1. Part-I, Section - V

**SECTION V:**

**ELIGIBLE SOURCE COUNTRIES OF JAPANESE ODA LOANS**

3. With regard to Section V (1) and (2) above.

b) The JvC pronta Contractor or, in the case of a joint venture, the JvC member countries partners shall be nationals of OECD member countries (hereinafter referred to as the "OECD member countries").

We request CMRL to define the requirement of nationals of OECD member countries. inline with details provided in Sl. No. 3 (ii)(a).

We refer to the response provided against Pre-bid Query S/N 60

NO

2. Part-I, Section – IV

**Table 4.3.2: Overview of Contract Price**

<table>
<thead>
<tr>
<th>Clause No.</th>
<th>CMRL Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tender Condition Prevailes</td>
</tr>
<tr>
<td>2</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Notes: The Bidder is required to submit these filled in tables as above along with Letter of Price Bid, the breakdown of lump sum price clearly giving the following:

a. Goods and Services Tax (GST) on the complete finished trains and Depot Machinery & Plant indigenously manufactured.

b. Not used.

c. Customs duty applicable on imported components / parts which go into manufacturing of cars / trains / Depot Machinery & Plants in India and for CMC scope are deemed to be included in the base price. The Bidders are not allowed to specify any custom duty value against these Price Centres and hence marked as "NOT APPLICABLE" in the above table.

Any change in rate of custom duty due to Change in law / legislation (GCC 13.7) is not applicable for these Price centres and the Contractor is not entitled for any claim or whatsoever on this account.

The total liability of the Contractor to the Employer, under or in connection with the Contract other than under Sub-Clause 4.19 (Electricity, Water and Gas), Sub-Clause 4.20 (Employer’s Equipment and Free-Issue Material), Sub-Clause 17.1 (Indemnities) and Sub-Clause 17.3 (Industrial and Intellectual Property Rights), shall not exceed the sum resulting from the application of a multiplier (less or greater than one) to the Accepted Contract Amount, as stated in the Contract Data, or (in such multiplier or other sum is not so stated), the Accepted Contract Amount.

We request CMRL to allow Booster comparing of JV/Consortium, if so desired, can raise separate invoice and receive separate payments to each Member of the Consortium. In this case, Bidder shall clearly state the Milestones / Currencies allocated to the different Members of the JV/Consortium, which shall be in agreement with the intended percentage share of the Members as indicated in the Consortium agreement for this Contract.

Accordingly, kindly add below clause in line with other Metro tender:

In case of Joint Venture (JV) or Consortium:

A. Invoicing: The invoice shall be raised by the Contractor towards Price variation payments during the contract period, as per approval of the Engineer / the Employer. Any rates of tax increased or decreased, a new tax is introduced, an existing tax is abolished in the course of performance of contract, an equable adjustment of the contract price shall be made to fully take into account any such change by addition to the contract price or deduction therefrom, as the case may be.

We refer to the response provided against Pre-bid Query S/N 15.

We request CMRL to define separately Limitation of Liability for Supply, Installation, testing and Commissioning scope and AMC scope.

We refer Addendum D/S N 97

NO

3. Part-I, Section – IV

3.1.1 The quoted lumpsum price by the bidder is inclusive of all taxes, duties, cess as per GST / Custom (self act etc.,), royalty, insurance, freight and fees required to be paid by him under the Contract.

Request CMRL to delete this clause instead request to allow payment of taxes on actuals as indicated in previous query.

We request CMRL to modify the clause as follows:

Contract price formula for additional 3-carrain train is different from other rolling stock contracts in India. Moreover, it does not reflect actual manufacturing cost. We request to modify this clause as below.

Contract price of each 3-car train set to be supplied against quantity variation shall be 90% of the overall contract price (i.e., $\text{CST} + \text{FAI} + \text{CPT} + \text{B} + \text{C} + \text{D} + \text{E} + \text{F} + \text{H}) x 90% / 75

Request CMRL to modify this clause as below.

We request CMRL to allow Booster comparing of JV/Consortium, if so desired, can raise separate invoice and receive separate payments to each Member of the Consortium. In this case, Bidder shall clearly state the Milestones / Currencies allocated to the different Members of the JV/Consortium, which shall be in agreement with the intended percentage share of the Members as indicated in the Consortium agreement for this Contract.

Accordingly, kindly add below clause in line with other Metro tender:

In case of Joint Venture (JV) or Consortium:

A. Invoicing: The invoice shall be raised by the Contractor towards Price variation payments during the contract period, as per approval of the Engineer / the Employer. Any rates of tax increased or decreased, a new tax is introduced, an existing tax is abolished in the course of performance of contract, an equable adjustment of the contract price shall be made to fully take into account any such change by addition to the contract price or deduction therefrom, as the case may be.

We refer to the response provided against Pre-bid Query S/N 15.

We request CMRL to allow Booster comparing of JV/Consortium, if so desired, can raise separate invoice and receive separate payments to each Member of the Consortium. In this case, Bidder shall clearly state the Milestones / Currencies allocated to the different Members of the JV/Consortium, which shall be in agreement with the intended percentage share of the Members as indicated in the Consortium agreement for this Contract.

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A. Invoicing: The invoice shall be raised by the Contractor towards Price variation payments during the contract period, as per approval of the Engineer / the Employer. Any rates of tax increased or decreased, a new tax is introduced, an existing tax is abolished in the course of performance of contract, an equable adjustment of the contract price shall be made to fully take into account any such change by addition to the contract price or deduction therefrom, as the case may be.

We refer to the response provided against Pre-bid Query S/N 15.

We request CMRL to allow Booster comparing of JV/Consortium, if so desired, can raise separate invoice and receive separate payments to each Member of the Consortium. In this case, Bidder shall clearly state the Milestones / Currencies allocated to the different Members of the JV/Consortium, which shall be in agreement with the intended percentage share of the Members as indicated in the Consortium agreement for this Contract.

Accordingly, kindly add below clause in line with other Metro tender:

In case of Joint Venture (JV) or Consortium:

A. Invoicing: The invoice shall be raised by the Contractor towards Price variation payments during the contract period, as per approval of the Engineer / the Employer. Any rates of tax increased or decreased, a new tax is introduced, an existing tax is abolished in the course of performance of contract, an equable adjustment of the contract price shall be made to fully take into account any such change by addition to the contract price or deduction therefrom, as the case may be.

We refer to the response provided against Pre-bid Query S/N 15.
7. **Part 3: Section VIII** 

**Particular Clauses (Part B: Specific Provisions)**

**Clause No.:** 14.2

**Advance Payment**

- The Employer shall make an interest free advance payment for mobilization when the Contractor submits a guarantee in accordance with this sub-clause.
- The Second & final instalment of Advance Payment may be paid after: (i) the required Bank Guarantee in the specified format from banks as mentioned above is submitted; (ii) the evidence for satisfactory utilization of the first instalment of mobilization is submitted; and (iii) acceptance of 3D visual models.

**Bidder's queries:**

- We request Second instalment of Advance should be paid based on utilization of first advance payment.
- The Employer shall make an interest free advance payment for mobilization when the Contractor submits a guarantee in accordance with this sub-clause…
- The Second & final instalment of Advance Payment may be paid after: (i) the required Bank Guarantee in the specified format from banks as mentioned above is submitted; (ii) the evidence for satisfactory utilization of the first instalment of mobilization is submitted; and (iii) acceptance of 3D visual models.

**CMRL Response:**

- Tender Condition Prevails

**Addendum:**

- Tender Condition Prevails

8. **Part 3: Section VIII** 

**Particular Clauses (Part A: Contract Date)**

**Delay Damages**

(Sub-clause 8.7)

- Table 1.1: Summary of Sections: Key Date - Rolling Stock A, Delay Damages for non-achievement of Main Key Dates

**Bidder's queries:**

- Request CMRL to waive/refund the LD dedicated for interim Key date
- If the Contractor achieves the final KD within the time frame as stipulated in the Contract

**CMRL Response:**

- Tender Condition Prevails

**Addendum:**

- Tender Condition Prevails

9. **Part 3: Section VIII** 

**Particular Clauses (Part B: Specific Provisions)**

- **PCC Clause 46 (GCC Clause 14.1)**
- **Add the following at the end of sub-Clause 14.1 (d):**
- **(v) Car Shell Structural Qualification Testing/ Payment Security and First Article Inspections' Payment Security:**

The Contractor shall at the time of the submission of the invoice for payment of Car Shell Structural Qualification Testing and First Article Inspections provide a security in an amount equal to the payment for these price centres (milestones) calculated in accordance with Price Schedule to the Contract Agreement, and in the same currency or equivalent. The security shall be in one of the forms of bank guarantee in the form mentioned in the building documents or in another form acceptable to the Employer. The security will become null and void when the first circumstance(s) that are themselves Force Majeure.

- **PCC Clause 44 (GCC clause 13.1)**

"Variations may be initiated by the Employer at any time during the performance of the Contract, either by an instruction or by a request for the Contractor to submit a proposal."

**Bidder's queries:**

- Variations may be initiated by the Employer at any time during the performance of the Contract, either by an instruction or by a request for the Contractor to submit a proposal.

**CMRL Response:**

- Tender Condition Prevails

**Addendum:**

- Refer Addendum 01 S/N 90
- Refer Addendum 01 S/N 90

10. **Part 3: Section VIII** 

**Particular Clauses (Part B: Specific Provisions)**

- **GCC Clause 19.1**

"Force Majeure" means an exceptional event or circumstances that are themselves Force Majeure.

**Bidder's queries:**

- The request to add below clause in Force Majeure clause:
- (v) International Health hazard like COVID19
- (vi) Shortage of labour, materials, or utilities where caused by circumstances that are themselves Force Majeure.

**CMRL Response:**

- Tender Condition Prevails

**Addendum:**

- Tender Condition Prevails

11. **Part 3: Section VII** 

**General Conditions of Contract**

- **GCC Clause 10.1**

"Variations may be initiated by the Employer at any time during the performance of the Contract, either by an instruction or by a request for the Contractor to submit a proposal."

**Bidder's queries:**

- Variations may be initiated by the Employer at any time during the performance of the Contract, either by an instruction or by a request for the Contractor to submit a proposal.

**CMRL Response:**

- Tender Condition Prevails

**Addendum:**

- Tender Condition Prevails

12. **Part 3: Section VIII** 

**Particular Clauses (Part B: Specific Provisions)**

- **PCC Clause 41 GCC Clause 11.1**

11.1.3 If the Works or sections are not available for usage by the Employer for more than 48 hrs, then a penalty shall be paid by the Contractor as set out below. The cumulative amount shall be deducted by the Employer from the subsequent bills submitted by Contractor.

- A penalty of Rs. 2,000 per day on the value of any equipment or machinery.
- A penalty of Rs. 5,000 per day on the equipment.
- A penalty of Rs. 9,000 per day on the equipment.
- A penalty of Rs. 14,000 per day on the equipment.

**Bidder's queries:**

- Request CMRL to cap the combined amount of total liquidated damages and penalties payable to CMRL to 15% of the total contract price.

**CMRL Response:**

- Tender Condition Prevails

**Addendum:**

- Tender Condition Prevails

13. **Part-1. Section – IV** 

**Bidding Forms**

- **Schedule of Adjustment Data Table A**

**Bidder's queries:**

- The indices & weightages are not in line with the cost structure.
- We request customer to add common components for all commodities (Wholesale price Index). Hence, we propose the formula below for your consideration.

**CMRL Response:**

- Tender Condition Prevails

**Addendum:**

- Tender Condition Prevails

14. **Part-1. Section – IV** 

**Bidding Forms**

**3. Instructions for completing the pricing document.**

**Bidder's queries:**

- We understand that Employer will facilitate the Contractor and/or sub-contractor for obtaining sponsoring / recommendation letter from the Ministry of Housing and Urban Affairs (MoHUA) / GOI for imports by contractors and/or sub-contractor for availing the project import benefit.
- Please confirm.

**CMRL Response:**

- CMRL support shall be provided to the Contractor.
Part-1, Section – IV

Price Variation / Price adjustment for Comprehensive Maintenance Contract (CMC) The Price adjustment for Price Centre ‘RS-CMC’ and ‘DM&P-CMC’, Comprehensive Maintenance of Rolling Stock, Depot Machinery & Plant shall be done as under: Price adjustment shall be applied to the amount (only applicable for INR portion) otherwise payable to the Contractor on completion of Works under these milestones as per the following formula:

\[
P_n = R \times \left( a + b \times \left( \frac{B_n}{B_0} \right) + c \times \left( \frac{C_n}{C_0} \right) + d \times \left( \frac{D_n}{D_0} \right) \right) - R
\]

Price Adjustment towards ‘RS-CMC’ and ‘DM&P-CMC’ is not applicable on Foreign Currencies (JPY & FC) portions.

Part-1, Section – IV

Price centres ‘CMC – RS’ and ‘CMC - DM&P’ shall be quoted in Indian Rupees (INR) only.

Part-3/ Section VIII

New Clause

New Clause Proposed

BOCW applicability

Request to allow Price Adjustment in foreign currencies also for Comprehensive Maintenance Contract (CMC), accordingly request to modify this clause as follows:

The Price adjustment for Price Centre ‘RS-CMC’ and ‘DM&P-CMC’, Comprehensive Maintenance of Rolling Stock, Depot Machinery & Plant shall be done as under:

Price adjustment shall be applied to the amount (only applicable for INR portion) otherwise payable to the Contractor on completion of Works under these milestones as per the following formula:

\[
P_n = R \times \left( a + b \times \left( \frac{B_n}{B_0} \right) + c \times \left( \frac{C_n}{C_0} \right) + d \times \left( \frac{D_n}{D_0} \right) \right) - R
\]

“Price Adjustment towards ‘RS-CMC’ and ‘DM&P-CMC’ is applicable on Foreign Currencies (JPY & FC) portions.”

New Clause

New Clause

Liability for not meeting KPIs/penalty during CMC period for Rolling Stock and DM&P.

Part-3/ Section VIII

New Clause

Adjusted amount of Total Aggregate limit of 25 Crs (per annum) with number of incidents limited for Total Aggregate limit of 25 Crs (per annum).

Part-3/ Section VIII

Particular conditions (Part B: Specific Provisions)

Addition of paragraph (4)(b) in Para 29:

29. (Sub Clause 18.3)

Period of submission for “Insurance Policies 28 days” is very less. Request to increase this time period minimum of 45 days. CPIL is requested to confirm the same.

Part-3/ Section VIII

Particular conditions (Part B: Specific Provisions)

Addition of paragraph (b) in Para 56:

56. (Sub Clause 18.1)

Add the following to the end of Sub-Clause 4.2:

PCC - Rolling Stock and Depot Machinery & Plant

28 days before the completion of Rolling Stock (Train level) DLP/DNP, the Contractor shall furnish CMC Performance Security for the deliverables defined in the CMC Period; in the form of a Bank Guarantee from a public sector bank (PSB) of India or Scheduled Commercial Banks in India, or any Japanese Bank as listed under Schedule of Commercial Banks by the Reserve Bank of India (RBI) for an amount of 10% of Price Centre RSCMC and DM&P-CMC in the same currency/ies. The Performance Bank Guarantee for CMC shall be valid until 210 days beyond the scheduled expiry of the Rolling Stock and Depot Machinery & Plant CMC period. The Employer shall, however, permit the Contractor to reduce the CMC Performance Security at every three (3) year intervals provided the following two (2) conditions are satisfied:

1. The Contractor has obtained a CMC Performance Certificate from the Employer for the preceding three year period.
2. The Contractor has provided a replacement Bank Guarantee (same expiry date) for the reduced value amount for CMC Performance Security amount in accordance with the following schedule:

Part-3/ Section VIII

Particular conditions (Part B: Specific Provisions)

Addition of paragraph (b) in Para 27:

27. (Sub Clause 18.1)

Period of submission for “Insurance Policies 28 days” is very less. Request to increase this time period minimum of 45 days. CPIL is requested to confirm the same.

Part-3/ Section VIII

Particular conditions (Part A: Contract Data)

Addition of Sub-Clause 21:

21. ‘Insurance’

Performance Bank Guarantee

Please note, CAR/EAR Insurance will not be applicable for CMC/Maintenance period of 15 Years. Contractor will be able to provide this policy till DNP completion only. Request to modify the requirement accordingly.

CPIL is requested to confirm the same.

Please refer Addendum 01/ S/N 96

Tender Condition Prevails

Tender Condition Prevails

Tender Condition Prevails

Tender Condition Prevails

No
**CP26 / ARE02A Contract - Reply to Bidder Queries**

<table>
<thead>
<tr>
<th>Sl No</th>
<th>Part 2/ Section VI: AERTS-RS System Assurance</th>
<th>Clause No.</th>
<th>Original Bid Condition</th>
<th>Bidder’s queries</th>
<th>CMRL Response</th>
<th>Addendum</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>Part 3 – Section VII: Particular Conditions (Part B: Specific Previsions)</td>
<td>PCC Clause 26 (GCC Clause No. 4.25)</td>
<td>Add a new sub-clause 4.25: 4.25.1 CMC - Rolling Stock: The Contractor is required to carry out 15 years Comprehensive Maintenance Contract (CMC) for Rolling Stock which shall commence after the DLP/DNP or extended DLP/DNP is completed for all the trains (Base order) and shall end after 15 years from start. The Contractor shall provide key maintenance staff as per qualification and experience detailed under Part 2, Section VI C ERTS (CMC). Upon expiry of CMC, the Contractor shall handover all equipment under this Contract in a working condition to the Employee. The procedures for handing over shall be as stated in Part 2, Section VI C ERTS (CMC).</td>
<td>We request to change this clause as: Add a new sub-clause 4.25: 4.25.1 CMC - Rolling Stock: The Contractor is required to carry out 15 years Comprehensive Maintenance Contract (CMC) for Rolling Stock which shall commence after the DLP/DNP or extended DLP/DNP is completed for all the trains (Base order) and shall end after 15 years from start. The Contractor shall provide key maintenance staff as per qualification and experience detailed under Part 2, Section VI C ERTS (CMC). Upon expiry of CMC, the Contractor shall handover all equipment under this Contract in a working condition to the Employee. The procedures for handing over shall be as stated in Part 2, Section VI C ERTS (CMC).</td>
<td>Tender Condition Prevails</td>
<td>NO</td>
</tr>
<tr>
<td>26</td>
<td>Part 2/ Section VI: AERTS-RS System Assurance Requirements</td>
<td>3.2.6.2 (a)</td>
<td>Smoke &amp; Heat detection system</td>
<td>Complete system should be SIL2 compliant.</td>
<td>We request to modify the clause as: Complete system should be SIL2 compliant. “Safety function of the system should be SIL2 compliant”</td>
<td>Tender Condition Prevails</td>
</tr>
<tr>
<td>27</td>
<td>Part 2 – Section VI A: ERTS-RS System Assurance</td>
<td>18.6.4.1 (a)</td>
<td>Failure Classification: a) Type! Service Failure</td>
<td>Failures that result in service operational delay in the specific train for more than 2 minutes at any location of the mainline or during induction from depots/maintenance to the CMLR Phase II Network.</td>
<td>We request to consider the delay time of 3 min for service affecting failure in line with other Metro project in India. Bidder requests to modify the clause as follows: Failures that result in service operational delay in the specific train for more than 2 minutes at any location of the mainline or during induction from depots/maintenance to the CMLR Phase II Network.</td>
<td>Tender Condition Prevails</td>
</tr>
<tr>
<td>28</td>
<td>Part 2 – Section VI A: ERTS-RS System Assurance</td>
<td>18.6.4.1 (a)</td>
<td>Failure Classification: a) Type! Service Failure</td>
<td>The train withdrawal scenarios are described in Appendix I. It includes possible anticipated failure scenarios which can affect safety, punctuality and passenger comfort. The train withdrawal scenario defined in Appendix I shall be considered as a Type 1 failure irrespective of whether or not CMRL is able to withdraw the train due to its operational constraints. This list shall be further developed during DLP/DNP.</td>
<td>Bidder requests to add below information in the clause as agreed in the Contract for CMLR Phase II (3 cars, Tender No. ARE02A) for Type 1 Failures: “End of the day withdrawals shall not be considered as Type 1 failures as the maintenance intervention is required only after completion of revenue service for entire day”</td>
<td>Refer Addendum 01 5/6 60</td>
</tr>
<tr>
<td>29</td>
<td>Part 2 – Section VI A: ERTS-RS System Assurance</td>
<td>18.6.4.1 (b)</td>
<td>Failure Classification: b) Relevant Failure</td>
<td>Improper operation, maintenance, or testing of the item as a result of the Contractor supplied documentation or Failure of transient nature including those with post investigation status as ‘No fault found’ shall be considered as relevant failure if in the opinion of CMRL these are attributable to rolling stock. The decision of CMRL shall be final.</td>
<td>Bidder requests to kindly change the clause as per mentioned below because of the reason: Zero NFF is not practical, hence 5% tolerance is requested. Hence we proposed following Clause as: Improper operation, maintenance, or testing of the item as a result of the Contractor supplied documentation or Failure of transient nature including those with post investigation status as ‘No fault found’ shall be considered as relevant failure if in the opinion of CMRL these are attributable to rolling stock. The decision of CMRL shall be final.</td>
<td>Tender Condition Prevails</td>
</tr>
<tr>
<td>30</td>
<td>Part 2 – Section VI C: ERTS –CMC of RS &amp; DNP - Train Operation Plan</td>
<td>3.2.1 (a)</td>
<td>Failure Classification: a) Type! Service Failure</td>
<td>Failures that result in a service operational delay of a specific train for more than 2 minutes at any location of the mainline or during induction from depot to the mainline of the CMLR Phase II Network.</td>
<td>We request to consider the delay time of 3 min for service affecting failure in line with other Metro project in India. Bidder requests to modify the clause as follows: Failures that result in a service operational delay of a specific train for more than 2 minutes at any location of the mainline or during induction from depot to the mainline of the CMLR Phase II Network.</td>
<td>Tender Condition Prevails</td>
</tr>
<tr>
<td>31</td>
<td>Part 2 – Section VI C: ERTS –CMC of RS &amp; DNP - Train Operation Plan</td>
<td>3.2.1 (b)</td>
<td>Failure Classification: b) Relevant Failure</td>
<td>Improper operation, maintenance, or testing of the item as a result of the Contractor supplied documentation or Failure of transient nature including those with post investigation status as ‘No fault found’ shall be considered as relevant failure if in the opinion of CMRL these are attributable to rolling stock. The decision of CMRL shall be final.</td>
<td>Bidder requests to kindly change the clause as per mentioned below because of the reason: Zero NFF is not practical, hence 5% tolerance is requested. Hence we proposed following Clause as: Improper operation, maintenance, or testing of the item as a result of the Contractor supplied documentation or Failure of transient nature including those with post investigation status as ‘No fault found’ shall be considered as relevant failure if in the opinion of CMRL these are attributable to rolling stock. The decision of CMRL shall be final.</td>
<td>Tender Condition Prevails</td>
</tr>
<tr>
<td>32</td>
<td>Part 2 – Section VI C: ERTS –CMC of RS &amp; DNP - Train Operation Plan</td>
<td>14.1.5</td>
<td>SIL Compliance</td>
<td>Wheel sliding signal transmission to Signalling, Brakes and Traction systems</td>
<td>Bidder request to kindly delete the requirement “Wheel sliding signal transmission to Signalling, Brakes and Traction systems” due to the following reason: RSP is at SIL2 at Brake level to manage Hazard. No need is foresee to transmit the safety information to signalling, brakes and traction system at SIL2.</td>
<td>Tender Condition Prevails</td>
</tr>
<tr>
<td>33</td>
<td>Part 2 – Section VI A: ERTS – RS – TCMSC</td>
<td>14.1.5</td>
<td>SIL Compliance</td>
<td>Holding Brake demand signal transmission</td>
<td>Bidder request to kindly delete the requirement “Holding Brake demand signal transmission” due to the following reason: We understand, no need for Transmission of holding brake signal at SIL2, as demand for holding brake given as fixed effort.</td>
<td>Tender Condition Prevails</td>
</tr>
<tr>
<td>34</td>
<td>Part 2 – Section VI A: ERTS – RS – TCMSC</td>
<td>14.1.5</td>
<td>SIL Compliance</td>
<td>Real time remote transmission of train data as defined in clause 14.11 &amp; 14.13</td>
<td>Bidder request to delete the requirement as it is not a Safety Function.</td>
<td>Tender Condition Prevails</td>
</tr>
<tr>
<td>35</td>
<td>Part 2 – Section VI A: ERTS – RS – TCMSC</td>
<td>14.1.5</td>
<td>SIL Compliance</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>36</td>
<td>Part 2 – Section VI A: ERTS-RS System Assurance</td>
<td>18.6.6.1</td>
<td>Reliability Requirements</td>
<td>Table 18.2 Reliability Calculation</td>
<td>Reliability Calculation</td>
<td>Bidder request to add below information in the clause in section 18.6.6.1: Any train shall be counted as available for reliability calculations only after a stabilization period of 6 months after putting the train into revenue service’</td>
</tr>
<tr>
<td>37</td>
<td>Part 2 – Section VI A: ERTS-RS System Assurance</td>
<td>18.6.6.1</td>
<td>Reliability Requirements</td>
<td>Table 18.2 Reliability Calculation</td>
<td>Reliability Calculation</td>
<td>Bidder request to add the following note in the Reliability calculation: When there is a change in annual mileage of the train, there will be x% reduction in reliability targets if the rest of the parameters in the mission profile are kept constant.</td>
</tr>
<tr>
<td>38</td>
<td>Part 2 – Section VI A: ERTS – RS – Appendix I – Train withdrawal Scenarios for 3 car trains</td>
<td>S. No. 12</td>
<td>System : Main Compressor Unit Withdrawal Condition: If any one Main Compressor Unit isolated / faulty 0 3 car train.</td>
<td>We request to kindly change the clause as per mentioned below because of the reason: With one compressor isolation, train can run till end of day and has no impact on Train service.</td>
<td>Tender Condition Prevails</td>
<td>NO</td>
</tr>
<tr>
<td>39</td>
<td>Part 2 – Section VI A: ERTS – RS – Appendix I – Train withdrawal Scenarios for 3 car trains</td>
<td>S. No. 13</td>
<td>System: Air leakage Withdrawal Condition: Any leakages which may lead to incorrect brake application</td>
<td>We request to kindly change the clause as per mentioned below because of the reason: Isolate the particular bogie &amp; run till end of day. After we proposed following statement: Withdrawal Condition: “Any leakages which may lead to incorrect brake application in multiple bogies”.</td>
<td>Tender Condition Prevails</td>
<td>NO</td>
</tr>
</tbody>
</table>
## Addendum

### Part 2 – Section VI: A

<table>
<thead>
<tr>
<th>No.</th>
<th>Original Bid Condition</th>
<th>Bidder’s queries</th>
<th>CMRL Response</th>
<th>Addendum</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>S. No. 15: System : Brake system (mechanical) \nWithdrawal Condition: If isolation of brakes of two bogies occurs.</td>
<td>We request you to kindly change the clause as per mentioned below because of the reason: With two bogies failure (Bogie Control), will not lead to an unsafe condition.</td>
<td>Tender Condition Prevails</td>
<td>NO</td>
</tr>
<tr>
<td>41</td>
<td>S. No. 35: System : Semi-permanent half coupler \nWithdrawal Condition: Failure of coupler 1. Mechanical failure of coupler 2. Pneumatic connection failure if not isolated through isolating cock</td>
<td>We request you to kindly change the clause as per mentioned below because of the reason: Any defect in Semi-permanent half coupler will not cause any delay. Hence we propose to modify this clause as : Withdrawal Condition: &quot;Failure in Semi-permanent coupler causing delay or withdrawal of train service.&quot;</td>
<td>Tender Condition Prevails</td>
<td>NO</td>
</tr>
<tr>
<td>42</td>
<td>S. No. 36: System : Auto-coupler \nWithdrawal Condition: Failure of coupler 1. Mechanical failure of coupler 2. Pneumatic connection failure if not isolated through isolating cock</td>
<td>We request you to kindly change the clause as per mentioned below because of the reason: Any defect in Auto-coupler will not cause any delay. Hence we propose to modify this clause as : Withdrawal Condition: &quot;Failure in Auto-coupler causing delay or withdrawal of train service.&quot;</td>
<td>Tender Condition Prevails</td>
<td>NO</td>
</tr>
<tr>
<td>43</td>
<td>1.7.2 Reasons which may give rise to a requirement for &quot;Unscheduled Maintenance&quot; includes, but is not limited to a Fault, unsatisfactory performance, defects, deficiencies, accident, vandalism, natural calamity, loss, riot, arson, negligence.</td>
<td>During the Mainline operations Contractor won’t be taking any insurance for the rolling stock (trains) since the train operation is under CMRL’s scope. So it is requested to modify this clause as: Reasons which may give rise to a requirement for &quot;Unscheduled Maintenance&quot; includes, but is not limited to a Fault, unsatisfactory performance, defects, deficiencies, accident, vandalism, natural calamity, loss, riot, arson, negligence.</td>
<td>Refer CMCL Clause 17.12(c).</td>
<td>tendern precondition.</td>
</tr>
<tr>
<td>44</td>
<td>Clause 18.13.2.1 CWRIL shall allocate approximately 100 square meter space to the Contractor at the Designated Depot(s) for erection of the Contractor’s Site Offices. This land/space provision shall be provided to the Contractor on a free of cost basis without any rental charges. Further space shall also be allocated to establish the Depot Stores facility. Any buildings and/or structures needed to be allocated the space ready for occupation by the Contractor shall be constructed by the Contractor at the Contractor’s own cost.</td>
<td>It is requested that all the civil infrastructure shall be provided by the Contractor including the Depot Stores. The Contractor will install the Depot M/Ps as per the Price Centre DMPA-Q, DMPA-R, DMPA-S and DMPA-T. A fully constructed stores area shall be handed over to the Contractor.</td>
<td>Refer Addendum OS 1/1S NS 85</td>
<td>yes</td>
</tr>
<tr>
<td>45</td>
<td>Clause 18.13.2.2 The Contractor shall be responsible for making applications or requests to the concerned Authorities for avoiding of the above facilities. In the event that electricity or water supplies are arranged by another Entity, the Contractor shall bear the cost and the cost of the utilities shall be reimbursed at actuals upon prior arrangement in writing by the Contractor.</td>
<td>Employer is requested to provide utilities, electricity and water free of cost for the complete duration of the Maintenance Contract.</td>
<td>Tender condition prevails.</td>
<td>Refer to ERTF Section VI.A Clause 18.13.2.2</td>
</tr>
<tr>
<td>46</td>
<td>2.3.2 (i) Maintenance obligations of CMRL All maintenance works related to Civil works, E&amp;M, fire safety, Traction, all S&amp;T installations and Track Installation including all its fittings shall be undertaken by CMRL.</td>
<td>Bidder understands that the maintenance of onboard Signalling system is excluded from the scope of this contract. CMRL is requested to confirm the same.</td>
<td>Maintenance of the onboard Signalling system shall be carried out by the concerned Contractor. However the CMRL shall provide the Contractor at his own cost using additional space that will be allocated to him by CMRL.</td>
<td></td>
</tr>
<tr>
<td>47</td>
<td>2.5.1(a) The Contractor shall be responsible, at its own cost (inclusive of power and any other expenses), for any upgrading (if provided to the concerned Contractor), operation and maintenance of all infrastructures in its custody at the RS Maintenance Depot. The Contractor may undertake any structural change or any additional construction work to the buildings handed over by the CMRL at the Maintenance depot. If required, after submission of details of work proposed for seeking prior approval of CMRL.</td>
<td>It is requested that any upgrade in infrastructure shall be in the scope of CMRL. CMRL is requested to confirm the same.</td>
<td>Tender condition prevails.</td>
<td></td>
</tr>
<tr>
<td>48</td>
<td>2.5.2(b) Maintenance and upkeep of RS Maintenance depot 1) During the period of custody, the Contractor shall be responsible for undertaking the maintenance of the RS Maintenance Depot including cleanliness, upkeep, housekeeping, repair work, civil maintenance and electrical maintenance for the entire premises of the RS Maintenance Depot. It is requested that any repair work, civil maintenance and electrical maintenance for the premises of the RS Maintenance Depot shall be carried out by CMRL.</td>
<td>It is requested that Bidder shall be allowed to quote for the Price Centre excluding all taxes and duties i.e. GST, Customs Duty, levies and fees etc. The taxes and duties shall be reimbursed at actuals upon submission of documentary evidence. CMRL is requested to confirm the same.</td>
<td>Refer Addendum OS 1/1S NS 85</td>
<td>yes</td>
</tr>
<tr>
<td>49</td>
<td>1.18.6 Taxes will be reimbursed by CMRL to the Contractor subject to the conditions of Contract.</td>
<td>It is requested that the Organization structure shall be proposed by the Contractor as per their practice.</td>
<td>Tender Condition Prevails</td>
<td></td>
</tr>
<tr>
<td>50</td>
<td>3.3.5.4 Table 3-5. Note 6: Escalation of 5% compounded annually shall be applicable for the figures mentioned under Penalty / Damages from the commencement date of the Contract.</td>
<td>It is requested to delete this clause.</td>
<td>Tender Condition Prevails</td>
<td>NO</td>
</tr>
<tr>
<td>51</td>
<td>1.4.1 CWRIL plans to operate 365 days a year, from approximately 4:00hrs to 23:00hrs Monday through Sunday during the complete fleet operation conditions. We propose to modify the clause as: CWRIL plans to operate 365 days a year, from approximately 5:00 Hrs to 23:00 Hrs Monday through Sunday during the complete fleet operation conditions.</td>
<td>Mandatory requirement of 10 staff per shift shall be removed. The organization structure shall be proposed by the Contractor as per their practice.</td>
<td>Tender Condition Prevails</td>
<td>NO</td>
</tr>
<tr>
<td>52</td>
<td>1.8.2 The PREB team shall consist of at least 10 fully trained staff per shift who shall be strategically located throughout the network, so as to ensure that incidents will be attended by PREB staff within 30 minutes of the alarm being received. The PREB team shall consist of at least 10 fully trained staff per shift who shall be strategically located throughout the network, so as to ensure that incidents will be attended by PREB staff within 30 mins of the alarm being received.</td>
<td>The PREB team shall consist of at least 10 fully trained staff per shift who shall be strategically located throughout the network, so as to ensure that incidents will be attended by PREB staff within 30 minutes of the alarm being received.</td>
<td>Tender Condition Prevails</td>
<td>NO</td>
</tr>
<tr>
<td>53</td>
<td>2.3.1(h) The Contractor shall ensure coordination with CWRIL’s Representative PDC and personnel for operation of traction and auxiliary power supply system by the Contractor’s personnel including requesting for power blocks required for the maintenance activities to be undertaken by the Contractor or CMRL at depot. The Contractor shall be responsible for deployment of competent personnel for: (a) safe operation of traction and auxiliary power supply system. (b) Safety of all persons including CMRL personnel and any 3rd party at RS Maintenance Depot.</td>
<td>We understand that our scope will be limited to operation of power block in the area where maintenance activity is done by our team in the depot i.e. (BIL, Workshop and SBL). CWRIL is requested to confirm the same.</td>
<td>The Bidder Understanding is Correct.</td>
<td></td>
</tr>
<tr>
<td>54</td>
<td>2.4.1 (ii) (c) A Minimum of 25% maintenance staff and supervisor of the Contractor shall be transferred to CWRIL payroll after expiry of Comprehensive maintenance contract to ensure continuity and quality of maintenance of the train. Alternative arrangements are made by CWRIL.</td>
<td>We request you to modify this clause as: A Minimum of 25% maintenance staff and supervisors of the Contractor shall be transferred to CWRIL payroll after expiry of Comprehensive maintenance contract to ensure continuity and quality of maintenance of the trains. The Contractor shall provide training to CWRIL Maintenance team 6 months before the completion of CMRL-RS &amp; DM&amp;P DMPA.</td>
<td>Tender Condition Prevails</td>
<td>NO</td>
</tr>
</tbody>
</table>
**Part 2 – Section VI C: ERTS – CMC of RS & DM&P – CMC Requirements**

<table>
<thead>
<tr>
<th>SI No</th>
<th>Clause No.</th>
<th>Original Bid Condition</th>
<th>Bidder's queries</th>
<th>CMLR Responses</th>
<th>Addendum</th>
</tr>
</thead>
<tbody>
<tr>
<td>55</td>
<td>1.14 (a)</td>
<td>An organization chart that clearly identifies the lines of authority of all departmental managers and of the following key staff for this contract:</td>
<td>1. The requirement for mandatory staff position shall be removed.</td>
<td>Tender Condition Prevalent</td>
<td>NO</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>56</td>
<td>1.19</td>
<td>Designated (Depot(s) refers to a) Madrasmain Depot, which is the principal site for all heavy maintenance and (ii) further Satellite Depot(s) (mostly for inspection, cleaning activities and Corrective Maintenance).</td>
<td>It is requested to inform the number of satellite depots and their location.</td>
<td>Refer Addendum 01 S/N 01</td>
<td>Yes</td>
</tr>
<tr>
<td>57</td>
<td>5.1.1.2</td>
<td>The training for various groups (maintainers and stores) shall be conducted separately. Solution provider shall provide training for four weeks to CMRL. The number of trainees will be decided by CMRL.</td>
<td>Please clarify no. of trainees and duration of training in the Tender Specifications.</td>
<td>Duration already specified. Tender Condition Prevalent</td>
<td>NO</td>
</tr>
<tr>
<td>58</td>
<td>4.5.1</td>
<td>Arrangements for Release of Payments, release of Retention Money against a Bank Guarantee as well as the final release of Retention Money or Bank Guarantee is defined in Part 3: Section VII Particular Conditions Clause 50 which is to be read in conjunction with Part 2: Section VII General Conditions of Contract Clause 14.9</td>
<td>It is requested to delete this clause for Maintenance Contracts (CMC of RS &amp; DM&amp;P).</td>
<td>Refer Addendum 01 S/N 07</td>
<td>Yes</td>
</tr>
</tbody>
</table>

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**Part 3 : Section VIII Particular Conditions (Part B: Specific Provisions)**

<table>
<thead>
<tr>
<th>SI No</th>
<th>Part 3: Section VIII Particular Conditions (Part B: Specific Provisions) Clause 52</th>
<th>Original Bid Condition</th>
<th>Bidder's queries</th>
<th>CMLR Responses</th>
<th>Addendum</th>
</tr>
</thead>
<tbody>
<tr>
<td>59</td>
<td>PCC Clause 52 (GCC Clause 14.9)</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Replace Clause 14.9 with the following:

Retention money shall be deducted at the rate of 5%, on each Interim payment certificate (IPC), excluding taxes & duties, in respective currencies and up to the cumulative value equal to 5% of the Accepted Contract Amount (Excluding Provisional sum), excluding taxes & duties, Release of Retention Money Against BG (Project Phase):

Upon the request of the Contractor, the Employer after issuance of Taking-over certificate of each trainset / each Depot Machinery & Plant may release the withheld retention money specific to that trainset / Depot Machinery & Plant, on submission of Bank Guarantee for an equivalent amount in respective currencies from a Public sector bank (PSB) of India or Scheduled Commercial Bank in India or any Japanese Bank as listed under Schedule of Commercial Banks by The Reserve Bank of India (RBI), in the format anned to the Particular Conditions.

Final Release of Retention or BG (Project Phase): Upon completion of CMC Period of Rolling Stock and Depot Machinery & Plant, the retention money amount or the Retention money Bank Guarantees (less the value of claims made by the Employer for uncompleted warranty work) for Rolling Stock and Depot Machinery & Plant (excluding Price Centre RS-CMC and Price Centre DM&P-CMC) shall be certified by the Engineer / Employer for releasing to the Contractor.

Final Release of Retention or BG (CMC Phase): Upon completion of CMC Period of Rolling Stock and Depot Machinery & Plant the Retention money amount or the Retention money Bank Guarantees (less the value of claims made by the Employer for uncompleted warranty work) pertaining to Price Centre RS-CMC and Price Centre DM&P-CMC shall be certified by the Engineer / Employer for releasing to the Contractor.

Refer Addendum 01 S/N 07

Refer Addendum 01 S/N 01

Refer Addendum 01 S/N 02

Refer Addendum 01 S/N 03

Refer Addendum 01 S/N 04

Refer Addendum 01 S/N 05

Refer Addendum 01 S/N 06

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**Part 1: Section V: Eligible Nationality**

<table>
<thead>
<tr>
<th>SI No</th>
<th>Part 1: Section V: Eligible Nationality</th>
<th>Original Bid Condition</th>
<th>Bidder's queries</th>
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<th>Addendum</th>
</tr>
</thead>
<tbody>
<tr>
<td>60</td>
<td>ELIGIBLE NATIONALITY</td>
<td>The prime Contractor or, in the case of a joint venture, the OECD member country partners shall be nationals of OECD member countries (hereinafter referred to as the “OECD member countries”).</td>
<td>While reading the cited Clause, we interpret that wholly owned Indian subsidiary companies that are incorporated and registered in India and actually conduct their business in India may themselves be considered as “Nations of OECD member countries” where it is the case that the parent company is registered in and actually doing-business in an OECD member country. Requesting you to kindly confirm our understanding.</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>

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**Part 1-SECTION - II: EVALUATION AND QUALIFICATION CRITERIA (EQC) 2.3 Financial Situation**

<table>
<thead>
<tr>
<th>SI No</th>
<th>Part 1-SECTION - II: EVALUATION AND QUALIFICATION CRITERIA (EQC) 2.3 Financial Situation</th>
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<th>CMLR Responses</th>
<th>Addendum</th>
</tr>
</thead>
<tbody>
<tr>
<td>61</td>
<td>2.3.1 Financial Performance</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is our understanding that “wholly owned Indian subsidiary of OECD member countries partners shall be eligible to participate as a Joint Venture Partner along with its parent company which are nationals of OECD member country”. Wherein, Indian subsidiary company can use the parent company’s (OECD member) credentials both Financial as well as Technical in accordance with the guidelines issued by MoHUA (kindly refer Letter No. K.14001/08/2017/NRTS Coord), in case of subsidiary company participating with its Parent company, the financial credentials of only Parent company are considered. In such case, there shall be no requirement of “Each Member to Must Meet requirement”. It is submitted that this was specifically indicated in the tender conditions of JCA funded (DMRC/R57 & BMRCL/R56).

Refer Addendum 01 S/N 01

Refer Addendum 01 S/N 02

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**Part 1-SECTION - II: EVALUATION AND QUALIFICATION CRITERIA (EQC) 2.3 Financial Situation**

<table>
<thead>
<tr>
<th>SI No</th>
<th>Part 1-SECTION - II: EVALUATION AND QUALIFICATION CRITERIA (EQC) 2.3 Financial Situation</th>
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<th>CMLR Responses</th>
<th>Addendum</th>
</tr>
</thead>
<tbody>
<tr>
<td>62</td>
<td>2.3.2 Average Annual Turnover and 2.3.3 Financial Resources</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is our understanding that “wholly owned Indian subsidiary of OECD member countries partners shall be eligible to participate as a Joint Venture Partner along with its parent company which are nationals of OECD member country”. Wherein, Indian subsidiary company can use the parent company’s (OECD member) credentials both Financial as well as Technical in accordance with the guidelines issued by MoHUA (kindly refer Letter No. K.14001/08/2017/NRTS Coord), in case of subsidiary company participating with its Parent company, the financial credentials of only Parent company are considered. In such case, there shall be no requirement of “Each Member to Must meet minimum 35% of the total requirement”. It is submitted that this was specifically indicated in the tender conditions of JCA funded (DMRC/R57 & BMRCL/R56).

Refer Addendum 01 S/N 01

Refer Addendum 01 S/N 02

Refer Addendum 01 S/N 03

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**Part 1-SECTION - II: EVALUATION AND QUALIFICATION CRITERIA (EQC)**

<table>
<thead>
<tr>
<th>SI No</th>
<th>Part 1-SECTION - II: EVALUATION AND QUALIFICATION CRITERIA (EQC)</th>
<th>Original Bid Condition</th>
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<th>Addendum</th>
</tr>
</thead>
<tbody>
<tr>
<td>63</td>
<td>2.4.1 General Experience</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is noted that “General Experience” requirement has been mandated for each member. It is our understanding that “wholly owned Indian subsidiary of OECD member countries partners shall be eligible to participate as a Joint Venture Partner along with its parent company which are nationals of OECD member country”. Wherein, Indian subsidiary company can use the parent company’s (OECD member) credentials both Financial as well as Technical in accordance with the guidelines issued by MoHUA (kindly refer Letter No. K.14001/08/2017/NRTS Coord), in case of subsidiary company participating with its Parent company, the financial credentials of only Parent company are considered. Accordingly, in such case, “General Experience” requirements shall be applicable for ‘26 Parties Combined’ and not for ‘Each Member’.

Refer Addendum 01 S/N 01

Refer Addendum 01 S/N 02

Refer Addendum 01 S/N 03

---
1.2 Letter of Price Bid

2.5 Subcontractors / Manufacturers
Form Sys - 1 to Form Sys - 23

Table D. For Price Centre RS-CMC and Price Centre DM&P-CMC

<table>
<thead>
<tr>
<th>Sl no</th>
<th>Description</th>
<th>Score</th>
<th>As per</th>
<th>Basic</th>
<th>Maximum</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tax, Duty, Levies, etc.</td>
<td>3.0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Table 4.3.2: Overview of Contract Price</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

It is noted that the tender conditions for the Bidder is required to tender for the maintenance of 23 major items. Further, it is required that the Bidder, is required to submit the experience certificate for the above said items. Please note, with such experience certificates for the maintenance of one BMRCL tender, the requirement shall be limited to only 23 items.

In view of above constraints, it is proposed that as included in the tender conditions of JICA funded (DMRC/RS17 & BMRCL/5RSDM) tenders, this requirement shall be limited for only Propulsion System (Traction Converter, Auxiliary Converter and Traction Motors). Further, it is proposed that experience certificates including end customer certificates can be provided by the Contractor during Design approval stage.

Further, it is requested to kindly review Table D Inflation index along with their respective Weighage and request you to define in line with recent JICA funded RS projects (DMRC/RS17 & BMRCL/5RSDM).

You are requested to kindly align tender condition in line with the recent JICA funded projects (DMRC/RS17 & BMRCL/5RSDM).

As per JICA conditions, all Contracts will be evaluated excluding Custom Duty and GST. Further, it will be appropriate that bid shall be submitted excluding "Customs duty and GST" and same shall be reimbursable as per MBOM approved at the project stage for project import scheme and documentary evidence.

Further Custom Duty & GST for Price Centre CMC shall be reimbursable as applicable and as per actuals based on Custom Duty amount indicated in the Bill of Entry (BoE).

You are requested to kindly align tender condition in line with recent JICA funded RS projects (DMRC/RS17 & BMRCL/5RSDM).

4.4.12 PRICE CENTRE RS-CMC – Comprehensive Maintenance Contract of Rolling Stock for 15 years

PRICE CENTRE RS-CMC – Comprehensive Maintenance Contract of Rolling Stock for 15 years (Applicable for INR)

Refer Addendum 01 S/N 15
Refer Addendum 01 S/N 16
Refer Addendum 01 S/N 20

It is noted that the CMC amount for 15 years has been fixed as 30% (for RS) and 40% (for Depot M&P) of the Total Contract Value, which is not realistic. Keeping such arbitrary cap will result in an excessive amount of Maintenance and Supply into different price centres. Considering that the RS and Depot M&P supply is being funded by JICA, it will be appropriate to not to define CMC as a percentage of RS or Depot M&P supply. The CMC Price shall be independent of the RS price and Depot M&P supply. It is proposed that the "Price Bid Structure", as followed in the recent JICA funded projects (DMRC/RS17 & BMRCL/5RSDM), may be followed.

It is requested to kindly review Table D Inflation index along with their respective Weighage.

For the other sources of finance (for CMC of Rolling Stock & Depot Infrastructure) are operated through CMRL (Operation & Maintenance).

Requesting you to kindly define CMC scope of source of funding along with the Payment Guarantee.

Further, we request you to kindly confirm that the ESCROW account facility will be available for smooth payment process and this account shall not be limited to CMRL operating revenues of the Contractors on which these trains will be operated.

CMRL clarifies that funding for CMC scope shall be provided by CMRL. There shall be no provision of payment guarantee or escrow account.

It is noted that CMC period for RS and Depot M&P is commencing after expiry of DNP-DLP. Further, the Contractors are required to carry out complete maintenance (Scheduled and unscheduled maintenance of trains & M&P) during the DNP-DLP. Considering that CMC period is for 15 years, there shall be no requirement for separate DNP-DLP.

In the recent JICA funded (DMRC/RS17 & BMRCL/5RSDM) tenders which included 15 years CMC of RS and Depot M&P, there was no separate requirement of DNP-DLP and the CMC period in both the above tenders commenced from the "Start of Revenue Service of first TS" and Ends "15 years from the start of revenue service of the last TS".

In view of above, it is proposed that suitable changes to be made in the tender conditions to bring it in line with above. Accordingly, we request you to kindly remove this CMC maintenance Cost clause.

4.4.18 DNP Maintenance Cost

It is noted that minimum criteria has been specified for Subcontractors/ Manufacturers of 23 major items. Further, it is required that the tender conditions that the Bidder is required to submit the experience certificates for the above said items. Please note, with such experience certificates for the maintenance of one BMRCL tender, the requirement shall be limited for only Propulsion System (Traction Converter, Auxiliary Converter and Traction Motors).

Further, it is proposed that experience certificates including end customer certificates can be provided by the Contractor during Design approval stage.

You are requested to kindly align tender condition in line with the recent JICA funded projects (DMRC/RS17 & BMRCL/5RSDM).

Refer Addendum 01 S/N 15
Refer Addendum 01 S/N 17
Refer Addendum 01 S/N 18
Refer Addendum 01 S/N 20

CP26 / ARE02A Contract - Reply to Bidder Queries
It is our understanding that 210 and option 136 can be operated on Corridor 3 (Madhavaram to SIPCOT) and Corridor 5 (Madhavaram to Tambaram) and Madhavaram depot will be principal depot site for CMC scope.

Further, kindly also confirm Madhavaram depot will be fully handed over to the RS Contractor for Contract No. CP26/ARE02A and there will be sharing of the abovementioned depot with CMRL.

It is clarified that Madhavaram Depot shall be the principal site for maintenance, however, the Contractor shall still be required to undertake light maintenance up to one (1) satellite depot.

Refer Addendum 01 S/N 76

Madhavaram Depot shall be handed over to the Contractor; however, there is the potential that a Rolling Block System (RBS) may also require to undertake maintenance at the depot as well. In such situation an SOP shall be agreed between the parties to provide effective governance and determine the facility shall be shared and provide clarity on the division of roles and responsibilities.

Refer Addendum 01 S/N 77

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Part 3, Section - VIII

**CMRL Response**

Yes

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**Sl No** | **Part** | **Section No** | **Particular Conditions** | **CMRL Response**
---|---|---|---|---
74 | Part 3, Section - VIII | Perticular Conditions (Part A: Contract Data) | Percentage of Retention; Limit of Retention; Payment of Retention Money; Form of Retention Money Security | Yes
75 | Part 3, Section - VIII | Perticular Conditions (Part B: Specific Provisions) | Percentage of Retention; Limit of Retention; Payment of Retention Money; Form of Retention Money Security | Yes
76 | Part 3, Section - VIII | Perticular Conditions (Part B: Specific Provisions) | Table 1.1: Summary of Sections : A. Delay Damages (Sub-Clause 8.7) for Non-achievement of Main Key Dates | Table 1.1
77 | Part 3, Section - VIII | Perticular Conditions (Part B: Specific Provisions) | Table 1.2: Key Date, as specified in the recent JICA funded (DMRC/RS17 & BMRCL/5RSDM) tenders, Second Commissioning schedule for the Depot M&P can be finalised by the Contractor during Design Finalisation stage | Table 1.2
78 | Part 3, Section - VIII | Perticular Conditions (Part B: Specific Provisions) | Where the Contractor had proposed more than One (1) Subcontractor the Employer / Engineer reserves the right to choose the vendor and/or Subcontractor from the proposed list | Table 1.2
79 | Part 3, Section - VIII | Perticular Conditions (Part B: Specific Provisions) | Paragraph 6 of GCC sub - clause 4.2: Rolling Stock and Depot Machinery & Plant – (a) amounting 10% of the Price Centre RS-CMC and DMPM-CMC | Table 1.2
80 | Part 1, Section - IV | Bidding Forms | 3.3.5 Depot Machinery & Plant – CMC: Performance BG for CMC is required to be submitted before commencement of CMC (10% of the Total CMC amount for 15 years), Banks do not provide RSA for such long periods. Moreover, the Contract value per annum for CMC will be much lower than the 10% amount of Total CMC contract value. Accordingly, it is proposed that the Performance BG for CMC be limited to 10% amount of the CMC contract value for succeeding 3-year period and validity for the same duration. The BG shall be renewed every 3 years. | Table 1.2
Part-1, Section – IV
Bidding Forms

3.3.2 Option Quantity Variation

The Price of each 3-car train set to be supplied against quantity variation shall be derived from the contracted price of the original tendered quantity, against Price Centre 'RS-A, 'RS-D', and 'RS-F' (in case of indigenous supply).

With this clause option car price will be limited to 78.89% only of the RS base price (Considering 100% at Price Centre 'RS-A, CST, FAI, CPT, B.C.D.E.F') it will not be feasible to execute option cars at such low price in view of the above we request you kindly revise option Car price determination methodology as described below (It's worth highlighting same has been followed in JICA funded DMRC RS17 Project). The price for option cars shall be determined based on methodology described below:

a) Say sum total of Price Centres 'RS-A, CST, FAI, CPT, B.C.D.E.F' is 'T' (in respective percentage).
b) Inverse of the apportioned contracted price, the value for the design, for Design, Car Body Structure Testing (CST), FAI and CPT shall be considered as 10% of 'T' and the fact that design is not to be carried out for additional Trains, the price to be considered for determination of the price of Trains proposed to be procured against quantity variation will be equal to 90% of 'T' i.e. 0.9'T'.
c) Contracted quantity of cars = 210

Further it is our understanding that minimum 30.069% requirement will not be applicable for option quantity variation. Kindly clarify.

Part-2, Section - IV A - ERTS

1.3.1 The CMRL Metro Phase 2 Project will be approximately 118.9 km long operating within three corridors i.e.,

- Corridor 3 from Madhavaram to Sipcot of 45.8 Km,
- Corridor 5 from Madhavaram to Sholinganallur of 47 Km

And their inter-corridor operations in the Chennai Metro Rail Phase 2 Project. The route will be approximately 76.3 km elevated and 42.6 km underground.

It is our understanding that minimum 30.069% of the Contract Price is mandatory requirement under this package.

Part-2, Section - IV A - ERTS

1.3.3 Operation of Trains that are formed of 6-car sets shall be achievable through two (2) possible configuration options:

i) The future provision of a single Comset trainset comprising of the following rake configuration:
   - DMC + TC + MC + MC + DMC
   - DMC + TC + DMC

ii) Multi-Comset trainset comprising of two (2) coupled 3-car consist having configuration:

   - DMC + TC + DMC
   - DMC + TC + DMC

Notes: The symbol * denotes a fully automatic coupled (with electrical head). The symbol + denotes a semi-permanent-coupler. DMC denotes Driving Motor Car, TC denotes Trailer Car (with pantographs), MC denotes Motor Car

It is our understanding that the inter-corridor operation shall be only in non-passenger service. Please confirm if our understanding is correct.

Bidders understanding is incorrect.

Further it is our understanding that minimum 30.069% of the Contract Price is mandatory requirement under this package. It is thus suggested to delete all the related requirements.

Correspondingly it is not necessary to provide electrical head in the automatic coupler and hence the same may be deleted.

Part-2, Section - IV A - ERTS

1.4.3 (and various other clauses related to multi-consist operation)

Based on operational requirement, rails may have to be operated in G24a mode with driver in G24a mode with attendant in G24a (UTO). However, the Phase 2 project is planned with operations in G24A (UTO) from the initial passenger service inauguration itself.

It is our understanding that the driver cabin and hence partition wall and doors between car and saloon area is not required. Please confirm if our understanding is correct.

The bidder's understanding is correct. A shop shall be provided by the Contractor.

Part-2, Section - IV A - ERTS

2.10.4 Trains shall be compatible with combined operation with other types of trains in CMRL Phase 2 network. Hence all the related interface with other Rolling stock systems suggested in Appendix C & Section 14 shall be achieved.

It is our understanding that combined operation shall only be limited to rescue of defective trains and hence only mechanical coupling with other trains will be achieved. Please confirm if our understanding is correct.

Electrical coupling is still required to allow basic control of the brake system during emergency train rescue operations (as clearly defined in the ERTS).

Part-2, Section - IV A - ERTS

2.11.3 With maximum allowable wheel and rail wear, the rails shall be able to operate under 150 mm above top of rail, and to creep at up to 8 kmph for a distance of 120 m.

Water more than 50mm above top of rail will have implications on train operations. (as per ERTS 22.26 the requirement is for all rolling stock fleets to be fully capable of serving all carriages in revenue operation.

The defined scenario already has an ample scope on the cap speed and distance to be travelled. Tender Condition Prevails.

Part-2, Section - IV A - ERTS

3.4.6.1 An open split type of double skin gangway shall be provided between the ends of interconnecting cars.

Since it is required to install sidewall and ceiling in the gangway and further the cars are not expected to be frequently uncoupled for maintenance, it is suggested that one piece gangway should be specified instead of split type gangway.

Further clarifying on existing ERTS requirements: When dooferless cars are coupled, the ERTS only requires the passing train to cross-feed power to the brake control units of the sick train and to provide train to train back feed control of the brake systems. This limited scope of required functionality assesses the complexity for RS Contractors to coordinate their interfaces. Further clarifying on existing ERTS requirements: When dooferless cars are coupled, the ERTS only requires the passing train to cross-feed power to the brake control units of the sick train and to provide train to train back feed control of the brake systems. This limited scope of required functionality assesses the complexity for RS Contractors to coordinate their interfaces.
100 | Part-2, Section - IV C - ERTS - CMC of RS & DM&P | 1.2.3 | KPI - Rolling Stock | 0.16 | Penalty amount specified for very high and will increase the risk cost for Contractor and hence the CMC price for CMRL. It is suggested to reduce the penalties as follows: Penalty for delay during maximum < 75,000 INR Penalty for delay > 3 months/60,000 INR Penalties for delay on maximum < 50,000 INR Penalty for delay < 1 month. Any separate KPI for DM&P should not be specified. It is requested to delete all the clauses related to KPI-DM&P. | Tender Condition Prevails. No | No |

101 | Part-2, Section - IV C - ERTS - CMC of RS & DM&P | 3.3.5 | RS Penalties on Service Failures | 0.16 | Penalty amount specified for very high and will increase the risk cost for Contractor and hence the CMC price for CMRL. It is suggested to reduce the penalties as follows: Penalty for delay during maximum < 75,000 INR Penalty for delay > 3 months/60,000 INR Penalties for delay on maximum < 50,000 INR Penalty for delay < 1 month. Any separate KPI for DM&P should not be specified. It is requested to delete all the clauses related to KPI-DM&P. | Tender Condition Prevails. No | No |

102 | Part-2, Section - IV C - ERTS - CMC of RS & DM&P | 3.3.6 | DM&P Availability target | 0.17 | Contractor shall be liable to make the trains available as per specified requirement by CMRL. Contractor should be free to decide on maintenance & upkeep of DM&P to fulfill its obligation of making the trains available. Train availability thus covers the DM&P/RPs and any separate KPI for DM&P should not be specified. It is requested to delete all the clauses related to KPI-DM&P. | Tender Condition Prevails. No | No |

103 | Part-2, Section - IV C - ERTS - CMC of RS & DM&P | 3.3.7 | DM&P | 0.17 | Contractor shall be liable to make the trains available as per specified requirement by CMRL. Contractor should be free to decide on maintenance & upkeep of DM&P to fulfill its obligation of making the trains available. Train availability thus covers the DM&P/RPs and any separate KPI for DM&P should not be specified. It is requested to delete all the clauses related to KPI-DM&P. | Tender Condition Prevails. No | No |

104 | Part-2, Section - IV C - ERTS - CMC of RS & DM&P | 1.2 | List of Depot Machinery & Plant | 0.21 | TOTAL ADVANCE PAYMENT – The interest free mobilisation advance shall be calculated at the rate of 10% of the accepted contract amount. Excluding Provisional sum, Price Centre TIS-CMC & DM&P-CMC | in the commercial and proportionate value is agreed upon in the Event of any separate KPI for DM&P should not be specified. It is requested to delete all the clauses related to KPI-DM&P. | Tender Condition Prevails. No | No |

105 | Part-2, Section - IV B - ERTS - DM&P | 3.20.3.1 | The Supplier shall furnish fully equipped Catenary Maintenance Vehicle designed for operation in CMRL Phase 2 installation. | 0.21 | TOTAL ADVANCE PAYMENT – The interest free mobilisation advance shall be calculated at the rate of 10% of the accepted contract amount. Excluding Provisional sum, Price Centre TIS-CMC & DM&P-CMC | in the commercial and proportionate value is agreed upon in the Event of any separate KPI for DM&P should not be specified. It is requested to delete all the clauses related to KPI-DM&P. | Tender Condition Prevails. No | No |

106 | PCC (Section - vii) | 21 | Removal of CMRL 4 Wheeler Requirement: Considering the exclusivity of availability of CMRL 4 Wheeler with our competitor, we suggest removing this specific requirement from the contract. This would allow us to do the competitive costing. | 0.21 | TOTAL ADVANCE PAYMENT – The interest free mobilisation advance shall be calculated at the rate of 10% of the accepted contract amount. Excluding Provisional sum, Price Centre TIS-CMC & DM&P-CMC | in the commercial and proportionate value is agreed upon in the Event of any separate KPI for DM&P should not be specified. It is requested to delete all the clauses related to KPI-DM&P. | Tender Condition Prevails. No | No |

107 | ERTS | 3.20.3.1 | The Supplier shall furnish fully equipped Catenary Maintenance Vehicle designed for operation in CMRL Phase 2 installation. | 0.21 | TOTAL ADVANCE PAYMENT – The interest free mobilisation advance shall be calculated at the rate of 10% of the accepted contract amount. Excluding Provisional sum, Price Centre TIS-CMC & DM&P-CMC | in the commercial and proportionate value is agreed upon in the Event of any separate KPI for DM&P should not be specified. It is requested to delete all the clauses related to KPI-DM&P. | Tender Condition Prevails. No | No |
The implementation of Dual Mode Detainment Doors with two operating modes is not feasible due to technical limitations. The design and installation of such doors would pose significant challenges and could compromise the overall safety and functionality of the system. To avoid impractical expectations and ensure a more viable solution, it is strongly recommended to remove the clause requiring the Dual Mode Detainment Doors and explore alternative options for emergency egress of passengers in both single and multi-consist operation modes.

Fender condition prevails. NO
DUAL MODE DETRAINMENT DOORS

6.9.1 Dual Mode Detrainment Doors shall be provided in the first and last car for emergency egress of passengers in one (1) of two (2) modes of operation.

6.9.2 Each Detrainment Door shall offer the possibility of two (2) operating modes, either through a single hybrid design, or shall otherwise be reconfigurable by the installation and removal of door apparatus equipment at a maintenance depot.

6.9.3 The two (2) required operating modes of the Detrainment Door are as follows:

- Train to Track Evacuation Mode (will be configured this way when the DM cars are not coupled);
- Train to Train Evacuation Mode (will be configured this way when DM cars are coupled during multi-consist operation).

The implementation of Dual Mode Detrainment Doors with two operating modes is not feasible due to technical limitations. The design and installation of such doors would pose significant challenges and could compromise the overall safety and functionality of the system. To avoid impractical expectations and ensure a more viable solution, it is strongly recommended to remove the clause requiring the Dual Mode Detrainment Doors and explore alternative options for emergency egress of passengers in both single and multi-consist operation modes.

Fender condition prevailes. No

DETAINMENT DOOR

5.3.3.1 Train to Train Evacuation Mode (will be configured this way when the DM cars are coupled during multi-consist operation)

The usage of two similar two (2) coupled 3-car consist having configuration DMC + TC + DMC or DMC + TC + DMC is requested to be reconfigured so that the configuration proposed shall be applicable only during the rescue mode and not for operational purpose.

Therefore, it is recommended to remove the clause requiring the multi-consist train configuration DMC + TC + DMC to DMC + TC + DMC DMC + TC + DMC DMC + TC + DMC in the contract.

Fender condition prevailes. No

DETAINMENT DOOR

15.18.1 Endemic Failures

Know nothing of any other provisions of the Contract, at any time prior to sixty (60) months from taking over CMRL Phase 2 installation of such doors would pose significant challenges and could compromise the overall safety and functionality of the system. To avoid impractical expectations and ensure a more viable solution, it is strongly recommended to remove the clause requiring the Dual Mode Detrainment Doors and explore alternative options for emergency egress of passengers in both single and multi-consist operation modes.

Refer Addendum 01 5N 57 Yes
Part 2
7.2.7
All electrical and electronic components shall comply with the EME and EMC requirements of EN 50121-1 (all parts), IEE-16, EN 50151 and IEC 61000-4 standards or other equivalent international standards. The requirements of EMC EMC requirements referred to in clause 1.10.9 and 2.18 of the rolling stock shall be met.

EN 50121 already makes reference to several other standards including EN 61000 to define requirements and test methods. It is unnecessary and creates confusion to add the other standards (IEC 16, EN 50151 and IEC 61000-4) in addition to requiring compliance to EN 50121. Please simplify the clause to state that applicable EMC requirements referred to in clause 2.18 should be met. And 10.19 can be for reference purpose only not to be a compliance.

CMRL Response: No
Tender Condition: No

Part 2
7.2.9
Each VAC unit shall have independent over voltage protection and over current protection system which safeguards the individual VAC unit from external electrical disturbances outside the VAC unit.

Please clarify that the requirement for the over voltage & current is to be built inside HVAC System.

CMRL Response: Yes
Bidder understanding is correct.

Part 2
7.3.10
Air filter elements shall be replaceable from outside the car.

Please clarify if filter access should be from outside the car or inside the air? Normally it is quicker for maintenance personnel to change filters if access is provided from inside the car. Hence kindly inform if it is necessary that only filter access to be done form outside or both (inside & outside) can be proposed.

CMRL Response: No
Tender Condition: No

Part 2
7.3.13
The VAC units shall be sized to cater for AHU load condition with all train sub-system equipment being operated simultaneously. The Contractor shall take the effects of door opening and closing at stations as well as piston and infiltration effects when the rake moves in a tunnel (as specified in relevant standards) into full consideration.

The term "sufficiently long durations" is ambiguous - please define the number of events that should be retained in the memory before the indication.

CMRL Response: No
Tender Condition: No

Part 2
7.4.3
The air discharge velocities at any outlet grille shall not create noise disturbing the passengers and shall vary progressively as per EN14790. Minimum air discharge velocities at any outlet grille shall not be less than 3.5 m/s measured at 300mm below ceiling. The air intake velocity to the recirculation and exhaust grilles shall not exceed 3m/s. The minimum volume of air supplied by the artificial ventilation shall be 2.5 liters per second per passenger at AHU-Load. This air shall be filtered. The Contractor may propose design improvements to the above parameters for CMRL’s review and approval.

The last sentence of the clause requires, "A positive interlock shall be provided to open heater contactors in the event of failure of the Auxiliary Power Supply." Please clarify why this is needed - in case of Auxiliary Power Supply failure (loss of 415 VAC, 3 Phase), the heaters will anyway be unpowered even if the contactors are closed.

CMRL Response: No
Bidder understanding is correct.

Part 2
7.5.3
The control circuitry shall not allow the heaters to be powered unless the appropriate interlocks are operating. Heater element over-temperature protection shall be provided for individual heaters. Self-resetting thermostats shall be installed adjacent to the heaters to open the contactors when excessive temperatures are detected. A positive interlock shall be provided to open heater contactors in the event of failure of the Auxiliary Power Supply.

The term "suitably long durations" is ambiguous - please define the number of events that should be retained in the memory before the indication.

CMRL Response: No
Tender Condition: No

Part 2
7.6.4
Each VAC unit shall be sized for an additional 10% over the required capacity calculated for the design of the VAC System.

The door cycling may be defined being the data defined in ERTS Clause IV 2.10 in combination with a simulation.

CMRL Response: No
Tender Condition: No

Part 2
7.6.5
When the external ambient temperature exceeds the values specified at paragraph 7.6.3, then the air conditioning shall be designed to maintain the temperature difference between the interior temperature and ambient temperature at not less than 10°C up to the ambient temperature of 42°C. From 42°C to 48°C of ambient temperature, the VAC units shall continue to operate at full load maximum capacity in cooling mode without interruption or degradation and shall maintain constant internal temperature of 32°C. Beyond 48°C ambient temperature, the VAC system shall go into ventilation mode.

This is a specific requirement.

CMRL Response: No
Tender Condition: No

Part 2
7.6.6
The microprocessor shall have memory permitting logging of faults and system events in its memory for sufficiently long durations. The microprocessor shall have suitable interface with TCMS for data communication and display. Suitable communication shall be provided to permit logged events to be downloaded to a laptop/computer. All the variables and parameters of the VAC unit shall be transmitted to TCMS. This data shall be able to be transmitted as part of RTI OMS as mentioned in clause 14.11 & 14.13.

The requirement referred to in clause 2.18 should be met.

CMRL Response: Yes
Ref Addendum 01 5/9 48

Part 2
7.7.19.1
Heat detectors/temperature sensors shall be used and integrated to TCMS. The Contractor shall set real time monitoring of all connection points of HVAC equipment power connection to TCMS in vicinity of return air duct as specified in clause 2.26.

The term "suitably long durations" is ambiguous - please define the number of events that should be retained in the memory before the indication is overwritten.

CMRL Response: Yes
Tender Condition: No

Part 2
7.8.2
Only permanent copper pipe with suitable non-fouling fittings shall be used.

Please clarify what is "permanent copper pipe" - should this be amperage that passes through the contacts.

CMRL Response: No
Bidder understanding is correct.

Part 2
7.8.3
Intermediate joints in refrigerant piping (i.e., pipe to pipe) shall not be accepted. The end termination to equipment shall be brazed lap joints.

The Contractor may propose the design concept for the Engineer’s consideration during design stage. The Engineer's decision shall be final and binding on the Contractor.

CMRL Response: No
Tender Condition: No

Part 2
7.11
Material requirements of all sub-systems of train shall be compliant with the requirements of Chapter 19.

Material of construction for HVAC Structure is not clear, we propose to refer SS 304L Material which is widely used.

CMRL Response: No
Tender Condition: No
Part 2 / Section VI A

Clause No. 10.11.10

The Contractor shall ensure that the overall design of the VAC System is able to tolerate the extremely dirty and humid environment which prevails in Chennai to the extent that there is no necessary to clean VAC filters before 12,500 km or within fewer than 30 days start running, whichever is lower. Minimum expected life of filter shall be 100,000 km. The effectiveness of VAC filters shall be adequate enough to ensure that dust deposition in the air ducts is minimal and won't create cause to need to clean the ducts between major intervals.

The Air Supply for the leveling system shall be taken from the main reservoir pipe and a separate reservoir of suitable capacity shall be provided. A load sensing valve shall be provided for each air suspension system. A load sensing valve shall be provided to indicate the pressure to the vehicle control and information system (VCI). The system shall be capable of carrying out three (3) consecutive emergency brake applications. Hence, request to change as "Wheel Slip / Slide control during powering and electrical regenerative braking shall be provided using speed sensor less vector control subject to its proven design in Metro Transits System. Uncontrolled slip / slide during Emergency braking can be given as indication will lead to transmission of lot. The minimum average emergency brake rate following any single point failure shall not be less than 1.3 m/s²."

The Contractor shall develop a life cycle cost plan in accordance with Section 8.2.3.3-3 an aim to minimize the overall life cycle cost whilst meeting the safety, quality, availability, maintainability, and reliability requirement of this particular specification.

The requirement can be rephrased as below

"Software contained within the traction and braking equipment shall be capable of modification to alter the rake performance and capabilities."

FTRLL believes it shall be necessary for the Contractor to provide a compatible automatic coupler / electric link in order to achieve the specified requirements.

CMRL Response

Addendum

FTRLL Requests to modify the clause as below

For queries related to Engineering Standards, bidders may refer to the response already provided against S/N 133.
<table>
<thead>
<tr>
<th>Sl no</th>
<th>Part No / Section No</th>
<th>Clause No.</th>
<th>Original Bid Condition</th>
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<tbody>
<tr>
<td>159</td>
<td>Part 2 / Section VI-A</td>
<td>12.12.3g</td>
<td>Wheel slide protection shall be available during emergency braking. Any failure in the wheel slide protection in emergency braking shall result in the application of full brake force and deactivation of the slip/skid system. Failure of WSP will deactivate DUMP valve to open the Brake cylinder path to admit the Brake Cylinder pressure as per load condition.</td>
<td>Tender condition prevails.</td>
<td>Refer Addendum 01 S/N 51</td>
<td>Yes</td>
</tr>
<tr>
<td>160</td>
<td>Part 2 / Section VI-A</td>
<td>12.16.1</td>
<td>It shall be possible to rescue a sick train (E.g., Defective, Inimmobile, No battery power or in a shutdown condition) using only an air connection from the rescue train or locomotive. The emergency brake application of the dead train shall be possible by its Operator. A detailed scheme shall be subjected to the Engineer during design finalization.</td>
<td>Tender condition prevails.</td>
<td>Refer Addendum 01 S/N 52</td>
<td>Yes</td>
</tr>
<tr>
<td>161</td>
<td>Part 2 / Section VI-A</td>
<td>12.19</td>
<td>The brakes system shall comply with the following SL areas: Emergency Brakes - SL-4, Service Brakes - Minimum speed, Wheel Slide Protection, Holding brake Application &amp; Feedback - SL-2.</td>
<td>Tender condition prevails.</td>
<td>Refer Addendum 01 S/N 52</td>
<td>No</td>
</tr>
<tr>
<td>162</td>
<td>Part 2 / Section VI-A</td>
<td>14.2.4</td>
<td>Single Point Upload of all software of the train to a) Single point uploading of software (for all sub-systems connected with TCSM) shall be possible via TCSM nodes or through suitable network switches. In case of sub-supplier’s equipment like Saloon Doors, PAPS &amp; CTVT, VAC, CI, APS, Brake system, the single point upload of software and downloading of faults on unit / car / train basis shall be ensured from TCSM only. b) The overall time required for uploading the software for all subsystems, shall be no more than 10 minutes for each complete sub-system of train and the same shall be demonstrated. (Ex. in case of doors sub-system, the time requirement is collectively for all doors of one train)</td>
<td>Single point uploading of software can be done through network switch. Request to modify the clause as below</td>
<td>Refer Addendum 01 S/N 52</td>
<td>No</td>
</tr>
<tr>
<td>163</td>
<td>Part 2 / Section VI-A</td>
<td>14.9.5</td>
<td>The Contractor shall furnish the following information in respect of printed circuit boards as part of contract: a) Voltage and/or waveform expected at each critical test point. b) The overall time required for uploading the software and downloading of faults on unit / car / train basis shall be ensured from TCSM only.</td>
<td>Tender condition prevails.</td>
<td>Refer Addendum 01 S/N 52</td>
<td>Yes</td>
</tr>
<tr>
<td>164</td>
<td>Part 2 / Section VI-A</td>
<td>14.11.2n</td>
<td>In fault data downloading is interrupted somehow, it should resume from the same point, at which it was interrupted.</td>
<td>Request to change the requirement as below</td>
<td>Refer Addendum 01 S/N 51</td>
<td>Yes</td>
</tr>
<tr>
<td>165</td>
<td>Part 2 / Section VI-A</td>
<td>19.54.3(i)</td>
<td>Dry heat test: The dry heat test shall be conducted to class T3 and the temperature shall be considered 85°C against 70°C specified in ECESN. An extra performance check at 95°C shall also be carried out for 10 minutes over temperature value. LCO2 (LED display unit) may be tested at 70°C and an extra performance check at 95°C shall also be carried out for 10 minutes over temperature value.</td>
<td>Brake electronic devices only comply EN standard. That means +70°C permanently and +60°C for max. 10 minutes according to the temperature profile defined in the norm. With a longer time at T+70°C the functioning of the electronic equipment is not guaranteed. Hence this requirement may be changed as given for standard EC EC without increasing the temperature</td>
<td>Tender condition prevails.</td>
<td>No</td>
</tr>
<tr>
<td>166</td>
<td>Part 2 / Section VI-A</td>
<td>19.55.6</td>
<td>The Contractor shall furnish the following information in respect of printed circuit boards as part of contract: a) Voltage and/or waveform expected at each critical test point.</td>
<td>Tender condition prevails.</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>167</td>
<td>Part 2 / Section VI-A</td>
<td>19.25.2(i)</td>
<td>All rubber hoses, connecting pipes etc. used in pneumatic circuit shall not be required to be replaced before 5 years or major overhaul, whatever is later. All rubber hoses shall be steel-reinforced for better life and reliability.</td>
<td>Tender condition prevails.</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>168</td>
<td>Part 2 / Section VI-A</td>
<td>19.32.2</td>
<td>Compressor suction hose required to be replaced in every two years. Request to give exception for compressor suction hose.</td>
<td>Tender condition prevails.</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>169</td>
<td>Part 2 / Section VI-B</td>
<td>4.1.1</td>
<td>Basic Parameters for the design of Wheel Profile Measurement System (WPMS). The WPMS shall automatically measure the following minimum parameters of wheelsets (but not limited to): Wheel Diameter - ± 2.5 mm</td>
<td>FRSL Proposes the parameter diameters should be ± 1 mm.</td>
<td>Tender condition prevails.</td>
<td>No</td>
</tr>
<tr>
<td>170</td>
<td>Part 2 / Section VI-B</td>
<td>4.2.2</td>
<td>The WPMS shall be supplied including in Madhavaram depot on ballasted track outside the workshop shed so that the respective train get examined by WPMS.</td>
<td>Billed. Shall be provided after Contract award.</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>171</td>
<td>Part 2 / Section VI-B</td>
<td>4.3.3</td>
<td>Installation of the WPMS shall require no cutting of track or any major civil work on the track. The system shall be installed on the existing Ballast less track or using a special sleeper by the contractor without altering the track layout. In case of usage of special sleeper, the contractor has to prove the strength of the sleeper through test reports.</td>
<td>Tender condition prevails.</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>172</td>
<td>Part 2 / Section VI-B</td>
<td>4.3.11</td>
<td>The system shall automatically identify the Train number and its orientation by means of inputs received from on-board signaling and radio communication system, with which the WPMS system shall select the signal for vehicle identification.</td>
<td>Tender condition prevails.</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>173</td>
<td>PART-2: SECTION VI-A</td>
<td>3.4.9.2.4</td>
<td>Replacement of door window glass shall be possible without removal of door leaf.</td>
<td>Tender condition prevails.</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>174</td>
<td>PART-2: SECTION VI-A</td>
<td>6.2.2</td>
<td>The two door panels at each passenger doorway shall be synchronously controlled with Anti-bump Feature and shall provide a door clear opening width of equal spacing of not less than 1400 mm. Since platform screen doors (PSD) will be used at all stations with full height PSDs in underground stations and half height PSDs in elevated stations, the location, inter-door distance &amp; size of the door panels are important for the PSD equipment supplier. The Contractor shall coordinate with PSD Contractor as part of interface.</td>
<td>Tender condition prevails.</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>175</td>
<td>PART-2: SECTION VI-A</td>
<td>6.2.7</td>
<td>No door system operation or single defect or failure of any part of any door system shall produce a situation capable of causing injury to any passenger / maintenance stuff. Single point failure of mechanical part cause a door to open will be detected by FSA and managed in the Safety related item list. Single point failure leading to passenger injuries / door opening without being commanded would be included in FMEA. Details to be defined during project phase.</td>
<td>Tender condition prevails.</td>
<td></td>
<td>No</td>
</tr>
<tr>
<td>SI No.</td>
<td>Part/Sect No</td>
<td>Clause No.</td>
<td>Original Bid Condition</td>
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| 175   | PART-2:SECTION VI A | 6.3.14 | 6.3.14 It shall be possible for CMRL to modify or change the door system parameters, modify or change open-close logic of the door circuits and implement the same as required by CMRL based on their operational and maintenance requirements. Full access to the software for the purpose above shall be provided. Any hardware/software tool required for the purpose shall also be provided. The documentation including but not
restricted to flow charts (for complete software), signal flow, and interpretation of signal etc., shall be provided. CMRL personnel shall be fully trained and made fully conversant by the Contractor for this purpose. | some parameters can be adjust by engineer in maintenance, it would be defined in technical description in design phase, while the logic of door could be only modified by TRSL, via software updating | Tender condition prevails. | No |
| 176   | PART-2:SECTION VI A | 6.3.17 | 6.3.17 There shall not be any drain holes on the floor sides that allow any | in drains holes on floor side, while there are holes for falling foreign objects on threshold as most of experienced projects in India market | Noted | No |
| 178   | PART-2:SECTION VI A | 6.3.18 | Each door test shall have a glass window meeting the requirements of 6.2.15.5.4 | TRSL suggest to replace the door window after dismantle the door test as it is the fastest way to do so. (consider it takes very short time to dismantle the door panel, 2 pressor*20min). | Tender condition prevails. | No |
| 180   | PART-2:SECTION VI A | 6.4.5 | 6.4.5 The device to detect and prove that passenger doors are fully closed and latched shall be capable of detecting any obstruction causing a maximum gap of 10 mm per doorway and prevent the door proving indication from being achieved, in accordance with EN-14752. This detection-obstacle function shall be achievable for a minimum gap of 10 mm per doorway along the height of the door. | TRSL propose detected rectangular with dimension 15x100mm at bottom, the middle and the top of the door as most of our experienced projects in India market; | Tender condition prevails. | No |
| 181   | PART-2:SECTION VI A | 14.4.5 | 14.4.5 List of Operator Control Functions. Remote Control features of train available from the DCC, BDC and from the DCC's control via remote operation shall include, but not be limited to, the following (These features shall be available in all UTO and non-UTO modes of operation). | for door system, when minor fault disappear; it would be reset automatically, TRSL proposes to remove remote reset feature modify the clause accordingly. | Tender condition prevails. | No |
| 182   | PART-2:SECTION VI A | 17.5.3.6.1 | 17.5.3.6.1 Endurance test: Two million operations shall be performed. A record of the velocity profile shall be taken at the beginning and the end of the test. It should also be demonstrated that no undue wear or compression of seals has occurred. This test shall be performed under representative dry and wet conditions. Endurance test shall be done on actual replica of the door portion of the car and door shall be as assembled in the car. Approval of CMRL shall be sought on the complete agreement. | TRSL requests that endurance test would may be conduct on mockup in lab environment, not dry and wet conditions; | Tender condition prevails. | No |
| 183   | PART-2:SECTION VI A | 17.5.3.6.2 | 17.5.3.6.2 Vibration Tests: Vibration test shall be carried out as defined in IEC 61375. These tests shall be completed before the first car is ready for final assembly. Failures recorded during testing must correlate with minimum and variability values. Door speed and noise tests shall be performed at the beginning, mid-point, and end of the life test for comparative evaluation. Door testing shall include the effects of wind. | TRSL suggests that door speed and noise test can be conduct at the mid-point, and end of the life test, but test result only can be reference; please clarify the requirement of effect of wind. | Tender condition prevails. | No |
| 184   | PART-2:SECTION VI A | 10.6.2 | 10.6.2 Stainless steel shall be AISI type 301, 304, 304L, 316, 316L or 347 in accordance with the intended function. For queries related to Engineering Standards, bidders may refer to the response already provided against S/N 133. | TRSL requests to add alternative NF EN 10283 for stainless steels. For queries related to Engineering Standards, bidders may refer to the response already provided against S/N 133 | No |
| 185   | PART-2:SECTION VI A | 19.7.3 | 19.7.3 High-strength castings shall be tested, inspected, and accepted in accordance with AAR requirements. High-strength castings, and Low alloy nickel castings, shall comply with, and be tested, inspected, and accepted in accordance with AAR-M-201. For queries related to Engineering Standards, bidders may refer to the response already provided against S/N 133. | TRSL requests to add alternative NF EN 1706 for aluminium and follow NF EN 10283 for stainless steels. For queries related to Engineering Standards, bidders may refer to the response already provided against S/N 133 | No |
| 186   | PART-2:SECTION VI A | 19.7.4 | 19.7.4 General-purpose steel castings shall comply with ASTM A27, either Grade 65-35 / Grade 70-36. TRSL requests to add alternative GB/T81358. For queries related to Engineering Standards, bidders may refer to the response already provided against S/N 133. | TRSL requests to add alternative GB/T 1591; For queries related to Engineering Standards, bidders may refer to the response already provided against S/N 133 | No |
| 187   | PART-2:SECTION VI A | 19.9.1 | 19.9.1 Structural heat-treated alloy steel suitable for welding may be used for sub-structures not exposed to atmospheric corrosion. Heat treated alloy steel used for structural purposes shall comply with ASTM A514, Grade F. The use of all alloys is subject to CMRL approval. TRSL requests to add alternative GB/T 1591; For queries related to Engineering Standards, bidders may refer to the response already provided against S/N 133. | for zinc plating on steel features, TRSL requests to add alternative DIN50979; For queries related to Engineering Standards, bidders may refer to the response already provided against S/N 133 | No |
| 188   | PART-2:SECTION VI A | 19.25.1 | 19.25.1 General (i) All fasteners shall be stainless steel, dichromate, or zinc-plated steel, depending on the specific application. Zinc plating on steel fasteners shall conform to ASTM B 633 Type I - yellow, or equivalent standard, for non-exposed fasteners. | TRSL requests to add alternative DIN50979; For queries related to Engineering Standards, bidders may refer to the response already provided against S/N 133 | No |
| 189   | PART-2:SECTION VI A | 19.31 | 19.31.1 SOLIDERING 19.31.1.1 Solidering of mechanical equipment shall comply with requirements of MIL-STD-454 or equivalent. 19.31.1.2 Solidering of mechanical equipment shall comply with requirements of DOD-STD-1866 or equivalent 19.31.3.3 The Contractor shall submit solidering specifications, procedures, and certifications for CMRL approval. For queries related to Engineering Standards, bidders may refer to the response already provided against S/N 133 | for solidering, TRSL requests to add alternative IPC-610, IPC-620; For queries related to Engineering Standards, bidders may refer to the response already provided against S/N 133 | No |
| 190   | PART-2:SECTION VI A | 15.41.6 | 15.41.6 Doors shall comply with MIL-C-5015 or approved equal TRSL requests to add alternative EN14194 | TRSL requests to add alternative EN14194 For queries related to Engineering Standards, bidders may refer to the response already provided against S/N 133 | No |
| 191   | PART-2:SECTION VI A | 19.42.9 | 19.42.9 Except for electronic equipment, all cable terminations shall be of the crimp type or, in accordance with BS 4079: Part 1: 1988, Compression Joints in Copper Conductors, or other service proven type. Soldered connections will not be accepted. 19.42.5 Low voltage cables up to 6.0 mm conductor cross sectional area shall preferably be fitted with terminals conforming to BS4579 Pt.1 or equivalent. Alternatives shall be submitted for CMRL review. BS4579 is withdrawn, TRSL requests to add alternative EN-62052-2; For queries related to Engineering Standards, bidders may refer to the response already provided against S/N 133 | No |
### CP26 / ARE02A Contract - Reply to Bidder Queries

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<td>192</td>
<td>PART - 2: SECTION VI A</td>
<td>19.46.14</td>
<td>19.46.14 All metallic boxes, cases and enclosures containing electrical equipment, including cable ducts</td>
<td>For the variation to be intended to be part of the live circuit shall be properly earthed an</td>
<td>Funder condition prevails</td>
<td>No</td>
</tr>
<tr>
<td>193</td>
<td>PART - 2: SECTION VI A</td>
<td>19.54.3</td>
<td>19.54.3 All electronic equipment shall comply with IEC60671 and/or EN50110 and additionally type tested to:</td>
<td>(i) Dry heat test: The dry heat test shall be conducted for class T3 and temperature shall be considered 80°C against 70°C specified in IEC61. An extra</td>
<td>Funder condition prevails</td>
<td>No</td>
</tr>
<tr>
<td>194</td>
<td>PART - 2: SECTION VI A</td>
<td>2.17.3.9</td>
<td>2.17.3.9 No Part 3/ Section III</td>
<td>Door operation Noise produced by simultaneous operation of all saloon doors. Open and close time of the passenger doors shall be adjustable in the range of 1.5 to 4.5 seconds.</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>195</td>
<td></td>
<td>6.3.15</td>
<td>6.3.15 Passenger Door Opening and Closing Time</td>
<td>As per our insurance consultant, in a commercial risk, deductibles are guided by regulation &amp; would as note below for projects exceeding Rs.2500 Crores. For Storage &amp; Erection Claims: 5% of the claim amount subject to a minimum of Rs. 75,000/-. For testing Claims: 5% of the claim amount subject to a minimum of Rs. 22,500/- For Acts of God: 15% of the claim amount subject to a minimum of testing period excess i.e., Rs.2,25,000/- For Fire/Explosion Claims: 10% of the claim amount subject to a minimum of testing period excess i.e., Rs.2,25,000/-</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>196</td>
<td>PART - 2: SECTION VI A</td>
<td>4.1.1</td>
<td>Minimum 30.06% of the Contract Price (Excluding Price Centre WSC, CMC, Price Centre DMAP , DMAP &amp; TDC) shall be assured from Japanese manufacturers - Companies for Goods and Services as it is mandatory requirement under this package.</td>
<td>The contract clause says excluding CMC &amp; Taxes for Japanese G&amp;S. For e.g., in Rs.50 millions and 50% is CMC. So in 70% of project cost Rs.30,60% will be 45% of Japanese G&amp;S. During discussion with CMRL, Our understanding regarding Japanese G&amp;S is 50.05% of JICA funded cost. Therefore, please revise the clause accordingly.</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>197</td>
<td>Part 3/ Section III</td>
<td>27.</td>
<td>27. Periods for submission of Insurance:</td>
<td>The stipulated timelines of 15 days and 28 days are not practical. The following is suggested in line with the stipulations of other metro Compositions: a) Evidence of Insurance - 12 weeks from commencement date b) Relevant Policies - 14 weeks from commencement date</td>
<td>Tender Condition Prevails</td>
<td></td>
</tr>
<tr>
<td>198</td>
<td>Part 3/ Section VIII Particular Conditions (Part A: Contract Data)</td>
<td>SL No: 27</td>
<td>Maximum amount of discounts for insurance of Employer's risk: RIR 1,00,000/-</td>
<td>As per our insurance consultant, since the third party liability is a legal liability &amp; payment is dependent on the court order, such sub limits per person for death, permanent disability &amp; partial disability cannot be offered. In view of the above, it is requested to not explicitly mention deductibles in tender document. Deductible amount shall be discussed and agreed upon as per applicable regulation after the award of the contract. Please amend accordingly.</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>199</td>
<td>Part 3/ Section VIII Particular Conditions (Part A: Contract Data)</td>
<td>SL No: 28</td>
<td>Minimum amount of discount for insurance of Employer’s risk: 8%</td>
<td>As per our insurance consultant, since it is not possible to take Contractor All Risk insurance or other insurance during the CMC period by the Contractor, since the trains are already owned and operated by the Contractor. It is understood only third party liability can be covered by the Contractor during CMC period. Accordingly, we request CMRL to delete the underlined option &amp; modify the clause.</td>
<td>Tender Condition Prevails</td>
<td></td>
</tr>
<tr>
<td>200</td>
<td>Part 3/ Section VIII Particular Conditions (Part B: Specific Provisions)</td>
<td>PCC Clause No. 56</td>
<td>Insurance cover for Contractor’s All Risk and other requirements as specified in GCC shall cover 100% of the Total Contract price and also cover the variation price. This insurance shall cover Project, DNP period and till completion of CMC period. This shall be submitted within 28 days from date of commencement including all other relevant policies.</td>
<td>As per our insurance consultant, the term “Contractor All Risk” policy is not applicable for taking such contracts. It should be marine underwriting policy. Request to rename the term “Contractor’s All Risk” to avoid confusion.</td>
<td>Tender Condition Prevails, however the bidder may refer to the following Addendum on a related topic. Addendum 01 SN 96</td>
<td>Yes</td>
</tr>
<tr>
<td>201</td>
<td>Part 3/ Section VIII Particular Conditions (Part B: Specific Provisions)</td>
<td>PCC Clause No. 56</td>
<td>Insurance cover for Contractor’s All Risk and other requirements as specified in GCC shall cover 100% of the Total Contract price and also cover the variation price. This insurance shall cover Project, DNP period and till completion of CMC period. This shall be submitted within 28 days from date of commencement including all other relevant policies.</td>
<td>As per our insurance consultant, it is not possible to take Contractor All Risk insurance or other insurance during the CMC period by the Contractor, since the trains are already owned and operated by the Contractor. It is understood only third party liability can be covered by the Contractor during CMC period. Accordingly, we request CMRL to delete the underlined option &amp; modify the clause.</td>
<td>Tender Condition Prevails, however the bidder may refer to the following Addendum on a related topic. Addendum 01 SN 96</td>
<td>Yes</td>
</tr>
<tr>
<td>202</td>
<td>Part 3/ Section VIII Particular Conditions (Part B: Specific Provisions)</td>
<td>PCC Clause No. 56</td>
<td>Insurance cover for Contractor’s All Risk and other requirements as specified in GCC shall cover 100% of the Total Contract price and also cover the variation price. This insurance shall cover Project, DNP period and till completion of CMC period. This shall be submitted within 28 days from date of commencement including all other relevant policies.</td>
<td>In case of extension of DNP period beyond 730 days, the extended maintenance cover as per insurance policy cannot be further extended. 24 months is the limit per negotiation. It is suggested to add the following statement at the end of the clause: “The validity period of the insurance for extended DNP periods (if any) shall be discussed and agreed upon in line with insurance guidelines / regulations.”</td>
<td>Tender Condition Prevails</td>
<td></td>
</tr>
<tr>
<td>203</td>
<td>Part 3/ Section VIII Particular Conditions (Part B: Specific Provisions)</td>
<td>PCC Clause No. 56</td>
<td>Insurance cover for Contractor’s All Risk and other requirements as specified in GCC shall cover 100% of the Total Contract price and also cover the variation price. This insurance shall cover Project, DNP period and till completion of CMC period. This shall be submitted within 28 days from date of commencement including all other relevant policies.</td>
<td>Since the definition of “Project Period” as per PCC clause No.B.6 contains in itself DLP / DNP and extension thereof, and considering the fact that DNP period is already mentioned separately in the adjacent clause, it is suggested to make the following change in the term “Project Period” in the adjacent clause to avoid confusion: “Read “Project Period” as “Project Period (Excluding DNP period)”</td>
<td>Tender Condition Prevails</td>
<td></td>
</tr>
<tr>
<td>204</td>
<td>Part 3/ Section VIII Particular Conditions (Part B: Specific Provisions)</td>
<td>PCC Clause No. 56</td>
<td>Insurance cover for Contractor’s All Risk and other requirements as specified in GCC shall cover 100% of the Total Contract price and also cover the variation price. This insurance shall cover Project, DNP period and till completion of CMC period. This shall be submitted within 28 days from date of commencement including all other relevant policies.</td>
<td>As already requested vide our above query no. 01, we request to modify the clause of “28 days to 14 weeks” from date of commencement. In any case there is no risk envisaged in the first few weeks of contract commencement as it would only design phase. Please modify the clause.</td>
<td>Tender Condition Prevails</td>
<td></td>
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</table>
205 Part 3: Section VII Particular Conditions (Part B: Specific Provisions)

PCC Clause No. 55

Insurance cover for Contractor's All Risk and other requirements as specified in GGC shall cover 100% of the Total Contract price and also covers the period of the Project, NIP period and 84 completion of CMP period. This shall be submitted within 25 days from date of commencement including all other relevant policies.

Please confirm by the following:
(A) Confirm that the Total contract price includes Price Centre RS-CMC and Price Centre DM&P-CMC.
(B) Clarify whether Total Contract Price for the purpose of insurances as per this clause, is exclusive of taxes & duties or inclusive of taxes & duties.
(C) Clarify whether tearoom cover is required to be taken by the contractor or not.

Tender Condition Prevails.

206 Part VII General Conditions

Clause 3.1.1

The quoted lumpsum price by the bidder is inclusive of all taxes, levies, duties, cess as per GST / Custom self tax etc., royalty, insurance, freight and fees required to be paid by him under the Contract.

Tender Condition Prevails.

207 Part I: Section – IV, Bidding Forms

Clause 3.1.1

The quoted lumpsum price by the bidder is inclusive of all taxes, levies, duties, cess as per GST / Custom self tax etc., royalty, insurance, freight and fees required to be paid by him under the Contract.

The insurer shall maintain this insurance to provide cover until the time of issue of the Performance Certificate for loss or damage for which the Contractor is liable arising from a cause occurring prior to the issue of the Performance Certificate, and to loss or damage caused by the Contractor in the course of any other operations (including the works undertaken under Clause 11 [Defects Liability] and Clause 12 [Tests after Completion]).

For avoidance of confusion, please confirm the “performance Certificate” mentioned in this clause is the “Project Performance certificate” and not the “CMC performance Certificate” (PCC clause No. 43).

Refer Addendum 01 S/N 88

208 Part I: Section – IV, Bidding Forms

Clause 3.3.2

The Price of each 3-car train-set to be supplied against quantity variation shall be determined on the cost of the original tendered quantity, against Price Centre ‘RS-B’, ‘RS-D’ and ‘RS-F’ (in case of offshore supply) or ‘RS-C’, ‘RS-E’ and ‘RS-F’ (in case of indigenous supply).

The Price Centre ‘RS-A’ (5.5%), ‘RS-C’ (2.10%), ‘RS-F’ (4.90%) and ‘RS-GT’ (2.10%) together constitute 14.7% of the Metro car price which are not being considered for the metro cars under quantity variation. This non-consideration is not rational since the cost structure of RS suppliers is not in alignment with these contracts (Price Centre apportionments and are in actual much less. Retaining this condition will force RS suppliers to front load the prices for base quantity in lieu of option quantity which may or may not be exercised by CWR in future and is detrimental to CWR interests.

The following modification is suggested which is more closer to the reality and provides Win-Win situation to both RS supplier and CMC. The Price of each 3-car train-set to be supplied against quantity variation shall be derived from the contracted cost of the original tendered quantity, against Price Centre ‘RS-C’, ‘RS-F’ and ‘RS-GT’, ‘RS-E’, ‘RS-C’ and ‘RS-F’ (in case of indigenous supply).

Refer Addendum 01 S/N 15

209 Part I: Section – IV, Bidding Forms

Table 4.3.2

Customer duly applicable on imported components / parts which go into manufacturing of cars / trains / depot machinery & plants in India and for CMC scope are deemed to be included in the base price. The bidders are not allowed to specify any Custom duty value against these Price CMC and hence marked as “NOT APPLICABLE” in the above table. Any change in rate of Custom duty due to Change in law / legislation (Sect 13.7) is not applicable for these Price centres and the Contractor is not entitled for any claim or whatsoever on this account.

This clause is not fair and is untenable.

The contract is of long duration (~7 years) and the bidder has no control over the movements of the customs rates / changes in customs rates for the import components / parts which go into indigenous manufacturing / CMC maintenance.

Hence, we request CWR to admit change in rate of custom duty due to change in law / legislation. Please consider/modify.

The request is crucial.

Refer Addendum 01 S/N 15

210 Section VII Particular Conditions (Part A: Contract Data)

SL No. 21

Total advance payment: The interest free mobilization advance at the rate of 10% of the accepted contract amount (excluding Provisional Sum, Price Centre ‘RS-CMC’ and ‘DM&P-CMC’) the bidders are deemed to be included in the base price. The price is inclusive of taxes & duties as declared by the bidder in Table 4.3.1. Please clarify.

Since the accepted contract amount already includes GST, in the expression “110% of the advance amount requested plus GST,” the inclusion of “110%” creates confusion.

The following modification is suggested: 10% of the advance amount requested plus GST including GST

Refer Addendum 01 S/N 88

211 Section VII Particular Conditions (Part A: Contract Data)

SL No. 21

Total advance payment: The interest free mobilization advance at the rate of 10% of the accepted contract amount (excluding Provisional Sum, Price Centre ‘RS-CMC’ and ‘DM&P-CMC’) the bidders are deemed to be included in the base price. The price is inclusive of taxes & duties as declared by the bidder in Table 4.3.1. Please clarify.

Please confirm if the mobilization advance amount is also payable on taxes & duties as declared by the bidder in Table 4.3.1.

Refer Addendum 01 S/N 88

212 Section VII Particular Conditions (Part A: Contract Data)

SL No. 21

Total advance payment: The interest free mobilization advance at the rate of 10% of the accepted contract amount (excluding Provisional Sum, Price Centre ‘RS-CMC’ and ‘DM&P-CMC’) the bidders are deemed to be included in the base price. The price is inclusive of taxes & duties as declared by the bidder in Table 4.3.1. Please clarify.

Please clarify.

Refer Addendum 01 S/N 88

213 Section VII Particular Conditions (Part A: Contract Data)

SL No. 21

Total advance payment: The interest free mobilization advance at the rate of 10% of the accepted contract amount (excluding Provisional Sum, Price Centre ‘RS-CMC’ and ‘DM&P-CMC’) the bidders are deemed to be included in the base price. The price is inclusive of taxes & duties as declared by the bidder in Table 4.3.1. Please clarify.

We request to increase the advance amount to 15% in two installments of 10% and 5%, on the same lines of other metro corporations. Please consider.

Tender Condition Prevails.

214 Part I: Section – IV, Bidding Forms

PRICE CENTRE ‘RS-C’ – INDEPENDENT MANUFACTURE, TESTING, INSPECTION, TRANSPORTATION AND DELIVERY TO CMRL DEPOT

PRICE CENTRE ‘RS-D’ – INDEPENDENT MANUFACTURE, TESTING, INSPECTION, TRANSPORTATION AND DELIVERY TO CMRL DEPOT

It is found payment will not be made train wise, but after certain lot of trains.

This creates hardship to the contractors in terms of cashflows and is inconsistent with established accounting precedence and processes of the Contractor.

It is suggested to make payments trainwise. Please modify.

Tender Condition Prevails.
### Bidder’s queries

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<td>215</td>
<td>Part-1, Section – IV Bidding Forms</td>
<td>4.4.8</td>
<td>PRICE CENTRE RS-5 – INTEGRATED TESTING AND COMMISSIONING OF TRAINS AND SERVICE TRIALS</td>
<td>It is found payment will not be made train wise, but after certain lot of trains. This creates hardships to the contractors in terms of cash flows and is inconsistent with established accounting precedence and processes of the contractor. It is suggested to make payments trainwise. Please modify.</td>
<td>Tender Condition Prevails.</td>
<td>No</td>
</tr>
<tr>
<td>216</td>
<td>Part-1, Section – IV Bidding Forms</td>
<td>4.4.9</td>
<td>PRICE CENTRE RS-5 – INTEGRATED TESTING AND COMMISSIONING OF TRAINS AND SERVICE TRIALS</td>
<td>It is found payment will not be made train wise, but after certain lot of trains. This creates hardships to the contractors in terms of cash flows and is inconsistent with established accounting precedence and processes of the contractor. It is suggested to make payments trainwise. Please modify.</td>
<td>Tender Condition Prevails.</td>
<td>No</td>
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<td>217</td>
<td>Part-1, Section – IV Bidding Forms</td>
<td>4.4.11 (RS-HO)</td>
<td>Training for the Employer’s staff shall be arranged and will be conducted:</td>
<td></td>
<td>Please quantify the requirement in terms of man months and whether the Employer is trainer man months or trainer man-months. Please confirm for clarity purpose.</td>
<td>Refer Addendum 01 S/N 22</td>
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<td>218</td>
<td>Part-1, Section – IV Bidding Forms</td>
<td>4.4.11 (RS-HO)</td>
<td>Training for the Employer’s staff shall be arranged and will be conducted:</td>
<td>The underlined portion seeking training at site with UTO operations for a period of almost 10 years is restrictive and is difficult to achieve especially for Indian players. Hence in line with the experience threshold in Section - II, Evaluation and Qualification Criteria (EQC), we request to amend the underlined portion as below,</td>
<td>Please modify the clause.</td>
<td>Tender Condition Prevails.</td>
</tr>
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<td>219</td>
<td>Part-1, Section – IV Bidding Forms</td>
<td>6.12.23</td>
<td>Form Sys-23: The Catenary Maintenance Vehicle equipped with onboard signaling system (mention Quantity) are in service since (DD-MM-YYYY).</td>
<td>The connected item No. 23, Minimum Criteria to be met, as below, At least two CMV (8 wheeler), incorporating the requirement for Design, manufacture, Supply, Installation, Testing and Commissioning of Catenary Maintenance Vehicle (CMV) for Metro Rail Projects / LRT / High Speed Rail Network / Railways, satisfactorily completed in and Operation for minimum 2 years in the duration from 1st January 2013 to bid submission end date. Proven-run certificate (issued by end user) of working satisfactorily outside the country of origin (foreign company) or within India shall be submitted by the bidder. does not mention onboard signaling system as requirement in minimum criteria. Further the onboard signaling system is a comparatively new development. Therefore, do not request to delete the term &quot;equipped with onboard signaling system&quot; in the adjacent wording in Form Sys-23.</td>
<td>Refer Addendum 01 S/N 25</td>
<td>Yes</td>
</tr>
<tr>
<td>220</td>
<td>Part-1, Section – IV Bidding Forms</td>
<td>2. Schedule of Adjustment Data</td>
<td>Table 4: For Price Centre RfI, CMC, and Price Centre ISM &amp; CMC: Apply for RfI</td>
<td>Weightage of 0.27 as Non-adjustable (Fixed) is more and Weightage of 0.27 for CPI-IW is less during the CMC period. Moreover, we suggest following Price Adjustment formula of the earlier BMRCL / DMRC tenders which is more realistic as below,</td>
<td>Tender Condition Prevails.</td>
<td>No</td>
</tr>
<tr>
<td>221</td>
<td>Part-1, Section – IV Bidding Forms</td>
<td>2. Schedule of Adjustment Data</td>
<td>Table 5: Foreign currency (INR) – Japanese Yen</td>
<td>Most of Japanese suppliers not accepting to Price Adjustment. Hence, if this clause is mandatory, please replace with Ministry of Health, Labour &amp; welfare - Japan Wage Indices - Manufacturing. with All India Consumer Price Index for Industrial Workers Published by RBI Bulletin. Base year 2010. Similar to Table C stipulation for foreign currency. Or Else, give both options to the bidders and let Bidder choose one between them.</td>
<td>Tender Condition Prevails.</td>
<td>No</td>
</tr>
<tr>
<td>222</td>
<td>Part-1, Section – IV Bidding Forms</td>
<td>3.3.5</td>
<td>Depot Machinery &amp; Plant – CMC: The Employer at their own discretion may extend the CMC period applicable for Depot Machinery &amp; Plant beyond its original CMC period (3 years), in order to align with the completion date of Rolling stock CMC period. In such cases, the pro-rata CMC cost applicable for ISM &amp; CMC period thereof, calculated from the “Price Centre ISM &amp; CMC” shall be adopted for all payment purposes, subject to Price variation as per Cl. 3.2 (Price variation / Price adjustment).</td>
<td>From the key dates, it is seen that the time gap is more than 3 years between CMC of trains and CMC of DM&amp;Ps. For the purpose of clarity, please mention the applicable percentages for years 16,17,18 and 19. We suggest average yearly CMC cost of 13th, 14th and 15th years, be taken as the per year CMC cost for the years 16,17,18 &amp; 19. Please modify.</td>
<td>Tender Condition Prevails.</td>
<td>No</td>
</tr>
</tbody>
</table>
Part-1, Section - IV Bidding Forms

223

3.3.2

In case the Employer is exercising the optional quantity variation as stated above, the CMC obligation as applicable for the base order (70 trains of 3 car configurations) quantity shall be applicable for the respective optional trains also. The pricing for CMC for the optional trains shall be derived proportionately from the "RS-CMC" price centre.

224

2. Schedule of Adjustment Data

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Typically, there is two months lag in publishing of CPI indices. For e.g., May indices will be published in July. Hence, it is not possible to provide Base Value and Date of the index 28 days before last date of bid submission.

Please delete this requirement for this Source of index or suggest a way out.

225

2.2, Note (ii)

Price centres "CMC" & "CMC - DM&P" shall be quoted in Indian Rupees (INR) only.

226

4.2, Note (i)

Please refer Addendum 01 S/N 04

227

5.15

Certificate confirming Tender requirement for Japanese Goods & Services

This is to certify that we, Mix. [Insert name of the company] (Single Entity JVs) have carefully examined all the requirements stipulated in Part 1: Section V - ELIGIBLE SOURCE COUNTRIES OF JAPANESE ODA/ OAIS for meeting a minimum of 30.069% Japanese Goods & Services as required by the tender bid conditions (excluding Price Centre "RS-CMC" & "DM&P-CMC")

228

4

Minimum 30.069% of the Contract Price (Excluding Price Centre "RS-CMC", Price Centre "DM&P-CMC" and Taxes & Duties) shall be sourced from Japanese manufacturer/ Companies for Goods and Services as it is a mandatory requirement under this package.

A. What is the foreign exchange conversion applicable for calculation of the 30.069%?

B. What are the modalities for verification of the achievement of 30.069%?

229

4

Minimum 30.069% of the Contract Price (Excluding Price Centre "RS-CMC", Price Centre "DM&P-CMC" and Taxes & Duties) shall be sourced from Japanese manufacturer/ Companies for Goods and Services as it is a mandatory requirement under this package.

We understand that while calculating 30.069% Japanese content, the amounts quoted for price centre "RS-CMC", Price Centre "DM&P-CMC" and Taxes and duties shall be ignored and not considered. Please confirm our understanding.

230

4.4.11 (RS-HH)

Provision of Contractor's Driving Instructions (2 man-months) for Training of Employee's operating personnel in India.

Please confirm whether the mentioned 02 man months is trainer man months or trainee man months?

231

4.4.11 (RS-HS)

Provision of Contractor's Instructors and OSRM's Experts (40 man-months) for on job Training and supervision of Employer's maintenance personnel in the metro train depot of CMRL in India.

Please confirm whether the mentioned 40 man months is trainer man months or trainee man months?

232

4.4.11

Price Centre "RS-H" - Training and Manuals

Please provide timelines for providing training under this price centre. This is required for pricing purposes.

233

ITB 11.2

A. Cost of the bid: Shall be Prac'd by NEFT/RTGS/Demand Draft/SWIFT. Scanned copy to be uploaded online at the time of bid submission. If tender is submitted in the form of DD, a scanned copy of DD is to be uploaded online and the Bidder should ensure submission of the original DD by person/post/courier at the office of the Employer at the address specified in the Bid document within Seven (7) days after the bid submission due date. Name of the Bidder and tender id/tender reference number are to be written on the backside.

Please clarify if CMRL issue receipt after payment of cost of the bid through NEFT/RTGS. If yes, where to collect the same?

Bidders can request by email a confirmation receipt and CMRL will respond.

234

ITB 11.2

A. Cost of the bid: Shall be Prac'd by NEFT/RTGS/Demand Draft/SWIFT. Scanned copy to be uploaded online at the time of bid submission. If tender is submitted in the form of DD, a scanned copy of DD is to be uploaded online and the Bidder should ensure submission of the original DD by person/post/courier at the office of the Employer at the address specified in the Bid document within Seven (7) days after the bid submission due date. Name of the Bidder and tender id/tender reference number are to be written on the backside.

Please clarify if CMRL issue GST invoice for the payment of cost of the bid. If yes, where to collect the same?

235

1.1.10

The location of the Satellite Depot(s) shall be designated by CMRL. However, CMRL may ask the sole discretion instruct the Contractor (by giving 90 days' notice) to deploy their maintenance operations at further Satellite Depot facilities. The Contractor shall comply with the deployment request without any cost implications to CMRL.

The number of satellite depots shall be decided by CMRL at any time.

236

1.1.10

The location of the Satellite Depot(s) shall be designated by CMRL. However, CMRL may ask the sole discretion instruct the Contractor (by giving 90 days' notice) to deploy their maintenance operations at further Satellite Depot facilities. The Contractor shall comply with the deployment request without any cost implications to CMRL.

The number of satellite depots shall be decided by CMRL at any time.

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<td>237</td>
<td>Part 2</td>
<td>Section VI: ERTS - CMC of RS &amp; DMAP - CMC Requirements</td>
<td>1.5.2</td>
<td>Spares and Consumables (herein referred to only as Spares) shall include but not be limited to the following subcategories: a) Supplemental to both Rolling Stock and Depot Maintenance &amp; Repair (including CMC) assets; b) Unit exchange spares; c) Vandiary spares; d) Recommended spares; e) Consumable spares; f) Special Tools; j) Figures, Gauges, Testing and Diagnostic Equipment.</td>
<td>For different terms, viz. a) Unit spare parts; b) Mandatory spares; c) Recommended spares; f) Consumable spares; g) Special Tools; j) Figures, Gauges, Testing and Diagnostic Equipment; h) Overhauling Equipment; i) Any other terms required for maintenance (identified by the Contractor)</td>
<td>Noted, however CMRL does not perceive a significant impact. Tender Condition Prevails.</td>
<td>No</td>
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<td>238</td>
<td>Part 2</td>
<td>Section VI: ERTS - CMC of RS &amp; DMAP - CMC Requirements</td>
<td>1.5.8</td>
<td>At least three (3) months prior to the end (or early termination) of the CMC period the Contractor shall restore inventory levels to the quantities defined in the approved lists. The Contractor shall also ensure that the entire inventory is in full working/serviceable condition before handing over the Spares assets back to CMRL.</td>
<td>For greater clarity, please indicate which of the following spares constitute part of the &quot;PM Maintenance Depot&quot;</td>
<td>Inventory management requirements are defined in CMC Clause 1.17. This includes arrangements for how minimum levels are defined and agreed upon between the parties.</td>
<td>No</td>
</tr>
<tr>
<td>239</td>
<td>Part 2</td>
<td>Section VI: ERTS - CMC of RS &amp; DMAP - CMC Requirements</td>
<td>1.5.12</td>
<td>The Contractor shall ensure that Spares are replaced at intervals that are set in accordance with the OEM’s recommendations for time, distance, wear limits etc as the case may be. The Contractor shall ensure the maintenance regime has an optimized schedule, such that inspections are frequent enough to avoid components wearing beyond serviceable limits during the normal course of operation of CMC Assets.</td>
<td>Specifically, it isewan OEMs tend to recommend replacements even when they may not be practically needed. This clause is prone to misinterpretations, from OEMs/CMRL side during the CMC period and they may insist for replacements even when the contractual performances are met by the contractor. Further, the Contractor is already fully responsible throughout the period of DMP, 15 years CMC to CMRL, for complying to availability / reliability / RI targets as per contract stipulations. Hence imposition of adherence to OEM recommendations will needlessly constrain the RS contractor with no added benefits to CMRL.</td>
<td>Refer Addendum 01 S/N 82</td>
<td></td>
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<td>240</td>
<td>Part 2</td>
<td>Section VI: ERTS - CMC of RS &amp; DMAP - CMC Requirements</td>
<td>10.2.2</td>
<td>2. For guidance of the operating staff of CMRL, the Contractor shall provide an Operations and Maintenance Manuals to CMRL. The Manuals shall also be responsible for the areas of: a) Training, Supervisors and CMRL’s other officers and staff associated with the Train operational management including but not limited to controllers, managers after obtaining training, supervisors of CMRL. b) Training officers and staff deployed by CMRL in the Depot for maintenance/recognition of the Maintenance work.</td>
<td>Please confirm that the training mentioned in the adjacent clause is counted under Price Centre RS-H. If additional, please quantify the number of trainer manmonths or trainee months required for the adjacent clause.</td>
<td>Refer Addendum 01 S/N 100</td>
<td>Yes</td>
</tr>
<tr>
<td>241</td>
<td>Part 2</td>
<td>Section VI: ERTS - CMC of RS &amp; DMAP - CMC Requirements</td>
<td>2.1.7</td>
<td>Briefly the RS Maintenance Depot shall include Stabling Bay Lines (IBL), Inspection Bay Line (IBL), Cleaning Sheds and Repair Bay Lines (RBL) for heavy repairs and overhaul as illustrated in Part 2 Section VIA - Appendix D.</td>
<td>Tentatively, the following S/N’s from the appended table shall be areas handed over to the Contractor:-</td>
<td>Of the CMC contract. Addendum 01 S/N 86 has been referred.</td>
<td>No</td>
</tr>
<tr>
<td>242</td>
<td>Part 2</td>
<td>Section VI: ERTS - CMC of RS &amp; DMAP - CMC Requirements</td>
<td>2.5.2(i)</td>
<td>During its period of custody, the Contractor shall be responsible for undertaking the maintenance of the RS Maintenance Depot including cleanliness, upkeep, housekeeping, repair work, civil maintenance and electrical maintenance for the entire premises of the RS Maintenance Depot.</td>
<td>This clause is not consistent with clause 2.3.1(iv). While clauses 2.3.1 (iv) and (v) are aggregate this clause 2.5.2(i) is not acceptable and creates confusion. Hence request to delete this clause.</td>
<td>Refer Addendum 01 S/N 86</td>
<td>Yes</td>
</tr>
<tr>
<td>243</td>
<td>Part 2</td>
<td>Section VI: ERTS - CMC of RS &amp; DMAP - CMC Requirements</td>
<td>1.1.3</td>
<td>Designated Depot(s) refers to (i) Madhavaram Depot, which is the principal site for all heavy maintenance AND (ii) further Satellite Depot(s) broadly for inspection, cleaning activities and Corrective Maintenance.</td>
<td>Who will provide the infrastructure &amp; DMAPs required for inspection, cleaning activities and Corrective Maintenance at Depots other than at Madhavaram?</td>
<td>Major Depot Machinery &amp; Plant items procured under the Contract shall be deployed at Madhavaram Depot. Any additional requirements for satellite depot(s) shall be procured separately by CMRL.</td>
<td></td>
</tr>
<tr>
<td>244</td>
<td>Part 2</td>
<td>Section VI: A - ERTS - RS – Systems Assurance</td>
<td>18.13.2.2</td>
<td>The Contractor shall arrange its own furnishing, security etc. Charges for the electricity consumption shall be payable by the Contractor at the prescribed rates.</td>
<td>We understand the requirement of payment of charges for electricity consumption is only for Contractor’s Site Office and not for the entire RS maintenance Depot or Designated Depots. Please confirm for clarity purpose. Further, please provide electricity charges details presently being paid by CMRL at similar depots for reference purpose to the bidder.</td>
<td>The bidder’s understanding is correct. Charges will be at the prevailing tariff.</td>
<td>No</td>
</tr>
<tr>
<td>245</td>
<td>Part 2</td>
<td>Section VI: A - ERTS - RS – Systems Assurance</td>
<td>18.13.2.2</td>
<td>The Contractor shall arrange its own furnishing, security etc. Charges for the electricity consumption shall be payable by the Contractor at the prescribed rates.</td>
<td>We understand the requirement of arranging for security is only for Contractor’s Site Office and not for the entire RS maintenance Depot or Designated Depots. Please confirm for clarity purpose.</td>
<td>The bidder’s understanding is correct.</td>
<td>No</td>
</tr>
<tr>
<td>246</td>
<td>Part 2</td>
<td>Section VI: A - ERTS - RS – Systems Assurance</td>
<td>18.13.2.9</td>
<td>The Contractor shall be responsible for making applications or requests to the concerned authorities for sealing of the above facilities. In the event that electricity or water supplies are arranged by another designated contractor in the Depot area, the Contractor may avail himself of those supplies from the Designated Contractor, either directly or agreed terms and conditions. The Contractor shall comply with all regulations of the utility companies and Government departments concerned.</td>
<td>Please clarify if water supplies are made available free of cost to the Contractor? If not, please provide water supply charges details presently being paid by CMRL at similar depots for reference purposes to the bidder.</td>
<td>Water supplies are free of cost to the Contractor</td>
<td>No</td>
</tr>
</tbody>
</table>
247 2.3.1 vi) The Contractor shall optimize the consumption of the water required for maintenance and other Project activities. Considering the scarcity of the water resources at present & in future, the Contractor by all innovative means shall progressively make efforts to limit the water consumption.

Please clarify if water supplies are made available free of cost to the Contractor? If no, please provide water supply charges details presently being paid by CMRL at similar depots for reference purpose to the bidders.

Water supplies are free of cost to the Contractor

248 2.7.7 The Contractor shall maintain appropriate Re-riding and Rescue Equipment (FIRE) at the Designated Depot(s) in a box container that is loaded on a Fleet & Rescue Vehicle (FRV).

Who will supply & maintain RRVs and RREs at Depots other than at Madhavaram Depot?

CMRL has nothing further to clarify on this matter

249 4.1.4 (a) All spares as per the latest approved list shall be replenished by the Contractor and handed back to CMRL in a serviceable and good working condition at least three (3) months prior to expiry of the CMC Period at no cost to CMRL, in accordance with Chapter 4 - Handover Requirements of Notice 2.1 CMC.

There shall be no minimum spares to be handed over to CMRL at the end of the CMC period? If so, please specify.

Clause is self explanatory.

250 1.12.1 The Contractor shall be managing the PMIS for entire contract duration shall be transferred to CMRL payroll.

A Minimum of 25% maintenance staff and supervisor of the Contractor should be transferred to CMRL payroll.

Funder condition prevails

251 1.10.10 (a) 1. (one) point shall be deducted for each individual item of the PA/PS system found to be non-functioning after the train is induced to the main line. Defects identified through physical inspection or were recorded by the TCMS logs shall be counted.

The underlined portion creates confusion and may be deleted.

ConditionPreviews

252 15.8.1 Notwithstanding any other provisions of the Contract, at any time prior to timely (60 days from) taking over certificate of the 70th Trainset for the entire project and in case any component or sub-assembly is found to be non-functioning, CMRL shall have notice in writing to the Contractor.

Please provide information on 60 days from taking over certificate of the 70th Trainset for the entire project.

Funder condition prevails

253 18.13.2.1 CMRL shall allocate approximately 100 square meter space to the Contractor at the Designated Depot(s) for erection of site the Contractor’s Site Office. This land space provision shall be provided to the Contractor on a free of cost basis without any rental charges.

Please confirm if space is to be provided in the form of constructed building by the Contractor.

Funder condition-previews

254 1.9 ENDEMIC FAILURES AND EFFECTS

Since this contract involves 02 years DNP and 15 years CMC totaling to more than 17 years wherein the Contractor is already fully responsible for the performance parameters including CMRL controls through 10%, we find it necessary to consent to the Endemic Failures and/or Defects clause.

Please confirm for clarity purpose.

Funder condition Prevails

255 18.13.2.1 CMRL shall allocate approximately 100 square meter space to the Contractor at the Designated Depot(s) for erection of site the Contractor’s Site Office. This land space provision shall be provided to the Contractor on a free of cost basis without any rental charges.

Please clarify if how manydeps contractor’s site offices has to be set up?

The bidder's understanding is correct

Funder condition prevails

256 18.13.2.1 CMRL shall allocate approximately 100 square meter space to the Contractor at the Designated Depot(s) for erection of site the Contractor’s Site Office. This land space provision shall be provided to the Contractor on a free of cost basis without any rental charges.

Please confirm for clarity purpose.

Funder condition prevails

257 18.13.2.1 CMRL shall allocate approximately 100 square meter space to the Contractor at the Designated Depot(s) for erection of site the Contractor’s Site Office. This land space provision shall be provided to the Contractor on a free of cost basis without any rental charges.

In future there is additional requirement of space in depots, we understand the same will be provided free of cost by CMRL. Please confirm for clarity purpose.

CMRL clarifies that it shall allocate approximately 100 square-meter space which shall be outside the depot building.

Funder condition prevails

258 16.7.5 and 16.7.6 The contractor will be managing the PMS for entire contract duration including the defects liability period for their contract package including sharing the proportionate costs of:

Please confirm the deduction at the rate of 0.5% of the accepted contract amount as per clause 16.7.5.

CMRL clarifies that it shall allocate approximately 100 square-meter space which shall be outside the depot building.

Funder condition prevails

259 11.2.1 At the start of the CMC Period, the Contractor shall supply twenty (20) diagnostic maintenance laptops of the same specification that is defined in Part 2 Section VIA Chapter 15.6 which will be handed over to CMRL.

Please clarify if these laptops are to be used by the Contractor during CMC period, even if they are required to be handed over to CMRL at the end of CMC period?

The laptops are primarily for CMRL. CMRL cannot guarantee that the apps will be available for the Contractor’s use.
The Contractor shall follow CMRL’s competency procedure, which will be updated from time to time. The Contractor shall undertake training of their manpower and undertake routine assessment of their staff to ensure their competency is upheld at all times.

CMRL’s competency procedure may be provided.

Shall be provided after Contract award

No

Secondary KPI Calculation

These clauses are new and we are not sure how this clause will affect the execution. However, we have the following submission:

TIPA Points & Weightage may be reviewed annually and modified based on the usage age of rolling stock.

We please insert the above as a part of the tender clause to take into account the natural wear & tear/ deterioration of performance within satisfactorily limits over time.

No

Also, the Contractor should not be unnecessarily penalized if CMRL is able to run its fleet with satisfactory reliability and availability.

Tender condition prevails

No

However, CMRL shall be given access to the data, information and reports generated by the Asset Management System through dedicated terminals / installations. Access is provided by the Contractor to CMRL’s OCC / PRO and all other CMRL offices through the internet.

A. Please clarify the requirement of number of terminals, workstations and access rights for use.

B. Also, who is responsible for providing internet?

No

No

The Contractor shall demonstrate by providing calculations of required to achieve the stopping distance.

ERTS clause suitably.

CMRL may please review and update the clause suitably.

Tender Condition prevails

No

We assume that route setting for shunting of the train within RS Maintenance Depot shall be the responsibility of the Contractor in coordination with OCC. The Contractor’s shunter shall be used for this purpose.

The bidder’s understanding is correct.

No

Shunting within RS Maintenance Depot shall be the responsibility of the Contractor in coordination with OCC. The Contractor’s shunter shall be used for this purpose.

No

No

The Contractor shall follow CMRL’s competency procedure.

No

No

ERTS - CMC of RS & DM&P - CMC Requirements

ERTS clause 12.18.1 (a) requires application of service brake maximum time to be 2 sec which is contradictory to the requirement of this clause. CMRL may please review and update the clause suitably.

The stated requirements do not contradict as they are different. It is clarified that:

ERTS clause suitably.

The bidder’s understanding is correct.

Yes

ERTS clause 12.18.1 (a) requires application of service brake maximum time to be 2 sec which is contradictory to the requirement of this clause. CMRL may please review and update the clause suitably.

The bidder’s understanding is correct.

Yes

ERTS clause suitably.

CMRL may please review and update the clause suitably.

No

ERTS clause suitably.

CMRL may please review and update the clause suitably.

No

ERTS clause suitably.

CMRL may please review and update the clause suitably.

No

ERTS clause suitably.

CMRL may please review and update the clause suitably.

No

ERTS clause suitably.

CMRL may please review and update the clause suitably.

No

ERTS clause suitably.

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No

ERTS clause suitably.

CMRL may please review and update the clause suitably.

No

ERTS clause suitably.

CMRL may please review and update the clause suitably.

No

ERTS clause suitably.

CMRL may please review and update the clause suitably.

No

ERTS clause suitably.

CMRL may please review and update the clause suitably.

No

ERTS clause suitably.

CMRL may please review and update the clause suitably.

No
CP26 / ARE02A Contract - Reply to Bidder Queries

277 Part 2 – Section VI A 2.26.1 (i) The car interior shall have resistance to fire and conform to EN 45454 (Part 1 to 7), Category 4 - A. Hazard level HL2 and BS 6853 Code of practice for fire precautions in the design and construction of passenger carrying railways or any other approved international standards. BS 6853 is withdrawn and superseded by EN 45454. Hence, BS 6853 to be deleted.

For queries related to Engineering Standards, bidders may refer to the response already provided against S/N 33

278 Part 2 – Section VI A 2.26.1 (iv) The vehicle floor shall provide a fire barrier of 30 minutes duration tested in accordance with EN54545 Part 1 to 7 - (Category 4-A, Hazard level HL2) latest editions.

As per EN 45454-3 for Category 4 the fire barrier duration is 15 minutes. Extract from the standard is shown below:

Foor Fire barrier duration to be updated as 15 minutes.

Tender condition prevails.

279 Part 2 – Section VI A 3.3.1 Fire resistance as required by either NFPA 130, BS 6853, EN 45454 or the Japanese Fire Standards, and Chapter 19

Fire resistance requirement to be as per EN 45454 standard for railway application. BS 6853 is superseded and to be deleted.

For queries related to Engineering Standards, bidders may refer to the response already provided against S/N 33

280 Part 2 – Section VI A 3.4.7.9 The total floor structure shall provide an effective fire barrier for a minimum of 30 minutes as per BS 6853, or equivalent

As per the standard EN 45454-3, the fire barrier criteria is E15 & E15 for operation category 4. hence, the fire barrier duration 30 minutes to be revised as 15 minutes.

Tender condition prevails.

281 Part 2 – Section VI A 3.4.9.1.1 All glassing shall be of toughened glass and shall comply with DIN 52305 (impact strength) and EN 1288 (bending strength). Structural requirements for rail vehicle structures shall be design and tested conforming with GRT/R2100, UIC 566, EN 12663-1

The requirement of all glazing shall be of toughened glass is contradicting with the clause 3.4.9.1.4 where it is mentioned Body-side windows shall comprise two panes of glass with outer laminated glass and inner nonshattering toughened glass. For the impact strength and bending strength DIN 52305 and EN 1288 is asked. Referring to ERTS clause 1.1.1 - acceptable design standards, the strength of the glass will be as per IS 2535 as followed in other Metro in India.

For queries related to Engineering Standards, bidders may refer to the response already provided against S/N 33

282 Part 2 – Section VI A 3.4.9.1.6 All glazing materials shall meet the requirements of clause 19.13

AT ERTS clause 19.13 the fire glass and tempered glass selection is specified as per ASTM C 1036, FS-DD-G-451, SAE-AWS-G-25867, MIL-G-26546. Referring to ERTS clause 1.1.1 - acceptable design standards, the glass specification will be as per IS 2535 followed in other Metro in India.

For queries related to Engineering Standards, bidders may refer to the response already provided against S/N 33

283 Part 2 – Section VI A 3.4.9.3.1 The cabs shall have watertight bolt-out glasses on both lateral sides of each emergency operator's desk area. bolt-out glasses shall be of the same construction as the body-side windows.

As the bolted glass construction to be same as body side window, the cab window will be fixed type.

Tender condition prevails.

284 Part 2 – Section VI A 3.4.9.4.1 The windshield design shall be a two-piece design with glazing and shall be clear in colour. The glazing material shall be laminated glass and it shall comply to IS 2535 or any International Standard. Structural requirements for rail vehicle structures shall be design, tested and conform with GRT/R2100, UIC 566, EN 12663-1, UIC 851, EN 10152

The requirement of two-piece windshield design is contradicting with the requirement of detrainment door at the middle. The windshield design will be three piece.

The contractor may propose the design concept for the Engineer's consideration during design stage. The Engineer's decision shall be final and binding on the Contractor.

Tender Condition Prevails

285 Part 2 – Section VI A 3.4.9.4.5 The glazing of emergency detrainment door at the middle of windshields shall be aesthetically aligned to give a continuous appearance when viewed from outside. At least three such designs may be submitted for CMRL's review and approval

With the detrainment door at middle, the windshield (windshield) will be three piece design.

The contractor may propose the design concept for the Engineer's consideration during design stage. The Engineer's decision shall be final and binding on the Contractor.

Tender Condition Prevails

286 Part 2 – Section VI A 3.5.3.1 Stanchions and handrails shall be provided to aid passengers when boarding, moving throughout the car, or standing throughout their journey. Structural requirements for rail vehicle structures shall be design and tested conforming with GRT/R2100, UIC 566, EN 12663-1

CMRL to specify the stanchion to be single or two or three arm.

The contractor may propose the design concept for the Engineer's consideration during design stage. The Engineer's decision shall be final and binding on the Contractor.

Tender Condition Prevails

287 Part 2 – Section VI A 3.5.3.2 Stanchions shall be arranged in two rows. They shall be placed in longitudinal row. Stanchions shall not be placed in the centre aisle of the passenger compartments. Stanchions in the middle may be replaced by handrails

The requirement of two rows of stanchions in longitudinal row is not clear. Provide sketch of the stanchion and handrail arrangement expected by CMRL.

The contractor may propose the design concept for the Engineer's consideration during design stage. The Engineer's decision shall be final and binding on the Contractor.

Tender Condition Prevails

288 Part 2 – Section VI A 3.5.3.6 Two longitudinal rows or three of grab straps shall be installed

Requirement is not clear. CMRL to give sketch for the requirement.

Tender Condition Prevails

289 Part 2 – Section VI A 3.5.5.8 The seats shall conform to EN 15883.

EN 15883 is Railway Applications - Vehicle reference masses. This standard defines a reference masses at rail vehicle level and applicable for on weight estimation. Hence, the clause to be deleted.

For queries related to Engineering Standards, bidders may refer to the response already provided against S/N 33

290 Part 2 – Section VI A 3.6.5.14.3 Seats shall meet the requirements of UIC 564-2 or equivalent

The load criteria is already specified by CMRL at clause no. 3.6.5.8 as “Each bench of seats shall be mounted on a totally enclosed platform, capable of carrying an evenly distributed load equivalent to the number of seated passengers per seat back times the weight of a passenger times a load factor of two (2) without damage or permanent deformation”. Hence, the clause 3.6.5.14 to be deleted.

Further, the NFF 31-119 standard is applicable for the transverse seating arrangement with a maximum of 3 seat sections adjacent to each other. The extract of the standard for single seat is as shown below:

3 Definitions

3.1 Single seat

Seat having a fixed or adjustable seat component and a fixed or adjustable backrest component. It can also mean any of them single seats that are adjacent to each other.

The seating arrangement in this tender is longitudinal with 7 single seats adjacent to each other. As per the standard definition for the single seat, the NFF 31-119 is applicable for maximum 3 seats. Hence, the NFF 31-119 is not applicable.

For queries related to Engineering Standards, bidders may refer to the response already provided against S/N 33

291 Part 2 – Section VI A 3.6.5.15.4 Behaviour of seats at static, fatigue, vibrations, impact stress shall be design, tested as per NFF 31-119, and induction test shall be design, tested as per ISO 2439. The indentation hardness shall be similar to industry standards. The indentation hardness and depth shall be measured first to be tested initially and then at 85,000 cycle intervals

The following definitions are applicable to the requirements of the standard

3.1 Single seat

Seat having a fixed or adjustable seat component and a fixed or adjustable backrest component. It can also mean any of them single seats that are adjacent to each other.
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298

3.14.6.1

The Contractor shall perform and submit a stress analysis report of the carbody structure and equipment supports for equipment weighing over 150 kg prior to commencing manufacture of any carbody structural parts.

CMRL is requested to rephrase the clause to consider the stress analysis support and equipment brackets carrying load of more than 500kg.

Tender condition prevails.

299

3.14.6.3

Crashworthiness analysis shall be conducted for all train configuration mentioned in this contract and in clause 2.2.12.

For crash scenarios (under standard EN 15227 the car loading shall be as per EN 15227).

Tender condition prevails.

297

3.14.10.1

A crash energy absorption ("large deflection") of the car body shall be tested and submitted to assess the energy absorbing properties of the structure. The Contractor shall submit a detailed report showing all the results of the analysis for CMRL's review and approval.

Crashworthiness analysis may apply, or an equivalent analysis, if approved by CMRL.

Tender condition prevails.

296

3.14.5

The carbody structure shall be designed according to European standard EN 13663 category P16 and crash scenarios defined in EN 15227 (Category CII), or as described below. The end of each car shall have two corner posts, two collision posts and an anti-climbing device. In lieu of vertical posts and collision posts the Contractor may propose a service proven collision buffer system that meets the requirements of EN 15227.

For crash scenarios (under standard EN 15227 the car loading shall be as per AW2).

Tender condition prevails.

287

3.14.2

(i) Collision between identical cars

(ii) Over riding of cars etc

EN 15227 has load cases for Crashworthiness analysis like:
- Collision between identical cars
- Over riding of cars etc
- Deformation limits

The load cases brought out in EN 15227 covers all requirements for load cases for Crashworthiness analysis.

As per OEM recommendations, couplers can absorb energy without permanent damage max. upto 10-15km/h. Couplers alone cannot absorb energy beyond 10km/h to 25km/h in combination with side crash absorbers in the carbody up to 25km/h.

CMRL is requested to delete this statement “At closing speeds of 10 kmph to 25km/h” and replace it with “The end of each car shall have two corner posts, two collision posts and an anti-climbing device. In lieu of vertical posts and collision posts the Contractor may propose a service proven collision buffer system that meets the requirements of EN 15227.”

Refer Addendum 01 S/N 36

Yes

295

3.14.6.7

The mounting fasteners and support structures for equipment weighing more than 68 kg shall be analysed using design loads specified in the applicable standards.

CMRL is requested to rephrase the clause to consider the stress analysis support and equipment brackets carrying load of more than 500kg.

Tender condition prevails.

294

The crush test means the quasi-static large deformation test only since the passenger compartment must not be affected or deformed in any way. Dynamic (kinematic) is not required to be repeated as long as the same test methodology and modeling for this analysis. If the Contractor does not have a previous experience and an approved model, stress analysis and load verification from a prior project then a compression test will be required. The test(s) mentioned is for the structural elements only. The crush test means the quasi-static large deformation test only since the passenger compartment must not be affected or deformed in any way. Dynamic crush test is not required.

293

3.14.5.4

The couplers shall progressively collapse bringing into play the anti-climb protection which shall remain fully engaged and operational under the action of vertical load (upwards and downwards) equivalent to half the Crush Loading Condition Car weight.

For crush test loading see EN 15227 Section 6.3.

As per IERTS 3.14.5.3, the couple shall be able to absorb energy without permanent damage up to 10km/h with AW2 loaded condition.

As per OEM recommendations, couplers can absorb energy without permanent damage max. upto 10-15km/h. Couplers alone cannot absorb energy beyond 10km/h to 25km/h in combination with side crash absorbers in the carbody up to 25km/h.

CMRL is requested to delete this statement “At closing speeds of 10 kmph to 25km/h” and simply replace it with “The end of each car shall have two corner posts, two collision posts and an anti-climbing device. In lieu of vertical posts and collision posts the Contractor may propose a service proven collision buffer system that meets the requirements of EN 15227.”

Refer Addendum 01 S/N 33

Yes

292

3.6.22

All internal panels (side panels, ceiling panels, anti-ceiling panels, inspection cover panels, door covering panels, ceiling covering panels, etc) shall be of aluminium material with proven record in Metro/EMU application. Coving system shall be proposed by the Contractor to be proven and confirm to the requirements in clause 3.6.1.21, subjected to CMRL approval.

Pathway of Aluminium side panels shall be controlled within 0.5 mm per length.

The Contractor shall ensure adequate measure have been taken to prevent and mitigate the risk of bi-metallic corrosion and rattle. Suitable damping and Insulation shall also be provided to reduce noise and thermal conductivity especially at metal-to-metal contact points.

CMRL is permitted to use whenever complex shape contours in interior panels are present. It is very difficult to manufacture complex shape with aluminium material.

Tender condition prevails.

No
<table>
<thead>
<tr>
<th>Sl no</th>
<th>Part Section No</th>
<th>Clause No.</th>
<th>Original Bid Condition</th>
<th>CMRL Response</th>
<th>Addendum</th>
</tr>
</thead>
<tbody>
<tr>
<td>299</td>
<td>Part 2 – Section VI A</td>
<td>3.14.10.5</td>
<td>Electrical equipment and systems shall be configured in a manner that precludes any electrical shock to passengers, operators, or maintenance personnel. The equipment shall be impact-tested in accordance with the safety requirements of clause 5.14.10.2.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>300</td>
<td>Part 2 – Section VI A</td>
<td>4.2.9</td>
<td>To meet emergency requirements of clearing a disabled train by a healthy train, the couplers of ARE03a trains shall be totally compatible to provide safe and smooth transition in accordance with the interface requirements detailed in Appendices C &amp; D.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>301</td>
<td>Part 2 – Section VI A</td>
<td>6.7.2.8</td>
<td>Since the device has been achieved to the ‘emergency release’ position, the device shall be mechanically latched in that position, and shall require the use of the key to reactivate to the ‘normal’ position. The reset function shall also be available from TCMS / OCC.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>302</td>
<td>Part 2 – Section VI A</td>
<td>6.9</td>
<td>DUAL MODE DETRAINMENT DOOR</td>
<td>Because of dual mode of Detrainment door, OEM is not able to meet the technical requirements specified.</td>
<td></td>
</tr>
<tr>
<td>303</td>
<td>Part 2 – Section VI A</td>
<td>6.9.1</td>
<td>Dual Mode Detrainment Doors shall be provided in the first and last car for emergency egress of passengers in one (1) of two (2) modes of operation.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>304</td>
<td>Part 2 – Section VI A</td>
<td>6.9.6</td>
<td>The detrainment door shall be aesthetically pleasing design which ensures a clear view of the track from driving car. The door shall aesthetically harmonize with front and side outlooks of the emergency operator’s desk, shall not block the front view and shall give a look of single glass.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>305</td>
<td>Part 2 – Section VI A</td>
<td>6.9.7</td>
<td>The material of front-end detrainment door glass shall meet the specifications in clause 3.4.9.4 and 5.3. The viability of the joint between the detrainment door and windshield look out glass shall be bare minimum.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>306</td>
<td>Part 2 – Section VI A</td>
<td>6.9.9</td>
<td>The clear width of the detrainment doorway and width of the ramp when operated shall be a minimum 700mm with a headroom not less than 1500mm.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>307</td>
<td>Part 2 – Section VI A</td>
<td>6.9.10</td>
<td>The Contractor shall ensure that the detrainment door should not jam in the event of a train collision.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>308</td>
<td>Part 2 – Section VI A</td>
<td>6.9.12</td>
<td>The detrainment ramp shall have full length longitudinal handrail and fluorescent material marking on both sides of passenger egress direction. The ramp shall be designed for load of 500 kgf/m2 or more and shall not sag during the evacuation process. The ramp angle shall not exceed 20 degrees. The ramp shall also be suitably supported to ensure there is no tilting on straight or curved sections of track.</td>
<td></td>
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</tr>
<tr>
<td>309</td>
<td>Part 2 – Section VI A</td>
<td>6.9.17</td>
<td>The complete opening of the detrainment door and placing of ramp by an untrained passenger shall not take more than 1 minute. The Contractor shall demonstrate the complete detrainment door opening and closing operation as part of type test.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>310</td>
<td>Part 2 – Section VI A</td>
<td>7.4.3</td>
<td>The air discharge velocities at any outlet grille, shall not create noise disturbing the passengers and shall vary progressively as per EN14750. Minimum air discharge velocities at any outlet grille shall not be less than 0.3 m/s measured at 300mm below ceiling. The air intake velocity at the re-circulation and exhaust grilles shall not exceed 3m/s. The minimum volume of fresh air supplied by the artificial ventilation shall be 2.5 litres per second per passenger at AW4 Load. This air shall be filtered. The Contractor may propose design improvements to the above parameters for CMRL’s review and approval.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>311</td>
<td>Part 2 – Section VI A</td>
<td>7.4.5</td>
<td>In the event of Smoke or fire being present outside the train, the arrangement shall be made to prevent the products of combustion being introduced into the train and the emergency operator’s desk areas by shutting off the fresh air intakes and operate in a 100% re-circulation mode. Irrespective of any smoke, in the event that there is a total loss of 110 V DC power supply to the VAC modules and therefore no emergency ventilation the ducting devices shall default to this condition of 100% re-circulation. The air intake velocities at any outlet grille shall not exceed 3m/s. The minimum volume of fresh air supplied by the artificial ventilation shall be 2.5 litres per second per passenger at AW4 Load. This air shall be filtered. The Contractor may propose design improvements to the above parameters for CMRL’s review and approval.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>312</td>
<td>Part 2 – Section VI A</td>
<td>7.4.6.3</td>
<td>During ventilation, the system shall deliver 100% fresh air, and circulate return air throughout the emergency operator’s desk area and saloon.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>313</td>
<td>Part 2 – Section VI A</td>
<td>7.5.2</td>
<td>The heater shall be installed to condition the fresh air intake and for heating to control humidity.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

** Clarification required for the following clause content: In the event that there is a total loss of 110 V DC power supply to the VAC modules and therefore no emergency ventilation the ducting devices shall default to this condition of 100% re-circulation. **

** CMRL clarifies that in case of total loss of 110 Vdc power supply failure, the ducting devices (e.g. fresh air damper) shall be closed and default to 100% re-circulation. **

** Tender Condition Previews. ** Yes
314 Part 2 – Section VI A
11.4.2 (c)

Part 2 – Section VI A of Y clause 14363 not the 7.6.8 No

Contractor for Part 2 – Section VI A mounted provided 1.2.

However, the design life of the dampers shall be minimum 10 years.

The design of the bogie, including the wheel profile, shall prevent the
320 Part 2 – Section VI A
11.4.11 (d)

The dynamic analysis, to evaluate the running behaviour of the cars with
320 Part 2 – Section VI A
11.4.16

The bogies for the above specified ERTS Clause may please be modified as follows:

320 Part 2 – Section VI A
11.4.18.1

The bogies for the above specified ERTS Clause may please be modified as follows:

320 Part 2 – Section VI A
11.4.18.2

The highlighted portion of the clause may please be clarified. Analysis, testing and simulation may please be explicitly specified.

320 Part 2 – Section VI A
11.4.18.3

The requirement of theoretical calculations means software simulations.

320 Part 2 – Section VI A
11.4.19

The Contractor shall submit a detailed dynamic model to demonstrate the running behaviour and performance characteristics of the proposed service proven bogie design. (CDPL-11-8)

The requirement in the clause is not clear. Generally, a vehicle dynamic analysis report will be submitted. Dynamic model comes under IPI and not be feasible to share.

The simulation model shall be validated with regard to the theoretical results along with a reference standard or the clause may please be deleted.

320 Part 2 – Section VI A
11.4.20 (c)

Flexibility coefficient calculation & test be performed conforming to EN 14363. The Contractor shall measure the following but not limited to flexibility coefficient, roll angle, roll, lateral movement.

The highlighted portion of the clause may please be clarified. Analysis, testing and simulation may please be explicitly specified.

The requirement in the clause is not clear. Generally, a vehicle dynamic analysis report will be submitted. Dynamic model comes under IPI and not be feasible to share.

320 Part 2 – Section VI A
11.4.20.1

The bogies for the above specified ERTS Clause may please be modified as follows:

320 Part 2 – Section VI A
11.4.20.2

The highlighted portion of the clause may please be clarified. Analysis, testing and simulation may please be explicitly specified.

The requirement in the clause is not clear. Generally, a vehicle dynamic analysis report will be submitted. Dynamic model comes under IPI and not be feasible to share.

320 Part 2 – Section VI A
11.4.20.3

The requirement in the clause is not clear. Generally, a vehicle dynamic analysis report will be submitted. Dynamic model comes under IPI and not be feasible to share.

320 Part 2 – Section VI A
11.4.20.4

The highlighted portion of the clause may please be clarified. Analysis, testing and simulation may please be explicitly specified.

320 Part 2 – Section VI A
11.4.20.5

The requirement in the clause is not clear. Generally, a vehicle dynamic analysis report will be submitted. Dynamic model comes under IPI and not be feasible to share.

320 Part 2 – Section VI A
11.4.20.6

The highlighted portion of the clause may please be clarified. Analysis, testing and simulation may please be explicitly specified.

320 Part 2 – Section VI A
11.4.20.7

The requirement in the clause is not clear. Generally, a vehicle dynamic analysis report will be submitted. Dynamic model comes under IPI and not be feasible to share.
329  Part 2 – Section VI A 11.3.4 The wheel and suspension shall be optimized to minimize squealing in curves, track curves are 120m on mainline and 100m on depot. This must be confirmed by test.

The Contractor may propose the design concept for the Engineer's consideration during design stage. The Engineer's decision shall be final and binding on the Contractor.

Tender Condition Prevails No

330  Part 2 – Section VI A 11.11.4 Control of the WFL System shall be entirely TCMS based. Activation of the oil spray cycle shall be based on the train location. TCMS shall adjust the cycle duration / quantity of oil deployed based on the train approach speed and degree of curve at that location etc.

Adjusting cycle duration / quantity of WFL oil spray by TCMS is not a practical solution.

The subject clause is having variables such as train approach speed which is very difficult to predict and does not follow a pattern. Also, this requirement will contradict with interoperability clause 2.2.6 with regard to train location.

In view of the above, the portion of the clause stating "TCMS shall adjust the cycle duration / quantity of oil deployed based on the train approach speed and degree of curve at that location etc." may please be deleted.

Tender Condition Prevails No

331  Part 2 – Section VI A 11.11.5 Spray cycles shall be configured to custom profiles for each curve section that is stored on a TCMS database. Each WFL location profile shall be programmable via TCMS to allow for fine adjustment, which the Contractor is required to optimise during service trials.

More clarity on what are the requirements for the custom profiles may be provided. It is possible only if the required custom profile details are shared along with the tender documents. Requested to share the custom profiles or delete the clause.

Tender Condition Prevails No

332  Part 2 – Section VI A 11.11.6 The health status of the WFL System; including oil levels in the reservoirs will be available in TCAMS. System isolation shall also be possible through TCMS in case of malfunction.

There is no proven solution available to display dynamic level of oil in the reservoirs. Hence, requested to update the clause as below: "TCMS will display the oil level low signal when the oil level drops below the set minimum limit..."

The Bidder's understanding is correct.

Tender Condition Prevails No

333  Part 2 – Section VI A 11.11.9 Pneumatic piping shall be stainless steel (grade SUS316LTP) conforming to JIS0435. Oil tanks shall be stainless steel, easily accessible for refilling and include a vertical sight glass with a scale.

The highlighted portion of the clause refers to include a vertical sight glass with a scale. It may please be noted that the proven WFL solutions available provide oil with high viscosity which is of pressurised grade. Hence, the oil may stick on the inner wall of the sight glass hindering the visibility. Hence provision of sight glass will not give the actual level in the reservoir. In view of the above the clause may please be modified suitably.

Tender Condition Prevails No

334  Part 2 – Section VI A 11.12.2 All wheels of bogies shall have derailment detection device. A derailment detection device can replace the inspection of accident consequences to passengers and property. Even, in the event of partial train derailment. The derailment detection device shall monitor all running wheels, and when activated, it shall apply the emergency brake. The detection of derailment shall be automatically reported to the OCC as an emergency message and shall be recorded by the TCMS.

As no proven solution applicable in metro applications are available as on date, details regarding the type of derailment monitoring and detection system such as condition monitoring time monitoring etc. and the technology (Mechanical impact Radio frequency/Laser technology etc.) may also be clearly defined.

The Contractor may propose the design concept for the Engineer's consideration during design stage. The Engineer's decision shall be final and binding on the Contractor.

Tender Condition Prevails No

335  Part 2 – Section VI A 12.2.2 (g) Wheel slip and slide protection

Wheel slip is controlled by propulsion and is not in the scope of brake system. The clause may be updated as Wheel slip protection by removing slip from brake system scope.

Tender Condition Prevails No

336  Part 2 – Section VI A 12.2.7 The brake system shall comply to UIC 544-1 regarding Braking Performances.

The clause may be rephrased as “The brake system shall comply to UIC 544-1 or EN 13403-1 regarding Braking Performances.”

Tender Condition Prevails No

337  Part 2 – Section VI A 12.2.10 (d) Under conditions of a shunting parking brake for a minimum distance of 5 kilometers at a speed of 10 kmph, no damage shall be caused to the braking system or any bogie component, with the exception of abnormal shoe wear. Detailed figures to be provided during preliminary design stage.

As no proven solution applicable in metro applications are available as on date, details regarding the type of derailment monitoring and detection system such as condition monitored time monitoring etc. and the technology (Mechanical impact Radio frequency/Laser technology etc.) may also be clearly defined.

Tender Condition Prevails No

338  Part 2 – Section VI A 12.2.10 (i) The Spring Applique Parking Brake (SAPR) shall be an integral part of the friction brake actuation system. Brake actuators shall be sufficient to permit push-through without any wheel damage.

As no proven solution applicable in metro applications are available as on date, details regarding the type of derailment monitoring and detection system such as condition monitored time monitoring etc. and the technology (Mechanical impact Radio frequency/Laser technology etc.) may also be clearly defined.

Tender Condition Prevails No

339  Part 2 – Section VI A 13.3.6 Flexible hoses shall be kept to a minimum and be proven in metro train operation. The Contractor shall submit proposals to increase the integrity of the air supply system against rupturing of in-car flexible hoses. Burst hoses shall be provided for hoses. Armored hoses or a double hose burst protection valve shall be provided in the flexible connections in the parking brake piping along with test reports in compliance with the latest international standard for acceptance by CMRL.

Conventionally burst hose protection will be provided for in-car flexible hoses for MR pipe only. "Burst hose protection shall be provided for hoses or may be rephrased as "Burst hose protection shall be provided for inter-car flexible hoses" to provide more clarity.

Tender Condition Prevails No

340  Part 2 – Section VI A 13.3.13 The air supply from the compressor(s) shall be controlled under all operating conditions by high and low pressure governor switches.

The clause is contradicting with clause 12.4.5 which says "TCMS shall control cut in and cut out of the compressors based on the feedback of a pressure transducer / governor fitted in the MR pipe." CMRL may please review and update the clause suitably.

Tender Condition Prevails No

341  Part 2 – Section VI A 13.3.15 The Contractor shall ensure that the pressure leakage from the train under static condition shall not exceed 1 bar / hour. This function shall be tested at contractor's manufacturing facility. The contractor shall ensure the requirement is met throughout the entire design life. Any trends of deterioration of pneumatic integrity shall be remedied by the Contractor through an appropriate modification.

As per international standard (IEC 61133) and practice, the pressure shall not drop below the minimum value compatible with the proper functioning of all the equipment within 20 min. CMRL may please review and update the clause suitably.

Tender Condition Prevails No

342  Part 2 – Section VI A 12.4.5 A pressure governor for each compressor shall be provided, which shall be capable of withstanding a pressure not less than the "open" pressure of the safety valve without damage or deterioration. TCMS shall control cut in and cut out of the compressors based on the feedback of a pressure transducer / governor fitted in the MR pipe. Pressure transducers, switches and governors shall be of proven reliability that was demonstrated in previous EMU metro operations. The Contractor shall furnish the reliability figures during the design stage.

Please note Pressure governor/Pressure Switch is a controlling device and cannot be controlled by TCMS. TCMS shall execute the compressor management based on feedback from pressure sensor/transducer only.

"Please update the clause as below: TCMS shall control cut in and cut out of compressor based on feedback of pressure transducer/sensor fitted in MR pipe."

Tender Condition Prevails No

343  Part 2 – Section VI A 12.4.12 Correct functioning and running hours of compressors shall be monitored and recorded by TCMS. A maintenance alarm shall be generated in TCMS if the air consumption exceeds a given criteria that will be agreed during design stage. The related parameter shall be adjustable.

Please note there is no such proven system of determining the air consumption of train in service. CMRL may please review and update the clause suitably.

Tender Condition Prevails No

344  Part 2 – Section VI A 12.4.13.6 A proven regenerative type of air dryer using desiccant and of a suitable capacity shall be provided between the air compressor and the main reservoir. The air dryer shall be preceded by an automatic drain valve, which collects and discharges the bulk of the moisture in the compressed air, before it enters the air dryer. The air dryer shall have IOPS protection.

For oil free compressors it is not required to provide an automatic drain valve before an air dryer. CMRL may please review and update the clause suitably.

Tender Condition Prevails No

345  Part 2 – Section VI A 12.5.6 All reservoirs shall have an associated automatic drain device and, an additional manual device for venting / draining the contents of the reservoir.

As per standard practice in Indian metros, only main reservoir will have provision of automatic drain valve and all other reservoirs will have manual drain cocks. CMRL may please review and update the clause suitably.

Tender Condition Prevails No
Part 2 – Section VI A

12.15.5
In the event of a failure of the dynamic brake, the friction brake shall be capable of carrying out brake reduction to a standstill of the rake in the Crush Loading condition.
The rake shall be deemed to then accelerate its maximum rate up to maximum speed after each step.

CMRL Response: No

12.15.6
The electric regenerative brake shall be independent for each Motor Car unit and shall not adversely affect the braking performance on the other car. Each Bogie of the rake shall have independent Brake Electronics with independent Electric Pneumatic brake control. Detection of Wheel slip & Wheel slide and its protection control shall be per individual axle basis.

CMRL Response: No

12.16.6.3
Wheel slip is controlled by propulsion and is not in the scope of brake system. CMRL may please review and update the clause suitably for brake system suitability.

CMRL Response: No

12.16.6.10
In the event of a failure of the dynamic brake, the friction brake shall be capable of carrying out brake reduction to a standstill of the rake in the Crush Loading condition.
The rake shall be deemed to then accelerate its maximum rate up to maximum speed after each step.

CMRL Response: No

12.19.1

Part 2 – Section VI A

14.9.5 (a)

Part 2 – Section VI A

No

12.19.1

Part 2 – Section VI A

No

12.8.9

Part 2 – Section VI A

12.7.1 (d)

Part 2 – Section VI A

12.6.8.3

Part 2 – Section VI A

12.6.8.2

Part 2 – Section VI A

12.6.8.1

Part 2 – Section VI A

352

Part 2 – Section VI A

12.7.1 (d)

Part 2 – Section VI A

12.6.8.4

Part 2 – Section VI A

351

Part 2 – Section VI A

12.6.9.11

Part 2 – Section VI A

12.6.8.14

Part 2 – Section VI A

350

Part 2 – Section VI A

12.6.9.8

Part 2 – Section VI A

12.6.8.3

Part 2 – Section VI A

352

Part 2 – Section VI A

12.8.5

Part 2 – Section VI A

354

Part 2 – Section VI A

12.8.9

Part 2 – Section VI A

355

Part 2 – Section VI A

12.9.2

Part 2 – Section VI A

356

Part 2 – Section VI A

12.15.5

Part 2 – Section VI A

357

Part 2 – Section VI A

12.17.1

Part 2 – Section VI A

358

Part 2 – Section VI A

12.19.1

Part 2 – Section VI A

359

Part 2 – Section VI A

14.2.4

Part 2 – Section VI A

360

Part 2 – Section VI A

14.9.5 (a)

Part 2 – Section VI A

361

Part 2 – Section VI A

14.9.5 (b)

Part 2 – Section VI A

362

Part 2 – Section VI A

14.11.2 (n)

Part 2 – Section VI A

13.3.10

Part 2 – Section VI A

14.14.3

Part 2 – Section VI A

15.4.1

Part 2 – Section VI A

16.11.1

Part 2 – Section VI A

14.17.1

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Part 2 – Section VI A

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Part 2 – Section VI A

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CP26 / ARE02A Contract - Reply to Bidder Queries

SI no. | Part/S Section No. | Clause No. | Original Bid Condition | Bidder’s queries | CMRL Response | Addendum
--- | --- | --- | --- | --- | --- | ---
363 | Part 2 – Section VI A | 17.5.3.3.3 | Vertical Load Testing | | Tender Condition Prevails. | No
364 | Part 2 – Section VI A | 17.5.3.3.3 | Yes | Refer Addendum 01 S/N 58 | Yes
365 | Part 2 – Section VI A | 17.5.3.3.3 | a) The test car shell shall be supported on bogies and shall be loaded to have | | Tender Condition prevails. | No
366 | Part 2 – Section VI A | 17.5.3.4.3 | Brake System Endurance Qualification Test | | Tender Condition Prevailes. | No
367 | Part 2 – Section VI A | 19.13 | Glass | | Tender Condition Prevailes. | No
368 | Part 2 – Section VI A | 19.20.3 | High-quality hard clay shall be used as a filler. No lime stone shall be used in the compound | | Tender Condition Prevailes. | No
369 | Part 2 – Section VI A | 19.20.5 | The rubber flooring material shall comply with FS-SS-T-312 and the flame and smoke test requirements of clause 19.6.1. | | Tender Condition Prevailes. | No
370 | Part 2 – Section VI A | 19.20.9 | The fire covering shall be permanently secured to the plate metal sub-floor with a CMRL approved adhesive and as recommended by the flooring manufacturer | | Tender Condition Prevailes. | No
371 | Part 2 – Section VI A | 19.6.1 | Flammability and smoke emission | | Tender Condition Prevailes. | No
372 | Part 2 – Section VI A | 19.4.5.3 (i) | Dry heat test: The dry heat test shall be conducted for class T3 and temperature shall be considered 80°C against 7S°C specified in EN62546. | | Tender Condition Prevailes. | No
373 | Part 2 – Section VI A | 19.55.6 | The Contractor shall furnish the following information in respect of printed circuit boards and sub-assemblies: a) Voltage/ Waveform statement | | Tender Condition Prevailes. | No
<table>
<thead>
<tr>
<th>Sl no</th>
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<tr>
<td>379</td>
<td>PART 2 : SECTION VI B : ERTS-DM&amp;P</td>
<td>3.2.1.1</td>
<td>Both driving cab and signaling equipment room shall be Airconditioned.</td>
<td>Adequate capacity DG power will be provided to both cabins in AC mode.</td>
<td>Agreed</td>
<td>No</td>
</tr>
<tr>
<td>380</td>
<td>PART 2 : SECTION VI B : ERTS-DM&amp;P</td>
<td>3.2.3.5 (a)</td>
<td>The vehicle must be equipped with proven compressed EP type with reciprocator air brake including.</td>
<td>Air brake system clause 3.2.3.5 (a) and 3.2.3.5 (c) are contradictory.</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>381</td>
<td>PART 2 : SECTION VI B : ERTS-DM&amp;P</td>
<td>3.2.3.5 (a)</td>
<td>The CMV shall be fitted with quick release air brakes. The brake system shall be of IUC approved type and shall meet all UIC requirements. It shall have the following distinct positions:</td>
<td>It is clarified that the principal braking system shall be a microprocessor controlled EP type with spring applied backing brake (SAPB) similar to passenger rolling stock.</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>382</td>
<td>PART 2 : SECTION VI B : ERTS-DM&amp;P</td>
<td>3.4.6.1</td>
<td>The wheel tread shall be of the wear adapted wheel profile S 1002 / N 128 / S 125 / 6.7 % as defined in EN 13715.</td>
<td>Proven Wheel Profile to RDSO drawing no. 91146 (Latest Revision) will be provided similar to wiper supplier's CMV's to various metro.</td>
<td>Refer Addendum 01 S/N 74</td>
<td>Yes</td>
</tr>
<tr>
<td>383</td>
<td>PART 2 : SECTION VI B : ERTS-DM&amp;P</td>
<td>3.4.10.1 (a)</td>
<td>The location of Satellite Depot(s) shall be designated by CMRL.</td>
<td>Principal site for all heavy maintenance AND (ii) further Satellite Depot(s) Designated Depot(s) refers to (i) Madhavaram Depot, which is the principal site for all heavy maintenance</td>
<td>Refer Addendum 01 S/N 74</td>
<td>Yes</td>
</tr>
<tr>
<td>384</td>
<td>PART 2 : SECTION VI B : ERTS-DM&amp;P</td>
<td>3.4.11.1</td>
<td>Cabin Door: One sliding door (entry and exit) shall be provided at the rear end of the cabin to enable easy entry of operator.</td>
<td>As Airconditioned to be provided in both the driving cabins. Sliding door will not be suitable &amp; cannot achieve tightness even after sealing.</td>
<td>Agreed</td>
<td>No</td>
</tr>
<tr>
<td>385</td>
<td>PART 2 : SECTION VI B : ERTS-DM&amp;P</td>
<td>3.11.3.3 (a)</td>
<td>The minimum height of the platform shall be 3 meters and extendable up to 5.5 meters. The platform shall be capable of 180 deg. rotation.</td>
<td>In order to attain extended height of 5.5 meters, the minimum height of the platform to be 3.3 meters not 3 meters from Rail level. The platform with minimum height of 3.3 meters &amp; extended to 5.5 meters from rail level is already supplied to DMRC (4 nos.) and working satisfactorily.</td>
<td>Final height shall be provided in place of 5 Kg capacity Fire Extinguisher.</td>
<td>No</td>
</tr>
<tr>
<td>386</td>
<td>PART 2 : SECTION VI B : ERTS-DM&amp;P</td>
<td>3.10</td>
<td>The pantograph of CMV shall be provided same as rolling stock.</td>
<td>CMRL to consider PANTograph to be free supply.</td>
<td>Tender Condition Prevails</td>
<td>No</td>
</tr>
<tr>
<td>387</td>
<td>PART 2 : SECTION VI B : ERTS-DM&amp;P</td>
<td>3.11.3.1</td>
<td>The window guides, and sills shall be of FRP as per RDSO requirement (SMC) to RDSO spec. C-8409 (Latest Revision).</td>
<td>The clause may be reviewed and change it accordingly.</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>388</td>
<td>PART 2 : SECTION VI B : ERTS-DM&amp;P</td>
<td>3.6.1</td>
<td>Fire Extinguisher</td>
<td>Two Clean Agent type fire extinguisher of 5 Kg capacity shall be provided in each cab.</td>
<td>Agreed. Suitable design FRP window to be provided to maintain the air-condition inside the cab</td>
<td>No</td>
</tr>
<tr>
<td>389</td>
<td>PART 2 : SECTION VI B : ERTS-DM&amp;P</td>
<td>3.16</td>
<td>Page-3-16</td>
<td>The minimum height of the platform shall be 3 meters and extendable up to 5.5 meters. The platform shall be capable of 180 deg. rotation.</td>
<td>In order to attain extended height of 5.5 meters, the minimum height of the platform to be 3.3 meters not 3 meters from Rail level.</td>
<td>No</td>
</tr>
<tr>
<td>390</td>
<td>PART 2 : SECTION VI B : ERTS-DM&amp;P</td>
<td>3.10</td>
<td>The pantograph of CMV shall be provided same as rolling stock.</td>
<td>CMRL to consider PANTograph to be free supply.</td>
<td>Tender Condition Prevails</td>
<td>No</td>
</tr>
<tr>
<td>391</td>
<td>PART 2 : SECTION VI B : ERTS-DM&amp;P</td>
<td>3.26.1</td>
<td>Speed Certificate</td>
<td>The CP26 ARE02A Contractor shall provide the Signalling Contractor the acceleration and braking rates of the CMV. The Guaranteed Emergency braking rate shall also be provided to the signalling Contractor for incorporating in his design.</td>
<td>Refer Addendum 01 S/N 73</td>
<td>Yes</td>
</tr>
<tr>
<td>392</td>
<td>PART 2 : SECTION VI B : ERTS-DM&amp;P</td>
<td>3.30.6</td>
<td>Interface Requirements</td>
<td>The CP26 ARE02A Contractor shall provide the Signalling Contractor the acceleration and braking rates of the CMV. The Guaranteed Emergency braking rate shall also be provided to the signalling Contractor for incorporating in his design.</td>
<td>May please be reviewed and change it accordingly.</td>
<td>No</td>
</tr>
<tr>
<td>393</td>
<td>PART 2 : SECTION VI B : ERTS-DM&amp;P</td>
<td>3.30.18.1 (11)</td>
<td>INTERFACE: Division of Responsibility</td>
<td>CMV with Conventional Pneumatic brake system as per UIC requirement or EP brake system with microprocessor air brake, considering CMV with 4 axles, the calculated GEBR value will be comparable and it cannot be compared with metro train.</td>
<td>Refer Addendum 01 S/N 73</td>
<td>Yes</td>
</tr>
<tr>
<td>394</td>
<td>Part 2 / Section VI C</td>
<td>1.1.9</td>
<td>Designated Depot(s) refers to (i) Medavakkam Depot, which is the principal site for all heavy maintenance AND (ii) further Satellite Depot(s) (mostly for inspection, cleaning activities and Corrective Maintenance).</td>
<td>The number of satellite depots shall be capped at one (1) at any one time.</td>
<td>Refer to Addendum 01 S/N 76</td>
<td>Yes</td>
</tr>
<tr>
<td>395</td>
<td>Part 2 / Section VI C</td>
<td>1.1.10</td>
<td>The location of the Satellite Depot(s) shall be designated by CMRL.</td>
<td>The number of satellite depots shall be capped at one (1) at any one time.</td>
<td>Refer to Addendum 01 S/N 77</td>
<td>Yes</td>
</tr>
<tr>
<td>396</td>
<td>Part 2 / Section VI A</td>
<td>1.4.3</td>
<td>Based on operational requirement, sites may have to be operated in Gua2 mode with driver in Gua3 mode with attendant</td>
<td>There is currently no plan to phase-in further revenue operations in Gua2. The requirement for a Gua-4 to be possible from the outset.</td>
<td>No</td>
<td></td>
</tr>
</tbody>
</table>
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357  Part 2 / Section VI.A  2.2.12

Automatic coupler with mechanical, pneumatic, and electrical head shall be provided to all trainsets. The coupler shall consist of two different parts: a) The trainset end and b) The trailer car end. The trainset end shall consist of the following components:

- Mechanical/ pneumatic lock
- Electrical interface
- Trainset energy supply
- Overcurrent protection

A complete set of drawings, installation instructions, and testing procedures shall be provided. All components shall comply with the requirements specified in the tender document. The installation of the coupler shall be done at the site to the full satisfaction and approval of CMRL.

Bidder's queries:

- Please clarify whether design and quotation proposal for future 6-car configuration is required for both Single Consist Trainset and 5-car multi-consist configuration? (DMC + TC + DMC + DMC + TC + DMC)

CMRL Response:

- In the future design provision as per ERTS Clause 2.2.31(c), the operation of 6-car trains shall be tested during service trials (as required by ERTS Clause 2.2.31(c)).

358  Part 2 / Section VI.A  2.2.26

Wire and cables up to and including of 10mm² Cross sectional area of conductor soft annealed, tinned and physical requirements of NEMA WC3, NEMA WC5, and NEMA WC7. Stranding and conductor construction for all wires and cables of 0.75 mm² shall comply the requirements specified in Chapter 04. Semi-permanent mechanical, pneumatic and jumper cables shall be used between the DMC and TC for the 3-Car consistent configuration shown below. 3-Car rake: DMC + TC + DMC (97% Tension power).

Bidder's queries:

- Please clarify whether design and quotation proposal for future 6-car configuration is required for both Single Consist Trainset and 5-car multi-consist configuration? (DMC + TC + DMC + DMC + TC + DMC)

CMRL Response:

- In the future design provision as per ERTS Clause 2.2.31(c), the operation of 6-car trains shall be tested during service trials (as required by ERTS Clause 2.2.31(c)).

359  Part 2 / Section VI.A  2.2.31

Multi-Consist Configuration

- The functionality of all Train sub-systems shall be fully available when Trainsets are operated in a 6-car multi-consist configuration.
- Hardware & Software of all subsystems (including but not limited to Train Control system, APS system, PARPS & CCTV system, TCMS system, Pneumatic/ Brake system, Saloon Door system, VAC system, Traincooler/ Heating system, Communication system, PID system, etc.) shall be automatically reproducible as required whenever a coupling or decoupling command is initiated by OCC or the Train Operator.
- The Contractor shall submit the design proposal for multi-consist configuration during Preliminary design stage. All technical requirements shall be addressed during Pre-final design stage and tested at the CMRL site to the full satisfaction and approval of CMRL.

Bidder's queries:

- Please clarify whether design and quotation proposal for future 6-car configuration is required for both Single Consist Trainset and 5-car multi-consist configuration? (DMC + TC + DMC + DMC + TC + DMC)

CMRL Response:

- Without prejudice to the original Tender condition, CMRL clarifies the following:

  1. It is understood that coupled train operation (different fleet) for revenue line is not required as per ERTS: e.g.: (DMC - DMC) + (DMC - DMC).

  2. The interface between different subsystem suppliers of different rolling stock for the communication between operators of two trains as per clause 2.2.31(c) will be complicated to meet the requirement of cl. no. 2.2.31(c).

  3. An emergency train rescue being a degraded mode, same shall be managed through headway rule.

  4. In addition, the Rail managed for Line 4 under the Phase 2 contract (ARE03a) will not couple with the Rail designed for other Lines (ARE02a/ARE04). To make the connecting arrangement, D3000 PAPS- CCTV/Other on-board Communication Networks.

Without prejudice to the original Tender condition, CMRL clarifies the following:

- It is clarified that the interoperability requirement between different trains when coupled together is only for performing coupled train operation at low speed. Accordingly, it is not envisaged that the subsystems mentioned in the tender (e.g. TCMS/PAPIS/CCTV/Other on-board Communication) will need to be part of that scope.

360  Part 2 / Section VI.A  2.2.31

Racks and on-board Communication Consist Networks. The interface between different subsystem suppliers of different rolling stock for the communication between operators of two trains as per clause 2.2.31(c) will be complicated to meet the requirement of cl. no. 2.2.31(c).

Bidder's queries:

- Please clarify whether design and quotation proposal for future 6-car configuration is required for both Single Consist Trainset and 5-car multi-consist configuration? (DMC + TC + DMC + DMC + TC + DMC)

CMRL Response:

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  1. It is understood that coupled train operation (different fleet) for revenue line is not required as per ERTS: e.g.: (DMC - DMC) + (DMC - DMC).

  2. The interface between different subsystem suppliers of different rolling stock for the communication between operators of two trains as per clause 2.2.31(c) will be complicated to meet the requirement of cl. no. 2.2.31(c).

  3. An emergency train rescue being a degraded mode, same shall be managed through headway rule.

  4. In addition, the Rail managed for Line 4 under the Phase 2 contract (ARE03a) will not couple with the Rail designed for other Lines (ARE02a/ARE04). To make the connecting arrangement, D3000 PAPS- CCTV/Other on-board Communication Networks.

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  2. The interface between different subsystem suppliers of different rolling stock for the communication between operators of two trains as per clause 2.2.31(c) will be complicated to meet the requirement of cl. no. 2.2.31(c).

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  4. In addition, the Rail managed for Line 4 under the Phase 2 contract (ARE03a) will not couple with the Rail designed for other Lines (ARE02a/ARE04). To make the connecting arrangement, D3000 PAPS- CCTV/Other on-board Communication Networks.

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  2. The interface between different subsystem suppliers of different rolling stock for the communication between operators of two trains as per clause 2.2.31(c) will be complicated to meet the requirement of cl. no. 2.2.31(c).

  3. An emergency train rescue being a degraded mode, same shall be managed through headway rule.

  4. In addition, the Rail managed for Line 4 under the Phase 2 contract (ARE03a) will not couple with the Rail designed for other Lines (ARE02a/ARE04). To make the connecting arrangement, D3000 PAPS- CCTV/Other on-board Communication Networks.

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- It is understood that coupled train operation (different fleet) for revenue line is not required as per ERTS: e.g.: (DMC - DMC) + (DMC - DMC).

  2. The interface between different subsystem suppliers of different rolling stock for the communication between operators of two trains as per clause 2.2.31(c) will be complicated to meet the requirement of cl. no. 2.2.31(c).

  3. An emergency train rescue being a degraded mode, same shall be managed through headway rule.

  4. In addition, the Rail managed for Line 4 under the Phase 2 contract (ARE03a) will not couple with the Rail designed for other Lines (ARE02a/ARE04). To make the connecting arrangement, D3000 PAPS- CCTV/Other on-board Communication Networks.

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- It is understood that coupled train operation (different fleet) for revenue line is not required as per ERTS: e.g.: (DMC - DMC) + (DMC - DMC).

  2. The interface between different subsystem suppliers of different rolling stock for the communication between operators of two trains as per clause 2.2.31(c) will be complicated to meet the requirement of cl. no. 2.2.31(c).

  3. An emergency train rescue being a degraded mode, same shall be managed through headway rule.

  4. In addition, the Rail managed for Line 4 under the Phase 2 contract (ARE03a) will not couple with the Rail designed for other Lines (ARE02a/ARE04). To make the connecting arrangement, D3000 PAPS- CCTV/Other on-board Communication Networks.

Without prejudice to the original Tender condition, CMRL clarifies the following:

- It is understood that coupled train operation (different fleet) for revenue line is not required as per ERTS: e.g.: (DMC - DMC) + (DMC - DMC).

  2. The interface between different subsystem suppliers of different rolling stock for the communication between operators of two trains as per clause 2.2.31(c) will be complicated to meet the requirement of cl. no. 2.2.31(c).

  3. An emergency train rescue being a degraded mode, same shall be managed through headway rule.

  4. In addition, the Rail managed for Line 4 under the Phase 2 contract (ARE03a) will not couple with the Rail designed for other Lines (ARE02a/ARE04). To make the connecting arrangement, D3000 PAPS- CCTV/Other on-board Communication Networks.
CP26 / ARE02A Contract - Reply to Bidder Queries

Sl no | Part No | Section No | Clause No | Original Bid Condition | Bidder’s queries | CMRL Response | Addendum
--- | --- | --- | --- | --- | --- | --- | ---
406 | Part 2 | Section VI.A | 10.11.21 | The Contractor shall hire reputed Power system analysis Design Consultant with the approval of CMRL and provision shall be made for arranging minimum three presentations by design Consultant to CMRL. The Role of the Power System analysis Design consultant is as below but not limited to: a) Power system System Design Analysis shall be performed for all Corridors of Phase Two considering ARE02A contract 70 trains, ARE03A contract 26 trains and ARE04A contract 42 trains: 138 trains of 3.2 cm section. b) Power system Design Analysis consultant along with Rolling Stock Contractor shall interface with Railway Electrification, Power Supply Contractor to comply the Design requirements of CMRL Phase 2 project. c) The proposed consultant shall be an ISO certified having proven previous experience in Power System Analysis. | Please provide the following details covering ARE02A, ARE03A and ARE04A and Corridors 3, 4 & 5. a) Electrical Network Details b) Station details c) AESS/SS/PSP/ Schematic d) Track switchgear details e) Function/Conditioning/Station switchgear details | Shall be obtained by the Contractor during interface Work after Contract award. | No
407 | Part 2 | Section VI.A | 10.11.15 | Four (4) trains shall be instrumented (in accordance with EN 50453) with separate Power Quality measuring instruments, data acquisition systems and power analyser (with provision for permanent installation and shall have necessary in built software / analysis tool) to measure, record and analyse the power quality parameters. This instrument shall also have scanning storage for minimum 15 days of recording data. The measurement with these instruments shall include but not limited to Time, kV, kW, kVAR, kVA, TID, TOD, Total of and Displacement pf. The instruments supplied shall have the adequate capability of measuring and data acquisition to analyse higher order harmonics (up to 50th) and measure power quality parameters mentioned above with minimum accuracy of ±0.1% and sampling rate of 100 kHz. Details of instruments shall be finalised during design stage. Other trains shall also have necessary provisions (suitable space, wiring etc.) for installation and recording power quality parameters as per above. | The Energy Measurement System described by the EN 50453:2017 area provides measurement and data suitable for billing and may also be used for energy management, e.g. energy saving. The Energy Measurement System EMS provides measurement of the consumed and regenerated active energy of a railway traction unit. If the traction unit is designed for use on AC traction systems the EMS shall also provide measurement of reactive energy. The EMS generally consists of the five main functions: 1) Voltage Measurement Function VMF 2) Current Measurement Function CMF, 3) Energy Calculation Function ECF 4) Data Handling System DHS 5) Communication Function EMS - DCS From the above, it is understood that EN 50453 basically dictates the Energy Measurement of the train or its units for the purpose of metering and billing. However, the clause 10.11.15 calls for Harmonics recording up to 50th Order with sampling rate of 1024 per sec with accuracy of ±0.1% Considering the above, please remove the compliance requirement to EN 50453 for power quality measuring system. | Tender Condition Prevails. | No
408 | Part 2 | Section VI.A | 10.11.16 | If Contractor proposes to measure the power quality parameters as mentioned in above Para, through TCMS (is preferred). In such case, TCMS shall have the adequate capability of measuring and data acquisition to analyse higher order harmonics (up to 50th) and measure power quality parameters mentioned above with minimum accuracy of ±0.1% and sampling rate of 100 kHz. Also, a suitable power analyser, software/analyzer test tool shall be built in. However, final approval will be provided by CMRL by comparing both proposals. | Please keep the ‘Power quality parameters measurement through TCMS as ‘an option’ instead of ‘preferred'. | Tender Condition Prevails. | No
409 | Part 2 | Section VI.A | 6ETS.13.13.5 | In addition to the cameras provided inside the saloon, the Contractor shall install a fresh position to monitor the track, OHE, and platform of each station. | Whether the following are part of the clause? (i) Digital Line scan cameras based Track condition monitoring systems (ii) Digital Line scan camera based OHE condition monitoring systems and (iii) Current Collection Performance Measurement System | No. | No
410 | Part 2 | Section VI.A | 13.2.15 | All memory storage system shall be Solid State disk (SSD) or Micro SD card or other latest technology available subject to CMRL approval. Required storage type is to be clearly specified (no options to be provided to the bidder) as it affect the bidding cost drastically. | The bidder shall propose in line with the stated requirements. Tender condition prevails. | No
411 | Part 2 | Section VI.A | 13.7.1.3 | Control of all displays in a train shall be possible from the TCMS, OCC, ROC and OOCC. | Control of all displays in a train shall be possible from the ODH, OCC, ROC and OOCs. | Tender Condition Prevails. | No
412 | Part 2 | Section VI.A | 13.7.1.1.4 | Each DRMD unit shall be a single display screen with a stretched aspect ratio. The minimum dimensions shall be 880mm x 160mm. The use of multiple screens joined together shall not be accepted. | Whether the area of the display is to be mentioned instead of overall dimensions. | No. | No
413 | Part 2 | Section VI.A | 13.7.1.1.5.1 | All LCD with LED backlight displays or any latest better technology displays shall be provided at both ends of the train above the windshield and side displays shall be provided on each side of the corridor (each covering a full window length) to indicate the destination station and route information. The message shall be displayed in both English and Tamil simultaneously. | The exterior display size shall be approved by the CMRL during design stage. | Tender Condition Prevails. | No
414 | Part 2 | Section VI.A | 13.7.1.1.5.4 | The exterior display size shall be approved by the CMRL during design stage. | Required matrices and LED pitch to be mentioned. | Tender Condition Prevails. | No
415 | Part 2 | Section VI.A | 13.7.1.1.6.1 | A set of LCD with LED backlight displays or any latest better technology displays of size not less than 65 cm x 40 cm shall be provided inside each coach at an appropriate location. The display location and specification shall be submitted for CMRL approval. | Please specify the area mentioned in Viewing area or total display area. | Tender Condition Prevails. | No
416 | Part 2 – Section VI.A | Appendix C - Interfaces - 14.1 | OTHER ROLLING STOCK CONTRACTOR | It is suggested to interface for other Rolling Stock information through Employing (CMRL) and not to consider them as designated contractor. It is requested to update the relevant clauses accordingly. | Tender Condition Prevails. | No
417 | Part 2 – Section VI.A | 19.52.3 | Very low current relays (1 Amp and less) shall have gold-plated, silver-alloy contacts. | The following change is suggested. Very low current relays (1 Amp and less) shall have gold-plated silver-alloy contacts. | Tender Condition Prevails. | No
418 | Part 2 – Section VI.A | 19.51.5 | Breaker current rating shall be clearly visible after installation and shall comply with NEMA A1B, ANSI C37.13, C37.14, or C37.16. | For queries related to Engineering Standards, bidders may refer to the response already provided against Section 133. | No
419 | Part 2 – Section VI.A | 19.52.4 | Low current and very low current relays that have not been proven in rail service shall comply with MIL-R-5573. | For queries related to Engineering Standards, bidders may refer to the response already provided against Section 133. | No
420 | Part 2 – Section VI.A | 19.52.5 | Higher current relays and contactors that have not been proven in rail service shall comply with MIL-R-6106. | For queries related to Engineering Standards, bidders may refer to the response already provided against Section 133. | No
421 | Part 2 – Section VI.A | 13.8.4 | The automatic announcement function shall use locally stored predefined digital messages and shall broadcast these messages to passengers automatically at designated track locations by means of location and direction information derived from signaling system and also an Independent Rolling stock vehicle location system. Overriding automatic messages by manual message triggering by the operator shall also be possible. | We would like to clarify what is “independent Rolling stock vehicle location system” referring to? This is a rather feature to be provided by TCMS. Further details shall be decided during design stage. | Tender Condition Prevails. | No
Part 2 / Section VI A
13.13.6
All the interior and exterior cameras shall support for a video resolution of minimum 1920x1080 HD and minimum 30 frames per second, minimum illumination of 0.3 lux (color), iris control, minimum 90 dB wide dynamic range (WDR) and Power Over Ethernet (POE) compliant. Cameras shall be of proven design in railway applications. The recordings from these cameras must be clear in dark, daytime, night-time and in all hours of operation even in case of nonavailability of any exterior lighting. All the then cameras shall be of the same type or latest better variant. Camera and Recorder shall comply CCTV industry standards like onvif. The Visual images from each camera shall be recorded in non-volatile memory without any limitation of repetitive writing of the data. Each camera shall have recording capacity for at least 7 days. The records shall be easily downloadable.

We would like to clarify that the infra-red requirement will only be for external pantograph camera and not mandatory for all internal saloon cameras.

The bidder's understanding is that infra-red is required for all cameras and should be installed. As per tender condition. Tender condition prevails.

Part 2 / Section VI A

Part 1, -Section - II

No
Bidding Forms
1.4.3
ITB 1.2
2.2.14

Part 2 / Section VI A

Part 2 / Section VI A

Part 2 / Section VI A

Part 1, - Section - IV

Addendum

CP26 / AREOA2A Contract - Reply to Bidder Queries

SL no Part/ Section No Clause No. Original Bid Condition Bidder’s queries CMLR Response Addendum

422 Part 2 / Section VI A
13.13.6
All the interior and exterior cameras shall support for a video resolution of minimum 1920x1080 HD and minimum 30 frames per second, minimum illumination of 0.3 lux (color), iris control, minimum 90 dB wide dynamic range (WDR) and Power Over Ethernet (POE) compliant. Cameras shall be of proven design in railway applications. The recordings from these cameras must be clear in dark, daytime, night-time and in all hours of operation even in case of nonavailability of any exterior lighting. All the then cameras shall be of the same type or latest better variant. Camera and Recorder shall comply CCTV industry standards like onvif. The Visual images from each camera shall be recorded in non-volatile memory without any limitation of repetitive writing of the data. Each camera shall have recording capacity for at least 7 days. The records shall be easily downloadable.

We would like to clarify that the infra-red requirement will only be for external pantograph camera and not mandatory for all internal saloon cameras.

The bidder’s understanding is that infra-red is required for all cameras and should be installed. As per tender condition. Tender condition prevails.

423 Part 2 / Section VI A
13.13.6
In case of任何 elevation in the altitude of any car by the passenger, the camera recording housing the PEI shall be deployed on the CCTV monitoring screen available in OCC, BCC & DCC and also in TCMS of the specific train. The cameras shall have infra-red zoom function. It shall be possible to filter, zoom and select images in off line mode for investigation purpose. The images shall be with time stamping and it shall be possible to link them with respective location of train.

We would like to clarify the “in-build zoom function” refers to zooming on recorded video for investigation purposes?

Correct. Digital zoom is acceptable.

424 Part 2 / Section VI A
13.13.17
Cameras, NVR, Video management software’s etc. shall implement bandwidth optimisation techniques like multicast transmission, modern codecs (e.g. H.265 or higher) for the efficient and reliable use of wireless network bandwidth available.

We would like to clarify on the codec requested of H.265, if the contractor proposes with codec of H.264 and H.264+.

H.265 is required as it has higher compression.

Tender condition prevails.

425 Part 1, - Section - IV
Bidding Forms
4.4.11
PRICE CENTRE ‘RS-H’ – TRAINING AND MANUALS.

As the Chennai Metro lines will have elevated and underground portions, the safe operation of the railway is mandatory. The equipment shall be designed to take care of such thermal shocks. As the Chennai Metro lines will have elevated and underground portions, the safe operation of the railway is mandatory. The equipment shall be designed to take care of such thermal shocks.

The following is believed. Please confirm.

- Rakas manufactured for Line 1 shall operate successfully in Line 3
- Rakas manufactured for Line 4 shall operate successfully in Line 4
- Rakas manufactured for Line 5 shall operate successfully in Line 5

Note 1. Considering the possibility of different Rolling Stock suppliers for each Line, interchanges of Rakas to different lines may not be feasible. If some rolling stock supplier, depending on car design, interchange maybe possible by updating configuration and software without hardware changes.

Note 2. Considering the possibility of different Supplier/manufacturer for each Line, interchanges of Rakas to different lines may not be feasible. If some rolling stock supplier, depending on car design, interchange maybe possible by updating configuration and software without hardware changes.

In addition, it’s believed that the Rakas manufactured for Line 4 under the Phase 2 contract will not couple with the Rakas manufactured for other Lines to make the connection between each TCMS Networks.

The bidder’s understanding is incorrect.

intervention requirements are already clearly defined in ERTS Clause 12.2.6. For avoidance of any doubt, all the fees being procured by CMLR are required to have the capability of performing with more than three corridors, along with services belonging to the two or more additional corridors.

Signalling scope is packaged under a single contract for all three corridors and was already awarded to Hitachi RTS.

Tender condition prevails.

426 Part 1, - Section - II

No
ITB 1.2

As “Joint Venture” or “JV” means any combination of two or more firms that has provided GoA-4 / UTO operations for a period >10 years)

In case of JV consortium, please specify the minimum percentage of participation of the member who brings in the qualification criteria.

Refer Addendum 01 S/N 111

427 Part 2 / Section VI A
1.4.3
Based on operational requirement, rakas may have to be operated in GoA2 mode with driver / in GoA3 mode with attendant / in GoA4 (UTO).

There is the mentioned that the “Phase 2 project is planned with operations in UTO (GoA4) from the initial passenger service inauguration itself.”.

There is currently no plan to phase-in initial revenue operations in GoA3. The requirement is for GoA-4 to be possible from the outset. Tender condition therefore prevails.

428 Part 2 / Section VI A
2.2.14
The rake shall be designed and manufactured to operate successfully within the environments of CMLR’s dedicated right-of-way

The following is believed. Please confirm.

- Rakas manufactured for Line 1 shall operate successfully in Line 3
- Rakas manufactured for Line 4 shall operate successfully in Line 4
- Rakas manufactured for Line 5 shall operate successfully in Line 5

Note 1. Considering the possibility of different Rolling Stock suppliers for each Line, interchanges of Rakas to different lines may not be feasible. If some rolling stock supplier, depending on car design, interchange maybe possible by updating configuration and software without hardware changes.

Note 2. Considering the possibility of different Supplier/manufacturer for each Line, interchanges of Rakas to different lines may not be feasible. If some rolling stock supplier, depending on car design, interchange maybe possible by updating configuration and software without hardware changes.

In addition, it’s believed that the Rakas manufactured for Line 4 under the Phase 2 contract will not couple with the Rakas manufactured for other Lines to make the connection between each TCMS Networks.

The bidder’s understanding is incorrect.

Intervention requirements are already clearly defined in ERTS Clause 12.2.6. For avoidance of any doubt, all the fees being procured by CMLR are required to have the capability of performing with more than three corridors, along with services belonging to the two or more additional corridors.

Signalling scope is packaged under a single contract for all three corridors and was already awarded to Hitachi RTS.

Tender condition prevails.

429 Part 2 / Section VI A
2.2.26
The Contractor shall identify and implement any design and/or interface Works required to ensure the AREO2A Rolling Stock fleet achieves the following objectives for interoperability:

a) The fleet shall serve all three (3) corridors of the CMRL-Phase 2 network.
b) The capable of running in mixed traffic operational diagrams, alongside up to two (2) additional fleets of passenger Rolling Stock as well as maintenance vehicles.
c) Have limited cross-compatibility with other passenger Rolling Stock.
d) Have designed to the extent that is defined by the technical requirements elsewhere in this Contract (E.g. emergency train rescue requirements).
e) Complies with any other interoperability requirements identified during the course of coordinated Interface Works with other Designated Contractors (as defined in Appendix-C) as may be required to ensure the safe operation of the railway.

The following are believed. Please confirm.

Compatibility between the Rolling Stocks of different corridors -

1. Traction System: Same hardware is possible if rolling stock supplier and interface (e.g. brake system) are same (software might be different depending on design and signaling supplier requirements). Compatibility cannot be ensured if rolling stock supplier are different since traction systems are different.

2. Pneumatic supply extension, Door pitch: Car builder scope

3. Coupled train operation for revenue service is not required as per ERTS. e.g.: (DM-T-DM)+(DM-T-DM)

4. Train rescue operation (E.g. two 3-car trainsets coupled together to form 6-car rake)

5. The bidder's understanding is that there is no requirement for dissimilar trains from different contractors to couple for the purpose of running in multi-consist mode.

The bidder’s understanding is incorrect.

Intervention requirements are already clearly defined in ERTS Clause 12.2.6. For avoidance of any doubt, all the fees being procured by CMLR are required to have the capability of performing with multi-consist mode.

Tender condition prevails.

430 Part 2 / Section VI A
2.11.2
As the Chennai Metro lines will have elevated and underground portions, there may be sudden change in the ambient temperature to rolling stock. The equipment shall be designed to take care of such thermal shocks.

Please clarify the detail of thermal shock level.

CMLR has nothing further to clarify. Tender condition prevails.

431 Part 2 / Section VI A
2.11.6
The Water used in Chennai for washing is likely to have a high level of dissolved matter which may also corrosion.

Please clarify the name and concentration of the pollutant to consider the impact for equipment.

CMLR has nothing further to clarify. Tender condition prevails.

432 Part 2 / Section VI A
2.14.1 b
The control system shall prevent live voltage oscillation and instability of the traction equipment.

The live voltage oscillation depends on strength of power station and auxiliary impedance. This requirement should be managed by the ground-side equipment and should be deleted from this section.

Refer Addendum 01 S/N 26

Yes
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<td>The design of the rolling stock, all its sub-systems and its relevant</td>
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<td>437</td>
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<td>9.2.6</td>
<td>The design life of the auxiliary converters shall be a minimum of 35 years</td>
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<td>The stipulations of EN 50388 and IEC 62213 shall be complied. Further,</td>
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<td>443</td>
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<td>445</td>
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</tbody>
</table>
CP26 / ARE02A Contract - Reply to Bidder Queries

446  Part 2 / Section VI A  14.5.2  c) Push Button record: All operations of Train operator including pressing of push buttons etc. shall be recorded with time stamp and be made available on DDU.

Please check if this clause can be updated as below since there are many VDU buttons which might not be important to record for example, buttons for the VDU screen transition.

Tender Condition Prevails. NO

447  Part 2 / Section VI A  14.5.5  DDU Access Control Levels

The access control system shall be based on different types of users accessing the DDU.

Operator Mode: For Train Fleet operation

Maintenance Mode: For Train Maintenance: PTU shall be used for testing and troubleshooting by connecting external laptop. PTU can also include VDU functionality and with these access levels according to the different user test engineer/maintenance etc.

Full Mode: Extension of VDU can be provided via PTU (Portable Terminal Unit) instead of DDU. Please check if this clause can be updated to include the standard as below:

Tender Condition Prevails. NO

448  Part 2 / Section VI A  14.5.7  DDU Hardware

Capactive-touch screen-based DDU or better shall be provided as approved by CMRL. The display screen shall be of coloured Light Emitting Diode (LED) type, suitable for use in rugged railway environment. DDU shall be equipped with brightness, sharpness, intensity and contrast controls etc.

The Contractor may propose the design concept for the Engineer's consideration during design stage. The Engineer's decision shall be final and binding on the Contractor.

Tender Condition Prevails. NO

450  Part 2 / Section VI A  2.14.2  SPECIFICATIONS:

During the rescue operation of a train with a burst MR pipe, a healthy assisting train (in AW 2 load condition) shall be capable of rescuing a failed train (in AW 4 load condition) with its parking brakes applied. The coupled AWO-AW4 consists shall be capable of starting and accelerating as a normal train at a speed of 4% and be able to reach a speed of 20 km/h in restricted manual mode.

This coupled train shall thereafter be able to push the defective train (with its load now reduced to AW1, but with parking brakes still applied) as far as necessary to reach the Depot.

The wheels of the train with parking brakes applied shall rotate without slipping under all operating conditions. The Contractor shall demonstrate that this requirement is met during main-line type functional testing. Wheel temperatures shall be monitored during testing using thermocouples that are mounted on every wheel with parking brakes applied during the entire push-out operation.

It is considered that the condition of rescue mode with its parking brakes applied is very rare case and has a huge impact on traction motor usage. In addition, high traction effort is needed when AW1 or AW2 self-propelled train is in service. At that case, adhesion ration is higher than normal traction effort and may cause map or slip. Therefore, please consider to revise it as follow:

During the rescue operation of a train with a burst MR pipe, a healthy assisting train (in AW 2 load condition) shall be capable of rescuing a failed train (in AW 4 load condition) with its parking brakes applied. The coupled AWO-AW4 consists shall be capable of starting and accelerating as a normal train at a speed of 4% and be able to reach a speed of 20 km/h in restricted manual mode.

This coupled train shall thereafter be able to push the defective train (with its load now reduced to AW1, but with parking brakes still applied) as far as necessary to reach the Depot.

The wheels of the train with parking brakes applied shall rotate without slipping under all operating conditions. The Contractor shall demonstrate that this requirement is met during main-line type functional testing. Wheel temperatures shall be monitored during testing using thermocouples that are mounted on every wheel with parking brakes applied during the entire push-out operation.

Tender Condition Prevails. NO

451  Part 1, section IV – Bidding Forms  4.11  PRICE CENTRE: RS-H – TRAINING AND MANUALS.

PRICE CENTRE RS-H (the site of an Operating Railway) must be part of a network that has provided GoA-4 / UTO operations for a period of > 2 years.

PRICE CENTRE: RS-H – TRAINING AND MANUALS.

PRICE CENTRE: RS-H (the site of an Operating Railway) must be part of a network that has provided GoA-4 / UTO operations for a period of > 2 years.

Tender Condition Prevails. NO

452  PART 1, section VIII – Evaluation and Qualification Criteria (EQC)  2.4(a)  Specific Experience

A minimum number of 105 cars (MRT, Suburban EMUs, Train sets) must have been manufactured as a Prime Contractor (single entity or JV member) during the last ten (10) years of the bid submission deadline.

PRICE CENTRE: RS-H (the site of an Operating Railway) must be part of a network that has provided GoA-4 / UTO operations for a period of > 2 years.

Tender Condition Prevails. NO

453  PART 1, section VIII – Evaluation and Qualification Criteria (EQC)  2.4(b)  Specific Experience

A minimum of 53 cars comprising stainless steel / steel EMU / MEMU / Metro car manufactured in India for either metro company or Indian Railways.

Tender Condition Prevails. NO

454  PART 1, section VIII – Evaluation and Qualification Criteria (EQC)  2.4(c)  Specific Experience

A minimum of 53 cars (MRT, LRT, Suburban EMUs, Train sets) must have been manufactured as a Prime Contractor (single entity or JV member) during the last ten (10) years of the bid submission deadline.

Tender Condition Prevails. NO

455  PART 1, section VIII – Evaluation and Qualification Criteria (EQC)  2.4(d)  Specific Experience

A minimum of 53 cars (MRT, Suburban EMUs, Train sets) for a period of three years shall be in satisfactory revenue operation at the time of bid submission deadline.

Tender Condition Prevails. NO
Bidder’s queries

CMRL Response

Addendum

456  Part-3/ Section – VII Particular Conditions of Contract (PCC)  Table 1.1 : Summary of Sections : Key Date - Rolling Stock

Effective Lift : Maximum 1800mm

It is clarified that the height achieved at the fully extended stroke must be at least 1800mm.

Funder Conditions Preval.  No

457  Part 2 / Section VI B  3.2 SNQ2

Effective Lift : Maximum 1800mm

It is clarified that the height achieved at the fully extended stroke must be at least 1800mm.

Funder Conditions Preval.  No

458  Part 2 / Section VI B  3.2 SNQ2

Effective Lift : Maximum 2700 mm

It is clarified that the height achieved at the fully extended stroke must be at least 2700mm.

Funder Conditions Preval.  No

459  Part 2 / Section VI B  3.16.7

Main control panels shall be fitted with door mounted electrical isolation switches for the safety of maintenance personnel.

Clause 3.16.7. Main control panel shall be fitted with door mounted electrical isolation switches. Normally for UFLS the Isolator Switch is fixed on the side of the main control cabinet. Please confirm that this is acceptable.

Funder Conditions Preval.  No

460  Part 2 / Section VI B

Normally the Sump pump and Pit Lighting is a separate system and it is better to park these under civil work contract. Please consider.

Funder Conditions Preval.  Sump pump and Pit Lighting (LED) is within the scope of the ARE02A Contract.  No

461  Part 2 / Section VI B  6.3.2 (ii) (MLJ)

A rapid changing of the spindle nut without dismounting the jack and without additional hoists shall be possible.

Clause 6.3.2 (i) - "Dismounting the Spindle nut without additional hoists shall be possible". Normally this is not possible because you will need a home to lift up the spindle at least then the lifting nut can be completely removed out.

Funder Conditions Preval.  The Contractor may propose the design concept for the Engineer's consideration during design stage. The Engineer’s decision shall be final and binding on the Contractor.  No

462  Part 2 / Section VI B  6.3.2 (v) (MLJ)

The gear torque support shall be provided with rubber bumpers. All bearings of the gear and motor shall be roller bearings.

Clause 6.3.2 (iv) - "Gear torque Support shall be provided with rubber bumper. It depends on different suppliers. Some suppliers has such design but not all suppliers has this design. Please consider to remove this clause."

Funder Conditions Preval.  The Contractor may propose the design concept for the Engineer's consideration during design stage. The Engineer’s decision shall be final and binding on the Contractor.  No

463  Part 2 / Section VI B  6.3.3 (iv) (MLJ)

The Safety nut shall be made of cast iron.

Clause 6.3.3 (iv) - "The Safety Nut shall be made of Cast Iron. Normally the Safety Nut is preferable to be made of Bronze because when using Cast Iron Safety Nut the Lift Spindle will wear out faster. Please consider to remove this clause."

Funder Conditions Preval.  No

464  Part 2 / Section VI B  12.3.9 (BTT)

One operating lever shall be provided to each turntable for manual turning operation. An inbuilt provision shall be provided for storage of the lever within the Turntable.

Clause 12.3.9 - "an in-built provision shall be provided for storage of the lever within the Turntable. Currently only 1 life of the supplier is using this design. Please consider to remove or replace it."

Funder Conditions Preval.  The Contractor may propose the design concept for the Engineer's consideration during design stage. The Engineer’s decision shall be final and binding on the Contractor.  No

465  Part-1/Section I  Clause 18.3

Part-1/Section IV  Schedule of Payments/ Bidding Forms/ Price Centre Table- RS-B, C, D, E & F

Part-1/Section I  Clause 18.3

Part-1/Section IV  Schedule of Payments/ Bidding Forms/ Price Centre Table- RS-B, C, D, E & F

With reference to provision under clause 18.3, it is our understanding that bidders may add breakdowns of items of Milestone Number”, “Milestone Activity”, “Arportioned Amount” and “Period of Completion of Milestone” in the Part-1/Bidding Forms/ Schedule of Payments/ Price Centre Table- RS-B, C, D, E & F for “Each Train Set”. Kindly refer revised Bidding Forms/ Schedule of Payments/ Price Centre Table- RS-B, C, D, E & F with Train set for your review and confirmation please.

Further, we also understand that Payments for respective breakdown milestones will be made as per Completion of respective milestone. Requesting you to kindly confirm our understanding.

Funder Conditions Preval.  No