

OIL INDIA LIMITED
(A Government of India Enterprise)
P.O. Duliajan-786602, Assam, India
E-mail: Contracts@oilindia.in
INVITATION FOR BID

OIL INDIA LIMITED invites Local Competitive Bid (LCB) through its e-procurement portal <https://etender.srm.oilindia.in/irj/portal> for the following items:

TENDER NO	Job Description	BID CLOSING/OPENING DATE
CDI1548P17	Construction of new Office Building with Garage at WSS Duliajan, including electrification and supply of all materials except Cement.	28.07.2016
CDI1549P17	Vertical Extension of Contracts Office at Duliajan including Electrification and supply of all materials except Cement.	28.07.2016

Tender fee (Non-refundable): ₹ 1000.00, Bid Closing/Opening Time: 11:00/14:00 Hrs; Last date for submission of tender fee is 21.07.2016. The complete bid documents and details for purchasing bid documents, participation in E-tenders are available on OIL's e-procurement portal <https://etender.srm.oilindia.in/irj/portal> as well as OIL's website www.oil-india.com.

NOTE: All addenda, Corrigenda, time extension etc. to the tenders will be hosted on above website and e-portal only and no separate notification shall be issued in the press. Bidders should regularly visit above website and e-portal to keep themselves updated.

(A. Das)
DGM-Contracts (Civil)
For Resident Chief Executive

Date: 24.06.2016

OIL INDIA LIMITED
(A GOVT. OF INDIA ENTERPRISE)
P.O.DULIAJAN-786602, ASSAM
E-TENDR NOTICE

OIL INDIA LIMITED (OIL) invites Bids under Single Stage Two Bid System from established Civil Engineering firms / contractors through its E-Procurement portal "<https://etender.srm.oilindia.in/irj/portal>" for the following works.

IFB No.	SHORT DESCRIPTION OF SERVICE	BID SECURITY	COST OF BID DOCUMENT
CDI1548P17	Construction of new Office Building with Garage at WSS Duliajan, including electrification and supply of all materials except Cement.	₹ 31,000/-	₹ 1000/-
Period of Sale of Bid Doc. for all the above works: 27.06.2016 to 21.07.2016			
Bid Closing / Opening Date & Time for all the above works: 28.07.2016 11.00/14.00 Hrs			
<p>Bidder shall require User ID and Password for online submission of Bid. Vendors having user ID & password can purchase bid documents on-line through OIL's electronic Payment Gateway. Alternatively, bidders can write to DGM-Contracts, Contracts Department, Oil India Limited, P.O. Duliajan, Assam-786602 along with cost of bid document (non-refundable) in the form of Demand Draft / Banker's Cheque from any Scheduled Bank in favour of OIL INDIA LIMITED and payable at Duliajan, which must reach DGM-Contracts office on or before the last date of sale of Bid Document.</p> <p>New Vendors who do not have User ID & password shall request OIL for the issue of the same well in advance and OIL will take up to 5 working days to issue the same. Therefore bidder should not delay in making request till the last moment in their own interest. In case of delay because of late request by the bidders, OIL shall not be responsible for non-submission of Bid in absence of user ID and Password. Alternatively, User ID and Password may be generated online by the bidders by using the link for supplier enlistment given in OIL's e-tender portal and can purchase bid documents subsequently in the similar manner.</p>			
EXEMPTION OF TENDER FEE: <p>If the bidder is a Micro or Small Enterprise under the Micro, Small and Medium Enterprises Development Act, 2006 and is registered with District Industries Centers or Khadi and Village Industries Commission or Khadi and Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicrafts and Handloom or any other body specified by Ministry of Micro, Small and Medium Enterprises, then they are exempted from payment of tender fees for the items/services for which they are registered. Copy of valid Registration Certificate, must be enclosed along with the application for issuing tender documents and the Registration Certificate should clearly indicate the monetary limit, if any and the items for which bidder are registered with any of the aforesaid agencies. Public Sector Units (PSU) are also exempted from payment of tender fee. Application for exemption of Tender Fee must reach the office of DGM-Contracts, Contracts Department, Oil India Limited, Duliajan-786602(Assam) within the bid selling period.</p>			
No physical Bid documents will be issued. The details of IFB can be viewed using "Guest Login" provided in the E-Procurement portal and also in OIL's web site www.oil-india.com . The link to OIL's E-Procurement portal has also been provided through OIL's web site www.oil-india.com .			
All corrigenda, addenda, amendments, time extension, clarifications etc. to the tender will be hosted on the OIL's website and in the e-tender portal only and no separate notification shall be issued in the press. Prospective bidders are requested to regularly visit the website and e-portal to keep themselves updated.			

Date: 24-06-2016

**DGM- Contracts (Civil)
for RESIDENT CHIEF EXECUTIVE**

OIL INDIA LIMITED
(A Govt. of India Enterprise)
Contracts Department, Duliajan

OIL INDIA LIMITED a premier Public Sector Enterprise of Govt. of India engaged in drilling and exploration activities for hydrocarbon invites ON-LINE BIDS from experienced and established firms / contractors meeting the requisite criteria for the following mentioned work under **SINGLE STAGE TWO BID System** through its e-Procurement site:

DESCRIPTION OF WORK/ SERVICE: Construction of new Office Building with Garage at WSS Duliajan, including electrification and supply of all materials except Cement.

LOCATION OF WORK: -WSS at Duliajan, Dibrugarh, Assam.

CONTRACT PERIOD: 78 (Seventy Eight) Weeks.

BID CLOSING/ OPENING DATE & TIME: 28.07.2016 (11:00 HRS/14:00 HRS)

BID SECURITY DEPOSIT: ₹31,000/- (Rupees Thirty One Thousand Only).

- a) Bid Security deposited vide Demand Draft / Banker's Cheque / Money Receipt/Bank Guarantee

No. _____ dated _____ of _____

(Original hard copy of (a) should reach the office of DGM-CONTRACTS before Bid opening date and time, otherwise Bid will be rejected. A scanned copy of this document should also be uploaded along with the Un-priced bid documents.

- b) Bidders to confirm that in the event of the award of Contract he/she/they will submit Performance Security Deposit @ 2.5% of the total contract price within two weeks of issue of LOI/LOA and this will not earn any interest. Immediately after deposit of Performance security, successful bidder shall have to sign the formal contract Agreement.

2.0 SEALED ENVELOPES containing the Bid Security Deposit (EMD) shall be marked with the above Tender Number and description of work and addressed to

**DGM-CONTRACTS
CONTRACTS DEPARTMENT
OIL INDIA LIMITED
Duliajan – 786602
Assam.**

2.1 All bidders shall deposit the requisite BID SECURITY in the form of Demand Draft/Banker's Cheque/ Money Receipt/Bank Guarantee from a Nationalized /

Scheduled Bank in favour of M/s Oil India Limited and payable at DULIAJAN. Alternatively, applicants already having User ID & Password for OIL's e-portal can pay the requisite Bid security against the individual IFBs through the online payment gateway. This Bid Security shall be refunded to all unsuccessful bidders, but is liable to be forfeited in full or part, at Company's discretion, as per Clause No. 6 below.

Bids without Bid Security in the manner specified above will be summarily rejected. However, OIL registered 'A' & 'B' class bidders are exempted from depositing the bid security against this tender. Bid should be submitted on-line through OIL's e-Tendering Portal up to 11:00 hrs (IST) (Server Time) on the date as mentioned and will be opened on the same day at 14:00 hrs (IST) at Office of the DGM-Contracts in presence of authorized representative of the bidder. **THE BID SECURITY SHOULD BE DROPPED IN THE TENDER BOX PLACED AT THE OFFICE OF THE DGM CONTRACTS ON OR BEFORE 1:30 p.m. OF THE SCHEDULE DATE OF OPENING OF TENDER. ALTERNATIVELY, APPLICANTS ALREADY HAVING USER ID & PASSWORD FOR OIL'S E-PORTAL CAN PAY THE REQUISITE BID SECURITY AGAINST THE INDIVIDUAL IFBS THROUGH THE ONLINE PAYMENT GATEWAY**

Exemption from submission of bid security:

If the bidder is a Micro or Small Enterprises (MSE) registered with District Industry Centers or Khadi and Village Industries Commission or Khadi and Village Industries Board or Coir Board or National Small Industries Corporation or Directorate of Handicrafts and Handloom or any other body specified by Ministry of MSME, then they are exempted from submitting Bid Security. Bidding MSEs shall have to submit a Copy of valid Registration Certificate clearly indicating the monetary limit, if any and the items for which bidder are registered with any of the aforesaid agencies.

2.2 THE PHYSICAL BID SECURITY IS TO BE SUBMITTED ALONGWITH A COVERING LETTER MENTIONING THE e-TENDER NO AND THE BIDDER'S NAME AND ADDRESS IN A DULY SEALED ENVELOPE ADDRESSED TO – DGM – CONTRACTS, OIL INDIA LIMITED, CONTRACTS DEPARTMENT, DULIAJAN – 786602

2.3 If the bidders deposit the requisite Bid security in the form of Bank Guarantee, then the Bank Guarantee should be valid for 30 days beyond the required bid validity period.

3.0 However, if the above mentioned closing / opening day of the tender happens to be non-working day due to Bandh / Strike or any other reason, the bids will be received and opened on the following working day at the same time except on Saturdays.

4.0 The rates shall be quoted per unit as specified in the "Price Bidding Format" attached just below the "Tendering text". Bidder should note that no pricing information is furnished in the "c-Folder" (Technical Bid) otherwise the bid will be rejected.

4.1 All other techno-commercial documents other than price details to be submitted with un-priced bid as per tender requirement placed in the 'un-priced' bid folder.

4.2 The bid and all uploaded documents must be Digitally signed using “Class 3” digital certificate [e-commerce application (Certificate with personal verification and Organization name)] as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India.

4.3 The authenticity of above digital signature shall be verified through authorized CA after bid opening. If the digital signature used for signing is not of “Class -3” with Organization’s name, the bid will be rejected.

4.4 Bidder is responsible for ensuring the validity of digital signature and its proper usage by their employee.

4.5 The bid including all uploaded documents shall be digitally signed by duly authorized representative of the bidding company.

5.0 The Company reserves the right to reject any or all the tenders or accept any tender without assigning any reason.

6.0 (a) No Bidder can withdraw his bid within the validity or extended validity of the bid. Withdrawal of any bid within validity period will lead to forfeiture of his/her/their Bid Security in full and debarment from participation in future tenders, at the sole discretion of the Company and the period of debarment will not be less than 2 (two) years.

(b) Once a withdrawal letter is received from any bidder, the offer will be treated as withdrawn and no further claim / correspondence will be entertained in this regard.

7.0

a) The Bid must be valid for 120 (One Hundred & Twenty) days from the date of opening of the tender.

b) In case of extension of Bid Opening Date, Bid validity must be extended suitably by the bidder, as and when advised by OIL.

c) The amount of Bid Security shall be as specified in the NIT.

d) In case the Bidder submits Bid security in the form of Bank Guarantee (BG), the BG must be valid for minimum 150 days (One Hundred & Fifty) from the date of Technical bid opening.

e) In case of extension of Bid Opening Date, Bid Security validity must be extended suitably by the bidder, as and when advised by OIL.

f) The bidders must upload the Integrity Pact, digitally signed by the authorized signatory (who is authorized to sign the bid) along with the Technical Bid.

8.0 Conditional bids are liable to be rejected at the discretion of the Company.

9.0 The work may be split up amongst more than one contractor at the sole discretion of the Company.

10.0 Before submission of bids, the bidder is advised to inspect the work site with permission from DGM (Civil) or his representative, to assess the nature and extent of work and the conditions under which it will be carried out. He may also seek such clarification from this office as are deemed necessary.

11.0 The bidders should quote their rates against individual items. The rates shall be quoted within (+/-) 10% on the internal estimate against individual items as specified in Schedule of Works (Part-II) subject to the limit of overall percentage from at par to (+10%) of the internal estimated contract cost. However, the bids with quoted rates below (-10%) or above (+10%) of the rates of internal estimate against individual items and bids with quoted overall percentage below at par and above (+10%) of the internal estimated cost will be rejected outright. The rates shall be in figures and up to two decimal places only. In case of any identical situation, the L-1 bidder will be decided through draw of lots.

12.0 The bidders are required to furnish the composition and status of ownership of the firm in whose name bid documents have been purchased/issued along with one or more of the following documentary evidences (which are applicable to the bidder) in support of the same and scanned copies of the same should be uploaded along with the Un priced bid documents.

12.1 In case of Sole Proprietorship Firm, Copies of Telephone/Electricity/Mobile Bill, PAN card, latest Income Tax Return form indicating therein the name, business and residential address, E-mail and telephone numbers of the owner and copies of Service Tax and Central Excise Registration Certificate.

12.2 In case of HUF, Copies of Telephone/Electricity/Mobile Bill, PAN card, latest Income Tax Return form, Family Arrangement indicating therein the name, residential address, E-mail and telephone numbers of the owners in general and Karta in particular and copies of Service Tax and Central Excise Registration Certificate.

12.3 In case of Partnership Firm, Copies of Telephone/Electricity/Mobile Bill, PAN card, latest Income Tax Return form indicating therein the name, residential address, E-mail and telephone numbers of all the partners(including the Managing Partner), registered partnership agreement/deed and copies of Service Tax and Central Excise Registration Certificate.

12.4 In case of Co-Operative Societies, Copies of Telephone/Electricity/Mobile Bill, PAN card, latest Income Tax Return form indicating therein the name, residential address, E-mail and telephone numbers of all the Directors or persons who are at the helm of affairs, registration certificate from Registrar of Co-Operative Societies and copies of Service Tax and Central Excise Registration Certificate.

12.5 In case of Societies registered under the Societies Registration Act, Copies of Telephone/Electricity/Mobile Bill, PAN card, latest Income Tax Return form indicating therein the name, residential address, E-mail and telephone numbers of all the Directors or persons who are at the helm of affairs, registration certificate from the Registrar of the state and copies Service Tax and Central Excise Registration Certificate.

12.6 In case of Joint Stock Companies registered under the Indian Companies Act, Copies of Telephone/Electricity/Mobile Bill, PAN card, latest Income Tax Return form indicating therein the name, residential address, E-mail and telephone numbers of all the Directors or persons who are at the helm of affairs, Certificate of Incorporation from the Registrar of Companies, Memorandum and Articles and copies of Service Tax and Central Excise Registration Certificate.

12.7 In case of Trusts registered under the Indian Trust Act, Copies of Telephone/Electricity/Mobile Bill, PAN card, latest Income Tax Return form indicating therein the name, residential address, E-mail and telephone numbers of all the Trustee or persons who are at the helm of affairs, registration certificate from the Registrar of the state, Trust Deed and copies Service Tax and Central Excise Registration Certificate.

NOTE: Point no. 12.1 to 12.7 are not applicable for contractor who are already registered with OIL INDIA LIMITED.

13.0 The selected bidder will be required to enter into a formal contract, which will be based on their bid, i.e. O.I.L's Standard Form of Contract.

14.0 SECURITY DEPOSIT:

The successful bidder shall furnish a Performance Security Deposit in the form of Demand Draft / Banker's Cheque / Bank Guarantee as specified above before signing the formal contract. The Security Deposit will be refunded to the Contractor after satisfactory completion of the work, but a part or whole of which shall be used by the Company in realization of liquidated damages or claims, if any or for adjustment of compensation or loss due to the Company for any reason. This Security Money shall not earn any interest.

15.0 OIL INDIA LIMITED reserves the right to curtail / enhance the scope of the work stated above or cancel, if required.

16.0 The amount of retention money shall be released after 6 (six) months from the date of completion certified by the concerned department.

17.0 The work shall have to be started within seven days from the date of work order.

18.0 Time Schedule: The time allowed for completing the work will be reckoned from the date of issue of work order. Time is the essence of the Contract and failure on part of the contractor to complete the work within the stipulated time, shall entitle the Company to impose liquidated damages and / or penalty from the contractor as per terms of the Contract.

19.0 The contractor will be required to allow OIL officials to inspect the work site and documents in respect of the workers payment.

20.0 BACKING OUT BY BIDDER: In case any bidder withdraws their bid within the bid validity period, The Bid security will be forfeited and the party will be debarred for a period of 2(two) years from the date of withdrawal of bid.

21.0 BACKING OUT BY L-1 BIDDER AFTER ISSUE OF LOA: In case LOA issued is not accepted by the L1 bidder or the Performance Security is not submitted as per the terms of the contract within the time specified in the Bid Document, the bid security shall be forfeited and the bidder shall be debarred for 2 (two) years from the date of default.

22.0 FURNISHING FRAUDULENT INFORMATION/DOCUMENT: If it is found at any time that, a Bidder / Contractor has / had furnished fraudulent documents / information, the Bid Security / Performance Security shall be forfeited and the bidder / contractor shall be debarred for a period of three (03) years from the date of detection of such fraudulent act, besides legal action.

23.0 Bidder(s) must also furnish the followings:

- a) NAME OF FIRM :
- b) DETAIL POSTAL ADDRESS :
- c) MOBILE / TELEPHONE NO :
- d) E-MAIL ADDRESS :
- e) FAX NO (If available) :
- f) CONTACT PERSON :
- g) VENDOR CODE (If available) :

24.0 The tender will be governed by :

- a) Covering Letter.
- b) Part - I - General Terms and Conditions for Works Contract. (GCC)
- c) Part - II - Schedule of Work, Unit and Quantity (SOQ)
- d) Part - III -Particular Specification, Special Terms, Conditions & Instructions of Contract (SCC)
- e) Part- IV - SCPME
- f) Part- V-Safety Measures
- g) Part- VI –Integrity Pact
- h) Bid Rejection Criteria & Bid Evaluation Criteria (BRC/BEC).

i) Special Note:

Please note that all tender forms and supporting documents are to be submitted on-line through OIL's E-Procurement site only except following documents which are to be submitted manually in sealed envelope super scribed with tender no. and due date at following address:

**The DGM Contracts,
Contracts Department,
Oil India Limited,
Duliajan- 786602, Assam**

Bidders are requested to examine all instructions, forms, terms and specifications in the bid. Failure to furnish all information required as per the bid or submission of offers not substantially responsive to the bid in every respect will be at the bidders risk and may result in the rejection of its offer without seeking any clarifications. Offers sent without the requisite value of prescribed Bid Security (if called for in the bid) in original will be ignored straightway.

25.0 The tender is invited under SINGLE STAGE-TWO BID SYSTEM. The bidder has to submit both the "TECHNICAL" and "PRICED" bid through electronic form in the OIL's e-Tender portal within the Bid Closing Date and Time stipulated in the e-Tender. The Technical Bid is to be submitted as per Scope of Work & Technical Specification of the tender. The Price Bid rates shall be quoted per unit as specified in the "Price Bidding Format" attached just below the "Tendering text" in the main bidding engine of OIL's e-Tender Portal. The price quoted in the "Price Bidding Format" will only be considered for evaluation.

26.0 In Technical Bid opening, only Technical RFX (Technical-Folder) will be opened. Therefore, the bidder should ensure that Technical bid is uploaded in the Technical - Folder link (Technical RFX link) under Un-priced Bid Tab Page only. No price should be given in above Technical RFX, otherwise the offer will be rejected. Please go through the help document provided in OIL's e-Portal, in detail before uploading the document.

NB: All the Bids must be Digitally Signed using "Class 3" digital signature certificate with Organization's Name (e-commerce application) as per Indian IT Act obtained from the licensed Certifying Authorities operating under the Root Certifying Authority of India (RCAI), Controller of Certifying Authorities (CCA) of India.

27.0 The Integrity Pact is applicable against this tender:

OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide "Part-VI Integrity Pact" of the tender document. This Integrity Pact proforma has been duly signed digitally by OIL's competent signatory. The proforma has to be returned by the bidder (along with the technical bid) duly signed (digitally) by the same signatory who sign the bid, i.e., who is duly authorized to sign the bid. Any bid not accompanied by Integrity Pact Proforma duly signed (digitally) by the bidder shall be rejected straightway. Uploading the Integrity Pact with digital signature will be construed that all pages of the Integrity Pact has been signed by the bidder's authorized signatory who sign the Bid.

(Note: Shri Rajiv Mathur, IPS (Retd.), Former Director, IB, Govt. of India, E-Mail ID: rajivmathur23@gmail.com have been appointed as Independent External Monitors).

28.0 SCREEN SHOTS:

Display RFx Response:

Technical RFx Response

RFx Response Number 60006452 RFx Number TEST2
RFx Owner WIPRO_TEST1 Total Value 0.00 INR

2013 11:00:00 INDIA
Number 4

RFx Information Items Notes and Attachments Conditions Summary Tracking

Basic Data Questions

Event Parameters

Currency: Indian Rupee

Detailed Price Information: Price with Conditions

Terms of Payment: 9010 90% against despatch+10% after receipt

Service and Delive
Incoter

Status and Statist
Created C
Created B
Last Processed C
Last Processed B

Partners and Delivery Information

Details Send E-Mail Call Clear

Function	Number	Name	Valid fr
The table does not contain any data			

On “EDIT” Mode- The following screen will appear. Bidders are advised to upload “Un-priced Techno-Commercial Bid” and “Priced Bid” in the places as indicated below:

Edit RFx Response:

Submit Read Only Print Preview Check Technical RFx Response Close Save Verify signature

RFx Response Number 60006452 RFx Number TEST2 Status Withdrawn Submission Deadline 13.04.2013 11:00:00 INDIA
RFx Owner WIPRO_TEST1 Total Value 0.00 INR RFx Response Version Number 2 RFx Version Number 5

RFx Information Items Notes and Attachments Condition

Notes

Add Clear

Assigned To	Category	Text Preview
The table does not contain any data		

Attachments

Sign Attachment Add Attachment Edit Description Versioning Delete Create Qualifier

Assigned To	Category	Description	File Name	Checked
The table does not contain any data				

Note :

* The “Techno-Commercial Unpriced Bid” shall contain all techno-commercial details **except the prices.**

** The “Price bid” must contain the price schedule and the bidder’s commercial terms and conditions. For uploading Price Bid, first click on Sign Attachment, a browser window will open, select the file from the PC and click on Sign to sign the Price Bid. On Signing a new file with extension .SSIG will be created. Close that window. Next click on Add Attachment, a browser window will open, select the .SSIG signed file from the PC and name the file under Description, Assigned to General Data and click on OK to save the File.

29.0 OIL now looks forward to your active participation in the IFB.

DGM-CONTRACTS
For RESIDENT CHIEF EXECUTIVE

OIL INDIA LIMITED
(A Govt. of India Enterprise)
Contracts Department,
Duliajan, DISTRICT: DIBRUGARH
ASSAM, PIN: 786602
Works Contract

DESCRIPTION OF WORK/SERVICES: - Construction of new Office Building with Garage at WSS Duliajan, including electrification and supply of all materials except Cement.

GENERAL CONDITIONS OF CONTRACT (GCC)

MEMORANDUM OF AGREEMENT made this _____ day of _____ Between OIL INDIA LIMITED a Company incorporated under the Companies Act 1956 and having its Registered Office at Duliajan in the District of Dibrugarh, Assam (hereinafter called Company) of the one part and Shri/Smti _____ and Shri/Smti _____ carrying on business as partners /proprietor under the firm name and style of M/s. _____ with the main Office at _____ in the District of _____ aforesaid (hereinafter called 'Contractor') on the other part.

WITNESSETH:

1. a) The contractor hereby agrees to carry out the work set down in the Schedule of work which forms part-II of this Contract in accordance with the 1968 General Conditions of Contract of Oil India Limited and General Specifications read in conjunction with any drawings and Particular Specifications & instructions which forms Part-III of the contract utilizing any materials/services as offered by the Company as per Part-IV of the contract at _____ .

b) In this Contract all words and expressions shall have the same meaning as are respectively assigned to them in the 1968 General Conditions of Contract of Oil India Limited which the Contractor has perused and is fully conversant with before entering into this Contract.

c) The clauses of this contract and of the specifications set out hereunder shall be paramount and in the event of anything herein contained being inconsistent with any term or terms of the 1968 General Conditions of Contract of Oil India Limited, the said term or terms of the 1968 General conditions of Contract to the extent of such inconsistency, and no further, shall not be binding on the parties hereto.

2. The contractor shall provide all labour, supervision and transport and such specified materials described in part-II of the Contract including tools and plants as necessary for the work and shall be responsible for all royalties and other levies and his rates shall include for these. The work executed and materials supplied shall be to the satisfaction of the Company's Engineer and Contractor's rates shall include for all

incidental and contingent work which although not specifically mentioned in this contract are necessary for its completion in a sound and workman like manner.

3. The Company's Engineer shall have power to:

a) Reduce the rates at which payments shall be made if the quality of work although acceptable is not up to the required standard set forth in the OIL Standard Specifications which have been perused and fully understood by the Contractor.

b) Order the Contractor to remove any inferior material from the site and to demolish or rectify any work of inferior workmanship, failing which the Company's Engineer may arrange for any such work to be demolished or rectified by any other means at the Contractor's expenses.

c) Order the Contractor to remove or replace any workman who he (The Engineer) considers incompetent or unsuitable; the Engineer's opinion as to the competence and suitability of any workman engaged by the Contractor shall be final and binding on the Contractor.

d) Issue to the Contractor from time to time during the progress of the work such further drawings and instructions as shall be necessary for the purpose of proper and adequate execution and maintenance of the works and the Contractor shall carry out and be bound by the same.

e) Order deviations in Part II and III of this Contract. All such deviation orders shall be in writing and shall show the financial effect, if any, of such deviation and whether any extra time is to be allowed. The rates to be applied for such Deviation Order shall be the same for those appearing in Company's Schedule of Rate in force on the date of issue of such Deviation Order, to which the contractor has no objection.

4. The Contractor shall have no claim against the company in respect of any work which may be withdrawn but only for work actually completed under this contract. The contractor shall have no objection to carry out work in excess of the quantities stipulated in Part-II. During the actual execution of the contract, if any, additional items (deviation items) are required, which are not covered in the tender, payment of such items shall be made at the current OIL schedule of rate. In case of positive variation in quantity of any items for the quantity mentioned in the schedule of work during the actual execution of work, the contractor will have to carry out the positive varied quantity at the contract rate, or internally estimated rate whichever is lower.

5. The Company reserves the right to cancel this Contract at any time upon full payment of work done and the value of the materials collected by the contractor for permanent incorporation in the work under this contract particularly for execution of this contract up to the date of cancellation of the Contract. The valuation of the work done and the materials collected shall be estimated by the company's Engineer in presence of the contractor. The Contractor shall have no claim to any further payment whatsoever. The valuation would be carried out exparte if Contractor fails to turn up despite reasonable notice which will be binding on the Contractor.

6. The Contractor hereby undertakes to indemnify the Company against all claims which may arise under the under noted Acts:-

- I. The Mines Act.
- II. The Minimum Wages Act, 1948.
- III. The Workman's Compensation Act, 1923.
- IV. The Payment of wages Act, 1963.
- V. The Payment of Bonus Act, 1965.
- VI. The Contract Labour (Regulation & Abolition) Act, 1970 and the rules framed there under.
- VII. Employees' Pension Scheme, 1995.
- VIII. Inter-State Migrant (Regulation of Employment and Condition of Service) Act. 1979.
- IX. The Employees Provident Fund and Miscellaneous Provisions Act, 1952.
- X. VAT Act.
- XI. Service Tax Act.

or any other Acts or Statute not here in above specifically mentioned having bearing over engagement of workers directly or indirectly for execution of work. The Contractor shall not make the Company liable to reimburse the Contractor for the statutory increase in the wage rates of the Contract Labour appointed by the Contractor. Such Statutory increase in the wage rates of Contract Labour shall be borne by the contractor.

7. The Contractor shall clear away all rubbish and surplus material from the site on completion of work and shall leave the site clean and tidy.

8. The Contractor must complete the work within 78 weeks of the written order to commence work. During the currency of the job, the work progress must be commensurate with the time elapsed. In the event of any delay on the contractor's part, he/she will be liable to pay to the company liquidated damages at the rate of 1/2% (Half p.c) per week of the contract price of the item(s) delayed in completion and the maximum value of the liquidated damage will be 7.5% of the contract price of the item(s) delayed provided the item(s) delayed are not critical for commissioning and final utilization of the work. If, however, the item(s) delayed in completion are critical for commissioning and final utilisation of the work then the contractor will be liable to pay liquidated damages by way of penalty at the rate of 1/2% (Half percent) per week of delay of the total contract cost subject to a maximum of 7.5% of total contract cost.

The Chief Engineer's certificate as to the criticality or otherwise of an item shall be final.

The payment of liquidated damages/penalty may be reduced or waived at the sole discretion of the Company whose decision in this regard will be final.

In the event of there being undue delay in execution of the Contract, the Company reserves the right to cancel the Contract and / or levy such additional damages as it deems fit based on the actual loss suffered by the company attributable to such delay. The company's decision in this regard shall be final.

9. In order to promote, safeguard and facilitate the general operational economic in the interest of the Company during the continuance of this contract the Contractor

hereby agrees and undertakes not to take any direct or indirect interest and or support, assist, maintain or help any person or persons engaged in antisocial activities, demonstration, riots, or in any agitation prejudicial to the Company's interest and any such even taking shape or form at any place of the Company's works or and its neighbourhood.

10. The tendered all-inclusive Price (i.e. the Contract price) is ` _____ **(Not to be filled up by bidder while submitting the offer in c-Folder. This figure will be filled up by OIL at the time of award of the contract to the successful bidder.)**
(_____ only.)

but the Company shall pay the Contract or only for actual work done at the all inclusive rates set down in the Schedule of work part II of this Contract.

On account payment may be made, not oftener than monthly, up to the amount of 92.5% of the value of work done. Final payment will be made only after satisfactory completion of the work. Such final payment shall be based on the work actually done allowing for deviations and any deductions and the measurement shall be checked and certified correct by the Company's Engineer before any such final payment is made.

11. The contractor employing 20 (twenty) or more workmen on any day preceding 12 months shall be required to obtain requisite licence at his cost from the appropriate Licensing Officer before undertaking any Contract work. The Contractor shall also observe the rules & regulations framed under the Contract Labour (Regulation & Abolition) Act.

12. Wages shall be paid by the Contractor to the workmen directly without any intervention of any Jamadars or Thekadars and that the Contractor shall ensure that no amount by way of commission or otherwise be deducted/ recovered by the Jamadar from the wages of the workmen.

13. The Company for any reason whatsoever and of which the company shall be sole judge may terminate this Contract with a 24 hours notice in writing to the Contractor and in the event of Company's so doing the clause 5 here of shall prevail and the accounts between the parties will be in accordance therewith finalised.

14. The Contractor will not be allowed to construct any structure (for storage / housing purpose) with thatch, bamboo or any other inflammable materials within any company's fenced area.

15. The Contractor shall ensure that all men engaged by him/her are provided with appropriate protective clothing and safety wear in accordance with regulation 89(a) and 89(b) in the Oil mines Regulations 1984. The Company's representative shall not allow/accept those men who are not provided with the same.

16. All Statutory taxes levied by the Central and State Government or any other competent authority from time to time will be borne by Contractor and the amount of the contract specified in the contract is inclusive of all tax liabilities.

17. The Contractor shall deploy local persons in all works.

18. The Contractor shall not engage minor labour below 18(eighteen) years of age under any circumstances.

19. The Contractor and his/her workmen shall strictly observe the rules and regulations as per Mines Act. (Latest editions).

20. Special Conditions

a) The amount of retention money shall be released after 6(six) months from the date of issue of completion certificate from concerned department.

b) The contractor will be required to allow OIL Officials to inspect the work site and documents in respect of the workers' payment.

c) Contractor(s) whosoever is liable to be covered under the P.F. Act and contract cost is inclusive of P.F., must ensure strict compliance of provisions of Provident Fund and Miscellaneous Provisions Act, 1952 in addition to the various Acts mentioned elsewhere in this contract. Any contractor found violating these provisions will render themselves disqualified from any future tendering. As per terms of the contract, if applicable, the Contractor must deposit Provident Fund Contribution (covering Employee's & Employer's share) with the competent authority monthly under their direct code. The Contractor shall be required to submit documentary evidence of deposit of P.F. Contribution to the Company. In case of failure to provide such documentary evidence, the Company reserves the right to withhold the amount equivalent to applicable P.F. Contribution.

d) In case P.F. is not included in the contract cost and later on required to be deposited by the Contractor, the same will be reimbursed on production of documentary evidence of depositing the same to the authority concerned. 12% P.F. will be applicable on the wage component of the contract cost. The following points are incorporated in the contract based on Contractor's declaration at the time of submission of offer against this contract.

- (i) 12% P.F. is included / not included in the contract cost.
- (ii) Wage component of the contract cost is 17.93 %.

e) As per Service Tax Act, the contractors are required to furnish service Tax Invoices Containing the following details:

- (i) Name, address and registration No of the contractor
- (ii) Name and address of the service recipient i.e. OIL
- (iii) Description and value of taxable services and the service Tax payable thereon

Note: In absence of Service Tax invoices, Service Tax will not be reimbursed and the consequences of the same shall entirely rest upon the Contractors

The Contractor shall have to submit Invoice of Service Tax as per the following Format:

Format of Invoice (As per Rule 4A (1) of the Service Tax Rule's 1994)

TAX INVOICE

Name of the Service Provider.....

Address of the Service Provider.....

Service Tax Regn. No of the service provider.....

Name & address of the Service Receiver

Invoice Serial No.....

Oil India Limited, Duliajan, Assam

Invoice Date.....

Particulars	Amount (Rs)
Description of the service provided or agreed to be provided (e.g. AMC Bill against Contract No.....for the period.....)	A
Add service Tax 15 % on (A) above (In case of taxable value of service is not 100 %, than specify the value of taxable service and apply 15 % of the qualifying amount) (e.g. if the value of service is only 40%, than service tax should be calculated at 15 % on 40% of the value declared at (A) above.)	B
Total amount (Including service Tax) (A + B)	C
Less: Service Tax Payable by Oil India Limited under reverse charge	D
Net Bill Amount	E

Signature of Proprietor/partner

21. ARBITRATION:

Any dispute under this contract will be settled through Arbitration as per Indian Arbitration and Conciliation Act, 1996.

Place of Arbitration: Duliajan, Dibrugarh, Assam

22. FORCE MAJEURE:

Force Majeure (exemption) Clause of the International Chamber of Commerce (ICC Publication No. 421) is hereby incorporated in this contract.

23. I.B. VERIFICATION REPORT AND SECURITY REVIEW:

Contractor will be required to submit the verification report to ascertain character and antecedents from the Civil Administration towards the persons engaged under this contract to the Head of the user Department before engagement.

24. In case of any doubt or dispute as to the interpretation of any clause herein contained, the decision of the Company's Engineer shall be final and binding on the contractor.

Contractor

Company

25. SET OFF CLAUSE:-

"Any sum of money due and payable to the contractor (including Security Deposit refundable to them) under this or any other contract may be appropriated by Oil India Limited and set off against any claim of Oil India Limited (or such other person or persons contracting through Oil India Limited) for payment of a sum of money arising out of this contract or under any other contract made by the contractor with Oil India Limited (or such other person or persons contracting through Oil India Limited)."

26.0 FURNISHING FRAUDULENT INFORMATION/DOCUMENT:

If it is found that a Bidder/Contractor has furnished fraudulent document/information, the Bid Security/ Performance Security shall be forfeited and the party shall be debarred as per the "Guidelines for Banning business Dealings".

27.0 LIQUIDATED DAMAGES FOR DELAY IN MOBILISATION AND/ OR COMPLETION OF WORKS AND SERVICES

27.1 In normal case of works /service contracts, liquidated damages will be applicable @ 0.5% of the contract value per week or part thereof, for delay in contract mobilization /completion date subject to a maximum ceiling of 7.5% of contract value .

IN WITNESS whereof the parties hereunto set their hands seals the day and year first written above:-

SIGNED & DELIVERED FOR AND
ON BEHALF OF

(Signature of Contractor or his legal Attorney)

By the hand of

(Full Name of Signatory)

It's Partner/Legal Attorney

(Seal of Contractor's Firm)

And in presence of

(Signature of witness)

Date: _____

(Full Name of Signatory)

Address:

(Signature of Acceptor)

SIGNED & DELIVERED FOR & ON
BEHALF OF OIL INDIA LIMITED

Designation _____

Date _____

Part-II SOQ

OIL INDIA LIMITED
(A Govt. of India Enterprise)
Duliajan, Assam
WORKS CONTRACT

E-Tender No.: CDI1548P17

Sl. no	Description of Work	Quantity	UOM	Currency	Rate
	Group A SEC-A (Civil Part)				
10	Providing & laying in position cement concrete of specified grade excluding the cost of centring and shuttering - All work upto plinth level: 1:3:6 (1 Cement: 3 coarse sand : 6 graded stone aggregate 20 mm nominal size)	40.00	M3	INR	3708.41
20	Providing & laying damp-proof course 40mm thick with cement concrete 1:2:4 (1 cement: 2 coarse sand : 4 graded stone aggregate 12.5mm nominal size).	20.00	M2	INR	173.19
30	Providing & laying in position specified grade of reinforced cement concrete excluding the cost of centring, shuttering, finishing and reinforcement - All work upto plinth level : 1:1.5:3 (1 cement: 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	26.00	M3	INR	3676.59
40	Reinforced cement concrete work in walls (any thickness), including attached pilasters, buttresses, plinth and string courses, fillets, columns, pillars, piers, abutments, posts and struts etc. upto floor five level excluding cost of centring, shuttering, finishing and reinforcement: 1:1.5:3 (1 cement: 1.5 coarse sand : 3 graded stone aggregate 20 mm nominal size)	90.00	M3	INR	4394.86
50	Centering and shuttering including strutting, propping etc. and removal of form for: Suspended floors, roofs, landings, balconies and access platform.	415.00	M2	INR	348.76
60	Centering and shuttering including strutting, propping etc. and removal of form for: Lintels, beams, plinth beams, girders, bressumers and cantilevers.	425.00	M2	INR	293.90
70	Centering and shuttering including strutting, propping etc. and removal of form for: Columns, Pillars, Piers, Abutments, Posts and Struts.	235.00	M2	INR	409.73
80	Brick work with F.P.S. bricks of class designation 75 in foundation and plinth in: Cement mortar 1:4 (1 cement : 4 coarse sand)	20.00	M3	INR	5145.42
90	Brick work with F.P.S. bricks of class designation 75 in superstructure above plinth level up to floor V level in all shapes and sizes in : Cement mortar 1:4 (1 cement : 4 coarse sand)	70.00	M3	INR	5772.55
100	Wood work in frames of doors, windows, clerestory windows and other frames, wrought framed and fixed in position :Kiln seasoned and chemically treated Hollock wood.	1.00	M3	INR	52246.42

Sl. no	Description of Work	Quantity	UOM	Currency	Rate
110	Providing & fixing ISI marked flush door shutters conforming to IS : 2202 (Part I) non-decorative type, core of block board construction with frame of 1 st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters:35mm thick including ISI marked Stainless Steel butt hinges with necessary screws.	17.50	M2	INR	1768.80
120	Providing & fixing ISI marked flush door shutters conforming to IS : 2202 (Part I) non-decorative type, core of block board construction with frame of 1 st class hard wood and well matched commercial 3 ply veneering with vertical grains or cross bands and face veneers on both faces of shutters:25mm thick (for cupboard) including ISI marked nickel plated bright finished M.S. piano hinges with necessary screws.	7.50	M2	INR	1419.65
130	Providing & fixing bright finished brass 100mm mortice latch and lock with 6 levers and a pair of lever handles with necessary screws etc. complete (best make of approved quality).	5.00	EA	INR	529.25
140	Providing & fixing bright finished brass tower bolts (barrel type) with necessary screws etc. complete: 200x10mm	50.00	EA	INR	245.77
150	Providing & fixing bright finished brass handles with screws etc. complete: 100mm	13.00	EA	INR	170.18
160	Providing & fixing IS : 3564 marked Aluminium die cast body tubular type universal hydraulic door closer with necessary accessories and screws etc. complete.	7.00	EA	INR	742.80
170	Structural steel work riveted, bolted or welded in built up sections, trusses and framed work, including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer all complete.	8200.00	KG	INR	74.53
180	Providing & fixing factory made ISI marked steel glazed doors, windows and ventilators side / top / centre hung with beading and all members such as K11 B and K12 B etc. complete of standard rolled steel sections, joints mitred and flash butt welded and sash bars tenoned and riveted with 15x3mm lugs, 10cm long, embedded in cement concrete blocks 15x10x10cm of 1:3:6 (1 cement : 3 coarse sand : 6 graded stone aggregate 20mm nominal size) or with wooden plugs and screws or rawl plugs and screws or with fixing clips or with bolts and nuts as required, including providing and fixing of hinges, pivots, float glass panes with glazing clips and special metal sash putty of approved make and a priming coat of approved steel primer excluding the cost of other fittings except necessary hinges or pivots complete as per approved design. (Sectional weight of only steel members shall be measured for payment without weight of glass and other fittings.)	1000.00	KG	INR	107.92

Sl. no	Description of Work	Quantity	UOM	Currency	Rate
190	Providing & fixing M.S. fan clamp type I or II of 16mm dia M.S. bar bent to shape with hooked ends in R.C.C. slabs, beams during laying including painting the exposed portion of loop, all as per standard design complete.	15.00	EA	INR	119.13
200	Steel work welded in built up sections / framed work including cutting, hoisting, fixing in position and applying a priming coat of approved steel primer using structural steel etc. as required. In gratings, frames, guard bar, ladder, railings, brackets, gates and similar works.	260.00	KG	INR	87.30
210	Providing & fixing hand rail of approved size by welding etc. to steel ladder railing, balcony railing and stair case railing including applying a priming coat of approved steel primer.E.R.W. tubes.	750.00	KG	INR	123.22
220	Cement concrete flooring 1:2:4 (1 cement : 2 coarse sand : 4 graded stone aggregate) finished with a floating coat of neat cement including cement slurry, but excluding the cost of nosing of steps etc. complete.40mm thick with 20mm nominal size stone aggregate.	215.00	M2	INR	227.08
230	Cement plaster skirting (up to 30cm height) with cement mortar 1:3 (1 cement : 3 coarse sand) finished with a floating coat of neat cement.18mm thick.	370.00	M2	INR	179.20
240	Providing & fixing 1st quality ceramic glazed wall tiles conforming to IS : 15622 (thickness to be specified by the manufacturer) of approved make in all colours, shades except burgundy, bottle green, black of any size as approved by Engineer-in-Charge in skirting, risers of steps and dados over 12mm thick bed of cement Mortar 1:3 (1 cement : 3 coarse sand) and jointing with grey cement slurry @ 3.3kg per sqm including pointing in white cement mixed with pigment of matching shade complete.	70.00	M2	INR	732.51
250	Providing & laying Ceramic glazed floor tiles 300x300mm (thickness to be specified by the manufacturer) of 1st quality conforming to IS : 15622 of approved make in colours such as White, Ivory, Grey, Fume Red Brown, laid on 20mm thick cement Mortar 1:4 (1 cement : 4 Coarse sand) including pointing the joints with white cement and matching pigment etc., complete.	80.00	M2	INR	757.02
260	Providing & erecting corrugated G.S. sheet roofing including vertical/curved surface fixed with polymer coated J or L hooks, bolts and nuts 8 mm diameter with bitumen and G.I. limpet washers or with G.I. limpet washers filled with white lead and including a coat of approved steel primer and two coats of approved paint on overlapping of sheets complete upto any pitch in horizontal/ vertical or curved surfaces excluding the cost of purlins, rafters and trusses and including cutting to size and shape wherever required-0.80mm thick with zinc coating not less than 275gm/m2	90.00	M2	INR	832.46

Sl. no	Description of Work	Quantity	UOM	Currency	Rate
270	<p>Providing & fixing at all height false ceiling including providing and fixing of frame work made of special sections power pressed from M.S. sheet and galvanised in accordance with zinc coating of grade 350 as per IS : 277 and consisting of angle cleats of size 25mm wide x 1.6mm thick with flanges of 22mm and 37mm at 1200mm centre to centre one flange fixed to the ceiling with dash fastener 12.5mm dia x 40mm long with 6mm dia bolts to the angle hangers of 25x25x0.55mm of required length, and other end of angle hanger being fixed with nut and bolts to G.I. channels 45x15x0.9mm running at the rate of 1200mm centre to centre to which the ceiling section 0.5mm thick bottom wedge of 80mm with tapered flanges of 26mm each having clips of 10.5mm at 450mm centre to centre shall be fixed in a direction perpendicular to G.I. channel with connecting clips made out of 2.64mm dia x 230mm long G.I. wire at every junction including fixing the gypsum board with ceiling section and perimeter channels 0.5mm thick 27mm high having flanges of 20mm and 30mm long, the perimeter of ceiling fixed to wall/partition with the help of rawl plugs at 450mm centre to centre with 25mm long drive-all screws @ 230mm interval including jointing and fixing to a flush finish of tapered and square edges of the board with recommended filler, jointing tapes, finisher and two coats of primer suitable for board as per manufactures specification and also including the cost of making openings for light fittings, grills, diffusers, cutouts made with frame of perimeter channels suitably fixed all complete as per drawing and specification and direction of the Engineer in Charge but excluding the cost of painting with :12.5 mm thick tapered edge gypsum board conforming to IS: 2095- Part I,</p>	35.00	M2	INR	774.85

Sl. no	Description of Work	Quantity	UOM	Currency	Rate
280	Providing & Fixing False Ceiling Tiles of approved materials of size 595x595mm in true horizontal level suspended on inter locking metal grid of hot dipped galvanised steel sections (galvanised @ 170 gsm/sqm.) consisting of main "T" runner with suitably spaced joints to get required length and of size 24x38mm made from 0.30mm thick (minimum) sheet spaced at 1200mm center to center and cross "T" of size 24x25mm made of 0.30mm thick (minimum) sheet, 1200mm long spaced between main "T" at 600mm center to center to form a grid of 1200x600mm and secondary cross "T" of length 600mm and size 24x25mm made of 0.30mm thick (minimum) sheet to be interlocked at middle of the 1200x600mm panel to form grids of 600x600mm and wall angle of size 21x21x0.3mm and laying false ceiling tiles of approved texture in the grid including, wherever, required, cutting/making, opening for services like diffusers, grills, light fittings, fixtures, smoke detectors etc. Main "T" runners to be suspended from ceiling using GI slotted cleats fixed to ceiling with 6mm dia and 50mm long dash fasteners, 4mm GI adjustable rods with galvanised level clips spaced at 1200mm center to center along main T, bottom exposed width of 24mm of all T-sections shall be pre-painted with polyester paint, all complete at all heights as per specifications drawings and as directed by Engineer-in-Charge.(The rate is excluding the cost of tiles which will be paid for separately)	25.00	M2	INR	1598.01
290	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete. Mild steel and Medium\Tensile steel bars.	600.00	KG	INR	63.60
300	Reinforcement for R.C.C. work including straightening, cutting, bending, placing in position and binding all complete. Thermo-Mechanically Treated bars.	14000.00	KG	INR	69.76
310	12mm cement plaster of mix:1:4 (1 cement : 4 coarse sand)	950.00	M2	INR	100.89
320	15mm cement plaster on rough side of single or half brick wall of mix:1:4 (1 cement : 4 coarse sand)	500.00	M2	INR	115.77
330	6mm cement plaster of mix:1:3 (1 cement : 3 fine sand)	425.00	M2	INR	88.35
340	Providing & applying Plaster of Paris putty of 2mm thickness over plastered surface to prepare the surface even and smooth complete.	400.00	M2	INR	93.91
350	Providing & finishing walls with Acrylic Smooth exterior paint of required shade: New work (Two or more coat applied @ 1.67 ltr/10 sqm over and including base coat of water proofing cement paint applied @ 2.20 kg/10 sqm).	500.00	M2	INR	75.65

Sl. no	Description of Work	Quantity	UOM	Currency	Rate
360	Painting wood work with Deluxe Multi Surface Paint of required shade. Two or more coat applied @ 0.90 ltr/10 sqm over an under coat of primer applied @ 0.75 ltr/ 10 sqm of approved brand or manufacture	90.00	M2	INR	75.87
370	Providing & applying priming coat: With ready mixed pink or Grey primer of approved brand and manufacture on wood work (hard and soft wood)	90.00	M2	INR	28.97
380	Providing & applying one coat of cement primer of approved brand and manufacture on wall surface: Cement primer	400.00	M2	INR	30.88
390	Providing & finishing with Epoxy paint (two or more coats) at all locations prepared and applied as per manufacturer's specifications including appropriate priming coat, preparation of surface, etc. complete. On steel work	45.00	M2	INR	118.23
400	Varnishing with varnish of approved brand and manufacture: Two or more coats of glue sizing with copal varnish over an under coat of flatting varnish.	85.00	M2	INR	90.33
410	Floor polishing on masonry or concrete floors with wax polish of approved brand and manufacture.	280.00	M2	INR	31.94
420	Providing & fixing white vitreous china pedestal type water closet (European type) with seat and lid, 10 litre low level white vitreous china flushing cistern & C.P. flush bend with fittings & C.I. brackets, 40mm flush bend, overflow arrangement with specials of standard make and mosquito proof coupling of approved municipal design complete including painting of fittings and brackets, cutting and making good the walls and floors wherever required: W.C. pan with ISI marked white solid plastic seat and lid.	2.00	EA	INR	4730.25
430	Providing & fixing white vitreous china flat back or wall corner type lipped front urinal basin of 430x260x350mm and 340x410x265mm sizes respectively with automatic flushing cistern with standard flush pipe and C.P. brass spreaders with brass unions and G.I clamps complete, including painting of fittings and brackets, cutting and making good the walls and floors wherever required: One urinal basin with 5 litre white P.V.C. automatic flushing cistern.	2.00	EA	INR	3187.72
440	Providing & fixing mirror of superior glass (of approved quality) and of required shape and size with plastic moulded frame of approved make and shade with 6mm thick hard board backing: Rectangular shape 1500x450mm	1.00	EA	INR	1357.17

Sl. no	Description of Work	Quantity	UOM	Currency	Rate
450	Providing & fixing PTMT towel rail complete with brackets fixed to wooden cleats with CP brass screws with concealed fitting arrangement of approved quality and colour. 600mm long towel rail with total length of 645mm, width 78mm and effective height of 88mm, weighing not less than 190gms	1.00	EA	INR	465.31
460	Providing& fixing PTMT liquid soap container 109mm wide, 125mm high and 112mm distance from wall of standard shape with bracket of the same materials with snap fittings of approved quality and colour, weighing not less than 105 gms.	2.00	EA	INR	201.84
470	Providing& fixing white vitreous china wash basin including making all connections but excluding the cost of fittings: Flat back wash basin of size 630 x 450 mm.	2.00	EA	INR	812.68
480	Providing & fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. 25mm dia. nominal bore	90.00	M	INR	272.50
490	Providing & fixing G.I. pipes complete with G.I. fittings and clamps, including cutting and making good the walls etc. 15mm dia. nominal bore	90.00	M	INR	181.11
500	Providing & fixing gun metal non-return valve of approved quality (screwed end) : 25mm nominal bore Horizontal	2.00	EA	INR	429.73
510	Providing & fixing gun metal non-return valve of approved quality (screwed end) : 25mm nominal bore Vertical	1.00	EA	INR	442.73
520	Providing & fixing C.P. brass long body bib cock of approved quality conforming to IS standards and weighing not less than 690 gms15mm nominal bore	3.00	EA	INR	482.57
530	Providing & fixing C.P. brass stop cock (concealed) of standard design and of approved make conforming to IS:8931.15mm nominal bore.	2.00	EA	INR	478.03
540	Providing & fixing PTMT pillar cock of approved quality and colour. 15mm nominal bore, 125mm long foam flow, weighing not less than 120 gms.	3.00	EA	INR	310.71
550	Providing & laying Brick Flat Soling (75mm thick) including grading the base and spreading 25mm thick sand bed at bottom and grouting soling with cement mortar (prop. 1:3) and carrying all materials from a distance of upto 30.00m.	450.00	M2	INR	409.71
560	Supplying and filling in plinth with sand under floors including, watering, ramming consolidating and dressing complete.	300.00	M3	INR	897.21
570	Supplying chemical emulsion in sealed containers including delivery as specified. Chlorpyriphos/ Lindane emulsifiable concentrate of 20%	20.00	L	INR	208.39

Sl. no	Description of Work	Quantity	UOM	Currency	Rate
580	Providing & fixing Stainless Steel A ISI 304 (18/8) kitchen sink as per IS 13983 with C.I. brackets and stainless steel plug 40mm including painting of fittings and brackets, cutting and making good the walls wherever required:Kitchen sink with drain board :510x1040mm bowl depth 225mm.	1.00	EA	INR	7232.05
590	Excavation work in foundation trenches or drains not exceeding 1.5 m in width or 10 sqm on plan including dressing of sides and ramming of bottoms, lift upto 1.5 m, including getting out the excavated soil and disposal of surplus excavated soil as directed, within a lead of 50 m. In ordinary rock.	85.00	M3	INR	237.59
600	Filling available excavated earth (excluding rock) in trenches, plinth, sides of foundations etc. in layers not exceeding 20cm in depth, consolidating each deposited layer by ramming and watering, lead up to 50 m and lift upto 1.5 m.	85.00	M3	INR	93.91
610	Surface dressing of the ground including removing vegetation and in-equalities not exceeding 15 cm deep and disposal of rubbish, lead upto 50 m and lift upto 1.5 m.All kinds of soil	1200.00	M2	INR	10.48
620	Diluting and injecting chemical emulsion for POST-CONSTRUCTIONAL anti-termite treatment (excluding the cost of chemical emulsion) :Along external wall where the apron is not provided using chemical emulsion @ 7.5 litres / sqm of the vertical surface of the substructure to a depth of 300 mm including excavation channel along the wall & rodding etc. complete With Chlorpyriphos/ Lindane E.C. 20% with 1% concentration.	250.00	M	INR	13.24
630	Cement brick work (in prop. 1 cement : 6 sand) for trapezoidal section drain of top width 525mm x bottom width 225mm x 150mm height, bricks laid flat over 25mm thick bedding (1 cement : 8 sand) and 13mm thick neat finish on inside plaster (1 cement : 3 sand) and in top edges curving, rounding etc. including necessary excavation to required size, dressing, grading, ramming and levelling and curing complete.	95.00	M	INR	415.54
	Group B SEC-A (Electrical Part)				

Sl. no	Description of Work	Quantity	UOM	Currency	Rate
10	<u>Point wiring:</u> Wiring for light point/ fan point/ exhaust fan point/ call bell point with 3x1.5 sq.mm FRLS PVC insulated copper conductor single core cable in surface / recessed medium grade ISI approved PVC conduit, with modular switch, suitable GI box and earthing the point with 1.5 sq.mm. FRLS PVC insulated copper conductor single core cable etc as required.(identical size phase ,neutral and earth wires ,colour coded red ,black and green respectively). Concealed Point wiring includes laying of PVC conduit in the roof/Wall also. Make of cable: Havells/Finolex/ L&T/Polycab,BIS approved make of PVC conduit: AKG/Plaza/Richa, Make of Modular switch : Legrand/L&T/MK/Schneider/Crabtree/Indo-Asian or Approved by Engineer in Charge.	90.00	EA	INR	1446.00
20	<u>Light plug point wiring :</u> Wiring for light plug point with 3X1.5 sq. mm FRLS PVC insulated copper conductor single core cable in surface/ recessed medium grade ISI approved PVC conduit alongwith FRLS PVC insulated copper conductor single core cable for loop earthing as required(identical size phase ,neutral and earth wires ,colour coded red ,black and green respectively). Concealed Plug point wiring includes laying of PVC conduit in the roof/Wall also.Make of cable :Havells/Finolex /L&T/ Polycab,BIS approved make of PVC conduit : AKG/Plaza/Richa or Approved by Engineer in Charge.	150.00	M	INR	200.00
30	<u>Circuit Wiring:</u> Wiring for circuit/ submain wiring alongwith earth wire with the 3x2.5mmsq sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class ISI approved PVC conduit as required. Wiring shall be done from MCB DB to desired Switch Board/power point.(identical in size phase ,neutral and earth wires ,colour coded red ,black and green respectively). Concealed circuit wiring includes laying of PVC conduit in the roof/Wall also.Make of cable :Havells/Finolex/ L&T,BIS approved make of PVC conduit: AKG/Plaza/Richa or Approved by Engineer in Charge.	180.00	M	INR	266.00

Sl. no	Description of Work	Quantity	UOM	Currency	Rate
40	Power Wiring : Wiring for power wiring along with earth wire the 3x4 mmsq sizes of FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class ISI approved PVC conduit as required. Wiring shall be done from MCB DB to desired Switch Board/ power point.(identical in size phase, neutral and earth wires, colour coded red, black and green respectively). Concealed circuit wiring includes laying of PVC conduit in the roof/wall also. Make of cable: Havells/Finolex/L&T, BIS approved make of PVC conduit: AKG/Plaza/Richa or Approved by Engineer in Charge.	220.00	M	INR	324.00
50	Sub main wiring (MDB to SP DB) : Sub Main: Wiring with 3 x 10.0 mmsq,1100 V,FRLS,PVC insulated,ISI,TAC,FIA approved,copper conductor,single core flexible cable for phase,neutral and earth wire in surface/ recessed,medium grade ISI approved PVC conduit from main MCB DB/TPN DB to TPN/SPN DB as required. Concealed sub main wiring includes laying of PVC conduit in the roof/Wall also. Make of cable:Havells/Finolex/L&T/Polycab, BIS approved make of PVC conduit: AKG/Plaza/Richa or Approved by Engineer in Charge.	250.00	M	INR	593.00
60	Sub Main Wiring(MCCB to TPN DB) : Sub Main: Wiring for 3 phase and neutral circuit wiring alongwith 2x16mmsq earth wire the 4x16 mmsq for FRLS PVC insulated copper conductor, single core cable in surface/ recessed medium class PVC conduit from main MCCB to TPN/SPN DB as required. All conductors shall be identical in size and distinct colour code as follows- Red, Yellow, Blue for phase and black for neutral, Earthing conductor shall be green. Concealed sub main wiring includes laying of PVC conduit in the roof/Wall also. Make of cable: Havells/ Finolex/L&T/Polycab, Make of PVC conduit: AKG/Plaza/Richa or Approved by Engineer in Charge	50.00	M	INR	1685.00
70	SITC of 2x28 W T5 Suspended type fitting: SITC of 2x28 W T5 Suspended type fitting: Supply, Installation, testing and commissioning of pre-wired, 2 x 28 W T5 Suspended type fluorescent fitting with all accessories and tube etc., including supplying and fixing ball and socket arrangement, 2 no. down rods of 20 mm dia X 1.6 mm thick steel conduit upto 45 cm length, painting and wiring the down rods and connection with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable and earthing etc as required.Fitting shall be similar to Bajaj make BCTS 228 X2 make type luminaire, including 2 No 28W TL5 tube and reflector.Make:Philips/Crompton/GE/Bajaj/Havells or Approved by Engineer in Charge. For office room and cabins.	18.00	EA	INR	7064.00

Sl. no	Description of Work	Quantity	UOM	Currency	Rate
80	SITC of 4x14 W T5 Recess mounted fitting: Supply, Installation, testing and commissioning of pre-wired, 4x 14 W T5 Recess mounted fluorescent fitting with all accessories and tube etc., including supplying and fixing of hanging arrangement, connection with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable and earthing etc as required.Fitting shall be similar to Bajaj make BLMRA 418 TD WEB4 luminaire, including 4 No 14 W TL5 tube and reflector. Make:Philips/Crompton/GE/Bajaj/Havells or Approved by Engineer in Charge. For Conference room only.	8.00	EA	INR	7984.00
90	SITC of 1x14 W T5 fitting: Supply, Installation, testing and commissioning of pre-wired, 1 x 14 W T5 CRCA box type fluorescent fitting with all accessories and tube etc., including fixing arrangement on wall, wiring and connection with 1.5sqmm FR PVC insulated, copper conductor, single core cable and earthing etc. as required. Fitting shall be similar to Bajaj BTER 114 make type luminaire, including 1 No. 14W TL5 tube. Make: Philips/Crompton/GE/Bajaj/Havells or Approved by Engineer in Charge. For Toilets.	6.00	EA	INR	1150.00
100	SITC of 1x28 W T5 Batten type fitting: Supply, Installation, testing and commissioning of pre-wired, 1 x 28 W T5 CRCA box type fluorescent fitting with all accessories and tube etc., including fixing arrangement on wall, wiring and connection with 1.5sqmm FR PVC insulated, copper conductor, single core cable and earthing etc. as required. Fitting shall be similar to Bajaj BTER 128 make type luminaire, including 1 No. 28W TL5 tube. Make: Philips/Crompton/GE/Bajaj/Havells or Approved by Engineer in Charge. For Corridor, staircase, Pantry Garage etc.	16.00	EA	INR	1243.00
110	SITC of 2x18 W Downlighter: Supply, Installation, testing and commissioning of pre-wired, Horizontal downlighters with full frosted glass downlighter Luminaire, recessed type of enclosed control gear box similar to baja BJDR 218 FR FFGL W2EB type fitting with all accessories and lamp etc., including fixing arrangement above false ceiling , wiring and connection with 1.5sqmm FR PVC insulated, copper conductor, single core cable and earthing etc. as required. Make: Philips/Crompton/GE/Bajaj/Havells or Approved by Engineer in Charge. For Conference Room only.	8.00	EA	INR	2558.00

Sl. no	Description of Work	Quantity	UOM	Currency	Rate
120	S/F of Junction Box: Supply and fixing of MS junction box made from 1.6 mm thick ,150 mm x 75 mm, 60 mm deep ,painted with 3.0 mm hylem sheet cover of white colour.Box shall have knockouts for conduit entry.J/Box shall have porcelain connector ,240 v ,6.0 mmsq rated suitable for termination of pahse ,neutral wires for looping and one no. earth stud for connection of earth wire in the box.Make : Richa/AKG/Havells or Approved by Engineer in Charge.This box will be used as a junction box above the switch board.	35.00	EA	INR	154.00
130	Supply, Installation, testing and commissioning of 1400 mm sweep ceiling fan without modular step regulator, including wiring the down rods of standard length (upto 30 cm) with 1.5 sq. mm FR PVC insulated, copper conductor, single core cable, including providing and fixing phenolic laminated sheet cover on the fan box etc. as required.Make of fan: Havell/Crompton Greaves/Bajaj/Orient. Make of electronic fan regulator: /Legrands /L&T/Indo asian/ GE or Approved by Engineer in Charge.	19.00	EA	INR	2761.00
140	Supply ,Installation and commissioning of 300 mm sweep heavy duty metallic exhaust fan in the existing opening, including making the hole to suit the size of the above fan, making necessary connection, testing, commissioning etc. as required.Make of fan: Havell/Crompton Greaves/Bajaj/Orient or Approved by Engineer in Charge.	3.00	EA	INR	4420.00
150	Supplying, installation and fixing of 16way as outgoing with double door , single pole and neutral, sheet steel, MCB distribution board, 240 volts, on surface/ recess, complete with 100 A tinned 12 way copper busbar, 12 way neutral busbar, 12 way earth bar, din bar, detachable gland plate, interconnections, phosphatized and powder painted including earthing etc. as required.DB shall have following as incomer :63 A RCBO, sensitivity 100mA -1 nos.Outgoings are 10 A MCB ,C curve-6 nos,20 A MCB,C curve- 6 nos.Make of RCBO, MCBs and box shall be of same make and shall be Schneider/Siemens/Indo Asian/Legrand or Approved by Engineer in Charge. DB shall be similar to Legrand cat no- 6077 13.	6.00	EA	INR	12597.00

Sl. no	Description of Work	Quantity	UOM	Currency	Rate
160	<p>7 SEGMENT TPN MCB DB: Pre-fabricated 7 SEGMENT 3 PHASE 12 WAY Double door MCB DB suitable for surface/recess mounting, IP 43/ IP 42 enclosure. Fully insulated 100A copper bus bar for each phase with insulated neutral and earth bar, door earthing. SIMILAR TO LEGRAND CAT NO. 6078 38 flash mounting on brick wall with following specifications. DB shall be fitted with the following incoming and outgoing devices. Seg1: INCOMER (MAIN) 125A 4P MCB 1NO; Seg 2,3&4: (Sub incomer)R-Y-B each phase incomer shall have- 63A RCBO DP, sensitivity 300mA - 3nos. Seg 5,6&7: each phase OUTGOING shall have 20A SP MCB 4 Nos. and 10A SP MCB 4nos. and 63 SP MCB 4 Nos.(Total 20 A MCB=12, 20 A MCB=12, 63 A MCB=12nos) 100 amp. tinned copper busbar should be provided for phase & neutral. Pre-fabricated DB and it's connection loop wires, busbars etc. MCB's shall be from same manufacturer. All MCBs should be 'C' curve, 240v AC rated, 10kA rated breaking capacity, with DMC housing, suitable for class-II tropicalisation (as per IEC) & approved by ISI or IEC. MCBs should have integrated label holder, biconnect upper and lower terminals & air channels for low temp. rise. DB shall be as per IS-8623. All wires inside DB shall have ferrules for identification of circuit no. All unused openings should be fitted with Blanking Plates. Instruction in English for resetting RCBO/RCCB in case of tripping shall be printed on a paper and shall be pasted on inside of the enclosure cover. All outgoing MCBs shall be marked with paint for identification of area being fed.MAKE OF DB and components: Legrand / Schneider / Siemens/Indo Asian/Havells or as approved by Engineer In charge of Electrical Department. Fixing TPN DB includes termination of all incoming and outgoing cable using proper size of lugs, glands etc.DB shall be fixed on first floor.</p>	1.00	EA	INR	64362.00

Sl. no	Description of Work	Quantity	UOM	Currency	Rate
170	<p>"Supply, fixing and Installation of 3 PHASE 12 WAY outgoing vertival TPN MCCB DB SIMILAR TO LEGRAND MAKE CAT NO 6079 18 on wall with following specifications. DB shall be fitted with the following incoming & outgoing devices.</p> <p>(a) Incomer : One no. 4 pole,400 v AC, 160 amp,16KA MCCB with electronic earth leakage module similar to Legrand cat no 4200 37, shall be approved by ISI or IEC, as incomer.</p> <p>(b) Outgoings:</p> <p>1) four (4) nos, 63 amp 'C' curve TP MCB as outgoing</p> <p>2) twelve(12) nos 63 amp 'C' curve SP MCB as outgoing</p> <p>3) twelve 12 nos 32 amp 'C' curve SP MCB as outgoing, suitable for class-II tropicalisation (as per IEC) & approved by ISI or IEC. All outgoing MCBs should be 'C' curve, 240v AC rated, 10kA rated breaking capacity, with DMC housing, suitable for class-II tropicalisation (as per IEC) & approved by ISI or IEC. MCBs should have integrated label holder, biconnect upper & lower terminals & air channels for low temp. rise. DB should be as per IS-8623 with latest amendment. DB should have external earth terminal & mounting holes. Cable ties & wire leads for wiring incomer MCCB to respective phase & neutral buses should be supplied and wired with single core 35 sqmm stranded copper cable with tinned copper lugs. 250 amp tinned copper busbar should be provided for phase & neutral. Neutral & Earth bar should be 12 way each & suitable for termination of wires with pin type cable lugs. Enclosure type- IP-54 with double door. DB shall have cable entry box on top side for keeping spare length of cables. All wires inside DB shall have ferrules for identification of circuit no. All unused openings should be fitted with Blanking Plates.Allougoing MCBs shall be marked with paint for identification of area being fed. MAKE OF DB and components: Legrand /Schneider/ Siemens/L&T/Indo Asian or as approved by Engineer In charge."</p>	1.00	EA	INR	91575.00
180	Supplying and fixing 3 pin, 5 amp. ceiling rose on the existing junction box	35.00	EA	INR	54.00
190	Supplying and fixing of Mild steel hexagonal/ Round fan box with 12mm Rod, 18G in the fan position. Make: Richa/ Anchor/ AKG or Approved by Engineer in Charge. This box will be used as a junction box above the switch board.	19.00	EA	INR	144.00

Sl. no	Description of Work	Quantity	UOM	Currency	Rate
200	Supply and installation of 250 amp., 415v AC, 4 pole MCCB similar to Legrand cat no. 4202 19 complete with enclosure Unit, Conduit entry: 70mm at top and bottom with rubber grommet ring or knockout. Enclosure and cover shall be made from rust free MS sheet and powder coated in White/ DA Grey colour. Enclosure cover shall have neoprene gasket. One no. external earth point shall be provided in the unit. MCCB with enclosure Unit shall be fixed on wall with proper mounting arrangement. Outgoing cable and incoming cable shall be connected to the MCCB by using proper size of lugs/thimble. Lugs/ Thimble shall be crimped with proper size of Crimping tools. Make: Legrands/ Havells/ Indo Asain/ Schneider or Approved by Engineer in Charge.	1.00	EA	INR	35853.00
210	Supply, installation and wiring of 2 Module Fan Regulator 100W Make: Legrand/L&T/ or as approved by Engineer in Charge.	19.00	EA	INR	798.00
220	Supplying and installation of Surface/ recess type 20A metallic plug/ socket DB complete with 20A Plug and Socket and 20A DP RCBO, 30mA sensitivity for AC. Make: Merlin Gerin/Legrand/ Siemens/ Havells or Approved by Engineer in Charge.	11.00	EA	INR	5799.00
230	Supply, installation and wiring of Blank Plate. Make: Legrand/L&T/MK/Schelder/Crabtree or Approved by Engineer in Charge.	56.00	EA	INR	53.00
240	Earthing with G.I. earth pipe 3 metre long, 100mm dia including accessories, and providing masonry enclosure with cover plate having locking arrangement and watering pipe etc. with charcoal/coke and salt as required. Make of pipe: Jindal/Tata.	2.00	EA	INR	5649.00
250	Supplying and laying 25mm x 5mm G.I. strip at 0.50 metre below ground as strip earth electrode, including connection/ terminating with G.I. nut, bolt, spring, washer etc. as required. (Jointing shall be done by overlapping and with 2 sets of G.I. nut, bolt & spring washer spaced at 50mm.	100.00	M	INR	109.00
260	Supplying, fixing and installation of 8 Module G.I. box along with modular base and cover plate for modular switches in recess etc. as required. Fixing of 6 A switch given in point wiring and internal connection included in the item. Make of Modular item: Legrand/L&T/MK/Schneider/Crabtree or Approved by Engineer in Charge.	8.00	EA	INR	602.00

Sl. no	Description of Work	Quantity	UOM	Currency	Rate
270	Supplying, fixing and installation of 6 modules G.I. box along with modular base and cover plate for modular switches in recess etc. as required. Fixing of 6 A switch given in point wiring and internal connection included in the item. Make of Modular item: Legrand/L&T/MK/ Schneider/Crabtree/Indo-Asian or Approved by Engineer in Charge.	6.00	EA	INR	548.00
280	Supplying, fixing and installation of 4 modules G.I. box along with modular base and cover plate for modular switches in recess etc. as required. Fixing of 6 A switch given in point wiring and internal connection included in the item. Make of Modular item: Legrand/L&T/MK /Schneider /Crabtree/Indo-Asian or Approved by Engineer in Charge.	6.00	EA	INR	365.00
290	Supplying, fixing and installation of 2 modules G.I. box along with modular base and cover plate for modular switches in recess etc. as required. Fixing of 6 A switch given in point wiring and internal connection included in the item. Make of Modular item: Legrand/L&T/MK/Schneider/Crabtree/Indo-Asian or Approved by Engineer in Charge.	12.00	EA	INR	314.00
300	Supplying and fixing 4 module G.I. box with modular plate and cover in front on surface or in recess, including providing and fixing 6 pin 5/6 & 15/16 amps modular socket outlet and 15/16 amps modular switch, connection etc. as required. Make of Modular item: Legrand/L&T/MK/Schneider/Crabtree/Indo-Asian or Approved by Engineer in Charge.	35.00	EA	INR	1038.00
310	Supplying and fixing suitable size G.I. box with modular plate and cover in front on surface or recess, including providing and fixing 3 pin 5/6 amps. Modular socket outlet and 5/6 amps modular switch, connection etc. as required. Make of Modular item: Legrand/L&T/MK/Schneider/Crabtree/Indo-Asian or Approved by Engineer in Charge.	48.00	EA	INR	762.00
320	Supplying and fixing metal box of 200mm x 250mm x 60mm deep (nominal size) on surface or recess with suitable size of phenolic laminated sheet cover in front including painting etc. as required. This metal box will be used as a junction box for MCB DB. Make: Richa/AKG or equivalent.	7.00	EA	INR	230.00
330	Supply of CFL Downlighter similar to item No. 110 including lamp.	4.00	EA	INR	2110.00
340	Supply of 4x14 W Luminaire similar to Item No. 80 including lamp.	4.00	EA	INR	6610.00
350	Supply of 2x28 W Luminaire similar to Item No. 70 including lamp.	4.00	EA	INR	5890.00

Sl. no	Description of Work	Quantity	UOM	Currency	Rate
360	Supply of 1x28 W Luminaire similar to Item No. 100 including lamp.	4.00	EA	INR	970.00
370	Supply of 1x14 W Luminaire similar to Item No. 90 including lamp.	4.00	EA	INR	890.00

- **Bidder must include all liabilities including statutory liabilities in their quoted rates.**

Note: The Company's Internal Estimated Rates, as indicated in Part-II, are inclusive of all overheads, taxes, duties, levies etc. except P.F. & Service Tax.

**OIL INDIA LIMITED
(A Govt. of India Enterprise)
DULIAJAN (ASSAM)
WORKS CONTRACT**

Particular Specifications and Instructions:

DESCRIPTION OF WORK/SERVICES: Construction of new Office Building with Garage at WSS Duliajan, including electrification and supply of all materials except Cement.

A. SPECIAL CONDITION OF CONTRACT (CIVIL)

Part - A: SCOPE OF CIVIL WORK

1. GENERAL:

All materials used in the work shall conform to the latest revision of the relevant Indian Standard Specifications to the extent practicable. Where no such specifications exist they shall be of the best quality available in the market. Wherever ISI certified materials and products are available these alone shall be used. All materials shall be stored at site in accordance with IS-4082-1996.

Unless specially provided for in the contract the tendered rates shall include the cost of carriage, transport, loading, unloading and stacking as directed for all materials required on the work. Where a tender provides a rate for transport of materials, it includes for all loading, unloading and stacking on the site in such position and manner as directed. Any materials found not conforming to specification must be removed from site within 48 hours.

2. SITE CLEARANCE:

Before the earthwork is started, the area coming under cutting and/refilling shall be cleared of shrubs, vegetation, grass, uprooting of tree stumps and such others, and rubbish removed up to a distance of 50 metres outside the periphery of the area under clearance. The rate of such site clearance is included in the rate of earthwork.

3. STORAGE:

Materials shall be transported, handled and stored at site carefully to the approval of Engineer so as to prevent any damage of any kind to be kept at his own risk and cost.

Cement shall be stored in a weather proof shed, the floor of which shall be raised 300 mm clear from the ground and 600 mm away from the wall all round in order to protect from rain and moisture. Empty cement bag shall be returned to the Company in good condition.

4. CEMENT CONCRETE/ REINFRCED CEMENT CONCRETE WORK:

All C.C. work in 1:3:6 proportions shall be done with 18 mm graded down broken stone. Broken stone shall be properly screened before use. All reinforced cement concrete work to be done in prop. 1:1.5:3 unless otherwise specified -- 18mm down to 12mm graded down broken stone as per related drawings and instructions of site Engineer to be followed in case of any discrepancies. Proper vibration to be done as per IS recommendation. Floor paneling to be done in the line of expansion joint as directed by Engineer In-charge.

Fine Aggregate - Fine aggregate shall be hard, durable, clean and free from adherent coating and organic matter. It shall not contain harmful impurities such as pyrites, coal, lignite, mica, shale or similar laminated material, clay, alkali, soft fragments, sea shells and organic impurities in such quality as to affect the strength or durability of the concrete. Fine aggregate to be used for reinforced concrete shall not contain any material liable to attack the steel reinforcement. Fine aggregate which is chemically reactive with alkalis of cement is harmful as cracking of concrete may take place.

Coarse Aggregate - Coarse aggregate shall be obtained from natural sources such as stone, gravel, etc. crushed or un-crushed or a continuation thereof from approved quarries. This shall consist of coarse material most of which is retained on 4.75mm sieve. Aggregate shall be hard, strong, dense, durable, clean and free from veins and adherent coatings. It shall be free from soft, feeble, thin, elongated or laminated pieces and shall be roughly cubical in shape. It shall be clear and free from dirt and any other deleterious matter.

Reinforcement bars - The following types of steel for reinforcement shall be used in reinforced concrete construction and these shall conform to Indian Standards or as revised from time to time mentioned against each

- a. Mild steel and medium tensile steel bars and hard drawn steel wire – IS: 432.
- b. HYSD bars – IS: 1786.

Bending & Placing steel reinforcement in position-Bending shall be carried out as per relevant IS specification and direction of the Engineer-in-charge. All reinforcement bars shall be accurately placed in position with spacing and cover as shown in the drawing or as specified and firmly held so during the placing and vibrating and setting of concrete. Bars shall be thoroughly cleared of rust, seals, grease, oil and any other foreign matter before placing them in position. The overlap jointing shall be staggered. The bars shall be fixed with 22G binding wire. Precast cover blocks 1:2 (1 cement: 2sand) cement mortar 40 mm square and necessary thickness shall be used to keep the reinforcement bars in proper position. For this block, no extra payment to

be made. Wire required for binding shall not be measured separately. Tack welding shall also be permitted in lieu of building with steel wire.

Proportioning of mix - Proportioning shall be done by volume. Boxes of suitable size shall be used for measuring sand and aggregates. The size of the boxes (internal) shall be 35 x 25cm and 40cm deep. The unit of measurement for cement shall be a bag of cement weighting 50 Kg and this shall be taken as 0.035 cubic metre. While measuring the aggregate and sand the boxes shall be filled without shaking, ramming or hammering. The proportioning of sand shall be on the basis of its dry volume and in case of damp sand; allowances for bulkage shall be made.

Mixing - Mixing of reinforced cement concrete shall, as a rule be done in a mechanical mixer. However, the Engineer-in-charge may permit hand mixing in specific cases where in his opinion it is not practicable to resort to mechanical mixing, either on account of the quality of cement concrete required is small or for any other reason. In such cases, it should be ensured that the inferior quality of concrete produced by hand mixing will not adversely affect the structure.

Consistency - The quantity of water to be used for each batch containing 50 Kg of cement, to give the required consistency shall not be more than 34 litres for 1:3:6, mix 32 litres for 1:2:4 mix, 30 litres for 1:1.5:3 mix and 27 litres for 1:1:2 mix. In case of vibrated concrete, the above quantity shall be suitably reduced. The quantity of water shall be regulated by carrying out regular Slump Test.

Placing of concrete - Before placing the concrete the sub-base/form work shall be cleared of all injurious or foreign matter, watered and well consolidated. Formwork shall be clean and free from all foreign material. It is necessary that the time between mixing and placing of concrete does not exceed the initial setting process. Mixed concrete that has been left standing shall not be used after the initial set has commenced the addition of water (or cement) to make such a mixture more workable shall not be allowed. In foundation trenches or such other situations, the entire concrete used in the work shall be laid gently (not thrown) in layers not exceeding 15cm. The concrete so deposited shall be thoroughly vibrated by means of mechanical vibrators till dense concrete is obtained.

Curing - Concrete shall be carefully protected during first stage of hardening from harmful effects or excessive heat, drying winds, rain or running water and shock. After the concrete has begun to harden i.e. about 1 to 2 hours after its laying it shall be protected from quick drying with moist gunny bags or any other material approved by the Engineer-in-charge. After 24 hours of laying of concrete the surface shall be cured by flooding water up to 25mm depth or by covering with wet adsorbent materials. The curing shall be done for a minimum period of 7 days from the date of pouring of concrete, unless otherwise specified.

Finishing - In case of roof slabs the top surface shall be finished even and smooth with wooden trowel, before the concrete beings to set. The surface of RCC slab on which the cement concrete or mosaic floor is to be laid shall be roughened with brushes while the concrete is green. This shall be done carefully without disturbing the concrete. Before laying the floor, the laitance shall be removed, the surface of slab hacked and a coat of cement slurry at 2.75 Kg of cement per square metre shall be applied, so as to get a good bond between RCC and concrete floor. The exposed surface which is to receive plaster or where it is to be joined with brick masonry wall shall be properly roughened immediately after the removal of form work, taking care to remove the laitance completely without disturbing the concrete. Before the surface is plastered, it shall be cleaned and wetted so as to give good bond between concrete and plaster.

5. FORM WORK:

The formwork shall be rigid and so corrected as to retain the shape and dimensions of the member being cast. Form work for concrete shall be seasoned timber/steel or other approved materials as per directions of the Engineer. It shall be sufficiently tightened to prevent loss of cement slurry and all holes and joints shall be chaulked with putty. It shall have sufficient strength and rigidity to withstand the load of concrete, and vibrations, movement of men, materials and plants and any other incidental loads without excessive deflection beyond permissible limits. The formwork shall be so constructed as to be removable in sections by inscribing or otherwise loosening – them without hammering or levering with force. Only wedges, clamps bolts or screws etc. shall be used in preference to nails or spikes. All side pieces shall be easily removable without disturbing the bottom pieces. Where however, use of nails and spikes become unavoidable, these shall be left projecting so that they can easily be withdrawn.

Surface treatment for shuttering - Forms shall be cleaned of all dust, wood shavings, dirt and other matter by washing with water. This process is facilitated by providing draining holes in the shuttering. The surface shall then be coated with soap solution applied before concreting is done. Soap solution for the purpose shall be prepared by dissolving yellow soap in water to get consistency of paint. Alternatively a coat of raw linseed oil/refined pale paraffin mineral oil or form oil of approved manufacture may be applied. In case steel shuttering is used, soap solution or row linseed oil shall be applied after thoroughly cleaning the surface. Care shall be taken that such approved composition is kept out of contact with the reinforcement.

In normal circumstances (temperature not below 15 degree C) and where ordinary Portland cement is used form may generally be removed after the expiry of the following periods.

- a. Vertical form work to columns, walls, beams = (16-24) hours
- b. Slabs side (props left under): 3 days
- c. Beam soffits (props. left under): 7 days

- d. Removal of props under slabs
 - i. Spanning up to 4.5 m: 7 days
 - ii. Spanning over 4.5 m: 14 days
- e. Removal of props under beams and arches:
 - i. Spanning up to 6 m: 14 days
 - ii. Spanning above 6 m: 21 days

In no circumstances shall forms be struck until the concrete reaches strength of at least twice the stress to which concrete may be subjected at the time of removal of form work. All form works shall be removed without such shock or vibration as would damage the concrete. Form work for long span deep beams to be supported by MS props or Bhaluka Bamboo props as required based on the design for the formwork to take care the massive load of the green concrete.

6. **BRICKWORK:**

- a. All bricks shall be of 75 class designation quality locally available as approved by the Site Engineer.
- b. Bricks shall be of size as specified in the item of work or of nominal size where no particular size is mentioned.
- c. Bricks shall be well burnt, sound, hard with sharp edges of uniform size and shape free from cracks, stones or particles of lime and other defects, shall be kiln burnt and satisfy the following requirement:
 - i. They shall give a clear metallic sound when struck
 - ii. They shall be of uniform colour and size
 - iii. They shall not be cracked, stratified or under or over burnt
 - iv. The tolerance in dimensions shall be +/- 12mm in length, 6mm in width and 3mm in height.
 - v. Keys or frogs shall be formed on one of the larger size, except in the case of machine extruded bricks where no frogs are required
 - vi. The increase in weight when soaked in water for 24 hours shall not be more than 20% of the dry weight of the bricks.
- d. If required by the Site Engineer, necessary test shall be conducted at the contractor's expense to ensure quality. In general, the bricks shall be the best quality locally available.

Bricks used for masonry in cement mortar or composite mortar shall be thoroughly soaked in clean water for at least an hour immediately before use (The absence of bubbling when the soaked brick is immersed in water is the test for thorough soaking). The soaked bricks shall be kept on a platform free from dirt, mud or any foreign element. Bricks shall be laid in English bond unless otherwise specified. Care must be taken that the bricks are perfectly clean and free from lime, moss or dirt of any kind. If necessary they must be scrubbed before use. Half or cut bricks shall be not used except for closures which may be required to complete the bond. It shall be ensured that all horizontal and vertical joints are completely filled with mortars without any void in brickwork. Brickwork shall be raised truly plum (or true to

required better where so specified). All courses shall be laid truly horizontal. Vertical joints shall be truly vertical and those in alternate courses shall be in the same vertical line. The thickness of brick courses shall be uniform. Great care must be taken to masonry in progress of construction damp. When work is left off for the day troughs shall be formed, by means of fillets of mortar 51mm high all-round the unfinished work and shall be kept filled with water. Vertical or inclined surfaces must be frequently watered from a rose headed can. Water should not be dashed with violence against new work as this washes out the mortar. Should the work be delayed owing to holidays or for other reason, the contractor must make adequate arrangements for keeping the work wetted, and shall continue to do so for at least ten days or such longer time as directed, after the brickwork has been completed.

- a. Brick work in cement mortar with 75 designation brick including racking out joints and curing complete as directed, in sub structure and superstructure in mortar of specified proportion.
- b. 115mm thick 75 designation brick nogged wall in cement mortar embedded with protruding M.S. rod 6mm dia in column including racking out joint and curing complete as directed in super structure above plinth in proportion as specified.

7. CEMENT MORTAR:

- a. Must be freshly mixed: Cement mortar will only be mixed in such quantities as can be used up on the work within half an hour of mixing. Mortar which has been mixed longer or which has taken its initial set will on no account be used on the work or remixed with fresh mortar. It must be immediately removed from the site or work.
- b. Method of mixing: The cement and sand will be mixed dry in the specified proportions, by turning over at least three times on the mixing platform. Only sufficient water will then be added, thorough a rose of a watering can, to produce a workable mixture. The wet mortar will be thoroughly worked or mixed by repeatedly turning over, not less than three times on the mixing board.
- c. Size of mixing platform and precaution against list : All mixing of mortar must be done on platforms of angle size and workman bringing the material to and from the platform must not be permitted to walk about on it, thereby bringing mud or dirt to the place, where the mortar is being mixed. The platform must be clean and level and all joints closed or filled so that the cement is not washed out.
- d. Proportion of cement and sand: Where not otherwise specified, cement mortar for plaster will consist of one part of cement to two parts of sand. For mortar for brick or stone masonry work the proportion unless otherwise specified, will be one part of cement to three parts sand

8. WOOD WORK:

The work shall be carried out as per detailed drawings and/or as directed by the Engineer-in-charge. The wooden members of the frame shall be planed smooth and

accurate to the full dimensions. Rebates, rounding, moldings etc. as shown in the drawing shall be done before the members are joined into frames. Timber will be 1st class seasoned as approved by the Engineer-in-charge.

Jointing - Jointing in timber frames must be made carefully and accurately. They shall be strong, neat and shall fit without wedging or filling. The joints shall be pinned with hard wood 10 to 15mm dia after the members of the frame are pressed together in a suitable vice-mechanism.

Surface treatment - Woodwork shall be painted, oiled, polished or otherwise treated as specified. All portions of timber abutting against masonry or concrete portion of building shall be coated with boiling coat tar or other type of approved wood preservative or primer, before placing them in final position.

Hold fasts - Hold fasts used for fixing doors and window frame shall be made of 40 x 3mm flat iron long. It shall have a hole on one end for fixing to frame with 10mm dia bolt, at the other end the flat iron shall be split and bent at right angles in the opposite direction. The hold fast shall be tightly fixed to the frame by means of bolts, the bolt hole in frame being plugged suitably and finished neat. The hole fast shall be embedded into masonry by concrete block as described in the item of work.

9. **DOORS:**

- a. The flush door shutters (solid core type) decorative and non-decorative type shall conform to IS: 202 (Part I). The door should be fixed using 4 nos. of hinges 125mm long ensuring that the hinges are not fixed less than 150mm from the edges with 8 nos. parallel sunk fully threaded screws 38mm long, should be used for fixing the hinges to the flush door after drilling a pilot hole 2.50mm dia 40mm long. Screws should not be hammered. Lock, tower bolts etc. necessary, if any to be paid separately.
- b. Door frame (Chowkaths) of door, windows, other similar works wrought, framed and fixed in position in contact with C.C. or brick masonry walls including supplying, fitting and fixing with M.S. flat hold fast (40mm x 3mm x 250mm) as per design and embedded in cement concrete block in prop 1:2:4 and with two coats of kiricide oiling to the timber faces in contact with C.C. and masonry as directed and specified.

10. **STEEL DOORS, WINDOWS AND VENTILATORS:**

The type, over all sizes, side opening position of steel doors, windows and ventilators shall be specified as per details given in IS: 1038, specification for steel doors, windows and ventilators. Both the fixed and opening frames shall be constructed of sections, which have been cut to length and mitred. The corners of fixed and opening frames shall be electrically flash butt welded to form a solid and true right angle and all frames shall be square and flat.

Side-hung shutter windows – Window shutters shall be hung on projecting type hinges (not less than 65mm and not more than 75mm wide). One leaf of the hinge shall be welded into a slot in the outer frame and the other leaf of the hinge riveted to the opening shutters. Friction hinges may be provided for side-hung shutter windows in which case peg-stay may not be required. In cases where non-friction type hinges are provided, the windows shall be fitted with peg-stays, which shall be either of hot pressed brass, cast brass; Aluminium or steel protected against rusting and shall be 300mm long with steel peg and locking bracket. The peg stay shall have three holes to open the side hung casements in three different angles.

Top Hung Ventilators – The steel butt hinges for top hung ventilators shall be riveted to the fixed frame or welded to it after cutting a slot in it. Hinges to the opening frame shall be riveted or welded and cleaned off. Top hung casements shall be provided with a peg stay three holes which when closed shall be held tightly by the locking bracket. The locking bracket shall either be fitted to the fixed frames or to the window.

Glazing of metal doors, windows and ventilators - Doors and windows shall normally be glazed with glazing putty on unless otherwise specified. Putty shall be applied between glass panes and glazing bars. Putty shall be applied over the glass panes, which shall stop 2 to 3mm from the sight line of the back rebate to enable the painting to be done up to the sight line, to seal the edge of the putty to the glass. The oozed out back putty shall be cleaned and cut to straight line.

11. **PLASTER WORK:**

- a. Preparation of surface: All putlog holes in brick work and junction between concrete and brick work shall be properly filled in advance. Joints in brick work shall be raked about 10mm and concrete surface hacked to provide grip to the plaster. Projecting burrs of mortar formed due to gaps at joints in shuttering shall be removed. The surface shall be scrubbed clean with wire brush/coil brush to remove dirt, dust etc. and the surface thoroughly washed with clean water to remove efflorescence, grease and oil etc. and shall be kept wet for a minimum of six hours before application of plaster.
- b. Proportion: The cement plaster shall be in specified proportion of cement and sand.
- c. Mixing: The cement and sand should be thoroughly mixed in dry condition. After dry mixing the materials shall be wetted with just sufficient water to bring the mortar to proper consistency of thick paste. Mortar should be used immediately after mixing and arrangements shall be made so that not more than 30 minutes elapse between the cement first coming in contact with the moisture and laying. In all exterior plaster works waterproofing compound to be added to the mortar as per the specification of the manufacturer, if not indicated in the item rate quoted should be inclusive of the same.

- d. Placing: Plaster shall be laid over the prepared surface in one coat to the specified thickness and rubbed with "PATAS" and trowel and shall be smooth, free from waviness and trowel marks.
- e. Sequence of operations: For external plaster, the plastering operations shall be started from the top floor and carried downwards. For internal plaster, the plastering operations may be started wherever the building frame and cladding work are ready and the temporary supports of the ceiling resting on the wall or the floor have been removed.
- f. Curing: Each coat shall be kept damp continuously till the next coat is applied or for a minimum period of 7 days. Moistening shall commence as soon as plaster is hardened sufficiently. Soaking of walls shall be avoided and only as much water as can be readily absorbed shall be used.

12. DAMP PROOFING COURSE:

It shall consist of 1:1.5:3 plain cement concrete with approved water proofing materials such as cico, impermo etc. of specified thickness. Edges of DPC shall be straight, even and vertical side shuttering shall consist of wooden or steel forms and shall be strong and properly fixed so that it is not disturbed during compaction and mortar or cement slurry does not leak through. When forms are struck the surface should be smooth without any honeycombing. The surface shall be kept wet for seven days. Before commencing the superstructure work, the top of concrete course shall be dried and cleaned of all materials. Blown type bitumen shall then be applied uniformly on the surface and the side of the concrete coming in contact with flooring on the inside shall also be painted with bitumen.

13. WASHABLE DISTEMPER/OIL BOUND DISTEMPER/PLASTIC EMULSION PAINTING:

Preparation of surfaces: The surface shall be thoroughly brushed free from dust, dirt, grease, mortar droppings and other foreign matter and sand papered smooth. Thereafter a smooth surface shall be prepared by applying putty, made of plaster of Paris mixed with water on the entire surface including filling up the undulation and then sand papering the same after it is dry.

Primer coat: The primer where used as on undecorated surfaces shall be alkali resistance primer or acrylic based cement primer as specified in the item. These shall be of the same manufacture as oil bound distemper/ plastic emulsion paint. If the wall surface plaster has not dried completely alkali resistance primer shall be applied before distempering the walls. But if the distempering is done after the wall surface is dried completely, cement primer shall be applied.

Application of distemper/plastic paint coat: For undecorated surfaces, after the primer coat has dried for at least 48 hours, the surface shall be lightly sand papered to make it smooth for receiving the distemper/plastic paint taking care not to rub out the priming coat. All loose particles shall be dusted off after rubbing. Minimum two

coats of distemper/plastic paint shall be applied with brushes in horizontal strokes followed immediately by vertical, which together shall constitute one coat. The subsequent coats shall be applied after a time interval of at least 24 hours between consecutive coats to permit of the proper drying of the preceding coat. For decorated surfaces, the distemper/plastic paint shall be applied in two coats or more over the prepared surface in the same manner as for undecorated surfaces.

Purchase of paint, varnish or oil: Only the best brands obtainable will be used and should the contract permit the contractor to supply any paint, oil or varnish he shall purchase only such brands as the Site Engineer shall approve of in writing. All purchases must be made direct from the manufacturers or through an agent approved of in writing by the Site Engineer. Should the Site Engineer so direct copies of all indents and receipts for purchase must be submitted for inspection. Paint etc. to be purchased in sealed containers. All paints, oil or varnishes supplied by the contractor must be produced for the inspection of the Site Engineer of the work in the manufacturers sealed and unopened containers. All containers from which the contents have been removed and are not required on the work must be destroyed and no extra payment will be granted for such destruction. Only ready mixed or varnished of the make or brand specified will be permitted to be used exactly as received from the manufacturer without any admixture what so ever unless previously authorised, in writing, by the Site Engineer.

14. SYNTHETIC ENAMEL PAINT:

Preparation of surface: The surfaces before painting shall be cleaned of all rust, scale, dirt and other foreign matter sticking to it with wire brushes, steel wool in case of steel surfaces and sand papering in case of wooden surfaces. Thereafter, one coat approved primer paint will be applied on the surface. Synthetic enamel paint (Superior quality as approved) shall be applied – two or more coats to give an even shade.

15. FILLING EXCAVATED EARTH IN FOUNDATION TRENCHES AND PLINTH OR UNDER FLOORS:

As soon as the work in foundation has been completed and measured, the sides of foundations shall be cleared of all debris, bricks bats, mortar dropping etc. and filled with earth in layers not exceeding 30cms, each layer shall be adequately watered, rammed and consolidated before the succeeding one is laid. Earth shall be rammed with iron rammers where feasible, and with the butt ends crowbars where rammer cannot be use.

The plinth shall be similarly filled with earth in layers not exceeding 30cms, adequately watered and consolidated by ramming with iron or wooden rammers. When filling reaches the finished level, the surface shall be flooded with water for at least 24 hours, allowed to dry and then rammed and consolidated, in order to avoid any settlement at a later stage.

Sand filling in plinth: Sand shall be clean and free from dust, organic and other foreign matter. Sand filling shall be done in a manner similar to earth filling in plinth. Concreting of floor shall not be started till the Engineer-in-charge has inspected and approved the filling.

16. CERAMIC TILE FLOORING/SKIRTING:

- a. Preparing of Plinth Filling: All plinth fillings shall be properly consolidated in layers, watered, rammed and allowed to consolidate to the Site Engineer's satisfaction before any flooring is laid. When the flooring is to be laid over a foundation of sand, broken stone, brick or a combination of sand and broken stone or brick the filling shall be removed to a depth equal to the thickness of the flooring plus such foundation layers.
- b. Foundations:
 - i. Sub-layer of sand : After the plinth filling has been prepared as detailed in specification above a sublayer of sand 300mm deep shall be laid watered and brought to an even surface.
 - ii. Layer of broken stone or brick: Over the sand a foundation course of bricks shall be laid and the interstices filled in with sand. The bricks shall be tightly packed and laid so as to break joint.
- c. Tile floors:
 - i. Foundation and cement floating under tiles: Over the foundation as in (b) above 2 coats of cement plaster, 1part of cement to 1 part of sand, prepared in a very liquid condition will be floated over it and allowed to set.
 - ii. Laying: After the tiles have been soaked in water for at least two hours and the cement foundation sprinkled with water, laying work may commence and shall start from the centre of the room or area to be tiled, work being continued in both directions so that borders are laid last. A layer of 20mm thick (average) cement mortar: 1:4 (1 cement: 4 sand) (unless otherwise specified) shall be provided as bedding for the tiles. Each tile will be laid in and drawn up in neat cement of honey like consistency at 4.40 Kg of cement per sqm, care being taken to exclude air bubbles. Threads shall be stretched across the surface, at intervals, parallel to the short sides of the area to be tiled to serve as guide lines. Each tile being gently tapped with a wooden mallet till it is properly bedded. The joints shall be grouted with white cement and matching pigment complete. The surface of the flooring shall be checked frequently with a straight edge so as to obtain a true surface with slope, if required. At position where full tiles cannot be fixed, the tiles shall be cut to size and smoothened to give straight and true joints.
 - iii. Cleaning: After a small area has been laid all superfluous cement will be wiped off the surface. Stains shall be removed by moistening with hydrochloric acid and rubbing with pumice stone and afterwards washing with warm water.

- iv. Curing: The floor shall be kept wet for a minimum of 7 days so that bedding and joints set properly.

17. MARBLE STONE FLOOR:

Each stone slab be cut to the required size, the overall dimension of each slab to be laid on floors shall not be less than 1.00 sqm and fine chisel dressed to give a smooth and even surface on all sides. A layer of 20mm thick (average) cement mortar 1:4 shall be provided as bedding for the marble slab.

Laying – Sub grade shall be cleaned, wetted and mopped. Mortar of the specified mix and thickness shall then be spread on an area sufficient to receive one marble slab. The slab shall be washed clean before laying. It shall be laid on top, pressed, and tapped gently to bring it in level with the other slabs. It shall then be lifted and laid aside. Top surface of the mortar shall then be corrected by adding fresh mortar at hollows or depressions. The mortar is then allowed to harden a bit. Over this surface, cement slurry of honey like consistency at 4.4 Kg of cement per square metre. The edges of the slabs already paved shall be buttered with grey or white cement with or without pigment to match the shade of the marble slabs as given in the description of item. The slab shall then be gently placed in position and tapped with wooden mallet till it is properly bedded in level with and close to the adjoining slab. The joint shall be as fine as possible. Surplus cement on the surface of the slab shall be removed.

Curing – The floor shall be cured for a minimum of 7 days.

Polishing – The marble stone slab shall be grinded by hand or machine to a fine polish.

18. PLINTH PROTECTION AND STORM WATER DRAIN:

Plinth protection and storm water drain shall be provided along the outer periphery of the building as per drawing and with PCC (1:3:6) over bricks flat laid in CM 1:4 and finished with 15mm thick cement plaster in prop. 1:2 with floating coat of neat cement finish.

19. SANITARY, PLUMBING WORKS AND WATER SUPPLY FITTINGS & FIXTURES:

All sanitary, plumbing and water supply fittings and fixtures shall conform to the specifications and particular make specified in the items of work and direction of Engineer-in-charge. All waste and soil pipes and fixtures shall conform to IS specifications and shall be jointed as specified.

- a. Indian/European W.C. with PVC flushing cistern as per drawing & specification.
- b. Wash basin and urinal pan at toilet as per drawing & specification. Wash basins to be provided with C.I. brackets.
- c. Providing soap tray in the toilet.
- d. Rain water pipe as per drawing & specification
- e. Gully trap
- f. Inspection chambers, manholes, septic tanks, drainage pipes etc. as per drawings.

- g. Medium class GI pipes with all GI fittings clamps and specials etc. for water supply lines 25mm, 20mm & 15mm.
- h. Concealed PE-AL-PE pipes for water supply.

20. P/F PRE PAINTED GALVALUME/GALVANISED SHEET ROOFING:

Pre Painted Galvalume Sheet at all levels shall be fitted and fixed with self-drilling, self-tapping screws complete (roof trusses, purlins to be measured and paid separately) of make Dyna roof/sathyam/century wells and of thickness as specified in the respective items. Preferably it shall be carried out by a reputed party.

21. ANODISED ALUMINIUM WORKS:

Aluminium sections used for fixed/openable windows, ventilators, partitions, frame work & doors etc. shall be suitable for use to meet architectural designs to relevant works and shall be subject to approval of the Engineer-in-Charge for technical, structural, functional and visual considerations. The aluminium extruded sections shall conform to IS 733 and IS 1285 for chemical composition and mechanical properties. The stainless steel screws shall be of grade AISI 304.

The permissible dimensional tolerances of the extruded sections shall be as per IS 6477 and shall be such as not to impair the proper and smooth functioning/operation and appearance of door and windows. Aluminium glazed doors, windows etc. shall be of sizes, sections and details as shown in the drawings. The details shown in the drawings may be varied slightly to suit the standards adopted by the manufacturers of the Aluminium work, with the approval of Engineer-in-Charge. Before proceeding with any fabrication work, the contractor shall prepare and submit, complete fabrication and installation drawings for each type of glazing doors, windows, ventilators and partition etc. for the approval of the Engineer-in-Charge. If the sections are varied, the contractor shall obtain prior approval of Engineer-in-Charge and nothing extra shall be paid on this account.

22. ALUMINIUM CLADDING WORKS:

Aluminium cladding work shall comprise of designing, providing and fixing composite panel 4 mm thick 35 microns DFT, PVDF coated Aluminium cladding of Alucobond / Alucomat or equivalent make of approved shade and colour for external wall either segmental curved or straight in plan, around corners and wherever else specified fixed to masonry / concrete with extruded Aluminium " U " sections, angle cleats Silicon weather sealants, rivets, brackets, plastic board for the cladding to either masonry or concrete as required, including all necessary accessories etc. and as directed by the Engineer-in-charge complete as per detailed fabrication drawings to be approved by Engineer-In-Charge.

Pre-laminated Particle Board

A particles board laminated on both surfaces by synthetic resin impregnated base papers under heat and pressure. Pre-laminated particle boards shall be of two grades, namely, Grade I and II corresponding to IS 3087 & 12823.

EPDM- GASKETS

The EPDM Gaskets shall be of size and profile as shown in drawings and as called for, to render the glazing, doors, windows, ventilators etc. air and water tight. Samples of gaskets shall be submitted for approval and the EPDM gasket approved by Engineer-in-Charge shall only be used.

SEALANT

The sealants of approved grade and colour shall only be used. The silicone for perimeter joints (between Aluminum section and RCC/Stone masonry) shall be of make approved by the Engineer in Charge.

PE-AL-PE PIPES

The PE-AL-PE pipes are bonded, multilayer pipes consisting of metal Aluminium and Polyethylene i.e. metallic pipe bonded with adhesive both internally and externally by polyethylene coating. The layers of PE-AL-PE pipes are:-

- a. The interior layer of polyethylene
- b. The adhesive layer
- c. Aluminium tube
- d. The adhesive layer
- e. The external layer of polyethylene

Polyethylene composite pressure pipes have welded Aluminium tube reinforcement between inner and outer polyethylene layers, inner and outer polyethylene layer being bonded to Aluminium tube by melt adhesive and are manufactured as per IS 15450 The specially manufactured compression joints fittings should be used for PE-AL-PE pipes which are available in 3 types i.e. brass, composite and composite external sealing. Either of these fittings should be used.

Jointing

While jointing PE-AL-PE pipes, following steps are required to be taken to ensure a leak proof and strong pipe joint:-

- a. Cut the pipe square by cutter to the required and proper length.
- b. Select the fitting to be used and dismantle its nuts and split rings.
- c. Place the nut and split ring over the pipe. Ensure that 'O' rings are in proper position of insert.
- d. Prepare the end of pipe to be jointed for roundness and chamfer by using beveling tool. Push the pipe over the insert and inside the support groove fully.
- e. Push the split ring and nut towards connector till split ring touches the support groove.

- f. Tighten the nut over connector with spanner.

If the joints are required to be dismantled for any reason, the 'O' ring and split ring should be inspected before reassembling the joint for any damage. If any ring is found damaged, the same should be replaced. All other components can be reused. The joint sealing with fittings is done by silicone rubber ring. No thread sealing is involved. Tightening of the nuts is required only for compressing the split ring over the pipe, hence excessive tightening of the nuts is to be avoided. In case threading is required for fixing valves.

Only Teflon Tape should be used on threads. While for fittings, specially designed rubber "Seal" should be used. For pressure testing the pipeline system, specially designed test plugs are to be used in female thread elbows instead of ordinary GI nipples with MS plugs before covering the pipes in chases.

23. **ANTITERMITE TREATMENT (IS 6313):**

Injecting chemical emulsion of Chlorpyriphosemulsifiable concentrates 20% with 1% concentration for pre-construction anti-termite treatment and creating a continuous chemical barrier under and all-round the column pits, trenches, top surface of plinth filling, junction of walls and floor along the external perimeter of building expansion joints, surroundings of pipes and conduits etc. complete as per specification (plinth area of the building at ground floor only shall be measured for payment) and to be executed by reputed party.

24. **MANDATORY TESTS:**

The various mandatory tests shall be carried out by the contractor and no separate payment shall be made unless otherwise specified in the schedule of rates. Following tests /test certificate to be produced by the contractor at his own cost as and when directed by the Engineer-in-charge.

- a. Water for construction and curing to be tested before use ('PH' value should not be less than 6.)
- b. Cube test for RCC to be done as per relevant is code of practice IS 456-2000.
- c. Test certificate for steel materials, M.S. rod, Torsteel should be produced.
- d. T.P. challan/procurement challan for timber and forest produce used shall be produced.
- e. Brick test as per BIS 1077 and BIS 3495 (part 1 and 2)
- f. Any other tests as per the direction of Engineer-in-charge.

25. **MEASUREMENT & PAYMENT:**

Payment for all works done shall be made on the basis of actual work done as per the schedule of rates. For all extra work done on the advice of the Company's Engineer and which is not included in the schedule of rates, deviation order for the same shall be made on the rates as decided by the Company's Engineer.

26. SAFETY MEASURE:

Safety measure as per OIL regulations shall be strictly adhered to by the Contractor. Safety belts and other measure taken by the Contractors shall be borne by the Contractor. If any loss or damage caused to life during the erection and execution, the contractor shall be fully responsible for the loss.

27. RECORD KEEPING:

- a. A site order book will be maintained at site which will be in the custody of the Engineer-in-charge or his representative and all instructions given to the Contractor will be recorded in the site order book and the same has to be signed by the contractor to comply with the instruction given therein.
- b. A register to be maintained at site which will be in the custody of the Engineer-in-charge or his representative to maintain the records of cement the same has to be signed by the contractor
- c. A separate register to be maintained at site by the contractor to record the works executed and remarks columns to be added in this to record the hindrance.

28. AMBIGUITY/CONFLICT:

In case of any ambiguity/conflict among various documents the decision of Engineer-in-charge will be final and binding.

29. CONTRACTOR'S GODOWN

The contractor must make adequate arrangement as directed by the Engineer-in-Charge, for the storage in suitable godown of all perishable materials such as cement. On no account may cement be stacked on the ground either in or outside godown. The contractor shall also construct a temporary office at site, before start the execution of work at site, as directed by the Engineer- in charge.

30. SITE BOOKS & RECORDS:

- a. A site order book will be maintained at site which will be in the custody of the Engineer-in-charge or his representative and all instructions given to the Contractor will be recorded in the site order book and the same has to be signed by the contractor to comply with the instruction given therein.
- b. A register to be maintained at site which will be in the custody of the Engineer-in-charge or his representative to maintain the records of cement the same has to be signed by the contractor
- c. A separate register to be maintained at site by the contractor to record the works executed and a remarks column to be added in this to record the hindrance.

31. SPECIAL INSTRUCTION TO THE CONTRACTOR:

- a. Contractor must use mixture machine and vibrator for the RCC works. The Contractor shall use pump if needed for dewatering for excavation job for which no extra payment will be made.

- b. Watch and ward, loss or damage to Company's property, theft and other incidental charges shall be Contractor's responsibility.
- c. Efficient workmen to be engaged by the Contractor.
- d. The Contractor's representative should report to Engineer-in charge on all working day's at 7.00AM for instruction.
- e. Materials if rejected should be removed from site within 48(forty eight) hours of rejection, failing which the company reserves the right to get the rejected materials removed at the risk and cost of the contractor.
- f. The Company reserves the right to get the part or whole work completed through other agency at the risk and cost of the contractor if he fails to complete the work within the stipulated time without any valid reasons. The Company's decision shall be final and binding on the Contractor.
- g. The Contractor shall obtain labour clearance within seven day's of signing the contract.
- h. Water that may accumulate on the site during progress of the works or in trenches and excavation from other than accepted risks shall be removed from the site to the satisfaction of the Engineer-in-charge and at the Contractor's expense.
- i. If needed water and electricity will have to be arranged by the Contractor at his own cost. However, if felt, the same may be provided by Co. on Chargeable basis depending on its availability & approved by the Competent authority.
- j. The Contractor and his workmen have to strictly observe the safety precautionary rules as per Mines Act. (Latest edition) while executing the work.
- k. No road closure will be allowed during execution of work and necessary traffic signal/road boards to be displayed at proper place by the Contractor at his own cost. The Contractor shall be wholly responsible for any accident arising out of non-fulfilment of this condition.
- l. The Contractor will be required to work expeditiously at the site and must visit the site before tendering.
- m. Welding and cutting sets with fuel & operator, welder, fitter etc. shall be arranged by the Contractor at his cost at site for fabrication and erection work.
- n. Hot and Cold permit, Gas leakage testing certificate issued by the Concerned Department to be submitted by the contractor(whenever applicable) to Engineer-in-Charge before starting of dismantling or the other execution of job.
- o. The contractor must engage at least one or as mentioned in the Contracts Agreement qualified Technical personal (Preferable BE/B Tech in Civil Engineering with minimum 5 years' experience or diploma in Civil Engineering with minimum 10 years' experience) for the overall execution of the job and the complete bio-data of the person should be submitted to the engineer in charge within 7 days of the signing of the Contract agreement. In case the contractor does not deploy qualified technical person as mentioned above, the company has right to penalize the contractor at a rate decided by the company
- p. The contractor must submit a work plan in bar chart for the overall job to complete it within 14 days of issuing of work order.

B. PART-B (ELECTRICAL)**SPECIAL CONDITION OF CONTRACT (FOR ELECTRIFICATION WORKS FOR WSS OFFICE BUILDING)****1. GENERAL:**

- 1.1 Special conditions of contract shall be read in conjunction with the General Conditions of Contract, Schedule of Quantities specifications of work, drawings and any other document forming part of this contract wherever the context so requires.
- 1.2 Notwithstanding the sub-division of the documents into these separate sections and volumes, every part of each shall be deemed to be supplementary of every other part and shall be read with and into the contract so far as it may be practicable to do so.
- 1.3 Where any portion of the General Conditions of contract is repugnant to or at variance with any provisions of the Special conditions of Contract, then unless different intention appears, the provisions of the Special Conditions of Contract shall be deemed to override the provision(s) of General Conditions of Contract only to the extent that such repugnance or variance cannot be reconciled with the tender conditions of contract and shall be to the extent of such repugnance of variations, prevail; it being understood that the provisions of General Conditions of Contract shall otherwise prevail.
- 1.4 Wherever it is stated anywhere in this tender document that such and such a supply is to be effected or such and such a work is to be carried out, it shall be understood that the same shall be effected/carried out by the contractor at his own cost, unless a different intention is specifically and expressly stated herein or otherwise explicit from the context.
- 1.5 The materials, design and workmanship shall satisfy the relevant Indian Standards, the job specifications contained herein & codes referred to. Where the job specifications stipulate requirements in addition to those contained in the standard codes and specifications, these additional requirements shall also be satisfied. In the absence of any Standard/Specifications/Codes of practice for detailed specifications covering any part of the work covered in this tender, the instructions/directions of Company will be binding on the Contractor.
- 1.6 The items given under Bill of Quantity shall be read in conjunction with scope of work, scope of supply (by Company as well as by Contractor) and job specifications and in case of any irreconcilable conflict between them the provision in the item under "Bill of Quantity" will override the corresponding

provision only if the scope of work, scope of supply and job specifications, which cannot be reconciled in such cases the decision of Company shall be final and binding on the contractor.

1.7 In case of contradiction between Indian Standards, General Conditions of Contract, Special Conditions of contract, Specifications Drawings, Bill of Quantity, the following shall prevail in order of precedence.

- i. Letter of intent / Detailed Letter of intent along with statement of Agreed Variations and its enclosures.
- ii. Bill of Quantity.
- iii. Special Conditions of Contract.
- iv. Job specifications/
- v. Drawings
- vi. General Condition of contract
- vii. Indian Standard/Technical/Material Specifications.

2. LOCATION OF SITE AND SITE PARTICULARS:

2.1 The site of work is located at WSS , OIL INDIA LIMITED, DULIAJAN

2.2 The intending Bidder shall be deemed to have visited the site and familiarized himself thoroughly with the site conditions job details before submitting the tender. Non familiarity with the site conditions will not be considered a reason either for extra claims or for not carrying out the work in strict conformity with the drawings and specifications.

3. STATUTORY REQUIREMENT FOR WORK:

- 3.1 The contractor should have valid Electrical Contractor License issued or recognized by Licensing Board, Govt. of Assam. In case license expires during contract period the same shall be renewed by the contractor. The contract shall be terminated if the license is not renewed if required.
- 3.2 Contractor shall employ work persons with valid wireman license issued by Licensing Board, Govt. of Assam to carry out all electrical jobs and shall employ one supervisor holding valid supervisor's competency certificate recognized by Govt. of Assam for supervision of electrical jobs.
- 3.3 Quality of jobs carryout by the Contractor shall be very high standard and should be as per the norms of BIS, NEC or other electrical standards recognized by the company.
- 3.4 The contractor should have (within last seven years) minimum experience of two years without any break in between for execution of office building electrification including three phase wiring system.

4. POWER:

Electricity required for wiring purpose shall be arranged by the contractor. However, electricity may be provided by the Company to use drilling machine or any other

portable tools required for wiring purposes if available at nearest point on chargeable basis. Then the Contractor shall have to arrange for required switch board with proper safety device like RCBO, MCCB / MCBs to take power from the existing source.

5. TIME SCHEDULE:

- 5.1 The works shall be executed strictly as per the time schedule specified in the Tender.

6. SCOPE OF SUPPLY:

Company does not envisage supplying any material for this work & contractor has to arrange all materials at his own & the rates quoted shall deem to include the same.

7. SCOPE OF WORK:

Brief details of work to be carried out by the contractor are as described below. This will include supply storage laying, installation, jointing and testing, obtaining approvals, testing and commissioning and completion of different works. The work shall be carried out as described in Bill of Quantities (BOQ), specifications, and drawings, BIS / NEC guidelines and as per the instructions by Engineer-in-charge (electrical), of the Company.

The scope of work shall cover complete electrification works of the office. All wiring shall be done through conceal mode. The board items/activities covered under internal electrical works shall include the followings:

- i. Point wiring of all lights points, Ceiling fan points, and exhaust fan points.
- ii. Light plug points, general power points, metal clad plug & socked outlet points etc. including light and power accessories etc. complete in all respects.
- iii. All concealed wiring shall be through ISI marked Medium duty PVC conduit through beams, columns roof, floors etc. and all surface wiring shall be through ISI marked casing-capping.
- iv. Cables from Main Distribution Board to Sub Distribution Board, sub main wiring from main/sub distribution boards to various final distribution boards.
- v. HDPE/GI pipes for cables and other items required to complete with re-electrification work in all respects.
- vi. Main Distribution Boards, Sub-Main Distribution Boards and Sub Distribution Boards.
- vii. Light fixtures, and exhaust fans.
- viii. Earthing of all Main CFS, Main DBs and SUB DBs etc. complete in all respects.
- ix. To prepare Layout and working drawings submission drawings and completion drawings for all systems to be executed.

- x. To obtain clearances, approvals etc. from Electrical Inspector to State Govt., Electricity Supply Company, Pollution Control Department and or any other statutory authority as may be applicable / required.

8. SCHEDULE OF QUANTITIES/RATE:

- 8.1 The quantities shown against the various items are only approximate and may vary to any extent individually subject to relevant clause of General Conditions of Contract. Any increase or decrease in the quantities shall not form the basis for alteration of rates quoted and accepted including where low/high rates have been quoted by the successful Tenderer.
- 8.2 The Engineer in charge reserves the rights to interpolate or extrapolate the rate for any new item of work not finding a place in the Bill of Quantity, for similar items of lower and or higher magnitude available in the Bill of Quantity.
- 8.3 In case any activity though specifically not covered in Bill of Quantity description but the same of covered under scope of work/spec./drawing etc. no extra claim on this account shall be entertained.

9. PRICE VARIATION:

Owner require "FIRM PRICES" as indicated in General Conditions or Contract during Contract period and no material or labour escalation shall admissible on any account whatsoever. It is to be noted that no deviation on contract period requirements in this connection will be acceptable.

10. MEASUREMENTS, BILLING & TERMS OF PAYMENT:

All works shall be measured in metric system based on actual work done as per the terms and conditions of the Tender documents. Running Accounts bills based on Bill of Quantity shall be prepared and submitted based on joint measurements.

11. FINAL BILL:

The final bill shall be submitted by the Contractor 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 Company 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 Company, will as far as possible be made within 6 months, the period being reckoned from the date of receipt of the bill by the Company, complete with no claim and no dues by contractor, No Objection Certificate from labour officer and all completion documents including material consumption statement.

12. DEDUCTIONS FOR INCORRECT WORK:

If, the Engineer-in-charge(Electrical) deems it expedient to correct work damaged or not done in accordance with the contract, an equitable deduction from the contract price shall be made thereof and the decision of the Owner shall be final.

13. CONTRACT DRAWINGS:

Contractor has to prepare all working drawings mentioned below and obtain approval from the engineer in charge (Electrical) before starting the Civil work starts so that piping works for wiring job does not suffer due to non-approval of the working drawings:

- a) Layout diagram of complete conduit job for concealed wiring showing route for wiring from DB to sub-DB, sub-DB to Switch Board, Light and ceiling positions etc.
- b) Schematic diagram for complete electrical work.
- c) The contract shall keep at least one copy each of drawings, conditions of contract, specifications, instructions and schedule of quantities at the site of works available for reference by any authorized representative Engineer-in-charge(Electrical), at all times during the progress of the works.

14. COMPLETION DOCUMENTS:

The contractor shall submit 4 copies of as built layout drawings to the Owner after completion of the work. These complete drawings shall give the following information:

- a) Layout of all equipment, switch boards, DB's etc.
- b) Operation & Maintenance Manuals for all equipment.
- c) Manufacturers test report & data sheets for equipment's if any.
- d) Layout of lighting & power wiring, UPS wiring Etc.
- e) Location of DB's, Sub-mains, cables & earthing.
- f) Junction boxes.
- g) Cable schedule, DB Charts
- h) Schematic diagram for overall electrical distribution duly laminated
- i) GA & schematic MV Panel Distribution Boards UPS etc.

C. TECHNICAL SPECIFICATIONS CHAPTER -1**TECHNICAL REQUIREMENTS & MEASUREMENT SYSTEM****1. SCOPE:**

This chapter covers the general technical requirements and measurement system of the various components in Internal Electrical Installation works.

1.1 TERMINOLOGY:

1.1.1 The definition of terms shall be in accordance with 18:732-1989 (Indian Standard Code of Practice for Electrical Wiring), except for the definitions of point, circuit, and sub-main wiring, which are defined in clauses 2.2.1, 2.3.1, and 2.3.2 hereunder.

1.2 **POINT WIRING:**

1.2.1 Definition of Point wiring:

A point (other than socket outlet point) shall include all work necessary in complete wiring to the following outlets from the controlling switch or MCB.

- a) Ceiling rose or connector (in the case of points for ceiling/exhaust fan points, prewired light fittings, and call bells).
- b) Ceiling rose (in case of pendants except stiff pendants).
- c) Back plate (in the case of stiff pendants).
- d) Lamp holder (in the case of goose neck type wall brackets, batten holders and fittings which are not prewired).

1.2.2 Scope:

Following shall be deemed to be included in point wiring.

- Conduit /Casing -capping, accessories for the same and wiring cables between the switch box and the point outlet.
- All fixing accessories such as screws, rawl plug etc. as required.
- Metal switch boxes for control switches, regulators and sockets etc, surface/recessed in walls.
- Outlet boxes, junction boxes, pull-through boxes-etc, including metal boxes if any, provided with switch boards for loose wires/conduit terminations.
- Control switch or MCB, as specified.
- Ceiling rose or connector as required. (2 pin and 5 pin socket outlet shall not be used).
- Connections to ceiling rose, connector, socket outlet, lamp holder, switch etc.
- Interconnecting wiring between points on the same circuit, in the same switch box or from another.
- Protective (loop earthing) conductor from one metallic switch box to another in the distribution circuits, and for socket outlets. (The length of protective conductor run along with the circuits/ sub-mains is excluded item the scope of points).
- Bushed conduit or porcelain tubing where wiring cables pass through wall etc.

1.2.3 Measurement:

1.2.3.1 Point Wiring:

Unless and otherwise specified, there shall be no linear measurement for point wiring for light points, fan points, exhaust fan points and call bell points.

These shall be measured on basis by counting only.

No separate measurement will be made for interconnections between points in the same distribution circuit and for the circuit wiring including protective (loop earthing) conductors between metallic switch boxes.

1.2.3.2 Wiring for socket outlet points:

Light plug point 5/6 A, Power point 5/15A or 6/16A, 20A metallic socket) wiring shall be measured as total length of wiring of total No. of power points as specified in BOQ and shall be measured on linear basis along the run of wiring depending on the actual number and sizes of wires run .

All wiring from the power point outlet may be 15A/5 A or 16A /6 A six pin socket outlet, where so specified in the tender documents.

1.2.3.3 Group control points wiring:

In the case of points with more than one point controlled by the same switch, such points shall be measured in parts i.e. (a) from the switch to the first point outlet as one point and for the subsequent points. the distance from that outlet to the next one and so on shall be treated as separate point(s).

The switch for controlling four or more outlets shall be of 15/16 amp. Rating and no extra payment shall be made for the same.

No recovery shall be made for non-provision of more than one switch in such cases.

1.3 **CIRCUIT AND SUBMAIN WIRING:**

1.3.1 Circuit wiring:

Circuit wiring shall mean the wiring from the distribution board up to the tapping point for the nearest first point of that distribution circuit, viz. upto the nearest first switch box. No extra payment shall be made for circuit wiring.

1.3.2 Sub-main wiring:

Sub-main wiring shall mean the wiring item one main/distribution switchboard to another.

1.3.3 Measurement of sub-main wiring:

The sub main wiring shall be measured on linear basis and paid for separately.

1.4 **OTHER WIRING WORKS:**

Except as specified above for point wiring, circuit wiring and sub-main wiring, other types of wiring 'shall be measured separately on linear basis along the run of wiring depending on the actual number and sizes of wires run.

1.5 SYSTEM OF DISTRIBUTION AND WIRING:**1.5.1 Control at the point of entry of supply:**

There shall be a circuit breaker on each live conductor of the supply mains at the point of entry.

1.5.2 Distribution:

The wiring shall be done on a distribution system through main and/or branch distribution boards. The system design as well as the locations of boards shall be as indicated in BOQ/drawings or as specified by the OIL Engineer-in-charge.

Main distribution board shall be controlled by a circuit breaker. Each outgoing circuit shall also be controlled by a circuit breaker.

The branch distribution board shall be controlled by a circuit breaker. Each outgoing circuit shall be provided with a miniature circuit breaker (MCB) of specified rating on the phase or live conductor.

The loads of the circuits shall be divided, as far as possible, evenly between the numbers of ways of the distribution boards, leaving at least one spare circuit for future extension.

The neutral conductors (incoming and outgoing) shall be connected to a common link (multilayer connector) in the distribution board and be capable of being disconnected individually for testing purposes.

'Power' wiring shall be kept separate and distinct from 'Lighting' wiring, from the level of circuits i.e., beyond the branch distribution boards.

Wiring shall be separate for essential loads (i.e., those fed through standby supply) and non-essential loads throughout.

1.5.3 Balancing of Circuits:

The balancing of circuits in three wire or poly phase installations shall be arranged beforehand to the satisfaction of the OIL Engineer-in-charge.

1.5.4 Wiring System:

Wiring shall be done only by the "Looping system". shall be looped at the switch boxes for both phase or live conductors and neutral conductors.

Lights, fans and call bells shall be wired in the 'lighting' circuits.

15A / 16A and 5A / 6A socket outlets and other power outlets shall be wired in the 'Power' circuits.

The wiring throughout the system shall be such that there is no break in the neutral wire except in the form of linked MCCB's, MCB's. RCBO's etc.

1.5.5 Run of Wiring:

The wiring shall be in surface casing-capping.

Due consideration shall be given for neatness, good appearance and safety.

1.5.6 Passing through walls or floors:

When wiring cables are to pass through a wall, these shall be taken through a protection (steel) pipe tube of suitable size such that they pass through in a straight line without twist or cross in them on either end of such holes. These pipes (approved make) shall be supplied by the contractor and price of the pipes are to be considered in the offered rate.

The ends of metallic pipe shall be neatly bushed with porcelain, PVC or other approved material.

1.5.7 Run on the bottom floor:

When wiring cables are to run on the bottom floor, these shall be covered with protective steel cover of suitable available size in the BOQ.

The cover to be fixed with 6 SWG 12mm screw with the floor. The floor surface shall be cut for a depth of 1.5 mm to place the cover so that no sharp edge will be exposed. Finishing and mending good damages to the building shall be done after the job is over.

1.6 JOINTS IN WIRING:

No bare conductor in phase and / or neutral or twisted joints in phase, neutral, and / or protective conductors in wiring shall be permitted.

There shall be no joints in the through-runs of cables. If the length of final circuit or sub main is more than the length of a standard coil, thus necessitating a through joint, such joints shall be made by means of, approved mechanical connectors in suitable junction boxes.

Termination of multi stranded conductors shall be done using suitable crimping type thimbles.

1.7 RATINGS OF OUTLETS:

Exhaust fan, fluorescent tubes, compact fluorescent tubes, shall be rated according to their capacity.

5A/6A and 15A/16A socket outlet points shall be rated at 100W and 1000W respectively, unless the actual values of loads are specified.

1.8 CAPACITY OF CIRCUITS:

'Lighting' circuit shall not have more than a total of 10 points of light, fan and socket outlets, or a total connected load of 800W, whichever is less.

'Power' circuit shall have only one outlet per circuit.

1.9 CONFORMITY TO IE ACT, AND STANDARDS:

All electrical works shall be carried out in accordance with the provisions of Indian Electricity Act, 1910, BIS AND National Electric code, National Building Code. List of Rules of particular importance to building installations is given in Appendix for reference.

The works shall also conform to relevant Indian Standard Codes of Practice (COP) for the type of work involved. (See Appendix B).

In all electrical installation works, relevant safety codes of practice shall be followed. Guidelines on safety procedure outlined in Appendix' C' should be adopted.

1.10 GENERAL REQUIREMENTS OF COMPONENTS:**1.10.1 Quality of materials:**

All materials and equipments supplied by the contractor shall be new. They shall be of such design, size and material as to satisfactorily function under the rated conditions of operation and to withstand the environmental conditions at site.

1.10.2 Ratings of components:

All components in a wiring installation, conductors, switches and accessories shall be of appropriate ratings of voltage, current, and frequency, as indicated in BOQ.

1.10.3 Conformity to Standards:

All components shall conform to relevant Indian Standard Specification, as per board list given in Appendix' A' including amendments or revisions there of up to the date of tender acceptance, shall be applicable in the respective contracts.

1.10.4 Interchangeability:

Similar parts of all switches, lamp holders, distribution boards, switchgears, ceiling roses, brackets, pendants, fans and all other fittings of the same type shall be interchangeable in each installation.

1.10.5 General Notes:

- a) Items shall be procured from the manufacturer or their authorized dealers only. Bidder shall submit valid authorized dealership certificate for each item along with the offer, otherwise offer will not be considered for evaluation.
- b) All the items shall be brand new. Regulators and light fittings shall bear ISI monogram for stringent quality.
- c) Item shall be guaranteed for a period of one year from the date of receipt of materials against any manufacturing defect or workmanship.
- d) Bidder shall confirm for energy efficiency of items wherever stipulated in the specifications.
- e) Guarantee certificates properly stamped & signed and user's manual shall be sent along with the supply.

- f) Technical leaflets/catalogues are to be supplied for each item along with the offer.
- g) Packing should be adequate to avoid moisture ingress and transit damage.

1.11 **CABLES:**

1.11.1 Wiring cables:

Conductors of wiring cables shall be of copper.

The smallest size of conductor for 'lighting' circuits shall have a nominal cross sectional area of not less than 1.5 sq mm. The minimum size of conductor for 'power' wiring shall be 4 sq mm stranded cable. All wiring cables shall be FRLS, single core, PVC insulated, unsheathed, 1100V grade, FIA, TAC, IS-694 approved with flexible copper conductor.

1.12 **PVC CASING AND CAPPING:**

1.12.1 Fixing casing-capping

PVC casing and capping shall be of standard material free from defects of any kind. It should be properly finished and conform to relevant standards. This system of wiring is suitable for low voltage installation where polyvinyl chloride (PVC), rubber, plastic or other approved insulated cables shall be used in the wiring work carried within PVC casing enclosure. PVC casing and capping wiring shall not be used in damp or poorly ventilated places without taking suitable precaution.

PVC casing and capping should be strong and properly fitted so as to hold wires laid in it 70% to its full capacity for all areas. For this reason, the thickness of the PVC casing and capping shall be 1.6mm for sizes up to 25mm and 1.5mm or more for sizes up to 50mm. It should be rigidly screwed at 150 mm interval cross wise with suitable wood screws of 25 mm length turned in PVC sleeve inserted in neatly drilled holes of proper size and depth with cup washer to give proper grip over more surface area. Providing and fixing of PVC casing and capping include bends, elbows, tees, inside and outside corners, round blocks and painting. It can be run whether in horizontal or vertical position as required. The inspection shall be done from time to time as the work progresses. Capping shall not be put on until the work has been inspected after the wires are laid in position and approved by the Engineer-in-charge-in-charge.

1.12.2 Providing earth continuity wires

The earth continuity wire shall be provided in the casing throughout the length of wiring. The size of earth continuity wire shall be same size with the main wire for circuits. All metallic parts, switch boards, light fittings and power sockets shall be connected to the earth wires and the connection shall be electrically and mechanically sound.

1.12.3 Size and Measurement

The length of the PVC casing capping is available from 1.8 to 3m. The unit of measurement shall be in meters, measured to the nearest cm. The width, depth and thickness of PVC casing and capping shall be as given below:

- a) 25mm x 10mm x 1.2mm thick
- b) 30mm x 10mm x 1.2mm thick
- c) 40mm x 20mm x 1.5mm thick
- d) 50mm x 20mm x 1.5mm thick

The maximum number of PVC insulated 650/1100V grade copper conductors that can be drawn in a given size of casing should not be more than 70% of its cross sectional area.

1.13 **PVC CONDUITS:**

1.13.1 All rigid conduit pipes shall be of medium duty PVC conduit of standard quality and be ISI marked.

The maximum number of PVC insulated cables conforming to IS:694-1990 that can be drawn in one conduit is given size wise in Table I, and the number of cables per conduit shall not be exceeded. Conduit sizes shall be selected accordingly in each run.

No steel conduit less than 20mm in diameter shall be used.

1.13.2 The conduit wiring system shall be complete in all respects, including their accessories.

1.13.3 Outlets:

The switch box or regulator box shall be made of sheet metal on all sides, except on the front. The wall thickness shall not be less than 1.2 mm (18 gauge) for boxes up to a size of 20 cm X 30 cm, and above this size 1.6 mm (16 gauge) thick MS boxes shall be used. The metallic boxes shall be duly painted with anticorrosive paint before erection as per chapter 10 of these Specifications.

Where a large number of control switches and/or fan regulators are required to be installed at one place, these shall be installed in more than one outlet box adjacent to each other for ease of maintenance.

An earth terminal with stud and 2 metal washers shall be provided in each MS box for termination of protective conductors and for connection to socket outlet/metallic body of fan regulator etc.

Clear depth of the box shall not be less than 60 mm, and this shall be increased suitably to accommodate mounting of fan regulators in flush pattern.

2.3.1 **Additional requirements:**

i. Making chase:

The chase in the wall shall be neatly made, and of ample dimensions to permit the conduit to be fixed in the desired manner.

The conduits shall be buried in the wall before plastering, and shall be finished neatly after erection of conduit.

ii. Fixing conduits in chase:

The conduit pipe shall be fixed by means of staples, J-hooks, or by means of saddles, not more than 60 cm apart.

A threaded joint of conduit pipes shall be treated with approved preservative compound- to secure protection against rust.

iii. Fixing conduits in RCC work:

The conduit pipes shall be laid in position and fixed to the steel reinforcement bars by steel binding wires before the concreting is done. The conduit pipes shall be fixed firmly to the steel reinforcement bars to avoid their dislocation during pouring of cement concrete and subsequent tamping of the same.

Fixing of standard bends or elbows shall be avoided as far as practicable, and all curves shall be maintained by bending the conduit pipe itself with a long radius which will permit easy drawing in of conductors.

Location of inspection / junction boxes in RCC work should be identified by suitable means to avoid unnecessary chipping of the RCC slab subsequently to locate these boxes.

iv. Fixing inspection boxes:

Suitable inspection boxes to the minimum requirement shall be provided to permit inspection, and to facilitate replacement of wires, if necessary.

These shall be mounted flush with the wall or ceiling concrete. Minimum 65 mm depth junction boxes shall be used in roof slabs and the depth of the boxes in other places shall be as per IS:2667-1977.

Suitable ventilating holes shall be provided in the inspection box covers,

v. Fixing switch boxes and accessories:

Switch boxes shall be mounted flush with the wall. All outlets such as switches, socket outlets etc. shall be flush mounting type.

vi. Fish wire:

To facilitate subsequent drawing of wires in the conduit, GI fish wire of 1.2 mm (18 SWG) shall be provided along with the laying of the recessed conduit.

2.3.1 Bunching of cables:

Cables shall always be bunched so that the outgoing and return cables are drawn into the same conduit.

Where the distribution is for three phase loads only, conductors for all the three phases and neutral wire shall be drawn in one conduit.

2.3.2 Earthing requirements:

The entire system of metallic work, including the outlet boxes and other metallic accessories, shall be mechanically and electrically continuous by proper screwed

joints, or by double check nuts at terminations. The conduit shall be continuous when passing through walls or floors.

Protective (loop earthing) conductor(s) shall be laid along the runs of the conduit between the metallic switch boxes and the distribution boards/ switch boards, terminated thereto. These conductors shall be of such size and material as specified. Depending upon their size and material, the protective earth conductors shall be either drawn inside the conduits along with the cables, or shall be laid external to the conduits. When laid external to the conduits, this shall be properly clamped with the conduit at regular intervals.

The protective conductors shall be terminated properly using earth studs/ earth terminal block etc. as required.

Gas or water pipe shall not be used as protective conductor (earth medium).

TABLE-1

Maximum Permissible No of single core cable that can be drawn into casing capping
Nominal cross-Sectional area of

Conductor in sq. mm. CASING CAPPING SIZE

10/15mm x 10mm 20mm x 10mm 25mm x 10mm 30mm x 10mm 40mm x 20mm 50
mm x 20mm

1.50 3 5 6 8 12 18

2.50 2 4 5 6 9 15

4.00 2 3 4 5 8 12

6.00 - 2 3 4 6 9

10.00 - 1 2 3 5 8

16.00 - - 1 2 4 6

25.00 - - - 2 5

35.00 - - - 2 4

TABLE-II

Maximum number of PVC insulated 650/1100 V grade copper conductor cable
conforming to IS:694-1990 which can be drawn through a conduit

Nominal cross-

Sectional area of

Conductor in sq. mm. CONDUIT DIAMETER

20mm 25mm 32mm 38mm 51 mm 64mm

S B S B S B S B S B

1.00 3 2 5 4 7 6 9 8 11 10 13 12

1.50 5 4 8 6 15 10 - - - - -

2.50 4 2 6 4 10 8 - - - - -

4.00 2 - 4 4 8 6 - - - - -

6.00 2 - 4 3 6 5 - - - - -

10.00 - - 3 2 5 4 6 5 - - - -

16.00 - - 2 2 3 3 5 4 9 6 11 7

25.00 - - - - 3 2 5 3 8 6 9 7

35.00 - - - - - 3 2 6 5 8 6

Note:

The above table shows the maximum capacity of conduits for a simultaneous drawing in of cables.

The columns headed 'S' apply to runs of conduits which have distance not exceeding 4.25 m between draw in boxes and which do not deflect from the straight by an angle of more than 15 degrees. The columns headed 'B' apply to runs of conduit which deflect from the straight by an angle of more than 15 degrees. Conduit sizes are the nominal external diameters.

1.13 **WIRING ACCESSORIES:**

1.13.1 Control switches for points:

Control switches (single pole switches) carrying not more than 16A shall be of clamp on type complete with plate, as specified, and the switch shall be #ON# when the knob is down.

The type and current rating of switch controlling a group of points, or discharge lamps, or a single large load, shall be specified in the tender documents.

Control switch shall be placed only in the live conductor of the circuit. No single pole switch or fuse shall be inserted in the protective (earth) conductor, or earthed neutral conductor of the circuit.

1.13.2 Socket outlets:

Socket outlets shall also be of clamp on type complete with plate. These shall be rated either for 6A, or 16A. Combined 6A/16A six pin socket outlet shall be provided in 'power' circuits wherever specified.

Socket outlets and plugs shall only be of 3 pin type; the third pin shall be connected to earth through protective (loop earthing) conductor. 2 pin or 5 pin sockets shall not be permitted to be used.

The control switches for 6A and 16A socket outlets shall be kept along with the socket outlets.

1.13.3 Switch box covers:

These shall be molded type of suitable size.

1.14 **FITTINGS:**

1.14.1 Indoor type fittings specification:

Mirror optic suspension mount T5 fluorescent tube light luminaire with all accessories and lamps, ready for installation as per the following description.

- a. Optical system should provide all round glare and beam control. Glare shall be as per British Lighting guide-3, Cat 2.
- b. Luminaire shall be supplied with:

- a. 1/2x28 Watt T5 fluorescent lamp.
- b. 1/3/4 x14 Watt T5 fluorescent lamp.
- c. Luminaires shall be pre-wired up to the terminal block and fitted with High Performance electronic ballast (THD<10%) as standard, PF> 0.95; ballast to conform to IS/IEC for safety/ performance.
- d. Luminaires shall be supplied with all standard accessories (including chains etc.) for suspension mounting.

Power supply: 230/240v, 50 Hz, single phase

Make: Philips/Bajaj/Crompton Greaves/GE/Havells/Osram

Model:

- a. Similar to Bajaj make BCTS 228 X2for 2x 28W T5 fluorescent lamp.
- b. Similar to Bajaj make BLMRA 418 TD WEB4 luminaire for 4x 14w T5 fluorescent lamp
- c. Similar to Philips TWG207, 1xTL5 14w .
- d. Similar to Philips- TWG207HF, 1xTL5 28w .
- e. Similar to Philips make FBH145 M 1xPL-C/4P13W HFM type for 1 x 13 W CFL

The type of fittings shall be as specified in BOQ.

1.14.2 LED Lighting Luminaire

High power and high lumen efficient LEDs suitable for following features shall be used:

Lumen output > 65 Lumen per Watt

Light color Neutral White -4000K

Voltage 220-240V AC 50 Hz

Driver Constant Current Driver

Optics High Efficiency Powder Coated reflectors and High Transitivity Opal Diffuser Cover

- a. The efficiency of the LED lamps at 1100C junction temperature shall be more than 80%.
- b. The working life of the lamp at junction temperature of 1100C for 350mA current shall be more than 50,000 hours of accumulative operation and shall be suitable for continuous operation of 24 hours per day .these features shall be supported with datasheet.
- c. Adequate heat sink with proper thermal management shall be provided.
- d. Colour temperature of the proposed white colour LED shall be 4000k.
- e. The output of LED shall be more than 65 lumen per watt at minimal operating current and shall ensure guaranteed operation life of 50,000 burning hours with controlled junction temperature of 1100C.
- f. Efficiency of driver electronics shall be more than 85%.
- g. Power factor of complete fitting shall be more than 0.9
- h. The driver card shall withstand 440V and shall resume normal working when nominal voltage is applied again.

- i. Thermal management shall be in such a way that LED junction temperature shall not go beyond 80 degree centigrade

1.15 **SWITCHGEAR AND CONTROLGEAR - General aspects:**

All items of switchgear and distribution boards (DB's) shall be metal clad type.

The types, ratings and/or categories of switchgear and protective gear shall be as specified in the BOQ.

RCBs (ELCBs) where specified, shall conform to the requirements of current rating, fault rating, single phase or three phase configuration and sensitivity laid down in the BOQ.

While each outgoing way of distribution board (DB) shall be of miniature circuit breaker (MCB) as specified, and of suitable rating on the phase conductor, the corresponding earthed neutral conductor shall be connected to a common neutral terminal block and shall be capable of being disconnected individually for testing purposes.

e. Independent earth terminal block:

Every distribution board (single phase as well as 3 phase) shall have an earth terminal block identical to, but independent from neutral terminal block, to enable termination of protective (loop earthing) conductors (incoming as well as outgoings) individually by screwed connection and without twisting.

Earthing terminal (1 for single phase and 2 for 3 phases) shall be provided on the metal cladding of switches and DB's for body earthing. These shall be suitably marked.

Knock out holes, with or without end plates as per standard design of manufacturers, shall be provided in the metal cladding of switches and DBs for termination of conduits/cables.

1.16 **PRE-WIRED MCB DISTRIBUTION BOARDS:**

Pre wired MCB DB's shall be provided only where specified.

The complete board shall be factory fabricated and shall be duly pre wired in the works, ready for installation at site.

The board shall be of wall mounted, cubical type construction, fabricated out of 1.6mm thick sheet steel, with stove enameled paint finish.

The board shall also be provided with a loose wire box as a compartment for the complete width and, depth of the board, and of minimum height of 125mm in case of TPN DB's, and 100mm in case of SPN DB's.

The board shall be provided with a hinged cover of 1.6mm thick sheet steel in the front. Only the knobs of the MCB's shall protrude out of the front covers through openings neatly machine made for the purpose.

Knock out holes at the bottom, and detachable plate with knock out holes at the top of the board shall be provided.

Each distribution board shall be provided with a circuit list giving details of each circuit which it controls and the current rating of the circuit, and the size of the MCB.

The board shall be complete with the following accessories:

- i. 200 A copper bus bar(s).
- ii. Neutral link.
- iii. Common earth bar.
- iv. DIN bar for mounting MCB's
- v. Screw type terminal connectors suitable for incoming and outgoing cables.
- vi. Earthing stud(s).

The board shall be fully prewired with single core PVC insulated copper conductors/insulated solid copper links, and terminated on to extended type terminal connectors, suitable for connections to the sizes of the respective conductors. '

All incoming and outgoing wiring to the pre wired MCB DB's shall be terminated only in the Elemex type extended terminal connectors to be provided within the DB. The terminal connectors shall, therefore, be so provided as to facilitate easy cable connections and subsequent maintenance.

A common copper earth bar shall be provided within the loose wire box. The common neutral bar as well as the terminal connectors shall, however, be provided within the main compartment just below the loose wire box.

1.17 MINIATURE CIRCUIT BREAKERS (MCB's):

'C' series MCB's shall be invariably used for all loads.

Ratings (A), number of poles, type as MCB or isolator, etc. shall be as specified in the BOQ. The MCB's shall be of minimum 10KA rupturing capacity.

1.17 SWITCH BOARD LOCATIONS:

1.17.1 General aspects:

Switch boards shall be located as indicated on the drawings. However exact location will be as per suitable available spaces.

1.18 SWITCH BOARD INSTALLATION:

A switch board shall not be installed so that its bottom is within 1.25 m above the floor.

Where it is required to terminate a number of conduits on a board, it may be convenient to provide a suitable PVC adopter box for the purpose. Such boxes shall be provided with the prior approval of the Engineer-in-charge (Electrical) and this will not be paid for separately.

No apparatus shall project beyond any edge of the panel.

1.19 WIRING OF SWITCH BOARDS AND DISTRIBUTION BOARDS:

All connections between pieces of apparatus, or between apparatus and terminals on a board shall be neatly arranged in a definite sequence, following the arrangement of the apparatus mounted thereon, avoiding unnecessary crossings.

Cables shall be connected to terminals either by crimped or soldered lugs, unless the terminals are of such a form that they can be securely clamped without cutting away of cable strands.

All bare conductors shall be rigidly fixed in such a way that a clearance of at least 2.5 cm is maintained between conductors of opposite polarity or phase, and between the conductors and any material other than insulating material.

The incoming and outgoing cables shall be neatly bunched and shall be fixed in such a way that the door shall be capable of swinging through an angle of not less than 90 degrees.

1.20 **MARKING OF APPARATUS:**

i. Marking of earthed neutral conductor:

On the switchgear, the earthed conductor of a two wire system, or an earthed neutral conductor of a multi-wire system, an indication of a permanent nature shall be provided to identify the earthed neutral conductor. In this connection Rule 32(1) of Indian Electricity Rules 1956 (see Appendix C) shall be referred to. The neutral conductor shall be black in colour.

ii. Main earthing terminal:

The main earthing terminal in the main switch board shall be permanently marked as "SAFETY EARTH - DO NOT REMOVE".

All distribution boards shall be marked 'L' for lighting or 'P' for power and 'E' for essential as the case may be.

When a board is connected to a voltage higher than 250V, all the terminals or leads of the apparatus mounted on it shall be marked in the following colours to indicate the different poles or phases to which the apparatus or its different terminals may have been connected:

Where a four wire, three phase wiring is done, the neutral shall preferably be in one colour, and the other three wires in another colour.

Three phases - Red, Blue & Yellow AND Neutral - Black

All marking required under this rule shall be clear and permanent.

1.21 **FANS, REGULATORS AND CLAMPS:**

1.21.1 Exhaust fans:

Exhaust fans shall conform to relevant Indian Standards.

Exhaust fans shall be erected at the places indicated on the drawings. For fixing an exhaust fan, a circular hole shall be provided in the wall to suit the size of the frame, which shall be fixed by means of rag bolts embedded in the wall. The hole shall be neatly plastered to the original finish of the wall. The exhaust fan shall be connected to the exhaust fan point, which shall be wired as near to the hole as possible, by

means of a flexible cord, care being taken to see that the blades rotate in the proper direction.

1.21.2 Fan Regulators:

Electronic modular type fan regulator shall be from approved vendor. The regulators are to be procured from authorized dealer to ensure genuineness of the material.

Fan regulator shall be fixed in the switch board as per the ceiling fan circuit shown in the drawing.

1.22 **WORKMANSHIP:**

Good workmanship is an essential requirement to be complied with. The entire work of manufacture/fabrication, assembly and installation shall conform to sound Engineering practice.

The work shall be carried out under the direct supervision of a first class licensed foreman, or of a person holding a certificate of competency issued by the State Govt. for the type of work involved, employed by the contractor, who shall rectify then and there the defects pointed out by the Engineer-in-charge (Electrical) during the progress of work.

1.23 **COMMISSIONING ON COMPLETION:**

Before the workman leaves the work finally, he must make sure that the installation is in commission, after due testing.

1.24 **DRAWINGS:**

The work shall be carried out in accordance with the drawings enclosed with the tender documents and also in accordance with detailing to be receive from OIL Engineer-in-charge in charge immediately after award of contract also modification thereto from time to time as approved by the OIL Engineer-in-charge.

All circuits shall be indicated and numbered in the wiring diagram and all points shall be given the same number as the circuit to which they are electrically connected.

1.24.1 Following drawings & documents shall be supplied.

Sl No.	Name of the Document	No. of Copies	After Order	For Approval	Final
--------	----------------------	---------------	-------------	--------------	-------

- | | | | | | |
|----|---|---|---|--|--|
| 1) | Specification Sheet | 2 | 6 | | |
| 2) | Technical particulars | 2 | 6 | | |
| 3) | Feeder Details | 2 | 6 | | |
| 4) | General Arrangement Drag. and Foundation Plan | 2 | 6 | | |
| 5) | Schematic/wiring Diagrams | 2 | 6 | | |
| 6) | Calculation for Bus Bar sizing | 2 | - | | |
| 7) | Terminal Arrangement Drawing | 2 | 6 | | |

- 8) Illustrative and Descriptive Literature - 4
- 9) Catalogues for brought out accessories. – 4
- 10) Installation and operation and maintenance manual – 4
- 11) Test Certificates
 - i. Switch Board, MCCB's - -
 - ii. Routine – 4
- 12) Guaranty/Warranty Certificate – 2
- 13) Spare Parts List if any - 4

Note: All final drawings shall be submitted prior to despatch of equipment. These shall be made in sets and shall be supplied in fine plastic coated folder.

APPENDIX-A

APPROVED MAKE OF MATERIAL

- 1) SINGLE CORE FRLS COPPER CABLES,1100V GRADE,IS694: FINOLEX/HAVELL'S/L&T/Polycab
- 2) COPPER LUGS:DOWELs or EQUIVALENT
- 3) SWITCH SOCKET (MODULER TYPE):MK/Legrand/Havells/Schneider/Crabtree
- 4) PVC CASING CAPPING :AKG/Plaza/ or any BIS approved make(Medium grade)
- 5) METAL CLAD SWITCH SOCKET UNIT:LEGRAND/Schneider/SIEMENS/Indo Asian/L&T/Havells
- 6) CEILING FAN:ORIENT/USHA/KHAITAN/Bajaj/Havells
- 7) EXHAUST FANS:USHA/KHAITAN/CG/ORIENT
- 8) LIGHT FITTINGS:PHILIPS/CROMPTON/GE/BAJAJ/WIPRO
- 9) FL LAMPS:PHILIPS/OSRAM/GE
- 10) MCB/MCCB/MCB DB :SCHNEIDER /SIEMENS /LEGRAND /INDO ASIAN/HAVELL
- 11) SFU/FSU/HRC FUSES/FUSE LINKS:SIEMENS/GE/Indo asian/ Havells

OTHER ITEMS:

AS APPROVED BY THE ENGINEER-IN-CHARGE IN-CHARGE OR AS PER BOQ AND SPECS.

APPENDIX-C

SAFETY PROCEDURE

- 1) The National Electricity Code and National Building Code as amended up to date are to be followed in their entirety. Any installation or portion of installation which does not comply with these codes should be got rectified immediately.

- 2) The detailed instructions on safety procedures given in B.I.S. Code No. 5216-1969-"Code of Safety Procedures and Practices in Electrical Works" shall be strictly followed.
- 3) No inflammable materials shall be stored in places other than the rooms specially constructed for this purpose in accordance with the provisions of Indian Explosives Act. If such storage is unavoidable, it should be allowed only for a short period and in addition, special precautions, such as cutting off the supply to such places at normal times, storing materials away from wiring and switch boards, giving electric supply for a temporary period with the permission of consultants shall be taken.
- 4) The electrical switchgears and distribution boards should be clearly marked to indicate the areas being controlled by them.
- 5) Before energizing on an installation after the work is completed, it should be ensured that all tools have been removed and counted, no person is present inside any enclosure of the switch board etc. any earthing connection made for doing the work has been removed.

APPENDIX-IX

CLAUSES GENERAL HEALTH, SAFETY AND ENVIRONMENTAL (HSE) ASPECTS

- 1) It will be solely the Contractor's responsibility to fulfill all the legal formalities with respect to the Health, Safety and Environmental aspects of the entire job (namely; the person employed by him, the equipment, the environment, etc.) under the jurisdiction of the district of that state where it is operating. Ensure that all sub-contractors hired by him comply with the same requirement as the Contractor himself and shall be liable for ensuring compliance all HSE laws by the sub or sub-sub-contractors.
- 2) Every person deployed by the Contractor in a mine must wear safety gadgets to be provided by the Contractor. The Contractor shall provide proper Personnel Protective Equipment as per the hazard identified and risk assessed for the job and conforming to statutory requirement and Company PPE schedule. Safety appliances like protective footwear, Safety Helmet and Full Body harness has to be DGMS approved. Necessary supportive document shall have to be submitted as proof. If the Contractor fails to provide the safety items as mentioned above to the working personnel, the Contractor may apply to the Company for providing the same. Company will provide the safety items, if available. But in turn, Company will recover the actual cost of the items by deducting from Contractor's Bill. . However, it will be the Contractor's sole responsibility to ensure that the persons engaged by him in the mines use the proper PPE while at work. All the safety gears mentioned above are to be provided to the working personnel before commencement of the work.
- 3) The Contractor shall prepare written Safe Operating Procedure (SOP) for the work to be carried out, including an assessment of risk, wherever possible and safe methods to deal with it/them. The SOP should clearly state the risk

arising to men, machineries & material from the mining operation / operations to be done by the Contractor and how it is to be managed.

- 4) The Contractor shall provide a copy of the SOP to the person designated by the mine owner who shall be supervising the Contractor's work.
- 5) Keep an up to date SOP and provide a copy of changes to a person designated by the Mine Owner/Agent/Manager.
- 6) Contractor has to ensure that all work is carried out in accordance with the Statute and SOP and for the purpose he may deploy adequate qualified and competent personnel for the purpose of carrying out the job in a safe manner. For work of a specified scope/nature, he should develop and provide to the mine owner a site-specific code of practice in line.
- 7) All persons deployed by the Contractor for working in a mine must undergo Mines Vocational Training, initial medical examination, PME. They should be issued cards stating the name of the Contractor and the work and its validity period, indicating status of MVT, IME & PME.
- 8) The Contractors shall submit to DGMS returns indicating - Name of his firm, Registration number, Name and address of person heading the firm, Nature of work, type of deployment of work persons, Number of work persons deployed, how many work persons hold VT Certificate, how many work persons undergone IME and type of medical coverage given to the work persons
- 9) The return shall be submitted quarterly (by 10th of April, July, October & January) for contracts of more than one year. However, for contracts of less than one year, returns shall be submitted monthly.
- 10) It will be entirely the responsibility of the Contractor/his Supervisor/ representative to ensure strict adherence to all HSE measures and statutory rules during operation in Company's installations and safety of workers engaged by him. The crew members will not refuse to follow any instruction given by company's Installation Manager / Safety Officer / Engineer-in-charge / Official / Supervisor/Junior Engineer-in-charge for safe operation.
- 11) Any compensation arising out of the job carried out by the Contractor whether related to pollution, Safety or Health will be paid by the Contractor only.
- 12) Any compensation arising due to accident of the Contractor's personnel while carrying out the job, will be payable by the Contractor.
- 13) The Contractor shall have to report all incidents including near miss to Installation Manager / departmental representative of the concerned department of Company.
- 14) The Contractor has to keep a register of the persons employed by him/her. The Contractor's supervisor shall take and maintain attendance of his men every day for the work, punctually.
- 15) If the Company arranges any safety class / training for the working personnel at site (company employee, Contractor worker, etc) the Contractor will not have any objection to any such training.
- 16) The health checkup of Contractor's personnel is to be done by the Contractor in authorized Health Centers as per Company's requirement & proof of such

test(s) is to be submitted to Company. The frequency of periodic medical examinations should be every five years for the employees below 45 years of age and every three years for employees of 45 years of age and above.

- 17) To arrange daily tool box meeting and regular site safety meetings and maintain records.
- 18) Records of daily attendance, accident report etc. are to be maintained in Form B, E, J (as per Mines Rules 1955) by the Contractor.
- 19) A Contractor employee must, while at work, take reasonable care for the health and safety of people who are at the employee's place of work and who may be affected by the employee's act or omissions at work.
- 20) A Contractor employee must, while at work, cooperate with his or her employer or other persons so far as is necessary to enable compliance with any requirement under the act or the regulations that is imposed in the interest of health, safety and welfare of the employee or any other person.
- 21) Contractor's arrangements for health and safety management shall be consistent with those for the mine owner.
- 22) In case Contractor is found non-compliant of HSE laws as required company will have the right for directing the Contractor to take action to comply with the requirements, and for further non-compliance, the Contractor will be penalized prevailing relevant Acts/Rules/Regulations.
- 23) When there is a significant risk to health, environment or safety of a person or place arising because of a non-compliance of HSE measures Company will have the right to direct the Contractor to cease work until the non-compliance is corrected.
- 24) The Contractor should prevent the frequent change of his contractual employees as far as practicable.
- 25) The Contractor should frame a mutually agreed bridging document between Company & the Contractor with roles and responsibilities clearly defined.
- 26) For any HSE matters not specified in the contract document, the Contractor will abide the relevant and prevailing Acts/rules/regulations/ pertaining to Health, Safety and Environment.

D. **“The bidders should note that, if three (3) or more bidders are found to be technically eligible, no clarification / deficit documents will be sought from the bidders under any circumstances, once the bids are opened and the bids will be evaluated on the basis of documents submitted by the bidders along with the bid”.**

E. The bidder shall also furnish following information / documents alongwith the bid. Company reserves the right to reject the bid in the event of non submission of such information / documents.

- Wherever applicable, the bidder shall have itself registered under Employees' Provident Fund and Miscellaneous Provisions Act, 1952 and follow the relevant

statutory provisions including Rules made there-under concerning contractual workers to be engaged by such bidder. The bidder shall furnish the Provident Fund code number issued by the appropriate Govt. Authority, with supporting documents, or a declaration / undertaking in stamped paper in the **Format Annexure-I.**

F. The bidder shall furnish following information / documents on issuance of LOI within 15 (fifteen) days from the date of issuance. Company reserves the right to cancel the contract / LOI if these documents are not submitted within the stipulated period, besides taking action under **Clause H. (III)** of Part-III SCC of tender document.

- a. PAN, VAT Registration number (Not required for OIL registered contractors)
- b. Service Tax Registration number issued by the appropriate Govt. Authority or exemption certificate from the concerned authority or a declaration / undertaking in stamped paper in the prescribed Format to the extent that provisions of the Service Tax are not applicable to him / her / them and in the event of any claim from the Service Tax Authority upon Company at a later date with respect to the services provided under the contract, the bidder shall deposit such amount to the Company, as per the rules applicable from time to time.

G. The bidder must provide the following minimum numbers of equipments in operational condition capable of providing uninterrupted services under the contract as and when required.

LIST OF MATERIALS & EQUIPMENTS TO BE SUPPLIED BY CONTRACTOR:

- a. Concrete Mixture Machine: 1No.
- b. Concrete Vibrator (Needle Type): 2 Nos.
- c. Sump Pump (Capacity= 8 tonne): 1 No.
- d. Welding set: 1 No.

H. **(I)** The following check list to be enclosed (uploaded) by the bidder along with the bid document:-

CHECK LIST:

SL NO	DESCRIPTION	
1	Location / construction site visited & assessed.	YES
2	Item descriptions clearly understood and availability of materials verified.	YES
3	Understood that Mandatory Material tests to be performed (wherever applicable)	YES
4	PF code No./ Annexure-I as per clause no. E. of Part-III SCC have been submitted by me /us	YES

5	Bid validity from the date of technical bid opening is 120 days	YES								
6	<p>I / We shall provide the following minimum numbers of equipments in operational condition capable of providing uninterrupted services under the contract as and when required, failing which company shall have the right to terminate the contract, besides taking action as per Clause H. (III) hereunder.</p> <p><u>List of equipment's:</u></p> <table><tr><td>a. Concrete Mixture Machine:</td><td>1No.</td></tr><tr><td>b. Concrete Vibrator (Needle Type):</td><td>2 Nos.</td></tr><tr><td>c. Sump Pump (Capacity= 8 tonne):</td><td>1 No.</td></tr><tr><td>d. Welding set:</td><td>1 No.</td></tr></table>	a. Concrete Mixture Machine:	1No.	b. Concrete Vibrator (Needle Type):	2 Nos.	c. Sump Pump (Capacity= 8 tonne):	1 No.	d. Welding set:	1 No.	YES
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b. Concrete Vibrator (Needle Type):	2 Nos.									
c. Sump Pump (Capacity= 8 tonne):	1 No.									
d. Welding set:	1 No.									

Bidder(s) should clearly understand these criteria before submission of the bid and in case of any doubt he / she / they may seek clarification from Engineer – in charge / DGM-Civil Engineering department, before submitting the bid.

(II) Information / List of other Civil works contract, if any, being executed by the bidder(s) in his / her / their firm's name in OIL and expected to continue beyond 6 months time from date of opening of bid document to be furnished to DGM-Civil by all bidders before issuance of work order.

(III) Company reserves the right to debar the bidder / contractor during processing of tender and / or during continuation of the contract on commission or omission on the part of the bidder / contractor as under:

- Has indulged in malpractices, bribery, fraud, pilferage.
- Is bankrupt or is being dissolved or resolved to be wound up or proceedings for winding up or dissolution have been instituted.
- Has furnished false information / statement / declaration and / or forged document / certificate.
- Has substituted materials in lieu of materials supplied by OIL or has not returned or has short returned or has unauthorizedly disposed-off materials / documents / drawings / tools or plants or equipments supplied by OIL.
- Has obtained official Company information or copies of documents in relation to the tender / contract by dubious methods / means.
- Has deliberately violated and circumvented the provisions of labour laws / regulations / rules, safety norms or other statutory requirements.
- Has indulged in construction and erection of defective works or supply of defective materials/services and not made good of the defects within reasonable time in spite of follow-up by Company.
- Has not cleared OIL's previous dues.
- Has committed Breach of Contract or has failed to perform a contract or has abandoned the contract.

- j) Has refused to accept LOA / LOI / Purchase Order / Signing of the Contract after accepting LOA / Work Order after the same is issued by OIL within the period of Bid validity and as per agreed terms & conditions.
- k) After bid opening, withdraws / revises its bid within the period of bid validity for no valid reasons. However, reduction of quoted rate(s) / Bid price by L1 Bidder after the bid opening date shall not constitute ground for banning.
- l) Has parted with, leaked or provided confidential / proprietary information of OIL given to the party only for its use (in discharging its obligations against an order / contract) to any third party without prior consent of OIL.
- m) Use intimidation / threatening or brings undue outside pressure on the Company or its Official(s) for acceptance of its bid or acceptance of materials supplied or performance of the job under the contract / purchase order.
- n) If the Director / Owner / Proprietor / Partner of a party is convicted by a court of law for offences involving moral turpitude in relation to its business dealings during last five years.
- o) Poor performance of the supplier / contractor / service provider in one or several contracts / supplies affecting Company's operations.
- p) Any other ground for which, in the opinion of the Company makes it undesirable to deal with the party.

Part- IV SCPME
OIL INDIA LIMITED
(A Govt. of India Enterprise)
Contracts, Duliajan
WORKS CONTRACT
Schedule of company's Plants, Materials and Equipments
E-Tender No.CDI1548P17

- a) SCHEDULE OF MATERIALS AVAILABLE AT THE COMPANY'S STORES/STOCK PILES for permanent incorporation in works and
- b) SCHEDULE OF COMPANY'S PLANTS AND EQUIPMENTS for use in the execution of work.

- **Material:** Cement will be supplied by company.

Note: - All empty Cement bags must be returned to material's Godown, Duliajan failing which a sum of Rs.8.00 (Rupees Eight) only per bag will be recovered from contractor's bill.

- **Equipment:** Nil

Note:

1. The Contractor is to arrange transport of the above materials to site of work with proper safety.
2. If the materials listed above are not available suitable substitute will be provided by the Company and Contractor shall incorporate the same in the works without extra cost.
3. Containers must be returned to Company in good condition.
4. Plants and equipment if issued to Contractor must be under proper watch so that no part is pilfered. These must be handled only by Company's operators. Contractor shall be responsible for any loss or damage to these plants and equipment while these are under his/their custody.
5. Materials issued to Contractor must be under proper watch & ward so that no part is pilfered. If any pilferation takes place the matter will be referred to appropriate Govt. authorities for legal action as well as realization of the materials issued.
6. Cement issued to Contractor by the Company is meant only for the specific Company work relating to the Contract. However, if any quantity of Cement is left over from the quantities issued for any reason whatsoever, on the completion / cancellation / termination of the Contract the same shall have

to be returned to the Company in full within one week of completion/cancellation of the work failing which the matter will be referred to appropriate Govt. authorities for legal action as well as realization of the Cement.

7. Bitumen issued to Contractor by the Company is meant only for the specific Company work relating to the Contract. However, if any quantity of Bitumen is left over from the quantities issued for any reason whatsoever, on the completion / cancellation / termination of the Contract the same shall have to be returned to the Company in full within one week of completion/cancellation of the work failing which the matter will be referred to appropriate Govt. authorities for legal action as well as realization of the bitumen
8. All other materials issue to the Contractor by the Company if subsequently found to be in excess of the actual requirement will have to be returned by the Contractor within two weeks of completion of the work failing which the cost of all such materials will be recovered from the Contactor at double the value of materials without any reference to him.

PART-V SAFETY MEASURES

**To,
DGM-CONTRACT
OIL INDIA LIMITED
DULIAJAN-786602**

SUB: SAFETY MEASURES

DESCRIPTION OF WORK/SERVICE: - Construction of new Office Building with Garage at WSS Duliajan, including electrification and supply of all materials except Cement.

Sir,

We hereby confirm that we have fully understood the safety measures to be adopted during execution of the above contract and that the same have been explained to us by the concerned authorities. We also give the following assurances.

- a) Only experienced and competent persons shall be engaged by us for carrying out work under the said contract.
- b) The names of the authorized persons who would be supervising the jobs on day to day basis from our end are the following:
 - i) _____
 - ii) _____
 - iii) _____

The above personnel are fully familiar with the nature of jobs assigned and safety precautions required.

- c) Due notice would be given for any change of personnel under item(b) above.
- d) We hereby accept the responsibility for the safety of all the personnel engaged by us and for the safety of the Company's personnel and property involved during the course of our working under this contract. We would ensure that all the provisions under the Oil Mines Regulations, 1984 and other safety rules related to execution of our work would be strictly followed by our personnel. Any violation pointed out by the Company's Engineers would be rectified forthwith or the work suspended till such time the rectification is completed by us and all expenditure towards this would be on our account.
- e) We confirm that all persons engaged by us would be provided with the necessary Safety Gears at our cost.
- f) All losses caused due to inadequate safety measures or lack of supervision on our part would be fully compensated by us and the Company will not be responsible for any lapses on our part in this regard.

g) We shall abide by the following HSE (Health Safety & Environment) points:

GENERAL HEALTH, SAFETY & ENVIRONMENT (HSE) POINTS:

1. It will be solely the Contractor's responsibility to fulfill all the legal formalities with respect to the Health, Safety and Environmental aspects of the entire job (namely; the person employed by him, the equipment, the environment, etc.) under the jurisdiction of the district of that state where it is operating. . Ensure that all sub-contractors hired by him comply with the same requirement as the contractor himself and shall be liable for ensuring compliance all HSE laws by the sub or sub-sub contractors.

2. Every person deployed by the contractor in a mine must wear safety gadgets to be provided by the contractor. The Contractor shall provide proper Personnel Protective Equipment as per the hazard identified and risk assessed for the job and conforming to statutory requirement and company PPE schedule. Safety appliances like protective footwear, Safety Helmet and Full Body harness has to be DGMS approved. Necessary supportive document shall have to be submitted as proof. If the Contractor fails to provide the safety items as mentioned above to the working personnel, the Contractor may apply to the Company (OIL) for providing the same. OIL will provide the safety items, if available. But in turn, OIL will recover the actual cost of the items by deducting from Contractor's Bill. . However, it will be the Contractor's sole responsibility to ensure that the persons engaged by him in the mines use the proper PPE while at work. All the safety gears mentioned above are to be provided to the working personnel before commencement of the work.

3. The Contractor shall prepare written Safe Operating Procedure (SOP) for the work to be carried out, including an assessment of risk, wherever possible and safe methods to deal with it/them. The SOP should clearly state the risk arising to men, machineries & material from the mining operation / operations to be done by the contractor and how it is to be managed.

4. The contractor shall provide a copy of the SOP to the person designated by the mine owner who shall be supervising the contractor's work.

5. Keep an up to date SOP and provide a copy of changes to a person designated by the Mine Owner /Agent /Manager.

6. Contractor has to ensure that all work is carried out in accordance with the Statute and SOP and for the purpose he may deploy adequate qualified and competent personnel for the purpose of carrying out the job in a Contractor 1 Company SCC safe manner. For work of a specified scope/nature, he should develop and provide to the mine owner a site specific code of practice in line.

7. All persons deployed by the contractor for working in a mine must undergo Mines Vocational Training, initial medical examination, PME. They should be issued cards

Tender No: CDI1548P17

stating the name of the contractor and the work and its validity period, indicating status of MVT, IME & PME.

8. The contractor shall submit to DGMS returns indicating - Name of his firm, Registration number, Name and address of person heading the firm, Nature of work, type of deployment of work persons, Number of work persons deployed, how many work persons hold VT Certificate, how many work persons undergone IME and type of medical coverage given to the work persons.

9. The return shall be submitted quarterly (by 10th of April, July, October & January) for contracts of more than one year. However, for contracts of less than one year, returns shall be submitted monthly.

10. It will be entirely the responsibility of the Contractor/his Supervisor/representative to ensure strict adherence to all HSE measures and statutory rules during operation in OIL's installations and safety of workers engaged by him. The crew members will not refuse to follow any instruction given by company's Installation Manager / Safety Officer / Engineer / Official / Supervisor/Junior Engineer for safe operation.

11. Any compensation arising out of the job carried out by the Contractor whether related to pollution, Safety or Health will be paid by the contractor only.

12. Any compensation arising due to accident of the Contractor's personnel while carrying out the job, will be payable by the contractor.

13. The contractor shall have to report all incidents including near miss to Installation Manager / departmental representative of the concerned department of OIL.

14. The contractor has to keep a register of the persons employed by him/her. The contractor's supervisor shall take and maintain attendance of his men every day for the work, punctually.

15. If the company arranges any safety class / training for the working personnel at site (company employee, contractor worker, etc) the contractor will not have any objection to any such training.

16. The health check up of contractor's personnel is to be done by the contractor in authorized Health Centers as per OIL's requirement & proof of such test(s) is to be submitted to OIL. The frequency of periodic medical examinations should be every five years for the employees below 45 years of age and every three years for employees of 45 years of age and above.

17. To arrange daily tool box meeting and regular site safety meetings and maintain records.

18. Records of daily attendance, accident report etc. are to be maintained in Form B, E, J (as per Mines Rules 1955) by the contractor.

19. A contractor employee must, while at work, take reasonable care for the health and safety of people who are at the employee's place of work and who may be affected by the employee's act or omissions at work.

20. A contractor employee must, while at work, cooperate with his or her employer or other persons so far as is necessary to enable compliance with any requirement under the act or the regulations that is imposed in the interest of health, safety and welfare of the employee or any other person.

21. Contractor's arrangements for health and safety management shall be consistent with those for the mine owner.

22. In case Contractor is found non-compliant of HSE laws as required company will have the right for directing the contractor to take action to comply with the requirements, and for further non-compliance, the contractor will be penalized prevailing relevant Acts/Rules/Regulations.

23. When there is a significant risk to health, environment or safety of a person or place arising because of a non-compliance of HSE Measures Company will have the right to direct the contractor to cease work until the non-compliance is corrected.

24. The contractor should prevent the frequent change of his contractual employees as far as practicable.

25. The contractor should frame a mutually agreed bridging document between OIL & the contractor with roles and responsibilities clearly defined.

26. For any HSE matters not specified in the contract document, the contractor will abide the relevant and prevailing Acts/rules/regulations/ pertaining to Health, Safety and Environment.

(Seal)

Yours Faithfully

Date_____

M/s_____

FOR & ON BEHALF OF CONTRACTOR

INTEGRITY PACT

Between
Oil India Limited (OIL) hereinafter referred to as "The Principal"
And
(Name of the bidder).....hereinafter referred to as
"The Bidder/Contractor"

Preamble:

The Principal intends to award, under laid down organizational procedures, contract/s for **Construction of new Office Building with Garage at WSS Duliajan, including electrification and supply of all materials except Cement.** The Principal values full compliance with all relevant laws and regulations, and the principles of economic use of resources, and of fairness and transparency in its relations with its Bidder/s and Contractor/s.

In order to achieve these goals, the Principal cooperates with the renowned international Non-Governmental Organisation "Transparency International" (TI). Following TI's national and international experience, the Principal will appoint an external independent Monitor who will monitor the tender process and the execution of the contract for compliance with the principles mentioned above.

Section 1 - Commitments of the Principal

(1) The Principal commits itself to take all measures necessary to prevent Corruption and to observe the following principles:-

- I. No employee of the Principal, personally or through family members, will in connection with the tender for, or the execution of a contract, demand, take a promise for or accept, for him/herself or third person, any material or immaterial benefit which he/she is not legally entitled to.
 - II. The Principal will, during the tender process treat all Bidders with equity and reason. The Principal will in particular, before and during the tender process, provide to all Bidders the same information and will not provide to any Bidder confidential/ additional information through which the Bidder could obtain an advantage in relation to the tender process or the contract execution.
 - III. The Principal will exclude from the process all known prejudiced persons.
- (2) If the Principal obtains information on the conduct of any of its employees which is a criminal offence under the relevant Anti-

Corruption Laws of India, or if there be a substantive suspicion in this regard, the Principal will inform its Vigilance Office and in addition can initiate disciplinary actions.

Section 2 - Commitments of the Bidder/Contractor

- (1) The Bidder/Contractor commits itself to take all measures necessary to prevent corruption. He commits himself to observe the following principles during his participation in the tender process and during the contract execution.
 - I. The Bidder/Contractor will not, directly or through any other person or firm, offer, promise or give to any of the Principal's employees involved in the tender process or the execution of the contract or to any third person any material or immaterial benefit which he/she is not legally entitled to, in order to obtain in exchange any advantage of any kind whatsoever during the tender process or during the execution of the contract.
 - ii. The Bidder/Contractor will not enter with other Bidders into any undisclosed agreement or understanding, whether formal or informal. This applies in particular to prices, specifications, certifications, subsidiary contracts, submission or non-submission of bids or any other actions to restrict competitiveness or to introduce cartelisation in the bidding process.
 - iii. The Bidder/Contractor will not commit any offence under the relevant anticorruption Laws of India; further the Bidder/Contractor will not use improperly, for purposes of competition or personal gain, or pass on to others, any information or document provided by the Principal as part of the business relationship, regarding plans, technical proposals and business details, including information contained or transmitted electronically.
 - iv. The Bidder/Contractor will, when presenting his bid, disclose any and all payments he has made, is committed to or intends to make to agents, brokers or any other intermediaries in connection with the award of the contract.
- (2) The Bidder/Contractor will not instigate third persons to commit offences outlined above or be an accessory to such offences.

Section 3 - Disqualification from tender process and exclusion from future Contracts

If the Bidder, before contract award has committed a transgression through a violation of Section 2 or in any other form such as to put his

reliability or risibility as Bidder into question, the Principal is entitled to disqualify the Bidder from the tender process or to terminate the contract, if already signed, for such reason.

1. If the Bidder/Contractor has committed a transgression through a violation of Section 2 such as to put his reliability or credibility into question, the Principal is entitled also to exclude the Bidder/Contractor from future contract award processes. The imposition and duration of the exclusion will be determined by the severity of the transgression. The severity will be determined by the circumstances of the case, in particular the number of transgressions, the position of the transgressions within the company hierarchy of the Bidder and the amount of the damage. The exclusion will be imposed for a minimum of 6 months and maximum of 3 years.
2. The Bidder accepts and undertakes to respect and uphold the Principal's Absolute right to resort to and impose such exclusion and further accepts and undertakes not to challenge or question such exclusion on any ground, including the lack of any hearing before the decision to resort to such exclusion is taken. This undertaking is given freely and after obtaining independent legal advice.
3. If the Bidder/Contractor can prove that he has restored/recouped the Damage caused by him and has installed a suitable corruption prevention system, the Principal may revoke the exclusion prematurely.
4. A transgression is considered to have occurred if in light of available evidence no reasonable doubt is possible.

Section 4 - Compensation for Damages

1. If the Principal has disqualified the Bidder from the tender process prior to the award according to Section 3, the Principal is entitled to demand and recover from the Bidder liquidated damages equivalent to 3 % of the value of the offer or the amount equivalent to Earnest Money Deposit/Bid Security, whichever is higher.
2. If the Principal has terminated the contract according to Section 3, or if the Principal is entitled to terminate the contract according to section 3, the Principal shall be entitled to demand and recover from the Contractor liquidated damages equivalent to 5% of the contract value or the amount equivalent to Security Deposit/Performance Bank Guarantee, whichever is higher.

3. The bidder agrees and undertakes to pay the said amounts without protest or demur subject only to condition that if the Bidder/Contractor can prove and establish that the exclusion of the Bidder from the tender process or the termination of the contract after the contract award has caused no damage or less damage than the amount or the liquidated damages, the Bidder/Contractor shall compensate the Principal only to the extent of the damage in the amount proved.

Section 5 - Previous transgression

1. The Bidder declares that no previous transgression occurred in the last 3 years with any other Company in any country conforming to the TI approach or with any other Public Sector Enterprise in India that could justify his exclusion from the tender process.
2. If the Bidder makes incorrect statement on this subject, he can be disqualified from the tender process or the contract, if already awarded, can be terminated for such reason.

Section 6 - Equal treatment of all Bidders/Contractor/Subcontractors

1. The Bidder/Contractor undertakes to demand from all subcontractors a commitment in conformity with this Integrity Pact, and to submit it to the Principal before contract signing.
2. The Principal will enter into agreements with identical conditions as this one with all Bidders, Contractors and Subcontractors.
3. The Principal will disqualify from the tender process all bidders who do not sign this Pact or violate its provisions.

Section 7 - Criminal charges against violating Bidders/Contractors/ Subcontractors

If the Principal obtains knowledge of conduct of a Bidder, Contractor or Subcontractor, or of an employee or a representative or an associate of a Bidder, Contractor or Subcontractor, which constitutes corruption, or if the Principal has substantive suspicion in this regard, the Principal will inform the Vigilance Office.

**Section 8 - External Independent Monitor/Monitors
(three in number depending on the size of the contract)
(to be decided by the Chairperson of the Principal)**

1. The Principal appoints competent and credible external independent Monitor for this Pact. The task of the Monitor is to review independently and objectively, whether and to what extent the parties comply with the obligations under this agreement.

2. The Monitor is not subject to instructions by the representatives of the parties and performs his functions neutrally and independently. He reports to the Chairperson of the Board of the Principal.
3. The Contractor accepts that the Monitor has the right to access without restriction to all Project documentation of the Principal including that provided by the Contractor. The Contractor will also grant the Monitor, upon his request and demonstration of a valid interest, unrestricted and unconditional access to his project documentation. The same is applicable to Subcontractors. The Monitor is under contractual obligation to treat the information and documents of the Bidder/Contractor/Subcontractor with confidentiality.
4. The Principal will provide to the Monitor sufficient information about all meetings among the parties related to the Project provided such meetings could have an impact on the contractual relations between the Principal and the Contractor. The parties offer to the Monitor the option to participate in such meetings.
5. As soon as the Monitor notices, or believes to notice, a violation of this agreement, he will so inform the Management of the Principal and request the Management to discontinue or heal the violation, or to take other relevant action. The monitor can in this regard submit non-binding recommendations. Beyond this, the Monitor has no right to demand from the parties that they act in a specific manner, refrain from action or tolerate action.
6. The Monitor will submit a written report to the Chairperson of the Board of the Principal within 8 to 10 weeks from the date of reference or intimation to him by the 'Principal' and, should the occasion arise, submit proposals for correcting problematic situations.
7. If the Monitor has reported to the Chairperson of the Board a substantiated suspicion of an offence under relevant Anti-Corruption Laws of India, and the Chairperson has not, within reasonable time, taken visible action to proceed against such offence or reported it to the Vigilance Office, the Monitor may also transmit this information directly to the Central Vigilance Commissioner, Government of India.
8. The word 'Monitor' would include both singular and plural.

Section 9 - Pact Duration

This Pact begins when both parties have legally signed it. It expires for the Contractor 12 months after the last payment under the respective contract, and for all other Bidders 6 months after the contract has been awarded.

If any claim is made/ lodged during this time, the same shall be binding and continue to be valid despite the lapse of this pact as specified above, unless it is discharged/determined by Chairperson of the Principal.

Section 10 - Other provisions

1. This agreement is subject to Indian Law. Place of performance and jurisdiction is the Registered Office of the Principal, i.e. New Delhi.
2. Changes and supplements as well as termination notices need to be made in writing. Side agreements have not been made.
3. If the Contractor is a partnership or a consortium, this agreement must be, signed by all partners or consortium members.
4. Should one or several provisions of this agreement turn out to be invalid, the remainder of this agreement remains valid. In this case, the parties will strive to come to an agreement to their original intentions.

For the Principal

for the Bidder/Contractor

Place: Duliajan.

Witness 1:

Date:

Witness 2:

BID EVALUATION CRITERIA (BEC)/BID REJECTION CRITERIA (BRC)

(A). BID EVALUATION CRITERIA (BEC):

1.0 The bid shall conform generally to the specifications and terms and conditions given in the Tender Documents. Bids will be rejected in case services offered do not conform to the required parameters stipulated in the technical specifications. Notwithstanding the general conformity of the bid to the stipulated specifications, the following mandatory requirements will have to be particularly met by the Bidders without which the same will be considered as non-responsive and rejected. All the documents related to BEC must be submitted along with the Techno-Commercial Bid.

2.1 Interested bidders shall have to submit the following documents to qualify for opening of the Price Bid:

2.1.1

- a. One successfully completed similar work of value ₹ 30,64,000.00/- under tender with CPWD, Railways, APWD, MES, NRL, ONGCL, OIL or any other Government Organization / Public Sector Undertaking during the last seven (07) years reckoned from the original bid closing date.
- b. For proof of requisite experience of SIMILAR work, Job Completion Certificate clearly mentioning Gross value of job done, Nature of works, Contracts period/Contract Start and Completion date issued by CPWD, Railways, APWD, MES, NRL, ONGCL, OIL or any other Government Organization / Public Sector Undertaking must be submitted along with the bid.
- c. SIMILAR work executed by a bidder for its own organization / subsidiary will not be considered as experience for the purpose of meeting BEC.

2.1.1.1 The bidder must possess valid electrical license issued/endorsed by Licensing Board of Govt. of Assam or else have tie up with an Electrical Firm having the electrical license issued/endorsed by Licensing Board of Govt. of Assam. The bidder or their collaborators must have experience in internal electrification works in Office/ Residential Building during the last 7(seven) years reckoned from the original bid closing date in any organizations as listed in Civil Experience. In case of collaboration with any Electrical firm as mentioned above, the bidder must furnish a MoU entered into with the collaborator towards providing the requisite service as per the terms of the contract.

2.1.2

- a) Annual Financial Turnover of the bidder during **any of preceding three financial / accounting years from the original bid closing date** should be at least ₹18, 39,000.00.
- b) **Net worth** of bidder must be positive for preceding financial/ accounting year.
- c) Considering the time required for preparation of Financial Statements, if the last date of preceding financial/accounting year falls within the preceding six months reckoned from the original bid closing date and the Financial Statements of the preceding financial / accounting year are not available with the bidder, then the financial turnover of the previous three financial/ accounting years excluding the preceding financial / accounting year will be considered. In such cases, the Net worth of the previous financial / accounting year excluding the preceding financial / accounting year will be considered. However, the bidder has to submit an affidavit / undertaking certifying that 'the balance sheet / Financial Statements for the financial year(as the case may be) has actually not been audited so far.

Note: For proof of Annual Turnover & Net worth any one of the following document must be submitted along with the bid:-

- i) A certificate issued by a practicing Chartered/ Cost Accountant (with Membership Number and Firm Registration Number), certifying the Annual turnover & Net worth as per format prescribed in Annexure-II.
- OR**
- ii) Audited Balance Sheet along with Profit & Loss account.

2.1.3 Bids must be valid for minimum 120 (one hundred twenty) days from the date of Technical Bid opening. If bidder does not submit / declare bid validity period, it will be presumed that the bid validity is 120 (one hundred twenty) days.

Note: In case of extension of Bid Opening Date, Bid validity must be extended suitably by the bidder, as and when advised by OIL.

2.1.4 Bid Security must be furnished (except those exempted) as a part of the Technical Bid. The Bid Security (in original) must reach the Office of DGM-Contracts, OIL, Duliajan on or before 1:30 p.m. on the bid closing date. *Alternatively, applicants already having User ID & Password for OIL's e-portal*

can pay the requisite Bid Document cost & Bid security against the individual IFBs through the online payment gateway.

The amount of Bid Security shall be as specified in the NIT.

Note:

(a) In case the Bidder submits Bid security in the form of Bank Guarantee (BG), the BG must be valid for minimum 150 days from the date of Technical bid opening.

(b) In case of extension of Bid Opening Date, Bid Security validity must be extended suitably by the bidder, as and when advised by OIL.

2.1.5 OIL shall be entering into an Integrity Pact with the bidders as per format enclosed vide Part-VI of the tender document. This Integrity Pact proforma has been duly signed digitally by OIL's competent signatory. The proforma has to be returned by the bidder (along with the Un-priced Techno-Commercial Bid) duly signed (digitally) by the same signatory who sign the bid, i.e., who is duly authorized to sign the bid. Uploading the Integrity Pact with digital signature will be construed that all pages of the Integrity Pact have been signed by the bidder's authorized signatory who sign the Bid.

2.1.6 The bidders must submit documentary evidence for BEC clause numbers **2.1.1, 2.1.1.1 and 2.1.2**. All the documents should be legible. The bidders must upload all the documents, digitally signed with "Organizational type" Digital Signature Certificate having Organization's name.

OIL registered 'A' & 'B' class bidders are exempted from depositing the bid security against this tender. They are also exempted from requirement of any experience or turnover criterion of this tender as per para 2.1.1, 2.1.1.1 & 2.1.2 above.

3.0 Notes to Clause no. 2.1.1 above:

(a) **"Similar work"** mentioned in Paragraph 2.1.1 above means the following:

Definition of similar work: Construction of RCC Building including plumbing & electrical works.

(b) Non-submission of the documents as specified in all the paragraphs above will result in rejection of bids.

4.0 SUBMISSION OF FORGED DOCUMENTS: Bidders should note that Company may verify authenticity of all the documents /certificates / information submitted by the bidder(s) against the tender. In case at any stage

of tendering process or Contract execution etc., if it is established that bidder has submitted forged documents / certificates / information towards fulfillment of any of the tender / contract conditions, Company shall immediately reject the bid of such bidder(s) or cancel / terminate the contract and forfeit EMD / SD submitted by the bidder(s), besides liable for action as per **clause no. H. (III) of Part-III SCC** of tender document.

5.0 The bids conforming to the specifications, terms and conditions stipulated in the tender documents and considered to be responsive after subjecting to Bid Evaluation Criteria will be considered for further evaluation as given below:

- i) To ascertain the inter-se-ranking, the comparison of the responsive bids will be made.
- ii) In case of identical lowest offered rate by more than 1 (one) bidder, the selection of priority-1 and priority-2 bidder will be made by draw of lots amongst the parties offering the same lowest. The tender shall be awarded to priority-1 bidder only, but if priority-1 bidder fails to accept the LOI/found non-eligible/ fails to execute the jobs, then Company may think to award the same to priority -2 bidder after taking management approval for the same.

Note: The Company's Internal Estimated Rates, as indicated in Part-II, are inclusive of all overheads, taxes, duties, levies etc. except P.F. & Service Tax.

(B). BID REJECTION CRITERIA (BRC):

1. The bids are to be submitted in single stage under 2 (two) bid system i.e. Un-priced Techno-Commercial Bid and Price Bid together. Only the Price Bid should contain the quoted price.
2. Bid security shall be furnished as a part of the Techno Commercial Un-priced Bid. The amount of bid security should be as specified in the NIT. Any bid not accompanied by a proper bid security will be summarily rejected.
3. Bid Documents / User Id & Password for OIL's E-Tender portal are not transferable. Bid made by parties who have not submitted the requisite tender fees will be rejected.
4. Any bid received in the form of Physical document/ Telex/Cable/Fax/E-mail will not be accepted.
5. Bidders must quote clearly and strictly in accordance with the price schedule outlined in Price Bidding Format attached under "Notes and Attachments" tab in the main bidding engine of OIL's e-Tender portal;

otherwise the bid will be rejected. All other techno-commercial documents other than price details to be submitted with Un-priced Techno-Commercial Bid as per tender requirement in the c-Folder link (collaboration link) under “Technical RFx Response” Tab Page only.

6. Bidder must accept and comply with the following provisions as given in the Tender Document. Deviations to such provisions shall make the bid liable for rejection.
 - a. Firm price
 - b. EMD / Bid Bond
 - c. Period of validity of Bid
 - d. Price Schedule
 - e. Performance Bank Guarantee / Security deposit
 - f. Delivery / Completion Schedule
 - g. Scope of work
 - h. Guarantee of material / work
 - i. Liquidated Damages clause
 - j. Tax liabilities
 - k. Arbitration / Resolution of Dispute Clause
 - l. Force Majeure
 - m. Applicable Laws
 - n. Specifications
 - o. Integrity Pact
7. There should not be any indication of price in the Un-priced Techno-Commercial Bid. If there is any indication of price in the Un-priced Techno-Commercial Bid, Such Bid will be rejected straightway.

8.0 GENERAL:

- i. In case bidder takes exception to any clause of bidding document not covered under BEC/BRC, then the Company has the discretion to load or reject the offer on account of such exception if the bidder does not withdraw / modify the deviation when / as advised by Company. The loading so done by the Company will be final and binding on the bidders. No deviation will however be accepted in the clauses covered under BRC.
- ii. To ascertain the substantial responsiveness of the bid the Company reserves the right to ask the bidder for clarification in respect of clauses covered under BEC/BRC also and such clarifications fulfilling the BEC/BRC clauses in toto must be received or before the deadline given by the Company, failing which the offer will be will be evaluated based on the submission.. However, mere submission of such clarification shall not make the offer responsive, unless Company is satisfied with the substantial responsiveness of the offer.

- iii. If any of the clauses in the BRC contradict with other clauses of bidding document elsewhere, the clauses in the BRC shall prevail.
- iv. Bidder(s) must note that requisite information(s)/financial values etc. as required in the BEC/BRC & Tender are clearly understandable from the supporting documents submitted by the Bidder(s); otherwise Bids shall be rejected.
- v. OIL will not be responsible for delay, loss or non-receipt of applications for participating in the bid sent by mail and will not entertain any correspondence in this regard.

NOTE: Apart from BEC/BRC as detailed above bidders are also advised to kindly note that Documents/ Annexure/Declaration as per clause no. E. & H. (I) of part -III SCC of tender document should be furnished along with the bid. However, this will not be a part of BEC / BRC.

(ON THE NJSP OF RS.100/-)

TO BE NOTORISED

**To
DGM-CONTRACTS
OIL INDIA LIMITED
DULIAJAN**

Dear Sirs,

**Sub: UNDERTAKING/DECLARATION BY THE BIDDER (S) IN
RESPECT OF TENDER NO. CDI1548P17**

(To be submitted by the Bidders who are not covered under EPF&MP Act, 1952)

This is in connection with the Bid submitted by(Name of the Bidder) against Tenderfor(subject of the Tender). As per the conditions stipulated in Clause no.....(Name of the Provision/SCC etc.), we/I ,being authorized on behalf of(Name of the Contractor) hereby confirm and undertake as follows;

- That our Firm/Company shall be responsible to comply with all the applicable labour laws in respect of the present Contract.
- That we are fully conversant with the applicable laws and confirm that our Firm/Company is not covered under the Employees Provident Funds and Misc. Provisions Act, 1952 and applicable Rules there under, and therefore I we have not obtained any registration or Provident Fund Code under the Act.
- That if, during the period of the present Contract, we/our Firm /Company comes within the coverage of the aforesaid Acts or any other statutes; we shall comply with the same and submit the necessary documents to OIL. We further confirm that we will indemnify OIL towards any future statutory compliances/claims raised from any corner including statutory authorities against the Labour engaged by our Firm/Company in the Contract.
- That in the event of any contravention towards the applicable laws found on our part in respect of the present Contract, we undertake to indemnify OIL and deposit the claims, if any.

Annexure-I

- That we shall fulfill all the obligations arising from under the labour laws in force from time to time and keep OIL indemnified against any loss/liability arising out of failure of our avoiding the laws.

We, further agree and undertake that in case of any violation of the above undertaking, OIL shall be at liberty to take appropriate action against us in terms of the Tender including but not limited to termination of contract and debarment from future business with OIL.

I/We declare that the information given above is true and any misstatement or misrepresentation or suppression of facts in connection with the above undertaking may entail rejection of the bid and cancellation of contract, if awarded.

Yours faithfully,

1. Authorized Signatory _____
(BIDDER)

Place:-

Date:-

CERTIFICATE OF ANNUAL TURNOVER & NET WORTH

TO BE ISSUED BY PRACTISING **CHARTERED ACCOUNTANTS' FIRM** ON THEIR LETTER
HEAD

TO WHOM IT MAY CONCERN

This is to certify that the following financial positions extracted from the audited financial statements of
M/s..... (Name of the Bidder) for the last three (3) completed accounting years upto
.....**(as the case may be)** are correct.

YEAR	TURN OVER In INR (Rs.)	NET WORTH In INR (Rs.)

Place:

Date:

Seal:

Membership No. & Firm Registration No. :

Signature