

**MAHARASHTRA METRO RAIL CORPORATION LIMITED  
(NAGPUR METRO RAIL PROJECT PHASE-2)**

**Corrigendum-VII Dated 22.07.2024**

**Name of Work:** Supply, Installation, Testing and commissioning of Electrical & Mechanical (E&M) works of 20 Nos. of stations in Reach-1, Reach-3 & Reach-4 Extension under Nagpur Metro Rail Project Phase-2.

**Tender No:** N2-039/E&M-03/2024 dated 14.03.2024.

Following Modifications in the Bid Provisions shall apply:

S.No	Page no.	Section and Clause no.	Existing Clause	Revised Clause
1	1134/119 3	Part 4 - Financial Bid & Bill of Quantities- Schedule A. 4.1 INTERNAL WIRING & ACCESSORIES	Supply, Installation, Testing & Commissioning of lighting points including ceiling fan, bracket fan, pedestal fans and exhaust fans in concealed or surface conduit system with 25 mm GI conduits & 1100 V grade, multi strand copper conductor, FRLS-PVC insulated wires for phase, neutral & earth, shall include end termination. The conduits shall be complete with bends, JBs etc. The laying cost shall also include chipping works, supporting arrangements if necessary.	Supply, Installation, Testing & Commissioning of lighting points including ceiling fan, bracket fan, pedestal fans and exhaust fans in concealed or surface conduit system with 25 mm GI conduits & 1100 V grade, multi strand copper conductor 3R x 2.5 Sq.mm wire for Light fixtures & fans and 3Rx 4 Sq.mm wire for power sockets. Wires for phase, neutral & earth, shall be FRLS-PVC insulated and include end termination. The conduits shall be complete with bends, JBs etc. The laying cost shall also include chipping works, supporting arrangements if necessary.
2	1179/119 3	Part 4 - Financial Bid & Bill of Quantities- Schedule C. H 01 1.1.VRV AIRCONDITONING SYSTEMS	Supply, Installation, testing and commissioning of Air Cooled Variable Refrigerant Volume System suitable for R410A and 415 ± 10% , 50 Hz, AC supply. The unit shall consist of indoor units and external condensing units and other accessories as listed below complete in all respects. The unit shall be fully charged with gas and oil.	Supply, Installation, testing and commissioning of Air Cooled VRV/VRF System suitable for R410A and 415 ± 10% , 50 Hz, AC supply. The unit shall consist of indoor units and external condensing units and other accessories as listed below complete in all respects. The unit shall be fully charged with gas and oil.

**Encl.:** - Annexure-I - Reply to Prebid Queries

  
**Executive Director (Procurement)**  
**Maha-Metro, Nagpur**

  
 NAGPUR METRO

**MAHARASHTRA METRO RAIL CORPORATION LIMITED  
(NAGPUR METRO RAIL PROJECT PHASE-2)**

**Annexure-I to Corrigendum-VII: Reply to Prebid Queries**

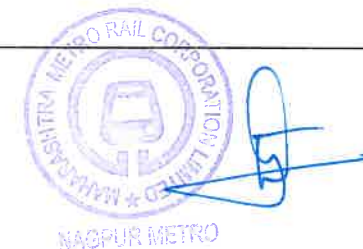
**Name of Work:** Supply, Installation, Testing and commissioning of Electrical & Mechanical (E&M) works of 20 Nos. of stations in Reach-1, Reach-3 & Reach-4 Extension under Nagpur Metro Rail Project Phase-2.

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S.N.	Page no.	Section	Clause no.	Subject/ Clarification Point/ Particular/ Existing Clause	Query	Reply
1	1108	Financial Bid & Bill of Quantities, Schedule-A	E01 - i MV switchgears	15% space provision with compartments for different breakers shall be provided for future expansion	Whether the space provision required for compartments with breaker or for all compartments in panel, like metering compartment, cable entry compartment, bus bar compartment	Tender conditions will prevail.
2	1123	Financial Bid & Bill of Quantities, Schedule-A	1.9 DIESEL GENERATOR	The entire set shall be housed in soundproof enclosure	Fuel Tank capacity of 250 KVA DG Set is 460 Ltr which comes along with DG set in soundproof encloser, Whether 990 ltr fabricated Day tank mentioned in specification shall also be housed in soundproof encloser. Please clarify	Tender conditions will prevail.
3	1134	Financial Bid & Bill of Quantities, Schedule-A	4.1 INTERNAL WIRING & ACCESSORIES	Supply, Installation, Testing & Commissioning of lighting points including ceiling fan, bracket fan, pedestal fans and exhaust fans in concealed or surface conduit system with 25 mm GI conduits & 1100 V grade, multi strand copper conductor, FRLS-PVC insulated wires for phase, neutral & earth, shall include end termination. The conduits shall be complete with bends, JBs etc. The laying cost shall also include chipping works, supporting arrangements if necessary.	Wire size / type is not mentioned in the bog specification, please confirm the same	Please refer corrigendum-VII
4	1134	Financial Bid & Bill of Quantities, Schedule-A	4.1 INTERNAL WIRING & ACCESSORIES	Supply, Installation, Testing & Commissioning of lighting points including ceiling fan, bracket fan, pedestal fans and exhaust fans in concealed or surface conduit system with 25 mm GI conduits & 1100 V grade, multi strand copper conductor, FRLS-PVC insulated wires for phase, neutral & earth, shall include end termination. The conduits shall be complete with bends, JBs etc. The laying cost shall also include chipping works, supporting arrangements if necessary.	Please define tentative length of primary light point, Secondary point, and length for light point / power point controlled from DB	Tender conditions will prevail.



S.N.	Page no.	Section	Clause no.	Subject/ Clarification Point/ Particular/ Existing Clause	Query	Reply
5	1164	Financial Bid & Bill of Quantities, Schedule-A	E11 Mandatory Operational Spares for the Panels		Please clarify the qty of listed spares	Tender conditions will prevail.
6	1186	Financial Bid & Bill of Quantities, Schedule-D	5.1 High Mast		Civil foundation scope is not clear in BOQ description, please clarify the same	Tender conditions will prevail.
7	1179	Part 4 - Financial Bid & Bill of Quantities- Schedule C	H 01 1.1. VRV AIRCONDITONING SYSTEMS	Supply, Installation, testing and commissioning of Air Cooled Variable Refrigerant Volume System.	Please note that Air Cooled Variable Refrigerant Volume System is the technology patented by single make only. Request you to accept Air Cooled Variable Refrigerant Flow System which is given by other Approved OEMs.	Please refer corrigendum-VII
8	1181	Part 4 - Financial Bid & Bill of Quantities- Schedule C	1.5 DX wall mounted Split Unit 1.5.1	Providing, fixing, testing and commissioning of split wall mounted cordless remote Air conditioners with Invertor Technology (Rating: 5 star or equivalent) air cooled type with evaporator coil, fan and fan motor ,air cooled condenser with compressor, condenser coil and complete with electrical Wiring as required	Kindly confirm the length and cable size to be considered along with each split AC.	Tender conditions will prevail.
9	1181	Part 4 - Financial Bid & Bill of Quantities- Schedule C	1.5 DX wall mounted Split Unit 1.5.2	Providing, fixing and testing of copper refrigerant piping of appropriate sizes duly insulated with nitrile rubber insulation of 9 mm thickness for all types of split AC units. The pipes plus nitrile rubber insulation are to be covered with PVC flexible conduits for protection - 626 Rmt	We understand that quantity mentioned in BOQ is liquid and Vapour pipe separately i.e 313 Rmt (Liquid pipe) + 313 Rmt (Vapour Pipe) = 626 Rmt. Kindly confirm.	Tender conditions will prevail.
10	1181	Part 4 - Financial Bid & Bill of Quantities- Schedule C	1.6 Condensate Drain Piping:	Providing, fixing and testing GI drain piping for condensate from indoor unit to nearest suitable drain system	We understand that GI B Class piping is acceptable for the given application. Kindly confirm the same.	Tender conditions will prevail.
11	1182	Part 4 - Financial Bid & Bill of Quantities- Schedule C	3.5	Supplying and fixing of accoustic lining of duct with fiber glass rigid board of density 48 kg/m3 sealed in fiberglass tissue paper and covered with 0.5mm perforated aluminium sheet & conforming to standard specification.	Please note that providing aluminium cladding over acoustic insulation is not recommended by OEM as it reduces the noise absorption rate of acoustic material.	Tender conditions will prevail.



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12	1182	Part 4 - Financial Bid & Bill of Quantities- Schedule C	3.4	Providing and fixing of self adhesive Closed Cell Elastomeric Nitrile rubber 13mm thick insulation on duct complete as per the specifications.	We understand that aluminium cladding is not required for the duct insulation. Kindly confirm.	Tender conditions will prevail.
13	574	Part-2 work requirements, Section VII Annexure VII-3	Approved Manufactures/Suppliers for E&M works 1 VRV Units	Toshiba, Blue Star, Voltas, Daikin, Mitsubishi	Kindly approve 0-General make for VRF System as it is reputed Japanese brand from Fujitsu Japan.	Tender conditions will prevail.
14		Part-2 work requirements	2.1.3 LV system Description	There are two Auxiliary Transformers provided for each station, which is capable of supplying power to all auxiliary loads and each separately installed in the ASS room	Auxiliary Transformers required for each station scope is not included in BOQ	Tender conditions will prevail.
15		Part-2 work requirements	2. List of Switch Boards	Switch boards and panels as per following list need be provided. The incoming & outgoing feeders, indications, metering and protection details are shown on various drawings as also referred in BOQ.	Following listed panels not included in BOQ H) Light Distribution Boards J) ACC Panels	Tender conditions will prevail.
16	82	Part-1 Bidding Procedure, Section-III Evaluation & Qualification criteria	4.2 (b) Specific Experience	Note: -1 . *Similar work: Similar works for this contract shall be the work of Supply, Installation, Testing and Commissioning of E&M works of Metro Station / Mass Rapid Transit System/ Railway Stations / Airport. Such E &M work can be part of a larger contract. E&M works shall be defined as work containing electrification, Fire suppression & Detection and VAC components,	Kindly accept following criteria for similar work as the same has been followed in majority of metro tenders in India such as Chennai Metro Rail Corporation Limited (CMRCL ) and Delhi Metro Rail Corporation Limited ( DMRCL ) *Similar work: Similar works for this contract shall be the work of Supply, Installation, Testing and Commissioning of E&M works of Metro Station / Mass Rapid Transit System/ Railway Stations / Airport / Commercial Buildings / Official Buildings / Hospital Buildings / Industrial Establishments. Such E &M work can be part of a larger contract. E&M works shall be defined as work containing electrification, Fire suppression & Detection and VAC components.	Tender conditions will prevail.

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17	82	Part-1 Bidding Procedure, Section-III Evaluation & Qualification criteria	4.2 (b) Specific Experience	<p>Successfully completed or substantially completed similar works specified below during last five years ending last day of month previous to the one in which applications are invited should be either of the following:</p> <p>(i) Should have **Substantially completed and have received in last 5 years at least INR 73.6 Crores towards single Contract of *similar work.</p> <p>OR</p> <p>(ii) Should have **Substantially completed and have received in last 5 years at least INR 46 Crores in each of the two Contracts of *similar work.</p> <p>OR</p> <p>(iii) Should have **Substantially completed and have received in last 5 years at least INR 36.8 Crores in each of the three Contracts of *similar work.</p> <p>Note: -</p> <p>1.*Similar work: Similar works for this contract shall be the work of Supply, Installation, Testing and Commissioning of E&amp;M works of Metro Station / Mass Rapid Transit System/ Railway Stations / Airport. Such E&amp;M work can be part of a larger contract. E&amp;M works shall be defined as work containing electrification, Fire suppression &amp; Detection and VAC components,</p>	<p>We request you to amend the given clause as below:</p> <p>Successfully completed or substantially completed similar works specified below during last five years ending last day of month previous to the one in which applications are invited should be either of the following:</p> <p>(i) Should have **Substantially completed and have received in last 5 years at least INR 73.6 Crores towards single Contract of *similar work.</p> <p>OR</p> <p>(ii) Should have **Substantially completed and have received in last 5 years at least INR 46 Crores in each of the two Contracts of *similar work.</p> <p>OR</p> <p>(iii) Should have **Substantially completed and have received in last 5 years at least INR 36.8 Crores in each of the three Contracts of *similar work.</p> <p>Note: -</p> <p>1.*Similar work: Similar works for this contract shall be the work of Supply, Installation, Testing and Commissioning of E&amp;M works of Metro Station / Mass Rapid Transit System/ Railway Stations / Airport/Highway Tunnels/Railway Tunnels. Such E&amp;M work can be part of a larger contract. E&amp;M works shall be defined as work containing electrification, Fire suppression &amp; Detection and VAC components,</p>	Tender conditions will prevail.



S.N.	Page no.	Section	Clause no.	Subject/ Clarification Point/ Particular/ Existing Clause	Query	Reply
18	82	Part-1 Bidding Procedure, Section-III Evaluation & Qualification criteria	4.2 (b) Specific Experience	<p>Successfully completed or substantially completed similar works specified below during last five years ending last day of month previous to the one in which applications are invited should be either of the following:</p> <p>(i) Should have **Substantially completed and have received in last 5 years at least INR 73.6 Crores towards single Contract of *similar work.</p> <p>OR</p> <p>(ii) Should have **Substantially completed and have received in last 5 years at least INR 46 Crores in each of the two Contracts of *similar work.</p> <p>OR</p> <p>(iii) Should have **Substantially completed and have received in last 5 years at least INR 36.8 Crores in each of the three Contracts of *similar work.</p> <p>Note: -</p> <p>1.*Similar work: Similar works for this contract shall be the work of Supply, Installation, Testing and Commissioning of E&amp;M works of Metro Station / Mass Rapid Transit System/ Railway Stations / Airport. Such E&amp;M work can be part of a larger contract. E&amp;M works shall be defined as work containing electrification, Fire suppression &amp; Detection and VAC components,</p>	We understand that the given clause " <i>Such E&amp;M work can be part of a larger contract. E&amp;M works shall be defined as work containing electrification, Fire suppression &amp; Detection and VAC components</i> ". also includes the given E&M work can part of Railway Tunnels/ Highway Tunnels.	Tender conditions will prevail.
19	1154	Part 4 - Financial Bid & Bill of Quantities- Schedule A	E-10 BMS/SCADA	SOFTWARE: RPU Programming and Configuration software (Rate included in item 11.1) (Complies to SIL-2)	Kindly reconfirm the requirement of SIL-2 PLC for BMS system	Tender conditions will prevail.
20	417	Part-2 work requirements, Section VII-H	10. Building Management system, CI 10.6.5 Programmable logic controller (PLC)	PLC consists of main CPU, I/O Modules, DC/DC converter and Terminal Blocks.	Requirement as mentioned in the below specifications is contradictory with BOQ requirements of SIL-2, Redundant IO's. Kindly reconfirm exact requirement.	Tender conditions will prevail. Kindly refer priority of documents in GCC.
21	444	Part-2 work requirements, Section VII-H	10. Building Management system, CI 10.11 Input/Output List (Indicative)	Input/Output List (Indicative)	Kindly provide the source of IO's indicative in IO's list to select the IO sub system quantity.	Tender conditions will prevail.
22		General	BMS		Kindly provide the system architecture with distance between ASS room, Pump room, SCR for networking components quantification.	Tender conditions will prevail.

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23		General	BMS		Kindly provide the plant layout with equipment location for control, signal and communication cable and Tray & conduit calculation and quantification of field instruments like PT, LS, water flow meter, wind transmitter, temperature and humidity sensor.	Tender conditions will prevail.
24	574	Part-2 work requirements, Section VII, Annexure-3, Appendix 10C	Approved Manufactures/Suppliers for E&M works (58) BMS/SCADA	GE, Ionix, Honeywell, Gulf Automation, Siemens, Rockwell Automation, ABB	We request you to include Schneider electric make, as the same has good proven track record across the country and world.	Tender conditions will prevail.
25	573	Part-2 work requirements, Section VII, Annexure-3, Appendix 10C	Approved Manufactures/Suppliers for E&M works (40) Main LT switchboards: PLC panels, Capacitor panels, Floor LT panels	Tricolite, advance, pratik systems, power control, pyrotech, pragathi control, Universal, Eletro Allied products, EMCO switchgear.	We request you to include Legrand make fo panels. Legrand is reputedated make and they have also supplied various panels for Metro Projects.	Tender conditions will prevail.
26	574	Part-2 work requirements, Section VII, Annexure-3, Appendix 10C	Approved Manufactures/Suppliers for E&M works (1) VRV Unit	Toshiba, Blue Star, Voltas, Daikin, Mitsubishi	We request you to kindly include samsung make fo VRV units, which is a reputedated make.	Tender conditions will prevail.
27	1152	Part 4 - Financial Bid & Bill of Quantities- Schedule A	E08-External Luminaires-8.1 Lighting	Supply, installation, testing and commissioning of LED Street light fixture - 70 watt with IP66 protected LM6 high pressure aluminium die cast housing capable of delivering a nominal system lumen output of 7200 lumens with a minimum system efficacy of 85 lumen/watt and a CRI greater than 70. The luminaire shall have a life class of 50,000 hours @ L70 and driver efficiency of >85%. (Similar to Philips Cat. No. BRP410 LED CW072 MR FG S1 PSU or equivalent)	The corresponding requirement of Street Light Poles is not given in the Item Code E-08. Kindly confirm if there is a requirement of Street Light Poles and if it is there, please provide technical specifications, under the separate item.	Tender conditions will prevail.
28	82	Part-1 Bidding Procedure, Section-III Evaluation & Qualification criteria	4.2 (a) Electrical license	The Contractor must have valid electrical contractor license issued by any State/ Central Government Authorities. (Bidder must submit the copy of such license along with the technical bid submissions.)	Is Only Electrical Work Experience considered for Joint Venture member ?	Tender conditions will prevail.

