AN ISO 9001 & 14001 COMPANY

TENDER DOCUMENT

TENDER No: DLI/CON/686A/625

FOR

Construction of G+7 RCC Framed Structure tenements blocks with Bus bar rooms including internal water supply, sanitary, electrifications works in Chennai near Perumbakkam Phase- II -Reach-II-Balance work.

VOLUME – II

Additional Conditions of Contract
&
Special Specifications
&
Drawings
ADDITIONAL CONDITIONS OF CONTRACT (ACC)

The following Additional Conditions of Contract shall be read in conjunction with General Conditions of Contract. If there are any provisions in these Additional Conditions of Contract, which are at variance with the provisions of General Conditions of Contract, the provisions in these Additional Conditions of Contract shall take precedence.

1.0 Introduction:

Construction of G+7 RCC Framed Structure tenements blocks with Bus bar rooms including internal water supply, sanitary, electrifications works in Chennai near Perumbakkam Phase- II -Reach-II-Balance work. M/s TNSCB is the client and have appointed a PMC to supervise the works.

2.0 Order of Precedence:
Clause 42.1 of GCC stands amended as under:

In case of difference, contradiction, discrepancy, dispute with regard to Conditions of Contract, Specifications, Drawings, Bill of Quantities and Rates quoted by the Contractor and other documents forming part of the contract, the following shall prevail in order of precedence

2.1 Contract Agreement which includes NIT, Special Instructions to Tenderer /Bidder, Memorandum.

2.2 Letter of Intent, detailed letter of Work Order along with statement of agreed variations and its enclosures.

2.3 Description in Bill of Quantity / Schedule of Quantities

2.4 Additional Conditions of Contract.

2.5 Special Specification as given in the Tender Documents.

2.6 General Conditions of Contract.

2.7 Drawings

2.8 TN PWD/ Highways Department specifications, TNDSS and MDSS

The item description mentioned in BOQ attached to this tender are generally based on items which are a part of Agreement No: L S Agreement C.R No.10/SE(J)/2011-12 dtd 28.03.2012,L S Agreement C.R No.43/SE(JNURM)/2013-14 dtd 31.10.2013 and L S Agreement C.R No.69/SE(CC-II)/2015-16 dtd 03.03.2016 between Engineering Projects (India) Ltd and Client M/s Tamil Nadu Slum Clearance Board based on Tamil Nadu Schedule Of Rates. If incase of any discrepancy between BOQ and afore mentioned agreement description, Description given in aforesaid agreement with TNSCB shall prevail.

3.0 Scope of work:

The project site for the work is available. The works have been started and are in various stages/Level of progress and the details of works completed and stage of progress are as follows:
3.1 **Structural Works:**
Construction of multi-storied buildings G+7 R.C.C framed structure including civil, plumbing etc.

<table>
<thead>
<tr>
<th>Sl No.</th>
<th>Description</th>
<th>Level of work completed/ stage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Block No.11</td>
<td>2nd Floor Roof Slab</td>
</tr>
<tr>
<td>2.</td>
<td>Block No.12</td>
<td>3rd Floor Roof Slab</td>
</tr>
<tr>
<td>3.</td>
<td>Block No.13</td>
<td>7th Floor Roof Slab</td>
</tr>
<tr>
<td>4.</td>
<td>Block No.14</td>
<td>3rd Floor Roof Slab</td>
</tr>
<tr>
<td>5.</td>
<td>Block No.15</td>
<td>3rd Floor Roof Slab</td>
</tr>
<tr>
<td>6.</td>
<td>Block No.16</td>
<td>7th Floor Roof Slab</td>
</tr>
<tr>
<td>7.</td>
<td>Block No.19</td>
<td>5th Floor Roof Slab</td>
</tr>
<tr>
<td>8.</td>
<td>Block No.20</td>
<td>7th Floor Roof Slab</td>
</tr>
</tbody>
</table>

3.2 **Finishing Works:**
The total scope of finishing works includes the Brick work, Plastering, Flooring, Door and Window fixtures, Plumbing, Painting, Firefighting etc for 14 blocks (including 8 blocks mentioned above) where RCC structural works are completed / advanced stages of completion.

3.3 **Electrical Works:**
The scope of Electrical Work does not include Supply, Installation, Testing and Commissioning of Main Incomer Panels for the above 14 blocks, however minor electrical works for development works and Miscellaneous work mentioned below as per BOQ are included.

3.4 **Development and Miscellaneous Works:**
Apart from above Buildings/Blocks, scope of work also consists:
- 3.4.1 Filling of Low Lying areas
- 3.4.2 Formation of Road
- 3.4.3 Pavement around the Blocks
- 3.4.4 Construction of Nursery School (1Nos)
- 3.4.5 SFRC around the Park area
- 3.4.6 Providing Fire Fighting arrangement for Blocks

4.0 **Tender Rates**
The work is to be quoted on *percentage rate above, below or at par basis* on the estimated bill of quantities and tender conditions.

5.0 **Completion Time**
The entire work shall be completed within **06 (Six) months** from the date of issue of LOI. The time of completion is firm and final and supersedes any other time mentioned elsewhere in any clause(s) of tender document.

6.0 **Quantity Variation:**
Deviation limit shall apply to individual items (as per GCC Clause No: 69.1 – V a))
+/- 25 % is modified to +/- 100%.

7.0 **Defect Liability Period:**
Defect Liability Period as per GCC Clause No: 74.0 stands modified as Twenty Four Months (24 Months) instead of twelve months (12 months). In addition, the contractor should furnish an Indemnity Bond for his scope of work for a further period of three years after completion of Defect liability period. Format of Indemnity bond enclosed as Annexure-1 in Special specifications.
8.0 Disqualification:
The tenderers may note that they are liable to be disqualified and not considered for the opening of Price Bid if;

8.1 Representation in the forms, statements and attachments submitted in the pre-qualification document are proved to be incorrect, false and misleading.

8.2 They have record of poor performance during the past 10(ten)years such as abandoning the work, rescinding of contract for which the reasons are attributable to the non-performance of the, inordinate delay in completion, consistent history of litigation / arbitration awarded against the or any of its constituents or financial failures due to bankruptcy etc. in their ongoing / past projects.

8.3 They have submitted incompletely filled in formats without attaching certified supporting documents and credentials to establish their eligibility to participate in the Tender.

8.4 If the tenderers attempt to influence any member of the selection committee.

8.5 EPI reserves its right to take appropriate action including disqualification of tenderer(s) as may be deemed fit and proper by EPI at any time without giving any notice to the in this regard. The decision of EPI in the matter of disqualification shall be final and binding on the Tenderers.

9.0 Specifications:
All works in general are to be carried out in accordance with the relevant Tamil Nadu PWD Specifications, highways department, Tamil Nadu Detailed Standard Specification (TNDSS), Madras Detailed Standard Specification (MDSS), Indian standard Specifications and as per the special specifications separately attached with this tender.

10.0 Taxes&Duties: Clause no 13 of GCC shall be **amended/deleted as per below:**

10.1 The bidder/Contractor must be registered with GST and should have valid GSTIN number.

10.2 The bidder/contractor must submit as an compliances of GST Act, the invoices in GST compliant format failing which the GST amount shall be recovered/adjusted by EPI without any prior notice from the next invoices or available dues with EPI.

10.3 The bidders/Contractors are requested to update/upload the GST/Taxes data periodically so as to avail ITC credit by EPI failing which it shall be recovered/adjusted by EPI without any prior notice from the next invoices or available dues with EPI.

10.4 Rates quoted in this tender are inclusive of all taxes, levies, cess, duties etc. including GST.

10.5 Bidder while quoting the rates in the tender must also consider the ITC credit applicable for the works, if any.

11.0 Price Escalation/Adjustment:
Clause 16.0 of GCC stands good. Prices shall remain firm and fixed for the entire duration of the contract. No escalation on prices whatsoever shall be admissible.
12.0 **Mobilization Advance:** Clause no. 8.0 of General Conditions of Contract (GCC) stands deleted.

13.0 **Security Deposit cum Performance Guarantee:** Clause 9.0 of GCC shall be amended as below:

“Security Deposit cum Performance Bank Guarantee in the form appended, from any Nationalised bank / Scheduled Bank equivalent to 1.5 % (One point five percent only) of the Contract Value for the due and proper execution of the contract. This bank guarantee shall remain valid up to 90 (ninety) days after the end of defects liability period”.

14.0 **RETENTION MONEY - Clause no. 10.0 of GCC shall be modified asunder:**

“The Retention Money shall be deducted from each running bill of the Contractor at 5% (five percent only) of the gross value of the Running Account bill. The Retention Money shall be refunded to the Contractor after expiry of defects liability period (referred to in Clause No.7 of ACC) or on payment of the amount of the final bill whichever is later.”

15.0 **Secured Advance:** No Secured advance shall be paid to the contractor hence Clause no. 35.0 of General Conditions of Contract (GCC) stands deleted.

16.0 **Water & Electricity:** In addition to clause No: 44.0 of GCC, the required water and electricity to be arranged by the tenderer only. If in case avails the existing electric supply at site, arranged by EPI recovery of the same shall be made as per actuals including maintenance.

17.0 **Compulsory Site Visit:** Bidders are advised to mandatorily visit the site, make their assessment on all works already executed and satisfy himself prior to submission of bid. Bidders are instructed to obtain certificate of Site visit from the Engineer-in-Charge (EPI) / EPI Site Engineer as a proof of site visit and submit the same along with the Technical Bid compulsorily.

18.0 **Handing Over Of Site To Contractor After Joint Measurement:** As the works are in various stages of completion, joint measurements are to taken along with EPI representative before start of Work; CONTRACTOR shall depute authorized engineer and all necessary manpower to take the joint measurement of incomplete works like reinforcement steel works/ Steel dowels, RCC Works including columns levels, slab executed, brick work executed, and electrical conducting works etc. as per site conditions. The joint measurement activity is part of the scope of work. Since time is of the essence CONTRACTOR has to deploy sufficient number of labour and engineers to complete the joint measurements for his scope of work within 10 days commencement of work.

19.0 **Structural Safety and Stability:** It shall be the responsibility of the successful bidder to undertake their own studies on soil testing and structural design before actual commencement of works. These studies should be duly certified by reputed institutions like IIT / Anna University/NIT. Any lapse in future, due to failure on account of structural design shall be total responsibility of the contractor in terms of Monetary value or otherwise. The contractor is to take full responsibility of the structural safety and stability of the entire structure including the works executed earlier including the structural designs and any damages to physical properties due to structural failure or
soil failure before handing over to the Superintending Engineer (JNURM) shall be solely attributable to the contractor.

In line with above, upon commencement of work contractor shall satisfy himself of the structural safety and stability of the for the structural works completed prior to taking over by contractor and shall submit certificate of structural stability from aforementioned reputed institutions at his own cost, which is to be furnished by contractor at the earliest along with their acknowledgement and acceptance of Stability of the structure. Further after completion of works, structural stability certificate for the completed structure shall be submitted as required by client before handing over to client M/s TNSCB.

20.0 Requirement of Technical Staff for the work:

In addition to Clause 27.0 of GCC, the following minimum Technical staff to be deployed/ engaged for the contract:

<table>
<thead>
<tr>
<th>Requirement of Technical Staff / Qualification</th>
<th>Minimum Nos Required</th>
<th>Minimum Experience ( Years)</th>
<th>Rate of Recovery in Case of Non-Compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Project Manager with degree</td>
<td>01</td>
<td>10 years</td>
<td>Rs. 60000/- p.m</td>
</tr>
<tr>
<td>Planning/Quality Control Engineer Degree BE Civil</td>
<td>01</td>
<td>05 years</td>
<td>Rs. 40,000/- p.m</td>
</tr>
<tr>
<td>Site Engineers with Degree (B.E Civil)</td>
<td>03</td>
<td>03 years</td>
<td>Rs. 25,000/- p.m</td>
</tr>
<tr>
<td>Junior Engineer /Site supervisor ( Diploma-civil)</td>
<td>05</td>
<td>02 years</td>
<td>Rs 20,000/- p.m</td>
</tr>
<tr>
<td>Junior Engineer /Site supervisor ( Diploma/ITI- Electrical)</td>
<td>01</td>
<td>02 years</td>
<td>Rs 20,000/- p.m</td>
</tr>
<tr>
<td>Safety officer</td>
<td>01</td>
<td>03 years</td>
<td>Rs. 25,000/- p.m</td>
</tr>
</tbody>
</table>

21.0 FACILITIES TO BE PROVIDED BY CONTRACTOR TO EPI

Immediately on placement of LOI/Work order (whichever is earlier) by EPI on the CONTRACTOR, the CONTRACTOR at his own cost shall provide furnished office, facilities etc. exclusively for the use of personnel of EPI as per details given below. The CONTRACT OR shall make his rates/prices in his offer sufficiently comprehensive to cover the cost of the facilities as per details shown below and the CONTRACTOR shall not be entitled for any extra payment for the same:

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>QUANTITY</th>
</tr>
</thead>
<tbody>
<tr>
<td>A) OFFICE ACCOMMODATION</td>
<td></td>
</tr>
<tr>
<td>Fully furnished site office having a sample room, AC meeting room/ staff room along with toilet, pantry with file storage facility with basic amenities like drinking water arrangement, lights fans etc. for exclusive use of EPI's/clients &quot;Engineers &amp; Staff and maintenance of the same till Defect Liability Period. The Specifications and Design of accommodation shall be as approved by EPI.</td>
<td>1500Sq.ft</td>
</tr>
<tr>
<td>B) FURNITURE OF TOTAL VALUE</td>
<td>Rs. 1.00 lacs</td>
</tr>
<tr>
<td>C) OFFICE EQUIPMENT</td>
<td></td>
</tr>
<tr>
<td>a) Fax Machine</td>
<td>1 Nos.</td>
</tr>
<tr>
<td>DESCRIPTION</td>
<td>QUANTITY</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------</td>
<td>----------</td>
</tr>
<tr>
<td>b) Computer (Windows 10 and above) with minimum 1TB HDD, i5 processor (minimum) along with UPS and Latest version of Software like MS Project, Windows, MS Office etc. and 2 lap tops with similar configuration</td>
<td>3 Nos.</td>
</tr>
<tr>
<td>c) 1 laser/inkjet color printer A4 size</td>
<td>2 Nos.</td>
</tr>
<tr>
<td>d) Internet Facilities(broad band)</td>
<td>1 Nos.</td>
</tr>
<tr>
<td>e) Refrigerator (165 ltr.) or any other gadget of equivalent cost as decided by EPI</td>
<td>1 Nos.</td>
</tr>
<tr>
<td>f) Air Conditioner with cooling (1.5 Ton Capacity)</td>
<td>1 Nos.</td>
</tr>
<tr>
<td>g) Aqua Guard (Drinking Water) or any other gadget of equivalent cost as decided by EPI</td>
<td>1 Nos.</td>
</tr>
<tr>
<td>h) Multi-Function Printer (A3) Size</td>
<td>1 Nos.</td>
</tr>
</tbody>
</table>

**D) CONSUMABLES**

a) All consumables like Stationary, ink etc. shall be provided by contractor till end of defect liability period.(Stationary items are inclusive of visiting cards, rubber-stamps, letter pads, photocopies, photocopy papers & other items of daily office use). Amount shall be restricted to: Rs.4000/ per month

b) Running & maintenance of the equipment mentioned above are to be done by the PARTY at his cost.

**E) TELEPHONE WITH STD FACILITY AND INSTRUMENT**

a) Office Telephone (Fixed Line):
   - 1 Nos.
   - Monthly operational expenditure on account of all telephones shall be restricted to. (The cost of each Mobile Phone Instrument shall be restricted to Rs.6,000/-)

b) Mobile Phone:
   - 1 Nos.
   - Rs. 3000 per month

**F) OFFICE BOY CUM COOK on Full time basis for EPI**

- 1 No

**G) VEHICLE** (Brand New) New Four wheel drive Scorpio DX vehicle or equivalent with Driver and accessories valuing Rs.45,000/- Monthly running shall be restricted to 4000KMS

- 1 Nos

The CONTRACTOR shall provide „Sign Board(s) " as per design approved by EPI and/ or Client, as per format mentioned in Annexure-1

In case the above facilities are not provided by the CONTRACTOR within 10(ten) days of award of work or replacement is not provided within the specified period, EPI shall arrange the same at the risk and cost of the CONTRACTOR and make the recoveries from the bills of the CONTRACTOR for the same. The decision of EPI shall be final binding on the CONTRACTOR in this regard.

**22.0 Insurance:** WCP and CAR Policy for his scope of work is the responsibility of the CONTRACTOR. EPI has already taken the policies and the expenditure so incurred by EPI shall be recovered on prorate basis.
23.0  **Arbitration: Modification of arbitration’s clause no 76.0 of GCC**

General Conditions of Contract (GCC) **Sub Clause no.76.1 and 76.3 of Arbitration Clause no.76.0** are amended as given below. **Sub Clause no.76.2** will remain the same.

### 76.0 ARBITRATION

#### 76.1

Before resorting to arbitration as per the clause given below, the parties if they so agree may explore the possibility of conciliation as per the provisions of Part III of the Arbitration and Conciliation Act, 1996 as amended by Arbitration and Conciliation (Amendment) Act, 2015. When such conciliation has failed, the parties shall adopt the following procedure for arbitration:

i) Except where otherwise provided for in the contract, any disputes and differences relating to the meaning of the Specifications, Design, Drawing and Instructions herein before mentioned and as to the quality of workmanship or materials used in the work or as to any other questions, claim, right, matter or things whatsoever in any way arising out of or relating to the Contract, Designs, Drawings, Specifications, Estimates, Instructions, or these conditions or otherwise concerning the works of the execution or failure to execute the same whether arising during the progress of the work or after the completion or abandonment thereof shall be referred to the Sole Arbitrator appointed by the Chairman & Managing Director (CMD) of Engineering Projects (India) Limited (EPI) or any other person discharging the functions of CMD of EPI. The person approached for appointment as Arbitrator shall disclose in writing circumstances, in terms of Sub-Section (1) of Section (12) of the Arbitration and Conciliation Act, 1996 as amended by Arbitration and Conciliation (Amendment) Act, 2015 as follows:

a) such as the existence either direct or indirect, of any past or present relationship with or interest in any of the parties or in relation to the subject-matter in dispute, whether financial, business, professional or other kind, which is likely to give rise to justifiable doubts as to his independence or impartiality; and

b) which are likely to affect his ability to devote sufficient time to the arbitration and in particular his ability to complete the entire arbitration within a period of twelvemonths.

The Arbitrator shall be appointed within 30 days of the receipt of letter of invocation of arbitration duly satisfying the requirements of this clause.

ii) If the arbitrator so appointed resigns or is unable or unwilling to act due to any reason whatsoever, or dies, the Chairman & Managing Director aforesaid or in his absence the person discharging the duties of the CMD of EPI may appoint a new arbitrator in accordance with these terms and conditions of the contract, to act in his place and the new arbitrator so appointed may proceed from the stage at which it was left by his predecessor.

iii) It is a term of the contract that the party invoking the arbitration shall specify the dispute/ differences or questions to be referred to the Arbitrator under this clause together with the amounts claimed in respect of each dispute.
iv) The Arbitrator may proceed with the arbitration ex-parte, if either party, in spite of a notice from the arbitrator, fails to take part in the proceedings.

v) The work under the contract shall continue as directed by the Engineer-In-Charge, during the arbitration proceedings.

vi) Unless otherwise agreed, the venue of arbitration proceedings shall be at the venue given in the “Memorandum” to the “Form of Tender”.

vii) The award of the Arbitrator shall be final, conclusive and binding on both the parties.

viii) Subject to the aforesaid, the provisions of the Arbitration and Conciliation Act, 1996 as amended by Arbitration and Conciliation (Amendment) Act, 2015 or any statutory modifications or re-enactment thereof and the Rules made there under and for the time being in force shall apply to the arbitration proceedings and Arbitrator shall publish his Award accordingly.

76.3 JURISDICTION:

The courts in Chennai alone will have jurisdiction to deal with matters arising from the contract.
# Special Specifications & Drawings

## Index

<table>
<thead>
<tr>
<th>SL No.</th>
<th>Description</th>
<th>Printed Page Nos</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Special Specifications</td>
<td>1-23</td>
</tr>
<tr>
<td>B</td>
<td>Annexures</td>
<td></td>
</tr>
<tr>
<td>B.1</td>
<td>Annexure number 1 (Indemnity Bond-TNSCB)</td>
<td>1-2</td>
</tr>
<tr>
<td>B.2</td>
<td>Annexure number 2 (INTEGRITYPACT)</td>
<td>3-9</td>
</tr>
<tr>
<td>C</td>
<td>Drawings</td>
<td></td>
</tr>
<tr>
<td>C.1</td>
<td>General Layout</td>
<td>1</td>
</tr>
<tr>
<td>C.2</td>
<td>Typical Slab Layout</td>
<td>2</td>
</tr>
<tr>
<td>C.3</td>
<td>Staircase drawings</td>
<td>3-4</td>
</tr>
<tr>
<td>C.4</td>
<td>Brickwork Layout (Typical)</td>
<td>5</td>
</tr>
</tbody>
</table>
SPECIAL CONDITION FOR CEMENT

(a) The contractors should make their own arrangements to procure the required quantity of good quality of cement for the works from the approved manufacturers confirming to ISI standard with the prior approval of the Executive Engineer.

(b) The cement shall be of fresh and good quality confirming to the specification as per IS 8112/1989 43 grade.

(c) The cement in each consignment shall be tested by the contractors at their risk and cost for its strength and quality in approved Government laboratories and necessary certificate to be produced before its actual use in the work, with the prior approval of the Executive Engineer.

(d) The samples for the test should be collected only in the presence of the Executive Engineer or the officers authorized by him.

(e) The contractors should inform the Executive Engineer in charge of the work about the arrival of cement consignment, each time and maintain minimum stock of cement quantity as specified by him.

(f) The rejected cement consignment if any should be removed from the site immediately at their risk and cost.

(g) The quantity of cement required for testing shall be supplied by the contractors at free of cost.

(h) The contractors are responsible for the storage of cement and make all arrangements for the stock and safety at site of work.

(i) The contractors should produce the manufacturer’s certificate for which the cement supplied by them.

(j) The contractors shall procure in standard packing of 50kg per bag from the authorized manufactures. The contractors shall make necessary arrangements at their own cost to the satisfaction of Engineer-in-charge for actual weight of random sample from the available stock and shall conform with the specification laid down by the Indian Standards Institution as per IS 8112/1989. Cement shall be got tested for all the tests as directed by the Engineer-in-charge at least one month in advance before the use of cement bags brought and kept at site godown.

CONTRACTOR

SUPERINTENDING ENGINEER
JNNURM CIRCLE
(k) The contractor shall store the cement of 30 days requirement at least in advance to ensure the quality of cement to be brought to site and shall not remove the same without the written permission of Engineer-in-charge.

(l) The contractor will have to construct sheds for storing cement having capacity not less than the cement required for 30 days use at approved locations. The Engineer-in-charge or the representative shall have free access to such store at all times.

(m) The contractor shall further at all times satisfy the Engineer-in-charge on demand by production of records and test books or by submission of returns and other proofs as directed that the cement is being used as tested and approved by Engineer-in-charges for the purpose and the contractor shall at all times keep his record upto date to enable the Engineer-in-charge to apply such checks as he may desire.

(n) Cement which has been unduly long in storage with the contractor or alternatively has deteriorated due to inadequate storage and thus become unfit for use on the works will be rejected by the Department and no claim will be entertained. The contractor shall forth with remove from the work area any cement if the Engineer-in-charge may disallow for use in work and replace the cement complying with the relevant Indian Standards.

**SPECIAL CONDITION FOR STEEL**

1. a) The Contractors have to make their own arrangements to procure standard quality of steel from the reputed dealers with prior approval of the Executive Engineer.

   b) The quality of steel should conform to Indian Standard specification code I.S.226 for Mild Steel and I.S.1786 for Ribbed Tor Steel (CTD bars).

   c) The steel supplied shall be sound and free from cracks harmful surface flaws, lamination, rough and imperfect edges other defects.

2. The contractors with prior approval of the Executive Engineer have to make their own arrangement to test each consignment of steel from the Government testing laboratory at their risk and cost for strength, section weight and diameter and produce the test certificate before its actual use in the works which will be allowed in bills.

3. The result should pass the test. Test also inclusive of physical properties such as weight 0.2% proof stress, Tensile strength percentage of elongation and Bend test.

4. Tolerance on weight - The tolerance on weight for bars shall conform to relevant ISI specifications.

5. The contractor should produce the manufacturer's test certificate for each consignment.

5. 5mm MS steel is to be supplied only in the form of coils.

CONTRACTOR

SUPERINTENDING ENGINEER
JNNURM CIRCLE
SPECIAL CONDITIONS FOR FILLING LOW LYING AREAS

(a) At any time during the execution of work, if it is found that the filling earth is transported from areas other than chosen for deepening Eri, payment will not be made and is liable to attract penalties.

(b) Pre-levels as taken by the Anna University will be given to the contractor for verification before commencement of work. If the contractor represents that the firm is not satisfied with the computation of levels, levels will be taken by Anna University in presence of the contractor. The contractor has to bear the charges. The level furnished by Anna University is the final.

(c) After filling, final levels will be taken by Anna University. The contractor should sign the final levels also. Payment will be made based on the difference between the pre and final levels for the filled-up portions with the filling earth at different stages. The payment will be made as per the quantity computed by Anna University.

(d) If any intermediate payment is desired by the contractor, levels at that stage will be taken and quantity arrived at a deduction in the quantity will be made based on the consolidation achieved. The decision of the Executive Engineer is final and binding for proposing the quantity to be deducted for interim bills.

(e) Pre-final payment shall however be restricted only to 90% of the total value of work satisfactorily completed and finally measured for. Pre-final payment will be assessed based on the consolidated final levels. Release of the remaining 10% shall be effected only after and immediate monocon period of 3 months (October to December), but in no case not later than 12 months (Commencing from the last date of measurements). Shortfall if any should be made good by the contractor.

(f) The contractor shall make his own arrangements for the machineries, power roller, clean fresh water etc., for use on the works and shall meet all charges there for.

Damages for delayed and non completion:- If the contractor fails to complete the work within the period naming class 4 of article of the agreement to be executed or within any extended time allowed by the Board under these presents the contractor shall pay or allow to the Board without prejudice to the rights of the Board under clause 60 and 61 of PS to TNSS the sum of Rs.10/- (Rupees ten only) for every lath value of work or part thereof as liquidated and ascertainment damaged for every day beyond the said date or extended time as the case may be during which the work shall remain and unfinished except as provided in clause 4 of articles of agreement to be executed and such damaged may be deducted by the board from any money due to the contractors including the security deposit made by him.

(g) The contractor shall employ at his cost necessary watch and ward to safeguard his machineries, plants etc., including barricading and danger lighting where ever the machineries are stationed as well as for the works turned out by him and paid for from time to time till completion including those hired if any.

(h) The contractor shall make his own arrangement for the required machineries such as earth remover, bulldozer, lorry, tipper, power roller, vibratory roller. However, incase the Tamil Nadu Slum Clearance Board arranged for any item of the machineries / equipments, the recovery shall be made as decided by the Tamil Nadu Slum Clearance Board. In addition to mobilization charges.

(i) For any disputes, the cases will be referred to the court of Law under the jurisdiction of Chennai City.

(j) The tenderer is requested to specially note that if any incidental pumping is opted by the tenderer to facilitate his own mode of excavation all incidental charges including pumping shall be borne by him.

CONTRACTOR

SUPERINTENDING ENGINEER
JNNURM CIRCLE
(x) Before commencing the work and also during the progress, the contractor shall give notice to the concerned authorities. Viz. the Panchayats / Municipalities, the Railway department, Police and other departments or company as may be required to the effect that the work is being taken up in particular locality and necessary diversion of traffic may be arranged for. The contractor shall co-operate with the department concerned and provide for necessary barricading of roads, protection to existing cables, wires etc., during the excavation. The contractor shall provide at his own expenses watching and lighting arrangements during the day and night times and put the required notice board such as "CAUTION-ROAD CLOSED" for traffic etc.,

(l) He should also provide and maintain at his own cost, the necessary supports for under ground cables etc., to afford best protection to them in consultation with the authorities in-charge of the properties and to their best protection.

(m) The rate of excavation shall include charges for bailing and pumping water wherever necessary and no extra payment shall be made for any of these contingent works. The pumping plant, hose pipe connections etc., required for pumping shall be arranged for only by the contractors and no arrangements shall be made for these by the Tamil Nadu Slum Clearance Board.

(n) No payment will be made for the excess earth brought by the contractor and such surplus earth brought to the site shall be disposed off by the contractor at his own cost in the places shown. The written instruction of the TNSCB authorities should be obtained for bringing earth beyond the place originally located for refilling.

(o) Flood damages etc., :- The contractor may take insurance at his cost against losses due to the unprecedented floods and other and naturals calamities. No claim shall be entertained on this account and paid for.

(p) The seignorage and other charges payable to the District Collector are to be borne by the contractor. The contractor should handover all the receipt of full payment made to the District Collector towards seignorage charges paid by him to the Executive Engineer. The receipt shall be in the name of the contractor concerned. If the seignorage charges part or full payment is not made to the District Collector, the amount due to the District Collector will be recovered from the bills.

(q) Payment to the labourers:- The contractor shall note in the event of emergency he shall pay all labourers every day and if this is not done the Board shall make requisite payment and recover the cost from the contractor. The contractor shall not employ child labourer.

(r) Night work: if night work is required to fulfill the agreed rate of progress and to complete the work within the period stipulated time, arrangement shall be made by the contractor including lighting without any claims for any extra rates.

(s) Once the offer of the tender is accepted by the Board if the tenderer choose to withdraw his tender or for any reason refuse to execute the agreement and comply with the terms of the tender and agreement, the amount deposited by the tenderer towards EMD and ASD will be forfeited as per the TNDSS conditions in clause 57.

(t) It is obligatory on part of the contractor to effect recovery of employees "Provident Fund" subscription form his employees who have worked for more than 80 days and remit to the Regional Provident Fund Commissioner.
(u) Only materials capable of giving or compaction in field, a dry density of more than 15.00 KN/m3 shall be used for the filling. For assessment of suitability of the materials for use in the work, the contractor may get the materials duly tested, for compact ability in the laboratory indicated by the Executive Engineer (at the cost of the contractor) in accordance with Proctor's Procedure. Notional given a dry density of 16.50 KN/m3 or more on compaction at optimum moisture content in the laboratory are suitable for the work.

(v) Although the laying of materials shall proceed in 15cm layers and further consolidated, dry density tests will be carried out only when a consolidated thickness of 15cm is achieved.

(w) One set of two core samples for every 3000 square meter area of each layer shall be taken and tested. The average dry density shall not be less than 15.00 KN/m3. The contractor shall bear the expenses of the above tests, which shall be carried out in Highways Research Laboratory or any other lab as directed by the Executive Engineer.

(x) It is hereby made clear that for any stagnation of water or inundation of water due to any reason whatsoever in the filling site or at the commencement of work at the time of handing over of site, for the execution of work or during execution of work, the contractor should make his own arrangement to bail-out the water at his own cost. The department will not accept or entertain any plea for bearing this cost or allowing extension of time on this score to complete the work.
SPECIAL CONDITION FOR ROAD WORK

WATER BOUND MACADAM ROAD SURFACE

(1) All metal or gravel shall be placed at convenient distance from the center line of the road and well behind the line of avenue trees or road margin including the berms. Particulars regarding the position of stacking with reference to the center line of the road, size of stacks their spacing, the general arrangement on the road parambone shall be as instructed by the supervisor in charge of the work from whom these particulars should be ascertained before any material or other road materials is brought to the site.

(2) No tools of any kind will be supplied departmentally nor does the department undertake to arrange for the purchase of tools on behalf of the contractor who shall himself make all arrangements for providing tools required for the work.

(3) Camber boards with spirit levels which should be got approved by Executive Engineer or Officer authorized by him shall be provided for the work by the contractor at his own cost. Camber boards shall be made out of well seasoned timber preferable teakwood and shall be of such length and profile and will suit the work for which it is intended and such a section as to remain rigid while in use. The consolidation work done without the use of camber boards is liable for rejection.

(4) New metal of required size intended for the work shall then be spread uniformly over the surface to the thickness specified.

(5) The metal so spread shall be packed to proper camber board with spirit level being used for the purpose of testing the camber and the surface shall then be rolled dry with a roller. To achieve this, model sections shall be formed to camber intervals of 10m with new metal, water with just sufficient quantities to moisten hoggling below (but no excess) should be sprinkled over the metal surface and rolled dry commencing from the edges and working toward the center.

(6) In place where metal sinks during rolling the surface shall be packed up and fresh metal added to make up the hollows. For this purpose small quantities of metal should be left behind when spreading of metal is in progress. Care should be taken to see that the camber of the road is reserved throughout at all stages.

(7) The rolling shall begin with the outside near wheel covering equal parts of shoulder and metalled surface and the roller shall be moved forward and backward until the shoulder and metal firmly found together. When edges have thus been firmly rolled the rolling shall progress gradually from edges to the center where track by one wheel with the center line of the road and lapping uniformly each proceedings area of the track and shall continue until all the surface has been rolled by the rear wheels and has been thoroughly laid and worked out so that the metal ceases to creep or any hump or depression that develop under these places and adding or removing materials until the surface is smooth.

(8) During rolling any soft metal pieces if any which get crushed under the roller shall be promptly removed by hand and good stones shall be set in the hollows.

(9) After rolling is done until there is no movements of the stone and the interlocking is complete, gravel shall be spread in the surface to a thickness specified and the gravel being added in two layers tayyed and consolidation proceed.
(10) The surface shall be wetted till the gravel become slumped and the slurry shall then be well brushed in to the interior of metal. It should be noted that gravel from the top should meet the slurry rising from below to effect good consolidation.

(11) The surface shall then be rolled again uniformly each proceeding rear wheel tractor until a hard smooth surface is produced.

(12) Water should be sprinkled over a newly consolidated surface for fifteen days during the closing hours of the evening to prevent the grade getting dry.

(13) The contractor rates should be in all inclusive. No payment will be made separately for any extra water loads.

(14) This specification shall be read in connection with the relevant TNDSS and other special specification attached to the contract.

(15) The above provision shall be adhered. Center of the road shall be such that rain falling on the surface of the road may readily drain off and not stagnate and run through. It shall not be steeper than 1 in 48 or flatter than 1 in 72 and will be fixed and intimated by the Executive Engineer.

(16) Gravel should be stacked for pre-measurement and payment shall be made on the finished work or 25/29 stacked quantity whichever is less.

II BITUMINOUS TOP SURFACE

(i) Mineral Aggregate Materials

The stone chipping shall consist of crushed stone aggregate of uniform quantity throughout and shall be clean and free from an excess of dust, flat or elongated pieces, soft or disintegrated stone or other deleterious matter.

(ii) Sand

The sand shall consist of clean, rough surface grains free from dust, clay, loam and other foreign matter.

(iii) Bitumen Materials

The grade of bitumen to be used as asphalt is 80/100 and shall meet required specification.

(iv) Preparation of Existing Surface

(v) If the existing road surface is in humps or depressions such irregularities shall be prepared by removal of all loose and defective materials and replace with premixed chipping to produce a well consolidated surface conforming with adjacent area.

(vi) Prior to application of tack coat all the dust and dirt and foreign matter shall be removed from the full width of the road.

(v) Tack coat

The tack coat of 80/100 asphalt to a specified temperature shall be applied uniformly to the road surface by pouring or pressure sprayer at the rate specified in the specifications.
(vi) The binder asphalt 80/100 heated to a specified temperature of 44 Kg per 0.254 m3 per 10 m2 shall be poured into the mixer and mixing shall continue until the mixture gets black and well distributed over all the particles of the aggregate. The mix shall then be discharged from the mixture into wheel borrow and taken to the work site.

(vii) **Spreading the mix**

Immediately after applying the tack coat over the road surface the premix shall be spread with racer to the derived thickness and to the correct level. All irregularities or inequalities in the carpet shall be adjusted before rolling commenced.

(viii) **Rolling**

After spreading, the premix shall be thoroughly compressed by three wheel or tender rollers of 8 tones in weight. rolling shall start longitudinally at the sides and proceed towards the center of the road overlapping on successive trips by one behalf of width of the rear wheel of the roller. The power roller has only to be used for rolling.

(ix) **Seal coat**

The surface shall then be given a seal coat of 0.014 cum of sand over 10 sq metre.

(x) **Opening traffic**

The finished road surface shall be opened 24 hours after completion of rolling or such time as specified by the Executive Engineer.

(xi) **Rolling for seal coat**

The seal coat should be rolled with 8 tones roller. The road may be thrown to traffic 24 hours after application of the remixed seal.

(xii) **Edging**

The bitumen carpet should be protected at the edges with suitable edging or by stricking the carpet.

(xiii) The contractor shall maintain watchman for the work center and regulate traffic if and wherever necessary. Notice boards shall be placed in suitable locations bearing large letters in conspicuous columns.

(xiv) Warning notice shall be placed at the points in the neighborhood of the work where other roads join and across the road and at such other places and joints as may be directed to enable the cyclists or other vehicular traffic to avoid the obstructed road by taking alternative routes.

(xv) The rates quoted for the item should be inclusive of all items of work required for the proper execution of the items viz., watering, barricading, lighting, watching safety arrangements in the interest of traffic etc., and no claim for extra payment on the score will be entertained.

(xvi) The contractor shall maintain the surface of road proper for period of 6 months from the date of check measurement. Any defects in the work noticed within the said period of maintenance of 6 months from the date of super check measurement shall be made good at the expense of the contractor.

(xvii) Minor undulations and other defects beyond the specified tolerance the maintenance period are to be detected or removed and replaced completely as be ordered to the satisfaction of the Engineer-in-charge.
SPECIAL CONDITION FOR THE ELECTRICAL WORKS

1. The work shall be carried out in accordance with the General specification for Electrical works and the code of practice for electrical wiring installing I.S.6732/1983 and I.S.3045/1965 and as amended up to date. All installation shall comply with the requirement of Indian Electricity Rules 1956 and Act and I.S. code amendment up to date.

2. Approval of the Engineer – in – charge shall be taken well in advance for all materials and brand of materials to be used on works by the contractor based on the description of the Executive Engineer – in – charge and this decision will be final.

3. Bad workmanship is liable to be rejected in total.

4. The contractor shall supply on completion of work, completed plan along with insulation, polarity and earth test reports before the installation is to be handed over to the Executive – in – charge in good condition in triplicate. The tests should be carried out in the present of Engineer – in – charge at contractor’s cost.

5. All repairs and patch works shall be neatly carried out to match the original finish and to the entire satisfaction of Engineer – in – charge.

6. The Contractor shall make his own arrangements at his own cost for all general T & P and special T & P required on the job.

7. The Contractor shall make his own arrangements for storage of materials and watch and ward at his own cost till installation (completed works) is handed over to the Department after obtaining the service connection from Electricity Board and testing the line. Any loss and tampering of materials for which the payment was made by the department, shall be made good by the Contractor at his own cost.

8. Issue of the materials to the Contractor wherever stipulated shall be regulated to the needs from time to time depending upon the progress.

9. Materials stipulated for issue shall be taken over to the site of works and the safe custody till completion of the job is the responsibility of the contractor.

10. All debris due to electrical works shall be removed from site by the contractor as soon as the work is completed.

11. Electrical works shall be progressed by the contractor side by side with the progress of the building work, carrying of conduits for recessed portion shall be planned together with the building progress so that there is no hindrance to the building progress at any stage.

12. The internal E.I. shall be ordinarily carried out according to the drawing supplied with the schedule of work subject to change made by the Executive Engineer-in-charge.

[Signatures]

CONTRACTOR

SUPERINTENDING ENGINEER
JNURM CIRCLE

9 of 23 Part of Vol-2
13. The wiring routs shall be marked at site first and get approval from the Executive Engineer – in charge before commencement of actual work. The work must be carried out as directed by the Executive Engineer – in charge.

14. In place, where electrical conduit is required to place through wall / RCC column / beam etc., the conduit shall be laid during the execution of work in consultation with the Engineer – in charge so as to avoid the need for cutting the structure at a later stage.

15. The teak wood materials such as illets specials T.W. boxes and all materials shall be got approved from the Engineer – in charge before use to ensure the quality of materials.

16. In the case of recessed conduit works, the M.S. Boxes shall also be recessed and covered with 1/8’ (3mm) hylom bake lite sheet. The thickness of M.S. Box sheets shall not be less than 3mm thick.

PROVISION OF FITTINGS

17. All switch boards shall be placed such that the bottom is normally 1.22 metres above floor level or such height as decided by the Engineer – in charge.

18. All fittings shall be provided at 2.5 metre from the floor level or such height as decided by the Engineer – in charge.

19. The convenient 5’15 amps plug socket shall be 23 cm above the floor level or such height as decided by the Engineer – in charge.

20. Wiring shall run normally at 2.6 metres from the floor level or such height as decided by the Engineer – in charge.

21. The materials issued if any by the department to the contractor the cost will be recovered at the stores issue rates. If the contractor fails to return the surplus materials after completion of work, the cost will be recovered at double the stores issue rate or market rate whichever is higher.

22. Tools and Plant general and special as required on the work is to be arranged by the contractor at his own cost.

23. Brass tinned link / joint clips of 0.32mm (30 gauge) thick up to 40mm length and 0.40mm (25 gauge) thick above 40mm length and of 8 mm width shall be used on the work.

24. Brass hinges brass hooks and eyes, single plank teak wood board 60mm minimum depth in case of open wiring and minimum depth of 100mm in the case of concealed wiring and not less than 6mm thickness shall be used on the works.
FIXING OF WOODEN BATTERNS

25. The screws shall be used for fixing the wooden batter and accessories at an interval not exceeding 50cm. The thickness of batter shall not be less than 10mm.

26. The clips are provided on the wooden batter with screw / pins and spaced at an intervals of 15cm both in the case of horizontal and vertical run.

27. The round block shall not be less than 75mm and 40mm deep and fixed by means of 2 Nos. of screws.

28. Piona type switches, sockets outlets of approved make wherever needed shall be used for recessed boards after getting the approval of Engineer - in - charge.

29. Only brass screws shall be used for fittings, switches, plug and sockets main boards and distribution boards and teak wood accessories etc., required for wiring.

30. All conduit pipe shall be of approved gauge (not less than 16 SWG 14 SWG) solid drawn or lap welded finished with galvanized stone enameled finish. The saddles used shall not be less than 24 gauge up to 25mm dia pipes and not less than 20 gauge for longer dia pipes.

31. The main earthing load shall not be less than 8 SWG copper (4.06 mm) incase of copper wire earthing of 6 SWG G.I. Wire (4.98 mm) incase of G.I. wire earthing separate earthing shall be provided for all mountings of main boards, distribution boards, 5/15 amps C.S.plugs sockets with not less than 14 SWG of copper (2.03mm).

32. Earthing shall confirm to the relevant I.S.code 303 / 1966. The G.I. pipes earth electrode system is adopted. G.I. pipes shall be of medium class 38 / 40mm dia 3.75 metres long. The electrode shall be buried in the ground vertically with its top not less than 20cm below ground level. Normally an earth electrode shall provide 1.5 metres away from any building. Incase of providing twin earthing the distance between the earth pits shall be 10'0" alternative layers of charcoal or coke and salt of minimum 15cm thick are to be provided from the bottom of earth pit up to1 metres below ground level and the masonry work is to be carried out in brick with cement mortar 1:4 (One of cement and four of sand) above the last layer and the top is to be covered by suitable cast iron frame and cover.

33. The staircase light point wiring must be done by looping or piece wire system and switch must control phase or line wire only.

34. Looping in system is to be adopted for wiring normally the looping of neutral to light fan plug points etc., shall be restricted to 3 points for a single wire from the switch board.

35. The wooden batter and specials shall not be butt jointed and joints should be lap jointed.

36. The wiring must be done using bend and corners wherever necessary sharp banding or cabling must be avoided.

37. The lighting circuit shall not have more than 10 points or a load of 800 watts which ever is less. In exceptional cases the lighting circuit shall not have more than 8 points.
38. Power wiring shall be kept separate and distinct from the lighting wiring.
39. The contractor should be present at the premises at the time of effecting service connection by the Electricity Board authority and afford all facility for testing and commissioning the installations.
40. The apartment main switches and the main switches at the Electricity Board Service connection should be numbered in paint for easy identification and the Damper boards should be provided wherever necessary according to the I.E. rules and indications.
41. The Contractor should provide sufficient leads for connecting the main switches to meters and cuts provided by the Electricity Board at his own cost.
42. Looping of neutral and connection wires in the switch boards must be carried out through mechanical connectors and proper insulation shall be provided inside the switch boards wherever necessary to avoid short circuiting the system.
43. The scaffolding and the shed required for the Electrical installation works should be put up by the contractor at his own cost.
44. The run off mains relates to the mains run from the buss bar to distribution board or buss bar main switches as the position indicated in the electrical layout. The point wiring shall include mains taken from distribution board or main switch to board. The main for this shall not be measured and paid.
   The run off mains relates to the mains run from the main switches provided inside the apartments to the Electricity Board authorities. The earthing for the main switches provided in the service connection board should be properly interconnected and connected to the main earthing system.
45. Each circuit has to be taken from the D.B. by separate independent conductor / separate group of wires from D.B. and they could be distinctly visible. The wiring must be one if there is no D.B. with distributed circuits as directed by the field staff.
46. For temporary supply if any required by the contractor himself should supply to M.E.S. and obtain the supply at his own cost.
47. PVC pipes and specials M.S. Boxes etc., if available with the department the same may be supplied for works at recovery.
48. The contractor should prepare necessary electrical systematic layout drawing at this own cost and get approval from the Chief Electrical Inspection to Government, Madras - 2 and the permission to enlarge the same from the CEIG (Madras - 2)
49. The Contractor shall use only the brand of materials that are approved by the Engineer - in - charges.
50. The Electrical installation to be carried out as per the specification and it confirmed to I.E. rule.
51. SALES TAX: Clause 38 (2) of General conditions of contract "The contractors shall be solely responsible to the payment of Sales Tax under the provisions of the Tamil Nadu General Sales Act 1939 (Madras Act IX of 1939) as in force for the 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 which the sales tax is payable".

52. All rates quoted in the tender shall be inclusive of payable under General Sales Tax Act, as amended from time to time (including Amendment Act) 28/84 and that the contract or responsible to file the sales tax returns and may be the tax as demanded by the Commercial Tax Department. No request for payment of sales tax separately, in addition to tendered rates due to any subsequent levy increase in tax, will be entertained vide also clause 38 (2) or General conditions of contract.

53. The Electrical contractors should hold either 'A' grade license or 'B' grade license issued by the Electrical wiremen and supervisor contractor licensing Board.
FOR CONTRACTOR'S SPECIAL ATTENTION

1. Clean fresh water and river sand shall be used in all cases.

2. Only clean fresh water shall be used on the work. The Contractor shall make his own arrangement for water and shall meet all charges therefore. The special attention of the contractor is drawn to clause 33 of the Preliminary Specification in the T.N.D.S.S. regarding water and lighting.

3. The broken stone for concrete and R.C.C. work should be of granite as passed by the Executive Engineer.

4. All iron work or steel work of every kind except such as is to be embedded in cement concrete shall be removed from the site before its delivery at the site to be properly scrapped and wire brushed and give a priming coat of approved red lead paint without claim or extra.

5. All fittings and furniture of doors and windows shall be of best quality steel made and well happened. The iron holdfasts shall be built up in the walls in cement mortar 1:3 at the time of construction of wall no extra claims shall be due for the same. Wherever holdfasts are to be provided 9" thick walls, these should be fixed with C.C. 1:3:6 using 3/4" size hard broken granite stone jelly proper anchorages and for proper binding. No separate rate for such of concrete filling at hold fast point will be allowed and this will be measured as masonry along with adjacent masonry.

6. The teakwood shall be best Indian teakwood only and shall be subject to inspection and approved by the Executive Engineer before use on the work. Country wood where specified shall be of best Karimadu and Mungo for scantling and Ayni for planks.

7. Holes and chases for electric wiring, water supply and drainage etc., shall be provided as directed during progress of work without any claim for extra.

8. The work shall be carried out with the least hindrance to the adjoining buildings and officers and the contractor will be responsible for any damages, caused to the existing fixtures, electric fitting etc., in the course of execution and the contractors shall make good any such damages without any claim the extra.

9. In the case of 'T' beams and 'L' beams, the quantities given in the schedule is the quantity of rib portion only. The top flange portion will be always measured with the general slab portion and paid for at the slab rate only. For all R.C.C. work the rate shall include the treatment of bearing as per plate W.No.2 of 1946 as per M.D.S.S. (Page 52 of 652 edition.)

10. Plastering all external corners, edges of beams, edges of doors and windows, openings etc., shall be finished sharp using richer mortar if necessary and also finished truly vertical or horizontal as the case may be the rate of plastering shall include the cost of finishing as above and no separate rate for finishing the corners, edges of beams, etc., will be paid.

11. Fixing iron bars to window : The methods of measurements for this item of work shall be area of the window frames.

CONTRACTOR

SUPERINTENDING ENGINEER

JNNURM CIRCLE

14 of 23 Part of Vol-2
12. If rates are not separately called for similar items of work in different floors the contractor should note one rate applicable for all the floors indicating in the detailed plans. Any claim for extra rates for such items floor-wise will not be entertained under any circumstances.

13. The revised preliminary specification of the T.N.D.S.S. are applicable to the contractor as per G.O.2659 P.W.D. dated 23-12-79.

**ADDITIONAL SPECIFICATION**

1. The planks for forms and centering for R.C.C. works shall be of well-seasoned timber approved by the Executive Engineer according to Clause (10) of M.D.S.S. No.30. They must be made smooth and perfectly level at top so as to give smooth and even finish to the R.C. Ceilings. Alternatively the contractor may use steel sheets over wooden form provided the required finish to the under-side of the slabs is obtained. Mango planks shall not be used under any circumstances. Centering and forming shall be provided to the extent and as ordered by the Executive Engineer during the execution.

2. All cement concrete for R.C.C. work shall be machine mixed and vibrated.

3. All lime mortar shall be ground in a mortar mill as per M.D.S.S.

4. M.S. Steel rods should be cut and placed as reinforcements with proper care according to the available rods at site so as to ensure the minimum possible wastage.

2. The cut bits shall be to the account of the contractors themselves and the same will not be taken back.

3. For the quantity of steel issued in excess of 5% over and above theoretical requirements and not returned to the Department in good condition, penal recovery will be made at double the issue rate, in addition to the normal recovery rate.

4. For the quantity of cement issued in excess of the theoretical requirement with an allowance indicated in the circular cited above and not returned to the department in good condition, penal recovery will be made at double the issue rate, in addition to the normal recovery rate.  

<table>
<thead>
<tr>
<th>Value of works</th>
<th>Percentage of allowance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upto Rs. 2.00 lakhs</td>
<td>5% (Five)</td>
</tr>
<tr>
<td>Upto Rs. 2.00 lakhs to Rs. 5.00 lakhs</td>
<td>4% (Four)</td>
</tr>
<tr>
<td>Above Rs. 5.00 lakhs</td>
<td>3% (Three)</td>
</tr>
</tbody>
</table>

5. If at any time subsequent to the execution of this agreement, department, materials other than those specified in the agreement are 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 rates whichever is higher. The contractor will be informed in writing of this charge and he should intimate in writing the rate which i.e., demand for finishing the work in view of the fact that he is to use department materials. No centage or incidental charge will be borne by the Government in connection with the supply of the materials.

---

**CONTRACTOR**

[Signature]

**SUPERINTENDING ENGINEER**

[Signature]

**JINNURM CIRCLE**
ADDITIONAL CONDITIONS I AND II

1. The materials noted in the list enclosed will be supplied departmentally at the work site stores and their cost recovered from the contractors' bills at issue rates noted against each.

2. The contractor shall be responsible for safe custody and storage of the materials under dry conditions at the place where the works got approved by the Executive Engineer.

3. Royalty or charges due for use of private quarries and private land shall be paid by the contractor.

4. The contractor shall form his own approach road to the work site for which no extra will be due to him. On completion of the work, 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 throughout the period of the contract.

5. The contractor's special attention is invited to clauses 35, 38 of Appendix of the P.S. to T.N.D.S.S. and he is requested to provide at his own expense sheds, latrines and urinals for his workmen.

6. If night work is required to fulfil the agreed rates for progress, all arrangements shall be made by the contractor inclusive of lighting without any claim for extra rate.

7. The contractor shall not employ the labour below the age of 12 years and shall also note that he must offer employment to ex-servicemen, ex-toddy tappers and unemployed agricultural labourers as far as possible.

8. Payment will be made on detailed measurement. Any of the items in the schedule may be omitted for radically altered, no variation in the rate shall become payable to the contractor on account of such omissions or variations in quantity.

9. Reference to T.N.D.S.S. No. in the schedule quantities referred to reprint 1952 and addenda and corrigenda issued thereafter.

10. The contractor shall abide by the contract labour regulation formed by the Tamil Nadu Government.

11. The contractor shall at his own expense provide or arrange for provision of foot wear for any labour doing cement mixing work and all other similar types of works involving the use of tar, mortar, etc., to the satisfaction of the Engineering chief and on his failure to do so Government shall be entitled to provide the same and recover the cost from the contractor.

12. When there are complaints of non-payment of wages to the labour, bills of the contractor, may be held pending a clearance certificate from the labour department.
SPECIFICATIONS FOR SANITARY FITTINGS, DRAINAGE, AND WATER ARRANGEMENTS

1. Water closets, basins, urinals sinks and other sanitary ware shall be of approved make as required in the relevant items. The fixing of these shall be in accordance with the special specifications separately attached.

2. The rates shall include all dismantling making holes in walls of slabs and restoring the structure to the original conditions after the completion of the work.

3. The work shall be carried out with least hindrance to the adjoining building and the contractor shall be responsible for any damages caused to the existing fixtures, electric fittings, etc., in the course of execution and the contractor shall make good any such damages without claim for extra.

4. The rate of laying stoneware pipes shall include necessary earthenwork excavation for trenches (irrespective of nature of all incidental charges such as shoring, strutting and bailing out water refilling trenches) after the completion of works and consolidating, removing the surplus earth to places shown within compound and making good the damages to roads and other structures.

5. The rates for laying C.I. Pipes and G.I. Pipes shall include earthenwork for trenching and refilling them and fixing with plug, clamps and screws where the pipes are fixed to walls. The rates for G.I. Pipes shall also include wrapping them with tarred tape where they are buried in earth tarring the portions embedded in masonry and painting with white lead paint, two coats for portions above ground level.

6. The clamps for G.I. Pipes fittings should not be spaced more than 6 feet apart, the wooden plugs for pipe and bracket fittings should be properly fixed in cement mortar 1:3 in holder make, in masonry with the wide end of wedge plugs inside and no hammered with them and into the walls. The size of plugs should not less than 1" square at this end and 1 1/2" at the other end with depth of not less than 3".

7. Painting with two coats of best white paint (or any other colour approved by the Executive Engineer) over a priming coat of red lead to all flushing tanks, brackets clamps used for fixing pipes) and all lead connections. Painting with two coats of anti-corrosive paint of approved colour to all C.I. Soils waste and anti-siphonage pipes.

8. The rates shall include all dismantling making holes in the slabs and restoring the structure to the original condition after the completion of the work.

SUPPLYING AND FIXING INDIAN TYPE WATER CLOSETS

1. The Indian type water closet shall be fixed in position at floor level in a bed of concrete brick jelly in lime mortar the proportion being 3:2:12 1/2 so as to completely embed the closet trap and foot rest. The existing masonry structures after dismantling the floor, making the holes, etc., shall be restored to its original condition after completion of the work. The flooring around the closet shall be finished off in cement mortar 1:3, 1/2" thick with adequate slope around for draining into the closets. The foot rest should be fixed at an angle shown in sanitary Engineer's type designs.

[Signatures]

CONTRACTOR
SUPERINTENDING ENGINEER

17 of 23 Part of Vol-2
2. The cast iron flushing tank shall be of three gallons capacity of Indian make of approved brand supported G.I. brackets with necessary G.I. chain and handle for pull float ball valve 1/2" lead and brass connections to the closet including necessary connection to the water main and closet complete and wiped solder joints. The flushing tanks and bracket must be painted with white glazed enamel paint 2 coats over a priming coat of red.

3. The fixing of water closets shall include the dismantling of existing floors wherever indicated making holes in masonry 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 cement mortar 1:0.

SPECIAL CONDITION

"The tenderer should quote his specific rate for each item both in words and figures and furnish the total of each item and the grand total of the whole contract otherwise the tender will be rejected".

SPECIAL CONDITION

"Wherever the M.S. and R.T.S. rods, supplied to the contractors for use in the work, are found to differ from standard section weight, due to variance in size, sufficient number of samples of rods of each section from each consignment, as and when the rods are received should be tested in a recognised laboratory, well before the commencement of fabrication work after getting the approval of the Superintending Engineer. The actual weight as per test report shall be adopted in the bills".

SCHEDULE "D"

Applicable to all cases of works where a minimum of fifty workers are employed except works relating to roads, channels and canals.

FOR THE PROVISION OF HEALTH AND SANITARY
ARRANGEMENT FOR WORKERS

The contractor's special attention is invited to clauses 35, 36, 42 (60) & 48 of the Preliminary Specification of the Madras Detailed Standard Specification and he is requested to provide at his own expense the following amenities to the satisfaction of the Superintending Engineer:

1. FIRST AID:

At the work site there shall be maintained in a readily accessible place, first aid appliances and medicines including as adequate supply of sterilised dressings and sterilised cotton wool. The appliances shall be kept in good order. They shall be placed under the charge of the responsible person who shall be readily available during working hours.

2. DRINKING WATER:

1. Water of good quality fit for drinking purposes shall be provided for the work people on a scale of not less than 8 gallons per head per day.

CONTRACTOR

SUPERINTENDING ENGINEER

JNNURM CIRCLE
2. 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.

3. Every water supply storage shall be at a distance of not less than 50 ft from any latrine drain or other source of pollution. Where water has to be drawn from an existing well which is within such 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 well shall be entirely closed in and be provided with a trap door which shall be dust and water proof.

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

3. WASHING AND BATHING PLACES:

Adequate washing and bathing places shall 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.

4. LATRINES AND URINALS:

There shall be provided within the premises of every work places, 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 Superintending Engineer in any particular case:

<table>
<thead>
<tr>
<th>Seats</th>
</tr>
</thead>
<tbody>
<tr>
<td>(i) Where the No. of persons employed exceed 50</td>
</tr>
<tr>
<td>(ii) Where the No. of persons employed exceed 50 but does not exceed 100</td>
</tr>
<tr>
<td>(iii) For every additional 100</td>
</tr>
</tbody>
</table>

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 store sewage system all latrines shall be provided with receptacles on dry earth system which shall be cleaned at least four times daily and at least twice during working hours and kept in a strictly sanitary condition. The receptacles shall be tarred inside and outside at least once a year.

The excreta from the latrines shall be disposed of at the contractor's expenses to the outway pits approved by the local public health authority. The contractor shall also employ adequate No. of scavengers and conservancy staff to keep the latrines and urinals in a clean condition.

5. SHEDS DURING REST:

At the work site there shall be provided, free of cost two suitable sheds one for male and the other for female, rest for the use of labourers.

[Signatures]
CONTRACTOR

[Signatures]
SUPERINTENDING ENGINEER
JHNNUR CIRCLE

19 of 23
Part of Vol-2
6. At every work place at which 60 or more women workers are ordinarily employed there shall be provided two 
huts of suitable for the use of children under age of 5 years belonging to such women. Out hut shall be used for 
infants games and play and the other as their shed room. The huts shall not be constructed on a lower standard 
then following.

a. Thatched Roofs.
b. Mud floors and walls.
c. Planks spread over the mud floor and covered with matting.

The use of the huts shall be restricted to children, their attendants and mothers of the children.

7. CANTEENS:

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

8. SHED FOR WOMEN:

The contractor should provide at his expense sheds for housing his workmen. The shed 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, 
floor area of about 6' x 5' for 2 person shall be provided. The sheds are to be in rows with 5ft, clear space 
between rows if conditions could permit. The work people camp shall be laid out in units of 400 persons each 
unit to have clear a space of 40 ft, all round.

CONDITION REGARDING CONTRACTOR'S RISK AND INSURANCE

The second para in clause 47 of the Preliminary Specification to T.N.D.S.S. is not operative and stands 
cancelled.

CLAUSES REGARDING ENGAGEMENT OF APPRENTICES

1. The contractor shall comply with the provisions of the Apprentices Act 1961 and the rules an 
orders issued there under from time to time. If the fails to do so, his failure will be a breach of the contract and
the competent authority, may at his discretion cancel the contract or invoke any of the penalties for the breach of 
contract provided in the agreement. The contractor shall also be liable for and pecuniary liability arising or 
account of any violation by him of the provisions of the Act.

2. Contractor shall during the currency of the contract ensure engagement of the apprentices in 
the categories mentioned below who may be assigned to him by the Director of Employment and Training / State 
apprenticeship Adviser, Tamil Nadu. The contractor shall train them as required under the Apprentice Act 1961, 
and the rules made there under, and shall be, responsible for all obligations of the employer under the said Act 
including the liability to make payments to the apprentices as required under the said Act.
<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Value of Contract</th>
<th>Category</th>
<th>No. to be appointed</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Rs. 1 lakhs and upto Rs. 3 lakhs</td>
<td>1. Building Constructor</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Brick layer</td>
<td>1</td>
</tr>
<tr>
<td>2.</td>
<td>Above Rs. 3 lakhs and upto Rs. 10 lakhs</td>
<td>1. Building Constructor</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Brick layer</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. Diploma holder in Civil Engineering</td>
<td>1</td>
</tr>
<tr>
<td>3.</td>
<td>Above Rs. 10 lakhs and upto Rs. 50 lakhs</td>
<td>1. Building Constructor</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2. Brick layer</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3. B. E. (Civil) or equivalent degree holder</td>
<td>1</td>
</tr>
</tbody>
</table>

3. Unless the contractor has been exempted from engagement of apprentices by the Director of Employment and Training / State Apprenticeship Adviser, a certificate to the effect that the contractor has discharged his obligation under the said Act, satisfactorily should be obtained from the Director of Employment and Training / State Apprenticeship Adviser and the same should be produced by the contractor for final payment in the settlement of the contract.

TAMIL NADU SLUM CLEARANCE BOARD

CONDITIONS FOR LIME

1. The lime shall be burnt from shells, lime stone or kanker as specified and shall be carefully free from earth impurities.

2. The process of burning shall be carried out in such kilns and / with such fuel of the Executive Engineer may approve.

3. In all cases, the lime shall be delivered at the site of the mortar mill quite fresh, i.e., within seven days of the date on which it was drawn fresh from the kiln. In case where compliance herewith is not possible due to seasonal closure of kilns, written permission of the Executive Engineer is necessary before stored slacked lime can be used.

4. The lime shall be slacked, if so required in the presence of a departmental representative before being put into the mill. All impurities, ashes, or pieces improperly or carelessly burnt shall be screened or picked out before slacking and removed at once from the work.

5. The lime shall then be screened through sieve of such size as the Executive Engineer may direct and all stuff that will not pass through the sieve shall be rejected. In the absence of separate orders under this clause a wire screen of 94 meshes to the square inch shall be used, except for plastering second and third coats or for any fine work defined accordingly by specification in which case the lime is to pass through a sieve of 324 meshes to the square inch.

6. Lime which has perished or which has been damaged by damp, rain or inter mixture of dirt, or which has become partially air-looked, shall on no account be used on the works but shall be removed at once from the site. Lime which given a residue of more than 10 percent by weight when tested hydrochloric acid shall be rejected.

CONTRACTOR

SUPERINTENDING ENGINEER
JNURM CIRCLE

[Signature]

[Signature]
7. Lime is to be obtained from the source defined in the Descriptive Specification sheet.

8. The Lime at work site is to be protected from weather action by being kept in a weather proof shed with impervious floor and sides.

9. When time permits, the following test is to be made for stone limes:

The lime to be tested shall be passed through a sieve having 64 meshes per square inch. Briquettes shall be made of 1 lime 2 sand adding sufficient water to the lime till a stiff paste is formed, this stiff paste is to be well pressed down into the mould, which is to rest on a sheet of glass. The upper surface of the mortar in the mould shall be struck off level with a trowel. The mould shall then be laid aside till the briquette attains initial set. After this period, the briquette (still in the mould) shall be placed in wet sand for two days to allow it to get gradually. It shall then be taken out of its mould, placed in water for 25 days taken out and allowed to dry for 24 hours and then finally tested. The briquette, which is to have cross sectional area of one square inch, should take a minimum tensile strain of 20 lb. If less than this the Executive Engineer shall have the right to reject the lime, and the contractor shall then remove the rejected material from the work site.

NOTE: The two general classes of lime are:

(a) Fat limes: and (b) Hydraulic limes. Shell lime comes under class (a) and is largely used for plaster and whitewash lines from kankar and limestone come under class (b) and should always be used for masonry work unless written permission of the Executive Engineer has been given to the use of shell lime.

Non hydraulic lime mortar should not be used in well locations. Works which are likely to be exposed to the action of water within a month from the date of completion should be constructed with a cement mortar or a surki mortar if the latter is found to be sufficiently hydraulic.

10. Vide instruction in note 2 under 'Materials', which shall apply.

DESCRIPTIVE SPECIFICATION SHEET

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Materials</th>
<th>Sources from where item is to be obtained</th>
<th>Approximate Lead</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Sand for mortar</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Sand for Filling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Hard broken stone of different sizes</td>
<td>Rough Stone and Bond Stone</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Brick, Brickjelly flat tilities, square titles, pressed titles etc.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.</td>
<td>Gravel</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7.</td>
<td>Lime</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## BRAND NAMES OF THE PAINTS TO BE USED FOR THE CONSTRUCTION OF SLUM TENEMENTS

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Name of the Paint Company</th>
<th>Brand Name of the Paint class</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>British paints</td>
<td>Parrot</td>
</tr>
<tr>
<td>2.</td>
<td>Asian paints</td>
<td>Three Mangoes</td>
</tr>
<tr>
<td>3.</td>
<td>Goodlass</td>
<td>Glossolite</td>
</tr>
<tr>
<td>4.</td>
<td>Jonson and Nicholson</td>
<td>Jensolth</td>
</tr>
<tr>
<td>5.</td>
<td>Shalimar</td>
<td>Durolac</td>
</tr>
<tr>
<td>6.</td>
<td>I. C. I.</td>
<td>Duwel</td>
</tr>
<tr>
<td>7.</td>
<td>Blundel</td>
<td>Kinglac</td>
</tr>
</tbody>
</table>
PROFORMA FOR INDEMNITY BOND

This deed of indemnity bond executed at Chennai (Place) on this..............day of
(month) 2018 (year) by and between
Thiru.____________________________________________________________________________
___________________________________________________________________
(hereinafter called “Contractor” which expression unless excluded by or repugnant to the context
include his/her heirs, executors, administrators and legal representatives) to and in favour of the
TNSCB (hereinafter called “the Tamil Nadu Slum Clearance Board” which expression shall unless
excluded by or repayment to the context include his successor and assigns) represented by the
Executive Engineer of Chennai special Division-II Chemancherry (place) shows as follows:

Contd.......
2) Whereas the contractor has submitted the tender for Repairs to the 1116 slum tenements at Perumbakam Phase-II scheme in Kanchipuram District, Chennai under NNURM Reach-V 2013-14 Vide CR No.11/SE (JNNURM)/2011-12 (place of work supply, and such tender has been accepted subject to the General Conditions to Contract appended to TNDSS and other conditions issued along with tender documents.

3) And whereas in pursuance of the terms of contract as per the Agt.No. L S Agreement C.R No.11/SE(J)/2011-12 Date:28.03.2012. that a sum equal to 5% of the total value of work done, has been retained with the Board for a period of 2 years reckoned from the date of completion of the work in order to enable the departmental officers to watch the effect of all seasons on the work and the structural stability of the work executed by the contractor.

4) And whereas it was decided to refund the said sum equal to 5% of the total value of the work done retained with the Board on the expiry of two years period reckoned from the date of completion of work provided that the contractor executes an indemnity bond for a period of further three years indemnifying the TNSECB against any loss or expenditure incurred to rectify any defect noticed due to the faulty workmanship by the contractor or substandard materials used by the contractor during the period of 5 years from the date of completion of the work.

5) Now, this deed of indemnity witnessth-that in consideration of the contract entrusted to the contractor by the Board, the contractor has agreed to the following terms and conditions and executed this indemnity bond in conformation of all and undertakes to comply with the terms referred to infra.

6) The contractor doth hereby indemnity the TNSECB against any loss or damage that may be caused to the TNSECB in respect of rectification and defect noticed due to the faulty workmanship, by the contractor, or substandard materials used by the contractor in the execution of work entrusted to the contractor during the period of three years i.e. from 28.03.2017 up to 27.03.2020 (dates to be specified).

7) It is hereby confirmed that in all other respects, the agreement conditions will be binding between the parties.

In witness whereof Thiru._______________________ has signed this deed on this day ............ of month _________ years 201_  

Witness             Signature of Contractor
1._________________ 
2._________________
C. Drawings

1. All dimensions are in mm.
2. M25 Concrete and Fe 415 grade steel shall be adopted.
3. Slab Thickness is 130 mm.
4. Clear cover to slab is 25 mm.
5. Crank point distances are as shown.
6. "--" denotes extra rods to be provided at top.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF TENEMENTS
@ PERUMBAKKAM

TITLE:
FLOOR / ROOF SLAB DETAILS

TYPE DESIGN NO.: 7 A / 2008
(Amended)

DWG. NO.: TNICB / PERUM AMENDED / 17

REVISION NO.: 0

Executive Engineer
Bhuvan PS & M Cell
Tamil Nadu Slum Clearance Board
Chennai - 600 005.

Sd/- Dr. A.R. Santhakumar
Dt: 11.10.2012.
C.Drawings

1. All dimensions are in mm.
2. M20 Concrete and Fe 415 grade steel shall be adopted.

STRUCTURAL DETAILS

PROJECT:
CONSTRUCTION OF TENEMENTS @ PERUMBAKKAM

TITLE:
STAIRCASE DETAILS - DOG LEGGE

TYPE DESIGN NO.: 7A / 2008 (Amended)

DWG. NO./INSC# / PERUM AMENDED / 18-

REVISION NO.: 0

Sd/- Dr. A.R. Santhakumar
Dt: 11.10.2012.