the contract will be subject to the ratification of Divisional Engineers for all works for which tenders were accepted by the JC/Commissioner/Govt.

#### **Powers for termination of LS contract.**

53.1 .B. Should the acceptance of tender beyond the authorised powers of the Executive Officers laid down in TN P.W.D. code, the orders and decision of such Executive Officers with regard to the termination of contract will be subject to ratification of the Chief Engineer for all works for which tenders were accepted by Superintending Engineer / Chief Engineer/Board of Engineer/Govt.

#### **54. Order Book.**

54.1. An order book shall be kept at the HR & CE office on the site. of the work. As far as possible, all orders regarding the work are to be entered in this book. All entries shall be signed and dated by the HR & CE officer in direct charge of the work and by the contractor or by his representative. In important cases, the Executive Officer or the Divisional Engineer will countersign the entries, which have been made. The order book shall not be removed from the work except with the written permission of the Executive Officer.

54.2. No photographs' of the site or of the work of any part thereof shall be taken except with the permission in writing of the Executive Officer and no such photographs shall be published or otherwise circulated without the permission, of the Commissioner.

## **H. DATE OF COMMENCEMENT, COMPLETION, DELAYS, EXTENSION, SUSPENSION OF WORK AND FORFEITURE.**

### **55. Date of Commencement and completion:**

55.1. On notification of possession of the site (or premises) being given to the contractor by letter registered for acknowledgement as provided in clause 9.1. supra, he shall forthwith begin the work, shall regularly and continuously proceed with them, and shall complete the same (except for painting or other work which in the opinion of the Executive Officer, it may be desirable to delay) by the date of completion, as defined in the "Articles of Agreement subject nevertheless to the provisions of extension of time mentioned in the next clause. The contractor shall under no circumstances be entitled to claim any damages from Government if he incurs any expenses or liabilities to payment under the contract before the date of commencement defined above. The contractor shall have the right to withdraw from the contract and obtain refund of his security deposit if such intimation of handing over the site is delayed by more than two months from the date of acceptance of the agreement by competent authority.

### **56. Delays and extension of time:**

56.1. No claim for compensation on account of delays or hindrances to the work from any cause whatever shall lie except as hereinafter defined.

Reasonable extension of time will be allowed by the Executive Officer or by the officer competent to sanction the extension for unavoidable delays, such as may result from causes which in the opinion of the Executive Officer are undoubtedly beyond the control of the contractor. The Executive Officer shall assess the period of delay of hindrance caused by any written instruction issued by him at twenty five percent in excess of the actual working period so lost. If at any time the Executive Officer is of the opinion that there has been avoidable delays and the contractor fails to maintain the "rate" of progress specified in the article of agreement, it shall be lawful for the Executive Officer to impose penalty or order forfeiture from the Deposit sanction the extension of time for such delays, provided however, the penalty and forfeiture shall be governed as per clause 51.2. and 51.3.

56.2. In the event of the Executive Officer failing to issue necessary instructions and thereby causing delay and hindrance) the contractor the latter

shall have the right to claim an assessment of such delay by the Superintending Engineer of the Circle. The contractor shall lodge in writing to the Executive Officer a statement of claim for any delay hindrance referred to above within fourteen days from its commencement, otherwise no extension of time will be allowed.

56.3. Whenever, authorised alterations or additions made during the progress of the work are of such nature in the opinion of the Executive Officer as to justify 8" extension of time in consequence thereof, such extension of time will be granted in writing by the Executive Officer or other competent authority when ordering such alteration or additions.

57. Delays in commencement or progress or neglect of work or suspension of works by the contractor and forfeiture of Earnest Money, Security Deposit and withheld amount.

57.1. Time shall be considered as The essence of the contract. If at any time the Executive Officer, shall be of the opinion that the contractor is delaying commencement of the work, neglecting or delaying the progress of work as defined in the tabular statement... Rate of Progress in the Article of Agreement or the contractor fails to maintain the Rate of Progress in the Articles of Agreement plus any CA tension of time or the contractor shall suspend the works.. or sublet the work or a portion thereof without the sanction of the Executive Officer or violates any of the provisions of the contract the Executive Officer shall so advise the contractor and at the same time demand compliance. If the contractor neglects to comply with such demand within seven days after receipts of such notice, it shall then or at any time be lawful for the Executive Officer to impose a penalty or forfeiture on this contractor from the deposit or to determine the contract.

57.2. The penalty or forfeiture referred to in Clause 57.1. shall not exceed 5% of the work executed and is imposed in cases where the contractor is allowed to proceed with the whole or part and complete the whole or such part of the works. The penalty or forfeiture imposed by the Executive Officer under this clause is however subject to modification or waiver at the absolute discretion of any authority higher in rank than the Executive Officer.

57.3. It shall be a further right of the Executive Officer to give any part of the work to any other contractor at his discretion or have it done departmentally in order to maintain the rate progress

and the contract shall then be determined for only that portion of the work given to the contractor or done departmentally. The forfeiture under clause 57.2. will in these circumstance be applied any excess expenditure incurred on this account shall be recovered from the original contractor.

57.4. Determination of the contract referred to in Clause 47." . shall carry with it the forfeiture at the Security [deposit. After determining the contract, the Executive Officer shall have the right to give any part of the work to any other contractor in the unexecuted portion of contract, in which case any expenses which may be incurred in excess of such amount which would have been paid to the original contractor if the whole work had been executed deducted from any money due to him by Government under this contract or any other account whatsoever. Provided, also that if the expenses incurred by the Government are less than the amount payable to the contractor at his agreement rates the difference will not be paid to the contractor.

57.5. In the event of anyone of the above clauses being adopted by the Executive Officer, the contractor shall have no compensation for any loss sustained by him reason of his having purchased or processed any materials or entered into any engagements or made any advances on account or with a view to the execution of the work at the performance of contract, and in case action is taken under any of the provisions aforesaid, the contractor shall not be entitled to be paid any sum for any work actually performed under the contract unless and until the Executive Officer 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.

57.6. In the event of the Executive Officer putting in force all or any of the powers vested in him under the clause 57.4. he may if he so desires after giving a notice in writing to the contractor take possession of the works, and site and such plants and materials thereon (or any ground contiguous thereto) and all such plant and materials as above mentioned shall thereupon be at the disposal of Government absolutely for the purpose of completing the work. After such notices shall have been given, the contractor shall not be at liberty to remove from the site or works or from the ground contiguous thereto any plant or materials belonging to him which shall have been placed thereon for the purpose of the above work. Government shall not be liable to make any payment to the contractor on

account of use of such plant for the completion of the works, under the provisions herein before contained. On taking possession of the materials and stores belonging to the contractor or procured by the contractor and intended to be used for the execution of the work or any part thereof the contractor rates to be certified there of shall be final. Otherwise, the Government may give notice in writing to the contractor to remove any of his plant or materials from the site and not required or any completion of the works, if such plant and or materials are not removed within fourteen days after notice, shall have been so given, Government may remove and sell the same, holding the proceeds less the cost of removal and sale, to the credit of the contractor. The expense, of any such removal and the amount of the proceeds and expense of any such sale. shall be final and binding on the contractor

## **I. PARTICULARS OF PAYMENT**

### **58. Payment of lump sum basis or by final measurement at unit prices:**

58.1. Final measurements need not be taken unless either the contractor or the Executive Officer claims extras to or deductions from, the quantities of Schedule A,

58.2. In case final measurements are claimed, they shall be taken only for those items for which either the contractor or the Executive Officer claims final measurements and the quantities of the remaining items in Schedule A shall be accepted as correct. The lump sum amount mentioned in the agreement will then be varied by adding thereto or deducting therefrom as the case may be, the difference if any between the amounts mentioned in Schedule A for such items and the amounts arrived at by calculation at contract rates based on the revised quantities for the same, obtained by the final measurements aforesaid.

58.3. It shall be accepted as a condition of the contract that the payment of the final bill to the contractor less the withheld amounts and his acceptance thereof shall constitute a full and absolute release of Government from all further claims by the contractor under the contract.

59. Payment for additions and deductions for omissions.

59.1. No authorised variation shall vitiate the contract, but additions and omissions shall be measured up and dealt with in accordance with clause 58.2

59.2. If there is no rate in Schedule 'A' for additional work ordered to be carried out by the Executive Officer, when prior to execution of the additional work, shall be worked out in accordance with the methods indicated in 59.3. and with the rate agreed upon a supplemental agreement shall be entered in the proper departmental form signed and dated by the contractor and the Executive Officer and or any other officer for the time being authorised to accept such agreement and supplemental agreement shall on such acceptance form part of the original agreement. A copy of the supplemental slip shall be given to the contractor.

59.3.1. The rate for additional works shall be derived from the rate for similar items of work in the accepted agreement,

59.3.2. In the case of works for which supplemental agreement is to be entered into during the period when the schedule of rates has not changed from the date of execution of the original agreement, then the rates for supplemental agreements may be the prevailing schedule of rates plus or minus tender premium in case the rates cannot be derived from the items in the original agreement, in other case where the schedule of rates has change in the intervening period, the rates prevailing as per the schedule of rates at the time of execution of supplemental items will be adopted with no tender premium over this rate.

59.3.3. If the rate for a particular item of work is not in the schedule of rates, the prevailing market rates when the work was done shall be adopted.

59.3.4. If the rates cannot be determined as above, the rates shall be fixed on the cost of labour and materials plus 10 percent thereon, provided the vouchers shall have been delivered to the Executive Officer within 7 days after such work is completed. If the Executive Officer considers that the vouchers are unduly high, the Executive Officer can value work as reasonable and fair and make payment if the value of payment is less than Rs.1,000. If the value of additional payment exceeds Rs.1,000 the contractor shall have the right to submit the matter to arbitration.

59.A. In cases where the Government under the terms of the contract with the contractor are liable to supply any materials, articles or things to the contractor for the performance of his part of the contract, the Executive Officer, may at his absolute discretion extend the time which such materials, articles or things may be supplied by the Government and the Government may supply to the contractor such materials, articles or things within the time so attended without any liability on their part to compensate the contractor by reason of the extension of time for the supply of the materials, articles or things.

59.B. In cases where the Government under the terms of the Contract are liable to supply any materials, articles or things to the contractor for the performance by him of his part of the contract and the Government for any reason are unable to supply such materials, articles or things either within the time specified in the contract or within the time extended under clause 59.A. the Executive Officer may at his discretion or at the request of the contractor determine the whole or any part of the contract which cannot be performed by reason of the failure to supply such materials, articles or things and the contractor shall not be entitled to claim any damages or compensations in respect of such determination. The contractor shall, however, be paid the value of the work already done by him and the cost of the materials, articles or things if any collected by him upto the date of such determination and left unused on the work- on shall be taken over by the Executive Engineer either at the contract rates or at values deduced from the through rates deduced in the contract. When the contract is determined at the discretion of the Executive Officer, he shall give notice in writing to the contractor and the decision of the Executive Officer to determine the contract shall be final and bind on the contractor.

#### **EXPLANATION:**

The expression "Through rates" means the rate for the finished items of work or the all in rates, that is to say, the rates for finished items of work inclusive of the cost of materials and labour.

59.C. if, at any time after the acceptance of the tender the Government shall, for any reason whatsoever not required the whole or any part of the work to be carried out, the Executive Officers shall give notice in writing of the fact to the contractor. Who shall have no claim to any compensation or other

payments whatsoever, who shall on account of any profit or advantage he might have derived from the execution of the work in full but which he did not derive in consequence of the termination of the works. He shall be paid at contract rates, for the work executed by him including any additional works such as clearing of site etc., that may be rendered necessary by such termination. He shall also be allowed a reasonable payment as decided by the authority next higher in rank to the authority which accepted the tender, for any expense incurred by him on account of labour and materials, articles or things collected, but which could not be utilised on the works as verified by the Executive Officer. Such decision shall be final and binding on both the parties and shall not be subject to arbitration under clause 73.

**60. No payment for unsanctioned extras:**

60.1. It shall be distinctly understood that no payment whatever will be made to the contractor for variations by way of extras, in cases where such variations have been made without the written sanction of the Executive Officer.

**61. Accounts Receipts and Vouchers;**

61.1. The contractor shall at any time upon the request of the Executive Officer furnish him with all invoices; account, receipts and other vouchers that he may require in connection with the contract.

**62. Fraud, willful neglect or default:**

62.1. No final or other certificate of payment or of completion, acceptance or settlement of account shall, in any circumstances, relieve the contractor from his liability for any fraud, or willful neglect or default in the execution of the contract or any willful or unauthorised deviations from drawings, specification, instructions and directions for the time being binding upon him.

**63. Unfixed materials:**

63.1. No payment or advance will be made for unfixed materials when the rates are for finished work in site.

**64. Payments and certificates:**

64.1 Payments will be made to the contractor under the certificates to be issued at reasonably frequent intervals by the Executive Officer

within 14 days of the date of each certificate an intermediate payment will be made by the Executive Officer or the Silo-Divisional Officer of a sum equal to 95 percent of the value of work as so certified and the balance of 5% will be withheld and retained as security for the due fulfillment of the contract.

Under the certificate to be issued by the Executive Officer or on the completion of the entire works, the contractor will receive the final payment of all the moneys due or payable to him under or by virtue of the contract except security deposit and the withheld amount equal to 2 1/2 percent of the total value of the work done provided there is no recovery from or forfeiture by the contractor to be made under clause 57. The amount withheld from the final bill will be retained under "Deposits" and paid to the contractor together with the Security Deposit after six months reckoned from the date of completion of work or as soon after the expiration of such period of six months as all defects shall have been made good according to the true intent and meaning thereof whichever shall last happen, in the event the final bill remains unpaid even after the period of six months before said, the Executive Officer shall refund the security deposit which includes the E.M.D. and also the withheld amount on a separate bill if requested or by the contractor in writing. No certificate of Executive Officer or Sub-Divisional Officer shall be considered conclusive evidence as to the sufficiency of any work or materials or correctness of measurements to which is related nor shall it relieve the contractor from his liability to make good defects as provided by the contract. The contractor when applying for a certificate, shall prepare a sufficiently detailed bill based on the original figures of quantities and rates in the contract scheduled to the satisfaction of the Executive Officer, to enable the Executive Officer or Sub-Divisional Officer to check the claims and issue the certificate. The certificate as to such of the claim mentioned in the application as are allowed by the Executive Officer, shall be issued within fourteen days of the application. No application for a certificate shall be made within fourteen days of a previous application.

64.1 A. Notwithstanding the above clause, the withheld amount of 2 1/2 % from the final bill in respect of contract for construction of original building, will be retained by the Government for a total period of one year in lieu of six months period referred to in clause.

64.1 .B. and will be released after the expiry of one year period on execution an indemnity bond by the contractor to the satisfaction of the Executive Officer for a further period of four years to ensure structural stability of the building under clause 26.1.A.

(G. O. MS. No. 181 PWD 28.1 .86)

64.2. When there are complaint from the Labour Department about non-payment of wages to the Labourers employee by the Contractors for the execution of work under agreement, the Executive Officer, shall have full powers to withheld the bills claimed by the contractor pending clearance certificate form the Labour Department and to act as per the direction given by the Labour Department.

#### **65. Interest an money due to the contractors:**

65.1. No omission by the Executive Officer or the Su 13-Divisional Officer to pay the amount due upon certificate. shall vitiate or make void the contract nor shall the contractor be entitled to interest upon any guarantee fund or payments in arrear, not upon any balance which may, on the final settlement of his accounts, be found to be due to him.

65.2. Whenever the withheld amount reaches Rs.1,000 or a multiple thereof, the contractor may at .his option, deposit with the Executive Officer any equal amount in sums of Rs.1,000 or in multiple thereof. in any of the forms of interest bearing securities recognized for the purpose by the T.N. Public Works Account Code and subject to the provisions thereof contained in which case the equivalent withheld amount shall be paid to him forthwith. The contractor will be permitted to exercise the option in this clause, subject only to the condition that the rates of progress contained in the Articles of Agreement is properly maintained.

#### **66. Acceptance of final measurements:**

66.1. The contractor agrees that before payment of the final bill shall be made on the contract, he will sign and deliver to the Executive Officer either in the measurement book or otherwise as demanded? valid release and discharge from any and all claims and demands whatsoever for all matters arising out of or connected with the contract and also produce a certificate from the Incomes tax Authorities that all income tax payable by him upto-date has been duly paid provided that nothing in this clause shall discharge or release the contractor from his liabilities under The contract. It is further expressly agreed That Executive Officer in supplying The final measurement certificate need not be bound by the proceeding measurements and payments. The final measurements, if any of the Executive Officer shall be final conclusive and binding on the contractor.

#### **67. Recovery of money from contractor in certain case.**

67.1. In every case in which provision is made for recovery of money from the contractor. Government shall be entitled to retain or deduct the amount thereof from any money, that may be due or may become due to the contractor under these presents and or under any other contract or contracts or any other account what so ever.

#### **67. A. Recovery under Revenue Recovery Act:**

Whenever any amount has to be paid by the contractor in view of determination of the contract by virtue of clause 57 (4) or any amount that may be due or may become due form the contractor under these presents and the contractor not responding to the demands for the payment of the ;aid amount, then the Govt., shall be entitled to recover the said amount under the provisions of the Revenue Recovery Act.

(G. O. Ms. No.3659 PWD 23.12.70)

#### **68. Contractor dying becoming insolvent, insane or imprisoned:**

68.1. In the event of the death or insanity or insolvency or imprisonment of the contractor or where the contractor being a partnership or firm 'becomes dissolved or being a corporation goes in to liquidation, voluntary or other wise, the contract may at the option of the Executive Officer, be terminated by notice in writing posted at the site of the works and advertised in one issue of the local district Gazettee and all accepted and acceptable works shall forthwith be measured up and paid for at the rates provided in the contract schedule where such apply, or otherwise, by most recent schedule 0 rain of the division approved by competent authority '0 the person or persons entitled to receive and give a discharge for the payment.

### **J. SETTLEMENT OF DISPUTES**

#### **69. Arbitrations:**

69.1 In case of any dispute or difference between the parties to the contract either during the progress or after the completion of the works or after the determination, abandonment or breach of the contract, or as to any matter or thing arising there under except as to the matters left to the sole

discretion of the Executive Officer under clauses 18,20,25.3, 27, 34, 35 and 37 of "General conditions of contract" or as to the with holding by the Executive Officer of payment of any bill to which the contractor may claim to be entitled, the either party shall forthwith give to the other notice of such dispute difference and such dispute or difference. shall or be and is hereby referred to the Joint Commissioner of the nominated circle mentioned in "Articles of Agreement" therein after called the "Arbitrator" in cases when the value of claim is less than & upto Rs.50000. In cases when the value of claim is more than Rs.50000 the parties will seek remedies to the competent civil courts. (G.O.Ms.No.253 pass 24.9.81) The Arbitrators shall give detailed reasons in their findings and conclusion (G.O.Ms.No.1 844 pass off 18.7.86)

69.2. Subject as aforesaid to the provisions of the arbitration Act, 1940, or any statutory modification or re-enactment thereof and the rules made there under and for the time being in force shall apply to the Arbitration proceeding under this clause.

69.3. Upon every and such reference, the costs of and incidental to the reference and award respectively shall be discretion of the arbitrator. Subject tot he condition that the amount of such costs to be awarded to either party shall not, in respect of a monetary claim exceed the percentage set out below of any such award irrespective of the actual fees, costs and expense incurred by either party provided that where a monetary claims disallowed in full the said percentage shall be calculated on the amount of the claim. The arbitrator may determine the amount of the costs be awarded or direct the same to be taxed as between solicitor and client or as party and shall direct by whom and to whom and in what manner the same shall be borne and paid.

69.4. The fees for arbitrators shall be levied based on the value of claims referred to for arbitrations. The fees shall be calculated at 5 percent of the first Rs.10000/- and 3 percent of the next Rs. 40000/-

(G.O.Ms.No. 1844 pms dt 18.7.86)

69.5. Provided that the Government shall not be liable to any claim in respect of any such dispute or differences until the liability and the amount thereof shall have been referred to and decided by the Arbitrator

## APPENDIX -1

### PUBLIC WORK DEPARTMENT SAFETY CODE

#### General Rules as to Scaffolds.

1 . Suitable scaffolds shall be provided for workman for all works that cannot be safely done from a ladder or by other means. When a ladder is used an extra Mazdoor shall be engaged for holding the ladder and the ladder shall be given an inclination not steeper than 0.25 to 1 (0.25 horizontal to 1 vertical) when the ladder is used for carrying materials as well, suitable foot holds and hand holds shall be provided on the ladder.

2. A scaffold shall not be constructed, taken down or substantially altered except (a) under the supervision of a competent and responsible person: and (b) as far as possible by competent workers possessing adequate experience in such work.

All scaffolds and appliances connected therewith and all ladders shall

- a) be of sound materials
- b) be of adequate strength having regard to the load strain to which they will be subjected and
- c) be maintained in proper condition

4. scaffolding or staging more than 3.5 metres above the ground or floor shall have a guard rail properly attached bol-braced and otherwise secured atleast 0 metres above the floor or platform of such scaffolding or staging extending along the entire length of the outside and ends thereof with only such opening as may be necessary for delivery of materials. Such scaffolding or staging shall be so fast ends as to prevent it from swaying from the building or structure.

5.Scaffolds shall be so constructed that no part thereof can be displaced in consequence of normal use

6.Scaffoldis shall not be overloaded and so far as practicable the load shall be evenly distributed.

7.Before installing lifting gear of scaffolds specials precautions shall be taken to ensure the strength and stability of the scaffolds.

8. Working platform, gangways and stairways should be so constructed that no part there can be unduly or unequally. If the height of the platform or the stairways is more than 3.5 metres above ground level or floor level they should be closely boarded, should have adequate width and should be suitably fenced as described in (4 above)

9. Every opening in the floor of a building or in a working platform shall be provided with suitable fencing or railing for a minimum height of 0.9 meter to prevent the fall of persons or material.

10. Safe means of access shall be provided to all working platforms and other working places. Every ladder shall be securely fixed. No portable single ladder shall be over 9 metres in length while the width between side rails in rung ladder shall in no case be less than 30cm for ladder up to and including 3 metres in length. For longer ladders this width should be increased at least 20mm for each additional metre of length. Uniform step spacing should not exceed 30cm. Adequate precautions should be taken to prevent danger from electrical equipment. No materials on the site of work shall be so stacked or placed as to cause danger or inconvenience to any person or the public. The contractor shall provide all necessary fencing and lights to protect the Public from accidents and shall be bound to bear the expenses of defence of every suit, action or other proceedings at law that may be brought by any persons for injury sustained owing to neglect of the above precautions and to pay any damage and cost which may be awarded in any such suit, action or proceedings to any cost which may with the consent of the contractor be paid to compromise any claim by any such person.

#### **Excavation and trenching:**

11. Trenches-1.2 metres or more in depth, shall at all times be supplied with at least one ladder for each 20 metres in length or fraction thereof. Ladder shall be extended from bottom of the trench to at least 0.6 metre above the ground. The sides of the trenches which are 1.5 metres or more in depth shall be stepped back to give suitable slope or held securely by timber bracing, so as to avoid the danger of sides to collapse.

12. Demolition- Before any demolition is commenced and also during the process of the work.

a) All roads and open areas adjacent to the work site shall either be closed or suitably protected.

b) No electric cable or apparatus used by the operator shall remain electrically charged.

c) All practical steps shall be taken to prevent danger to persons employed from risk of fire or explosion or flooding. No floor, roof or other part of the building shall be so overloaded with debris or materials as to render it unsafe.

13. All necessary personal safety equipment as considered adequate by the Executive Officers shall be kept available for the use of the person employed on the site and maintained in a condition suitable for immediate use, and the contractor should take adequate steps to ensure proper use of equipment by those concerned.

a) Works employed on mixing asphalted materials, cement and lime mortars- shall be provided with protective footwear and protective goggles.

b) Those engaged in wheel-washing and mining or stacking of cement bags or any material which is injurious to the eyes shall be provided with protective goggles.

c) Those engaged in welding works shall be provided with welder's protective 513- '195.

d) Those engaged in welding works shall be provided with welder's protective 513- '195.

e) When workers are employed in sewers and man holes, which are in use, the contractor shall ensure that the manholes covers are opened and are ventilated at least for an hour before the workers are allowed to get into them and holes, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to the public.

f) The contractor shall not employ men below the age of 18 years and women on the work of painting, with products containing lead in any form. Wherever men above the age of 18 are employed on the work of lead painting, the following precautions shall be taken.

i) No paint containing lead products shall be used except in the form of paste or ready - made paint,

ii) Suitable face masks should be supplied for use by the workers when paint is applied in the form of spray or a surface having lead paint dry rubbed and scrapped.

iii) Overalls shall be supplied by the contractors to workmen and adequate facilities shall be provided to enable the working painters to wash during the cessation of work.

iv) When workers are employed in dangerous occupations like work with hot bitumen, drilling operations etc., which are likely to prove dangerous resulting in physical damage and casualty, adequate protection of the workers should be provided.

14. When the work is done near any place where there is risk of drawing all necessary equipments should be provided and kept ready for use and all necessary equipments steps taken for prompt rescue of any person in danger and adequate provision should be made for prompt first aid treatments of all injuries likely to be sustained during the course of the works

15. a) Hoisting machines and tackle including their attachments anchorages and supports shall be good mechanical construction, sound materials and adequate strength and free from patent defect and shall be kept in good repair and in good working order. Every rope used in hoisting or lowering materials or any means of suspension shall be of suitable quality and adequate strength and free from patent defect.

b) Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years should be in control of any hoisting machine, including the scaffold which or give signals of the operator,

c) In the case of every hoisting machine and of every chain ring hook shackle level and pulley block used in hoisting lowering or as a means of suspension, the safe working load shall be ascertained by adequate means. Every hoisting machine and all car referred to above shall be plainly marked with the safe working load, in the case of a hoisting machine Slaving variable safe working load, each safe working load and the conditions under which it is applicable shall be clearly indicated. No part of any hoisting machine or of any gear referred to above in this-paragraph shall be loaded beyond the safe working load except for the purpose of testing.

16. Motors, gearing, transmissions, electricity wiring and other dangerous parts of hoisting appliance shall be provided with efficient safeguards, Hoisting appliance shall be provided with such means as will reduce to a minimum the risk of the accidental descent of the load. Adequate precautions shall be taken to reduce to a minimum the risk of any part of a suspended load becoming accidentally displaced.

When workers are employed on electrical installations which are already energized, insulation mats, wearing apparel such as gloves, sleeve, and boots as may be necessary should be provided. The workers and carry keys or other materials which are good conductors of electricity.

17. These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place at workshop. The person responsible for the compliance of the safety code shall be named by the contractor.

18. To ensure effective enforcement of the rules and regulations relating to safety precautions, the arrangements made by the contractor shall be open to inspection by the Labour Officer, Executive Officer of the Department or other representative.

19. Notwithstanding the above clauses (1) to (18) there is nothing in these to exempt the contractor from the operations of any other Act of rules in force in the Republic of India.

Model rules for provision of Health and Sanitary arrangements for workers employed by the HR & CE Department and their contractors.

The contractor's special attention is invited to relevant clauses of the "General conditions of contract in the Tamil Nadu Building Practice and he is requested to provide at his own expense the following amenities to the satisfaction of the Executive Officer.

1. Application - These rules shall apply to all building and construction works in charge of P.W.D.

2. Definitions- (i) "Workplace" means a place at which an average fifty or more workers are employed in connection with construction work.

(ii) "Large work place" at which, at an averaged 500 or more workers are employed in connection with construction work.

3. First-Aid - (a) At the work site there shall be maintained in a readily accessible place, first aid appliance and medicines including an adequate supply of sterilized dressing and sterilized cotton wool. The appliances shall be kept in good order. They shall be placed under the charge of a responsible person who shall be readily available during working hours

b) At large work places, where hospital' facilities are not available within easy distance of the works, first aid posts shall be established and be run by a trained compounder.

c) Where large work place are remote from regular hospitals an in-door ward shall be provided with one bed for every 250 employees.

d) Where large work places are situated in cities, towns or in their suburbs and no beds are considered necessary owing to the proximity or city or town hospitals, suitable transport shall be provided to facilitate removal of urgent cases to these hospitals. At other work places some conveyance facilities, such as a car shall be kept readily available to take injured persons or persons suddenly taken seriously ill to the nearest hospital.

4. Drinking water-(a) Water of good quality fit for drinking purposes shall be provided for the work people on a scale of not less than 15 litres per head per day

b) Where drinking water is obtained from an intermittent public water supply each work place shall be provided with storage tank where such drinking water shall be stored.

c) Every water supply storage shall be at a distance of not less than 15 metres from any latrine, drain or other source of pollutions.- Where water has to be drawn from an existing well, which is within such proximity of latrine, drain or any other source of pollution, the well shall be properly chlorinated before water is drawn from it for drinking. All such wells shall be entirely closed in and be provided with a trap door which shall be dust and water proof.

d) A reliable pump shall be fitted to each covered well, the trap door shall be kept locked and opened only for cleaning or inspection which shall be done atleast once a month.

5. Washing and bathing places-Adequate washing and bathing places should be provided, separately for men and women such places shall be kept in clean and drained condition. Bathing or washing should not be allowed in or near any drinking water well.

6. Latrine and Urinals- There shall be provided within the precincts of every work place, latrines and urinals in an accessible place and the accommodation separately for each of them, shall be on the following scale or on the scale so directed by the Executive Officer in any particular cases.

i) Where the number of persons employed does not exceed 50.

ii) Where the number of persons employed exceed 50 - 3 but does not exceed 100.

iii) For every additional 100 ... -3

If women are employed separate latrines and urinals, screened from those for men shall be provided on the same scale.

Except in work places provided with water flushed latrines connected with a water borne sewage system, all latrines shall be provided with receptacle on dry earth system which shall be cleaned atleast four times daily and at least twice during the working hours and kept in strictly sanitary conditions. The receptacles shall be tarred inside and outside atleast once a year.

The excreta from the latrines shall be disposed off at the contractor's expense, in out way pits approved by the local Public Health Authority. The Contractor shall also employ adequate number of scavengers and conservancy staff to keep the latrines and urinals in a clean condition.

7. Shelters during rest: At every work site there shall be provided, free of cost, two suitable sheds one for meals and the other for rest separately for men and women for the use of labourer.

8. Creches: (a) At every work place at which 50 or more women 'workers are ordinarily employed there shall be provided two huts of suitable size for the use of children under the age of 6 years, belonging to such women, one hut shall be used of infants, games and play and the other as their bed room. The huts shall not be constructed on a lower standard than the following:

i) thatched roofs

ii) mud floors and walls.

iii) Planks spread over the mud floor and covered with matting.

The huts shall be provided with Suitable and sufficient opening for light and ventilation. There shall be adequate provision of sweepers to keep the places clean. There shall be two attendance Sanitary utensils shall be provided Health Officer of the area concerned. The use of the huts shall be restricted to children, their attendants and mothers of the children.

b) Where the number of women workers is more than 25 but less than 50, the contractor shall provide atleast one hut and one Dai to look after the children of women workers.

c) The size of creche or creches shall vary according to number of women workers.

d) The creche or creches shall be properly maintained and necessary equipment like toys, etc. shall be provided.

9. Canteens-A cooked food canteen on a moderate scale shall be provided for the benefits of workers if it is considered expedient.

10. Sheds for Workmen - The contractor should provide at his own expense sheds for housing his workmen. These sheds shall be on a standard not less than the cheap shelter type, to live in which the work people in the locality are accustomed to.

A floor area of about 1 .8 metres x 1 .5 metres for two persons shall be provided. The sheds to be. in rows with 1.3 metres clear space between sheds and 9 metres clear space between rows if conditions permit. The work people's camp shall be laid out in units of 400 persons, each, each unit to have a clear space of 1 2 metres alround.

#### APPENDIX IX. XXXVIII

#### MONTHLY REPORT OF CONSTRUCTION EMPLOYEES UNDER CONTRACTORS

##### Return for the Month Ending

1. Name location and type of work
2. Name of contractor
3. Works engaged in
  - i) P.W.D. work
  - ii) Government work other than PWD
  - iii) Other works
4. Name and address of Manager(s) of works

#### 5. Value of Contract

#### 6. Employment earnings

##### Employees

Category (1)	Men (2)	Women (3)	Boys (4)	Girls (5)
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- i) Total number of employees during the month
- ii) Number of employees in the work on the last working day of the month
- iii) Total wages paid for the
- iv) Total number of working days during the month
- v) Length of normal wage period.

To

1. The Employment officer  
District Employment Office
2. The Executive Officer  
Division

#### Instruction to complete the Proforma

1. Contractor means the person who has contracted execute the works
2. Manager means any person who manages, supervises the works on behalf of the contractor

3. Item (i) the cumulative total of daily employment on all days in a calendar month if the last day of the calendar month is a holiday, the working day immediately precious to the holiday.

**Item 6. (ii) wages means basic wage, dearness allowance, project allowances etc., including work benefits paid in cash or kind**

Item 6. (iii) Columns 2 and 3 refer to adults who are 18 year of age or over

Item 6 - Column 4 and 5 refer to others not covered by columns 2 and 3

4. Returns should cover a calender month

5. Completed returns to reach the employment exchanges concerned on or before the 5th of the month succeeding the month to which he return relates.

## **ADDITIONAL CONDITIONS**

1. Departmental supply of the Materials : Nil

### **2. Centering works**

Payments for centering works for all RCC items shall be made only after concrete is laid, even though separate rate is called for centering work in the schedule.

### **3. Concrete for RCC works**

All cement concrete for RCC works shall be machine mixed and vibrated.

### **4. Special conditions for earthwork excavation in hard rock requiring blasting:**

In the case of earth work excavation in hard rock requiring blasting the tender should observe the following conditions.

The blasted rock shall be compactly stacked for measurement. The net quantity of blasted rock shall be arrived at by allowing a deduction of 40% for voids and compared with the premeasured quantity and only the lesser of the two shall be paid.

Where the rock other than hard rock and hard rock are mixed upon ground the two kinds (if rocks shall be separately for measurement. The total of the net measurement of the two kinds of rock shall be arrived by applying 40% deduction for voids. The total of the net measurement of two kinds of rock shall be compared with the premeasured quantity and only the lesser of the two shall be paid for. If the total of net measurements of the two kinds of rock exceeds (or) falls short of the measurements of mixture, the volume of mixture proposed to be paid shall be apportioned in the proportion of the net actual measurements or stacks of the two kinds of rocks.

Payment for 'earthwork for embankment will be made excluding the quantity of pebbles and boulders and other such materials which shall not normally be used along with earth for formation of bund.

- NOTE:
- i) 40% deduction for voids shall be adopted for compact and proper stacking but such percentage of deduction shall be: increased for loose (or) improper stacks.
  - ii) The blasted rock material, stacked, measured and paid for shall become the property of the department.
  - iii) I. S. Code No. 1200 (Part 1) I 9G9 method of measurement of buildings and Civil Engineering of work, Part I "Earthwork" may be referred as and when necessary.

### **5. Employment of Technical Assistant:**

For more than one work: One technical assistant be employed by the contractor for more than one work situated within one kilo metre, provided that monetary limit prescribed for the nature of Technical staff to be employed is adhered to be one and the same contractor..

Other Engineering qualification:

The contractors who possess a degree in mechanical or chemical engineering may also have to appoint technical assistants as in the case of registered contractors with degree in electrical engineering, when they are entrusted with civil works by the department.

## 6. Mosaic Flooring:

1. Cement concreting flooring tiles shall be manufactured from a mixed cement natural aggregates and colour materials where required by pressure process. During manufacture the tiles shall be subleted to a pressure- of not less 140 kg/1 m<sup>2</sup> (or) 2000 lbs/sq. inch.

2. Proportion of cement to aggregate ii', backing of the tiles shall be not less than 1:5 by weight.

3. On removal from mould the tile shall be kept in moist condition continuous for atleast 7 days and subsequently if necessary kept m 0 is t for such a longer period that would ensure their confirmity, to the requirements of Transfers, strength, Resistance to wear and tear absorption and would minimise, shrinkage and cracking tiles shall be stored undercover.

4. TOLERANCE: Tolerance on length and breath shall be plus or minus one millemetre Tolerance on thickness shall be plus 5mm that the range of dimensions if any of one delivery of this shall not exceed 1 mm on length and breadth and 3mm on thickness.

THICKNESS OF WEARNING LAYERS	
Class of Tiles	Minimum thickness of wearing layer
Plain cement and plain coloured tiles for general duty	3 mm
Plain cement and plain coloured tiles for heavy duty	6 mm
(Mosaic) terrace tiles with chips of size varying from the smallest upto 6mm (¼ ")	5 mm
(Mosaic) terrace tiles with chips of size varying from the smallest upto 6mm (¼ ")	5 mm
(Mosaic) terrace tiles with chips of size varying from the smallest upto 6mm (¼ ")	6 mm

5. **Colours and appearance:** The colour and texture of the various layer shall be uniform throught its thickness

6. When specifying the tiles, the contract should specification indicate whether the chips to be used are from the smallest chips 6mm or from the smallest upto 12mm or from the smallest upto 20mm size. The officers of the department shall also specify size of chips referring the approximate photograph given in figure 4 to figure 5 in Indian standard 1237/1959

## GENERAL QUALITY OF TILES

7. Unless otherwise required the wearing face for terrace shall be mechanically sound and flat. The wearing face of the tiles shall be plane free from projections, depressions and crack. (Here cracks not included) and shall be reasonably parallel to the back face of tiles. All angle shall be right Angles and all edges shall be sharp and true.

8. Breaking Traverse strength of the shall be given as

Size of tiles	span	Breaking Wet test	
<b>19.85 x 19.85 cm</b>	<b>15cm</b>	<b>71kg</b>	
<b>24.85 x 248.5 cm</b>	<b>20 cm</b>	<b>90 kg</b>	
<b>29.85 x 29.85 cm</b>	<b>25 cm</b>	<b>99 kg</b>	

9. The average wear of net less than 12 specimens shall not exceed 2mm and the wear on any individual specimen shall not exceed 2.5 cm when rested in any Abrasion machine

10. The average percentage of water absorption shall not be less than six. Full tiles shall not exceed ten in the case of water absorption test.

11. The density of the tiles shall be in the order of about 2.4 gms. The tiles shall be laid with the minimum possible width of joint and not exceeding 1/32 inch. The joints shall be filled with gray cement to match the finish of the tiles and shall be made almost inviolable when the floors is given the final polish. The polishing shall be done means of electric polisher wherever possible and ~and polish to other places like vertical faces, or walls, covers and other areas where the machines can have no access and to high degree so as present a perfectly smooth and glossy surface as even as possible

12. All angles at junctions of vertical face shall be rounded off to 1/16" radius with same quality of materials and colour of the tiles of the floor. But laid in site and these cover shall be measured as part of flooring and laid for at the same rates as the flat floors. The colours of the tiles shall generally match other coloured face adjacent or as may be directed by Executive Officer.

13. The dadoing and skirting have to be finished by giving necessary race in the brick wall itself so that the projections does not exceed 3/4" from the face of the wall. i.e. the finish plastered surface.

#### **SPECIFICATION FOR SANITARY FITTINGS DRAINAGE AND WATER SUPPLY**

7. Water Closets, basins, urinals, sinks and other sanitary shall be approved make as required in the relevant items these shall be in accordance with the special specification.

8. The rates shall include all dismantlings making holes or slabs and restoring the structure to the original conditions of the completion of the work.

9. The work should be carried out with least hindrance to building and the contractor shall be responsible for any damaging to the existing fixtures, electric fittings etc., in the execution and the Contractor shall make good any such damages claim for extra.

10. The rate for laying stone ware pipes shall include necessary all incidental charges during execution of work and making good the damages to roads and other structures.

11. The rates for laying C.I. Pipe and G.I. Pipes (or P.V.C. Pipes) shall include fixing with wooden plugs C.I. / C.I. clamps and these screws where the pipes are fixed to walls. The rates for Pipes shall also include wrapping them with tarrod tape are hurried in earth, tarring the portions embeded in and painting with white lead into two coats for portions above ground level.

12. The clamps for G.I. Pipes fittings should not be spread than a part, the wooden plugs, for pipe and bracket fitting should be properly fixed in C.M. 1:3 in holders main thereby with the wide and of wedge shapped plugs inside and not with them and into the wells. The size of plug should be not less than 1 square at one end 1 1/2 at the other end, with a depth of not less than 3".

13. Painting with two coats of best white paint (or any other coloured approved by the Executive Officer) over a priming of red lead to all flushing tanks, brackets, clumps used for fixing pipes and all other connections.

14. The rates shall all included dismantling, making holes on walls, on slabs and restoring the structure to the original conditions after the completion of the work.

15. The contractor should employ sufficient number of qualified licenced plumber with necessary experience and skill in the to the satisfaction of the Executive Officer concerned for execution of water supply arid sanitary items of work.

16. The water for the works shall be as for as practicable from earthing vegetable or organic matter and from salts or substance likely to interfere with the setting of mortar prove harmful to the work.

17. All items of work shall be- done in accordance with relevant clauses of TNBP and addenda volume to the TNBP as from time to time

18. The contractor shall be responsible for the safe custody of the departmental materials once they are handed over to the Contractor at the departmental stores. The cost of any material the custody of the Contractor lost, stolen, destroyed or damaged or if rendered unfit for the work will be recover from the Contractor at the issue rate.

19. For testing the concrete and aggregate the Contractor procure the following equipments and make them available.

20. Steel mould for making 15 cm cubes of concrete (The mould be in two halves for easy removal).

21. Slum cone for testing consistency (Slum test) the cone will be 30cm height with top and bottom diameters of 10 cm and 50 cm in length. In addition a steel rod 15cm dia and 50cm in length and with tamping and rounded is to be procured.

22. For finding finess mouldes sand and coarse aggregate a hand operated sieve apparatus may be procured along with weighing machine for weighing the aggregate and sand.

23. In the case of any breach of the terms of the contract, the contract will be closed at the risk and costs of the Contractor in addition to the forfeiture of the EMD and Security Deposit.

24. The testing is to be done at the Contractor's cost for all building materials and also for concrete cubes.

25. The work shall be executed and measured as per metric dimension given in the schedule of quantities & drawing etc., (F.P. Units where indicated are for guidance only).

26. Unless otherwise specified P.I' the rates quoted by the Contractor shall be for works at all levels of the buildings.

27. Rates for every item of works to be done under this contract shall be for all lifts and leads, heights, depths, length and widths except when specifically mentioned in the item, otherwise nothing extra will be paid on this account.

28. The work shall be carried out as per drawings and designs supplied by the Department and as directed by Engineer-in- Charge.

29. The rate for all item in which use of cement is involved is inclusive of charges for curing.

30. The Contractor has to make his own arrangements for procuring water for construction purpose construction and curing should be done with water free from injurious amounts of deleterious materials, potable water are generally considered, satisfactory for curing and fixing concrete and masonry. However the water tube used should be periodically tested at Contractors cost for its suitability for using in the construction work and got approved from Department Engineers.

31. Electricity: The contractor should make his own arrangements for obtaining electricity for all types of his use like lighting welding pumping and mosaic and marble polishing etc.,

32. Any damage to work resulting from rains or from any other cause until these work is taken over by the Department after completion will be made good by the contractor at his own cost:

## SUPPLY AND FIXING INDIAN TYPE WATER CLOSETS

33. The Indian type water closer shall be fixed in position at floor level in a bed of concrete brick jelly in lime mortar 1:2 so as to complete by embedding the closet trap and foot rests. The existing masonry structure after dismantling the floor making the holes etc., shall be rested to its original condition after completion of the work. The foot rests should be fixed at an angle as per standard.

34. The PVC flushing tank shall be three gallons capacity of Indian make (confirming to ISI specification) supported on CI brackets with necessary CI chain and handle for pull float ball valve ½" PVC connection to the water main and closet including pipe with the white glazed paint 2 coats over a priming coat of red lead

35. The fixing of water closet shall including the dismantling of existing floor wherever indicated making holes in necessary walls etc., and restoring structure to original condition after completion of the work. The flushing tank and accessories will be fixed to the walls with necessary clamps and brackets in CM 1:1:3.

36. The Contractors shall be solely responsible for the payment of Sales Tax under the provision of the Madras Central Sales Tax Act (Madras Act II of 1980) as in force for the various items of work time being and the rate for the various items of work shall remain unaffected by any changes that may be made from time to time in the rate at which such tax should be payable. Sales tax on the matter also supplied to the contractor as amended from time to time shall be paid by them separately and the relevant challans produced to the Departmental Officers.

## ELECTRIFICATION WORKS

The tenderer shall furnish the electrical tie-up Engineer details with license for executing the building electrification works, experience details etc., based on the value of electrical works.

### 1. TERMS OF PAYMENT:

- (a) The cost of materials will be released after receipt of materials at site in good condition, and payment will be paid on completion of work (i.e) on Commissioning and handing over of the plant to the Department in Satisfactory working condition for electrical works.

### 2. GUARANTEE :

The plant should be guaranteed against faulty design, materials manufacture and workmanship for a period of 12 months from the date of handing over of the plant to the Department in perfect working condition. The guarantee should cover free replacement of defective parts / accessories. Lubricating of the parts descaling of condenser, recharging of fresh refrigerant and Gas whenever necessitated during the guarantee period. The To and Fro Bata charges for mechanic and transport charges for taking defective materials to the company and bringing them back to the site should be borne by the firm only. If at any time during the guarantee period the plant is out of order for more than a month at a time, then the GUARANTEE period will be extended by the period RECKONED from the date the PLANT went out of order to the date when it was recommissioned.

### 3. FREE SERVICING:

The plant should be serviced regularly every month during the GUARANTEE PERIOD FREE OF CHARGE. Break down calls should be attended immediately free of charge. The firms capability in ensuring required after sales Services must be stated.

- a) Firm having full Fledged Service, Station in Madras for nearby will be preferred. The location of the Service station should be stated.

### 4. TRAINING THE DEPARTMENT PERSONS:

The tenderer should be ready to train the Departmental persons on the Operation maintenance and fault detection and design of the plant during the erection period and servicing period also.

- 5. a) All the electrical wiring should be done as per the latest I.E, rules.
- b) Necessary Physical Layout and Electrical Schematic Line Diagram of Electrical portion of A.C. plant and circuit Diagram for the control panel and connected M.V. drawings shall be prepared and got approved by the C.E.I.G. Madras-32 if necessary at no extra cost. The firms should also see to it that safety certificate from C.E.I.G. Madras-32 is obtained for electrical Installation if necessary at no extra cost. The inspection charges payable to C.E.I.G will be borne by the Department. 3 Sets Electrical Wiring diagram and 3 set maintenance instruction should be furnished while handing over the plant to the Department among which one copy should be neatly framed for keeping it in the plant room at no extra cost.
- c) All iron and steel work including the equipment shall be provided with two coats of enamel paint over one coat red oxide paint.
- d) The Motors and all other metal parts shall be effectively earthed.
- a) Necessary Tests for the performance should be carried out.
- b) All the Refrigerant lines should be properly clamped.

### 6. TESTING:

After the completion of the installation, the equipment shall be adjusted and tested fully. The following details shall particularly be applicable.

- i) After the trial run is carried out, the A.C. unit shall be adjusted to the initial running for a period of three days before taking any test of the installation. It should demonstrate trouble free performance and capability during running.
- ii) (a) Test for unit capacity in T.R. by Computation for temperature and flow measurement.  
(b) Test for operation of various controls.
- iii) Any other test desired necessary by Engineer-in-Charge.

In case the test results are not found satisfactory and further tests are considered necessary the contractor shall bear all the expense thereof.

All test equipment, labour, operating personnel, Oil and refrigerant required for these tests shall be furnished by the Contractor to enable the A.C Units to be put in a continuous running test for a period of five days after all other tests and adjustment have been made. The contractor shall give one test for summer to prove, compliance with design conditions.

- h) The gauges and cut outs should be installed in a separate panel installed on the wall or in a separate stand away from the foundation.
- i) All the liquid lines should be properly clamped.

### SPECIAL CONDITIONS FOR QUALITY CONTROL SYSTEM

- 1) The Contractor shall establish Quality Assurance and Quality Control Systems In accordance with Quality Assurance Plan to prove compliance with the requirements of the contract as approved by the Executive Officer (or) Engineer-in charge concern.
- 2) The Contractor shall provide all apparatus, assistance, documents and other information, electricity, equipment, fuel consumables, instruments, labour, materials and suitably qualified and experienced staff as are necessary to carry out the specified test efficiently. The samples shall be collected and the tests may be conducted in the presence of the Engineer-in-Charge or his authorized representatives.
- 3) Alternatively, the contractor may test the materials during execution of works at the reputed laboratories approved by the Executive Officer **at the contractors own cost**, provided that the samples are collected with proper identification marks in the presence of the Engineer-in-Charge or his authorised representative.
- 4) The frequency of testing of materials shall be in accordance with the relevant IS codes.
- 5) Compliance with the Quality Assurance / Quality Control Systems shall not relieve the contractor of any of his duties, obligations or responsibilities covered under the contract.
- 6) The Engineer-in-charge shall check the contractor's work and notify the contractor of any defects that are found. Such checking shall not affect the contractor's responsibilities. The Engineer-in-charge may instruct the contractor to search for a defect and to uncover and test any work that the Engineer-in-charge considers may have a defect.
- 7) If the contractor has not corrected a defect within the time specified in the Engineer-in-charge notice, the Engineer-in-charge will assess the cost of having the defect corrected, and the contractor have to bear the costs

Table IV : Preliminary Test

## ACCEPTANCE CRITERIA FOR CONCRETE (ALL GRADE)

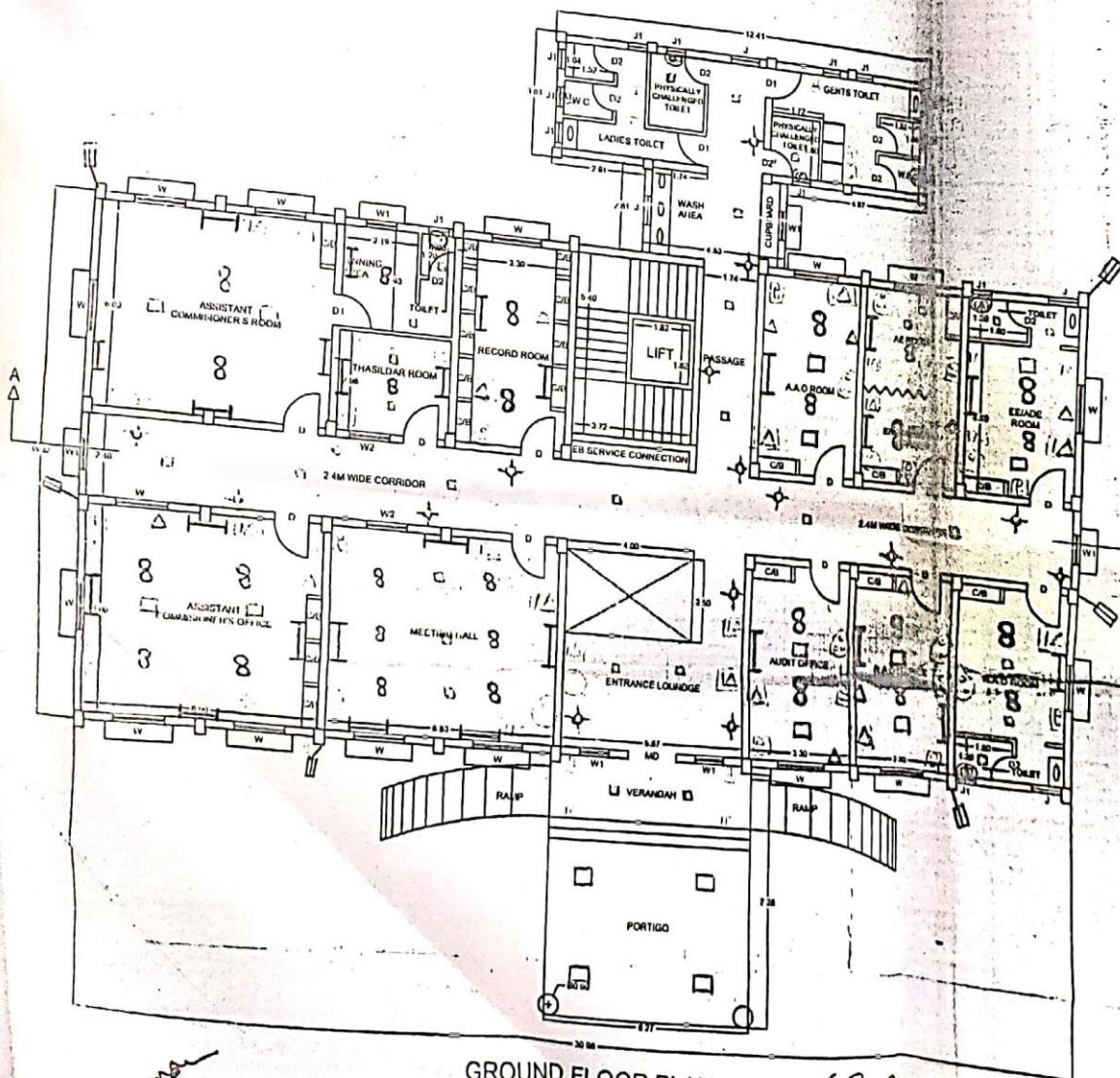
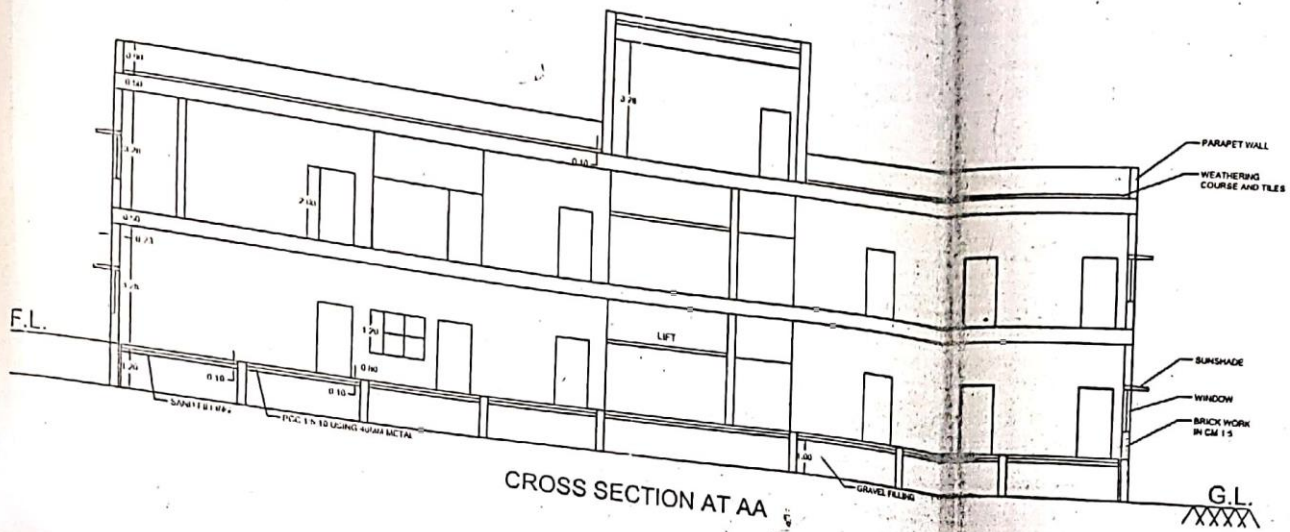
## WORK TEST

Minimum No. of specimens from each batch (cubes)		Minimum Frequency	Criteria for Acceptance	Minimum No. of specimens taken from the same days work				Minimum Frequency		Criteria for Acceptance
7 day compressive strength test as optional test if desired	28 days compressive strength test			Cubes		Beams		In terms of the quality of concrete	In terms of Period	
(1)	(2)	(3)	(4)	7 day compressive strength test as optional test if desired	28 days compressive strength test	72+2 Hours test as an optional test if desired	7 days test as an optional test if desired	(9)	(10)	(11)
5	5	For each batch with a minimum of three batches	Accept for if average compressive strength of the specimen tested is not less than the compressive strength specified in Table-I (For Optional tests See Table-2) subject to the condition that only one out of five consecutive test may give a value less than specified strength.	3	3	3	3	For every 150 cubic metre of concrete of part thereof	At such intervals as the Engineer incharge, may decide. However in the case of concrete sample shall be drawn on each day for the first four day of concreting and there after atleast once in 7 days of concreting.	Accepted to average strength of the specimen tested is not less than the strength specified in Table-I (For Optional tests see Table-2) subject to the condition that only one out of three consecutive test may give a value less than specified Strength but this shall not be less than 90% for the specified strength.

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
---	10	For each batch with a minimum of three batches	Accept for if average compressive strength of the specimen tested is not less than the compressive strength specified in Table-I subject to the condition that the average compressive strength shall be more than the specified compressive strength in Table-I, by atleast the value of standard deviation* of the series of the test * Standard deviation	5	5	5	5	For every 150 cubic metre of concrete of part thereof	At such intervals as the Engineer incharge, may decide. However in the case of controlled concrete samples shall be drawn on each day for the first four days of concreting and there after atleast one seven days concreting.	Accept if average strength of the specimen tested is not less than the strength specified in Table-I (For Optional tests see Table-32) subject to the condition the one out of five consecutive tests may give a value less than the specified strength.
* standard deviation = $d2 / (n-1)$ Where 'd' individual deviation from the average and 'n' number of specimens tested.										



# NAME OF WORK: CONSTRUCTION OF JOINT COMMISSIONER OFFICE AND ASSISTANT COMMISSIONER OFFICE AT VELLORE TOWN, TALUK AND DISTRICT.



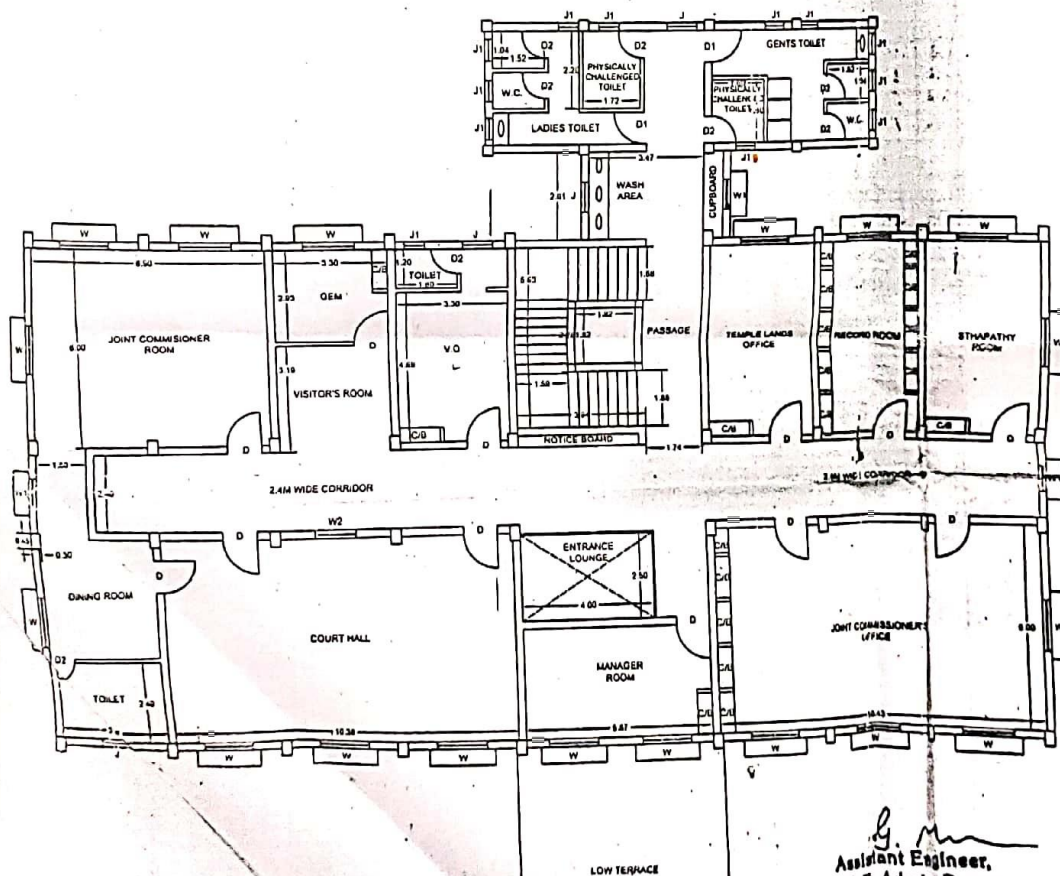
செயல் அலுவலர்  
ஜி. கி. வி. ராமசாமி செல்வபாரதி அறக்கட்டளை  
வேலூர் மாநகர் - 632 004

Assistant Engineer,  
H.R. & C.E. Admin. Department  
VELLORE - 632 009.

Assistant Divisional Engineer,  
HR & CE Dept.,  
Vellore.

Executive Engineer  
HR & CE Department  
Vellore - 632 004

Hand-drawn floor plan of the second floor of a building. The plan shows a large rectangular area with a central 'PASSAGE' and several rooms. Dimensions are provided for various sections: 12.41, 3.81, 2.45, 3.01, 3.21, 3.35, 2.01, 8.23, 8.40, 6.27, 6.30, and 6.50. A north arrow is located in the bottom right corner.



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செயல் அலுவலர்  
பூர்வீரமணி செல்வார் அறக்கட்டளை  
வேலூர் மாநகர் - 632 004

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VELLORE - 632 009.

Assistant Divisional Engineer,  
HR & CE Dept.,  
Vellore.

FIRST FLOOR PLAN

Executive Engineer  
HR & CE Department