



ENGINEERING SERVICES DIVISION

ELECTRONICS CORPORATION OF INDIA LIMITED

(A Govt. of India Enterprise under the Department of Atomic Energy)

TENDER DOCUMENT

FOR

NO.EC: ESD: HEAD:**412:2013**

Name of the Work: Supply & Installation of Energy Efficient LED Street lights in ECIL, Hyderabad .

TENDER DOCUMENT

INCLUDING

PRICE BID

(SECTION I TO VI)

ISSUED TO:-



ENGINEERING SERVICES DIVISION

ELECTRONICS CORPORATION OF INDIA LIMITED

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TENDER DOCUMENT

SALE OF TENDER	FROM 21 st August 2013 onwards.
Last date for submission of tender	10th September 2013 up-to 14.30 hrs.
Date of Opening of Tender	
Technical bid	11th September 2013 at 10.00hrs
Commercial bid	13th September 2013 at 10.30hrs

NOTE: A Pre -bid meeting has been scheduled on **4th September at 10.30 hrs** at Conference hall of ECIL Guest house, Hyderabad-500062. In case of any clarifications, the willing agencies are advised to attend the meeting.

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ENGINEERING SERVICES DIVISION

ELECTRONIC CORPORATION OF INDIA LIMITED
(A Govt. Of India Enterprise under the Department of Atomic Energy)

SECTION - I

NOTICE INVITING TENDER No.EC: HEAD: 412:2013, Dt.21-08-2013
AND
INSTRUCTIONS TO TENDERERS

Sealed tenders are invited in two part bid system (Technical and Commercial) from eligible registered contractors with similar experience for the following work in Hyderabad.

<u>S/N</u>	<u>Name of the work</u>	<u>Estimated Cost (In Lakhs)</u>	<u>Tender cost (Rs.)</u>	<u>EMD (in Lakhs.)</u>	<u>Period of Completion</u>
1)	Supply & Installation of Energy Efficient LED Street lights in ECIL, Hyderabad.	16.49	500/-	0.33	3 Months

Note: The tender documents can be seen/downloaded by visiting our website www.ecil.co.in or www.tenders.gov.in.

Prequalification cum Technical Evaluation Criteria:

A:Essential

1. Proof of experience having successfully completed similar works during the last seven year s calculated from the date of opening of tender should be either of the following:
 - Three similar works each costing not less than the amount equal to 40% of the estimated cost.
 - OR
 - Two similar works each costing not less than the amount equal to 50% of the estimated cost.
 - OR
 - One similar work costing not less than the amount equal to 80% of the estimated cost.

Completion Certificates from clients should indicate the nature of work done, the value of work done, date of start, date of completion as per agreement, actual date of completion and a mention about satisfactory completion of the work.

Note: Completion certificates in respect of private works must be supported with relevant duly attested TDS certificates , copy of the work order and final bill payments otherwise the same shall not be considered.

2. The average annual financial turnover during the last 3 years 2010-11, 2011-12 and 2012-13 ending 31st March of the previous financial year, should be at least 30% of the estimated cost. (Attested photocopies of the audited balance sheet along with profit and loss account statement to be enclosed).
3. Registration of the firm.
4. Copy of Electrical License issued by State Electrical Inspectorate
5. Copy of PAN card.
6. Bank solvency certificate of 30% of the estimated cost of work form Nationalized / Scheduled bank, issued after 1st April, 2013.
7. A declaration to the effect that applicant was not blacklisted by any CPSU or by Government of India in the past shall be submitted by the Applicant along with the application.

Additional

1. Complete name and mailing address of the applicant along with Telephone numbers , Fax no., mobile numbers and E-mail address.
2. Information regarding firm / Company profile.
3. Details of projects in hand indicating the name, value, nature & scope of work, stipulated dates of completion. This shall be accompanied with the copies of the work orders or purchase orders issued by respective clients.

Note: All the above “Essential technical qualification” documents must be attested by a Gazetted officer/ Notary public.

INSTRUCTIONS TO TENDERERS

1. The intending bidders should submit their bids in two parts, Technical (Envelope -I) and Commercial (Envelope-II) in two separate sealed covers and both the sealed covers should be kept in another sealed cover marked with the name of the work.

A. ENVELOPE-I(Technical Bid)

The envelope shall be superscribed as Technical bid with Name of the work clearly written on top of the Envelope. This envelope shall contain the following documents:

- a) **Tender document cost:** The cost of tender document shall have to be paid only by crossed demand draft drawn on any scheduled bank in favour of Accounts Officer, ECIL, Hyderabad, enclosed in sealed Technical bid (envelope -1) without which the tender will be rejected. The demand draft for tender cost is not refundable.
- b) **Earnest Money Deposit:** Tender shall be accompanied by a demand draft as Earnest Money Deposit drawn on any scheduled bank in favour of Accounts Officer, ECIL, Hyderabad and submitted in sealed technical bid (envelope-1) along with the tender. The EMD so submitted in the form of Demand draft will be adjusted into Security deposit in

case of successful tenderer and shall be returned in case of unsuccessful tenderers after award of work to successful bidder. **No exemption for non-submission of EMD will be allowed on any account without which the tender will be rejected. Further, tenders with insufficient EMDs shall also be rejected.**

- c) The complete tender document except the schedule for price bid should be kept in Envelope-I. Each page of the tender document should be duly signed and stamped by the bidders.
- d) **The intending bidders shall submit all the documents of prequalification mentioned in the tender document attested by a Gazetted officer /Notary public.** The intending bidders, who do not submit the prequalifying documents as stated above, shall be summarily rejected.

B. ENVELOPE-II(Price Bid)

- a) Envelope –II contain the Price bid (Schedule) of the tender document. This envelope shall be superscribed as Price –Bid with name of the work clearly written on top of the envelope. This document shall be duly signed and stamped on each page by the bidder.
2. **Conditional offers including conditional rebates will not be entertained and will be summarily rejected.**
3. **Validity of offer:** 90 (Ninety) days from the date of opening of tender . If any tenderer withdraws his tender before the said period or issue of letter of acceptance , whichever is earlier, or makes any modifications in the terms and conditions of the tender which are not acceptable to the department, then the ECIL shall, without prejudice to any other right or remedy, be at liberty to forfeit the earnest money as aforesaid. Further the tenderer shall not be allowed to participate in the retendering process of the work.
4. Tenders must reach the office of Head, ESD, ECIL, Hyderabad – 500062 within the stipulated period. Tenders received after the due date of receipt will not be entertained. ECIL takes no responsibility for delay, loss or non-receipt of the tenders sent by post/courier.
5. The Technical evaluation committee of ECIL will check pre -qualification documents and evaluate each tenderer's technical capabilities before qualifying them . Sealed commercial bids and EMD will be returned to the contractors whose technical bids are rejected.
6. Further details / clarifications if any, can be had from Tendering section, ESD, ECIL. The working hours of the Company on all working days (Monday to Saturday) are 08:30 Hrs to 16:00 Hrs. The communication facilities available are E -mail: headesd@ecil.co.in, Tele fax no. 040 -27182550 and Tele phone nos. 271826656, 27182227.

GENERAL RULES AND DIRECTIONS

1. In the event of the tender being submitted by a firm, it must be signed separately by each partner thereof or in the event of the absence of any partner, it must be signed on his behalf by a person holding a power-of-attorney authorizing him to do so, such power of attorney to be produced with the tender, and it must disclose that the firm is duly registered under the Indian Partnership Act, 1952.
2. Receipts for payments made on account of work, when executed by a firm, must also be signed by all the partners, except where contractors are described in the tender as a firm, in which a case the receipts must be signed in the name of the firm by one of the partners or by some of the person having due authority to give effectual receipts for the firm.
3. Use of correcting fluid and over writing, anywhere in tender document is not permitted. Such tender is liable for rejection. All entries in the tender documents should be in one ink. All cancellations and insertions should be duly signed by the tenderers concerned.
4. If at any stage, any information / documents submitted by the applicant are found to be false; the contract shall be liable for rejection, apart from any other appropriate/legal action by ECIL.
5. All rates shall be quoted in the price schedule form. The amount for each item should be worked out and requisite totals given. Special care should be taken to write the rates in figures as well as in words and the amount in figures only, in such a way that interpolation is not possible. The total amount should be written both in figures and in words. In case of figures, the word 'Rs.' should be written before the figure of rupees and word 'P' after the decimal figures, e.g. 'Rs. 3.25 P' and in case of words, the word, 'Rupees' should precede and the word 'Paise' should be written at the end. Unless the rate is in whole rupees and followed by the word 'only' it should invariably be upto two decimal places. While quoting the rate in schedule of quantities, the word 'only' should be written closely following the amount and it should not be written in the next line.
6. Rates quoted by the contractor in item rate tender in figures and words shall be accurately filled in so that there is no discrepancy in the rates written in figures and words. However, if a discrepancy is found, the rates which correspond with the amount worked out by the contractor shall unless otherwise proved be taken as correct. If the amount of an item is not worked out by the contractor or it does not correspond with the rates written either in figures or in words, then the rates quoted by the contractor in words shall be taken as correct. Where the rates quoted by the contractor in figures and in words tally, but the amount is not worked out correctly, the rates quoted by the contractor will unless otherwise proved be taken as correct and not the amount . **In event no rate has been quoted for any item(s), leaving space both in figure(s), word(s), and amount blank, it will be presumed that the contractor has included the cost of this/these item(s) in other items and rate for such item(s) will be considered as zero** and work will be required to be executed accordingly.
7. In quoting their rates, the tenderers are advised to take into account all factors including any fluctuations in the market rates etc. No claim will be entertained on this account after acceptance of the tender or during the currency of the contract except for the provisions in clauses if any elsewhere in the contract.
8. Before tendering the tenderers are advised to inspect the site of work and its environment and be well acquainted with the actual working and other prevalent conditions, position of materials and

labour, General and Special Conditions of Contract, Drawings and specifications and all other documents which form part of the Agreement to be entered into.

9. The acceptance of the tender will rest with the Head ESD who does not bind himself to accept the lowest tender and reserves to himself the authority to reject any or all of the tenders received. However, the reasons for the rejection of the tender will be communicated if desired by the bidder in writing.
10. ECIL reserves to itself the right of accepting the whole or any part of the tender and the tenderer shall be bound to perform the same at the rate quoted.
11. Sales-tax/VAT (except service tax), purchase tax, turnover tax, labourcess or any other tax/statutory deduction as per Central govt. /State govt. rules applicable in respect of this contract shall be payable by the Contractor and ECIL will not entertain any claim whatsoever in respect of the same. However, in respect of service tax, same shall be paid by the contractor to the concerned department on demand and it will be reimbursed to him by the Engineer -in-Charge after satisfying that it has been actually and genuinely paid by the contractor.
12. The contractors / applicants should submit the tender document on the prescribed forms, complete in all respects as explained above. Incomplete tender documents shall be summarily rejected.
13. The tender for the work shall not be witnessed by a contractor or contractors who himself/ themselves has/have tendered or who may and has/have tendered for the same work. Failure to observe this condition would render, tenders of the contractors tendering, as well as witnessing the tender, liable to summary rejection.
14. The contractor whose tender is accepted, will be required to furnish performance guarantee of 5% (Five Percent) of the tendered amount within the period specified in Schedule F. In case the contractor fails to deposit the said performance guarantee within the period as indicated in Schedule 'F'. including the extended period if any, the Earnest Money deposited by the contractor shall be forfeited automatically without any notice to the contractor.
15. The contractor whose tender is accepted will also be required to furnish by way of Security Deposit for the fulfillment of his contract, an amount equal to 5 % of the tendered value of the work. The Security deposit will be collected by deductions from the running bills of the contractor at the rates mentioned above and the earnest money deposited at the time of tenders, will be treated as a part of the Security Deposit.

JURISDICTION:

The agreement for this work will be executed at Hyderabad and be governed by the Indian Law for the time being in force and the court in Hyderabad alone will have jurisdiction to deal with matter arising there from.

Head ESD

ECIL IS COMMITTED TO A CORRUPTION FREE WORK ENVIRONMENT. All the purchase and contracts commitments of ECIL will be honored without the citizen having to pay any bribe. In case any person demands any bribe, it is the duty of a responsible citizen to inform the matter to the Chief Vigilance Officer, ECIL, Hyderabad. His name and telephone number are Shri C Muralidhar Rao, Phone(O):040-27121349, EPABX No.2378, Email:cvo@ecil.co.in.

SECTION-II

FORM OF TENDER AND ACCEPTANCE

Name of the work: Supply & Installation of Energy Efficient LED Street lights in ECIL, Hyderabad.

TENDER

I/We have read and examined the notice inviting tender, schedules, specifications applicable, Drawings & Designs, General Rules and Directions, Conditions of Contract, clauses of contract, Special conditions, Schedule of Rate & other documents and Rules referred to in the conditions of contract and all other contents in the tender document for the work.

I/We hereby tender for the execution of the work specified for ECIL within the time specified in Schedule 'F' viz., schedule of quantities and in accordance in all respect with the specifications, designs, drawing and instructions in writing referred to in the contract and with such materials as are provided for, by, and in respect of accordance with, such conditions so far as applicable.

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

A sum of Rs. is hereby forwarded through demand draft of a scheduled bank as earnest money. If I/We fail to furnish the prescribed performance guarantee within the prescribed period, I/We agree that ECIL or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money absolutely. Further, if I/We fail to commence work as specified, I/We agree that ECIL or the successors in office shall without prejudice to any other right or remedy available in law, be at liberty to forfeit the said earnest money and performance guarantee absolutely, otherwise the said earnest money shall be retained by them towards security deposit to execute all the works referred to in the tender documents upon the terms and conditions contained or referred to in the contract. Further, I/We agree that in case of forfeiture of Earnest Money and performance guarantee as aforesaid, I/We shall be debarred for participation in the re-tendering process of the work.

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

Dated:

Signature of Contractor

Witness:

Postal Address:

Address:

Occupation:

ACCEPTANCE

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

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

(a)

(b)

(c)

For & on behalf of ECIL

Signature

Dated:

Designation

SECTION-III



ENGINEERING SERVICES DIVISION

ELECTRONIC CORPORATION OF INDIA LIMITED

(A Govt. Of India Enterprise under the Department of Atomic Energy)

GENERAL CONDITIONS OF CONTRACT

Definitions

- 1.** The **contract** means the documents forming the tender and acceptance thereof and the formal agreement executed between the competent authority on behalf of the ECIL and the Contractor, together with the documents referred to therein including these conditions, the specifications, designs, drawings and instructions issued from time to time by the Engineer -in-Charge and all these documents taken together, shall be deemed to form one contract and shall be complementary to one another.
- 2.** In the contract, the following expressions shall, unless the context otherwise requires, have the meanings, hereby respectively assigned to them :-
 - (i)** The expression **works** or **work** shall, unless there be something either in the subject or context repugnant to such construction, be construed and taken to mean the works by or by virtue of the contract contracted to be executed whether temporary or permanent, and whether original, altered, substituted or additional.
 - (ii)** The **site** shall mean the land / or other places on, into or through which work is to be executed under the contract or any adjacent land, path or street through which work is to be executed under the contract or any adjacent land, path or street which may be allotted or used for the purpose of carrying out the contract.
 - (iii)** The **Contractor** shall mean the individual, firm or company whether incorporated or not, Joint Venture / Consortium undertaking the works and shall include the legal personal representative of such individual or the persons composing such firm or company, or the successors of such firm or company and the permitted assignees of such individual, firm or company
 - (iv)** “**Drawings**” means the Drawings of the Works, as included in the Contract and any additional / modified Drawings approved by the Engineer from time to time.
 - (v)** The “**Engineer-in-charge**” means the Assistant to the accepting Officer, to perform the duties set forth in clauses here to whose authority shall be notified in writing to the Contractor by the accepting officer.
 - (vi)** “**Electronics Corporation of India Limited**” herein after referred to as ECIL shall mean the Board of Directors, General Manager or other Administrative officers of the said corporation, Managing Director, Head ESD or Executive Engineer authorized to invite tender and enter into contracts for work on behalf of ECIL
 - (vii)** “**Bill of Quantities**” means the priced and completed bill of quantities forming part of the Tender.
 - (viii)** **Accepting Authority / Employer** shall mean the HEAD ESD, ECIL.
 - (ix)** **Excepted Risk are Risks** due to riots (other than those on account of contractor's

employees), war (whether declared or not) invasion, act of foreign enemies, hostilities, civil war, rebellion revolution, insurrection, military or usurped power, any acts of Government, damages from aircraft, acts of God, such as earthquake, lightening and unprecedented floods, and other causes over which the contractor has no control and accepted as such by the Accepting Authority or causes solely due to use or occupation by ECIL of the part of the works in respect of which a certificate of completion has been issued or a cause solely due to ECIL's faulty design of works.

- (x) **Market Rate** shall be the rate as decided by the Engineer -in-Charge on the basis of the prevailing cost of materials and labour at the site where the work is to be executed plus the percentage mentioned in Schedule 'F' to cover, all overheads and profits.
- (xi) **Schedule(s)** referred to in these conditions shall mean the relevant schedule(s) annexed to the tender papers or the standard Schedule of Rates of the ECIL mentioned in Schedule 'F' hereunder, with the amendments thereto issued up to the date of receipt of the tender.
- (xii) **Department** means Engineering Services Division, ECIL.
- (xiii) **Tendered value** means the value of the entire work as stipulated in the work order.
- (xiv) **Approved and Directed** means the approval or direction of the Head ESD or person deputed by him for the particular purpose.
- (xv) **The Final Sum** means the actual amount payable under the contract by ECIL to the Contractor for the entire execution and full completion of the work.
- (xvi) **The "Date of Completion"** is the date or dates for completion of the whole or any part of the work as set out in or ascertained in accordance with the individual work orders or the tender documents or any subsequent agreed amendments thereto.
- (xvii) A **"Week"** means seven days without regard to the number of hours not worked in any day in that week.
- (xviii) A **"Day"** means a day of 24 (Twenty Four) hours irrespective of the number of hours worked or not worked in that day.
- (xix) A **"Working Day"** means any day other than that prescribed by the Negotiable Instruments Act as being a holiday, and consists of the number of labour as commonly recognized by good employers in the Hyderabad District where the work is carried out as laid down in the ECIL regulations.
- (xxi) **"Deviation Order"** means an order given by the Head ESD or Engineer -in-Charge to effect an alternation, addition or deduction.
- (xxii) **"Emergency Works"** means any urgent measures which in the option of the Engineer-in-charge, become necessary bring the progress of the work to obviate any risk of accident or failure or which become necessary for security.
- (xxiii) **"Day Work"** means item of work requiring the employment of labour with or without materials and tools and plant as the case may be, which in the opinion of the Engineer-in-charge is not capable of being evaluated by the accepted methods of measurement or assessment and is paid for on the basis of the actual labour and materials and tools and plant utilized on the particular item of work referred to.

3. The contractor shall be furnished one certified copy of the contract documents except standard specifications, Schedule of Rates and such other printed and published documents, together with all drawings as may be forming part of the tender papers. None of these documents shall be used for any purpose other than that of this contract.

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

5. Sufficiency of Tender The Contractor shall be deemed to have satisfied himself before tendering as to the correctness and sufficiency of his tender for the works and of the rates and prices quoted in the Schedule of Quantities, which rates and prices shall, except as otherwise provided, cover all his obligations under the Contract and all matters and things necessary for the proper completion and maintenance of the works.

6. Discrepancies and Adjustment of Errors

6.1 In the case of discrepancy between the schedule of Quantities, the Specifications and/or the Drawings, the following order of preference shall be observed:-

- i) Description of Schedule of Quantities.
- ii) Particular Specification and Special Condition, if any.
- iii) Drawings.
- iv) CPWD Specifications.
- v) Indian Standard Specifications of B.I.S.

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

6.3 Any error in description, quantity or rate in Schedule of Quantities or any omission therefrom shall not vitiate the Contract or release the Contractor from the execution of the whole or any part of the works comprised therein according to drawings and specifications or from any of his obligations under the contract.

7. Signing of Agreement The successful tenderer / contractor, on acceptance of his tender by the Accepting Authority, shall, within 15 days from the stipulated date of start of the work, sign the contract consisting of :

- i. The notice inviting tender, all the documents including drawings, if any, forming the tender as issued at the time of invitation of tender and acceptance thereof together with any correspondence leading thereto.
- ii. ECIL General conditions of contract.

iii. No payment for the work done will be made unless agreement is signed by the contractor

CLAUSES OF CONTRACT

Performance Guarantee

CLAUSE 1

(i) The contractor shall submit an irrevocable Performance Guarantee of 5% (Five percent) of the tendered amount in addition to other deposits mentioned elsewhere in the contract for his proper performance of the contract agreement, (not withstanding and/or without prejudice to any other provisions in the contract) within period specified in Schedule 'F' from the date of issue of letter of acceptance. This period can be further extended by the Engineer -in-Charge up to a maximum period as specified in schedule 'F' on written request of the contractor stating the reason for delays in procuring the Performance Guarantee, to the satisfaction of the Engineer -in-Charge. However, ECIL reserves the right to give any further extension beyond the above stated maximum extendable period in specific critical cases if felt necessary. This guarantee shall be in the form of bank draft drawn on any scheduled bank in favor of Accounts officer, ECIL, Hyderabad or a bank guarantee from any scheduled bank in the format stipulated by ECIL.

(ii) The Performance Guarantee shall be initially valid up to the stipulated date of completion plus 60 days beyond that. In case the time for completion of work gets enlarged, the contractor shall get the validity of Performance Guarantee extended to cover such enlarged time for completion of work. After recording of the completion certificate for the work by the competent authority, the performance guarantee shall be returned to the contractor, without any interest.

(iii) The Head, ESD, ECIL shall not make a claim under the performance guarantee except for amounts to which the ECIL is entitled under the contract (not withstanding and/or without prejudice to any other provisions in the contract agreement) in the event of:

(a) Failure by the contractor to extend the validity of the Performance Guarantee as described herein above, in which event the Head, ESD, ECIL may claim the full amount of the Performance Guarantee.

(b) Failure by the contractor to pay ECIL any amount due, either as agreed by the contractor or determined under any of the Clauses/Conditions of the agreement, within 30 days of the service of notice to this effect by Head, ESD, ECIL.

(iv) In the event of the contract being determined or rescinded under provision of any of the Clause/Condition of the agreement, the performance guarantee shall stand forfeited in full and shall be absolutely at the disposal of the ECIL.

Recovery of Security Deposit

CLAUSE 1 A

The person/persons whose tender(s) may be accepted (hereinafter called the contractor) shall permit ECIL at the time of making any payment to him for work done under the contract to deduct a sum at the rate of 5% of the gross amount of each running bill till the sum along with the sum already deposited as earnest money, will amount to security deposit of 5% of the tendered value of the work. Earnest money shall be adjusted first in the security deposit and further recovery of security deposit shall commence only when the up-to-date amount of security deposit starts exceeding the earnest money. Such deductions will be made and held by ECIL by way of Security Deposit unless he/they has/have deposited the

amount of Security at the rate mentioned above vide demand draft or Bank guarantee issued by any scheduled bank.

**Compensation
for Delay**

CLAUSE 2

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

This will also apply to items or group of items for which a separate period of completion has been specified.

- (i) Compensation for delay of work --- @ 0.75 % on the tendered value of work per week of delay to be computed on per day basis

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

The amount of compensation may be adjusted or set off against any sum payable to the Contractor under this or any other contract with the ECIL. In case, the contractor does not achieve a particular milestone mentioned in schedule F, or the re-scheduled milestone(s) in terms of Clause 5.4, the amount shown against that milestone shall be withheld, to be adjusted against the compensation levied at the final grant of Extension of Time. Withholding of this amount on failure to achieve a milestone, shall be automatic without any notice to the contractor. However, if the contractor catches up with the progress of work on the subsequent milestone(s), the withheld amount shall be released. In case the contractor fails to make up for the delay in subsequent milestone(s), amount mentioned against each milestone missed subsequently also shall be withheld. However, no interest, whatsoever, shall be payable on such withheld amount.

**When Contract
can be
Terminated?**

CLAUSE 3

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

(i)

If the contractor having been given by the Engineer in Charge a notice in writing to rectify, reconstruct or replace any defective work or that the work is being performed in an inefficient or otherwise improper or unworkmanlike manner shall omit to comply with the requirement of such notice for a period of seven days thereafter.

(ii)

If the contractor has, without reasonable cause, suspended the progress of the

work or has failed to proceed with the work with due diligence so that in the opinion of the Engineer -in-Charge (which shall be final and binding) he will be unable to secure completion of the work by the date for completion and continues to do so after a notice in writing of seven days from the Engineer -in-Charge.

- (iii) If the contractor fails to complete the work within the stipulated date or items of work with individual date of completion, if any stipulated, on or before such date(s) of completion and does not complete them within the period specified in a notice given in writing in that behalf by the Engineer-in-Charge.
- (iv) If the contractor persistently neglects to carry out his obligations under the contract and / or commits default in complying with any of the terms and conditions of the contract and does not remedy it or take effective steps to remedy it within 7 days after a notice in writing is given to him in that behalf by the Engineer-in-Charge.
- (v) If the contractor shall offer or give or agree to give to any person in ECIL service or to any other person on his behalf any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this or any other contract for ECIL.
- (vi) If the contractor being a company shall pass a resolution or the court shall make an order that the company shall be wound up or if a receiver or a manager on behalf of a creditor shall be appointed or if circumstances shall arise which entitle the court or the creditor to appoint a receiver or a manager or which entitle the court to make a winding up order.
- (vii) If the contractor assigns, transfers, sublets (engagement of labour on a piece - work basis or of labour with materials not to be incorporated in the work, shall not be deemed to be subletting) or otherwise parts with or attempts to assign, transfer, sublet or otherwise parts with the entire works or any portion thereof without the prior written approval of the Head, ESD, ECIL.

When the contractor has made himself liable for action under any of the cases aforesaid, the Head, ESD, ECIL on behalf of the ECIL shall have powers :

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

In the event of above courses being adopted by the Head, ESD, ECIL, the contractor shall have no claim to compensation for any loss sustained by him by reasons of his having purchased or procured any materials or entered into any engagements or made any advances on account or with a view to the execution of the work or the performance of the contract. And in case action is taken under any of the provision aforesaid, the contractor shall not be entitled to recover or

be paid any sum for any work thereof or actually performed under this contract unless and until the Head, ESD, ECIL has certified in writing the performance of such work and the value payable in respect thereof and he shall only be entitled to be paid the value so certified.

CLAUSE 3 A

In case, the work cannot be started due to reasons not within the control of the contractor within 1/4th of the stipulated time for completion of work, either party may close the contract. In such eventuality, the Earnest Money Deposit and the Performance Guarantee of the contractor shall be refunded, but no payment on account of interest, loss of profit or damages etc. shall be payable at all.

CLAUSE 4

**Contractor
liable to pay
Compensation
even if action
not taken
under Clause 3**

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

CLAUSE 5

**Time and
Extension for
Delay**

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

5.1 Within one week of issue of the work order, the Contractor shall submit a Time and Progress Chart for each mile stone and get it approved by the Department. The Chart shall be prepared in direct relation to the time stated in the Contract documents for completion of items of the works. It shall indicate the forecast of the dates of commencement and completion of various trades of sections of the work and may be amended as necessary by agreement between the Head, ESD, ECIL and the Contractor within the limitations of time imposed in the Contract documents, and further to ensure good progress during the execution of the work, the contractor shall in all cases in which the time allowed for any work, exceeds one month (save for special jobs for which a separate programme has been agreed upon) complete the work as per mile stones given in Schedule 'F'.

5.2 If the work(s) be delayed by:-
(i) force majeure, or
(ii) abnormally bad weather, or
(iii) serious loss or damage by fire, or
(iv) civil commotion, local commotion of workmen, strike or lockout, affecting any of the trades employed on the work, or
(v) delay on the part of other contractors or tradesmen engaged by ECIL in executing work not forming part of the Contract, or
(vi) non-availability of stores material, which are the responsibility of ECIL to supply or
(vii) Any other cause which, in the absolute discretion of the Head, ESD, ECIL is beyond the Contractor's control.
Then upon the happening of any such event causing delay, the Contractor shall immediately give notice thereof in writing to the Head, ESD, ECIL but shall nevertheless use constantly his best endeavors to prevent or make good the delay and shall do all that may be reasonably required to the satisfaction of the Head, ESD, ECIL to proceed with the works.

5.3 Request for rescheduling of Mile stones and extension of time, to be eligible for consideration, shall be made by the Contractor in writing. The contractor may also, if practicable, indicate in such a request the period for which extension is desired.

5.4 In any such case the Head, ESD, ECIL may give a fair and reasonable extension of time and reschedule the Milestones for completion of work. Such extension shall be communicated to the Contractor by the Head, ESD, ECIL in writing. Non-application by the contract or for extension of time shall not be a bar for giving a fair and reasonable extension by the Head, ESD, ECIL and this shall be binding on the contractor.

CLAUSE 6

Measurements of Work Done

Engineer-in-Charge shall, except as otherwise provided, ascertain and determine by measurement, the value in accordance with the contract of work done.

All measurements of all items having financial value shall be entered in Measurement Book and/or level field book so that a complete record is obtained of all works performed under the contract.

All measurements and levels shall be taken jointly by the Engineer -in-Charge or his authorized representative and by the contractor or his authorized representative from time to time during the progress of the work and such measurements shall be signed and dated by the Engineer -in-Charge and the

contractor or their representatives in token of their acceptance. If the contractor objects to any of the measurements recorded, a note shall be made to that effect with reason and signed by both the parties.

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

The contractor shall, without extra charge, provide all assistance with every appliance, labour and other things necessary for measurements and recording levels.

Except where any general or detailed description of the work expressly shows to the contrary, measurements shall be taken in accordance with the procedure set forth in the specifications notwithstanding any provision in the relevant Standard Method of measurement or any general or local custom. In the case of items which are not covered by specifications, measurements shall be taken in accordance with the relevant standard method of measurement issued by the Bureau of Indian Standards and if for any item no such standard is available, then a mutually agreed method shall be followed.

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

Engineer-in-Charge or his authorized representative may cause either themselves or through another officer of the department to check the measurements recorded jointly or otherwise as aforesaid and all provisions stipulated herein above shall be applicable to such checking of measurements or levels.

It is also a term of this contract that recording of measurements of any item of work in the measurement book and/or its payment in the interim, on account or final bill shall not be considered as conclusive evidence as to the sufficiency of any work or material to which it relates nor shall it relieve the contractor from liabilities from any over measurement or defects noticed till completion of the defects liability period.

**Payment
towards
Running
Account Bills.**

CLAUSE 7

No payment shall be made for work, estimated to cost Rs. Twenty thousand or less till after the whole of the work shall have been completed and certificate of completion given. For works estimated to cost over Rs. Twenty thousand, the interim or running account bills shall be submitted by the contractor for the work executed on the basis of such recorded measurements on the format of the Department in triplicate on or before the date of every month fixed for the same by the Engineer -in-Charge. The contractor shall not be entitled to be paid any such interim payment if the gross work done together with net payment/adjustment of advances for material collected, if any, since the last such payment is less than the amount specified in Schedule 'F', in which case the interim bill shall be prepared on the appointed date of the month after the requisite progress is achieved. Engineer-in-Charge shall arrange to have the bill verified by taking or causing to be taken, where necessary, the requisite measurements of the work. In the event of the failure of the contractor to submit the bills, Engineer-in-Charge shall prepare or cause to be prepared such bills in which event no claims whatsoever due to delays on payment including that of interest shall be payable to the contractor. Payment on account of amount admissible shall be made by the Engineer-in-Charge certifying the sum to which the contractor is considered entitled by way of interim payment at such rates as decided by the Engineer-in-Charge. All such interim payments shall be regarded as payment by way of advances against final payment only and shall not preclude the requiring of bad, unsound and imperfect or unskilled work to be rejected, removed, taken away and reconstructed or re-erected. Any certificate given by the Engineer-in-Charge relating to the work done or materials delivered forming part of such payment, may be modified or corrected by any subsequent such certificate(s) or by the final certificate and shall not by itself be conclusive evidence that any work or materials to which it relates is/are in accordance with the contract and specifications. Any such interim payment, or any part thereof shall not in any respect conclude, determine or affect in any way powers of the Engineer-in-Charge under the contract or any of such payments be treated as final settlement and adjustment of accounts or in any way vary or affect the contract.

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

- i) ELECTRICAL AND AIR-CONDITIONING WORKS: Payment will be made as follows:
For Contract value more than five lakhs, the contractor can claim 75% of the Material cost supplied against proof of materials procured. In the absence of proof of Material cost supplied, ESD will consider 70% of the quoted value as Material cost and remaining 20% as Installation, 10% as Commissioning cost.

**Completion
Certificate and
Completion
Plans**

CLAUSE 8

Within ten days of the completion of the work, the contractor shall give notice of such completion to the Engineer -in-Charge and within thirty days of the receipt of such notice, the Engineer-in-Charge shall inspect the work and if there is no defect in the work, shall furnish the contractor with a final certificate of completion, otherwise a provisional certificate of physical completion indicating defects (a) to be rectified by the contractor and/or (b) for which payment will be made at reduced

rates, shall be issued.. But no final certificate of completion shall be issued, nor shall the work be considered to be complete until the contractor shall have removed from the premises on which the work shall be executed all scaffolding, surplus materials, rubbish in connection with the execution of the works as shall have been erected or constructed by the contractor(s) and cleaned off the dirt from all wood work, doors, windows, walls, floor or other parts of the building, in, upon, or about which the work is to be executed or of which he may have had possession for the purpose of the execution; thereof, and not until the work shall have been measured by the Engineer-in-charge. If the contractor shall fail to comply with the requirements of this Clause as to removal of scaffolding, surplus materials and rubbish and all huts and sanitary arrangement as aforesaid and cleaning off dirt on or before the date fixed for the completion of work, the Engineer -in-charge may at the expense of the contractor remove such scaffolding, surplus materials and rubbish etc., and dispose of the same as he thinks fit and clean off such dirt as aforesaid, and the contractor shall have no claim in respect of scaffolding or surplus materials as aforesaid except for any sum actually realized by the sale thereof.

**Contractor to
keep site clean**

CLAUSE 8 A

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

**Payment of
final bill**

CLAUSE 9

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

(i) If the Tendered value of work is up to Rs. 15 lac : 3 months

(ii) If the Tendered value of work exceeds Rs. 15 lac : 4 months

**Materials
supplied
by ECIL**

CLAUSE 10

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

As soon as the work is awarded, the contractor shall finalize the programme for the completion of work as per clause 5 of this contract and shall give his estimates of materials required on the basis of drawings/ or schedule of quantities of the work. The contractor shall give in writing his requirement to the Engineer -in-charge, which shall be issued to him keeping in view the progress of work as assessed by the Engineer -in-Charge in accordance with the agreed phased programme of work indicating monthly requirements of various materials. The contractor shall place his indent in writing for issue of such materials at least 7 days in advance of his requirement.

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

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

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

Materials to be provided by the contractor and Mandatory Tests

CLAUSE 10 A

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

The contractor shall, at his own expense and without delay; supply to the Engineer-in-charge samples of materials to be used on the work and shall get these approved in advance. All such materials to be provided by the contractor shall be in conformity with the specifications laid down or referred to in the contract. The contractor shall, if requested by the Engineer-in-charge furnish proof, to the satisfaction of the Engineer -in-charge that the materials so comply. The Engineer -in-charge shall within thirty days of supply of

samples or within such further period as he may require intimate to the Contractor in writing whether samples are approved by him or not. If samples are not approved, the Contractor shall forthwith arrange to supply to the Engineer-in-charge for his approval, fresh samples complying with the specifications laid down in the contract. When material is required to be tested in accordance with specifications, approval of the Engineer -in-charge shall be issued after the test results are received.

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

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

The Engineer-in-charge shall have full powers to require the removal from the premises of all materials which in his opinion are not in accordance with the specifications and in case of default, the Engineer-in-charge shall be at liberty to employ at the expense of the contractor, other persons to remove the same without being answerable or accountable for any loss or damage that may happen or arise to such materials. The Engineer-in-Charge shall also have full powers to require other proper materials to be substituted thereof and in case of default, the Engineer-in-Charge may cause the same to be supplied and all costs which may attend such removal and substitution shall be borne by the Contractor.

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

**Mobilization
Advance**

CLAUSE 10B

(i) Interest free mobilization advance not exceeding 15 % of the tendered value may be given, if requested by the contractor in writing within one month of the order to commence the work. Such advance shall be in one or more installments to be determined by the Engineer -in-Charge at his sole discretion. The first installment of such advance shall be released by the Engineer-in-charge to the contractor on a request made by the contractor to the Engineer - in-Charge in this behalf. The second and subsequent installments shall be released by the Engineer - in- Charge only after the contractor furnishes a proof of the satisfactory utilization of the earlier installment to the entire satisfaction of the Engineer-in-Charge.

Before any installment of advance is released, the contractor shall execute a Bank guarantee Bond from scheduled Bank for the amount of advance & valid for the contract period. This shall be kept renewed from time to time to cover the balance amount and likely period of complete recovery.

Provided always that provision of above Clause shall be applicable only when so provided in 'Schedule F'.

(ii) Recovery of such sums advanced shall be made by the deduction from the contractors bills commencing after first ten per cent of the gross value of the work is executed and paid, on pro-rata percentage basis to the gross value of the work billed beyond 10% in such a way that the entire advance is recovered by the time eighty per cent of the gross value of the contract is executed and paid.

(iii) If the circumstances are considered reasonable by the Engineer-in-Charge, the period mentioned in above for request by the contractor in writing for grant of mobilization advance may be extended on the discretion of the Engineer-in-Charge.

CLAUSE 10 CA

Payment due to variation in prices of materials after receipt of tender

If after submission of the tender, the price of materials specified in Schedule F increases/ decreases beyond the price(s) prevailing at the time of the last stipulated date for receipt of tenders (including extensions, if any) for the work, then the amount of the contract shall accordingly be varied and provided further that any such variations shall be effected for stipulated period of Contract including the justified period extended under the provisions of Clause 5 of the Contract without any action under Clause 2.

However for work done/during the justified period extended as above, it will be limited to indices prevailing at the time of stipulated date of completion or as prevailing for the period under consideration, whichever is less.

The increase/decrease in prices of cement, steel reinforcement and structural steel shall be determined by the Price indices issued by the Director General (Works), CPWD. For other items provided in the Schedule 'F', this shall be determined by the All India Wholesale Price Indices of materials as published by Economic Advisor to Government of India, Ministry of Commerce and Industry and base price for cement, steel reinforcement and structural steel as issued under the authority of Director General (Works) CPWD applicable for Delhi including Noida, Gurgaon, Faridabad & Ghaziabad and for other places as issued under the authority of Zonal Chief Engineer, CPWD and base price of other materials issued by concerned Zonal chief Engineer as indicated in Schedule 'F' as valid on the last stipulated date of receipt of tender, including extension if any and for the period under consideration. In case, price index of a particular material is not issued by Ministry of Commerce and Industry, then the price index of nearest similar material as indicated in Schedule 'F' shall be followed.

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

Adjustment for component of individual material

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

where,

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

P = Base Price of material as issued under authority of DG(W), CPWD or concerned Zonal Chief Engineer as indicated in Schedule "F" valid at the time of the last stipulated date of receipt of tender including extensions, if any.

Q = Quantity of material brought at site for bonafide use in the works since previous bill.

Clo = Price index for cement, steel reinforcement bars and structural steel as issued by the DG(W), CPWD as valid on the last stipulated date of receipt of tenders including extensions, if any. For other items, if any, provided in Schedule 'F', All India Wholesale Price Index for the material as published by the Economic Advisor to Government of India, Ministry of Industry and Commerce as valid on the last stipulated date of receipt of tenders including extensions, if any.

CI = Price index for cement, steel reinforcement bars and structural steel as issued under the authority of DG(W), CPWD for period under consideration. For other items, if any, provided in Schedule 'F', All India Wholesale Price Index for the material for period under consideration as published by Economic Advisor to Government of India, Ministry of Industry and Commerce.

Note : (i) In respect of the justified period extended under the provisions of clause 5 of the contract without any action under clause 2, the index prevailing at the time of stipulated date of completion or the prevailing index of the period under consideration, whichever is less, shall be considered.

(ii) If during progress of work or at the time of completion of work, it is noticed that any material brought at site is in excess of requirement, then amount of escalation if paid earlier on such excess quantity of material shall be recovered on the basis of cost indices as applied at the time of payment of escalation or as prevailing at the time of effecting recovery, whichever is higher.

**Dismantled
material
ECIL Property**

CLAUSE 10D

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

Work to be Executed in Accordance with Specifications, Drawings, Orders etc.

CLAUSE 11

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

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

Deviations /Variations Extent And Pricing

CLAUSE 12

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

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

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

Deviation, Extra Items and Pricing

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

**Deviation,
Substituted
Items Pricing**

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

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

**Deviation,
Deviated
Quantities,
Pricing**

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

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

12.6 The contractor shall send to the Engineer -in-Charge once every three months, an up to date account giving complete details of all claims for additional payments to which the contractor may consider himself entitled and of all additional work ordered by the Engineer -in-Charge which he has executed during the preceding quarter failing which the contractor shall be deemed to have waived his right. However, the Head ESD, ECIL may authorize consideration of such claims on merits.

12.7 For the purpose of operation of Schedule "F", the following works shall be treated as works relating to foundation unless & otherwise defined in the contractor:

- (i) For Buildings : All works up to 1.2 meters above ground level or up to floor 1 level whichever is lower.
- (ii) For abutments, piers and well staining : All works up to 1.2 m above the bed level.
- (iii) For retaining walls, wing walls, compound walls, chimneys, over

headreservoirs/tanks and other elevated structures : All works up to 1.2 meters above the ground level.

(iv) For reservoirs/tanks (other than overhead reservoirs/tanks) : All works up to 1.2 meters above the ground level.

(v) For basement: All works up to 1.2 m above ground level or up to floor 1 level whichever is lower.

(vi) For Roads, all items of excavation and filling including treatment of sub base.

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

CLAUSE 13

Foreclosure of contract due to Abandonment or Reduction in Scope of Work

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

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

- i) Provided that the contractor shall be paid the cartage charges only of materials actually and bonafide brought to the site of work by the contractor and rendered surplus and then taken back by the contractor.

The contractor shall, if required by the Engineer -in-Charge, furnish to him, books of account and other relevant documents and evidence as may be necessary to enable him to certify the reasonable amount payable under this condition.

CLAUSE 14

Carrying out part work at risk & cost of contractor

If contractor:

(i) At any time makes default during currency of work or does not execute any part of the work with due diligence and continues to do so even after a notice in writing of 7 days in this respect from the Head ESD, ECIL; or

(ii) Commits default in complying with any of the terms and conditions of the contract and does not remedy it or takes effective steps to remedy it within 7 days even after a notice in writing is given in that behalf by the Head ESD, ECIL or

Fails to complete the work(s) or items of work with individual dates of completion, on or before the date(s) so determined, and does not complete them within the period specified in the notice given in writing in that behalf by the Head ESD, ECIL.

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

(a) Take possession of the site and any materials, constructional plant, implements, stores, etc., thereon; and/or

(b) Carry out the part work / part incomplete work of any item(s) by any means at the risk and cost of the contractor.

The Head ESD, ECIL shall determine the amount, if any, is recoverable from the contractor for completion of the part work/ part incomplete work of any item(s) taken out of his hands and execute at the risk and cost of the contractor, the liability of contractor on account of loss or damage suffered by ECIL because of action under this clause shall not exceed 10% of the tendered value of the work.

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

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

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

In the event of above course being adopted by the Head ESD, ECIL, the contractor shall have no claim to compensation for any loss sustained by him by reason of his having purchased or procured any materials or entered into any engagements or made any advance on any account or with a view to the execution of the work or the performance of the contract.

Suspension of Work

CLAUSE 15

(i) The contractor shall, on receipt of the order in writing of the Engineer -in-Charge, (whose decision shall be final and binding on the contractor) suspend the progress of the works or any part thereof for such time and in such manner as the Engineer -in-Charge may consider necessary so as not to cause any damage or injury to the work already done or endanger the safety thereof for any of the following reasons:

- (a) on account of any default on the part of the contractor or;
- (b) for proper execution of the works or part thereof for reasons other than the default of the contractor; or
- (c) for safety of the works or part thereof.

The contractor shall, during such suspension, properly protect and secure the works to the extent necessary and carry out the instructions given in that behalf by the Engineer-in-Charge.

- (ii) If the suspension is ordered for reasons (b) and (c) in sub-para (i) above:
 - a. the contractor shall be entitled to an extension of time equal to the period of every such suspension PLUS 25% for completion of the item or group of items of work for which a separate period of completion is specified in the contract and of which the suspended work forms a part, and;
- (iii) If the works or part thereof is suspended on the orders of the Engineer -in-Charge for more than three months at a time, except when suspension is ordered for reasons (a) in sub -para (i) above, the contractor may after receipt of such order serve a written notice on the Engineer -in-Charge requiring permission within fifteen days from receipt by the Engineer -in-charge of the said notice, to proceed with the work or part thereof in regard to which progress has been suspended and if such permission is not granted within that time, the contractor, if he intends to treat the suspension, where it affects only a part of the works as an omission of such part by ECIL or where it affects whole of the works, as an abandonment of the works by ECIL, shall within ten days of expiry of such period of 15 days give notice in writing of his intention to the Engineer -in-Charge. In the event of the contractor treating the suspension as an abandonment of the contract by ECIL, he shall have no claim to payment of any compensations on account of any profit or advantage which he might have derived from the execution of the work in full but which he could not derive in consequence of the abandonment.

Provided, further, that the contractor shall not be entitled to claim any compensation from ECIL for the loss suffered by him on account of delay by ECIL in the supply of materials in schedule 'B' where such delay is covered by difficulties relating to the supply of wagons, force majeure including non-allotment of such materials by controlling authorities, acts of God, acts of enemies of the state/country or any reasonable cause beyond the control of the ECIL.

**Action in case
Work not done
as per
Specifications**

CLAUSE 16

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

If it shall appear to the Head, ESD, ECIL or his authorized subordinates in charge of the work or to the Head, ESD, ECIL or his subordinate officers or the officers of the organization engaged by the Department for quality Assurance or to the Chief Technical Examiner or his subordinate officers, that any work has been executed with unsound, imperfect, or unskillful workmanship, or with materials or articles provided by him for the execution of the work which are unsound or of a quality inferior to that contracted or otherwise not in accordance with the contract, the contractor shall, on demand in writing which shall be made within twelve months of the completion of the work from the Head, ESD, ECIL specifying the work, materials or articles complained of notwithstanding that the same may have been passed, certified and paid for forthwith rectify, or remove and reconstruct the work so specified in whole or in part, as the case may require or as the case may be, remove the materials or articles so specified and provide other proper and suitable materials or articles at his own charge and cost.

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

CLAUSE 17

**Contractor
Liable for
Damages,
defects during
maintenance
period**

If the contractor or his working people or servants shall break, deface, injure or destroy any part of building in which they may be working, or any building, road, road kerb fence, enclosure, water pipe, cables, drains, electric or telephone post or wires on which the work or any part is being executed, or if any damage shall happen to the work while in progress, from any cause whatever or if any defect, shrinkage or other faults appear in the work within twelve months (six months in the case of work costing Rs. Ten lakhs) after a final completion certificate or otherwise of its completion shall have been given by the Engineer-in-charge as aforesaid arising out of defect or improper materials or workmanship the contractor shall upon receipt of a notice in writing on that behalf make the same good at his own expense or in default the Engineer-in-charge cause the same to be made good by other workmen and deduct the expense from any sums that may be due or at any time thereafter

may become due to the contractor, or from his security deposit. The security deposit of the contractor shall not be refunded before the expiry of twelve months (six months in the case of work costing Rs. Ten lacs and below) after the issue of the certificate final or otherwise, of completion of work, or till the final bill has been prepared and passed whichever is later.

In case of Maintenance and Operation works, the security deposit deducted from contractors shall be refunded within one month from the date of final payment or within one month from the date of completion of the maintenance contract whichever is earlier.

**Contractor to
Supply Tools &
Plants etc.**

CLAUSE 18

The contractor shall provide at his own cost all materials (except such special materials, if any, as may in accordance with the contract be supplied from the Engineer-in-charge's stores) machinery, tools & plants as specified in Schedule F. in addition to this, appliances, implements, other plans, ladders, cordage, tackle, scaffolding and temporary works required for the proper execution of the work, whether original, altered or substituted and whether included in the specifications or other documents forming part of the contract or referred to in these conditions or not, or which may be necessary for the purpose of satisfying or complying with the requirements of the Engineer-in-Charge as to any matter as to which under these conditions he is entitled to be satisfied, or which he is entitled to require together with carriage therefore to and from the work. The contractor shall also supply without charge the requisite number of persons with the means and materials, necessary for the purpose of setting out works, and counting, weighing and assisting the measurement for examination at any time and from time to time of the work or materials. Failing his so doing, the same may be provided by the Engineer-in-Charge at the expense of the contractor and the expenses may be deducted, from any money due to the contractor, under this contract or otherwise and/or from his security deposit or the proceeds of sale thereof, or of a sufficient portions thereof.

**Labour laws to
be complied by
the Contractor**

CLAUSE 19

RULES FRAMED UNDER CONTRACT LABOUR (REGULATION AND ABOLITION) ACT, 1970. No. D1/8385/79

After taking into final consideration of the objections and suggestions received from various managements/persons in response to the draft notification issued by me, which was published in Rules supplement to part I of Andhra Pradesh Gazette No.26, dated 19th July, 1979, the following notification is issued.

Where as it is expedient to specify conditions of service, Rates of Wages, holidays and hours of work for the workmen employed by contractor's who do not perform the same or similar kind of work as the workmen directly employed by the principal employer of an establishment, I. the Commissioner of labour, Government of Andhra Pradesh Contract Labour (Regulation and Abolition) Rules 1971 hereby specifying the condition of service, rates of wages, holidays and hours of work as in Annexure which will be effective from the date of publication in the Gazette of Andhra Pradesh.

ANNEXURE
ANDHRA PRADESH CONTRACT LABOUR (REGULATION AND ABOLITION) RULES 1971 CONDITIONS OF SERVICE

In exercise of the powers conferred under clause (b) of sub-rule (V) of rule 25 of the Andhra Pradesh contract Labour (Regulation and Abolition) Rules 1971, the Commissioner of Labour, Andhra Pradesh, Hyderabad hereby specified the following conditions of service, rates of wages, holidays and hours of work for the workmen directly employed by the principal employer of an establishment.

1. EMPLOYMENT CARD : The contract labour employed by contractor shall be provided with an employment card, indicating there in the name of the workmen, Father's name his token number, the date of appointment designation, wage rates and his residential address.

2. WORKING HOURS: (a) No adult workmen shall be required to work for more than 8 hours in any day and 48 hours in a week.

(b) No young persons who have not completed 18 Years of age shall be required to work more than 7 hours in any day and 42 hours in a week.

3. BAR ON EMPLOYMENT OF FEMALES: No Female shall be required to work after 7.00 PM. or before 6.00 A.M.

Provided that the Commissioner of Labour may be notification, in the Official Gazette in respect of any factory or group of class or description of factories vary the limits laid down under condition No.9. But no such variation shall authorize the employment of any workmen between the hours of 1000 PM. to 6.00 A.M.

4. BAR ON EMPLOYMENT OF CHILD LABOUR: No child below the age of 15 Years shall be allowed to work as contract labour.

5. REST INTERVAL: No workmen shall be required to work for more than 5 hours in any day unless he has an interval for rest for at least half an hour.

6. SPREAD OVER: The Period of work of any workmen shall be so arranged that along with has interval for rest, they shall not spread over more than 10 hours in any day.

7. EXTRA WAGES FOR OVER TIME: (i) Where a contract labour is required to work for more than 9 hours in any day excluding the period of rest interval, he shall be entitled to wages at the rate of twice his ordinary rate of wages.

(ii) For the purposes of this clause, ordinary rate of wage means his basic wage plus, D.A. or the consolidated wage.

8. WEEKLY REST: Every labour shall be allowed a day of rest of one whole day provided he/she has worked for 6 days.

9. NATIONAL AND FESTIVAL HOLIDAYS : (1) Every workman employed by the contractor, shall be entitled to 8 holidays in a calendar Year, with wages, which shall be 26th January, 15th August, 2nd October, and 1st May. Remaining 4 holidays will be fixed by mutual discussion between the contractor and his labour each Year by the end of November. The list of holidays so decided will be duly and prominently displayed by the contractor. A copy of the list to holidays for the following year shall be furnished by the contractor to the Deputy Commissioner of Labour of the region and the Commissioner of labour before 5th December each Year.

(2) A workman would be entitled to the festival and national holidays as per sub-clause (1) if he has put at least 15 days of work during the calendar year and has been on rolls a day prior to the holiday.

(3) Where a workman who is entitled to the holiday, is required or allow to work on any holiday, he shall at his option be entitled to:

(a) Twice the wages or, (b) wage or such day and to avail himself of a substituted holiday with wages on one of seven days immediately before or after the day on which he so works.

10. (a) Leave with wages: Every workman who has worked under a contractor

during the calendar year shall be allowed leave with wages for number of days calculated at the rate of

- (i) If an adult one day for every 20 days of actual work performed by him.
- (ii) If a young person one day for every 15 days of actual work performed by him.

EXPLANATIONS:

(a) For counting the days of actual work weekly offs, festival holidays, and other interruptions like lay-offs. Shall be treated as service rendered.

(b) Leave admissible under this clause shall be exclusive of all holidays whether occurring during or at either end of the period of leave

(c) In calculating leave under this clause fraction of leave of half-a-day or more shall be treated as one full days leave and fraction of leave less than half a-day shall be omitted.

(c) Provided that the total number of days of leave that may be carried forward to a succeeding year shall not exceed 30 days in the case of adult worker and 40 days in the case of child worker or the contractor shall pay the full wages whenever the contract Labour quits the employment in lieu thereof.

(d) A workman may at any time apply in writing to the contractor or his authorized representative not less than 7 days before the date of which he wishes his leave to begin to take all the leave or any portion thereof allowable to him during the calendar Year.
Provided further that the number of times in which leave may be taken during any year shall not exceed three.

e) Every employee for the period of leave allowed under this section shall be paid at a scale equal to the daily averages of his total full time earnings for the days on which he worked during the month immediately preceding his leave exclusive of any over-time but exclusive of D.A.

(f) If a workman entitled to leave is discharged by the contractor before he has been allowed such leave or if the leave applied by such workman has been refused and if he quits his employment before he has been allowed the leave, the contractor shall pay to the workman within one week the amount in respect of the period of the invalid leave.

(g) If the existing leave facilities are more beneficial than those provided in the above section the employee will continue to enjoy the existing facilities.

MAINTENANCE OF REGISTERS: Every contractor shall maintain relevant registers as provided in Rules 78 of the contract labour (Regulation and abolition) Rules, 1971.

WAGES:

1) Where no rates of wages have statutory being fixed for any category or class of workmen the contractor shall pay wages not less than Rs. 297/- per day to an unskilled employees Rs. 328/- per day to semiskilled and Rs. 361 /- per day to skilled employees subject to revision as may be notified by Commissioner of Labour from time to time.

2) If the statutory wages in force are more beneficial to the workmen they will continue to be paid notwithstanding the rates of wages proposed to be fixed under Rule 25(V) (b) of the Andhra Pradesh Contract Labour (Regulation and abolition) Rules, 1971.

Where any category of employee is actually in receipt of higher rate of wages than those specified above he/she shall continue to be paid such higher wages.

EXPLANATION:

- i) Where the monthly rate has to be computed it shall be multiplied by 30 days.
- ii) Where the employees are being paid at piece rates, they shall not receive wages less than the wages provided in clause (i) above.

Lay Off: 1) The contractor may at any time in the event of fire catastrophe, break down of machinery or shortage of power supply epidemics civil commotion or other causes beyond his control stop work for any period or periods without notice

2) In the event of such stoppage during work hours, the workmen affected shall be notified by the notice put upon the notice board in a conspicuous place.

PROCEDURE FOR TERMINATION OF SERVICES:

- 1) No contractor shall without a reasonable cause, terminate the service of a workman who has been in this employment continuously for a period for a period of thirty days or more without giving a workman at least for a period of 3 days notice in writing or wages in the lieu of except for misconduct.
- 2) The following acts and omission shall be treated as misconduct on the part of workmen.
 - a) Willful insubordination or disobedience whether alone or in combination with other of any lawful and reasonable of supervisor.
 - b) Striking work or inciting others to strike contravention of the provisions any law.
 - c) Willful slowing down in performance, are abetment, or instigation thereof.
 - d) Theft, fraud or dishonesty in connection with contractor's or principal employer's.
 - e) Habitual breach of any law applicable to the work place or any rule made there under.
 - f) Drunkenness riotous or disorderly or indecent behavior at the workplace.
 - g) Habitual neglect or work or habitual negligence.
 - h) Willful damage to work in progress.
 - i) Holding meeting with in premises without prior permission of the employer.
 - j) Gambling within the premises of work.
 - k) Sleeping while on duty.
 - l) Habitual late attendance.
 - m) Threatening, abusing or assaulting any superior or co-worker.
 - n) Habitual absence without leave or absence without leave for more than 5 consecutive days or over staying the sanctioned leave without sufficient grounds or proper or satisfactory explanation.
- 3) A workman guilty of misconduct may be punished with warning, fine suspension for a period of 7 days or dismissed.

4) No order of punishment for misconduct shall be made expect after holding an enquiry Against the workman following the p rinciples of natural justice while awarding punishment to the gravity of misconduct and previous record of the workman shall be taken Into consideration.

5) A workman who absents himself for more than 5 continuous working days without applying for the leave or making a representation to the contractor and without sufficient Cause, the services of the employees will be liable to be terminated without notice

CLAUSE 19 A

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

CLAUSE 19 B

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

CLAUSE 19 C

The contractor shall at all stages of work deploy skilled / semi skilled tradesmen who are qualified and possess certificate in particular trade from CPWD Training Institute / Industrial Training Institute/National Institution of Construction Management and research (NICMAR) National Academy of Construction, CIDC or any similar reputed and recognized Institute managed / certified by State / Central Government.

Employment of skilled / semi-skilled workers

Minimum Wages Act to be Complied with

CLAUSE 20

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

Employees Provident Fund & Miscellaneous Provident Act 1952 and State Insurance (ESI) Act, 1948.

CLAUSE 20(A)

The Contractor shall comply with all the provisions of the Employees Provident Fund & Misc. Provisions Act, 1952, and ESI Act, 1948, amended from time to time and rules framed thereunder. Some of the provisions are given below:

a) The contractor shall intimate his

(i) PF Account Code No. allotted by Regional PF Commissioner and

(ii) ESI Registration No. allotted by ESI Corporation, while submitting tender and shall continue to have valid PF Account Code No. and ESI Registration No. till actual completion of the contract.

b) The contractor shall provide a list of contract Workers engaged for contract work along with their PF Account No. / ESI Registration No.

c) The contractor by 20th of every month shall provide a monthly statement showing recoveries of contribution and proof of remittance of

provident fund contribution to RPFC and ESI contributions to ESI Corporation in respect of Workers engaged in contract work.
d) The contractor shall provide copies of PF & ESI challans of monthly contributions in respect of contract workers engaged for contract work on month to month basis.
ECIL reserves the right to withhold suitable amount from the running account payments, if PF / ESI contributions are not paid by the contractor and proof to that effect have not been produced regularly on due dates.

Work not to be sublet. Action in case of insolvency

CLAUSE 21

The contract shall not be assigned or sublet without the written approval of Head, ESD, ECIL and if the contractor shall assign or sublet his contract, or attempt to do so, or become insolvent or commence any insolvency proceedings or make any composition with his creditors or attempt to do so, or if any bribe, gratuity, gift, loan, perquisite, reward or advantage pecuniary or otherwise, shall either directly or indirectly, be given, promised or offered by the contractor, or any of his servants or agent to any public officer or person in the employ of ECIL in any way relating to his office or employment, or if any such officer or person shall become in any way directly or indirectly interested in the contract, the Head, ESD, ECIL on behalf of the ECIL shall have power to adopt the course specified in Clause 3 hereof in the interest of ECIL and in the event of such course being adopted, the consequences specified in the said Clause 3 shall ensue.

Dispute Resolution Mechanism and Arbitration

CLAUSE 22

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

(i)

Through Dispute Resolution Committee : Any dispute as stated above shall be referred in the first place to the Dispute Resolution Committee (DRC) appointed by the Director (Personnel), ECIL.
It is also a term of contract that fees and other expense if payable to DRC shall be paid equally by both the parties i.e. ECIL and Contractor.
Unless the contract has already been repudiated or terminated, the contractor shall, in every case, continue to proceed with the work with all due diligence.
It is also a term of contract that If the contractor does not make any demand for Dispute Resolution Committee in respect of any claim in writing within 90 (Ninety) days of receiving the intimation from the ECIL that the bill is ready for payment, the claim of contractor(s) will be deemed to have been waved and absolutely barred and the ECIL shall be discharged and released of all liabilities under the contract in respect of these claims.

(ii)

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

It is also a term of contract that If the contractor does not make any demand for appointment of Arbitrator in respect of any claim in writing within 120 (One hundred Twenty) days of receiving the decision / award from Dispute Resolution Committee, the claim of contractor(s) will be deemed to have been waved and absolutely barred and the ECIL shall be discharged and released of all liabilities under the contract in respect of these claims.

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

It is also a term of this contract that no person, other than a person appointed by above mentioned appointing authority, should act as arbitrator and if for any reason that is not possible, the matter shall not be referred to arbitration at all.

The arbitration shall be conducted in accordance with the provisions of the Arbitration and Reconciliation Act, 1996 (26 of 1996) 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 proceedings under this clause.

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

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

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

Contractor to indemnify ECIL against Patent Rights

CLAUSE 23

The contractor shall fully indemnify ECIL against any action, claim or proceeding relating to infringement or use of any patent or design or any alleged patent or design rights and shall pay and royalties which may be payable in respect of any article or part thereof included in the contract. In the event of any claims made under or action brought against ECIL in respect of any such matters as aforesaid, the contractor shall be immediately notified thereof and the contractor shall be at liberty, at his own expense, to settle any dispute or to conduct any litigation that may arise there from.

Action where no specifications are specified

CLAUSE 24

In the case of any class of work for which there is no such specifications as referred to in the tender document, such work shall be carried out in accordance with the Bureau of Indian Standards Specifications. In case there are no such specifications in Bureau of Indian Standards, the work shall be carried out as per manufacturers' specifications. In case there are no such specifications as required above, the work shall be carried out in all respects in accordance with the instructions and requirements of the Engineer-in-Charge.

Recovery from the contractors

CLAUSE 25

(Whenever under the contract any sum of money shall be recoverable from or payable by the contractor the same may be deducted from any sum then due or which at any time thereafter may become due to the contractor under the contract or under any other contract with ECIL or from his Security Deposit, or he shall pay the claim on demand.

Unfiltered water supply

CLAUSE 26

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

(i) That the water used by the contractor(s) shall be fit for construction purposes to the satisfaction of the Engineer-in-Charge.

(ii) The Engineer-in-Charge shall make alternative arrangements for supply of water at the risk and cost of contractor(s) if the arrangements made by the contractor(s) for procurement of water are in the opinion of the Engineer-in-Charge, unsatisfactory.

Departmental water supply, if available

CLAUSE 26 A

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

(i) The water charges @ 1.5 % shall be recovered on gross amount of the work done on items involving use of water.

(ii) The contractor(s) shall make his/their own arrangement of water connection and laying of pipelines from existing main of source of supply.

(iii) The Department do not guarantee to maintain uninterrupted supply of water and it will be incumbent on the contractor(s) to make alternative

arrangements for water at his/ their own cost in the event of any temporary break down in the ECIL water main so that the progress of his/their work is not held up for want of water. No claim of damage or refund of water charges will be entertained on account of such break down.

**Departmental
Electricity
Supply**

CLAUSE 26 B

Electronic power from sources available near the site shall be made available at 420 volts 3 phase (4 wire) 50 cycles to the contractor at one point. Further distribution, installation of the switch board, meter etc. shall be arranged by the contractor at his own cost. All connections will be made at contractors cost. He shall arrange to install a tested meter of approved make and pay for the energy consumed by him for the agreed rates, namely Rs. 5/- KWH. All wiring from the switchboard and meter will be removed by the Contractor on completion of the work. He shall reinstate and make good any work disturbed by the temporary power lines to the satisfaction of the Engineer-in-charge.

The contractor shall state in Appendix-I the requirement of electric power for lighting and construction equipment.

**Hire of plant
& Machinery**

CLAUSE 27

(i) The Contractor shall arrange at his own expense all tools, plant, machinery and equipment (hereinafter referred to as T& P) required for execution of the work.

(ii) In case rollers for consolidation are employed by the contractor himself, log book for such rollers shall be maintained.

**Condition
relating to use
of asphaltic
materials**

CLAUSE 28

(i) The contractor undertakes to make arrangement for the supervision of the work by the firm supplying the tar or bitumen used.

(ii) The contractor shall collect the total quantity of tar or bitumen required for the work as per standard formula, before the process of painting is started and shall hypothecate it to the Engineer -in-Charge. If any bitumen or tar remains unused on completion of the work on account of lesser use of materials in actual execution of for reasons other than authorized changes of specifications and abandonment of portion of work, a corresponding deduction equivalent to the cost of unused materials as determined by the Engineer-in-Charge shall be made and the material return to the contractors. Although the materials are hypothecated to ECIL, the contractor undertakes the responsibility for their proper watch, safe custody and protection against all risks. The materials shall not be removed from site of work without the consent of the Engineer-in-Charge in writing.

(iii) The contractor shall be responsible for rectifying defects noticed within a year from the date of completion of the work.

**Employment of
Technical Staff
and employees**

CLAUSE 29

Contractor shall engage Engineers, Supervisors, Technical staff & Employees

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

The Contractor shall immediately after receiving letter of acceptance of the

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

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

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

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

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

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

CLAUSE 30

Levy/Taxes payable by Contractor

(i). Sales Tax/VAT (except Service Tax), Building and other Construction Workers Welfare Cess or any other tax or Cess in respect of this contract shall be payable by the contractor and Government shall not entertain any claim whatsoever in this respect. However, in respect of service tax, same shall be paid by the contractor to the concerned department on demand and it will be reimbursed to him by the Engineer -in-Charge after satisfying that it has been actually and genuinely paid by the contractor.

(ii) The contractor shall deposit royalty and obtain necessary permit for supply of the red bajri, stone, kankar, etc. from local authorities.

(iii) If pursuant to or under any law, notification or order any royalty, cess or the like becomes payable by the ECIL and does not any time become payable by the contractor to the State Government. Local authorities in respect of any material used by the contractor in the works then in such a case, it shall be lawful to the ECIL and it will have the right and be entitled to recover the amount paid in the circumstances as aforesaid from dues of the contractor.

Termination of Contract on death of contractor

CLAUSE 31

Without prejudice to any of the rights or remedies under this contract, if the contractor dies, the Head, ESD, ECIL on behalf of the ECIL shall have the option of terminating the contract without compensation to the contractor.

If relative working in ECIL then the contractor not allowed to tender

CLAUSE 32

The contractor shall not be permitted to tender for works in ECIL wherein his near relative is posted as an Officer responsible for award and execution of work. He shall also intimate the names of persons who are working with him in any capacity or / are subsequently employed by him and who are near relatives to any officer of ECIL. Any breach of this condition by the Contractor would render him getting debarred from participating in future tenders of ECIL along with termination of the tender in question.

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

**No officer in
Dept. of
Engineering to
work as
Contractor
within one year
of retirement**

CLAUSE 33

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

**Apprentices Act
provisions to
be complied
with**

CLAUSE 34

The contractor shall comply with the provisions of the Apprentices Act, 1961 and the rules and orders issued there under from time to time. If he fails to do so, his failure will be a breach of the contract and the Head, ESD, ECIL may, in his discretion, cancel the contract. The contractor shall also be liable for any pecuniary liability arising on account of any violation by him of the provisions of the said Act.

**Changes in
firm's
Constitution to
be intimated**

CLAUSE 35

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

CLAUSE 36

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

**Damage and
loss to private
property and
injury to
workmen**

Clause 37

The Contractor shall at his own expense reinstate and make good to the satisfaction the Head, ESD and pay compensation for any injury loss or damage occasioned to any property or rights whatever including property and right of ECIL (or agents, servants or employees of ECIL) the injury loss or damage arising out of or in any way in connection with the execution or proposed execution of the contract and further contract or shall indemnify ECIL against all claims enforceable against ECIL any agent, servant or employee of ECIL or which would be so enforceable against ECIL were ECIL a private person, in respect of any such injury (Including injury resulting in death), loss or damage to any person whosoever or property including all claims which may arise under the Workmen's Compensation Act or otherwise.

Use of Explosives **Clause 38**
Shall not be used on the works or on the sites by the Contractor without the previous permission of the Engineer -in-Charge and then only in the manner and to the extent permitted by him. When explosives are required for any work the same shall be stored in a special magazine to be provided by and at the cost of the Contractor in accordance with the law relating to the possession and storage of explosives for the time being in force. The Contractor shall forth with obtain a license recurred by such law f sto rage and use of explosives and all operations in which or for which explosives are employed. Shall be at the sole risk and responsibility of the Contractor and the Contractor shall fully and effectually indemnity the E.C.I.L. in all respects thereof.

Reporting of Accidents to Labour **Clause 39**
The Contractor shall be responsible for the safety of all employees or workmen employed or engaged by him on and in connection with the works and shall forthwith report to the Head ESD of Engineer-in-Charge all cases of serious accidents to them or any one of them, howsoever caused and whenever occurring on the work, and shall make adequate arrangements for rendering all possible aids to the victims of the accidents.

Orders under the Contract **Clause 40**
All orders, notices etc., to be under the contract shall be in writing, typescript or printed and if sent by registered post /speed post to the address given in the tender of the Contractor, shall be deemed to have served on the date when in the ordinary course they would have been delivered to him. The Contractor shall carry out without delay all orders given to him.

Admission to Site **Clause 41**
The Contractor shall not enter or (other than for inspection purpose) take possession of the site unless permitted to do so by the Head, ESD. The positions of the site to be occupied by the Contractor will be clearly defined and marked on the site plan and the Contractor will on no account be allowed to extend his operations beyond these areas.

The Contractor shall provide if necessary or requi red at the site temporary access thereto and shall alter, modify and maintain the same at required from time to time. He shall take out and clear away the access route when no longer required restoring the area to its original conditions.

The Head ESD shall have power to execute other works (Whether or not connected with the works in the contract agreement on the site simultaneously with the execution of the original work and the Contractor shall give reasonable facilities for this purpose.

Electronics Corporation of India Limited reserves the right of taking over, at any time any portion of the site which they may require and the Contractor shall at his own expense clear such portion forthwith. No photographs of the site or of the works o r any part thereof shall be taken published or otherwise circulated, without the prior approval of the Head ESD.

No such approval shall however exempt the Contractor from complying with any statutory provisions, in regard to the taking and publication of such photographs.

E.C.I.L. officials connected with the contract shall have the right of entry to the site at all times.

Head ESD shall have the power to exclude from the site any person whose admission there to may, in his opinion is undesirable due to any reason whatsoever.

CLAUSE 42

Return of material & recovery for excess material used

(i) After completion of the work and also at any intermediate stage in the event of non-reconciliation of materials issued, consumed and in balance (see Clause 10), theoretical quantity of materials issued by the ECIL for use in the work shall be calculated on the basis and method given hereunder:-

(a) Quantity of cement & bitumen shall be calculated on the basis of quantity of cement & bitumen required for different items of work as shown in the Schedule of Rates mentioned in Schedule 'F'. In case any item is executed for which standard constants for the consumption of cement or bitumen are not available in the above mentioned schedule/statement or cannot be derived from the same shall be calculated on the basis of standard formula to be laid down by the Engineer-in-Charge.

(b) Theoretical quantity of steel reinforcement or structural steel sections shall be taken as the quantity required as per design or as authorized by Engineer-in-Charge, including authorized lappings, chairs etc. plus 3% wastage due to cutting into pieces, such theoretical quantity being determined and compared with the actual issues each diameter wise, section wise and category wise separately.

(c) Theoretical quantity of G.I. & C.I. or other pipes, conduits, wires and cables, pig lead and G.I./M.S. sheets shall be taken as quantity actually required and measured plus 5% for wastage due to cutting into pieces (except in the case of G.I./M.S. sheets it shall be 10%), such determination & comparison being made diameter wise & category wise.

(d) For any other material as per actual requirements.

(ii) Over the theoretical quantities of materials so computed a variation shall be allowed as specified in Schedule 'F'. The difference in the net quantities of material actually issued to the contractor and the theoretical quantities including such authorized variation, if not returned by the contractor or if not fully reconciled to the satisfaction of the Engineer-in-Charge within fifteen days of the issue of written notice by the Engineer-in-charge to this effect shall be recovered at the rates specified in Schedule 'F', without prejudice to the provision of the relevant conditions regarding return of materials governing the contract. Decision of Engineer-in-Charge in regard to theoretical quantities of materials, which should have been actually used as per the Annexure of the standard schedule of rates and recovery at rates specified in Schedule 'F', shall be final & binding on the contractor. For non scheduled items, the decision of the Head, ESD, ECIL regarding theoretical quantities of materials which should have been actually used, shall be final and binding on the contractor.

(iii) The said action under this clause is without prejudice to the right of the ECIL to take action against the contractor under any other conditions of contract for not doing the work according to the prescribed specifications.

**Compensation
during warlike
situations**

CLAUSE 43

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

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

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

ELECTRONICS CORPORATION OF INDIA LIMITED
SAFETY CODE

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

- 8 All necessary personal safety equipment as considered adequate by the Engineer -in-Charge should be kept available for the use of the person employed on the site and maintained in a condition suitable for immediate use, and the contractor should take adequate steps to ensure proper use of equipment by those concerned. The following safety equipment shall invariably be provided.
- (i) Workers employed on mixing asphaltic materials, cement and lime mortars shall be provided with protective footwear and protective goggles.
 - (ii) Those engaged in white washing and mixing or stacking of cement bags or any material which is injurious to the eyes, shall be provided with protective goggles.
 - (iii) Those engaged in welding works shall be provided with welder's protective eye-shields.
 - (iv) Stone breaker shall be provided with protective goggles and protective clothing and seated at sufficiently safe intervals.
 - (v) When workers are employed in sewers and manholes, which are in active use, the contractors shall ensure that the manhole covers are opened and ventilated at least for an hour before the workers are allowed to get into the manholes, and the manholes so opened shall be cordoned off with suitable railing and provided with warning signals or boards to prevent accident to the public. In addition, the contractor shall ensure that the following safety measures are adhered to:-
 - (a) Entry for workers into the line shall not be allowed except under supervision of the Engineer in charge or any other higher officer.
 - (b) At least 5 to 6 manholes upstream and downstream should be kept open for at least 2 to 3 hours before any man is allowed to enter into the manhole for working inside.
 - (c) Before entry, presence of toxic gases should be tested by inserting wet lead acetate paper which changes colour in the presence of such gases and gives indication of their presence.
 - (d) Presence of Oxygen should be verified by lowering a detector lamp into the manhole. In case, no Oxygen is found inside the sewer line, workers should be sent only with oxygen kit.
 - (e) Safety belt with rope should be provided to the workers. While working inside the manholes, such rope should be handled by two men standing outside to enable him to be pulled out during emergency.
 - (f) The area should be barricaded or cordoned off by suitable means to avoid mishaps of any kind. Proper warning signs should be displayed for the safety of the public whenever cleaning works are undertaken during night or day.
 - (g) No smoking or open flames shall be allowed near the blocked manhole being cleaned
 - (h) The malba obtained on account of cleaning of blocked manholes and sewer lines should be immediately removed to avoid accidents on account of slippery nature of the malba.
 - (i) Workers should not be allowed to work inside the manhole continuously. He should be given rest intermittently. The Engineer -in-Charge may decide the time up -to which a worker may be allowed to work continuously inside the manhole.
 - (j) Gas masks with Oxygen Cylinder should be kept at site for use in emergency.
 - (k) Air-blowers should be used for flow of fresh air through the manholes. Whenever called for, portable air blowers are recommended for ventilating the manholes. The Motors for these shall be vapor proof and of totally enclosed type. Non sparking gas engines also could be used but they should be placed at least 2 meters away from the opening and on the leeward side protected from wind so that they will not be a source of friction on any inflammable gas that might be present.

- (l) The workers engaged for cleaning the manholes / sewers should be properly trained before allowing working in the manhole.
- (m) The workers shall be provided with Gumboots or non-sparking shoes bump helmets and gloves non sparking tools safety lights and gas masks and portable air blowers (when necessary). They must be supplied with barrier cream for anointing the limbs before working inside the sewer lines.
- (n) Workmen descending a manhole shall try each ladder stop or rung carefully before putting his full weight on it to guard against insecure fastening due to corrosion of the rung fixed to manhole well.
- (o) If a man has received a physical injury, he should be brought out of the sewer immediately and adequate medical aid should be provided to him.
- (p) The extents to which these precautions are to be taken depend on individual situation but the decision of the Engineer -in-Charge regarding the steps to be taken in this regard in an individual case will be final.
- (vi) The Contractor shall not employ men and women below the age of 18 years 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 precaution should be taken:-
 - (a) No paint containing lead or lead products shall be used except in the form of paste or readymade paint.
 - (b) 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 is dry rubbed and scrapped.
 - (c) Overall shall be supplied by the contractors to the workmen and adequate facilities shall be provided to enable the working painters to wash during and on the cessation of work.

9. An additional clause (viii)(i) of ECIL Safety Code (iv) the Contractor shall not employ women and men below the age of 18 on the work of painting with product containing lead in any form, wherever men above the age of 18 are employed on the work of lead painting, the following principles must be observed for such use:

- (i) White lead, sulphate of lead or product containing these pigment, shall not be used in painting operation except in the form of pastes or paint ready for use.
- (ii) Measures shall be taken, wherever required in order to prevent danger arising from the application of paint in the form of spray.
- (iii) Measures shall be taken, wherever practicable, to prevent danger arising out of from dust caused by dry rubbing down and scraping.
- (iv) Adequate facilities shall be provided to enable working painters to wash during and on cessation of work.
- (v) Overall shall be worn by working painters during the whole of working period.
- (vi) Suitable arrangement shall be made to prevent clothing put off during working hours being spoiled by painting materials.
- (vii) Cases of lead poisoning and suspected lead poisoning shall be notified and shall be subsequently verified by medical man appointed by competent authority of ECIL.
- (viii) ECIL may require, when necessary medical examination of workers.
- (ix) Instructions with regard to special hygienic precautions to be taken in the painting trade shall be distributed to working painters.

10. When the work is done near any place where there is risk of drowning, all necessary equipment should be provided and kept ready for use and all necessary steps taken for

prompt rescue of any person in danger and adequate provision, should be made for prompt first aid treatment of all injuries likely to be obtained during the course of the work.

- 11 Use of hoisting machines and tackle including their attachments, anchorage and supports shall conform to the following standards or conditions:
 - (i) (a) These shall be of good mechanical construction, sound materials and adequate strength and free from patent defects and shall be kept repaired and in good working order.

(b) Every rope used in hoisting or lowering materials or as a means of suspension shall be of durable quality and adequate strength, and free from patent defects.
 - (ii) Every crane driver or hoisting appliance operator shall be properly qualified and no person under the age of 21 years should be in charge of any hoisting machine including any scaffolding winch or give signals to operator.
 - (iii) In case of every hoisting machine and of every chain ring hook, shackle swivel and pulley block used in hoisting or as means of suspension, the safe working load shall be ascertained by adequate means. Every hoisting machine and all gear referred to above shall be plainly marked with the safe working load. In case of a hoisting machine having a variable safe working load each safe working load and the condition under which it is applicable shall be clearly indicated. No part of any machine or any gear referred to above in this paragraph shall be loaded beyond the safe working load except for the purpose of testing.
 - (iv) In case of departmental machines, the safe working load shall be notified by the Electrical Engineer-in-Charge. As regards contractor's machines the contractors shall notify the safe working load of the machine to the Engineer -in-Charge whenever he brings any machinery to site of work and get it verified by the electrical Engineer concerned.
- 12 Motors, gearing, transmission, electric wiring and other dangerous parts of hoisting appliances should be provided with efficient safeguards. Hoisting appliances should be provided with such means as will reduce to the minimum the risk of accidental descent of the load. Adequate precautions should be taken to reduce to the minimum the risk of any part of a suspended load becoming accidentally displaced. When workers are employed on electrical installations which are already energized, insulating mats, wearing apparel, such as gloves, sleeves and boots as may be necessary should be provided. The worker should not wear any rings, watches and carry keys or other materials which are good conductors of electricity.
- 13 All scaffolds, ladders and other safety devices mentioned or described herein shall be maintained in safe condition and no scaffold, ladder or equipment shall be altered or removed while it is in use. Adequate washing facilities should be provided at or near places of work.
- 14 These safety provisions should be brought to the notice of all concerned by display on a notice board at a prominent place at work spot. The person responsible for compliance of the safety code shall be named therein by the contractor.
- 15 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 or Engineer-in-Charge of the department or their representatives.
- 16 Notwithstanding the above clauses from (1) to (15), there is nothing in these to exempt the contractor from the operations of any other Act or Rules in force in the Republic of India.

SAFETY INSTRUCTIONS FOR CONTRACTORS

1. The contractor shall at all times keep his work area clean.
2. Display warning signs, caution boards in his work area.
3. The contractor shall comply with the instructions given by the Safety officer.
4. Before carrying out the work in Radiography area, he has to follow the instructions of Radiological Safety officer.
5. Inform all accidents/Fire immediately to the In-charge of the work.
6. Use ladders for safe access to work at height.
7. Use safety belts while working in height.
8. The contractor shall take prior permission from electrical department to carry out any excavation work or to work on electrical equipment or on electrical lines (Work Permit System).
9. Contractor shall provide necessary Personal protective equipment (like Safety helmets, electrical gloves, Safety shoes, welding screens, Gum boots etc.,) to their workmen.
10. Only men above the age of 18 years shall be employed in paint shops.
11. "SMOKING - STRICTLY PROHIBITED" in paint shops/paint storage areas.
12. Employ qualified & authorized welders for welding & gas cutting.
13. Maintain welding cables and gas hoses in good condition.
14. Do not route the welding cables across the passages.
15. Keep wheel guards in position for all portable grinders.
16. The contractor shall have licensed electrical staff at site.
17. All three phase equipment shall be provided with double earthing.
18. Use insulated hand tools to work on Electric lines/equipment.
19. Before carrying any work on electrical installations/equipment, de-energize the circuit and confirm the line is dead by using and approved voltage testing device.
20. When two persons are working within reach of each other, they shall never work on different phases of the supply.
21. While tapping electricity from the socket, plug top must be used. Use only standard three pin plugs. Broken sockets/plugs shall be replaced immediately with good ones.
22. Unauthorized tapping of power is prohibited.
23. Do not use Switch Boards as storage area.
24. "MEN ON LINE", "DONOT SWITCH ON", "DANGER" OR CAUTION" or board as applicable shall be used during maintenance works on the electrical equipment. The contractor shall be held responsible for violation of safety measures. I shall follow and abide by above instruction.

IMPORTANT INSTRUCTIONS FOR CONTRACTORS

1. Any material brought for using on the work has to be documented by ECIL security and obtain the declaration forms from them indicating the work order number, quantity of all the material brought in for the entire work during the period of execution. Such declaration forms are required to be enclosed to the bills / handed over to the Engineer In -Charge for preparation of bills in the absence of which it may not be possible to release the payments.
2. The PF & ESI contributions for the labour engaged on the work have to be borne by the contractor at 12% and 4.75% respectively on the wages paid to the labourers.
3. The wages for labour shall be paid not less than the approved departmental rate communicated periodically in front of the Engineer In-Charge of the work.
4. The contractor shall maintain the wage register and PF & ESI records at site of work and produce the same for inspection at any time. The register should contain the name and details of all labour engaged on the work along with their PF & ESI numbers.
5. The contractor shall take all safety precautions required for this job and shall ensure the work as per statutory requirements for the required amount.
6. The contractor should have the required labour license to execute works at ECIL in accordance prevailing labour laws and statutory provisions.

NOTE : The contractor has ensure registration with the authorities under The Building and other construction worker's (Regulation of employment and conditions of Service)Act, 1996 which is enclosed herewith for submission of returns and for assessment of cess in order to levy of taxes and the payment

**BUILDING AND OTHER CONSTRUCTION WORKERS'
WELFARE CESS ACT, 1996
(Act No. 28 of 1996, dt.19.08.1996)**

An Act to provide for the levy and collection of a cess on the cost of construction incurred by employers with a view to augmenting the resources of the Building and Other Construction Workers' Welfare Boards constituted under the Building and Other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996.

Belt enacted by Parliament in the Forty-Seventh Years of the Republic of India as follows:

01. Short title, extent and commencement:

- (1) This Act may be called the Building and other Construction Workers' Welfare Cess Act, 1996. It extends to the whole of India.
- (2) It shall be deemed to have come into force on the 3rd day of November, 1995.

02. Definitions:

In this Act, unless the context otherwise requires,

(a) "Board" means a Building and other Construction Workers Welfare Board constituted by a State Government under sub -sec.(1) of sec.18 of the Building and other Construction Workers(Regulation of Employment and Conditions of service) Act,1996.

(b) "Fund" means the Building and other Construction Workers' Welfare Fund a constituted by a Board.

(c) "Prescribed" means prescribed by rules made under this Act.

(d) works and expressions used herein but not defined and defined in the Building and other Construction Workers' (Regulation of Employment and Conditions of Service) Act, 1996 shall have the meanings respectively assigned to them in that Act.

03. Levy and collection of Cess:

1. There shall be levied and collected a cess for the purposes of the Building and the Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996, at such rate not exceeding two per cent but not less than one percent of the cost of construction incurred by an employer, as the Central Government may, by notification in the Official Gazette, from time to time specify.
2. The cess levied under sub-sec(1) shall be collected from every employer in such manner and at such time, including deduction at source in relation to a building or other construction work of a Government or of a public sector undertaking or advance collection through a local authority where an approval of such building or other construction work by such local authority is required, as may be prescribed.
3. The proceeds of the cess collected under sub -sec.(2) shall be paid by the local authority or the State Government collecting the cess to the Board after deducting the cost of collection of such cess not exceeding one per cent of the amount collected.
4. Notwithstanding anything contained in sub -sec(1) or sub -sec(2) the cess livable under this Act including payment of such cess in advance may subject to that asse ssment to be made , be collected at a uniform rate or rates as ma y be prescribed or the basis of the quantum of the building or other construction work involved.

COMMENTS - A cess has been collected for the purpose of the Building and other Construction Workers (Regulation of Employment and Conditions of Service) Act, 1996, at the rate of in between 1 and 2% of the cost of construction incurred by an employer.

04. Furnishing of Returns:

- (1) Every employer shall furnish such return to such officer or authority in such manner and at such time as may be prescribed.
- (2) If any person carrying on the building or other construction work, liable to pay the cess under Sec.3, fails to furnish any return under sub -sec.(1) the officer or the authority shall give a notice requiring such person to furnish such return before such date as may be specified in the notice.

COMMENTS

Any person who is carrying on the building or other construction work, liable to pay the cess under section 3, must furnish return to the concerned office authority shall give notice requiring such employer to furnish return before such date as mentioned in the notice.

05. Assessment of Cess:

- (1) The officer or to whom or to which the return has been furnished under Sec.4 shall, after making or causing to be made such inquiry as he or it thinks fit in and after satisfying himself or itself that the particulars stated in the return are correct by order, assess the amount of cess payable by the employer.
- (2) If the return has not been furnished to the officer or authority under sub-sec.(2) of sec.4, he or it shall, after making or causing to be made such inquiry as he or it thinks fit by order, assess the amount of cess payable by the employer.
- (3) An order of assessment made under sub-sec.(1) or sub -sec(2) shall specify the date within which the cess shall be paid by the employer.

06. Power to exempt:

Notwithstanding anything contained in this Act, the Central Government may by notification in the Official Gazette, exempt any employer or class of employers in a State from the payment of cess payable under this Act where such cess is already levied and payable under any corresponding law in force in the State.

COMMENTS

Central Government has power to exempt from payment cess to any employer or class or employers in a State.

07. Power of Entry:

Any officer of authority of the State Government specially empowered on behalf by that Government may

- (a) With such assistance, if any as he or it may think fit, enter at any reasonable time any place where he or it considers it necessary to enter for carrying out the purposes of this Act including verification of the correctness of any particulars furnished by any employer under Sec.4.
- (b) do within such place anything necessary for the proper discharge of his or its duties under this Act; and
- (c) Exercise such other powers as may be prescribed.

08. Interest payable on delay in payment of cess:

If any employer fails to pay any amount of cess payable under Sec.3 within the time specified in the order of assessment, such employer shall be liable to pay interest on the amount to be paid at the rate of two per cent, for every month or part of a month comprised in the period from the date on which such payment is due till such amount is actually paid.

COMMENTS

Whosoever fails to pay the amount of cess within the time, such employer shall be liable to pay interest on the amount to be paid at the time rate of 2% for every month of delay.

09. Penalty for non-payment of cess within the specified time:

If any amount of cess payable by any employer under sec.3 is not paid within the time specified in the order of assessment made under Sec.5, it shall be deemed to be in arrears and the authority prescribed in this behalf may, after making such inquiry as it deems fit, impose on such employer a penalty not exceeding the amount of cess.

PROVIDED that, before imposing any such penalty, such employer shall be given a reasonable opportunity of being heard and if after such hearing the said authority is satisfied that the default was for any good and sufficient reason, no penalty shall be imposed under the section.

COMMENTS

The penalty for non-payment of cess within the specified time is not exceeding the amount of cess.

10. Recovery of amount of due under the Act.

Any amount due under this Act (including any interest or penalty) from an employer may be recovered in the same manner as an arrear of land revenue.

COMMENTS

The amount (cess) recovered under this Act is treated as an arrear of land revenue.

11. Appeal

(1) Any employer aggrieved by an order of assessment made under Sec.5 or by an order imposing penalty made under Sec.9 may, within such time as may be prescribed, appeal to such appellate authority in such form and in such manner as may be prescribed.

(2) Every appeal preferred under sub-sec.(1) shall be accompanied by such fees as may be prescribed.

(3) After the receipt of any appeal under sub-sec.(1), the appellate authority shall, after giving the appellant an opportunity of being heard in the matter, dispose of the appeal as expeditiously as possible.

(4) Every order passed in appeal under this section shall be final and shall not be called in question in any Court of law.

12. Penalty

(1) Wherever, being under an obligation to furnish a return under this Act, furnishes any return knowing or having reason believe the same to be false, shall be punishable with imprisonment which may extend to six months, or with fine which may extend to one thousand rupees, or with both.

(2) Whosoever, being liable to pay cess under this Act, willfully or internally evades or attempts to evade the payment of such cess shall be punishable with imprisonment which may extend to six months, or with fine, or with both.

(3) No Court shall take cognizance of an offence punishable under this section save on a complaint made by or under the authority of the Central Government.

13. Offences by companies

(1) Where an offence under this Act has been committed by a company every person who, at the time the offence was committed was in-charge of, and was responsible to, the company for the conduct of the business of the company, as well as the company, shall be deemed to be guilty of the offence and shall be liable to be proceeded against and punished accordingly.

PROVIDED that nothing contained in this sub-section shall render any such person liable to any punishment if he proves that the offence was committed without his knowledge or that he had exercised all due diligence to prevent the commission of such offence.

(2) Notwithstanding anything contained in sub-sec.(1), where an offence under this Act has been committed with the consent or connivance of, or is attributable to any neglect on the part of, any director, manager, secretary or other officer of the company such director, manager, secretary or other officer shall also be deemed to be guilty of that offence and shall be liable to be proceeded against and punished accordingly.

Explanation for the purposes of this section,-

(a) "company" means by anybody corporate and includes a firm or other association of individual; and

(b) "Director", in relation to a firm, means a partner in the firm.

14. Power to make rules

(1) The Central Government may, by notification in the Official Gazette, make rules for carrying out the provisions of this Act.

(2) Without prejudice to the generality of the foregoing power, such rules may provide for all or any of the following matters namely:

(a) the manner in which and the time within which the cess shall be collected under sub -sec.(2) or sec.3;

(b) the rate or rates of advance cessleviable under sub-sec.(4) or Sec.3;

(c) the particulars of the returns to be furnished, the officer or authority to whom or to which such returns shall be furnished and the manner and time of furnishing such returns under sub -sec.(1) of sec.4;

(d) the powers which may be exercised by the officer or authority under Sec.7

(e) the authority which may impose penalty under sec.9;

(f) the authority to which an appeal may be filed under sub -sec.(1) of Sec.11 and the time within which and the form and manner in which such appeal may be filed.

(g) the fees which shall accompany an appeal under sub-sec.(2) of Sec.11; and

(h) Any other matter which has to be, or may be, prescribed.

(3) Every rule made under this Act shall be laid, as soon as may be after it is made, before each House of Parliament while it is in session for a total period of thirty days which may be comprised in one session or two or more successive sessions, and if before the expiry of the session immediately following the session or the successive sessions aforesaid, both Houses agree that the rule should not be made, the rule shall thereafter have effect only in such modified form or be of no effect, as the case may be so however, that any such modification or annulment shall be without prejudice to the validity of anything previously done under that rule.

15. Repeal and saving

(1) The Building and other Construction Workers' Welfare Cess(Third Ordinance), 1996 (Ord.26 of 1996), hereby released.

(2) Notwithstanding such repeal, anything done or any action taken under the said Ordinance shall be deemed to have done or taken under the corresponding provisions.

**THE BUILDING & OTHER CONSTRUCTION WORKERS'
WELFARE CESS RULES,1998
(G.S.R. 149(e) DT.26.03.1998)**

In exercise of the powers conferred by Sub -sec(1) of sec.14 of the Building and Other Construction Workers'

Welfare Cess Act,1996 (Act 28 of 1996), the Central Government hereby makes the following rules, namely

01. Short Title and commencement

(1) These Rules may be called The Building and Other Construction Workers Welfare Cess Rules, 1998.

(2) They shall come into force on the date of their publication in the Official Gazette.

02. Definition

In these Rules, unless the context otherwise requires.

(a) 'Act' means the Building and Other Construction Worker' Welfare Cess Act,1996(Act 28 of 1996)

(b) 'Main Act' means the Building and Other Construction Worker' (Regulation Employment and Conditions of service) Act, 1996 (Act 27 of 1996).

(c) 'Form' means the form annexed to these Rules.

(d) All other words and expression used in these Rules but not defined and defined in the Act or in the main Act shall have the meanings respectively assigned to them in those Acts.

(e) 'Specified' means specified by a State Government by an order published in the Official Gazette.

(f) 'Cess Collector' means an officer appointed by the State Government for collection of cess under the Act.

(g) 'Assessing Officer' means a gazetted officer of State Government or an officer of a local authority holding an equivalent post to a gazetted officer of the State Government appointed by such State Government for Assessment of Cess under the Act.

(h) 'Appellate Authority' means an officer, senior in rank to the Assessing Officer, appointed by the State Government for the purposes of Sec.11 of the Act

03. Levy of cess For, the purpose of levy of cess under Su7b -sec(1) of Sec.3 of the Act. cost of construction shall include all expenditure incurred by an employer in connection with the building or other construction work but shall not include cost of land; Any compensation paid or payable to a worker or his kin under the Worker's Compensation Act, 1923.

SECTION-IV



ENGINEERING SERVICES DIVISION

ELECTRONIC CORPORATION OF INDIA LIMITED

(A Govt. Of India Enterprise under the Department of Atomic Energy)

GENERAL SPECIFICATIONS AND SPECIAL CONDITIONS OF CONTRACT

1.0 SCOPE

The intent and scope of this specification is design, manufacturing, supply, installation, testing and commissioning of energy efficient street light luminaires using High Power LEDs with suitable current control driver circuit and other accessories including mounting arrangement and related mechanical and electrical works and warranty period obligations at ECIL, Hyderabad.

LED street light luminaires shall conform to IS: 16107/2012 complete with electronic control gear for LED luminaires conforming to IS: 16104/2012, transparent cover made out of min 3mm thick toughened glass duly wired for use on 100V to 280V AC, 50 Hz power supply, body of fitting shall be made of aluminium die cast.

Fitting shall be suitable for mounting up to a height of 6 Mtrs. It shall conform to Class-I of IS: 10322 (Part 5 / Sec 3) / 1987 with amendments 1&2 (Reaffirmed 2005) and IP -65 protection with photometric test.

The supplier shall furnish the performance data as detailed in clause No 12.3 of IS: 10322 (Part 5 / Sec 3) / 1987 with amendments 1&2. They shall furnish type test report along with photometric test report from any NABL approved laboratory with detailed drawing and colour photography duly certified by the laboratory.

2.0 TECHNICAL REQUIREMENTS

2.1 LED FITTED LUMINAIRE

2.1.1 The lighting luminaires offered by a vendor shall be fitted with High Power LEDs having minimum luminous efficiency of 100 lumens/watt.

2.1.2 The LEDs shall be of reputed make such as Cree Inc. / Nichia Corporation/ OSRAM / Philips Lumileds/ Seoul Semiconductor.

2.1.3 To enhance the secondary optics of the fixture, suitable Acrylic Optical Lenses shall be used.

2.1.6 The CCT of the LED fixture shall be in the range of 6000- 6500 °K.

2.1.7 The luminaires shall ensure a CRI of minimum 75.

2.1.8 The Uniformity Ratio (E_{min} / E_{avg}) shall be greater than 35%.

2.1.9 The LED luminaires shall produce constant lux level in the voltage range of 100V to 280V. Voltage variations/ fluctuations in the specified voltage range shall not impinge upon the lux level it produces.

2.1.10 The life span of the LED source including its Driver shall be greater than 50000 hours.

2.1.11 The P/N junction temperature of individual LED must not exceed 100°C. High Thermal conduction must be achieved by use of silicon heat conductive greases and adhesive.

2.1.12 LED Light must be constructed to achieve the LUX level at the ground level/ working level as per relevant IS Standards for that particular application.

- 2.1.13 All fasteners must be of stainless steel.
- 2.1.14 LED must be mounted on heat sinking conductive bars if any with suitable large area surface by means of fins to dissipate the conducted heat. The fins must be exposed to ambient flowing air.
- 2.1.15 The electrical component of the LED and LED driver must be suitably enclosed in a hermetically sealed unit.
- 2.1.16 The luminaire should be provided with in-built power unit & electronic driver. The luminaire should be so constructed to ensure that the drivers are replaceable, if required.
- 2.1.17 The luminaires shall conform to IEC 60598 or equivalent standard. The driver should comply with IEC 61347-2-13, IEC 61547, CISPR -15; and 61000 -3-2. The supplier should submit luminaire test report conforming to the specified standards.
- 2.1.18 Light Distribution shall be Cut Off/ Semi Cut Off type in accordance with IESNA Type II/ III Lighting Distribution.
- 2.1.19 The minimum acceptable luminous efficacy of the fixture offered shall be 100 Lm/W.

2.2 CONSTRUCTION

2.2.2 The casing of the lighting luminaires shall be made of pressure die cast aluminum coated with epoxy polyester powder coat single, self contained device not requiring any on-site assembly for installation onto an existing lighting luminaires integral with power supply unit. The driver unit must be accessible and if need be replaceable easily and with minimum use of tools.

2.2.3 The casing made of non-corrosive aluminum having high conductivity shall have external surface designed in a manner so as to act as an efficient heat sink to extract heat generated at p-n junction of a LED. Effort shall be made to keep the overall outer dimensions as minimum as possible without compromising on the performance of the LEDs or luminaire.

2.2.4 The assembly and manufacturing process for the LED source assembly in modules/ arrays shall be designed to assure all internal components are adequately supported to withstand sudden impacts and mechanical shock and vibration from high winds and other sources.

2.2.5 No part shall be constructed of polycarbonate unless it is UV stabilized.

2.2.6 Material used for the lens of LED source shall be of toughened glass, heat resistant and shall not undergo discoloration during lifetime of the LED source. It shall conform to ASTM specifications for the materials.

Any discoloration observed in the lens shall be considered a failure under warranty clause.

2.2.7 All luminaires shall be provided with acrylic / polycarbonate / glass diffusers and/or aluminized reflectors and/or lenses to provide proper road lighting distribution.

2.2.8 Toughened and/or tempered glass of sufficient strength may be provided under the LED chamber to protect the LEDs and luminaires.

2.2.9 The LED lens shall be UV stabilized and shall be capable of withstanding ultraviolet (direct sunlight) exposure for a minimum period of 60 months without exhibiting evidence of deterioration.

2.2.10 The finish of the fixture shall be powder coated and of grey colour.

2.2.11 The luminaires shall be capable of operating normally in ambient temperatures from -20°C to 50°C maintaining junction temperature below 100°C and heat sink temperature below 60°C, ensuring efficient thermal management of the luminaire.

2.2.12 The fixture shall be designed in such a manner that it is easy to handle and install, is not too large and unwieldy, is of robust construction, light weight and conforms to minimum IP65 class of protection for outdoor use and min. IP22 for indoor application against dust and moisture intrusion.

Luminaire's manufacturer should submit IP test report from Govt. Accredited Test Lab / R&D Labs.

2.2.13 The luminaire shall be provided with a built-in external heat sink as well as an aluminum MCPCB printed circuit board, designed in such a way that the heat generated within the LED source is efficiently dissipated to the surrounding atmosphere without abnormal rise in temperature. Any debris build up shall not degrade heat dissipation performance of the luminaires. *A lighting luminaire fitted with an assisted cooling system is not acceptable.*

2.2.14 The fixture shall be capable of installation on the existing poles, brackets, and in the existing lighting cutouts in offices/ corridors etc. as per specified application.

2.3 THERMAL MANAGEMENT

2.3.1 The manufacturers shall ensure that the fixture is designed in such a manner that it conducts the heat away from the LEDs as efficiently as possible. The design shall ensure that the junction temperature is kept as low as possible during operation. Thermal management shall be in such a way that Luminaire shall have trouble free operations from -20 °C to +50°C. The following tests shall be done to determine efficient thermal management:

2.3.1.1 The Fixture manufacturer shall perform solder point temperature (Tsp) measurement and compute junction temperature (Tj). The manufacturer shall show the proof that the junction temperature shall not go beyond the LED manufacturer's maximum junction temperature for long term lumen maintenance (i.e., 70% of the original value of lumen output after 50000 hours of operation).

2.3.2 The fixture manufacturer shall furnish proof that the LEDs that have been offered and used in the fixture have White Point stability data (6000 Hours) as per IESNA's LM80 -08, done at high ambient temperature 85°C and solder point temperature of 85°C.

2.3.3 The fixture manufacturer shall furnish proof that the LEDs that have been offered and used in the fixture have been tested to IEC 62471 for safety requirements.

2.4 ELECTRICAL

2.4.1 The LEDs offered by the vendor for replacement of the existing lighting fixtures shall be as per the table given below. **The wattages indicated are inclusive of watts consumed by their respective drivers.** This is a rough comparison; the vendor shall offer the best possible replacement with maximum energy efficiency and required minimum illumination levels.

S.No.	Type of the Existing Fixture	To be Replaced with	Remarks
1	125W HPSV (5M Pole mounted)	40W LED (3M Pole mounted)	The existing poles shall be used for installing the LED based street lighting fixtures using the existing cables without compromising on existing aesthetics look

2.4.2 The LED fitted lighting fittings shall operate at 50 Hz \pm 3Hz AC over a voltage ranging from 100V to 280V with a power factor > 0.95 in a 3-wire distribution system.

2.4.3 The total power consumption in the LED lighting fixture shall not exceed the total *guaranteed* power consumption including power consumption in the electronic circuit of the driver for that particular application over the entire voltage range given in clause 2.4.2. The fluctuations in line voltage shall have no visible effect on luminous intensity of the LED luminaries.

2.4.4 The operating voltage of the luminaries shall be 230V. All parameters measured at this voltage shall stand valid for the entire operating voltage range of 100- 280V.

2.4.5 Total harmonic distortion (THD) of current and voltage induced into the AC power supply by an LED lighting source shall not exceed 10% for current and 3% for voltage. Harmonic generation shall be as per EN61000-3-2 and EN61000-3-3 / IEEE 519.

2.4.6 The driver module on board circuitry shall include voltage surge protection to withstand high - repetition noise transients as stated in Section 2.1.6 of NEMA Standard TS-2/ 1992.

2.4.7 The LED circuitry shall function at an operating frequency that must be greater than 120 Hz to prevent perceptible flicker to the unaided eye over the entire voltage range specified above.

2.4.8 The lighting luminaries shall withstand the following tests

- a) HV test of 2.5 KV
- b) IR test of 500V DC

2.4.9 Power supplies/ Driver unit shall operate between -20°C and 50°C .

2.4.10 Power supplies shall meet FCC 47 CFR Part 15/18 on Consumer Emission Limits. And shall have a Class-A sound rating as per ANSI Standard C63.4.

2.4.11 The Driver Unit shall have provision for proper grounding.

2.4.12 There shall be electrical isolation between input and output circuits of the driver.

2.4.13 The output circuit shall have short circuit and open circuit protection inbuilt to the driver unit.

2.4.14 The material used in the construction of driver printed boards; driver enclosure etc. shall be non - flammable and heat resistant. Also, all the PCBs in the system shall be coated to prevent any corrosion.

3 Testing

3.1.1 Design Qualification Testing shall be performed by the manufacturer or an independent testing lab hired by the manufacturer on new LED module/ array designs and when a major change has been implemented on an existing design.

3.1.2 The vendor shall submit manufacturer's test certificates complete with verification of Design Qualification Testing details by an independent testing authority.

3.1.3 The fixture manufacturer must show proof that the LEDs they use have been tested and approved to IESNA's LM80 -09. The manufacturer must be able to provide the test data set to establish the authenticity and genuineness of the LEDs.

3.1.4 Tests conducted on LED luminaries are classified as:

- 1) Type test,
- 2) Acceptance test,
- 3) Routine test and
- 4) Mock-up test.

3.1.5 **Type Test** shall be carried out to prove confirmation with the requirements of specification and general quality/ design features of the unit. In case of any change in Bill of Material or design of unit, complete type test shall be repeated. If any sample fails in any of the type tests, fresh samples shall be taken and tested. If any sample again fails in that test, the whole lot shall be rejected.

3.1.6 **Acceptance Tests** are carried out by an inspecting authority at the supplier's premises on sample taken from a lot for the purpose of acceptance of a lot. Acceptance tests shall not be carried out from particular size or lot on which type tests have already been conducted.

3.1.7 **Routine Tests** shall be performed by the manufacturer on each complete unit of the same type and the results shall be submitted to the inspecting agency, prior to offering the lot for acceptance test. The firm shall maintain the records with traceability.

3.1.8 **Mock up Test** shall be performed prior to the commencement of design. The successful bidder shall provide proposed LED lamp and **luminaries on three consecutive poles as demonstration to prove the suitability** of the fittings matching with the requirement in regards to lux level, quality of illumination for professional, objective & impartial review jointly by the bidders team along with team of IOCL Engineers. This shall be carried out within two weeks from the date of issue of work order and prior to submission of detail design package for approval.

3.2 Sample size and criteria for conformity

3.2.1 The luminaries shall be selected from the lot at random. In order to ensure randomness of selection, procedures given in IS 4905-1968 (Reaffirmed 2001) may be followed.

3.2.2 Test Scheme:

Sr.No.	Description of Test	Type Test	Acceptance Tests	Routine Tests
1	Visual and Dimensional check	Y	Y	Y
2	Checking of documents of purchase of LED	Y	Y	Y
3	Résistance to humidity	Y	-	-
4	Insulation résistance test	Y	Y	Y
5	HV test	Y	Y	Y
6	Over voltage protection	Y	-	-
7	Surge protection	Y	-	-
8	Reverse polarity	Y	Y	Y
9	Température rise	Y	Y	-
10	Lux measurement	Y	Y	-
11	Fire retardant	Y	-	-
12	Test for IP65 Protection	Y	-	-

4 MARKING

4.1 The following information shall be distinctly and indelibly marked on the housing:

- Year of manufacture
- Batch Number
- Serial Number
- Name of Manufacturer
- Rated Wattage and Voltage (Input)
- Markings like CE, CB

4.2 ISO Certification: The agency shall preferably possess the ISO certification for design, manufacturing and supply of the complete Lighting Unit.

5 GUARANTEED TERMS & CONDITIONS

5.1 Warranty

In addition to meeting the performance requirements for the minimum period of 60 months, the manufacturer shall provide a written warranty against defects in materials and workmanship for the modules/ arrays for a period of 60 months after acceptance of the modules/ arrays. Replacement modules shall be provided promptly after receipt of modules that have failed at no cost to the Owner.

5.1.1 The vendor shall stand guarantee for full replacement of the luminaire due to any failure in 5 years from the date of purchase. Failures shall include failure/ deterioration of LEDs in terms of performance like guaranteed luminous efficiency, high junction temperature, and abnormal lamp lumen depreciation, deterioration in LED including its lens, driver unit and quality of light. The vendor shall replace the entire LED module/ array of the defective luminaire with new module /array free of cost immediately.

5.1.2 In the event of single LED source getting defective, the entire array/ module shall be replaced by the vendor and the replaced part shall stand guaranteed for a further period of 5 years from the date of replacement.

5.1.3 The vendor shall stand guarantee against lumen depreciation beyond 30%. Vendor shall ensure that LED module/ array shall deliver at least 70% of initial lumens, when installed for a minimum of 50,000 hours, failing which vendor shall carry out necessary rectification free of cost to the entire satisfaction of ECIL.

5.1.4 The vendor shall maintain appropriate level of inventory in India for immediate replacement of a defective/malfunctioning luminaire/ LED module/ array/ driver etc.

6 COMPLIANCE TO STANDARDS

6.1 The luminaries shall comply with IS 10322 for functional, photometric and safety requirements. The fixtures shall conform to safety standard EN60598.

6.2 The luminaries shall conform to EM & RF interference norms as per EN55015 and EN61547, CISPR 11, FCC Part 15, IEC 61000 (3-2,4-2/3/4/5/6/8/11).

6.3 The luminaries shall conform to norms on transient voltages, voltage dips and fluctuations as per EN61547.

6.4 The luminaries fitted with LED source shall be CE and ISO certified to ensure quality of the LED source.

6.5 The other relevant standards applicable to LED based lighting solutions to which lighting luminary must conform are as under:

ANSI C78.377.2008	Specifications for the Chromaticity of Solid State Lighting Products
IESNA LM-79-08	IESNA Approved Method for the Electrical and Photometric Measurements of Solid State Lighting Products.
IESNA LM-80-08 (Recommended)	IESNA Approved Method for Measuring Lumen Maintenance of LED Lighting Sources.
UL Standards (Latest Approved)	<ul style="list-style-type: none">• 8750 Light Emitting Diode (LED) Light Sources for use in Lighting Products.• 1598 Luminaries• 1012 Power Units other than Class-2• 1310 Class-2 Power Units• 2108 Low Voltage Lighting Systems.
IEC 62471	Photo-biological safety of lamps and lamp systems.

7 INSTRUCTION TO BIDDERS

7.1 The bidder should be a manufacturer or authorized company of LED manufacturing firms.

7.2 The firms should carry out the complete job along with sample prototype fittings on three consecutive poles (for demonstration) to prove the suitability of the fittings matching with the requirement in regards to quality of illumination and provide professional, objective & impartial advice and at all times holding the client's interests paramount.

7.3 While preparing the technical proposal, Bidders must give particular attention to the following:

7.3.1 The P/N junction temperature of individual LED must not exceed 100°C. High Thermal conduction must be achieved by use of silicon heat conductive greases as adhesive.

7.3.2 Luminaries must be constructed with high corrosion proof, powder coated or anodized aluminum extruded aluminum sheet or bars.

7.3.3 All fasteners must be of stainless steel.

7.3.4 LED must be mounted on heat sinking conductive bars with suitable large area surface by means of fins to dissipate the conduct heat. The fins must be exposed to ambient flowing air.

7.3.5 The electrical component of the LED and LED driver must be suitably enclosed in hermetically sealed unit.

7.3.6 There should be sufficient inventory of LED lamps, so that the defective lamps can be replaced immediately.

7.4 The Technical proposal should also include the following for IOCL consideration:

7.4.1 A brief description of the firm's organization and an outline of recent experience on assignments of a similar nature jobs/ projects executed. For each assignment, the outline should indicate, inter alia the profiles and names of the staff provided duration of the assignment, contract amount, and firm's involvement.

7.4.2 Any comments or suggestions on the terms of reference and on the data, services and facilities to be provided by the Under signed and a description of the methodology (work plan) by which the Bidder proposes to execute the services, illustrated, as appropriate, with bar charts of activities and graphics.

7.4.3 Any additional information requested in the data sheet.

7.4.4 Incomplete /conditional bidders and bidders submitted on lines indicated above are liable to be straightway rejected.

7.4.5 Any deviations to the Clauses in the tender specifications must be clearly and separately indicated otherwise it shall be presumed that the offer is in line with the requirements of tender. The firm will have to produce invoice/gate pass of the manufacturer for major items like LEDs etc. to be installed against supply & erection of work for genuineness of the material.

7.4.6 The firm will be responsible to achieve the desired lux level and uniformity on the road/ in office areas and all the testing equipment shall be arranged by the firm at his own cost to check the same in the presence there representative of the client.

7.4.7 Considering the tolerable variations of different makes, the vendor shall specify the following with supporting documentation/ technical literature/ test certificates as proof:

- i) Individual wattage of LED
- ii) Type and specification
- iii) Make: that is manufacturer of LED shall be as per clause 2.1.2 above.
- iv) The maximum junction temperature
- v) Lumen depreciation in percentage vs. operating hours and lumen life maintenance during lifetime performance.
- vi) Expected luminous efficacy need to be specified along with operating temperature
- vii) Thermal management details such as built-in external heat sink as well as details of technology employed such as aluminum MCPCB printed circuit boards etc.
- viii) Recyclability aspects and eco-friendliness of components
- ix) Light pollution free Certificate
- x) Specify Auto Adjusting Voltage range e.g., 100V to 280V
- xi) Expected luminous efficacy need to be specified along with operating temperature.
- xii) Luminaire Cut Off details
- xiii) Effective water drainage system
- xiv) Luminaire shall have tool free access
- xv) Details regarding distribution of the light such as optic lens.

7.5 TEST CERTIFICATES AND INSTRUCTION BOOK ETC.

7.5.1 The supplier/agency shall furnish to the department the following documents along with the consignment.

- a) Four Copies of Printed Pamphlets/Catalogues: for each item of equipment it includes all the specification
- b) Drawing of all the equipments
- c) Any other relevant information to be incorporated at the time of placing the purchase order four copies.
- d) The manufacturer/agency shall furnish the required certificates along with consignment of material.
- e) Test Certificate of all the materials.
- f) The bidder will carry out necessary testing for the uniformity of lighting levels achieved on completion of the work and submit final lighting levels.
- g) All the testing documentation as mentioned in.
- h) Test certificates from ERTL/ CPRI/MNRE shall be attached.

7.5.2 Manufacturer's catalogue should clearly define the claimed life of LEDs (L70) in hours. Wherever asked for, the manufacturer shall submit the lumen depreciation test report as per LM80 of the specific or a similar typically representative LED. Manufacturers have to give a declaration for Type and Make of LEDs /Modules used in their luminaire and may be required to submit proof of procurement at the time of testing.

7.5.3 Supplier shall provide the Photometric test report of the luminaries as per LM79. Test for the Street Lighting luminary should be preferably done in a Goniophotometer (not in an optical sphere since the size of sphere will be too big) with due precautions (temperature, humidity, airflow, input power supply) and will provide test data on total luminary flux (absolute Lumens), Luminous efficacy (ratio total lumens / total input power in watts), Luminous intensities (absolute candela) at typical C and Y angles. The supplier should have sufficient ability to simulate the test data for the desired application and meet the application criteria e.g. lux level & uniformity on given road.

7.5.4 The efficacy (ratio of lumen output from luminary to the luminary wattage) of the luminary at test conditions shall be more than 100 lm/W. The quality of optical distribution will be integrally calculated, from wattage required per meter square or road stretch in meters meeting criteria for lux level & uniformity, while comparing the performance of luminary and set up a minimum standard for acceptance (in future).

7.5.5 Life of a luminary will be defined as the effective life i.e. the life of hardware (LEDs + Electronics) and time till which it maintains 70% of the initial lumens. The operating lifespan of the luminary will be a factor of junction temperature (case temperature for LED Modules) at an ambient temperature of 50°C. This may be directly calculated e.g. as mentioned at Clause 2.4 of this specification.

7.5.6 LED manufacturer will also provide a life degradation curve with junction temperature which may be used for calculating the expected life.

7.5.7 Alternatively, the manufacturer of LEDs will provide the LM80 data at different case temperature for LEDs/ LED Modules. A direct measurement of the case temperature of LEDs / LED Module inside luminaire at specified ambient temperature will be taken. The expected lumen maintenance can be calculated by a direct interpolation from LM80 data. The life of the luminary showing at least 94.1% lumen maintained after the test period of 6000 hours at 25°C will signify a minimum useful life class of

35000 hours at specified ambient. For Electronics, in the same stipulated period (35000 hours) there should not be more than 10% failure of Hardware.

7.5.8 Housing shall act as a heat sink with proper thermal management to optimize LED efficiency and life. The manufacturer shall provide luminaire Heat Test report ensuring operation of LEDs within limits of the solderpad temperature.

8. TECHNICAL EVALUATION:

8.1 The Technical Evaluation of Pre-qualified Bidders shall be carried out to achieve the objective of the assignment as detailed in the Terms of Reference. The Bidders will outline their methodology in their proposals giving a brief description of methods that they intend to adopt to achieve this objective. The wattage of the fittings should not be more than guaranteed watts. Due weightage will be given to this methodology in the evaluation of the technical bids.

8.2 The evaluation of the proposals shall be carried out in two stages: Firstly the quality, and then the cost. The financial proposals shall be opened only after the technical proposals have been evaluated and concluded.

The department shall evaluate the technical proposals taking into account several criteria:

- The Bidders' relevant experience in the field of LED lighting technology including manufacturing capability, testing as per international standards and supply of LED based lighting products.
- Details of essential infrastructure to establish manufacturing capability of the Bidder to manufacture and test LED lighting luminaires in quality and reliability.
- Parameters specified in the specifications.
- The energy consumption of the LED Fitting.
- The qualification of the key staff proposed.
- Transfer of knowledge and training.

8.2.1 During warranty period, the bidder shall attend the defects free of cost (including replacement of spares) for any manufacturing defects in the luminaire.

8.2.2 Experience in handling Similar Projects to be supported by PO Copies, Completion and Performance Certificates from clients.

8.3 While submitting the Bid, the manufacturer / bidder firm shall submit the following documents/technical details for our technical evaluation:

- Technical Catalogue of Product
- Lumen Depreciation Curve of LEDs used (supplied by LED manufacturer)
- Polar Diagram of Luminaire tested in certified laboratory
- LM79 Measurement Report for the luminaire
- LM80 Report for the LEDs used (supplied by LED manufacturer)
- Detailed design / calculation of lighting scheme with the following parameters:

1. Lux Level
2. Uniformity
3. Pole height
4. Pole spacing

5. Tilt
6. Conforming to road category.
7. The detailed calculation for lux levels with uniform distribution including the lux distribution curve / graph / spatial distribution shall be submitted in support of the dimensions selected and variation thereof.
- 8.0 Type Test Certificate of luminaire from Govt. accredited Test Lab/ CPRI/ ERTL.
- 8.1 Test certificates for compliance to IP test.

9 ESSENTIAL INFRASTRUCTURAL REQUIREMENTS

9.1 The following facilities/ machinery and plant are considered essential for the manufacturing of quality and reliable LED product:

- Dust free environment with ESD protection for the assembly of LEDs/ PCB.
- Testing jigs for the testing of assembled LEDs/ PCB.
- Component lead forming machines for through hole devices.
- Temperature controlled automatic wave -soldering machine with auto -fluxing facilities for through hole devices.
- Automatic Temperature controlled re-flow-soldering machine for surface mounted devices.
- Stencil and solder paste application machine for surface mounted devices
- Automatic Device insertion machine for surface mounted devices.
- Variable regulated AC supply at least up to 500 Volts.
- Heat chamber / oven having minimum range of 0-150°C with alternate arrangement of standby power supply for carrying out endurance tests.
- Center lathe, Milling machine, hydraulic press etc. for manufacture of luminaire

9.2 All the above facilities are considered essential at the manufacturer's premises and shall be verified by authorities as the case may be before considering the firm as a supplier. However, the firm may outsource assembly with the sub vendor(s) who shall have above facilities. The firm shall arrange the visit to the sub-vendor's premises.

10. The testing of material as required under specifications/directions of Head ESD or his representative has to be done in a reputed laboratory to be approved by ECIL. The contractor shall make available the required material for testing free of charge and shall also bear all testing costs.

11. The manufacturer's test certificates for the material shall also be submitted by the contractor.

12. In the event of any ambiguity between the General specifications, contract drawings or elsewhere in the tender documents, the decision of Head ESD shall be final and binding. However, in case of any ambiguity between "General conditions of contract" and "Special conditions of contract", the "Special conditions of contract" shall prevail.

13. The police verification of all Labourers deployed by the contractor for execution of the work is mandatory and should be strictly complied with. ECIL will extend logical support in required documentation for obtaining of the Police verification certificate. However, any expenses in obtaining of the requisite Police verification certificate shall be borne by the contractor.

14. The contractor shall have to take advance permissions for working during night hours and Sundays/holidays. Generally, such permission can be granted after observance of due procedures but if the same is denied due to security reasons, no claims whatsoever shall be entertained by the department.

15. CORRUPT OR FRAUDULENT PRACTICES

The Employer requires that Bidders/Suppliers/Contractors under this contract, observe the highest standard of ethics during the procurement and execution of this contract. In pursuance of this policy, the Employer:

- a) Defines, for the purpose of these provisions, the terms set forth below as follows:
 - i. “Corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the procurement process or in contract execution; and
 - ii. “Fraudulent practice” means is misrepresentation of facts in order to influence a procurement process or the execution of contract to the detriment of the Employer, and includes collusive practice among Bidders (prior to or after bid submission) designed to establish bid prices at artificial non -competitive levels and to deprive the Employers of the benefits of free and open competition.
- b) Will reject a proposal for award of work if he determines that the Bidder recommended for award has engaged in corrupt or fraudulent practices in competing for the contract in question.
- c) Will declare Bidder in eligible, either indefinitely or for a stated period of time, to be awarded a contract/ contracts if he at any time determines that the Bidder has engaged in corrupt or fraudulent practices in competing for, or in executing, the contract.

SECTION – V

PROFORMA OF SCHEDULES

SCHEDULE 'A'

Schedule of quantities (as attached)

SCHEDULE 'B'

Schedule of materials to be issued to the contractor.

S.No.	Description of item	Quantity	Rates in figures & words at which the material will be charged to the contractor	Place of issue
1	Nil	Nil	Nil	Nil

SCHEDULE 'C'

Tools and plants to be hired to the contractor

S.No.	Description	Hire charges per day	Place of Issue
1	2	3	4
-----NIL-----			

SCHEDULE 'D'

Extra schedule for specific requirements/document for the work, if any.

SCHEDULE 'E'

Reference to General Conditions of contract.

Name of Work: Supply & Installation of Energy Efficient LED Street lights in ECIL, Hyderabad.

Estimated cost of work : Rs 16.49 Lakhs.

(i) Earnest Money : Rs. 0.33 Lakhs

(ii) Performance Guarantee : 5% of tendered value

(iii) Security Deposit : 5% of tendered value

SCHEDULE 'F'

GENERAL RULES & DIRECTIONS: Officer inviting tender ----- HEAD, ESD, ECIL

Definitions:

- 2(v) Engineer-in-ChargeHead, ESD, ECIL or His Authorized Representative
- 2(viii) Accepting AuthorityC & MD, ECIL/ Director (P), ECIL/Head, ESD, ECIL
- 2(x) Percentage on cost of materials and Labour to cover all overheads and profits: 15%
- 2(xi) Standard Schedule of Rates.....Market rates
- 2(xii) DepartmentESD, ECIL

Clause 1

- i. Time allowed for submission of Performance Guarantee from the date of issue of letter of acceptance10(Ten) days
- ii. Maximum allowable extension beyond the period provided in (i) above10(Ten)days

Clause 2

Authority for fixing compensation underclause 2Head, ESD, ECIL/Director(P), ECIL/ C& MD, ECIL

Clause 5

Number of days from the date of issue of letter of acceptance for reckoning date of start10(Ten) days

Mile stone(s) as per table given below:-

S.No.	Description of Milestone (Physical)	Time allowed in days(from date of start)	Amount to be with-held in case of non-achievement of mile stone
1	To be finalized in the consultation of the Engineer In- Charge after award of the work		--

Time allowed for execution of workThree Months(3 months)

Authority to decide:

- (i) Extension of time Head, ESD, ECIL/Director(P), ECIL/ C& MD, ECIL
- (ii) Rescheduling of mile stones Head, ESD, ECIL.

Clause 7

Gross work to be done together with net payment /adjustment of advances for material collected, if any, since the last such payment for being eligible to interim paymentRs.3.00 Lakhs.

Clause 10A

List of testing equipment to be provided by the contractor at site lab all necessary equipment for meeting mandatory field test requirements.

Clause 10B(i)

Whether Clause 10 B (i) shall be applicable No

Clause 10CA

S.N.	Material covered under this clause	Nearest Materials (other than cement, reinforcement bars and the structural steel) for which All India Wholesale Price Index to be followed	Base Price of all Materials covered under clause 10 CA
-----NIL-----			

Clause 11

Specifications to be followed for execution of workAs per tender document and Indian Electricity rules and Standard Statutory codes of Practice.

Clause 12

12.4. & 12.5 Deviation Limit beyond which clauses 12.4 & 12.5 shall apply for building work30%.

12.7 Deviation Limit beyond which clauses 12.4 & 12.5 shall apply for foundation work50%

Clause 16

Competent Authority for deciding reduced rates.Head, ESD, ECIL/Director (P), ECIL/Director(F), ECIL.

Clause 18

List of mandatory machinery, tools & plants to be deployed by the contractor at site:

1. Safety equipment .

Clause 29

Requirement of Technical Representative(s) and recovery Rate

S.No.	Minimum Qualification of Technical Representative	Discipline	Designation (Principal Technical/ Technical Representative)	Minimum Experience	Number	Rate at which recovery shall be made from the contractor in the event of not fulfilling provision of clause 29	
						Figures (Rs.)	Words (Rs.)
1	Diploma	Electrical Engineering	Principal Technical Representative	Three years	one	15,000/- per month	Fifteen thousand per month

Clause 42

(i) (a) Schedule/statement for determining theoretical quantity of cement & bitumen on the basis of Delhi Schedule of Rates Printed by C.P.W.D.

(ii) Variations permissible on theoretical quantities:
(a) Cement

For works with estimated cost put to tender not more than Rs. 5 lakh.

3% plus/minus.

For works with estimated cost put to tender more than Rs.5 lakh.

2% plus/minus.

(b) Bitumen All Works 2.5% plus & only & nil on minus side.

(c) Steel Reinforcement and structural steel sections for each diameter, section and category

2% plus/minus

(d) All other materials.

Nil

RECOVERY RATES FOR QUANTITIES BEYOND PERMISSIBLE VARIATION

S.No.	Description of Item	Rates in figures and words at which recovery shall be made from the Contractor
		Excess beyond permissible variation
1	Cement	Double the issue rate
2	Steel Reinforcement	Double the issue rate
3	Structural Sections	Double the issue rate

SECTION – VI PRICE BID

SCHEDULE – A

Name of the work: Supply & Installation of Energy Efficient LED Street lights in ECIL, Hyderabad

<u>S.No.</u>	<u>Description of work</u>	<u>Quantity</u>	<u>Unit</u>	<u>Rate</u>	<u>Amount</u>
1.0	<p>Supply, Installation, Testing & Commissioning of Energy efficient, Weather proof high power LED street light fittings with LEDs of rating 36-40Watts and compatible LED driver electronic control gear circuit suitable to operate at voltage level from 100V -280V AC, 50Hz by dismantling the existing HPMV street lighting fixtures mounted on poles. The scope of work include supply, drawing and connection of 3 core 2.5Sqmm PVC insulated FRLS cable from terminal box to the lighting fixture complete as per the instructions of Engineer In-charge.</p> <p>Make: Philips / Crompton / Wipro / Bajaj / Fortune Art</p> <p>(Detailed Technical specifications and approved makes of LEDs enclosed in the annexure)</p>	160 Nos	Each		
2.0	<p>Supply of Energy efficient, Weather proof high power LED street light fittings with LEDs of rating 36 -40Watts and compatible LED driver electronic control gear circuit suitable to operate at voltage level from 100V -280V AC, 50Hz.</p> <p>Make: Philips / Crompton / Wipro / Bajaj / Fortune Art</p> <p>(Detailed Technical specifications and approved makes of LEDs enclosed in the annexure)</p>	10 Nos	Each		

3.0	Supply and fixing of 1 ½" dia X 1000mm long GI pipe (Medium class) bracket for mounting of above mentioned street light fitting on existing pole including supply of reducers / nipples and other coupling materials of required diameter, bending the pipe to required shape complete to mount the above mentioned street light fittings to the existing pole.	150 Nos.	Each		
4.0	Supply and fixing of street light pole terminal / junction box with IP -65 protection comprising of 10A SPMCB, Neutral link and 63A TPN connector strip suitable for one incoming & two outgoing mounted on a DIN Rail with all the accessories like clamps, brackets including lock & key facility, powder coated paint by dismantling the existing terminal box, closing the existing holes on poles with plugs including supply and fixing of 2 Nos of 20mm dia X 1500mm length GI pipes for drawing Incoming & Outgoing cables to street lights.	150 Nos	Each		
5.0	Earthing of street light poles using 8SWG GI wire spiral earthing, salt & charcoal at 1Mtr deep below the ground including excavation and backfilling complete as per the instructions of Engineer In-charge.	160 Nos	Each		
Total....Rs.					

Signature of the Contractor

Signature of Head, ESD