CP26 / ARE02A Contract - Reply to Bidder Queries (02)						
Sl no	**Part / Section No**	**Clause No.**	**Original Bid Condition**	**Bidder's queries**	**CMRL Response**	**Addendum**
1	Part-1, Section I, Part-1, Section III & Part 1, Section IV	Part-1/Section I/ Clause 18.3 Part-1/Section III/EQC/Clause 2.6 & Part-1/ Section IV/ Schedule of Payments/ Bidding Forms/ Price Centre RS-B, C, D, E & F	EQC/Clause 2.6: Establishment of manufacturing facility in India: The successful bidder shall ensure that 75% of the quantity ordered in this bid is achieved by establishing / established metro cars manufacturing facility in India to manufacture or utilize existing Rolling Stock manufacturing facility in India for assembly Works. ITB/ Clause 18.3// Bidders shall provide price in each item in the manner and detail called for in the Price Schedules included in Section IV, Bidding Forms. Further, Bidders may add breakdowns of items and provide the prices in each Price Schedule included in Section IV, Bidding Forms. & Part-1/Bidding Forms/ Schedule of Payments/ Price Centre Table- RS-B, C, D, E & F: Price centre RS-A,B,C,D,E,F-Tender.pdf	1.) With refernce to provision under the clause Part-1/Section III/EQC/2.6, Bidders are allowed to import upto 25% of the Trains (maximum 18 Trainsets). Bidder is permitted to import any quantity between 1 Trainset to 18 Trainsets. Accordingly, the Milestones in the Price Centres 'B', 'C', 'D' & 'E' will need to be suitably changed to make them compatible with the number of trains being imported. For example, in case the number of trainsets being manufactured offshore is '5', the Milestone RS-B2 shall have to be changed to following: Existing MILESTONE NUMBER | WORK DESCRIPTION – MILESTONE ACTIVITY | APPORTIONED AMOUNT – INR COLUMN A, JPY COLUMN B, FC COLUMN C | PERIOD OF COMPLETION OF MILESTONE FROM COMMENCEMENT DATE (QUANTITY) | ALLOWABLE APPORTIONMENT % Obtain the "No Objection With Comments (NOWC)" / "Notice of No Objection (NONO)" from the Employer / Engineer for: a. Issue of Inspection / Certificate on satisfactory completion of all Factory Tests / running; b. Marine Insurance; c. Documents for shipment to Indian Port; d. Transit insurance from Port in India to Depot Site in Chennai; and For; e. Delivery of cars to CMRL's property RS-B1 | First 3-car rake (Prototype Rake) | | | | | Price Centre RS-B Table-Combined shall not exceed 48.45 % RS-B2 | Obtain as above for first 8 train sets | | | | | RS-B3 | Obtain as above for next 7 train sets | | | | | RS-B4 | Obtain as above for next 2 train sets | | | | | RS-B | PRICE CENTRE TOTAL (RS-B1 – RS-B4) | | | | | Replace with 4.4.5 PRICE CENTRE 'RS-B' – OFFSHORE MANUFACTURE, TESTING, INSPECTION, TRANSPORTATION AND DELIVERY TO CMRL DEPOT DETAILS NOT TO BE SUBMITTED IN TECHNICAL BID. IT SHALL BE FILLED AND UPLOADED ONLY IN THE PRICE BID DOCUMENT OF E-PROCUREMENT PORTAL. MILESTONE NUMBER | WORK DESCRIPTION – MILESTONE ACTIVITY | APPORTIONED AMOUNT – INR Column A, JPY Column B, FC Column C | PERIOD OF COMPLETION OF MILESTONE FROM | ALLOWABLE APPORTIONMENT % Obtain the "No Objection With Comments (NOWC)" / "Notice of No Objection (NONO)" from the Employer / Engineer for: a. Issue of Inspection / Certificate on satisfactory completion of all Factory Tests / running; b. Marine Insurance; c. Documents for shipment to Indian Port; d. Transit insurance from Port in India to Depot Site in Chennai; and For; e. Delivery of cars to CMRL's property RS-B1 | (First 3-car rake (Prototype Rake) RS-B2.1 | Obtain as above for First 2 train sets RS-B2.2 | Obtain as above for next 2 train sets RS-B2.3 | Obtain as above for next 2 train sets RS-B3 | Obtain as above for next 7 train sets RS-B4 | Obtain as above for next 2 train sets RS-B | PRICE CENTRE TOTAL (RS-B1 – RS-B4) Appropriate bifurcation of Price Centres 'C', 'D' & 'E' shall have to be done in line with the changed Price Centre 'B' above. Further, kindly refer worksheets Table '4.4.5', '4.4.6', '4.4.7' & '4.4.8' with revision in Price Centres 'B', 'C', 'D' & 'E' respectively.	**Refer to Addendum_02 S/N 02**	Yes
2	Part-1, Section IV	Part-1/Section IV/ Bidding Forms/Form 5.16/ Manufacturers Authorization	5.16/ Form Man: Manufacturer's Authorization	With reference to the Section IV/Bidding Forms/5.16, we would like to draw your kind attention that in bidding stage suppliers are not ready to accept Clause 11/PCC/Deffect Liability and also not ready give authorization to the bidder as it is very early stage. Hence, it is requested to kindly consider Form MAN applicability for the Contractor and not to the Bidders. Alternatively, Bidders should be allowed to submit undertaking with commitment to submit suppliers FORM MAN in project Stage.	**Refer to Addendum_02 S/N 05**	Yes
3	Part-1, Section IV	Part-1/Section IV/Bidding Forms/Clause 3.1.3 Part-1/Section IV/Bidding Forms/Table 4.3.1, 4.3.2, 4.4.13, 4.4.14, 4.4.15 & 4.4.16	As single rate of custom duty is available under project imports scheme under heading 98.01 of Custom Tariff Act 1975 for import of capital goods, the advantage of the same may be considered under project import scheme. After award of the Contract, Employer at the written request of a Contractor shall facilitate the Contractor for obtaining sponsoring / recommendation letter from the Ministry of Housing and Urban Affairs (MoHUA) / GOI for getting themselves registered for availing Project Import benefits. However, the responsibility to avail the concessional benefits under Project Import or otherwise as extended in accordance with the law of the land shall solely rest with the Contractor.	It is our understanding that Project will qualify under Project Import Scheme with Concessional Custom Duty. Accordingly, we request you to kindly confirm following: 1) CMRL will reimburse only 'Concessional Custom Duty' under project impport scheme and limited to import made. Kindly confirm. 2) It is our understanding that Imports made by approved Sub-contractors for supply of materials/equipment for Onshore manufacture, **whose details are included in the BOM proposed by the Contractor shall be eligible for Concessional Custom Duty under Import Project Scheme.** 3) It is our understanding that CMRL will assist the Contractor by way of documentation support in obtaining Project import license for concessional Custom Duty for all items of import as finalized by the Contractor irrespective rather the amounts have been filled in the Custom Duty or Not.	**Refer to Addendum_02 S/N 01**	Yes
4	Part 3 : Section VIII - Particular Conditions (Part B: Specific Provisions	7.7 Ownership of Plant and Materials	Replace Sub-clause 7.7 with the following: Ownership of the Plant and Equipment (including spare parts) to be imported into the country where the Site is located shall be transferred to the Employer at high seas. Contractor shall maintain all insurance and bear all risks for safe handling and transport of the cars until delivery to Employer's depot site.	On perusal of the Particular conditions provided in the bidding documents, we understand that in respect of imported products, ownership is transferred at high seas, while contractor bears all cost/ risk (including insurance) till the goods are delivered to CMRL in India. In this regard, we request CMRL to confirm if the title/ownership in the imported products will be transferred outside India.	Tender Condition Prevails.	n/a
	Part-1, Section – IV - Bidding Forms	PRICE CENTRE 'RS-B' – OFFSHORE MANUFACTURE, TESTING, INSPECTION, TRANSPORTATION AND DELIVERY TO CMRL DEPOT	As per the Bidding Form, Contractor is responsible for delivery of goods till CMRL's depot		Tender Condition Prevails.	n/a
5	Part-3, Section - VIII/ PCC	Section - VIII (PCC [Part A])/ Sl. No. 21	Total advance payment: The interest free mobilization advance at the rate of 10 % of the accepted Contract amount (Excluding Taxes & Duties, Provisional Sum, Price Centre 'RS-CMC' and 'DM&P-CMC') in the currencies and proportions is payable against production of Bank guarantee from a public sector bank. And the guarantee shall be in the form of a BG for 110% of the advance amount requested. (in parlance with CVC guidelines). GST on the mobilization advance is not reimbursable. Mobilization advance shall be paid in two equal instalments.	It is our understanding that Mobilisation advance will be paid against Performa Invoice and GST shall not be appicable on mobilisation advance. Kindly Confirm.	The bidder's understanding is correct. Tender Condition Prevails.	n/a
6	Part-1, Section – IV/ Bidding Forms/	1.2 Letter of Price Bid	Table D. For Price Centre RS-CMC and Price Centre DM&P-CMC (Applicable for INR) Table D. For Price Centre RS-CMC and Price Centre DM&P-CMC (Applicable for INR) DETAILS NOT TO BE SUBMITTED IN TECHNICAL BID. IT SHALL BE FILLED AND UPLOADED ONLY IN THE PRICE BID DOCUMENT OF E-PROCUREMENT PORTAL. Code | Description | Source | Weightage | Base value and date a | Non-adjustable (Fixed) | N/a | 0.33 | b | All India Consumer Price Index for Industrial Workers for Chennai (CPI-IW) | *i | 0.27 | c | Wholesale Price Index for Manufacture of Electrical Equipment (WPI-MEE) | *ii | 0.20 | d | Wholesale Price Index for Manufacture of Computer, Electronic and Optical Products (WPIMCEOP) | *iii | 0.20 |	Table D. For Price Centre RS-CMC and Price Centre DM&P-CMC We note that price variation for the Price Centre RS-CMC and DM&P-CMC has been defined as 33% (Fixed)+ 27% (CPI-IW)+20% (WPI-MEE)+20%(WPI-MCEOP). Assessment of past years indices with the defined Weightage, doesn't address the actual inflation linked with CMC scope. It is requested to kindly review Table-D Inflation index along with their respective Weightage and request you to define in line with recent JICA funded RS projects (DMRC/RS17 & BMRCL/5RSDM) where Maintenance of 15 years was also part of scope, with **Price variation for the Maintenance Price centre was defined as 20% (Fixed)+ 40% (CPI-IW)+ 40% (WPI)**. Kindly note that Price Variation Clause(PVC) for maintenance in RS17 and 5RSDM Projects has been defined after detail industrial consultation. We recommend you to kindly amend the clause in line with the recent JICA funded RS projects (DMRC/RS17 & BMRCL/5RSDM). Related Tender extrct of DMRC/RS17 and Bangalore/ 5 RSDM **reflecting 20% (Fixed) for Price variation for the Maintenance Price centre** are enclosed for your ready reference. Price Adjustment Data for DMRC RS17.pdf Price Adjustment Data BMRCL 5RSDM.pdf	Tender Condition Prevails.	No
7	Part-3, Section - VII/ GCC & PCC/Part-3, Section - VIII/Particular Conditions	GCC/1.1.3.7/DNP & GCC /11/Defect Liability & GCC 1.1.3.13, 1.1.5.8; 4.25,11.9 11.1.1 DLP/ DNP - Rolling Stock & 11.1.2, 11.3, DLP/ DNP – Depot M&P: & PCC/(Part B: Specific Provisions)/ PCC Clause 3, 7,10, 26,41, 42, 43 Comprehensive Maintenance Contract (CMC)	DLP/DNP & CMC Requirements:	• In recent past, two JICA funded contracts ('DMRC/RS17- Part B-78 Cars with 15 Years DLMP' & 'BMRCL/5RSDM- 318 Cars with 15 Years DLMP) have been finalised by Metro Authorities where 15 Years of Comprehensive Maintenance was also part of scope with no requirement of DLP. Both tender conditions clearly define scope of DLMP/CMC as "Start of Revenue Service of first TS" and Ends "15 years from the start of revenue service of the last TS". Similar requirements were also defined in RRTS/DELHI-GHAZIABAD–MEERUT RRTS. • DLP/DNP As per tender condition of CP26/ARE02A, Contractor is required to carry out complete maintenance (Scheduled and unscheduled maintenance of trains & M&P's) during the DNP/DLP. This implies that Contractor will be incurring Maintenance cost even during DLP phase without being compensated. With the provision of DLP/DNP extension, this becomes very risky topic to estimate/manage which has cascading impact even on Maintenance. • Provision of DLP/DNP and extensions in the tender, may lead to non-uniform interpretation by different bidders and this becomes very risky topic to estimate/manage in case of delay in readiness of Civil infrastructure. In view of above, we request you to kindly review tender conditions pertaining to DLP/DNP and may kindly be aligned as per JICA funded projects (DMRC/RS17- Part B-78 Cars with 15 Years DLMP' & 'BMRCL/5RSDM- 318 Cars with 15 Years DLMP). May kindly review this requirement in line with bid queries provided earlier. We would like to bring your kind attention, as per present Tender conditions, significant Depot Operation and Maintenance cost need to be considered by Bidders in the Rolling Stock Supplier's part. Further the duration of DLP can be interpreted differently by different Bidders and may lead to non-level playing field. Accordingly, we request you to kindly revise DLP tender conditions to ensure common understanding by different Bidders.	Refer to: **Addendum_02 S/N 80** **Addendum_02 S/N 81** **Addendum_02 S/N 82**	Yes
8	Part-3, Section - VIII/Particular Conditions	(Part B: Specific Provisions)/ PCC Clause 52 & GCC 14.9 GCC/14.3('C) & PCC/ Part A: Sr No. 23 & 24 Section 9/ Form 6/Retention Money Security	5% Retention Money Requirements:	• As Contractor scope covers 15 years comprehensive maintenance where Contractor 'Performance Bank Guarantee' will be already available, Retention money deduction shall not be applicable. We would like to bring to your kind attention that in similar scope tenders, retention money deduction was not applicable in recent JICA funded DMRC / RS17 & BMRCL/5RS-DM. • Retention money requirement will have significant impact on project cash-flow and can be very risky and may lead to non-uniform interpretation by different bidders especially in case of DLP/DNP extension and linked to Civil infrastructure delay. In view of above, we request you to kindly review tender conditions pertaining to Retention money deduction may kindly be aligned as per JICA funded projects (DMRC/RS17- Part B-78 Cars with 15 Years DLMP' & 'BMRCL/5RSDM- 318 Cars with 15 Years DLMP). May kindly review this requirement in line with bid queries provided earlier.	The bidder may take note that an earlier change (published with Addendum-01) had already removed Retention Money deductions from CMC Price Centres. Tender Condition Prevails.	No
9	Corrigendum 02	Bid Submission timeline:	01 December 2023	In line with our bid extension request letter number CAF/CMRL/ARE02A/2023-24, dated 9th October, 2023, we kindly request you to extend the Bid submission date of subject tender up to 25th January, 2024	The bidder may refer to Corrigendum-03 which was published on 18 Nov 2023	n/a

CP26 / ARE02A Contract - Reply to Bidder Queries (02)						
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10	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	6.9.3	The two (2) required operating modes of the Detrainment Door are as follows:- a. Train to Track Evacuation Mode (will be configured this way when the DM cars are not coupled) b. Train to Train Evacuation Mode (will be configured this way when DM cars are coupled during multi-consist operation)	There is lack of availability of proven technology for train to train mode of detrainment doors. It could have difficulties in safe evacuations of passengers. It is thus suggested that train to train mode of front detrainment door should be deleted. Hence the proposed clause is: The required operating mode of the Detrainment Door is as follows:- a. Train to Track Evacuation Mode (will be configured this way when the DM cars are not coupled).	Refer to: **Addendum_02 S/N 28** **Addendum_02 S/N 29** **Addendum_02 S/N 30** **Addendum_02 S/N 31** **Addendum_02 S/N 32** **Addendum_02 S/N 33** **Addendum_02 S/N 34**	No
11	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	11.12.2	All wheels of bogies shall have derailment detection device. A derailment detection device can reduce the escalation of accident consequences to passengers and property, even in the event of partial train derailment. The derailment detection device shall monitor all running axles, 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.	Derailment detection is sometimes requested in metros on both ends of the train. However, providing derailment detection on all wheels is not known. No proven technology is known for derailment detection of all wheels of bogies. It is thus requested to replace this requirement with derailment detection devices on each end of train, which is a proven system. Hence the proposed clause is: **Each end of train shall have Derailment detection device.** A derailment detection device can reduce the escalation of accident consequences to passengers and property, even in the event of partial train derailment. The derailment detection device 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.	Refer to: **Addendum_02 S/N 50**	Yes
12	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	11.12.1	At both the outer ends of the Driving Motor Car, an obstruction deflection & detection device shall be installed to detect the obstacles and push away obstacles on track to avoid derailment. At the front of the cab car at both ends of the train, an obstacle detection device shall be installed. The obstacle detection device shall detect obstacles in front of the train at the earliest point practicable within emergency braking distance. The detection of obstacle shall initiate the emergency brake. Detection of an obstacle shall be reported to the OCC as an emergency message and shall be recorded by the TCMS.	There is no proven technology known to detect the obstacles in front of the train from far distances which is successfully working in any metro system. This kind of system has so far not been requested and implemented in any working rolling stock in India. Please consider deleting the portion highlighted in red in the requirement. Hence the proposed clause is: At both the outer ends of the Driving Motor Car, an obstruction deflection & detection device shall be installed to detect the obstacles and push away obstacles on track to avoid derailment. At the front of the cab car at both ends of the train, an obstacle detection device shall be installed. Detection of an obstacle shall be reported to the OCC as an emergency message and shall be recorded by the TCMS.	Refer to: **Addendum_02 S/N 49**	Yes
13	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	11.4.10(a)	The primary suspension shall consist of elastomeric elements, such as chevrons or conical rubber springs	Elastomeric elements are non optimal solution for longitudinal forces. Better performance is met by using helical coil springs. Furthermore, helical coil spring requires less maintenance. Various Indian metros have adopted helicoidal springs as primary suspension in their projects (DMRC RS2, DMRC RS10, DMRC RS17, Mumbai Line 2&7). It is proposed to allow helical coil springs for primary suspension in bogie instead of Elastomeric elements. Hence the proposed clause is: The primary suspension shall consist of elastomeric elements, such as chevrons or conical rubber springs **or helical coil steel spring.** Attaching some tender specification extracts of recent tenders in Indian Metros for your kind reference. DMRC RS17 requirement **5.4 Bogie Construction: Primary and Secondary Suspension** 5.4.1.1 The Contractor shall submit a proposal for the primary suspension system of proven helical coil steel springs. Use of Chrome vanadium grade Steel as per EN10089 for helical coil primary suspension system design shall be ensured. The helical coil springs shall be designed for the lifetime of train/carbody. Springs shall be designed and tested as per EN 13298 and EN 13906. Bangalore Metro 5RS-DM Tender Specification BMRCL Bid No.3 RS- DM Section: VI B - Employer's Requirements: Technical Specifications 10 **BOGIES** 10.1 **General Requirements and Features** 10.1.1 The bogies shall be of the two axle bolster less type incorporating a primary suspension system of proven steel-and-rubber or helical coil steel springs with vertical and lateral dampers, and a secondary pneumatic suspension system, and with axle bearings outboard of the wheels.	Refer to: **Addendum_02 S/N 43** **Addendum_02 S/N 44** **Addendum_02 S/N 45** **Addendum_02 S/N 46** **Addendum_02 S/N 47**	Yes
14	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	11.6.5(b)	Radiographic inspection tests shall be done on an agreed upon minimum number of bogie frames and traction bar arrangements as per an approved inspection plan. All inspection results shall be submitted to CMRL.	"Magnetic Particle Inspection" and "Dye penetration" test are done for bogie frame inspection as they are best suitable for bogie frame inspection w.r.t accuracy and safety as compared to Radiography test. Thus, it is requested to allow for Magnetic Particle testing or dye penetration test and delete requirement for radiographic tests. Hence the proposed clause is: **Magnetic Particle or Dye Penetration** inspection tests shall be done on an agreed upon minimum number of bogie frames and traction bar arrangements as per an approved inspection plan. All inspection results shall be submitted to CMRL.	As per ERTS Clause 17.6.16.1, Radiographic inspection test need only be performed on 1 in every 10 bogie frames. Tender Condition Prevails.	No
15	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	7.4.5.3	In the event of the system failure or power supply failure of any individual VAC unit, an emergency ventilation system (one [1] hour operation with battery supply) shall operate automatically to admit fresh air directly into car to maintain the required oxygen level in the fully laden car, in accordance with EN 14750. In this emergency ventilation condition, the outside fresh air shall be admitted into car at a minimum rate of 5 litres / sec / passenger (@ AW4 load). The ventilation fan shall be fed from the 110V DC supply with its dedicated inverter per each VAC unit during these conditions	The fresh air flow requirement during emergency condition of 5liters/sec/passenger seems to be very high. To comply with 5liters/sec/passenger fresh air flow will significantly increase velocity of air and noise in the duct. Further size of HVAC is also increased because of this. Following are some of the reference values for fresh air flow per passenger during emergency condition in different projects/tenders: i) DMRC RS17: 10 m3/hr/pass. (i.e. 2.77 L/s/pax). ii) Pune metro: 10 m3/hr/pass. (i.e. 2.77 L/s/pax). iii) Bangalore metro: 3.33 L/s/pax. Request you to kindly reduce the requirement inline with industry practice. Hence the proposed clause is: In the event of the system failure or power supply failure of any individual VAC unit, an emergency ventilation system (one [1] hour operation with battery supply) shall operate automatically to admit fresh air directly into car to maintain the required oxygen level in the fully laden car, in accordance with EN 14750. In this emergency ventilation condition, the outside fresh air shall be admitted into car at a minimum rate of **2.77 litres / sec / passenger** (@ AW4 load). The ventilation fan shall be fed from the 110V DC supply with its dedicated inverter per each VAC unit during these conditions In the attached file, we are providing the CO2 ppm level which is specified in an EU regulation and the air flow required to manage it, which is much lower than the value specified in ARE02A tender.	Refer to: **Addendum_02 S/N 36**	Yes
16	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	7.6.3	An average temperature of 25°C and relative humidity of 60% shall be automatically maintained within the saloon and emergency operator's desk areas that are under AW4 loading. The system shall be rated to fulfil this requirement until an outside ambient design condition of 38°C & 65% RH in summer, and 35°C & 80% RH in winter.	Designing the HVAC cooling conditions for the highest passenger capacity of AW4(8Pax/m2) loading condition and for worst case environmental conditions will increase the heat load significantly which will not be used for most of the time. This will oversize the equipment leading to lower energy efficiency and also significantly higher physical dimensions and weight. This is also causing significant increase in SEC for HVAC. It is suggested that loading conditions and also environmental conditions may please be reduced as was there in ARE03 tender conditions. Hence the proposed clause is: An average temperature of 25°C and relative humidity of 60% shall be automatically maintained within the saloon and emergency operator's desk areas that are under **AW3** loading. The system shall be rated to fulfil this requirement until an outside ambient design condition of 38°C & **36.2 %** RH in summer, and 35°C & **70%** RH in winter. ARE03 Ref : 7.6.3, AW3	The bidder may refer to Table 7-1 : Climatological Data for the rationale of this requirement. Tender Condition Prevails.	No
17	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	18.6.6.1	Table 18-2: The Reliability calculation shall be as per the below requirements: Level 1 Six (6) months period after passenger service induction date of first train 80,000 Km Level 2 Twelve (12) months period after passenger service induction date of first train 1,25,000 Km	A sufficient time should be provided for the system to get stabilized and hence it is proposed that Level1 and Level2 should be specified at 12 months and 18months respectively after passenger service induction date of first train. Hence the proposed clause is: Table 18-2: The Reliability calculation shall be as per the below requirements: Level 1 **Twelve (12)** months period after passenger service induction date of first train 80,000 Km Level 2 **Eighteen (18)** months period after passenger service induction date of first train 1,25,000 Km	Refer to: **Addendum_02 S/N 61**	Yes
18	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	18.6.6.1(d)	Any train shall be considered for reliability calculations after due completion of various testing and commissioning as detailed in Chapter 17, after completion of UTO trails and after sanction of Train's Conditional Acceptance certificate from CMRL for operation in passenger revenue service.	A stabilization period of 6months shall be required for each train from its entry into revenue service, before it could be counted for reliability calculations. It is requested to amend the clause suitably. This is similar to other metro tenders in India Hence the proposed clause is: **Any train shall be considered available for reliability calculations only after six (6) months of stabilization period after putting the train into revenue service.** Attaching some tender specification extracts of recent tenders in Indian Metros for your kind reference. DMRC RS17 ERTS requirement clause 1.2 reliability requirement: (iv) 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.	Refer to: **Addendum_02 S/N 61**	Yes
19	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	5.2.16	The train operator's seat shall be cushioned, non-slippery, ergonomically designed using non- flammable materials and filling, and fully adjustable in the longitudinal and vertical directions. The seat shall be foldable and adequate measures shall be taken to ensure that it is opened only by the train operator.	An adjustable seat in the longitudinal and vertical direction makes it complex and also bulky. As the driver is required to use seat in cases when train shall be operated in manual mode and thus the seat could be simpler without longitudinal and vertical adjustments. Similar trains in India had not requested this type of seat. Hence the proposed clause is: The train operator's seat shall be cushioned, non-slippery, ergonomically designed using non-flammable materials and filling. The seat shall be foldable and adequate measures shall be taken to ensure that it is opened only by the train operator.	Refer to: **Addendum_02 S/N 24**	Yes

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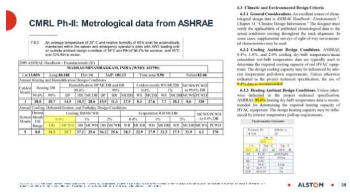
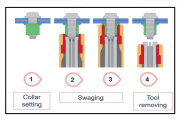
20	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	3.6.1.22	All internal panels (side panels, ceiling panels, end-ceiling panels, inspection cover panels, door coving panels, ceiling coving panels, etc) shall be of aluminium material with proven record in Metro/ EMU application. Coating system shall be proposed by the Contractor shall be proven and conform to the requirements in clause 3.6.1.21, subjected to CMRL approval.	Providing aluminium panels at places requiring complex shapes is not feasible. Thus, FRP panels may please be allowed at such locations. Hence the proposed clause is: All internal panels (side panels, ceiling panels, end-ceiling panels, inspection cover panels, door coving panels, ceiling coving panels, etc) shall be of aluminium **or FRP** material with proven record in Metro/ EMU application. Coating system shall be proposed by the Contractor shall be proven and conform to the requirements in clause 3.6.1.21, subjected to CMRL approval.	Tender Condition Prevails.	No
21	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	3.2.4 & 3.9.6	3.2.4 Roof shrouding shall be designed in a manner that does not impede equipment function, drainage, or duty cycle, or cause premature degradation. 3.9.6 All roof-mounted equipment shall be masked or covered by a continuous shroud that is consistent with the exterior colours and styling of the car. Shrouds shall be easily removable to enable access to roof-mounted equipment.	Shroud are not recommended on the roof of the train as it will adversely affect the Kinematic Envelope and will impede maintenance of the roof mounted equipment. Furthermore, downtime for maintenance will be increased. Thus, it is requested to delete clause 3.2.4 & 3.9.6. Hence the proposed clause is: 3.2.4: **Not used.** 3.9.6: **Not used.**	Refer to: **Addendum_02 S/N 19** **Addendum_02 S/N 22**	Yes
22	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	13.7.1.14.2	Each DRMD unit shall be a single display screen with a stretched aspect ratio. The minimum dimensions shall be 965mm x 183mm. The use of multiple screens joined together shall not be accepted.	The dimensions specified in the tender are non standard and making solution difficult to be accommodated in the space available above doors. It is thus suggested to open the requirement to allow solutions that can be accommodated in the space above doors to be applied. A value of 36.6 inches display may be considered. Hence the proposed clause is: Each DRMD unit shall be a single display screen with a stretched aspect ratio. The minimum dimensions shall be **36.6 inches.** The use of multiple screens joined together shall not be accepted.	Refer to: **Addendum_02 S/N 52**	Yes
23	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	13.7.1.16.1	6 no's of LCD with LED backlit 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.	The dimensions specified in the tender are non standard. It is thus suggested to allow screen size of 18.5 inches to be used. Hence the proposed clause is: 6 no's of LCD with LED backlit displays or any latest better technology displays of size not less than **18.5 inches** shall be provided inside each coach at an appropriate location. The display location and specification shall be submitted for CMRL approval.	Refer to: **Addendum_02 S/N 54**	Yes
24	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	13.10.12	Each PEI device shall be equipped with one miniature temper proof camera including microphones, loud-speakers and alarm button. Additionally, the CCTV's of the car shall also focus the specific PEI area shall be automatically selected and displayed in OCC, BCC, DCC and in TCMS.	Miniature camera in PEI device solution is not available with Japanese suppliers, which makes it difficult to comply with Japanese content requirement for project. It is thus suggest to delete requirement for miniature camera in PEI. Hence the proposed clause is: Each PEI device shall be equipped with microphones, loud-speakers and alarm button. Additionally, the CCTV's of the car shall also focus the specific PEI area shall be automatically selected and displayed in OCC, BCC, DCC and in TCMS.	Refer to: **Addendum_02 S/N 55**	Yes
25	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	2.25.1	The Contractor shall note that 'SPECIFIC ENERGY CONSUMPTION (SEC)' shall be verified in any one corridor of Phase 2 as agreed with CMRL under conditions detailed hereafter in this clause shall not exceed 48 Wh /GTKM (watt hours per gross tonne kilometre), referred to as SECs. The Contractor shall submit detailed simulation results for all corridors of Phase 2 in Pre Final Design stage.	Contractor may kindly be allowed to select the corridor for verification of SEC as per the estimation made by the propulsion equipment supplier. Minimum value of 51 Wh/GTKM is requested. Hence the proposed clause is: The Contractor shall note that 'SPECIFIC ENERGY CONSUMPTION (SEC)' shall be verified in any one corridor of Phase 2 **selected by the contractor based on the estimation** under conditions detailed hereafter in this clause shall not exceed **51 Wh /GTKM** (watt hours per gross tonne kilometre), referred to as SECs. The Contractor shall submit detailed simulation results for all corridors of Phase 2 in Pre Final Design stage.	Refer to: **Addendum_02 S/N 15** **Addendum_02 S/N 16** **Addendum_02 S/N 17**	Yes
all out	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	2.25.10(a)(v)	The train operation in Normal mode shall be in maximum acceleration and deceleration with no coasting till maximum speed is achieved and thereafter speed is maintained within 5 kmph below than the maximum speed. During braking, maximum regenerative braking shall be utilized to achieve the specified retardation rate from top speed till train stops and the Jerk rate shall be limited within the specified limit.	The condition specified in 2.25.10(a)(v) is not aligned with the requirement specified in 2.25.10(a)(i). Hence proposed clause is: The train operation in Normal mode **as per the Guaranteed "Declared Schedule Speed (DSSP) in Kmph for a round trip as specified in 2.25.10(a)(i).**	Refer to: **Addendum_02 S/N 18**	Yes
27	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	2.14.2.2	During the rescue operation of a train with a burst MR pipe ; a healthy assisting train (in AW0 load condition) shall be capable of rescuing a failed train (in AW4 load condition) with its parking brakes applied . The coupled AW0~AW4 consists shall be capable of starting and accelerating up a worst case gradient of 4% and be able to reach a speed of 20 kmph in restricted manual mode.This coupled rake of healthy and defective consists shall be able to ascend any combination of gradient and/or curve as may be necessary to reach the next station to allow passengers to deboard. The healthy train shall thereafter be able to push the defective train (with its load now reduced to AW0, 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 sliding under all operating conditions . The Contractor shall demonstrate that this requirement is met during main line type 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.	As per ERTS 12.6.8.12 train driver can mechanically release parking brake from the salon and will operate train when rescue operation. On the other hand, i. As per ERTS 2.15.7.1, Parking Brake shall hold a train from rolling back on 4% ii. Further propulsion rating for emergency to push/pull at 4% gradient, with no brakes applied While in this case, considering i & ii above, propulsion system must consider much tractive higher effort to push/pull such defective train. Also from the rating point, since 4% hold force coming from the Parking Brake and continuous operating under 20kmph for a line lengths over 50~90kms, rating will drastically increase, affecting weight/size/energy/etc. Therefore, CMRL should revise the ERTS for rescue operation without parking brake. Hence the proposed clause is: During the rescue operation of a train ; a healthy assisting train (in AW0 load condition) shall be capable of rescuing a failed train (in AW4 load condition). The coupled AW0~AW4 consists shall be capable of starting and accelerating up a worst case gradient of 4% and be able to reach a speed of 20 kmph in restricted manual mode. This coupled rake of healthy and defective consists shall be able to ascend any combination of gradient and/or curve as may be necessary to reach the next station to allow passengers to deboard. The healthy train shall thereafter be able to push the defective train (with its load now reduced to AW0) as far as necessary to reach the Depot. The Contractor shall demonstrate that this requirement is met during main line type 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.	Refer to: **Addendum_02 S/N 10**	Yes
28	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	2.15.9.7 & 2.15.9.8	2.15.9.7:The correction of slide shall act independently on each axle basis. The system shall be fully adaptive to varying adhesion conditions to maximize the use of the available adhesion level at every individual axle. 2.15.9.8: If wheel spin is detected in any individual axle basis, the traction equipment shall reduce power to the concerned specific motor of the axle. When wheel spin is corrected in the individual axle, traction power shall be gradually increased to meet performance requirements per axle basis.	Traction Converter/Inverter will prevail the requirement mentioned in 10.11.1(one Converter Inverter per bogie in each motor car), bogie base control that cannot regulate the current flow in each motor fed by same inverter and therefore slip/slide control and correction shall be performed on car bogie by CI. Hence the proposed clause is: 2.15.9.7:The correction of slide shall act independently on **bogie** basis. The system shall be fully adaptive to varying adhesion conditions to maximize the use of the available adhesion level at every per **bogie in each motor car**. 2.15.9.8: If wheel spin is detected in any individual **bogie** basis, the traction equipment shall reduce power to the concerned motors of the **bogie**. When wheel spin is corrected in the individual axle, traction power shall be gradually increased to meet performance requirements per **bogie** basis.	Refer to: **Addendum_02 S/N 12** **Addendum_02 S/N 13**	Yes
29	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	10.16.8	The HV and Propulsion system of the 3 car train shall be able to rescue another 6 car AW4 passenger loaded train in the CMRL Phase 2 alignment including gradients and curves. Refer Appendix D for alignment data.	Adhesion ratio will be very very high and considered to be much higher than the acceptable value. Request you to delete the requirement. Hence the proposed clause is: 10.16.8: **Not used**	Refer to: **Addendum_02 S/N 41**	TBD
30	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	10.8.2	The overall harmonic current levels viewed at the pantograph shall be according to clause 10.3.1 . The KVA rating of the transformers shall be specified at a line voltage of 22.50 KV and shall be designed to deliver the power corresponding to the continuously rated traction motor currents, after accounting for the efficiency and the power factor of the traction motor, converter, inverter and auxiliary inverter.	There is a discrepancy between 10.8.2 and 10.8.8. Hence the proposed clause is: The overall harmonic current levels viewed at the pantograph shall be according to clause 10.3.1. The KVA rating of the transformers shall be specified at a line voltage of 22.50 KV and shall be designed to deliver the power **according to ERTS10.8.8** after accounting for the efficiency and the power factor of the traction motor, converter, inverter and auxiliary inverter.	Refer to: **Addendum_02 S/N 39**	Yes
31	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	20.4.1	Systems containing software All systems that contain software and which are either part of train or which interface with the train will be part of the rail Systems. If, however other systems are identified these should also be indicated by the Contractor. The requirements defined in this document shall apply to all software used on the Project. Software used on the Project are, for example, application software and software tools. For application software (including all data and all protocols), it is the Contractor's responsibility to provide them and hand them over to the CMRL without any restrictions. Application software shall remain under the Contractors responsibility during O&M. For train systems' software and their software tools, either bespoke or COTS (Commercially Off the Shelf) software, it is the Contractors responsibility to ensure the CMRL has full right to use them with perpetual licence access to all the train systems' software and software tools used in the rolling stock.	Contractor purchases the COTS equipment and cannot submit any tools and software for COTS equipment. In addition, software rights is belonging to the COTS supplier. Furthermore, the subsystem software rights is belonging to subsystem supplier. The tools/software required for safe operation and maintenance of the train shall be provided. Hence the proposed clause is: Systems containing software All systems that contain software and which are either part of train or which interface with the train will be part of the rail Systems. If, however other systems are identified these should also be indicated by the Contractor. The requirements defined in this document shall apply to all software used on the Project. Software used on the Project are, for example, application software and software tools. For application software **(required for safe operation and maintenance)**, it is the Contractor's responsibility to provide them and hand them over to the CMRL without any restrictions. Application software shall remain under the Contractors responsibility during O&M. For train systems' software and their software tools, **required for safe operation and maintenance,** it is the Contractors responsibility to ensure the CMRL has full right to use them with perpetual licence access to all the train systems' software and software tools used in the rolling stock.	Tender Condition Prevails.	No

CP26 / ARE02A Contract - Reply to Bidder Queries (02)						
Sl no	**Part / Section No**	**Clause No.**	**Original Bid Condition**	**Bidder's queries**	**CMRL Response**	**Addendum**
32	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	14.3.3	Communication Protocol Details The software and communication protocols used throughout the TCMS and the interfaces to subsystems shall be compliant to a common standard or standards. Contractor shall submit details of the communication protocols used in their design clearly indicating how the requirements of monitoring and control are complied with. The Contractor shall also define the dual homing compliant communication protocols for all EDs. Further details along with any hardware/software tools required shall be submitted during design stage..	TCMS supplier applies TRDP (defined in IEC613752 3) to be applied for all the Ethernet Network protocol with other On board System as well as to apply the Safety Data Transmission (defined in EN 50159) for signals uses for safety related functions. It is requested to CMRL to insist this protocol concept applied to other interfacing contractors/equipment supplier including signalling supplier.	Bidders are encouraged to refer to the Interface Appendix-C of Part-2 Section VI-A wherein Clause 2.4.10 (h) clarifies that *"The Signalling Contractor shall comply with trainborne communication protocol to be proposed by the Rolling Stock Contractor."* It is further clarified that the TRDP / SDTv2 protocol is likely to be the adopted interface for vital signal exchange between the already awarded Sig and RS Contractors. Based on the above, the requested change is not required. Tender Condition Prevails.	n/a
33	Part-1/Section III/EQC/2.3.1 & Part-1/Section IV/Bidding forms/ FIN-1	Form FIN-1	Working Capital	It is our understanding that Working Capital as required in FIN-1 & FIR-1 needs to be calculated as 'difference between Current Assets and Current Liabilities'. Kindly confirm.	Working capital = current assets – current liabilities	n/a
34	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	3.13.20.3	….Undulations on brightly polished / unpainted surfaces shall not be easily visible to the naked eye. Surface undulation/variation shall not exceed **1.5 mm in any one square meter area**, to ensure that the exterior stainless steel or aluminium appearance is smooth. Smoothing shall be achieved without the use of filler, painting or other similar materials.	**Justification:** Bidder would like to inform that requirement of 1.5 mm in any one square meter area is practically not possible throughout the carbody ,i.e., areas like end walls, flat roof, HVAC area and areas where joints & welds are present have higher undulations. Hence we propose the Absolute measurement methodology for most of the areas of carbody sidewall in line with ongoing 78 car project. **Amendment Requested:** …Undulations on brightly polished / unpainted surfaces shall not be easily visible to the naked eye. Surface undulation/variation shall not exceed 1.5 mm **in most of the areas of car body sidewalls (except at certain sections/joints where undulations are generally higher like end walls, flat roof, HVAC area and areas where joints & welds are present)** in any one square meter area **with Absolute measurement methodology**, to ensure that the exterior stainless steel or aluminium appearance is smooth. Smoothing shall be achieved without the use	Tender Condition Prevails.	Yes
35	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	3.6.1.27	"Gaps in vehicle interior shall be minimized. Gaps that are visible to passengers shall be maintained in the range of **1mm (min) to 2mm (max)** to ensure they are flush and uniform with the panel edges. Concealed gaps shall be **1.5 mm ~ 3 mm**."	**Justification:** Bidder requests to update the gap requirements to 3-5mm in order to accommodate the stack of multiple panel architecture in line with existing methodology of the bidder. Requirement for gap to be in range of 1 - 2 mm is very stringent and difficult to achieve even with Alu panels. As per our quality process which is followed globally we maintain the gap less than 5mm so that fingers of passengers shall not stuck in the gap. **Amendment Requested:** "Gaps in vehicle interior shall be minimized. Gaps that are visible to passengers shall be maintained in the range of ~~1mm (min) to 2mm (max)~~ 3mm to 5mm to ensure they are flush and uniform with the panel edges. ~~Concealed gaps shall be 1.5 mm ~ 3 mm.~~	Tender Condition Prevails.	No
36	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	3.2.7	Design of carbody shall be such that **sealants are not used as a primary protection for ingress of rainwater**. The cars shall be completely watertight, without using any sealing compound If considered unavoidable, **only weld-through sealants** shall be provided. The **external sealants shall not be exposed to direct sunlight**. The sealants life shall match with the **35-years** of design life of the car body and detailed literature / catalogues shall be submitted to the CMRL and approval obtained prior to undertaking manufacture of car body. Water tightness shall comply with clause 17.6.13…	Justification: Bidder would like to inform that sealant available in the market has life of 8 years only. Accordingly we request to amend the clause. Amendment Requested: Design of carbody shall be such that sealants are not used as a primary protection for ingress of rainwater. The cars shall be completely watertight, without using any sealing compound If considered unavoidable, only weld-through sealants shall be provided. The external sealants shall not be exposed to direct sunlight. The sealants life shall be 8 years ~~match with the 35-years of design life of the car body~~ and detailed literature / catalogues shall be submitted to the CMRL and approval obtained prior to undertaking manufacture of car body. Water tightness shall comply with clause 17.6.13…	Refer to: **Addendum_02 S/N 20** **Addendum_02 S/N 21**	Yes
37	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	10.8.4	The main transformer design shall be "**Hermetically Sealed**" type forced cooled or naturally cooled design is proposed. Components shall be modular in construction, complete with oil pump, oil pump motor, radiator with blower fans (if adopted), conservator (if adopted) and protection equipment (e.g. over pressure, over temperature, Buchholz Relay, etc.) all assembled as a single module``	**Justification:** Bidder would like to inform that our current design of transformer takes adequate measures to ensure elimination of air from the hydraulic circuit. Moreover, we use Ester oil as cooling agent which has better moisture absorbing characteristics in comparison to silicone oil (which is used by other suppliers). Hence, "Hermetically Sealed" type transformers may not be required in our case. **Amendment Requested:** The main transformer design shall be ~~"Hermetically Sealed" type~~ forced cooled or naturally cooled design is proposed. Components shall be modular in construction, complete with oil pump, oil pump motor, radiator with blower fans (if adopted), conservator (if adopted) and protection equipment (e.g. over pressure, over temperature, Buchholz Relay, etc.) all assembled	Tender Condition Prevails.	No
38	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	2.14.2.2	During the rescue operation of a train with a burst MR pipe; a healthy assisting train (in AW0 load condition) shall be capable of rescuing a failed train (in AW4 load condition) with its parking brakes applied. The coupled AW0~AW4 consists shall be capable of starting and accelerating up a worst case gradient of 4% and be able to reach a speed of 20 kmph in restricted manual mode. This coupled rake of healthy and defective consists shall be able to ascend any combination of gradient and/or curve as may be necessary to reach the next station to allow passengers to deboard. The healthy train shall thereafter be able to push the defective train (with its load now reduced to AW0, 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 sliding under all operating conditions. The Contractor shall demonstrate that this requirement is met during main line type 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	**Justification:** Bidder recommends not to rescue defective train with parking brake applied condition as it will lead to excessive temperature rise in wheel & brake pad, wheel flat issue and abnormal damage in the brake pad. As per office memorandum issued on MRGR 2020 dated 29.10.2020 suggests that before moving defective train brake applied in the train need to be released. Only in the emergency situation when it is not possible to release the brake then train shall be move in the restricted speed up to next station. Since we have parking brake release option available within the saloon car itself hence we can easily release the parking brake in the sick train and rescue the train till next station. Also, rescuing sick train with parking brake applied condition will call for the over sizing of the traction components i.e., Transformer, Traction Converter, Motor which will results in increase of weight of train and energy consumption. Moreover, this requirement is new for Indian market and has not been asked in any GoA4 projects yet. Accordingly, in line with ongoing 78 car bidder request to delete this requirement.	Refer to: **Addendum_02 S/N 10**	Yes
39	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	12.16.1	It shall be possible to rescue a sick train (E.g. Defective, Immobilized, 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. The detailed scheme shall be subject to the Engineer's review during design finalization.	**Justification:** Bidder would like to inform that we can apply emergency brake in the sick train (E.g. Defective, Immobilized, No battery power or in a shutdown condition) through electrical connection via healthy train. Hence, we request to keep this option open for both air as well as electrical connection for rescuing the sick train. **Amendment Requested:** It shall be possible to rescue a sick train (E.g. Defective, Immobilized, No battery power or in a shutdown condition) using ~~only an~~ air or electrical connection from the rescue train or locomotive. The emergency brake application of the dead train shall be possible by its operator. The detailed scheme shall be subject to the Engineer's review during design finalization.	The requested change is not agreed, as it would compromise the mandatory cross-compatibility between different fleet types for train rescue scenarios. All fleets will adopt a single-pipe brakes system and RS Contractors will coordinate on the necessary interfaces. Tender Condition Prevails	No
40	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	19.52.9	Contractor shall use Mors Smitt BK-400 relays for all Safety Functions (like, Cab active, Rear cab active, Zero velocity, Door System, Brake control, Emergency brake circuit, coupler, etc).	Justification: Bidder would like to inform that we will follow EN61810 for safety functions related relays as part of our standard solution. Restricting the requirement to specific OEM will lead to monopoly and high cost. Amendment Requested: Contractor shall use ~~Mors Smitt BK-400~~ relays as per EN 61810 for all Safety Functions (like, Cab active, Rear cab active, Zero velocity, Door System, Brake control, Emergency brake circuit, coupler, etc).	Tender Condition Prevails.	No
41	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	11.5.3 (d)	The gearbox shall be subjected to a test based on the actual duty cycle on a specified corridor with the specified torque and speed conditions. Testing shall start with gearbox at temperature of at least 45ºC ambient + 10ºC proximity effect and temperature shall be continuously monitored. The temperature shall not exceed the manufacturer's recommendations consistent with life between oil changes. Test shall be carried out in both the directions. Noise and vibration test shall also be performed along with this test. The Contractor shall submit a Test Procedure based on international practice for approval by the CMRL.	Justification: Bidder request CMRL to keep the requirement same as ARE03A (78 CARS Project) in order to use proven product. Increase in temperature requirement may lead to change in the solution and new certification report which will unnecessarily increase the cost. Amendment Requested: The gearbox shall be subjected to a test based on the actual duty cycle on a specified corridor with the specified torque and speed conditions. Testing shall start with gearbox at temperature of at least ~~45ºC ambient + 10ºC proximity effect~~ 30ºC and temperature shall be continuously monitored. The temperature shall not exceed the manufacturer's recommendations consistent with life between oil changes. Test shall be carried out in both the directions. Noise and vibration test shall also be performed along with this test.	Tender Condition Prevails.	No
42	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	11.4.11 (d)	Hydraulic dampers of suitable capacity shall be provided symmetrically to control and limit the vertical and lateral oscillation of the car body. The damping factors are to satisfy this provision. The damping factor in vertical mode, by wedge test, when tested using a wedge of 18 mm thickness should be between 0.20 and 0.25. The damping factor in lateral mode when measured by quick release side pull test should be between 0.30 and 0.40. Suspension will not be considered acceptable if maximum acceleration and spring displacements do not decay within 2-3 cycles. No leakages of any kind shall be permitted. The design life of the dampers shall be minimum 10 years.	Justification: There is no specific requirement in EN 14363 for the Side Pull Test (To validate the Damping Factor). Intent of the Side Pull Test is already covered in RDSO defined Tests. Acceleration & Ride Comfort Test will cover the Lateral Damping effect. Bidder proposes to remove the Side Pull test requirement. Amendment Requested: Hydraulic dampers of suitable capacity shall be provided symmetrically to control and limit the vertical and lateral oscillation of the car body. The damping factors are to satisfy this provision. The damping factor in vertical mode, by wedge test, when tested using a wedge of 18 mm thickness should be between 0.20 and 0.25. ~~The damping factor in lateral mode when measured by quick release side pull test should be between 0.30 and 0.40.~~ Suspension will not be considered acceptable if maximum acceleration and spring displacements do not decay within 2-3 cycles. No leakages of any kind shall be permitted. The design life of the dampers shall be minimum 10 years.	Tender Condition Prevails.	Yes

CP26 / ARE02A Contract - Reply to Bidder Queries (02)						
Sl no	**Part / Section No**	**Clause No.**	**Original Bid Condition**	**Bidder's queries**	**CMRL Response**	**Addendum**
43	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	11.12.4	The Contractor shall submit the methodology of detection, detailed calculation of design proof load, installation arrangement, safety against derailment, energy absorbing capabilities etc. conforming to Table 3 — Obstacle deflector performance requirements of EN 15227/ Section 4.5 of GM/RT2100 and EN 12663-1/EN 13749 during detailed design for CMRL review and approval. Provisions shall be made to avoid false detection.	Justification: Bidder request CMRL to keep the requirement same as ARE03A (78 CARS project) in order to use proven solution available in the Indian market. Amendment Requested: The Contractor shall submit the methodology of detection, detailed calculation of design proof load, installation arrangement, safety against derailment, energy absorbing capabilities etc. ~~conforming to Table 3 — Obstacle deflector performance requirements of EN 15227/ Section 4.5 of GM/RT2100 and EN 12663-1/EN 13749~~ during detailed design for CMRL review and approval Provisions shall be made to avoid false detection.	Tender Condition Prevails.	No
44	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	11.12.1	At both the outer ends of the Driving Motor Car, an obstruction deflection & detection device shall be installed to detect the obstacles and push away obstacles on track to avoid derailment. At the front of the cab car at both ends of the train, an obstacle detection device shall be installed. The obstacle detection device shall detect obstacles in front of the train at the earliest point practicable within emergency braking distance. The detection of obstacle shall initiate the emergency brake. Detection of an obstacle shall be reported to the OCC as an emergency message and shall be recorded by the TCMS.	Justification: Obstacle detection device (non-contact type) is not recommended for closed circuit metro application like Metro railway due to high possibility of false signals, risk of system signal interference with Train signal. These are more applicable for Tramways which runs in an open environment at very low speed. Moreover, there is no proven available solution in the market to meet this requirement. Amendment Requested in line with ongoing 78 car project: At both the outer ends of the Driving Motor Car, an obstruction deflection & detection device shall be installed to detect the obstacles and push away obstacles on track to avoid derailment. At the front of the cab car at both ends of the train, an obstacle detection device shall be installed. ~~The obstacle detection device shall detect obstacles in front of the train at the earliest point practicable within emergency braking distance.~~ The detection of obstacle shall initiate the emergency brake. Detection of an obstacle shall be reported to the OCC as an emergency message and shall be recorded by the TCMS.	Refer to: **Addendum_02 S/N 49**	Yes
45	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	7.6.3 7.4.5.3 7.4.5.5 7.4.6.2 7.6.2 7.6.11 17.5.3.1	VAC design conditions given in RFP: 1.25°C and RH of 60% @AW4 loading with outside ambient of 38°C & 65% RH in summer, and 35°C & 80% RH in winter 2.Fresh air intake under emergency ventilation @ rate of 5 liters / sec / passenger (@AW4 load). 3.Fresh air intake under normal ventilation @ rate of 2.5 liters / sec / passenger (@AW4 load). 4.Heat gain to be considered @AW4 load for all cars 5.Pre-cooling (with full passenger occupancy heat load)	Justification: Bidder would like to inform designing VAC for AW4 condition will lead to increase in size of VAC and hence packaging issue on car body, increase in the power consumption, oversize the Aux converter, increase the battery size and LCC cost. It will also have impact on the SECH. Regarding outside ambient condition, we can see in ASHRAE handbook (screenshot attached below) that in summers at 38°C temperature the humidity level is 36.3 and in winters at 35°C temperature the humidity level is 64 (at 80 RH maximum temperature in winter is 31.5°C). Whenever temperature increases RH reduces and vice versa. Designing VAC by considering temperature as well as RH both at maximum values will only lead to overdesigning the system which will lead to new design and above mentioned issues.  Amendment Requested in line with ongoing 78 car project: 1.25°C and RH of 60% ~~@AW4~~ AW3 loading with outside ambient of 38°C & 36.2 ~~65%~~ RH in summer, and 35°C & 70 ~~80%~~ RH in winter 2.Fresh air intake under emergency ventilation @ rate of 5 liters / sec / passenger (~~@AW4~~ AW3 load). 3.Fresh air intake under normal ventilation @ rate of 2.5 liters / sec / passenger (~~@AW4~~ AW3 load). 4.Heat gain to be considered ~~@AW4~~ AW3load for all cars Pre-cooling (with ~~full passenger~~ no load occupancy heat load)	Tender Condition Prevails.	No
46	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	6.9	DUAL MODE DETRAINMENT DOOR	Justification: Bidder would like to inform that dual mode type detrainment door has complexity in design and it's very difficult to integrate with our carbody. As the proven solution is not available with any supplier it may impact safety and reliability of the system. Also, it will be difficult to operate the system at curves (esp. within the tunnels). Accordingly, bidder request to delete this requirement of Train to Train Evacuation Mode (from all the clauses of the section).	Refer to: **Addendum_02 S/N 28** **Addendum_02 S/N 29** **Addendum_02 S/N 30** **Addendum_02 S/N 31** **Addendum_02 S/N 32** **Addendum_02 S/N 33** **Addendum_02 S/N 34**	No
47	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	2.13.1 (d) 2.13.1 (e)	The mounting of under-body equipment shall be designed to ensure that breakage or loss of any of the mounting arrangement shall not cause the under-body equipment to fall on to the track Under-body equipment shall not be supported by bolts under tension unless otherwise approved by the CMRL	ALSTOM adopted proven solution for Underframe Equipment with Lock Bolt System. It's swaged installation makes it exceptionally resistant to loosening with vibration or material fatigue. It exceeds the performance of torqued bolts in both shear and tensile strength, so they have a longer fatigue life and it's also easy to visually inspect a lockbolt joint for proper installation.   Lean System that offers minimal weight & higher efficiency	Tender Condition Prevails.	No
48	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	10.4.1	VCB shall be additionally type tested with 300,000 operations.	Justification : Bidder would like to inform that our proven standard solution is type tested for 200,000 operations and is already under service in various global & Indian projects. Change in requirements for type test will lead to new type test and may require new development which will impact the cost and delivery time. Amendment Requested: VCB shall be additionally type tested with ~~300,000~~ 200,000 operations.	Tender Condition Prevails.	No
49	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	10.12.8	The train operator from the cab shall be able to isolate any power converter / inverter. Current drawn by each motor shall be measured and recorded.	Justification : Bidder understand proven solution with global references shall be accepted which can be combined current measurement of a group drive avoiding control complexities (synchronizing additional hardwares, softwares, control logics, diagnostics, LCC etc.) still fulfilling protection concepts as requested. Amendment Requested: The train operator from the cab shall be able to isolate any power converter / inverter. Current drawn by each bogie ~~motor~~ shall be measured and recorded.	Tender Condition Prevails.	No
50	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	20.6.5.2	20.6.5.2 Hardware spare capacity i. Spare capacity requirements shall apply to memory, disk storage, communication links/ports, input/output capacity. Minimum figures for spare capacity are given here below. Resource Spare Capacity Memory 50% Disk Storage 50% Communication Links/Ports 50% Input/Output Capacity Min. 10% (End of DNP)	Bidder would like to inform that 50% spare capacity for memory, disk storage, Communication link ports etc. are not required as any future expansion of data monitoring activity can be managed with maximum of 10% of spares capacity. Moreover, 50% spare capacity has several other impact like – packaging of materials and communication cables within the space available. Hence, in line with other Indian tenders and as per global practice we request you to amend this clause as below. Amendment Requested: Hardware spare capacity i. Spare capacity requirements shall apply to memory, disk storage, communication links/ports, input/output capacity. Minimum figures for spare capacity are given here below. Resource Spare Capacity Memory ~~50~~ 10% Disk Storage ~~50~~ 10% Communication Links/Ports ~~50~~ 10% Input/Output Capacity Min. 10% (End of DNP)	Tender Condition Prevails.	No
51	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	2.14.3.3	For an emergency brake application in good adhesion conditions (i.e. dry uncontaminated wheel rail interface) on level track from maximum speed, the rake shall brake to a standstill from 80kmmh within a distance of 223 m under any Loading Conditions up to AW4. The minimum average emergency brake rate following any single point failure shall not be less than 1.3 m/s2	Justification: Bidder would like to inform that Minimum average emergency brake rate without failure as well as with single point failure has been asked same as 1.3m/s2, which is not practical. Bidder confirms to meet the EBD requirement of 223m even with single point failure. Amendment Requested: For an emergency brake application in good adhesion conditions (i.e. dry uncontaminated wheel rail interface) on level track from maximum speed, the rake shall brake to a standstill from 80kmmh within a distance of 223 m under any Loading Conditions up to AW4. ~~The minimum average emergency brake rate following any single point failure shall not be less than 1.3 m/s2~~	Tender Condition Prevails.	No

CP26 / ARE02A Contract - Reply to Bidder Queries (02)						
Sl no	Part / Section No	Clause No.	Original Bid Condition	Bidder's queries	CMRL Response	Addendum
52	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	11.5.1 (d) (ii)	A lateral load of half fully loaded body weight subjected to an acceleration of ±1.1g	Justification: As per GMRT2100, lateral load of half fully loaded body weight subjected to an acceleration of ± 0.5g to 0.9g. ±1.1g is too high and are never experienced in service. Hence bidder request customer to amend the requirement accordingly. Amendment Requested: A lateral load of half fully loaded body weight subjected to an acceleration of ~~±1.1g~~ ± 0.5g to 0.9g as per GMRT2100.	Tender Condition Prevails.	No
53	Part 2 VI ERTS-RS-SYSTEM REQUIRMENT	2.25.1	The Contractor shall note that 'SPECIFIC ENERGY CONSUMPTION (SEC)' shall be verified in any one corridor of Phase 2 as agreed with CMRL under conditions detailed hereafter in this clause shall not exceed 48 Wh/GTKM (watt hours per gross tonne kilometer), referred to as SECs.	Justification: Bidder would like to inform that achieving SEC @ 48 Wh/GTKM will be very challenging. Moreover, Standardization of broad parameters of Rolling Stock for Metro Railways issued by MoHUA in April 2017 also calls for SEC value to be less than 50 Wh/GTKM for 25KV AC. Amendment Requested: The Contractor shall note that 'SPECIFIC ENERGY CONSUMPTION (SEC)' shall be verified in any one corridor of Phase 2 as agreed with CMRL under conditions detailed hereafter in this clause shall not exceed ~~48~~ 50 Wh/GTKM (watt hours per gross tonne kilometer), referred to as SECs.	Refer to: **Addendum_02 S/N 15** **Addendum_02 S/N 16** **Addendum_02 S/N 17**	Yes
54	Part 3 / Section VIII Particular Conditions of the Contract	GCC/Clause 19.6. PCC/Clause 57	[Optional Termination, Payment and Release]The clause 19.6 is deleted in its entirety and replaced with the following: Either party shall not terminate the Contract without the consent of the other party during Force Majeure. If both the parties agree for a termination of the Contract, then the Engineer shall determine the value of the work done and issue a Payment Certificate which shall include the amounts payable for any work carried out for which a price is stated in the Contract.	We kindly request to maintain the original wording of the FIDIC in Sub-Clause 19.6. instead of the proposed Sub-Clause 19.6 of the Particular Conditions, since Sub-Clause 19.6 of the Particular Conditions: (a) leaves unregulated the consequences of termination due to the Employer's default or by convenience, and (b) establishes conditions related to the occurrence of a force majeure event (more in particular, termination and financial consequences thereof), which are far beyond international standards.	Tender Condition Prevails.	No
55	Part 3 / Section VIII Particular Conditions of the Contract	PCC/Clause 58/GCC/Clause 20.2	**(iv) In case of the Contractor or the Lead Partner of the Contractor (in the case of a Joint Venture or Consortium) being of Japanese origin** CMRL will ask the successful bidders to propose few names up to a maximum of twenty from Japan for DB Members/Arbitrator and all such names will be abridged and out of the same, ten names will be shortlisted by GC based on their qualifications, experience etc. These shortlisted ten names will be added to the list of 20 member's panel of DB Members / Arbitrator mentioned above.	It is noted that as per Clause 20.2.(iv) (Part III, Part-B Specific Conditions), in the event of the Lead Partner of the Contractor (in the case of a Joint Venture or Consortium) being of Japanese origin, the Japanese Lead Partner shall be allowed to propose the list of 20 names for Dispute Board members/arbitrator. CMRL is accordingly requested that in the event of the Lead Partner being not of Indian or Japanese origin, such Lead Partner shall be allowed to suggest 20 names for the Dispute Board members/arbitrator and GC can then chose 10 names out of them for the final list from which the Dispute Board members/arbitrator shall be chosen. CMRL may kindly confirm.	Tender Condition Prevails.	No
56	Part 3: Section VIII Particular Conditions (Part B: Specific Provisions)	14.2	The interest free mobilization advance at the rate of 10 % of the accepted contract amount (Taxes & Duties, Excluding Provisional Sum, Price Centre 'RS-CMC' and 'DM&PCMC') in the currencies and proportions is payable against production of Bank guarantee from a public sector bank. And the guarantee shall be in the form of a BG for 110% of the advance amount requested plus GST. (in parlance with CVC guidelines). GST on the mobilization advance is not reimbursable. Mobilization advance shall be paid in two equal instalments.	TOTAL ADVANCE PAYMENT :- 15 % (interest free) advance of the total contract price (excluding cost center - F) in the respective currencies shall be paid in two tranches - First & Second tranches are 10 % & 5 % respectively of the total contract price (excluding cost center - F) As per Tender Documents of BMRCL/5RS-DM.	Tender Condition Prevails.	No
57	EQC	2.1.1	Submission Requirements: For ELI-1.1 and 1.2 with attachments	As per Bidding Forms Part-1, Section – IV, ELI-1 and ELI-2 forms are available.	Tender Condition Prevails.	n/a
58	PART- 2: SECTION VI A	6.9	DUAL MODE DETRAINMENT DOOR 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 subsystem equipment at a maintenance depot. 6.9.3 The two (2) required operating modes of the Detrainment Door are as follows:- a. Train to Track Evacuation Mode (will be configured this way when the DM cars are not coupled) b. Train to Train Evacuation Mode (will be configured this way when DM cars are coupled during multi-consist operation)	We kindly request to remove the option of "Train to Train Evacuation Mode" from the technical requirement specification We request to consider only Train to Track Evacuation mode as this is commonly used in the Indian metro context.	Refer to: **Addendum_02 S/N 28** **Addendum_02 S/N 29** **Addendum_02 S/N 30** **Addendum_02 S/N 31** **Addendum_02 S/N 32** **Addendum_02 S/N 33** **Addendum_02 S/N 34**	No
59	PART- 2: SECTION VI A	11.12.1	11.12.1 At both the outer ends of the Driving Motor Car, an obstruction deflection & detection device shall be installed to detect the obstacles and push away obstacles on track to avoid derailment. At the front of the cab car at both ends of the train, an obstacle detection device shall be installed. The obstacle detection device shall detect obstacles in front of the train at the earliest point practicable within emergency braking distance	We kindly request to amend the clause to allow the use of mechanical sensors for obstacle detection which shall detect an obstacle only after hitting the obstacle in order to apply emergency brakes. This is the most common technology seen from other reference metro projects. Any technology used to detect the obstacle in advance is not well proven.	Refer to: **Addendum_02 S/N 49**	Yes
60	PART- 2: SECTION VI A	11.12.2	11.12.2 All wheels of bogies shall have derailment detection device. A derailment detection device can reduce the escalation of accident consequences to passengers and property, even in the event of partial train derailment. The derailment detection device shall monitor all running axles, and when activated, it shall apply the emergency brake. Remarks: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.	We kindly request to amend the clause to allow supply of derailment detection device only in both the end cars alone.	Refer to: **Addendum_02 S/N 50**	Yes
61	PART- 2: SECTION VI A	2.14.2.2	During the rescue operation of a train with a burst MR pipe; a healthy assisting train (in AW0 load condition) shall be capable of rescuing a failed train (in AW4 load condition) with its parking brakes applied. The wheels of the train with parking brakes applied shall rotate without sliding under all operating conditions.	In case the concern from CMRL is regarding the parking brake release mechanism which is usually accessible only from the track level, then, TRSL recommends to include a clause to have a provision of mechanism to release the Parking brake standing inside the train or from the platform using a special tool. This is seen as a requirement in other reference metro projects in India. TRSL does not recommend to move the train with Parking Brakes applied.	Refer to: **Addendum_02 S/N 10**	Yes
62	PART- 2: SECTION VI A	3.6.1.22	All internal panels (side panels, ceiling panels, end-ceiling panels, inspection cover panels, door coving panels, ceiling coving panels, etc.) shall be of aluminum material. Aluminum side panels shall be controlled within 0.5 mm per 1m length.	We kindly request you to please include GFRP as an option for all the internal panels, for Driver Cabin Equipment	Tender Condition Prevails.	No
63	PART - 1 SECTION - V	SECTION V	The successful bidder under this Contract shall procure goods and services of minimum 30.069% of the Total Contract Price (Excluding all Taxes & Duties, Price Centre 'RS-CMC' and Price Centre 'DM&P-CMC') from Japanese Manufacturers / Contractors. Certificate confirming Tender requirement for Japanese Goods & Services This is to certify that we, M/s. [Insert name of the company (Single Entity /JV)] have carefully examined all the requirements stipulated in Part 1: Section V – ELIGIBLE SOURCE COUNTRIES OF JAPANESE ODA LOANS for meeting a minimum of 30.069% Japanese Goods & Services as required by the tied loan conditions (excluding Price Centre RS-CMC, DM&P-CMC and Taxes & Duties).	We understand that both Purchase of goods and services can be provided as compliance to meet minimum 30.069% of Japanese content as per section V (4). We kindly request clarity as to whether TRSL can show the NRC (Non recurring cost) to any Japanese supplier as a part of "services" to comply with minimum 30.069% of Japanese content as per section V (4). NRC is usually related to engineering costs, type testing costs, transportation, installation testing and commissioning.	Tender Condition Prevails.	n/a
64	PART- 2: SECTION VI A	15.18.1	~~Notwithstanding any other provisions of the Contract, at any time prior to sixty (60) months from taking over certificate of the 70th Trainset for the whole Works, if an "Endemic Failure" occurs in any component or sub-assembly, CMRL shall issue notice in writing to the Contractor.~~ Notwithstanding any other provisions of the Contract, at any time prior to completion of DNP/DLP, if an "Endemic Failure" occurs in any component or sub-assembly, CMRL shall issue notice in writing to the Contractor	We kindly request CMRL not to include Endemic failures in CMC (as CMC is only the maintenance activity)	It is clarified that resolution of endemic failures is intended to be part of the CMC Scope.	No
65	PART- 2: SECTION VI A	2 3.20.3.1	The Supplier shall furnish fully equipped Catenary Maintenance Vehicle designed for operation in CMRL Phase 2 installation.	Modification to 4 Wheeler or Equivalent: Alternatively, we propose amending the contract requirements to include the option for a 4 Wheeler CMV or an equivalent vehicle that meets the necessary specifications and functionalities. This adjustment would provide us with a wider range of options, making it easier to obtain accurate quotes and ensure cost-effectiveness	Tender Condition Prevails.	No
66	Part -2: SECTION VI A	2.25.1	The Contractor shall note that 'SPECIFIC ENERGY CONSUMPTION (SEC)' shall be verified in any one corridor of Phase 2 as agreed with CMRL under conditions detailed hereafter in this clause shall not exceed 48 Wh/GTKM (watt hours per gross tonne kilometer), referred to as SECs. The Contractor shall submit detailed simulation results for all corridors of Phase 2 in Pre-Final Design stage.	The Contractor shall note that 'SPECIFIC ENERGY CONSUMPTION (SEC)' shall be verified in any one corridor of Phase 2 selected by the contractor based on the estimation ~~as agreed with CMRL~~ under conditions detailed hereafter in this clause shall not exceed 48 Wh/GTKM (watt hours per gross tonne kilometer), referred to as SECs. The Contractor shall submit detailed simulation results for all corridors of Phase 2 in Pre-Final Design stage. ---------- (Request confirmation) From the estimated Specific Energy Consumption (SEC) of 2M1T train at AW4 load in earlier tender (ARE02), where in normal mode the consumption values for Line3 and Line4 are much higher. the target of less than 48Wh/GTKM may not be achieved in Line3 and Line4 . Thereby, please consider revising the ERTS clause as proposed, giving the contractor to choose suitable line for validation or please confirm if contractor can validate only in Line5 .	Refer to: **Addendum_02 S/N 15** **Addendum_02 S/N 16** **Addendum_02 S/N 17**	Yes

CP26 / ARE02A Contract - Reply to Bidder Queries (02)						
Sl no	**Part / Section No**	**Clause No.**	**Original Bid Condition**	**Bidder's queries**	**CMRL Response**	**Addendum**
67	Part -2: SECTION VI A	2.25.10(v)	The train operation in Normal mode shall be in maximum acceleration and deceleration with no coasting till maximum speed is achieved and thereafter speed is maintained within 5 kmph below than the maximum speed. During braking, maximum regenerative braking shall be utilized to achieve the specified retardation rate from top speed till train stops and the Jerk rate shall be limited within the specified limit.	The train operation in Normal mode ~~shall be in maximum acceleration and deceleration with no coasting till maximum speed is achieved and thereafter speed is maintained within 5 kmph below than the maximum speed. During braking, maximum regenerative braking shall be utilized to achieve the specified retardation rate from top speed till train stops and the Jerk rate shall be limited within the specified limit.~~ ,as per the Guaranteed "Declared Schedule Speed (DSSP) in Kmph for a round trip in Corridor 3,4 & 5. ---------- (Reason) Original requirement is "Definition of normal mode". This content is "maximum acceleration and deceleration with no coasting till maximum speed is achieved ". Our recognition is not "normal mode" but "all-out mode". Please revise this ERTS clause, inline to the provision as in Combined Test bed, where contractor has to propose a DSSP.	Refer to: **Addendum_02 S/N 18**	Yes
68	Part -2: SECTION VI A	2.14.2.2	During the rescue operation of a train with a burst MR pipe; a healthy assisting train (in AW0 load condition) shall be capable of rescuing a failed train (in AW4 load condition) with its parking brakes applied. The coupled AW0~AW4 consists shall be capable of starting and accelerating up a worst- case gradient of 4% and be able to reach a speed of 20 kmph in restricted manual mode.This coupled rake of healthy and defective consists shall be able to ascend any combination of gradient and/or curve as may be necessary to reach the next station to allow passengers to deboard. The healthy train shall thereafter be able to push the defective train (with its load now reduced to AW0, 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 sliding under all operating conditions.The Contractor shall demonstrate that this requirement is met during main line type 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.	During the rescue operation of a train ~~with a burst MR pipe~~; a healthy assisting train (in AW0 load condition) shall be capable of rescuing a failed train (in AW4 load condition) ~~with its parking brakes applied.~~ The coupled AW0~AW4 consists shall be capable of starting and accelerating up a worst- case gradient of 4% and be able to reach a speed of 20 kmph in restricted manual mode.This coupled rake of healthy and defective consists shall be able to ascend any combination of gradient and/or curve as may be necessary to reach the next station to allow passengers to deboard. The healthy train shall thereafter be able to push the defective train (with its load now reduced to AW0,~~ 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 sliding under all operating conditions.~~ The Contractor shall demonstrate that this requirement is met during main line type 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. ---------- (Reason) Big impact for propulsion system design As per ERTS 12.6.8.12 and 12.8.4, train driver can mechanically release parking brake from the salon and will operate train when rescue operation. On the other hand, i. As per ERTS 2.15.7.1, Parking Brake shall hold a train from rolling back on 4% gradient. ii. Further propulsion rating for emergency to push/pull at 4% gradient, with no brakes applied While in this case, considering i & ii above, propulsion system must consider much tractive higher effort to push/pull such defective train. Also from the rating point, since 4% hold force coming from the Parking Brake and continuous operating under 20kmph for a line lengths over 50~90kms, rating will drastically increase, affecting weight / size / energy / etc. Therefore, please revise this ERTS clause for rescue operation without parking brake.	Refer to: **Addendum_02 S/N 10**	Yes
69	Part -2: SECTION VI A	2.15.9.7	The correction of slide shall act independently on each axle basis. The system shall be fully adaptive to varying adhesion conditions to maximize the use of the available adhesion level at every individual axle.	The correction of slide by Pneumatic system shall act independently on each axle basis. The system shall be fully adaptive to varying adhesion conditions to maximize the use of the available adhesion level at every individual axle. ---------- (Request confirmation) Traction Converter/Inverter will prevail the requirement mentioned in 10.11.1(one Converter-Inverter per bogie in each motor car), bogie base control that cannot regulate the current flow in each motor fed by same inverter and therefore slip/slide control and correction shall be performed on car bogie by CI.	Refer to: **Addendum_02 S/N 12**	Yes
70	Part -2: SECTION VI A	2.15.9.8	If wheel spin is detected in any individual axle basis, the traction equipment shall reduce power to the concerned specific motor of the axle. When wheel spin is corrected in the individual axle, traction power shall be gradually increased to meet performance requirements per axle basis.	If wheel spin is detected in any individual axle basis, the traction equipment shall reduce power to the concerned specific bogie ~~motor of the axle~~. When wheel spin is corrected in the bogie basis ~~individual axle~~, traction power shall be gradually increased to meet performance requirements ~~per axle basis.~~ ---------- (Request confirmation) Traction Converter/Inverter will prevail the requirement mentioned in 10.11.1(one Converter-Inverter per bogie in each motor car), bogie base control that cannot regulate the current flow in each motor fed by same inverter and therefore slip/slide control and correction shall be performed on car bogie by CI.	Refer to: **Addendum_02 S/N 13**	Yes
71	Part -2: SECTION VI A	10.16.8	The HV and Propulsion system of the 3-car train shall be able to rescue another 6-car AW4 passenger loaded train in the CMRL Phase 2 alignment including gradients and curves. Refer Appendix D for alignment data.	The HV and Propulsion system of the 6-car AW0 passenger train without parking bake shall be able to rescue another 6-car AW4 passenger loaded train to the nearest station including gradients and curves. ---------- (Request confirmation) Adhesion ratio will be over than 24% and considered to be much higher than the acceptable value. Therefore, it cannot be complied. At the proposed clause, adhesion ratio will be 20.6%, and considered to be acceptable.	Refer to: **Addendum_02 S/N 41**	Yes
72	Part -2: SECTION VI A	14.3.3	Communication Protocol Details The software and communication protocols used throughout the TCMS and the interfaces to subsystems shall be compliant to a common standard or standards. Contractor shall submit details of the communication protocols used in their design clearly indicating how the requirements of monitoring and control are complied with. The Contractor shall also define the dual-homing compliant communication protocols for all EDs. Further details along with any hardware/software tools required shall be submitted during design stage..	Communication Protocol Details The software and communication protocols used throughout the TCMS and the interfaces to subsystems shall be compliant to a common standard or standards. These data exchanged using the Safety Data Transmission for safety function between subsystems, including Signaling System. Contractor shall submit details of the communication protocols used in their design clearly indicating how the requirements of monitoring and control are complied with. The Contractor shall also define the dual-homing compliant communication protocols for all EDs. Further details along with any hardware/software tools required shall be submitted during design stage.. ---------- TRDP (defined in IEC61375-2-3) will be applied for all the Ethernet Network protocol with other On-Board System as well as to apply the Safety Data Transmission (defined in EN 50159) for signals uses for safety related functions. Request to include this protocol concept for TCMS interface with Signaling supplier in Appendix C – INTERFACE Chapter of ERTS.	Bidders are encouraged to refer to the Interface Appendix-C of Part-2 Section VI-A wherein Clause 2.4.10 (h) clarifies that *"The Signalling Contractor shall comply with trainborne communication protocol to be proposed by the Rolling Stock Contractor."* It is further clarified that the TRDP / SDTv2 protocol is likely to be the adopted interface for vital signal exchange between the already awarded Sig and RS Contractors. Based on the above, the requested change is not required. Tender Condition Prevails.	n/a
73	Part -2: SECTION VI A	10.8.2	The overall harmonic current levels viewed at the pantograph shall be according to clause 10.3.1. The KVA rating of the transformers shall be specified at a line voltage of 22.50 KV and shall be designed to deliver the power corresponding to the continuously rated traction motor currents, after accounting for the efficiency and the power factor of the traction motor, converter, inverter and auxiliary inverter.	The overall harmonic current levels viewed at the pantograph shall be according to clause 10.3.1. The KVA rating of the transformers shall be specified at a line voltage of 22.50 KV and shall be designed to deliver the power according to ERTS10.8.8 ~~corresponding to the continuously rated traction motor currents,~~ after accounting for the efficiency and the power factor of the traction motor, converter, inverter and auxiliary inverter. ---------- (Reason) There is a discrepancy between 10.8.2 and 10.8.8. (ERTS10.8.8) The KVA rating of the main transformer shall be designed to meet the continuous power load as well as the additional power required for emergency operational condition(s). The additional load capacity shall not be less than 10% and the main transformer shall be rated to tolerate the full load for at least 30 minutes without exceeding any thermal limits. That is to say, MTr KVA rating(capacity) shall specify the power from Run-curve simulation with additional 10% capacity. MTr KVA rating will be considered based on ERTS10.8.8.	Refer to: **Addendum_02 S/N 39**	Yes
74	Part -2: SECTION VI A	20.4.1	Systems containing software All systems that contain software and which are either part of train or which interface with the train will be part of the rail Systems. If, however other systems are identified these should also be indicated by the Contractor. The requirements defined in this document shall apply to all software used on the Project. Software used on the Project are, for example, application software and software tools. For application software (including all data and all protocols), it is the Contractor's responsibility to provide them and hand them over to the CMRL without any restrictions. Application software shall remain under the Contractors responsibility during O&M. For train systems' software and their software tools, either bespoke or COTS (Commercially Off the Shelf) software, it is the Contractors responsibility to ensure the CMRL has full right to use them with perpetual licence access to all the train systems' software and software tools used in the rolling stock.	~~All systems that contain software and which are either part of train or which interface with the train will be part of the rail Systems. If, however other systems are identified these should also be indicated by the Contractor.~~ ~~The requirements defined in this document shall apply to all software used on the Project. Software used on the Project are, for example, application software and software tools.~~ ~~For application software (including all data and all protocols), it is the Contractor's responsibility to provide them and hand them over to the CMRL without any restrictions. Application software shall remain under the Contractors responsibility during O&M.~~ ~~For train systems' software and their software tools, either bespoke or COTS (Commercially Off the Shelf) software, it is the Contractors responsibility to ensure the CMRL has full right to use them with perpetual licence access to all the train systems' software and software tools used in the rolling stock.~~ ---------- (Request confirmation) For COTS equipment (eg.,TCMS HMI and ER), software rights is belonging to the COTS supplier. Hence, we cannot submit any tools and software for COTS equipment. Furthermore, the TCMS software rights belongs to TCMS supplier and cannot be not handover due to IPR issues.	Tender Condition Prevails.	No

CP26 / ARE02A Contract - Reply to Bidder Queries (02)						
Sl no	**Part / Section No**	**Clause No.**	**Original Bid Condition**	**Bidder's queries**	**CMRL Response**	**Addendum**
75	Part -2: SECTION VI A	2.2.20	When fully mated, the connectors for internal use (i.e., fitted within the car body) shall achieve a seal rated to at least IP 65 in accordance with IEC 60529 if the sealing is not provided by the cabinet or similar. Connectors fitted externally to the Car body shall achieve a seal rated to at least IP65.	When fully mated, the connectors for internal use (i.e., fitted within the car body) shall achieve a seal rated to at least IP 53 ~~65~~ in accordance with IEC 60529 if the sealing is not provided by the cabinet or similar. Connectors fitted externally to the Car body shall achieve a seal rated to at least IP65. ---------- (Reason) There is a discrepancy between 2.2.20 and 14.2.10. (ERTS 14.2.10) Minimum IP level of all TCMS cubicles / equipment or the panel in which it is installed shall be IP53 or higher. IP 65 level is not applicable for internal use (fitted within the car body) and normally IP 53 is applied. Hence, request to revise clause as above.	Refer to: **Addendum_02 S/N 09**	Yes
76	Part-3, Section - VIII Particular Conditions (Part A: Contract Data)	SL No.27	**27. Periods for submission of insurance:** 18.1 a. Evidence of insurance. — 15 days b. relevant policies — 28 days	**Initial Bidder Query (August 2023)** The stipulated timelines of 15 days and 28 days are not practical. The following is suggested in line with the stipulations of other metro corporations: a. Evidence of Insurance - 12 weeks from commencement date b. Relevant policies - 14 weeks from commencement date **CMRL Response (August 2023)** Tender Condition Prevails **Follow-up Bidder Query** The grievance of the bidder is unaddressed in the response. The bidder has to follow tender process for finalizing insurance provider. Hence, (A) 15 days / 28 days mentioned in the clause is not practical and the clause cannot be complied with. (B) It is requested to modify the clause inline with other metro RS tenders The following is requested to be specifically included through addendum, to provide leeway during contract execution: After the contract award, CMRL may relax the stipulated timelines based on the reasons to be provided by the Contractor and contractor's indemnification for the relaxed period.	In the event that the Contractor is not able to submit evidence of insurance within the stipulated timeframe, the Contractor may submit a letter of undertaking to declare that it will arrange a compliant policy as soon as is reasonably practicable and will underwrite its own risk until such time that the policy is in place. Tender Condition Prevails	No
77	Part-3, Section - VIII Particular Conditions (Part A: Contract Data)	SL No. 28	Maximum amount of deductibles for insurance of Employer's risks: INR 1,00,000/-	**Initial Bidder Query (August 2023)** As per our insurance consultant, it is understood, Deductibles are guided by regulation & would as note below for projects exceeding Rs.2500Crores. For Storage & Erection Claims:5 % of the claim amount subject to a minimum of Rs. 75,000/- For Testing Period Claims:5% of the claim amount subject to a minimum of Rs. 2,25,000/- For Acts of God Claims:10% 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/-. For projects below Rs.2500 Crores the minimum limit in each case would little lesser. In view of the above, it is requested to not explicitly mention dedcutibles in tender document. Deductible amount shall be discussed and agreed as per applicable regulation after the award of the contract. Please amend accordingly. **CMRL Response (August 2023)** Tender Condition Prevails. **Follow-up Bidder Query** The provided clarification does not fulfill the purpose. The following is requested to be included through addendum or clarification, to provide leeway during contract execution: During execution stage, the details of deductibles may be discussed and agreed as per applicable rules and regulations.	Tender Condition Prevails	No
78	Part-3, Section - VIII Particular Conditions (Part A: Contract Data)	SL No. 29	**29. Minimum amount of third party insurance** 18.3 In case of death, INR 50,00,000 per person in each case. In case of permanent disability, INR 25,00,000 per person in each case. In case of partial disability, INR 10,00,000 per person in each case. In case damage to facility, the Contractor shall be responsible for full coverage of damages without limit of occurrences. Hence, the amount shall be decided by the Contractor based on his experience.	**Initial Bidder Query (August 2023)** As per our insurance consultant, Since third party liability is a legal liability & payment is dependent on the court order, such sub limits per person for death, permanent disability & partial disability cannot be offered. In view of the above, it is requested to not explicitly mention sub-limit liability amounts in the tender document. The option should be left to the contractor based on his experience. **CMRL Response (August 2023)** Tender Condition Prevails. **Follow-up Bidder Query** The provided clarification does not fulfill the purpose. The following is requested to be included through addendum or clarification, to provide leeway during contract execution:	Tender Condition Prevails	No
79	Part-1, Section – IV, Bidding Forms	Table 4.3.2 Note 4	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.	**Initial Bidder Query (August 2023)** This clause is not fair and is unilateral. The contract is of long duration (>17 years) and the bidder has no control over the movements of the customs rates / changes in customs rules for the import components / parts which go into indigenuous manufacturing / CMC maintenance. Hence, we request CMRL to admit change in rate of custom duty due to change in law / legislation. Pls consider/modify. This request is crucial. **CMRL Response (August 2023)** Notes on Taxes / Duties / Levies: Table 4.3.2: Overview of Contract Price 1. Any Customs Duty incurred by the Contractor for importing any parts and/or components used to indigenously manufacture items reflected in Price Centres RS-C, DM&P-Q, DM&P-R, DM&P-S and DM&P-T shall be deemd to have already been included in the lumpsum price. Customs duty amounts therefore cannot be entered in the Table and will not be reimbursible by the Employer. 2. Wherever Customs duty is denoted as "Not Applicable" it is clarified that the Contractor will not be eligible for any adjustment claims whatsoever in the event of any future changes in law / legistlation (GCC 13.7) which effect customs duty rates. **Follow-up Bidder Query** We request the following changes: The contractor shall be permitted to declare custom duties lumpsum in the bid. After the contract award and latest by 06 months prior to delivery of the proto trainset, the contractor shall submit the breakup of the lumpsum amount, into the item wise custom duty amounts considering the bid stage custom tarriff rates. Subsequently, CMRL shall admit adjustment claims due to change in custom duty rates to the contractor, with no reference made to the ceiling amount mentioned in the bid.	**Refer to Addendum_01 S/N 01**	Yes
80	Part-1, Section – IV Bidding Forms	4.4.6	PRICE CENTRE 'RS-C' – INDIGENOUS MANUFACTURE, TESTING, INSPECTION, TRANSPORTATION AND DELIVERY TO CMRL DEPOT **MILESTONE NUMBER** / **WORK DESCRIPTION** / **MILESTONE ACTIVITY** / **APPORTIONED AMOUNT** INR (COLUMN A), JPY (COLUMN B), FC (COLUMN C) / **PERIOD OF COMPLETION OF MILESTONE FROM COMMENCEMENT DATE (QUANTITY)** / **ALLOWABLE APPORTIONMENT** % Obtain the "No Objection With Comments (NOWC)" / "Notice of No Objection (NONO)" from the Employer / Engineer for: a. Issue of Inspection/ clearance Certificate on satisfactory completion of all Factory Tests; b. Transit Insurance; c. Dispatch documents d. Delivery of cars to CMRL's property. RS-C1 — First 3-car rake (Prototype Rake) RS-C2 — Obtain as above for first 8 train sets RS-C3 — Obtain as above for next 7 train sets RS-C4 — Obtain as above for next 7 train sets RS-C5 — Obtain as above for next 7 train sets RS-C6 — Obtain as above for next 6 train sets RS-C7 — Obtain as above for next 6 train sets RS-C8 — Obtain as above for next 6 train sets RS-C9 — Obtain as above for next 8 train sets RS-C10 — Obtain as above for next 7 train sets RS-C11 — Obtain as above for next 7 train sets **RS-C : PRICE CENTRE TOTAL (RS-C1 – RS-C11)** Price Centre RS-B & RS-C combined shall not exceed 44.45%	**Initial Bidder Query (August 2023)** 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 cashflows and is in-consistent with established accounting precedence and processes of the contractor. It is suggested to make payments trainwise. Please modify. **CMRL Response (August 2023)** Tender Condition Prevails. **Follow-up Bidder Query** A. It is found Milestones under these price centres (therefore, payments) are not defined train wise, but after certain lot of trains (6 trains or 7 trains or 8 trains, on case by case basis). B. This creates hardships to the contractors in terms of cashflows and leads to avoidable price loading. C. It is suggested to define Milestones (and consequent payments) train wise. It is requested to issue a clarficatory statement stipulating that trainset wise payments is admissible during execution stage.	It is clarified that existing Tender Conditions will not prevent CMRL from settling interim payment requests submitted by Contractor that are structured on a train by train basis. Tender Condition Prevails.	No

CP26 / ARE02A Contract - Reply to Bidder Queries (02)						
Sl no	**Part / Section No**	**Clause No.**	**Original Bid Condition**	**Bidder's queries**	**CMRL Response**	**Addendum**
81	Part-1, Section – IV Bidding Forms	4.4.8	PRICE CENTRE 'RS-E' – FORMATION, TESTING IN THE DEPOT FOR INDIGENOUSLY MANUFACTURED TRAINS MILESTONE NUMBER / WORK DESCRIPTION / MILESTONE ACTIVITY / APPORTIONED AMOUNT INR (COLUMN A) / JPY (COLUMN B) / FC (COLUMN C) / PERIOD OF COMPLETION OF MILESTONE FROM COMMENCEMENT DATE (QUANTITY) / ALLOWABLE APPORTIONMENT % Obtain the "No Objection With Comments (NOWC)" / "Notice of No Objection (NONO)" from the Employer / Engineer for: a) Formation of train, obtaining certificate of satisfactory completion of functional tests and running of train in the Depot. For; RS-E1 First 3-car rake (Prototype Rake) RS-E2 Obtain as above for first 8 train sets RS-E3 Obtain as above for next 7 train sets RS-E4 Obtain as above for next 7 train sets RS-E5 Obtain as above for next 7 train sets RS-E6 Obtain as above for next 6 train sets RS-E7 Obtain as above for next 6 train sets RS-E8 Obtain as above for next 6 train sets RS-E9 Obtain as above for next 8 train sets RS-E10 Obtain as above for next 7 train sets RS-E11 Obtain as above for next 7 train sets RS-E: PRICE CENTRE TOTAL (RS-E1 – RS-E11) Price Centre RS-D & RS-E combined shall not exceed 5.6%	**Initial Bidder Query (August 2023)** 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 cashflows and is in-consistent with established accounting precedence and processes of the contractor. It is suggested to make payments trainwise. Please modify. **CMRL Response (August 2023)** Tender Condition Prevails. **Follow-up Bidder Query** A. It is found Milestones under these price centres (therefore, payments) are not defined train wise, but after certain lot of trains (6 trains or 7 trains or 8 trains, on case by case basis). B. This creates hardships to the contractors in terms of cashflows and leads to avoidable price loading. C. It is suggested to define Milestones (and consequent payments) train wise. It is requested to issue a clarficatory statement stipulating that trainset wise payments is admissible during execution stage.	It is clarified that existing Tender Conditions will not prevent CMRL from settling interim payment requests submitted by Contractor that are structured on a train by train basis. Tender Condition Prevails.	No
82	Part-1, Section – IV Bidding Forms	4.4.9	PRICE CENTRE 'RS-F' – INTEGRATED TESTING AND COMMISSIONING OF TRAINS AND SERVICE TRIALS MILESTONE NUMBER / WORK DESCRIPTION / MILESTONE ACTIVITY / APPORTIONED AMOUNT INR (COLUMN A) / JPY (COLUMN B) / FC (COLUMN C) / PERIOD OF COMPLETION OF MILESTONE FROM COMMENCEMENT DATE (QUANTITY) / ALLOWABLE APPORTIONMENT % Obtain the "No Objection With Comments (NOWC)" / "Notice of No Objection (NONO)" from the Employer / Engineer for: a. Completion of Integrated Testing and Commissioning in the Depot; b. Completion of Integrated testing and Commissioning on the section in conjunction with Designated Contractors; c. Instrumentation Tests of First train, conducting oscillation trials as per requirement of Statutory Authorities, compilation of test Results, obtaining sanction of Statutory Authorities for fitness of train for carriage of passengers in respect of Prototype Trains only. d. Service Trials, for; RS-F1 First 3-car rake (Prototype Rake) 0.07 % RS-F2 Obtain as above for first 8 train sets 0.56 % RS-F3 Obtain as above for next 7 train sets 0.49 % RS-F4 Obtain as above for next 7 train sets 0.49 % RS-F5 Obtain as above for next 7 train sets 0.49 % RS-F6 Obtain as above for next 6 train sets 0.42 % RS-F7 Obtain as above for next 6 train sets 0.42 % RS-F8 Obtain as above for next 6 train sets 0.42 % RS-F9 Obtain as above for next 8 train sets 0.56 % RS-F10 Obtain as above for next 7 train sets 0.49 % RS-F11 Obtain as above for next 7 train sets 0.49 % RS-F : PRICE CENTRE TOTAL (RS-F1 – RS-F11) 4.90 %	**Initial Bidder Query (August 2023)** 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 cashflows and is in-consistent with established accounting precedence and processes of the contractor. It is suggested to make payments trainwise. Please modify. **CMRL Response (August 2023)** Tender Condition Prevails. **Follow-up Bidder Query** A. It is found Milestones under these price centres (therefore, payments) are not defined train wise, but after certain lot of trains (6 trains or 7 trains or 8 trains, on case by case basis). B. This creates hardships to the contractors in terms of cashflows and leads to avoidable price loading. C. It is suggested to define Milestones (and consequent payments) train wise. It is requested to issue a clarficatory statement stipulating that trainset wise payments is admissible during execution stage.	It is clarified that existing Tender Conditions will not prevent CMRL from settling interim payment requests submitted by Contractor that are structured on a train by train basis. Tender Condition Prevails.	No
83	Part-1, Section – IV Bidding Forms	2. Schedule of Adjustment Data	Table B: Foreign Currency (FC) – Japanese Yen L_0 / L_0 | Labour | Ministry of Health, Labour & welfare - Japan Wage Indices - Manufacturing | | | 0.10 ~ 0.25 |	**Initial Bidder Query (August 2023)** Most of Japanese suppliers not accepting to Price Adjustment. Hence, if this clause is mandatory, please replace Ministry of Health, Labour & welfare - Japan Wage Indices - Manufacturing with All India Consumer Price Index for Industrial Workers Published by RBI Bulletin (base year 2016) similar to Table C stipulation for foreign currency. Or Else, give both options to the bidders and let Bidder choose one between them. **CMRL Response (August 2023)** Tender Condition Prevails. **Follow-up Bidder Query** Japanese Suppliers are not willing to accept for the price adjustment and do not support for the indices. Hence, for contract administration purpose, if this clause is mandatory, please replace Ministry of Health, Labour & welfare - Japan Wage Indices - Manufacturing with All India Consumer Price Index for Industrial Workers Published by RBI Bulletin (base year 2016) Please be informed this is similar to Labour index stipulation for Table C, foreign currency which is already accepted.	Tender Condition Prevails Note: Bidders may refer to the following GoJ Website to find an English Translation of the indicie that is referred to in Schedule of Adjustment Data -Table-B https://www.mhlw.go.jp/english/database/db-l/r05/2301re/2301re.html	No
84	Part-1, Section - IV Bidding Forms	4.2, Note (ii)	Price centres 'CMC – RS' and 'CMC - DM&P' shall be quoted in Indian Rupees (INR) only.	**Initial Bidder Query (August 2023)** We request CMRL to permit bidders to quote for CMC in foreign currency as well. **CMRL Response (August 2023)** Tender Condition Prevails. **Follow-up Bidder Query** A. Some imports would inevitably exist through out CMC period, esp. due to 30% mandatory japanese content. B. Contractor cannot foresee / estimate of FE fluctuation over a long period of 17 years C. Hence the change is very much essential. We request CMRL to permit bidders to quote for CMC in foreign curreny.	Refer to: **Addendum_02 S/N 03**	Yes
85	Part 2 - Section VI C: ERTS - CMC of RS & DM&P - CMC Requirements	2.4.1 iii) c)	A Minimum of 25% maintenance staff and supervisor of the Contractor shall be transferred to CMRL payroll after expiry of Comprehensive maintenance contract to ensure continuity and quality of maintenance of the train till alternative arrangements are made by CMRL. The selection procedure shall be finalized jointly by CMRL and Rolling stock Contractor.	**Initial Bidder Query (August 2023)** This transfer is not feasible. Please delete the underlined portion. **CMRL Response (August 2023)** Tender Condition Prevails. **Follow-up Bidder Query** The clause is not feasible to be implemented. Please delete or modify the clause suitably.	Refer to: **Addendum_02 S/N 79**	Yes
86	Part-1, Section – IV Bidding Forms	4.4.11	Price Centre 'RS-H' - Training and Manuals	**Initial Bidder Query (August 2023)** Please provide timelines for providing training under this price centre. This is required for pricing purposes. **CMRL Response (August 2023)** Refer to Footnote-2 of Part-1, Section – IV Bidding Forms Clause 4.4.11 **Follow-up Bidder Query** As per the cited footnotes, The dates of operation of the Milestones Activities for Milestones RS-H1 to RS-H6 and RS-H13 will be at the discretion of the Employer. In this connection the following is submitted, (A) There is no price adjustment allowed for Cost Centre - H items. (B) As such, it is not possible to hold the Cost Centre H (RS-H0, RS-H4, RS-H5 and RS-H6) prices through out the contract duration including CMC phase. It is requested to clearly mention the key dates for Price Centre - H similar to all other Price Centres. Alternatively, it may be spcifically mentioned that RS-H0, RS-H4, RS-H5 and RS-H6 shall be operated prior to CMC commencement.	It is clarified that the timelines decided by CMRL shall not be beyond the Project Period. Tender Condition Prevails.	n/a
87	Part-1, Section - V/ELIGIBLE SOURCE COUNTRIES OF JAPANESE ODA LOANS	Clauses '5' and '13'	Minimum Japanese Content Requirement of 30.069% of the Contract Price (Excluding Price Centre 'RS-CMC', Price Centre 'DM&P-CMC' and Taxes & Duties)	Clauses '5' and '13' of Part-1, Section-V (SECTION V: ELIGIBLE SOURCE COUNTRIES OF JAPANESE ODA LOANS) of the CMRL Tender specs (Bid No. CP26/ARE02A) are not consistent. As per Clause '5', the goods procured form the eligible local manufacturing company(ies) invested by Japanese Companies (hereinafter referred to as the "Eligible Local Manufacturing Company(ies)") can be regarded and counted as Japanese origin against the requirement of Goods and Services to be sourced from Japanese manufacturer / Companies being minimum 30.069% of the Contract Price (Excluding Price Centre 'RS-CMC', Price Centre 'DM&P-CMC' and Taxes & Duties). However Clause '13' of SECTION V: ELIGIBLE SOURCE COUNTRIES OF JAPANESE ODA LOANS does not permit the Juridical persons incorporated and registered in India, having appropriate facilities for producing or providing the goods and services in India and actually conducting their business there despite fulfilling the requisite conditions that the Japanese Company is not holding less than 10% shares in such company and no any company from third world is having more shares than the above said Japanese Company. It is requested that CMRL may please clarify whether in accordance with the above said Clause '5' (SECTION V: ELIGIBLE SOURCE COUNTRIES OF JAPANESE ODA LOANS), the goods procured from eligible local manufacturing company(ies) invested by Japanese Companies (hereinafter referred to as the "Eligible Local Manufacturing Company(ies)" in clause '5') shall be regarded and counted as Japanese origin against the requirement of Goods and Services to be sourced from Japanese manufacturer / Companies being minimum 30.069% of the Contract Price (Excluding Price Centre 'RS-CMC', Price Centre 'DM&P-CMC' and Taxes & Duties).	It is clarified that the eligibility criteria for counting goods and services as Japanese Origin as set out in Clause Numbers 5, 6 and 7 shall remain valid in spite of Clause-13.	Yes

CP26 / ARE02A Contract - Reply to Bidder Queries (02)						
Sl no	Part / Section No	Clause No.	Original Bid Condition	Bidder's queries	CMRL Response	Addendum
88	Part 3 : Section VIII Particular Conditions (Part B: Specific Provisions)	4.1.1	Country of Origin of Goods and Services: The successful bidder under this Contract shall procure goods and services of minimum 30.069% of the Total Contract Price (Excluding all Taxes & Duties, Price Centre 'RS-CMC' and Price Centre 'DM&P-CMC') from Japanese Manufacturers / Contractors as per Part 1 Section V – Eligible Source countries.	In order to boost the **"Make in India"** and **"Atmanirbhar Bharat"** initiatives of Government of India, we need to focus on procurement from Indian vendor suiting the requirements; accordingly, the Percentage of procurements are required to be relooked and realigned to have more suitable competition, both technically and commercially. In view of the above,we do hereby request to amend the clause 4.1.1 as below: The successful bidder under this Contract shall procure goods and services of minimum ~~30.069%~~ **20%** of the Total Contract Price (Excluding all Taxes & Duties, Price Centre 'RS-CMC' and Price Centre 'DM&P-CMC') from Japanese Manufacturers / Contractors as per Part 1 Section V – Eligible Source countries.	Tender Condition Prevails	No
89	Part 2 – Section VI A	2.14.2.2	During the rescue operation of a train with a burst MR pipe; a healthy assisting train (in AW0 load condition) shall be capable of rescuing a failed train (in AW4 load condition) with its parking brakes applied. The coupled AW0~AW4 consists shall be capable of starting and accelerating up a worstcase gradient of 4% and be able to reach a speed of 20 kmph in restricted manual mode. This coupled rake of healthy and defective consists shall be able to ascend any combination of gradient and/or curve as may be necessary to reach the next station to allow passengers to deboard. The healthy train shall thereafter be able to push the defective train (with its load now reduced to AW0, 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 sliding under all operating conditions.** The Contractor shall demonstrate that this requirement is met during main line type 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**.	Push-out requirement will limit the safety against rolling under worst case as per ERTS Clause 2.14.3.6, 2.14.3.7 & 12.8.1. Since the clause is contracdictory with above mentioned clauses, it is requested to remove push-out brake requirement. Otherwise it may be detremental to the rolling stock during operation which may result in wheel flat / track damage. In view of the above,CMRL may please review and delete the ERTS clause.	Refer to: **Addendum_02 S/N 10**	Yes
90	Part 2 – Section VI A	2.14.3.7	The parking brakes shall also be capable of holding a stationary rake in the Tare Loading Condition AW0 on the worst gradient of the Depot track (4%) in the worst wind conditions stated in Table 2-6. **Under rescue conditions the rescuing rake shall be capable of holding itself and the coupled defective rake, under any combination of loading conditions (from AW0 to AW4 Loading), on the worst combination of gradient and the worst wind conditions as stated in Table 2-6.** The rake shall not move during the transition from emergency brake to parking brake or vice versa, when positioned on the worst track gradient.	This requirement of ERTS clause is not practically possible keeping view of requirement of ERTS 2.14.2.2, 12.2.10 (h), 12.2.10 (i), 12.8.5 and 17.5.4.8.10. In view of the above, CMRL may please review and delete the ERTS clause.	Refer to: **Addendum_02 S/N 11**	No
91	Part 2 – Section VI A	12.2.10 (h)	Under conditions of a dragging parking brake for a minimum distance of 3 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.	Dragging requirement will limit the safety against rolling under worst case as per ERTS Clause 2.14.3.6, 2.14.3.7 & 12.8.1. Since the clause is contracdictory with above mentioned clauses, it is requested to remove push-out brake requirement. Otherwise it may be detremental to the rolling stock during operation which may result in allow wheel flat / track damage. In view of the above, CMRL may please review and delete the ERTS clause.	Bidders may refer to Addendum_02 S/N 11 in the context of SAPB rating, to understand that the requested change is not required. Tender Condition Prevails	Yes
92	Part 2 – Section VI A	12.2.10 (i)	The Spring Applied Parking Brake (SAPB) shall be an integral part of the friction brake actuation system. **Brake actuators shall be sufficient to permit push-through without any wheel damage.**	Dragging requirement will limit the safety against rolling under worst case as per ERTS Clause 2.14.3.6, 2.14.3.7 & 12.8.1. Since the clause is contracdictory with above mentioned clauses, it is requested to remove push-out brake requirement. Otherwise it may be detremental to the rolling stock during operation which may result in allow wheel flat / track damage. In view of the above, CMRL may please review and delete the ERTS clause.	Bidders may refer to Addendum_02 S/N 11 in the context of SAPB rating, to understand that the requested change is not required. Tender Condition Prevails	Yes
93	Part 2 – Section VI A	12.8.5	The parking brake force on individual axles shall not be so large as to inhibit emergency rake recovery or to give rise to locked wheels during recovery. The maximum wheel / rail adhesion level to be assumed for the "push-out"requirement shall be 0.16	Push-out requirement will limit the safety against rolling under worst case as per ERTS Clause 2.14.3.6, 2.14.3.7 & 12.8.1. Since the clause is contracdictory with above mentioned clauses, it is requested to remove push-out brake requirement. Otherwise it may be detremental to the rolling stock operation which may result in wheel flat / track damage. In view of the above, CMRL may please review and delete the ERTS clause.	Bidders may refer to Addendum_02 S/N 11 in the context of SAPB rating, to understand that the requested change is not required. Tender Condition Prevails	No
94	Part 2 – Section VI A	17.5.4.8.10	Parking Brake Test A parking brake system test shall be performed on one three car rake. Design compliance with Chapter 2 shall be demonstrated by measuring the force required to move the train with the parking brake applied. The test shall be performed with bedded-in brake shoes. Push out test shall be performed in dry condition to prove clause 12.8.5. During this test, all wheels should rotate and shall not slide.	Push-out requirement will limit the safety against rolling under worst case as per ERTS Clause 2.14.3.6, 2.14.3.7 & 12.8.1. Since the clause is contracdictory with above mentioned clauses, it is requested to remove push-out brake requirement. Otherwise it may be detremental to the rolling stock operation which may result in wheel flat / track damage. In view of the above, CMRL may please review and delete the ERTS clause.	Bidders may refer to Addendum_02 S/N 11 in the context of SAPB rating, to understand that the requested change is not required. Tender Condition Prevails	No
95	Part 3 : Section VIII Particular Conditions (Part B: Specific Provisions)	4.1.1	Country of Origin of Goods and Services: The successful bidder under this Contract shall procure goods and services of minimum 30.069% of the Total Contract Price (Excluding all Taxes & Duties, Price Centre 'RS-CMC' and Price Centre 'DM&P-CMC') from Japanese Manufacturers / Contractors as per Part 1 Section V – Eligible Source countries.	….In consideration of this issue, we respectfully urge CMRL to consider the removal of clause 4.1.1 from Part 3: Section VIII Particular Conditions (Part B: Specific Provisions) thereby removing the restriction to procure goods and services of minimum 30.069% of the Total Contract Price from Japanese Manufacturers / Contractors as per Part 1 Section V – Eligible Source countries.....	Tender Condition Prevails	No
96	Part-1, Section – IV/ Bidding Forms//	4.4.12 PRICE CENTRE 'RS-CMC & 4.2 Pricing Summary (BID TOTAL)/	PRICE CENTRE 'RS-CMC' – Comprehensive Maintenance Contract of Rolling Stock for 15 years & Pricing Summary (BID TOTAL)/Sl. No. 11./Price Centre RS-CMC: Allowable apportionment	It is noted that the CMC allowable apportionment for Price Centre RS-CMC weightage has been defined as 30% of the Total Value. In the scenario that the amount required for 15 years of CMC is lower than the defined apportionment of 30%, deficit cashflow shall emerge for the supply of RS for a very long period resulting into 'increased project financing cost'. This will result in increased Contract value significantly. Accordingly, we request you to kindly revise the allowable apportionment for CMC in line with either of the below mentioned options: **Option#1:** CMC Price shall be independent of the RS price. **Option#2:** CMC allowable apportionment for **Price Centre RS-CMC weightage may be suitably reduced**.	Tender Condition Prevails	No
97	Part-1, Section – IV Bidding Forms & Part-1, Section - II Bid Data Sheet (BDS)/ Annexure to BDS	4.Price Schedules/4.1 Preamble/4.1.9 & 2. COST OF BIDDING DOCUMENTS/ (e)	4.Price Schedules/4.1 Preamble/4.1.9: In case the successful bidder being a JV / Consortium, payment will be made only to the Bank account of JV / consortium and not to the Bank account of individual member of JV / Consortium. & 2. COST OF BIDDING DOCUMENTS/ (e): Indian bidders are to provide their GST registration details. However, If the foreign bidders or JV formed by foreign bidders turn out to be the successful bidders, they shall obtain the GST registration details and submit to the Engineer before getting any payments.	In case of the bidder being a Consortium, tender conditions require that for receipt of contracted payments, the Bank Account shall be in the name of the Consortium. Also, it is our understanding that tender conditions require that the Consortium members must form an unincorporated/incorporated JV to execute the contract and all invoices shall be raised by such JV and not by individual members of the Consortium. In such a scenario, CAF will be required to form an unincorporated/incorporated JV, which has huge operational, legal, tax, statutory compliance and financial implications. On account of such challenges, it will not be feasible for CAF to consider forming an unincorporated /incorporated JV at this stage. It will be appropriate to note that for RS contracts funded by multilateral funding agencies, all other Metro Operators in India allow the Consortium members to submit separate invoices corresponding to their scope of work and the Employer make payments into the members separate bank accounts. It is earnestly requested that the conditions be suitably modified to enable the Consortium members to submit separate invoices and receive payments in their respective bank accounts corresponding to their share of scope as indicated in the Consortium Agreement. Further, there shall be no requirement of obtaining GST registration in the name of Consortium. With reference to above we request you to kindly amend refered clauses as With reference to above we request you to kindly amend refered clauses as below: Part-1, Section – IV /Bidding Forms/4.Price Schedules/4.1 Preamble/4.1.9: In case the successful bidder being a JV / Consortium, ~~payment will be made only to the Bank account of JV / consortium and not to the Bank account of individual member of JV / Consortium.~~ Bidder comprising of JV/Consortium could raise separate invoices and receive separate payments in the respective Bank accounts of the Member of the Consortium. Contractor shall clearly lay down 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.	**Refer Addendum S/N 83**	Yes

CP26 / ARE02A Contract - Reply to Bidder Queries (02)						
Sl no	Part / Section No	Clause No.	Original Bid Condition	Bidder's queries	CMRL Response	Addendum
				Part-1, Section - II /Bid Data Sheet (BDS)/ Annexure to BDS/2. COST OF BIDDING DOCUMENTS/ (e): Indian bidders are to provide their GST registration details. However, If the foreign bidders or JV formed by foreign bidders turn out to be the successful bidders, they shall obtain the GST registration details and submit to the Engineer before getting any payments. In case of Consortium between Indian Bidder and Foreign Bidder, individual GST registration details shall be submitted by respective Consortium Members and there is no mandatory requirement of GST registration for Consortium.		