



**DELHI METRO RAIL CORPORATION LTD.**

(A Joint Venture of Govt. of India & Govt. of NCT, Delhi)

**Annual Rate Contract for General E&M Works for L-2  
(Ext.) & L-3 (DSTO) Underground Stations of DMRC.**

NO.DMRC/O&M/E&M/UG-II/E&M General Works

**NOTICE INVITING TENDER (NIT)**

*DELHI METRO RAIL CORPORATION LTD.*

**METRO BHAWAN, Fire Brigade Lane, Barakhamba Road**

**New Delhi-110001**

**SECTION 1****NOTICE INVITING TENDER****1.1 GENERAL**

Delhi Metro Rail Corporation (DMRC) Ltd. invites **e-open tenders** in from the eligible tenderes as per tender clause 1.2. Of NIT for **Annual Rate Contract for General E&M Works for L-2 (Ext.) & L-3 (DSTO) Underground Stations of DMRC.**

1.1.1 Delhi Metro Rail Corporation (DMRC) Ltd. invites e-open tenders from eligible tenderers for **Annual Rate Contract for General E&M Works for L-2 (Ext.) & L-3 (DSTO) Underground Stations of DMRC** as per following details:

Estimated cost of work	Rs.49,22,846 /-(inclusive of all taxes)
Tender Security amount	Rs. 98457/- (in form of bank guarantee with validity as per tender clause 11 of ITT or in form of draft)
Cost of Tender form (Non Refundable)	Rs. 5250/- (Rs. plus 5% VAT)
Contract period of the Work	01 year (from the 3 <sup>rd</sup> day of LOA)
Tender documents on sale	From 01/09/2015 to 22/09/2015 (up to 1400 hrs) through e-tendering website <a href="http://www.tenderwizard.com/DMRC">www.tenderwizard.com/DMRC</a> Tender document can only be obtained after registration of tenderer on the website <a href="http://www.tenderwizard.com/DMRC">www.tenderwizard.com/DMRC</a> . For further information on this regard bidders are advised to contact 011-49424307, 011-49424365 or 011-23417910
Last date of Seeking Clarification	21/09/2015 (up to 1500 hrs)
Last date of issuing addendum	22/09/2015
Date & time of Submission of Tender	22/09/2015 (up to 1500 hrs)
Date & time of opening of Tender	22/09/2015 at 15.30 hrs
Authority for purchase of tender documents, seeking	DGM/E&M/UG-II Delhi Metro Rail Corporation,

<b>clarifications and submission of completed tender documents</b>	<b>6th floor, C-Wing, Metro Bhawan, Fire Brigade Lane, Barakhamba Road, New Delhi –110001</b>
<p><b>The tender cost and tender security will be in the form of a Demand draft/ Banker’s cheque drawn on a scheduled Commercial Bank based in India and should be in favour of “Delhi Metro Rail Corporation Ltd.” payable at New Delhi.</b></p> <p><b>The same should be submitted in original before opening of tender in the office of DGM/E&amp;M/UG-II at the above mentioned address.</b></p> <p><b>NOTE: The bidders who fail to submit the tender cost &amp; tender security (in original), etc. within stipulated scheduled time deemed to be rejected.</b></p>	

## **1.2 ELIGIBILITY CRITERIA**

### **1.2.1 Work Experiences:**

The tenderers should have the experience in the similar nature of work not less than three years. The tenderers will be qualified only if they have completed work(s) in last seven years in Govt., PSU/Semi-Govt./Govt. Autonomous body as mentioned below:-

- a. Three similar works costing not less than the amount equal to 40% of the estimated cost.

Or

- b. Two similar works costing not less than the amount equal to 50% value of estimated cost

Or

- c. One similar work costing not less than the amount equal to 80% value of estimated cost

#### **Similar nature of work:**

Below mentioned work would be considered as similar nature of work for the purpose of evaluation of work experience mentioned in above clause i.e. clause 1.2.1(a), (b) & (c).

This work should include maintenance and installation of General E&M works e.g. execution of laying of GI strip, wiring, lighting of stations and tunnel section, Electrical illuminated signage, installation of MCBs, rectification of unapproachable lights and pole lights by providing hydra and other general Electrical works etc. as mentioned in the BOQ.

- 1.2.2 N/A

- 1.2.3 The tenderers shall submit details of works executed by them in the Performa prescribed in **FORM A of FOT of ITT** for the works to be considered for qualification of work experience criteria. **Documentary proof such as completion certificates from client clearly indicating the nature/scope of work, actual completion cost and actual date of completion for such work should be submitted. Tender offers submitted without this documentary proof may be liable to be rejected.** In case the work is executed for private client, copy of work order, bill of quantities, bill wise details of payment received certified by C.A., T.D.S certificates for all payments received and copy of final/last bill paid by client shall be submitted.
- 1.2.4 Value of successfully completed portion of any ongoing work will also be considered for qualification of work experience criteria.
- 1.2.5 The tenders for this contract will be considered only from those tenderers (proprietorship firms, partnerships firms, companies, corporations, consortia or joint ventures) who meet requisite eligibility criteria prescribed in the sub-clauses of Clause 1.2.1 of NIT. In the case of a JV or Consortium, all members of the Group shall be jointly and severally liable for the performance of whole contract..  
A tenderer shall submit only one tender, either individually as a tenderer or as a partner of a JV/Consortium. A tenderer who submits or participates in more than one tender will cause all of the proposals in which the tenderer has participated either as sole tenderer or member of JV/consortium will be disqualified. No tenderer can be included as subcontractor while submitting a bid individually or as a partner of a JV/consortium in the same bidding process subsequently or at the tender stage. A tenderer, if acting in the capacity of subcontractor in any bid may however participate in more than one bid, but only in the capacity as subcontractor.
- 1.2.6 Tenderers shall not have a conflict of interest. Tenderers found to have a conflict of interest shall be disqualified. Tenderers shall be considered to have a conflict of interest with one or more parties in this bidding process, if:
- (a) a tenderer has been engaged by the Employer to provide consulting services for the preparation related to procurement for implementation of the project;
  - (b) a tenderer's associate(s)/affiliate(s) (inclusive of parent firms) mentioned in subparagraph (a) above; or
  - (c) a tenderer lends, or temporarily seconds its personnel to firms or organizations which are engaged in consulting services for the preparation related to procurement for implementation of the project, if the personnel would be involved in any capacity on the same project.
- 1.2.7 A firm, who has purchased the tender document in their name, can submit the tender either as individual firm or as partner of a joint venture/consortium. However, the

lead partner in case of JV shall be one who has experience of similar works.

1.2.8 NON SUBSTANTIAL PARTNERS IN CASE OF JV/CONSORTIUM

- a. Lead partner must have a minimum of 26% participation in the JV/Consortium.
- b. Partners having less than 26% participation will be termed as non-substantial partner and will not be considered for evaluation which means that their financial soundness and work experience shall not be considered for evaluation of JV/Consortium.
- c. In case of JV/Consortium, change in constitution or percentage participation shall not be permitted at any stage after their submission of application otherwise the applicant shall be treated as non-responsive.

1.3.1 **Financial Standings :**

- a. Applicant should have average Annual Turnover of last three audited financial years not less than **80% of X.**

**Where, X= estimated cost of work as per NIT  
Completion periods in years**

- b. Applicant must not have been black listed or deregistered by any Govt or Public sector undertaking during last 5 years the contractor has to submit an undertaking on Rs. 10 stamp paper duly attested by Notary
- c. Tenderers shall submit last three years (yr 2012-2013, 2013-2014, 2014-2015) audited financial statement duly attested by certified CA to work out net worth.  
**The net worth must be positive.**
- d. Self attested copy of VAT/Service tax registration certificate, PAN no.

Documentary proof of satisfying eligibility conditions and chartered accountant certificate for turnover to be furnished along with the application on printed letter heads. Testimonials of satisfactory completion should be obtained from an officer not below the rank of executive engineer

**Notes :**

- Financial data for last three audited financial years has to be submitted by the tenderer in **FORM T-V** along with audited balance sheets. The financial data in the prescribed format shall be certified by Chartered Accountant with his stamp and signature in original. In case audited balance sheet of the last financial year is not made available by the bidder, he has to submit an affidavit certifying that 'the balance sheet has actually not been audited so far'. In such a case the financial

data of previous '2' audited financial years will be taken into consideration for evaluation. If audited balance sheet of any year other than the last year is not submitted, the tender may be considered as non-responsive.

- Where a work is undertaken by a group, only that portion of the contract which is undertaken by the concerned applicant/member should be indicated and the remaining done by the other members of the group be excluded. This is to be substantiated with documentary evidence.

1.3.2 The tender submission of bidders, who do not qualify the minimum eligibility criteria stipulated in the clauses 1.2 above, shall not be considered for further evaluation. The mere fact that the bidder is qualified as mentioned in sub clause shall not imply that his bid shall automatically be accepted. The same shall be subject to the data as required for consideration of tender prescribed in the ITT

The mere fact that the tenderer is technically qualified as shall not imply that his bid shall automatically be accepted. The same should contain all Financial & other details as required for the consideration of tender.

1.3.3 The scope of work along with various other terms & conditions have been spelt out in the tender document consisting of the following:

- a. Notice Inviting Tender - consisting of
  - i. Notice Inviting Tender
  - ii. Scope of Work
  - iii. Tender prices
- b. Instructions to Tenderers
- c. General Conditions of Contract
- d. Special Conditions of Contract
- e. Bill of Quantities.

1.3.4 The tenderers may obtain further information in respect of these tender documents from the office of Deputy General Manager/E&M/UG-II office, 6<sup>th</sup> Floor, Metro Bhawan Fire Brigade lane, Barakhamba Road New Delhi-110001

1.3.5 The intending bidders must be registered on e-tendering portal [www.tenderwizard.com/DMRC](http://www.tenderwizard.com/DMRC). Those who are not registered on the e-tendering portal shall be required to get registered beforehand. If needed they can be imparted training on 'online tendering process'. After registration the tenderer will get user id and password. On login tenderer can participate in tendering process and can witness various activities of the process.

- 1.3.6 The authorized signatory of intending bidder, as per Power of Attorney (POA), must have valid class-III digital signature. The tender document can only be downloaded or uploaded using Class-III digital signature of the authorized signatory.
- 1.3.7 Tender submissions will be made online after uploading the mandatory scanned documents towards cost of tender documents such as Demand Draft or Pay Order or Banker's Cheque from a Scheduled commercial bank based in India and towards Tender Security such as Bank Guarantee or Demand Draft or Pay Order or Banker's Cheque from a Scheduled commercial bank based in India and other documents as stated in the tender document.
- 1.3.8 Tenderer is cautioned that the tender containing any material deviation from the tender document which consists of NIT, Instructions to tenderes, General conditions of contract, Special conditions of contract, Bill of quantities is liable to be summarily rejected as non-responsive.
- 1.3.9 Tenders shall be valid for a period of 180 days from the date of submission of Tenders and shall be accompanied with a tender security of the requisite amount as per clause 12.0 of ITT.
- 1.4.0 DMRC reserves the right to accept or reject any or all proposals without assigning any reasons. No bidder shall have any cause of action or claim against the DMRC for rejection of his proposal.
- 1.4.1 Bidders shall note that the maximum file size that can be uploaded is 5 MB. All the uploaded files in tender submission should be named properly and arrange systematically.
- 1.4.2 The bidders are advised to keep in touch with e-tendering portal [www.tenderwizard.com/DMRC](http://www.tenderwizard.com/DMRC) for updates. Any corrigendum, addendum etc issued shall be part of this tender document and shall be made available on DMRC website [www.tenderwizard.com/DMRC](http://www.tenderwizard.com/DMRC)

**(Vivek Shrivastava)**  
**DGM/E&M/UG-II**  
**Delhi Metro Rail Corporation Ltd**  
**6th floor, Metro Bhawan,**  
**Fire Brigade lane,**  
**Barakhamba Road**  
**New Delhi-110001**

## SECTION 2

### SCOPE OF WORK

**1.0** The contractor will execute the work i.e. **Annual Rate Contract for General E&M Works for L-2 (Ext.) & L-3 (DSTO) Underground Stations of DMRC.**

**2.0** The works to be executed under this contract shall cover the below mentioned stations of DMRC :

- Udyog Bhawan
- Race Course
- Jor Bagh
- INA
- AIIMS
- Green Park
- Hauz Khas
- Malviya Nagar
- Saket
- Dwarka Sector 21

The Contractor, if required, shall also execute the works at any other locations of DMRC as instructed by the Engineer in Charge

#### **Annual Rate Contract for General E&M Works for L-2 (Ext.) & L-3 (DSTO) Underground Stations of DMRC includes:**

- **Part A: ONE TIME EXECUTION OF:** - Supplying, installation, commissioning of wiring for circuit along with earth wire, fixing of GI boxes with cover and modular plate including providing and fixing of 5/6 amps switch, supply and installation of 36 watt single tube HPF light, supplying, laying and commissioning of GI strips for earthing for panels, DB's, equipments as required as mentioned in BOQ.
- **Part B: ANNUAL RATE CONTRACT FOR GENERAL E&M WORKS:** - All Electrical works on stations such as lighting of stations, tunnels, wiring for circuit, rectification of unapproachable light, conducting, signage, supplying and fixing of MCB's etc as required as mentioned in BOQ.
- The Contractor shall follow the DMRC Electrical codes & Standards along with all safety measures during the execution of work which is available at <http://www.delhimetrorail.com/electrical-specification>.
- The makes to be used are detailed in **Annexure-I**.



- All the electrical works shall be carried out by the contractor under the supervision of qualified supervisor. During the execution all safety measures to be followed with sole responsibility of contractor.
- For the rectification of pole lights hydra will be arranged by contractor and no extra cost will be incurred by DMRC.
- During rectification of tunnel light at height, all the safety equipment shall be brought by contractor. Without which, no permission will be granted to work in tunnel or at height.

**3.0** NA

**4.0 Site preparation**

4.1 The Bidders shall visit the site & identify the defects & deficiencies and examine the site conditions for the execution of above named works and submit offer to execute and complete such works and remedy defects therein in conformity with the said Conditions of Contract, Specifications for the amount indicated in BOQ.

4.2 All site preparatory work shall have been carried out prior to the commencement of the work and all safety measures to be followed during the execution of work.

**5.0 Schedule of Maintenance:-**

The services to be provided by the contractor shall include, but not limited to, the following:

**A. Corrective/Breakdown Maintenance:**

- I. The scope of **Corrective/Breakdown** Maintenance shall include all the Breakdown and failures occurring in the system at any time during **24 hrs x 365 days** inclusive of all Sundays & Holidays.

**Response Time (Max.)** - **08 hours**

**Rectification Time (Max.)** - **24 hours**

**6.0 TOOLS/TACKLES AND REPLACEMENT OF DEFECTIVE PARTS INCLUDING CONSUMABLES.**

6.1 The contractor shall bring special tools and test equipments which are essential for day to day use in both corrective and preventive maintenance during the period of the contract.

6.2 The spare parts supplied by the contractor should be brand new /original one and from the reputed manufacturers / sources to ensure satisfactory performance. Before using any spare, the same should be shown and got approved by the employer's representative. The contractor will ensure that the repairs carried out do not require same repairs again within a reasonable time.

**7.0 TO MAINTAIN RECORD OF DEFECTS OCCURRED/ATTENDED WITH THE CONSUMPTION OF SPARES & CONSUMABLES.**

For every site visit, Engineer in-charge will prepare a service report, signed by Contractor's Service Engineer and DMRC engineer. First copy of it will be handed over to the DMRC engineer and second would be retained by Contractor's Service Engineer.

**8.0 OTHER ACTIVITIES TO BE CARRIED OUT TO UPKEEP THE SYSTEM IN HEALTHY CONDITION**

8.1 DMRC is an ISO-14001 & OHSAS 18001 certified Organization for Environment, Health & safety. The work is to be carried out as per International Norms/Standards and in such a manner that all premises always look Neat & Clean. Similarly, the waste disposal is also carried out in totally sealed manner without affecting the Environment.

8.2 For the hot works like welding, brazing, grinding and torch cutting and torch soldering to be carried out with prior hot work permit from DRMC under the supervision of DMRC staff and at most safety to be followed during the execution of any hot work. Preferably the hot work should be carried out during non revenue hours.

8.3 Repairing insulation removed for inspection & maintenance procedure.

8.4 Clean the equipment and surrounding area upon completion of work.

8.5 Report deficiencies and repairs required.

8.6 Contractor shall provide localized support for immediate problem resolution.

8.7 Completely filled the service inspection report after each visit with findings documented on equipment condition and performance, and recommendations on equipment enhancement to extend usable life.

8.8 Other activities required to be carried out as per manufacturer recommendation and to keep the system in healthy condition. If anything not included / missed and required for system proper operation if then it should be done by contractor free of cost.

**SECTION 3**  
**TENDER PRICES AND**  
**SCHEDULE OF PAYMENT**

**3.1 Tender Prices**

- 3.1.1 a. Unless explicitly stated otherwise in the Tender Documents, the contractor shall be responsible for the whole works, based on the Bill of Quantities and payment shall be as per accepted rates based on the activities carried out as in the Schedule of work.
- b. The rate quoted by the tenderer shall be inclusive of all duties, taxes, fees, octroi and other levies, materials, labor etc.

**3.1.2 Schedule of Payment**

Payment shall be made by running bills as per accepted rates on the quarterly basis after submission of bill along with the service reports duly verified from the DMRC in charge.

Payment shall be subjected to deduction of all T.D.S as per applicable law.

## BOQ

**SUB: Annual Rate contract for General E&M Works for L-2(ext.) & L-3 (DSTO) Underground stations of DMRC.**

Item No.	Description of work	Unit	Qty	Unit Rate (in Rs.)	Amount in Rs. (inclusive of all taxes)
<b>PART A :- One time execution of :-</b>					
1	Supply, installation, testing and commissioning of conduiting and Wiring for circuit/sub main wiring along with earth wire the following sizes of single core, copper conductor LSZH wires in flexible/recessed 25mm steel conduit, of ISI marked, reputed brand of DMRC approved make, with all accessories such as bends, saddles, crimping socket, glands, fasteners including cutting and painting as required, as per DMRC Electrical Specifications and Standards.				
1.1	<b>Wire size:</b> - 2×2.5 sq. mm + 1×2.5 sq. mm earth wire LSZH type <b>Conduit:</b> - 25 mm steel conduit	Mtrs	1700		
2	Supplying and fixing of suitable size GI box, of ISI marked, reputed brand of DMRC approved make, with modular plate and cover in front on surface or in recess, including providing and fixing 5/6 amps modular switch, connection etc. as required, as per DMRC Electrical Specification and Standards.				
2.1	<b>Module:</b> -1/2 Module	No's	35		
2.2	<b>Switch :</b> S. P. 5/6 amps, one way modular switch	No's	50		
3	Supply and installation of 36 watt Single tube TMC 501/136 HPF light fitting make of Philips from wall/ceiling/fabricated beam up to the height 10 to 20 feet with suitable size of nuts and bolts if required and other related accessories complete in all respect of ISI marked, reputed brand of DMRC approved make and as per DMRC Standards and specifications and latest IS.				
3.1	36 Watt tube light <b>MAKE :</b> Philips <b>Model :</b> TMC 501/136 HPF	No's	150		
4	Supply , laying, testing and commissioning of GI strips for interconnecting to earthing stations, panels DB's etc of the following sizes in built up trenches/surface/wall/round complete with holes and fixing/jointing/terminating accessories etc of ISI marked, reputed brand of DMRC approved make.				
4.1	75mm × 6mm	Mtr.	2500		
4.2	40mm × 5mm	Mtr.	2800		
<b>Sub Total (inclusive of all taxes)</b>					
<b>PART B :- Annual Rate Contract for General E&amp;M works</b>					
1	Supply, installation, testing and commissioning of conduiting and Wiring for circuit/sub main wiring along with earth wire the following sizes of single core, copper conductor LSZH wires in flexible/recessed 25mm steel conduit with all accessories such as bends, saddles, crimping socket, glands,				

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	fasteners including cutting and painting as required, of ISI marked, reputed brand of DMRC approved make, as per DMRC Electrical Specifications and Standards.				
1.1	<b>Wire size:</b> - 2×2.5 sq. mm + 1×2.5 sq. mm earth wire LSZH type <b>Conduit:</b> - 25 mm steel conduit	Mtr.	200		
2	Supply , laying, testing and commissioning of GI strips for interconnecting to earthing stations, panels DB's etc of the following sizes in built-up trenches/surface/wall/round complete with holes and fixing/jointing/terminating accessories etc. Of ISI marked, reputed brand of DMRC approved make.				
2.1	75mm × 6mm	Mtr.	50		
2.2	40mm × 5mm	Mtr.	50		
3	Laying and fixing of different type of PVC/XLPE LSZH armored, copper/aluminium conductor cables on existing trench/cable/tray/wall/trusses with heavy duty GI Clamps/saddle of suitable size incl. termination of cables with suitable size of crimping sockets and gallants as per latest IS code and practice. <b>NOTE: Cable shall be supplied by DMRC in the store of KPDP. Loading and transportation from store to site shall be done by the contractor at his own cost and labor.</b>				
3.1	Cable Size:- 3/3.5/4 core size from 1.5sq mm to 4sq mm	Mtr.	200		
3.2	Cable Size:- 3/3.5/4 core size from 6sq mm to 25sq mm	Mtr.	200		
4	Supply and installation of Cable gland and thimbles of appropriate size with proper termination of cable up to 25sq mm, of ISI marked, reputed brand of DMRC approved make, as per DMRC Electrical Specifications and Standards.	No's	20		
5	Rectification of unapproachable lights on stairs at UG station by special tools and ladders(Light Fixtures material will be given by DMRC)	No's	270		
6	Fixing of 70/150/250/400 watt Metal Halide/HPSV Flood light fittings on wall/ceiling/fabricated beam up to the height 10 to 20 feet with suitable size of nuts and bolts if required and other related accessories complete in all respect.	No's	50		
7	Rectification, testing and commissioning of 12 M height Pole lights (Light Material will be given by DMRC and hydra will be provided by the contractor)	No's	70		
8	Erection of metallic pole of following length in cement concrete 1:3:6 (1 cement :3 coarse sand :6 graded stone aggregate 40 mm nominal size) foundation including excavation and refilling etc. as required.(Above 4.5 metre and up to 6.5 metre)	No's	5		
9	Supply, fabrication and installation of cover suitable for pole mounting type junction box, of ISI marked, reputed brand of DMRC approved make, as per DMRC Electrical Specifications and Standards.	No's	5		
10	Supply, fixing, testing and commissioning of four core XLPE straight through LT joint, of ISI marked, reputed brand of DMRC approved make, with suitable thimble and epoxy resin compound/heat shrink joint. Make Raychem.				
10.1	4/3.5 × 16 sq mm to 25 sq mm	No's	4		
10.2	4/3.5 × 35 sq mm to 50 sq mm	No.	2		

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11	Detection and pin pointing of faults in underground LT cable with Fault Locating Machine (FLC).	No's	2		
12	Repair of earthing pit size 300/450/600 × 40/100 mm with cement concrete mixture 1:4:8 and Plastering inner/outer Wall.	No's	5		
13	Supplying and installing following size of perforated pre-painted M.S cable trays Tee's of ISI marked, reputed brand of DMRC approved make, with perforation not more than 17.5% joined with connector, suspended from the ceiling with M.S suspenders including bolts and nuts, painting suspenders etc as required, as per DMRC Electrical Specifications and Standards.				
13.1	100 mm width × 50 mm depth × 1.6 mm thickness	Mtr.	25		
14	Supply and fixing of G.I electrical conduit 25 mm medium class with accessories on surface/recess (as required as per site condition) make-AKG/BCE as per ISS/IE rule and site condition.	Mtr.	100		
15	Removal of tube and reflector of 2×36 W ceiling mounted flush type FTL, cleaning of housing, reflector, louvers and tube with solvent and refitted the same at Concourse level as per site condition and as directed by DMRC representative.	No's	2000		
16	Removal of tube and reflector of 36 W (Tunnel light) ceiling mounted flush type FTL, cleaning of housing, reflector, louvers and tube with solvent and refitted the same at Concourse level as per site condition and as directed by DMRC representative.	No's	1000		
17	Fixing of the LBT connector (L1, L2, L3) for the platform boom lights in the UG stations.	No's	40		
18	Fixing of the End bus termination of LBT for the platform boom lights in UG stations.	No's	6		
19	Supplying and fixing following way, horizontal type three pole and neutral, sheet steel, MCB distribution board, 415 Volts, on surface/recess, of ISI marked, reputed brand of DMRC approved make, complete with tinned copper bus bar, neutral bus bar, earth bar, din bar, interconnections, powder painted including earthing etc. as required (But without MCB/RCCB/Isolator).				
19.1	4 way (4+12), Single door	No's	3		
19.2	6 way (4+18), Single door	No's	3		
20	Supplying and fixing 5 amps to 32 amps rating, 240/415 volts, "c" curve, miniature circuit breaker, of ISI marked, reputed brand of DMRC approved make, suitable for inductive load of following poles in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
20.1	Single pole and neutral	No's	5		
20.2	Triple pole and neutral	No's	5		
21	Supplying and fixing following rating, 240 volts, RCCB, of ISI marked, reputed brand of DMRC approved make, having a sensitivity current up to 300 milliamps in the existing MCB DB complete with connections, testing and commissioning etc. as required.				
21.1	Double pole (Single phase and neutral), 25 Amps	No's	5		
21.2	Four pole (Three phase and neutral), 25 Amps	No's	5		
22	Installation, testing and commissioning of ceiling fans/exhaust fans with suitable fixing arrangements and connection wires etc as per ISS/IE rule and site condition. Note- ceiling fan/exhaust fans will be supplied by DMRC, as	No's	100		

	per DMRC Electrical Specifications and Standards.				
23	Repair of electrical back lit Signage glass thickness 5mm in existing board with clear visibility.	Sq. Ft	70		
24	Supply and installation and testing of 2'x1' Signage board, of ISI marked, reputed brand of DMRC approved make, along with ACP base and (SUPERSCRIPT WITH WORDS AS PER ENGINEER IN CHARGE) lights, as per DMRC Electrical Specifications and Standards.	No's	10		
25	Supply, fixing, connection, testing and commissioning of MS Gang box along with suitable size with hylem sheet of 3mm thick with 16Amp, switch socket complete as required of approved make (MDS, Anchor, MK or other reputed brand, ISI mark White color).	No's	50		
<b>Sub Total (inclusive of all taxes)</b>					
<b>Grand Total (Part A+ Part B)(inclusive of all taxes)</b>					

## Annexure-1

The makes to be used are as follows:-

Item Details	Make	Remarks
<b>Wire size:</b> - 2×2.5 sq. mm + 1×2.5 sq. mm earth wire LSZH type	Polycab, Ducab Dubai, Cords Cables, KEI or equivalent.	Item No. 1.1 of BOQ
<b>Conduit:</b> - 25 mm steel conduit.	BEC, AKG, NIC, Steel craft-ISI marked or equivalent.	Item No. 1.1 of BOQ
36 Watt Single tube TMC 501/136 HPF light.	ISI marked, reputed brand of DMRC approved make PHILIPS or equivalent.	Item No. 3.1 of BOQ
GI box with modular plate and cover in front on surface or in recess including providing and fixing 5/6 amps modular switch.	MDS, ANCHOR, MK or reputed brand, ISI mark White color.	Item No. 2 of BOQ