

**Chennai Metro Rail Limited**

**Tender Description: Design, Manufacture, Supply, Testing, Commissioning of Standard Gauge Metro Rolling Stock (210 cars) and Training of Personnel**

**Tender No. CMRL/PHASE II/SYS/CP26/ARE02/2021**

**Tender ID. 2021\_CMMDB\_640237\_1**

**Addendum No.02**

S. No.	Part/Section No.	Clause No.	Original Bid Condition	Revised Bid Condition																																																			
1	Part 1 : BDS	ITB 22.2	The Power of Attorney authorizing to sign on behalf of the bidder shall be submitted in the format provided in Section IV – Bidding Forms – Form: ‘Power of Attorney for Signing of Bid’	The Power of Attorney authorizing to sign on behalf of the bidder shall be submitted.																																																			
2	Part 1 : EQC	1.1.1		Inserted New Clause : Bidders shall ensure that the Qualification of the proposed personnel is Engineering Graduate or above. Bidders can propose more than One personnel for each position.																																																			
3	Part 1 : EQC	2.4	Notes for the Bidder : (ii) For contracts under which the Bidder participated as a JV member, only the Bidder’s share, by value, shall be considered to meet this requirement.	Deleted.																																																			
4	Part 1 : EQC	2.6	Establishment of manufacturing facility in India:  The successful bidder shall establish metro cars manufacturing facility in India to manufacture at least 75% of the quantity ordered in this bid either through collaboration with companies based in India or by setting up an independent manufacturing unit in India.  The contractor shall provide declaration through the Form Manufacturing Facility that he will establish a manufacturing facility in India and assembled/ manufacture at least 75% of the total ordered quantity.	Establishment of manufacturing facility in India:  The successful bidder shall ensure that 75% of the quantity ordered in this bid is achieved by establishing metro cars manufacturing facility in India to manufacture or utilize existing Rolling Stock manufacturing facility for assembly works.  The contractor shall provide declaration through the Form Manufacturing Facility that he will establish a manufacturing facility in India to manufacture or utilize existing Rolling Stock manufacturing facility for assembly works at least 75% of the total ordered quantity.																																																			
5	Part 1 - Section IV Bidding Forms	2 - Schedule of Adjustment Data:	Schedule of Adjustment Data (Table A & Table B):  Note : In case if the bidder fills in weightages whose sum is not equal to 0.67 (excluding Nonadjustable), then CMRL will adjust the indices on pro-rata basis based on bidder’s submission.	Schedule of Adjustment Data (Table A & Table B):  Note: Bidder shall quote the applicable weightage/co-efficient against each components listed above within the range specified therein and the sum-total of all the components (including Non-adjustable (Fixed) component) shall be equal to 1 (100%). Bidder shall upload the filled-in ‘Schedule of adjustment data’ along with their Price bid.  In case if the bidder fills in weightages whose sum is not equal to 0.67 (excluding Nonadjustable), then CMRL will adjust the indices on pro-rata basis based on bidder’s submission.																																																			
6	Part 1 - Section IV Bidding Forms	2 - Schedule of Adjustment Data:		New Clause Inserted : Table C: Foreign Currency <table border="1"> <thead> <tr> <th>(a)</th> <th>(b)</th> <th>(c)</th> <th>(d)</th> <th>(e)</th> <th>(f)</th> </tr> <tr> <th>Index Code</th> <th>Index Description</th> <th>Source of Index</th> <th>Base value and date</th> <th>Bidder's related currency amount</th> <th>Weightage</th> </tr> </thead> <tbody> <tr> <td></td> <td>Non-adjustable (Fixed)</td> <td>—</td> <td>—</td> <td></td> <td>0.33</td> </tr> <tr> <td>L<sub>i</sub>/L<sub>0</sub></td> <td>Labour</td> <td>All India Consumer Price Index for Industrial Workers Published by RBI Bulletin</td> <td></td> <td></td> <td>0.10 – 0.25</td> </tr> <tr> <td>S<sub>i</sub>/S<sub>0</sub></td> <td>Stainless steel (Or)</td> <td>CRU</td> <td rowspan="2">Value as on 28 days prior to date of bid submission</td> <td></td> <td rowspan="2">0.15 – 0.25</td> </tr> <tr> <td>A<sub>i</sub>/A<sub>0</sub></td> <td>Aluminium</td> <td>ALCOA</td> </tr> <tr> <td>E<sub>i</sub>/F<sub>0</sub></td> <td>Carbon Steel</td> <td>CRUspi</td> <td></td> <td></td> <td>0.10 – 0.30</td> </tr> <tr> <td>C<sub>i</sub>/C<sub>0</sub></td> <td>Copper</td> <td>LME</td> <td></td> <td></td> <td>0.04 – 0.10</td> </tr> <tr> <td colspan="5" style="text-align: center;"><b>Total</b></td> <td><b>1.00</b></td> </tr> </tbody> </table>	(a)	(b)	(c)	(d)	(e)	(f)	Index Code	Index Description	Source of Index	Base value and date	Bidder's related currency amount	Weightage		Non-adjustable (Fixed)	—	—		0.33	L <sub>i</sub> /L <sub>0</sub>	Labour	All India Consumer Price Index for Industrial Workers Published by RBI Bulletin			0.10 – 0.25	S <sub>i</sub> /S <sub>0</sub>	Stainless steel (Or)	CRU	Value as on 28 days prior to date of bid submission		0.15 – 0.25	A <sub>i</sub> /A <sub>0</sub>	Aluminium	ALCOA	E <sub>i</sub> /F <sub>0</sub>	Carbon Steel	CRUspi			0.10 – 0.30	C <sub>i</sub> /C <sub>0</sub>	Copper	LME			0.04 – 0.10	<b>Total</b>					<b>1.00</b>
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8	Part 1 - Section IV Bidding Forms	3.2.2		New Clause Inserted :  Conditions Applicable to Price Adjustment: (f) If the currency of the index specified in ‘Schedule of adjustment data’ of Section IV – Bidding Forms is different from the currency of payment, a correction factor will be applied to avoid incorrect adjustment of the Contract Price. The correction factor shall correspond to the ratio of the exchange rates between the two currencies (Currency of payment and currency of index) on the Base date and the date of adjustment, as defined above.																																																			

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9	Part 1 - Section IV Bidding Forms	3.2.2		New Clause Inserted :  Conditions Applicable to Price Adjustment: (g) The value of the index on the Base date will be converted into a notional index in the currency of payment using the exchange rate on the base date between the currency of the index and the currency of payment. This notional index value will be used as "So", "Ao", "Co" "Fo" and "Lo" as applicable. The value of the index on the adjustment date in notional terms will be computed likewise using the exchange rate on the date of adjustment. These notional index values will correspond to "Sn", "An", "Cn" "Fn" and "Ln"as applicable.
10	Part 1 - Section IV Bidding Forms	4.4.5		New Clause Inserted :  B11 : Obtain as above for next 7 train sets
11	Part 1 - Section IV Bidding Forms	4.4.6		New Clause Inserted :  C11 : Obtain as above for next 7 train sets
12	Part 1 - Section IV Bidding Forms	4.4.7		New Clause Inserted :  D11 : Obtain as above for next 7 train sets
13	Part 1 - Section IV Bidding Forms	4.4.8		New Clause Inserted :  E11 : Obtain as above for next 7 train sets
14	Part 1 - Section IV Bidding Forms	4.4.9		New Clause Inserted :  F11 : Obtain as above for next 7 train sets
15	Part 1 - Section IV Bidding Forms	4.4.10	G6 : Intermediate Overhauling Spares for 2 Train Sets of 3 cars (As per Appendix E, Part 2, Employer's Requiement - Technical Specification). (Details to be given as per Annexure GA6)	G6 : Intermediate Overhauling Spares for <b>1 Train Set</b> of 3 cars (As per Appendix E, Part 2, Employer's Requiement - Technical Specification). (Details to be given as per Annexure GA6)
16	Part 1 Section IV	Bidding Forms GA 5 (Sl. No. 25)	Depot maintenance tools: Software tools for train equipment Maintenance, monitoring equipment & Depot Management performance.	Depot maintenance tools: Software tools for train equipment Maintenance & monitoring equipment.
17	Part 1 Section IV	Bidding Forms 5.1	[Insert technical proposal for Site Organization]	Bidders shall submit detailed Technical Proposal for Site Organization & Site Management Plan, which shall include both Onshore & Offshore team details.
18	Part 1 Section IV	Bidding Forms 5.2	[Insert technical proposal for Method Statement]	Bidders shall submit detailed Technical Proposal for Manufacturing Plan. The document shall cover the methodology adopoted for proposed Major Subassemblies, Manufacturing of Cars (Onshore & Offshore).
19	Part 1 Section IV	Bidding Forms 5.3	[Insert technical proposal for Mobilization Schedule]	Bidders shall submit detailed Technical Proposal for Mobilization Schedule Plan. The document shall cover the methodology adopoted for proposed Project, Engineering, Manufacturing (Onshore & Offshore), T&C, DNP, etc.,
20	Part 1 Section IV	Bidding Forms 5.4	[Insert technical proposal for Construction Schedule]	Bidders shall submit detailed Technical Proposal for Work Programme & Design Submission Programme.
21	Part 1 Section IV	Bidding Forms 5.13	Propulsion (Traction converter and Traction motors) Communication System	Revised Bid Condition Propulsion (Traction converter, Auxiliary Converter Inverter and Traction motors) Communication system ( PA, PIS & CCTV )
22	Part 1 Section IV	Bidding Forms 5.13	The following Subcontractors and/or manufacturers are proposed for carrying out the item of the facilities indicated. Bidders are free to propose more than one for each item.	The following Subcontractors and/or manufacturers are proposed for carrying out the item of the facilities indicated. Apart from the items indicated below, Bidders can propose anyother Major items based on their Previous Project experience. Bidders are allowed to propose more than one sub contractor for each item and CMRL reserves their rights to choose any subcontractor from the Bidder's proposal.
23	Part 1 Section IV	Bidding Forms 5.13		Inserted New Clause : Major Items of Plant and Installation Services Carbody (Roof Structure, Side Structure, Underframe Structure, End Structure & Cab Structure). Main Transformer & VCB
24	Part 1 Section V	ESC	"Section A"	In this section "Section A" is replaced with "Section V"
25	Part 1 Section IV	Section 4.2		New Clause Inserted :  Note (v) : The bidder shall be responsible to ensure that their quoted price towards individual Price Centres in various currencies (if any), converted into INR equivalent as above, are in compliant with the apportionment percentage indicated against each Price Centres. In case of any deviation in the quoted price towards individual Price Centres with respect to its allowable apportionment percentage, the Employer will readjust the prices among the Price Centres without altering the Total Bid Price, before entering into the Contract agreement.

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26	Part 2 - Section VI ERTS	ERTS 20.6.5	<table border="1"> <thead> <tr> <th>Resource</th> <th>Spare Capacity</th> </tr> </thead> <tbody> <tr> <td>Memory</td> <td>50%</td> </tr> <tr> <td>Disk Storage</td> <td>50%</td> </tr> <tr> <td>Communication Links/Ports</td> <td>50%</td> </tr> <tr> <td>Input/Output Capacity</td> <td>20%</td> </tr> </tbody> </table>	Resource	Spare Capacity	Memory	50%	Disk Storage	50%	Communication Links/Ports	50%	Input/Output Capacity	20%	<table border="1"> <thead> <tr> <th>Resource</th> <th>Spare Capacity</th> </tr> </thead> <tbody> <tr> <td>Memory</td> <td>50%</td> </tr> <tr> <td>Disk Storage</td> <td>50%</td> </tr> <tr> <td>Communication Links/Ports</td> <td>50%</td> </tr> <tr> <td>Input/Output Capacity</td> <td>20% Min. 10% (End of DNP)</td> </tr> </tbody> </table>	Resource	Spare Capacity	Memory	50%	Disk Storage	50%	Communication Links/Ports	50%	Input/Output Capacity	20% Min. 10% (End of DNP)
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27	Part 2 - Section VI ERTS	Appendix C: 14.1.1	This section describes the interface requirements between Rolling Stock (ARE03) Contract and other Rolling Stock (ARE02 / ARE04) Contractor.	This section describes the interface requirements between Rolling Stock (ARE02) Contract and other Rolling Stock (ARE03 / ARE04) Contractor.																				
28	Part 2 - Section VI ERTS	20.6.6	<p>Security</p> <p>i. The Contractor shall define procedures to ensure the security of the software configuration status and system during both the development and operation stages.</p> <p>ii. Other than just procedural control, built-in security facility / function (e.g. access control, anti-virus, firewall, any computer security standards to comply with – (“this is for AFC only”, etc.) is essential for safety-related and bona fide systems (e.g. ATS and AFC). These should be added if they are not included in the Particular Spec. for the individual system.</p>	<p>Security</p> <p>The Contractor shall define procedures to ensure the security of all hardware, software, communication protocols, architecture, networks and data acquisition concepts of Rolling stock &amp; its sub-systems during both the development and operation stages.</p> <p>Other than just procedural control, built-in security facility / function (e.g. access control, anti-virus, firewall, any computer security standards) to comply with aspects to be considered include and shall not be limited to:</p> <p>1) Sabotage : The Contractor shall describe measures taken to protect all hardware, software, communication protocols, architecture, networks and data acquisition concepts of Rolling stock &amp; its sub-systems against sabotage during the development and operational phase. This description shall define the physical restrictions as well as procedural measures and specific tests to be carried out on the train.</p> <p>2) Unauthorised Access : The Contractor shall describe measures taken to protect all hardware, software, communication protocols, architecture, networks and data acquisition concepts of Rolling stock &amp; its sub-systems against unauthorized access and subsequent modification. The description shall define both physical and procedural methods.</p> <p>3) Virus : The Contractor shall ensure software which is susceptible to viruses is developed in environment certified free from computer viruses. To achieve this, the Contractor shall use propriety virus detection software and suppression tools, as reviewed by CMRL. Approval of the software tools by CMRL shall not relieve the Contractor of his obligations to ensure that the software is free of viruses.</p> <p>Other manipulation may be caused by malicious activity like intrusion, hacking, phishing, wireless signal jamming, physical tampering, damaging critical communication cable or nodes; accident or natural disaster.</p> <p>Security Levels shall be declared by RS contractor for all software used in Rolling stock.</p> <p>Security Plan:</p> <p>The Contractor shall submit the Security Plan to CMRL describing all the precautions mentioned above taken for the security of all hardware, software, communication protocols, architecture, networks and data acquisition concepts of Rolling stock &amp; its sub-systems.</p> <p>The contractor shall comply IEC62443 and TS50701 (or any other International Standards) and prepare the Security Plan including Operational &amp; Technical precautions / procedures taken as also incorporated in the system design to ensure necessary safety of the complete Rolling Stock sub-system including both Hardware &amp; Software. The Contractor shall ensure that all the computer based systems in network are provided with latest anti-virus protection.</p> <p>This Security Plan must be regularly reviewed, updated and accepted through a process of security certification, access control, gateway security, communications security, physical security, accreditations and certifications.</p> <p>The RS contractor must demonstrate practically, the ability of the system to proactively detect, contain, eradicate and recover from a security breach in a real-time basis. The RS contractor shall define procedures for assured operations and continuous monitoring of the security controls.</p>																				

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29	Part 2 - Section VI ERTS	Appendix D :		Latest copy of Alignment data is attached.
30	Part 2 - Section VI ERTS	Appendix E : 1.6.1	Contractor shall supply the overhauling kits for two train sets. The price of overhauling kits for two train sets shall be included in the Contract. Overhauling kits for all those equipment, systems, sub-systems of trains that will need overhauling during intermediate overhaul of the train will be included in these kits. Contractor shall submit the list of such kits and if possible the details of the items in the kits in technical offer.	Contractor shall supply the overhauling kits for <b>One trainset</b> . The price of overhauling kits for <b>One trainset</b> shall be included in the Contract. Overhauling kits for all those equipment, systems, sub-systems of trains that will need overhauling during intermediate overhaul of the train will be included in these kits. Contractor shall submit the list of such kits and if possible the details of the items in the kits in technical offer.
31	Part 3 Section VIII Particular Conditions	4.1.1 Country of Origin of Goods and Services:	The successful bidder under this contract shall procure goods and services of minimum 90% (Seventy Point Five Percentage) of the Contract Price from Japanese Manufacturers/contractors as per Section V – Eligible Source countries. Remaining portion of the goods and services shall be procured from Indian manufacturers / contractors.	The successful bidder under this contract shall procure goods and services of minimum 90% ( <b>Nienty</b> Percentage) of the Contract Price from Japanese Manufacturers/contractors as per Section V – Eligible Source countries. Remaining portion of the goods and services shall be procured from Indian manufacturers / contractors.
32	Part 3 Section VIII Particular Conditions	1.1.5.8		New Clause Inserted :  Add the following at the end of Sub-Clause 1.1.5.8 with the following:  “Works” will generally mean railcars/trains.
33	Part 3 Section VIII Particular Conditions	1.5	The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence: (a) the Contract Agreement along with schedules, (b) the Letter of Acceptance (LoA), (c) Letter of Technical Bid and Letter of Price Bid (d) Addendum/Corrigendum to Tender (e) the Particular Conditions – Part A (Contract Data) (f) the Particular Conditions – Part B (Specific Provisions) (g) the General Conditions (h) Employer’s Requirements – Technical Specifications (i) Pricing Document & Financial Bid (j) the Acknowledgement of Compliance with Guidelines for Procurement under Japanese ODA Loan (k) Any other documents forming part of the contract If an ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction.	The documents forming the Contract are to be taken as mutually explanatory of one another. For the purposes of interpretation, the priority of the documents shall be in accordance with the following sequence: (a) the Contract Agreement along with schedules, (b) the Letter of Acceptance (LoA), (c) Letter of Technical Bid and Letter of Price Bid (d) Addendum/Corrigendum to Tender (e) the Particular Conditions – Part A (Contract Data) (f) the Particular Conditions – Part B (Specific Provisions) (g) the General Conditions (h) Employer’s Requirements – Technical Specifications (i) Pricing Document & Financial Bid (j) <u>Technical Bid submitted by the Bidder</u> (k) the Acknowledgement of Compliance with Guidelines for Procurement under Japanese ODA Loan (l) Any other documents forming part of the contract If an ambiguity or discrepancy is found in the documents, the Engineer shall issue any necessary clarification or instruction.
34	Part 3 Section VIII Particular Conditions	5.4		New Clause inserted :  “This shall also include metro safety certification and technical clearances, safety certification of Rolling stock for public carriage of passenger and all other rules, guidelines, Acts, as specified by the Government of India.”
35	Part 3 Section VIII Particular Conditions	9.1		New Clause Inserted :  (g) RDSO requirements for Contractor’s submission and testing as per ERTS clause 17.11 of Part 2 – Section VI of tender document
36	Part 3 Section VIII Particular Conditions	10.1		New Clause Inserted :  The Defect Notification Period shall begin with Taking-Over of Works or Section except for parts and systems/sub-system of Works, which require corrective action. Defect notification period for such parts and systems/sub-systems shall commence only after completion of corrective action up to the satisfaction of the Engineer/Employer.