



DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA

SRI LANKA RAILWAYS

**MINISTRY OF TRANSPORT, HIGHWAYS, PORTS & URBAN
DEVELOPMENT**

BIDDING DOCUMENTS

**PROCUREMENT FOR SUPPLY OF 05 DIESEL MULTIPLE UNITS
FOR SRI LANKA RAILWAYS**

SRS/F 8156

2026

BIDDING DOCUMENT

Procurement of Diesel Multiple Units

Single-Stage: Two-Envelope Bidding Procedure

PROCUREMENT FOR SUPPLY OF 05 DIESEL MULTIPLE
UNITS FOR SRI LANKA RAILWAYS - SRS/F 8156

BIDDING DOCUMENTS ISSUED UP TO : 20/07/2026

CLOSING / OPENING OF BIDS : 21/07/2026

Document Number:

Bidder:

Address:

.....

.....

.....

Amount collected: Rs. 500,000.00

Receipt No : of

Issued on:

Issuing officer

Invitation for Bids (IFB)
DEMOCRATIC SOCIALIST REPUBLIC OF SRI LANKA
SRI LANKA RAILWAYS

PROCUREMENT FOR THE SUPPLY OF FIVE (05) NOS. DIESEL MULTIPLE UNITS FOR SRI LANKA RAILWAYS - SRS/F.8156

1. The Chairman, High Level Procurement Committee of Ministry of Transport, Highways and Urban Development on behalf of Sri Lanka Railways, Colombo, Sri Lanka, will receive sealed bids from International Manufacturers/Suppliers for Supply of 05 Nos Diesel Multiple Units for Sri Lanka Railways.
2. Bidding will be conducted through International Competitive Bidding procedure. The Bidding Documents for Procurement of Goods has been prepared by the Ministry of Transport, Highways and Urban Development and is based on the Standard Bidding Document for the Procurement of Goods issued by the Asian Development Bank on December 2016. The Bidding Document is used as per the Sub-Clause C of Clause 5.3 of Paragraph 05 of Procurement Guideline 2024.
3. Interested eligible Bidders may obtain further information and inspect the Bidding Documents at the address given below from 9.00 AM to 3.00 PM from **08/06/2026 to 20/07/2026** on a working day.

Deputy General Manager (Procurement),
Railway Procurement Sub Department,
Olcott Mawatha, Colombo 10, Sri Lanka.
Telephone Nos. : 94 (11) 2438078 or 94(11) 4600202
Fax No. : 94(11) 2432044
Email : srs.slr@gmail.com, tender1.srs@gmail.com
Website : www.railway.gov.lk

4. The Complete set of Bidding Documents in English Language may be purchased, by interested bidders on the submission of a written request to the address above from **08/06/2026 to 20/07/2026** up to 3.00 PM or from Sri Lanka Missions abroad till **20/07/2026** up to 3.00 PM (Sri Lanka Time) on payment of a non-refundable procurement fee of Rs.500,000.00 only or an equivalent sum in a freely convertible currency.
5. The Bidder shall submit documentary evidences in proof of ability and capability, as given in the Section 3.2.2 – Contractual & Technical Experience of Bidding Document.
6. Bid Shall be valid until 12/01/2027 (175 days from the date of bid opening).
7. The Bidder shall furnish a bid security in the amount of USD 660,000 or equivalent amount in Sri Lankan currency or in any freely convertible currencies in the form of bank guarantee from a local bank or internationally reputed bank counter guaranteed by a bank operating in Sri Lanka, approved by the Central bank of Sri Lanka.
8. Pre-Bid meeting will be held at **10.00 am on 23/06/2026** at the office of Secretary, Ministry of Transport, Highways and Urban development, 7th floor, Sethsiripaya Stage II, Baththaramulla, Sri Lanka.

9. Bids must be delivered to the address below on or before **02.00 PM on 21/07/2026** and the bids shall be opened immediately after closing of the bids. Bidders or their authorized representatives are requested to be present at the opening of Bids. Late Bids shall not be accepted.

The Chairman,
High Level Procurement Committee,
Ministry of Transport, Highways and Urban Development,
7th Floor, Sethsiripaya Stage II
Baththaramulla.

Ref: SRS/F.8156

The Chairman,
High Level Procurement Committee

Information Copy Not for Bidding

Preface

This Bidding Document for Procurement of Goods has been prepared by Ministry of Transport, Highways and Urban Development and is based on the Standard Bidding Document for the Procurement of Goods issued by the Asian Development Bank, dated December 2016.

This Bidding Document is used as per the Procurement Guide line 2024 under paragraph 5, Clause 5.3,
Sub Clause (C)

Information Copy Not for Bidding

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A. General

- 1. Scope of Bid**
- 1.1 In connection with the Invitation for Bids (IFB) indicated in the Bid Data Sheet (BDS), the Purchaser, as indicated in the BDS, issues this Bidding Document for the supply of Goods and Related Services incidental thereto as specified in Section 6 (Schedule of Supply). The name, identification, and number of lots of the international competitive bidding (ICB) are provided in the BDS.
- 1.2 Throughout this Bidding Document,
- (a) the term "in writing" means communicated in written form and delivered against receipt;
 - (b) except where the context requires otherwise, words indicating the singular also include the plural and words indicating the plural also include the singular; and
 - (c) "Day" means calendar day.
- 2. Source of Funds**
- 2.1 The Borrower or Recipient (hereinafter called "Borrower") indicated in the BDS has applied for or received financing (hereinafter called "funds") from the Asian Development Bank (hereinafter called "ADB") toward the cost of the project named in the BDS. The Borrower intends to apply a portion of the funds to eligible payments under the contract(s) for which this Bidding Document is issued.
- 2.2 Payments by ADB will be made only at the request of the Borrower and upon approval by ADB in accordance with the terms and conditions of the Financing Agreement between the Borrower and ADB (hereinafter called the Financing Agreement), and will be subject in all respects to the terms and conditions of that Financing Agreement. No party other than the Borrower shall derive any rights from the Financing Agreement or have any claim to the funds.
- 3. Fraud and Corruption**
- 3.1 ADB's Anticorruption Policy requires Borrowers (including beneficiaries of ADB-financed activity), as well as Bidders, Suppliers, and Contractors under ADB-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, ADB
- (a) Defines, for the purposes of this provision, the terms set forth below as follows:
 - (i) "Corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;
 - (ii) "fraudulent practice" means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
 - (iii) "Coercive practice" means impairing or harming, or threatening to impair or harm, directly or indirectly, any

party or the property of the party to influence improperly the actions of a party;

- (iv) "Collusive practice" means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party;
 - (v) "obstructive practice" means (a) deliberately destroying, falsifying, altering, or concealing of evidence material to an ADB investigation; (b) making false statements to investigators in order to materially impede an ADB investigation; (c) failing to comply with requests to provide information, documents, or records in connection with an Office of Anticorruption and Integrity (OAI) investigation; (d) threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or (e) materially impeding ADB's contractual rights of audit or access to information; and
 - (vi) "integrity violation" is any act which violates ADB's Anticorruption Policy, including (i) to (v) above and the following: abuse, conflict of interest, violations of ADB sanctions, retaliation against whistleblowers or witnesses, and other violations of ADB's Anticorruption Policy, including failure to adhere to the highest ethical standard.
- (b) will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations in competing for the Contract,
 - (c) will cancel the portion of the financing allocated to a contract if it determines at any time that representatives of the borrower or of a beneficiary of ADB-financing engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations during the procurement or the execution of that contract, without the borrower having taken timely and appropriate action satisfactory to ADB to remedy the situation;
 - (d) will impose remedial actions on a firm or an individual, at any time, in accordance with ADB's Anticorruption Policy and Integrity Principles and Guidelines (both as amended from time to time), including declaring ineligible, either indefinitely or for a stated period of time, to participate¹ in ADB-financed, -administered, or -supported activities or to benefit from an ADB-financed, -administered, or -supported contract, financially or otherwise, if it at any time determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations; and
 - (e) will have the right to require that a provision be included in bidding documents and in contracts financed by ADB, requiring

¹ Whether as a Contractor, Subcontractor, Consultant, Manufacturer or Supplier, or Service Provider; or in any other capacity (different names are used depending on the particular Bidding Document).

Bidders, suppliers and contractors to permit ADB or its representative to inspect their accounts and records and other documents relating to the bid submission and contract performance and to have them audited by auditors appointed by ADB.

- 3.2 Furthermore, Bidders shall be aware of the provision stated in Subclause 3.2 and Subclause 35.1 (c) of the General Conditions of Contract.

4. Eligible Bidders

- 4.1 A Bidder may be a natural person, private entity, or government-owned enterprise subject to ITB 4.5-or any combination of them with a formal intent to enter into an agreement or under an existing agreement in the form of a joint venture. In the case of a joint venture,

- (a) all parties to the Joint Venture shall be jointly and severally liable; and
- (b) the Joint Venture shall nominate a representative who shall have the authority to conduct all businesses for and on behalf of any and all the parties of the Joint Venture during the bidding process and, in the event the Joint Venture is awarded the Contract, during contract execution.

- 4.2 A Bidder, and all parties constituting the Bidder, shall have the nationality of an eligible country, in accordance with Section 5 (Eligible Countries). A Bidder shall be deemed to have the nationality of a country if the Bidder is a citizen or is constituted, incorporated, or registered, and operates in conformity with the provisions of the laws of that country. This criterion shall also apply to the determination of the nationality of proposed subcontractors or suppliers for any part of the Contract, including related services.

- 4.3 A Bidder shall not have a conflict of interest. All Bidders found to have a conflict of interest shall be disqualified. A Bidder may be considered to be in a conflict of interest with one or more parties in this bidding process if any of, including but not limited to, the following apply:

- (a) they have controlling shareholders in common; or
- (b) they receive or have received any direct or indirect subsidy from any of them; or
- (c) they have the same legal representative for purposes of this Bid; or
- (d) they have a relationship with each other, directly or through common third parties, that puts them in a position to have access to material information about or improperly influence the Bid of another Bidder, or influence the decisions of the Purchaser regarding this bidding process; or
- (e) a Bidder participates in more than one bid in this bidding process, either individually or as a partner in a joint venture, except for alternative offers permitted under ITB 13. This will result in the disqualification of all Bids in which it is involved. However, subject to any finding of a conflict of interest in terms

of ITB 4.3 (a)–(d) above, this does not limit the participation of a Bidder as a subcontractor in another bid or of a firm as a subcontractor in more than one Bid; or

- (f) a Bidder or any affiliated entity, participated as a consultant in the preparation of the design or technical specifications of the goods and services that are the subject of the Bid; or
- (g) a Bidder was affiliated with a firm or entity that has been hired (or is proposed to be hired) by the Purchaser or Borrower as Project Manager for the contract.

4.4 A firm shall not be eligible to participate in any procurement activities under an ADB-financed, -administered, or -supported project while under temporary suspension or debarment by ADB pursuant to its Anticorruption Policy (see ITB 3), whether such debarment was directly imposed by ADB, or enforced by ADB pursuant to the Agreement for Mutual Enforcement of Debarment Decisions. A bid from a temporary suspended or debarred firm will be rejected.

4.5 Government-owned enterprises in the Purchaser's country shall be eligible only if they can establish that they (i) are legally and financially autonomous, (ii) operate under commercial law, and (iii) are not a dependent agency of the Purchaser.

4.6 Bidders shall provide such evidence of their continued eligibility satisfactory to the Purchaser, as the Purchaser shall reasonably request.

4.7 Firms shall be excluded if by an act of compliance with a decision of the United Nations Security Council taken under Chapter VII of the Charter of the United Nations, the Borrower's country prohibits any import of goods or contracting of works or services from that country or any payments to persons or entities in that country.

5. Eligible Goods and Related Services

5.1 All Goods and Related Services to be supplied under the Contract and financed by ADB, shall have their country of origin in eligible source countries as defined in ITB 4.2, and all expenditures under the Contract will be limited to such Goods and Related Services.

5.2 For purposes of this clause, the term "goods" includes commodities, raw material, machinery, equipment, and industrial plants; and "related services" includes services such as insurance, transportation, installation, commissioning, training, and initial maintenance.

5.3 The term "country of origin" means the country where the goods have been mined, grown, cultivated, produced, manufactured, or processed; or through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its imported components.

5.4 The nationality of the firm that produces, assembles, distributes, or sells the goods shall not determine their origin.

B. Contents of Bidding Document

- 6. Sections of the Bidding Document**
- 6.1 The Bidding Document consists of Parts I, II, and III, which include all the sections indicated below, and should be read in conjunction with any addenda issued in accordance with ITB 8.
- PART I Bidding Procedures**
- Section 1 Instructions to Bidders (ITB)
 - Section 2 Bid Data Sheet (BDS)
 - Section 3 Evaluation and Qualification Criteria (EQC)
 - Section 4 Bidding Forms (BDF)
 - Section 5 Eligible Countries (ELC)
- PART II Supply Requirements**
- Section 6 Schedule of Supply (SS)
- PART III Conditions of Contract and Contract Forms**
- Section 7 General Conditions of Contract (GCC)
 - Section 8 Special Conditions of Contract (SCC)
 - Section 9 Contract Forms (COF)
- 6.2 The IFB issued by the Purchaser is not part of the Bidding Document.
- 6.3 The Purchaser is not responsible for the completeness of the Bidding Document and its addenda, if they were not obtained directly from the source stated by the Purchaser in the IFB.
- 6.4 The Bidder is expected to examine all instructions, forms, terms, and specifications in the Bidding Document. Failure to furnish all information or documentation required by the Bidding Document, may result in the rejection of the Bid.
- 7. Clarification of Bidding Document**
- 7.1 A prospective Bidder requiring any clarification on the Bidding Document shall contact the Purchaser in writing at the Purchaser's address indicated in the BDS. The Purchaser will respond in writing to any request for clarification, provided that such request is received no later than 21 days prior to the deadline for submission of Bids. The Purchaser shall forward copies of its response to all Bidders who have acquired the Bidding Document in accordance with ITB 6.3, including a description of the inquiry but without identifying its source. Should the Purchaser deem it necessary to amend the Bidding Document as a result of a clarification, it shall do so following the procedure under ITB 8 and ITB 24.2.
- 8. Amendment of Bidding Document**
- 8.1 At any time prior to the deadline for submission of the Bids, the Purchaser may amend the Bidding Document by issuing addenda.
- 8.2 Any addendum issued shall be part of the Bidding Document and shall be communicated in writing to all who have obtained the Bidding Document directly from the Purchaser in accordance with ITB 6.3.

- 8.3 To give prospective Bidders reasonable time in which to take an addendum into account in preparing their Bids, the Purchaser may, at its discretion, extend the deadline for the submission of the Bids, pursuant to ITB 24.2

C. Preparation of Bids

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| 9. Cost of Bidding | 9.1 | The Bidder shall bear all costs associated with the preparation and submission of its Bid, and the Purchaser shall in no case be responsible or liable for those costs, regardless of the conduct or outcome of the bidding process. |
| 10. Language of Bid | 10.1 | The Bid, as well as all correspondence and documents relating to the Bid exchanged by the Bidder and the Purchaser, shall be written in the language specified in the BDS. Supporting documents and printed literature that are part of the Bid may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified in the BDS, in which case, for purposes of interpretation of the Bid, such translation shall govern. |
| 11. Documents Comprising the Bid | 11.1 | The Bid shall comprise two envelopes submitted simultaneously, one containing the Technical Bid and the other the Price Bid, both envelopes enclosed together in an outer single envelope. |
| | 11.2 | <p>The Technical Bid submitted by the Bidder shall comprise the following:</p> <ul style="list-style-type: none"> (a) Technical Bid Submission Sheet; (b) Bid Security or Bid-Securing Declaration, in accordance with ITB 21; (c) alternative Technical Bid, if permissible, in accordance with ITB 13; (d) written confirmation authorizing the signatory of the Bid to commit the Bidder, in accordance with ITB 22; (e) documentary evidence in accordance with ITB 16, establishing the Bidder's eligibility to bid; (f) documentary evidence in accordance with ITB 17, that the Goods and Related Services to be supplied by the Bidder are of eligible origin; (g) documentary evidence in accordance with ITB 18 and ITB 32, that the Goods and Related Services conform to the Bidding Document; (h) documentary evidence in accordance with ITB 19, establishing the Bidder's qualifications to perform the contract if its Bid is accepted; and (i) any other document required in the BDS. |

- 11.3 The Price Bid submitted by the Bidder shall comprise the following:
- (a) Price Bid Submission Sheet and the applicable Price Schedules, in accordance with ITB 12, ITB 14, and ITB 15;
 - (b) alternative Price Bid corresponding to the alternative Technical Bid, if permissible, in accordance with ITB 13; and
 - (c) any other document required in the BDS.
- 12. Bid Submission Sheets and Price Schedules**
- 12.1 The Bidder shall submit the Technical Bid Submission Sheet and the Price Bid Submission Sheet using the form furnished in Section 4 (Bidding Forms). These forms must be completed without any alterations to their format, and no substitutes shall be accepted. All blank spaces shall be filled in with the information requested.
- 12.2 The Bidder shall submit, as part of the Price Bid, the Price Schedules for Goods and Related Services, according to their origin as appropriate, using the forms furnished in Section 4 (Bidding Forms) and as required in the BDS.
- 13. Alternative Bids**
- 13.1 Unless otherwise indicated in the BDS, alternative Bids shall not be considered.
- 14. Bid Prices and Discounts**
- 14.1 The prices and discounts quoted by the Bidder in the Price Bid Submission Sheet and in the Price Schedules shall conform to the requirements specified below.
- 14.2 All items in the Schedule of Supply must be listed and priced separately in the Price Schedules. If a Price Schedule shows items listed but not priced, their prices shall be assumed to be included in the prices of other items. Items not listed in the Price Schedule shall be assumed not to be included in the Bid, and provided that the Bid is substantially responsive, the corresponding adjustment shall be applied in accordance with ITB 33.3.
- 14.3 The price to be quoted in the Price Bid Submission Sheet shall be the total price of the Bid excluding any discounts offered. Absence of the total bid price in the Price Bid Submission Sheet may result in the rejection of the Bid.
- 14.4 The Bidder shall quote discounts and the methodology for their application in the Price Bid Submission Sheet.
- 14.5 The terms EXW, CIF, CIP, and other similar terms shall be governed by the rules prescribed in the current edition of Incoterms, published by the International Chamber of Commerce, at the date of the Invitation for Bids or as specified in the BDS.
- 14.6 Prices proposed in the Price Schedule Forms for Goods and Related Services, shall be disaggregated, when appropriate, as indicated in this sub-clause. This disaggregation shall be solely for the purpose of facilitating the comparison of Bids by the Purchaser. This shall not in any way limit the Purchaser's right to contract on any of the terms offered

- (a) for Goods offered from within the Purchaser's country:
 - (i) the price of the goods quoted EXW (ex works, ex factory, ex warehouse, ex showroom, or off-the-shelf, as applicable), including all customs duties and sales and other taxes already paid or payable on the components and raw material used in the manufacture or assembly of goods quoted ex works or ex factory, or on the previously imported goods of foreign origin quoted ex warehouse, ex showroom, or off-the-shelf;
 - (ii) Sales tax and all other taxes applicable in the Purchaser's country and payable on the Goods if the Contract is awarded to the Bidder; and
 - (iii) The total price for the item.
- (b) for Goods offered from outside the Purchaser's country:
 - (i) The price of the goods quoted CIF (named port of destination), or CIP (border point), or CIP (named place of destination), in the Purchaser's country, as specified in the BDS;
 - (ii) The price of the goods quoted FOB port of shipment (or FCA, as the case may be), if specified in the BDS; and
 - (iii) The total price for the item.
- (c) for Related Services whenever such are specified in the Schedule of Supply:
 - (i) The local currency cost component of each item comprising the Related Services; and
 - (ii) the foreign currency cost component of each item comprising the Related Services, inclusive of all customs duties, sales and other similar taxes applicable in the Purchaser's country, payable on the Related Services, if the Contract is awarded to the Bidder.

14.7 Prices quoted by the Bidder shall be fixed during the Bidder's performance of the Contract and not subject to variation on any account, unless otherwise specified in the BDS. A Bid submitted with an adjustable price quotation shall be treated as nonresponsive and shall be rejected, pursuant to ITB 32. However, if in accordance with the BDS, prices quoted by the Bidder shall be subject to adjustment during the performance of the Contract, but a Bid submitted with no indexes identified in the Tables of Adjustment Data, price adjustment shall be treated as zero for the purpose of price adjustment during the performance of the contract.

14.8 If so indicated in ITB 1.1, Bids are being invited for individual contracts (lots) or for any combination of contracts (packages). Unless otherwise indicated in the BDS, prices quoted shall correspond to 100% of the items specified for each lot and to 100% of the quantities specified for each item of a lot. Bidders wishing to offer any price discount for the award of more than one Contract shall specify in their Price Bids the price discount applicable to each package, or alternatively, to individual Contracts within the package. Price discounts shall be submitted in accordance with ITB 14.4,

provided the Price Bids for all lots are submitted and opened at the same time.

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| 15. Currencies of Bid | 15.1 | <p>Bid prices shall be quoted in the following currencies:</p> <ul style="list-style-type: none"> (a) Bidders may express their bid price in any fully convertible currency. If a Bidder wishes to be paid in a combination of amounts in different currencies, it may quote its price accordingly but shall use no more than three currencies in addition to the currency of the Purchaser's country. (b) If some of the expenditures for the Related Services are to be incurred in the borrowing country, such expenditures should be expressed in the Bid and will be payable in the Purchaser's currency. |
| 16. Documents Establishing the Eligibility of the Bidder | 16.1 | <p>To establish their eligibility in accordance with ITB 4, Bidders shall</p> <ul style="list-style-type: none"> (a) complete the eligibility declarations in the Bid Submission Sheet, included in Section 4 (Bidding Forms); and (b) if the Bidder is an existing or intended Joint Venture in accordance with ITB 4.1, submit a copy of the Joint Venture Agreement, or a letter of intent to enter into such an Agreement. The respective document shall be signed by all legally authorized signatories of all the parties to the existing or intended Joint Venture, as appropriate. |
| 17. Documents Establishing the Eligibility of Goods and Related Services | 17.1 | <p>To establish the eligibility of the Goods and Related Services, in accordance with ITB 5, Bidders shall complete the country of origin declarations in the Price Schedule Forms included in Section 4 (Bidding Forms).</p> |
| 18. Documents Establishing the Conformity of the Goods and Related Services to the Bidding Document | 18.1 | <p>To establish the conformity of the Goods and Related Services to the Bidding Document, the Bidder shall furnish as part of its Technical Bid documentary evidence that the Goods and Related Services conform to the requirements specified in Section 6 (Schedule of Supply).</p> |
| | 18.2 | <p>The documentary evidence may be in the form of literature, drawings or data, and shall consist of a detailed item-by-item description of the essential technical and performance characteristics of the Goods and Related Services, demonstrating substantial responsiveness of the Goods and Related Services to those requirements, and if applicable, a statement of deviations and exceptions to the provisions of Section 6 (Schedule of Supply).</p> |
| | 18.3 | <p>Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by the Purchaser in Section 6 (Schedule of Supply), are intended to be descriptive only and not restrictive. The Bidder may offer other standards of quality, brand names, and/or catalogue numbers,</p> |

provided that it demonstrates, to the Purchaser's satisfaction, that the substitutions ensure substantial equivalence or are superior to those specified in Section 6 (Schedule of Supply).

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| 19. Documents Establishing the Qualifications of the Bidder | <p>19.1 To establish its qualifications to perform the Contract, the Bidder shall submit as part of its Technical Proposal the evidence indicated for each qualification criteria specified in Section 3 (Evaluation and Qualification Criteria).</p> <p>19.2 If so required in the BDS, a Bidder that does not manufacture or produce the Goods it offers to supply shall submit the Manufacturer's Authorization using the form included in Section 4 (Bidding Forms) to demonstrate that it has been duly authorized by the manufacturer or producer of the Goods to supply these Goods in the Purchaser's country.</p> <p>19.3 If so required in the BDS, a Bidder that does not conduct business within the Purchaser's country shall submit evidence that it will be represented by an agent in the country equipped and able to carry out the Supplier's maintenance, repair, and spare parts-stocking obligations prescribed in the Conditions of Contract and/or Technical Specifications.</p> |
| 20. Period of Validity of Bids | <p>20.1 Bids shall remain valid for the period specified in the BDS after the bid submission deadline date prescribed by the Purchaser. A Bid valid for a shorter period shall be rejected by the Purchaser as nonresponsive.</p> <p>20.2 In exceptional circumstances, prior to the expiration of the bid validity period, the Purchaser may request Bidders to extend the period of validity of their Bids. The request and the responses shall be made in writing. If a Bid Security is requested in accordance with ITB 21, it shall also be extended 28 days beyond the deadline of the extended bid validity period. A Bidder may refuse the request without forfeiting its Bid Security. A Bidder granting the request shall not be required or permitted to modify its Bid.</p> |
| 21. Bid Security/ Bid-Securing Declaration | <p>21.1 Unless otherwise specified in the BDS, the Bidder shall furnish as part of its Bid, in original form, either a Bid-Securing Declaration or a bid security as specified in the BDS. In the case of a bid security, the amount and currency shall be as specified in the BDS.</p> <p>21.2 If a Bid-Securing Declaration is required pursuant to ITB 21.1, it shall use the form included in Section 4 (Bidding Forms). The Purchaser will declare a Bidder ineligible to be awarded a Contract for a specified period of time, as indicated in the BDS, if a Bid-Securing Declaration is executed.</p> <p>21.3 If a bid security is specified pursuant to ITB 21.1, the bid security shall be, at the Bidder's option, in any of the following forms:</p> <ul style="list-style-type: none"> (a) an unconditional bank guarantee, (b) an irrevocable letter of credit, or |

- (c) a cashier's or certified check,

All from a reputable source from an eligible country as described in Section 5 (Eligible Countries). In the case of a bank guarantee, the bid security shall be submitted either using the Bid Security Form included in Section 4 (Bidding Forms), or another form acceptable to the Purchaser. The form must include the complete name of the Bidder. The bid security shall be valid for 28 days beyond the original validity period of the bid, or beyond any period of extension if requested under ITB 20.2.

- 21.4 Unless otherwise specified in the BDS, any bid not accompanied by a substantially compliant bid security or Bid-Securing Declaration, if one is required in accordance with ITB 21.1, shall be rejected by the Purchaser as nonresponsive.
- 21.5 If a bid security is specified pursuant to ITB 21.1, the bid security of unsuccessful Bidders shall be returned as promptly as possible upon the successful Bidder's furnishing of the performance security pursuant to ITB 46.
- 21.6 If a bid security is specified pursuant to ITB 21.1, the bid security of the successful Bidder shall be returned as promptly as possible once the successful Bidder has signed the Contract Agreement and furnished the required performance security.
- 21.7 The bid security may be forfeited or the Bid-Securing Declaration executed,
- (a) if a Bidder withdraws its bid during the period of bid validity as specified by the Bidder on the Technical Bid Submission Sheet, except as provided in ITB 20.2; or
 - (b) if the successful Bidder fails to
 - (i) Sign the Contract Agreement in accordance with ITB 45;
 - (ii) Furnish a performance security in accordance with ITB 46; or
 - (iii) Accept the arithmetical corrections of its bid in accordance with ITB 36.
- 21.8 The bid security or the Bid-Securing Declaration of a Joint Venture shall be in the name of the Joint Venture that submits the bid. If the Joint Venture has not been legally constituted at the time of bidding, the bid security or the Bid-Securing Declaration shall be in the names of all future partners as named in the letter of intent mentioned in ITB 4.1.

22. Format and Signing of Bid

- 22.1 The Bidder shall prepare one original set of the Technical Bid and one original set of the Price Bid as described in ITB 11 and clearly mark each "ORIGINAL - TECHNICAL BID" and "ORIGINAL - PRICE BID". In addition, the Bidder shall submit copies of the Technical Bid and the Price Bid, in the number specified in the BDS and clearly mark them "COPY NO... - TECHNICAL BID" and "COPY NO.... - PRICE BID". In the event of any discrepancy between the original and the copies, the original shall prevail.

- 22.2 The original and all copies of the Bid shall be typed or written in indelible ink and shall be signed by a person duly authorized to sign on behalf of the Bidder. This authorization shall consist of a written confirmation as specified in the BDS and shall be attached to the Bid. The name and position held by each person signing the authorization must be typed or printed below the signature. All pages of the Bid, except for unamended printed literature, shall be signed or initialled by the person signing the Bid. If a Bidder submits a deficient authorization, the Bid shall not be rejected in the first instance. The Purchaser shall request the Bidder to submit an acceptable authorization within the number of days as specified in the BDS. Failure to provide an acceptable authorization within the prescribed period of receiving such a request shall cause the rejection of the Bid.
- 22.3 Any amendments such as interlineations, erasures, or overwriting shall be valid only if they are signed or initialled by the person signing the bid.

D. Submission and Opening of Bids

23. Sealing and Marking of Bids

- 23.1 Bidders may submit their bids by mail or by hand. When so specified in the BDS, Bidders shall have the option of submitting their bids electronically. Procedures for submission, sealing and marking are as follows:
- (a) Bidders submitting Bids by mail or by hand shall enclose the original of the Technical Bid, the original of the Price Bid, and each copy of the Technical Bid and each copy of the Price Bid, including alternative Bids, if permitted in accordance with ITB 13, in separate sealed envelopes, duly marking the envelopes as "ORIGINAL - TECHNICAL BID", "ORIGINAL - PRICE BID" and "COPY NO... - TECHNICAL BID" and "COPY NO.... - PRICE BID", as appropriate. These envelopes containing the original and the copies shall then be enclosed in one single envelope. The rest of the procedure shall be in accordance with ITB 23.2 to ITB 23.6.
 - (b) Bidders submitting Bids electronically shall follow the electronic bid submission procedures specified in the BDS.
- 23.2 The inner and outer envelopes shall
- (a) bear the name and address of the Bidder;
 - (b) be addressed to the Purchaser in accordance with ITB 24.1; and
 - (c) bear the specific identification of this bidding process indicated in the BDS.
- 23.3 The outer envelopes and the inner envelopes containing the Technical Bids shall bear a warning not to open before the time and date for the opening of Technical Bids, in accordance with ITB 27.1.

- 23.4 The inner envelopes containing the Price Bids shall bear a warning not to open until advised by the Purchaser in accordance with ITB 27.2.
- 23.5 If all envelopes are not sealed and marked as required, the Purchaser will assume no responsibility for the misplacement or premature opening of the Bid.
- 23.6 Alternative Bids, if permissible in accordance with ITB 13, shall be prepared, sealed, marked, and delivered in accordance with the provisions of ITB 22 and ITB 23, with the inner envelopes marked in addition "ALTERNATIVE NO...." as appropriate
- 24. Deadline for Submission of Bids**
- 24.1 Bids must be received by the Purchaser at the address and no later than the date and time indicated in the BDS.
- 24.2 The Purchaser may, at its discretion, extend the deadline for the submission of Bids by amending the Bidding Document in accordance with ITB 8, in which case all rights and obligations of the Purchaser and Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.
- 25. Late Bids**
- 25.1 The Purchaser shall not consider any Bid that arrives after the deadline for submission of Bids, in accordance with ITB 24. Any Bid received by the Purchaser after the deadline for submission of Bids shall be declared late, rejected, and returned unopened to the Bidder.
- 26. Withdrawal, Substitution, and Modification of Bids**
- 26.1 A Bidder may withdraw, substitute, or modify its Bid after it has been submitted by sending a written notice, duly signed by an authorized representative, and shall include a copy of the authorization in accordance with ITB 22.2 (except that withdrawal notices do not require copies). The corresponding substitution or modification of the bid must accompany the respective written notice. All notices must be
- (a) prepared and submitted in accordance with ITB 22 and ITB 23 (except that withdrawal notices do not require copies), and in addition, the respective inner and outer envelopes shall be clearly marked "WITHDRAWAL," "SUBSTITUTION," "MODIFICATION;" and
- (b) received by the Purchaser prior to the deadline prescribed for submission of bids, in accordance with ITB 24.
- 26.2 Bids requested to be withdrawn in accordance with ITB 26.1 shall be returned unopened to the Bidders.
- 26.3 No Bid may be withdrawn, substituted, or modified in the interval between the deadline for submission of bids and the expiration of the period of bid validity specified by the Bidder on the Technical Bid Submission Sheet or any extension thereof.

27. Bid Opening

- 27.1 The Purchaser shall open the Technical Bids in public at the address, on the date, and time specified in the BDS in the presence of Bidder's designated representatives and anyone who choose to attend. Any specific electronic bid opening procedures required if electronic bidding is permitted in accordance with ITB 23.1, shall be as specified in the BDS.
- 27.2 The Price Bids will remain unopened and will be held in custody of the Purchaser until the time of opening of the Price Bids. The date, time, and location of the opening of Price Bids will be advised in writing by the Purchaser. If the Technical Bid and the Price Bid are submitted together in one envelope, the Purchaser may reject the Bid. Alternatively, the Price Bid may be immediately revealed for later evaluation.
- 27.3 First, envelopes marked "WITHDRAWAL" shall be opened, read out, and recorded, and the envelope containing the corresponding bid shall not be opened, but returned to the Bidder. No bid withdrawal shall be permitted unless the corresponding withdrawal notice contains a valid authorization to request the withdrawal and is read out and recorded at bid opening.
- 27.4 Next, outer envelopes marked "SUBSTITUTION" shall be opened. The inner envelopes containing the Substitution Technical Bid and/or Substitution Price Bid shall be exchanged for the corresponding envelopes being substituted, which are to be returned to the Bidder unopened. Only the Substitution Technical Bid, if any, shall be opened, read out, and recorded. Substitution Price Bid will remain unopened in accordance with ITB 27.2. No envelope shall be substituted unless the corresponding substitution notice contains a valid authorization to request the substitution and is read out and recorded at bid opening.
- 27.5 Next, outer envelopes marked "MODIFICATION" shall be opened. No Technical Bid and/or Price Bid shall be modified unless the corresponding modification notice contains a valid authorization to request the modification and is read out and recorded at the opening of Technical Bids. Only the Technical Bids, both Original as well as Modification, are to be opened, read out, and recorded at the opening. Price Bids, both Original as well as Modification, will remain unopened in accordance with ITB 27.2.
- 27.6 All other envelopes holding the Technical Bids shall be opened one at a time, and the following read out and recorded
- (a) the name of the Bidder;
 - (b) whether there is a modification or substitution;
 - (c) the presence of a bid security or a Bid-Securing Declaration, if required; and
 - (d) any other details as the Purchaser may consider appropriate.

Only Technical Bids and alternative Technical Bids read out and recorded at bid opening shall be considered for evaluation. Unless otherwise specified in the BDS, all pages of the Technical Bid

Submission Sheet are to be initialed by at least three representatives of the Purchaser attending the bid opening. No Bid shall be rejected at the opening of Technical Bids except for late bids, in accordance with ITB 25.1.

- 27.7 The Purchaser shall prepare a record of the opening of Technical Bids that shall include, as a minimum: the name of the Bidder and whether there is a withdrawal, substitution, modification, or alternative offer; and the presence or absence of a bid security or a Bid-Securing Declaration, if one was required. The Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders.
- 27.8 At the end of the evaluation of the Technical Bids, the Purchaser will invite bidders who have submitted substantially responsive Technical Bids and who have been determined as being qualified for award to attend the opening of the Price Bids. The date, time, and location of the opening of Price Bids will be advised in writing by the Purchaser. Bidders shall be given reasonable notice of the opening of Price Bids.
- 27.9 The Purchaser will notify Bidders in writing who have been rejected on the grounds of being substantially nonresponsive to the requirements of the Bidding Document and return their Price Bids unopened.
- 27.10 The Purchaser shall conduct the opening of Price Bids of all Bidders who submitted substantially responsive Technical Bids, in the presence of Bidders' representatives who choose to attend at the address, on the date, and time specified by the Purchaser. The Bidder's representatives who are present shall be requested to sign a register evidencing their attendance.
- 27.11 All envelopes containing Price Bids shall be opened one at a time and the following read out and recorded
- (a) the name of the Bidder;
 - (b) whether there is a modification or substitution;
 - (c) the Bid Prices, including any discounts and alternative offers; and
 - (d) any other details as the Purchaser may consider appropriate.
- Only Price Bids, discounts, and alternative offers read out and recorded during the opening of Price Bids shall be considered for evaluation. Unless otherwise specified in the BDS, all pages of the Price Bid Submission Sheet and Price Schedules are to be initialed by at least three representatives of the Purchaser attending bid the opening. No Bid shall be rejected at the opening of Price Bids.
- 27.12 The Purchaser shall prepare a record of the opening of Price Bids that shall include, as a minimum: the name of the Bidder, the Bid Price (per lot if applicable), any discounts, and alternative offers. The

Bidders' representatives who are present shall be requested to sign the record. The omission of a Bidder's signature on the record shall not invalidate the contents and effect of the record. A copy of the record shall be distributed to all Bidders who submitted bids on time, and posted online when electronic bidding is permitted.

E. Evaluation and Comparison of Bids

- 28. Confidentiality**
- 28.1 Information relating to the examination, evaluation, comparison, and qualification of Bids, and recommendation of contract award, shall not be disclosed to Bidders or any other persons not officially concerned with such process until information on the Contract award is communicated to all Bidders.
- 28.2 Any attempt by a Bidder to influence the Purchaser in the examination, evaluation, comparison, and post qualification of the Bids or Contract award decisions may result in the rejection of its Bid.
- 28.3 Notwithstanding ITB 28.2, from the time of opening the Technical Bids to the time of Contract award, if any Bidder wishes to contact the Purchaser on any matter related to the bidding process, it should do so in writing.
- 29. Clarification of Bids**
- 29.1 To assist in the examination, evaluation, comparison and post-qualification of the Bids, the Purchaser may, at its discretion, ask any Bidder for a clarification of its Bid. Any clarification submitted by a Bidder with regard to its Bid and that is not in response to a request by the Purchaser shall not be considered. The Purchaser's request for clarification and the response shall be in writing. No change in the prices or substance of the Bid shall be sought, offered, or permitted, except to confirm the correction of arithmetic errors discovered by the Purchaser in the evaluation of the Price Bids, in accordance with ITB 36.
- 29.2 If a Bidder does not provide clarifications on its Bid by the date and time set in the Purchaser's request for clarification, its bid may be rejected.
- 30. Deviations, Reservations, and Omissions**
- 30.1 During the evaluation of Bids, the following definitions apply:
- (a) "Deviation" is a departure from the requirements specified in the Bidding Document;
 - (b) "Reservation" is the setting of limiting conditions or withholding from complete acceptance of the requirements specified in the Bidding Document; and
 - (c) "Omission" is the failure to submit part or all of the information or documentation required in the Bidding Document.
- 31. Examination of Technical Bids**
- 31.1 The Purchaser shall examine the Technical Bid to confirm that all documents and technical documentation requested in ITB 11.4 have been provided, and to determine the completeness of each document submitted.

- 31.2 The Purchaser shall confirm that the following documents and information have been provided in the Technical Bid. If any of these documents or information is missing, the offer shall be rejected:
- (a) Technical Bid Submission Sheet in accordance with ITB 12.1;
 - (b) written confirmation of authorization to commit the Bidder;
 - (c) bid security or Bid-Securing Declaration, if applicable; and
 - (d) Manufacturer's Authorization, if applicable.
- 32. Responsiveness of Technical Bid**
- 32.1 The Purchaser's determination of a Technical Bid's responsiveness is to be based on the contents of the Technical Bid itself, as defined in ITB 11.
- 32.2 A substantially responsive Technical Bid is one that meets the requirements of the Bidding Document without material deviation, reservation, or omission. A material deviation, reservation, or omission is one that,
- (a) If accepted, would
 - (i) affect in any substantial way the scope, quality, or performance of the Goods and Related Services specified in Section 6 (Schedule of Supply); or
 - (ii) limits in any substantial way, inconsistent with the Bidding Document, the Purchaser's rights or the Bidder's obligations under the Contract; or
 - (b) if rectified, would unfairly affect the competitive position of other Bidders presenting substantially responsive Technical Bids.
- 32.3 The Purchaser shall examine the technical aspects of the Bid in particular, to confirm that all requirements of Section 6 (Schedule of Supply) have been met without any material deviation, reservation, or omission.
- 32.4 If a Technical Bid is not substantially responsive to the Bidding Document, it shall be rejected by the Purchaser and may not subsequently be made responsive by the Bidder by correction of the material deviation, reservation, or omission.
- 33. Nonmaterial Nonconformities**
- 33.1 Provided that a Technical Bid is substantially responsive, the Purchaser may waive nonconformities in the Bid that does not constitute a material deviation, reservation, or omission.
- 33.2 Provided that a Technical Bid is substantially responsive, the Purchaser may request that the Bidder submit the necessary information or documentation, within a reasonable period of time, to rectify nonmaterial nonconformities or omissions in the Technical Bid related to documentation requirements. Requesting information or documentation on such nonconformities shall not be related to any aspect of the Price Bid of the Bid. Failure of the Bidder to comply with the request may result in the rejection of its Bid.

- 33.3 Provided that a Technical Bid is substantially responsive, the Purchaser shall rectify quantifiable nonmaterial nonconformities or omissions. To this effect, the Bid Price shall be adjusted during evaluation of Price Bids, for comparison purposes only, to reflect the price of the missing or non-conforming item or component. The adjustment shall be made using the method indicated in Section 3 (Evaluation and Qualification Criteria).
- 34. Qualification of the Bidder**
- 34.1 The Purchaser shall determine to its satisfaction during the evaluation of Technical Bids whether Bidders meets the qualifying criteria specified in Section 3 (Evaluation and Qualification Criteria).
- 34.2 The determination shall be based upon an examination of the documentary evidence of the Bidder's qualifications submitted by the Bidder, pursuant to ITB 19.
- 34.3 An affirmative determination shall be a prerequisite for the opening and evaluation of a Bidder's Price Bid. A negative determination shall result into the disqualification of the Bid, in which event the Purchaser shall return the unopened Price Bid to the Bidder.
- 35. Examination of Price Bids**
- 35.1 Following the opening of Price Bids, the Purchaser shall examine the Price Bids to confirm that all documents and financial documentation requested in ITB 11.5 have been provided, and to determine the completeness of each document submitted.
- 35.2 The Purchaser shall confirm that the following documents and information have been provided in the Price Bid. If any of these documents or information is missing, the offer shall be rejected:
- (a) Price Bid Submission Sheet in accordance with ITB 12.1; and
 - (b) Price Schedules, in accordance with ITB 12, ITB 14, and ITB 15.
- 36. Correction of Arithmetical Errors**
- 36.1 During the evaluation of Price Bids, the Purchaser shall correct arithmetical errors on the following basis:
- (a) If there is a discrepancy between the unit price and the total price that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total price shall be corrected, unless in the opinion of the Purchaser there is an obvious misplacement of the decimal point in the unit price, in which case the total price as quoted shall govern and the unit price shall be corrected.
 - (b) If there is an error in a total corresponding to the addition or subtraction of subtotals, the subtotals shall prevail and the total shall be corrected.
 - (c) If there is a discrepancy between words and figures, the amount in words shall prevail, unless the amount expressed in words is related to an arithmetic error, in which case the amount in figures shall prevail subject to (a) and (b) above.
- 36.2 If the Bidder that submitted the lowest evaluated Bid does not accept the correction of errors, its Bid shall be disqualified and its bid

security may be forfeited, or its Bid-Securing Declaration executed.

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| 37. Conversion to Single Currency | 37.1 | For evaluation and comparison of Price Bids, the Purchaser shall convert all bid prices expressed in the amounts in various currencies into a single currency, using the selling exchange rates established by the source and on the date specified in the BDS. |
| 38. Margin of Preference | 38.1 | Unless otherwise specified in the BDS, a margin of preference shall not apply. |
| 39. Evaluation of Price Bids | 39.1 | The Purchaser shall use the criteria and methodologies indicated in this clause. No other criteria or methodology shall be permitted. |
| | 39.2 | <p>To evaluate a Price Bid, the Purchaser shall consider the following:</p> <ul style="list-style-type: none"> (a) the bid price as quoted in accordance with ITB 14; (b) price adjustment for correction of arithmetic errors in accordance with ITB 36.1; (c) price adjustment due to discounts offered in accordance with ITB 14.4; (d) price adjustment due to application of the evaluation criteria specified in Section 3 (Evaluation and Qualification Criteria). These criteria may include factors related to the characteristics, performance, and terms and conditions of purchase of the Goods and Related Services which shall be expressed to the extent practicable in monetary terms to facilitate comparison of bids unless otherwise specified in Section 3; and (e) converting the amount resulting from applying (a) to (c) above, if relevant, to a single currency in accordance with ITB 37. |
| | 39.3 | <p>The Purchaser's evaluation of a bid will exclude and not take into account,</p> <ul style="list-style-type: none"> (a) in the case of Goods offered from within the Purchaser's country, all sales tax and all other taxes, applicable in the Purchaser's country and payable on the Goods if the Contract is awarded to the Bidder; (b) in the case of Goods offered from outside the Purchaser's country, all customs duties, sales tax, and other taxes, applicable in the Purchaser's country and payable on the Goods if the Contract is awarded to the Bidder; and (c) any allowance for price adjustment during the period of performance of the Contract, if provided in the Bid. |
| | 39.4 | If the Bidding Document allows Bidders to quote separate prices for different lots (contracts), and the award to a single Bidder of multiple lots (contracts), the methodology to determine the lowest evaluated price of the lot (contract) combinations, including any discounts offered in the Price Bid Submission Sheet, is as specified in Section 3 (Evaluation and Qualification Criteria). |

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| 40. Comparison of Bids | 40.1 | The Purchaser shall compare all substantially responsive Bids to determine the lowest evaluated bid, in accordance with ITB 39. |
| 41. Purchaser's Right to Accept Any Bid, and to Reject Any or All Bids | 41.1 | The Purchaser reserves the right to accept or reject any Bid, and to annul the bidding process and reject all Bids at any time prior to Contract award, without thereby incurring any liability to the Bidders. In case of annulment, all Bids submitted and specifically, bid securities, shall be promptly returned to the Bidders. |

F. Award of Contract

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| 42. Award Criteria | 42.1 | The Purchaser shall award the Contract to the Bidder whose offer has been determined to be the lowest evaluated Bid and is substantially responsive to the Bidding Document, provided further that the Bidder has remained qualified to perform the Contract satisfactorily. |
| | 42.2 | A Bid shall be rejected if the qualification criteria as specified in Section 3 (Evaluation and Qualification Criteria) are no longer met by the Bidder whose offer has been determined to be the lowest evaluated Bid. In this event the Purchaser shall proceed to the next lowest evaluated Bid to make a similar reassessment of that Bidder's capabilities to perform satisfactorily. |
| 43. Purchaser's Right to Vary Quantities at Time of Award | 43.1 | At the time the Contract is awarded, the Purchaser reserves the right to increase or decrease the quantity of Goods and Related Services originally specified in Section 6 (Schedule of Supply), provided this does not exceed the percentages indicated in the BDS, and without any change in the unit prices or other terms and conditions of the Bid and the Bidding Document. |
| 44. Notification of Award | 44.1 | Prior to the expiration of the period of bid validity, the Purchaser shall notify the successful Bidder, in writing, that its Bid has been accepted. |
| | 44.2 | At the same time, the Purchaser shall also notify all other Bidders of the results of the bidding. The Purchaser will publish in an English language newspaper or well-known freely accessible website the results identifying the Bid and lot numbers and the following information: (i) name of each Bidder who submitted a Bid; (ii) bid prices as read out at bid opening; (iii) name and evaluated prices of each Bid that was evaluated; (iv) name of Bidders whose Bids were rejected and the reasons for their rejection; and (v) name of the winning Bidder, and the price it offered, as well as the duration and summary scope of the contract awarded. After publication of the award, unsuccessful Bidders may request in writing to the Purchaser for a debriefing seeking explanations on the grounds on which their Bids were not selected. The Purchaser shall promptly respond in writing to any unsuccessful Bidder who, after publication of contract award, requests a debriefing. |
| | 44.3 | Until a formal Contract is prepared and executed, the notification of award shall constitute a binding Contract. |

- 45. Signing of Contract**
- 45.1 Promptly after notification, the Purchaser shall send to the successful Bidder the Agreement.
- 45.2 Within 28 days of receipt of the Agreement, the successful Bidder shall sign, date, and return it to the Purchaser.
- 46. Performance Security**
- 46.1 Within 28 days of the receipt of notification of award from the Purchaser, the successful Bidder shall furnish the Performance Security in accordance with the GCC, using for that purpose the Performance Security Form included in Section 9 (Contract Forms), or another form acceptable to the Purchaser.
- 46.2 Failure of the successful Bidder to submit the above-mentioned Performance Security or sign the Contract Agreement shall constitute sufficient grounds for the annulment of the award and forfeiture of the bid security or execution of the Bid-Securing Declaration. In that event, the Purchaser may award the Contract to the next lowest evaluated Bidder whose offer is substantially responsive and is determined by the Purchaser to be qualified to perform the Contract satisfactorily.

Section 2 - Bid Data Sheet

A. General	
ITB 1.1	The number of the Invitation for Bids (IFB) is : SRS/F 8156
ITB 1.1	The Purchaser is: Sri Lanka Railways
ITB 1.1	The name of the international competitive bidding (ICB) is: PROCUREMENT FOR SUPPLY OF 05 DIESEL MULTIPLE UNITS FOR SRI LANKA RAILWAYS The identification number of the ICB is: SRS/F 8156 The number and identification of lots comprising this ICB is: None
ITB 2.1	Not applicable
ITB 2.2	Not applicable
ITB 2.3	Add This procurement is funded by GOSL funds.

ITB 3	Replaced with applicable laws of Democratic Socialist Republic of Sri Lanka 3.1 The attention of the bidders is drawn to the following guidelines of the Procurement Guidelines published by National Procurement Agency: Parties associated with Procurement Actions, namely, suppliers/contractors and officials shall ensure that they maintain strict confidentiality throughout the process; Officials shall refrain from receiving any personal gain from any Procurement Action. No gifts or inducement shall be accepted. Suppliers/Contractors are liable to be disqualified from the bidding process if found offering any gift or inducement which may have an effect of influencing a decision or impairing the objectivity of an official. 3.2 The Purchaser requires the Bidders, Suppliers, Contractors, and Consultants to observe the highest standard of ethics during the procurement and execution of such Contracts. In pursuit of this policy: (a) "Corrupt Practice" means the offering, giving, receiving, or soliciting directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution; (b) "Fraudulent Practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract; (c) "Collusive Practice" means a scheme or arrangement between two or more bidders, with or without the knowledge of the Purchaser to establish bid prices at artificial, non-competitive levels; and (d) "Coercive Practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract. 3.3 If the Purchaser found any unethical practice as stipulated under ITB Clause 3.2, the Purchaser will reject the bid, If it is found that a Bidder directly or through an agent, engaged in corrupt, fraudulent, collusive or coercive practice in competing for the Contract in question.
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ITB 4	Replaced with 4.1 A Bidder may be a legal entity or any combination with a formal intent to enter into an agreement or under an existing agreement in the form of a joint venture. In the case of a joint venture, a) all parties to the Joint Venture shall be jointly and severally liable; and b) The Joint Venture shall nominate a representative who shall have the authority to conduct all businesses for and on behalf of any and all the parties of the Joint Venture during the bidding process and, in the event the Joint Venture is awarded the Contract, during contract execution. 4.2 A Bidder shall not have a conflict of interest. All bidders found to have conflict of interest shall be disqualified. Bidders may be considered to have a conflict of interest with one or more parties in this bidding process, if they: (a) are or have been associated in the past, with a firm or any of its affiliates which have been engaged by the Purchaser to provide consulting services for the preparation of the design, specifications, and other documents to be used for the procurement of the goods to be purchased under these Bidding Documents ; or (b) Submit more than one bid in this bidding process. However, this does not limit the participation of subcontractors in more than one bid.
ITB 5.1	Not applicable
B. Contents of Bidding Document	
ITB 6.1	Part 1 - Bidding Procedure Section 5 – Eligible Countries (ELC) – Not applicable
ITB 7.1	For <u>clarification purposes</u> only, the Purchaser's address is: Attention: Chairman, Address: High Level Procurement Committee Ministry of Transport, Highways and Urban Development, Level 07, Sethsiripaya Stage II, Battaramulla. Sri Lanka Telephone: 011-2187201 Fax: 011-2187224 E-mail: procurement@transport.gov.lk

C. Preparation of Bids	
ITB 10.1	The language of the Bid is: English
ITB 11.2	11.2 (f) not applicable ADD The Bidder shall submit with its Technical Bid the following additional documents 1. Experience and capacity of the local agent of the Bidder. 2. Any person acts as an agent, representative or nominee for or on behalf of any bidder shall register himself with the Registrar of Companies if the bid price exceeds LKR 5 million in accordance with the Public Contracts Act No. 3 of 1987 and subsequent gazette notification. Such certificate issued to the local agent/ representative by the registrar of companies to be submitted. 3. Compliance form of specifications as given in Section 4 for each and every clause with sufficient details.
ITB 12.2	The units and rates in figures entered into the Price Schedules should be typewritten or if written by hand, must be in print form. Price Schedules not presented accordingly may be considered nonresponsive.
ITB 13.1	Alternative Bids shall not be permitted.
ITB 14.5	The Inco terms edition is: 2010
ITB 14.6 (b) (i)	For Goods offered from outside the Purchaser's country, the Bidder shall quote prices using the following Inco terms: FOB, CFR Colombo and CIF Colombo.
ITB 14.6 (b) (ii)	In addition to the above, the bidder shall quote prices for goods offered from outside the purchaser's country, using the following Inco terms FOB (Port of Shipment)
ITB 14.7	The prices quoted by the Bidder shall not be adjustable.
ITB 14.8	Prices quoted for each item of the bid shall be 100 % of the quantities specified in the bid.
ITB 16.1 (b)	Manufacturer shall be a single entity
ITB 18.3	Replaced with Standards for workmanship, process, material, and equipment, as well as references to brand names or catalogue numbers specified by the Purchaser in Section 6 (Schedule of Supply), are to be strictly followed.
ITB 19.2	The Bidder shall include with its bid the Manufacturer's Authorization in the form given in section 4- bidding forms.
ITB 19.3	The Bidder is required to include with its bid, evidence that it will be represented

	by an Agent in the Purchaser's country.
ITB 20.1	The bid validity period shall be 175 days. (Until 12/01/2027)
ITB 21.1	The Bid Security Declaration shall be not applicable, Bid security is required.
ITB 21.1	The Bidder shall furnish a bid security in the amount of USD 660,000 or equivalent amount in Sri Lankan currency or in any freely convertible currencies in the form of bank guarantee from a local bank or Internationally reputed bank counter guaranteed by a bank operating in Sri Lanka, approved by the Central bank of Sri Lanka. The Security shall be in the form as specified in section 4.
ITB 21.2	The ineligibility period will be Not applicable.
ITB 21.3	"all from a reputable source from an eligible country as described in Section 5 (Eligible Countries)" to be replaced by " bank guaranty or irrevocable letter of credit shall be from reputed bank which is acceptable and operate in Sri Lanka. The bid security shall be valid for 56 days beyond the original validity period of the bid (until 09/03/2027), or beyond the any period of extension if requested under ITB 20.2.
ITB 21.4	Subject to the succeeding sentences, any bid not accompanied by an irrevocable and callable bid security shall be rejected by the Purchaser as nonresponsive. If a Bidder submits a bid security that (i) deviates in form, amount, and/or period of validity, or (ii) does not provide sufficient identification of the Bidder (including, without limitation, failure to indicate the name of the Joint Venture or, where the Joint Venture has not yet been constituted, the names of all future Joint Venture Partners), the Purchaser shall request the Bidder to submit a compliant bid security within 14 days of receiving such a request. Failure to provide a compliant bid security within the prescribed period of receiving such a request shall cause the rejection of the Bid.
ITB 22.1	In addition to the original Bid, the number of copies is: one
ITB 22.2	The written confirmation of Authorization to sign on behalf of the Bidder shall consist of: An organizational document, board resolution or its equivalent, or power of attorney specifying the representative's authority to sign the Bid on behalf of, and to legally bind, the Bidder. If the Bidder is an intended or an existing joint venture, the power of attorney should be signed by all partners and specify the authority of the named representative of the joint venture to sign on behalf of, and legally bind, the intended or existing joint venture. If the joint venture has not yet been formed, also include evidence from all proposed joint venture partners of their intent to enter into a joint venture in the event of a contract award in accordance with ITB 16.1 (b)

ITB 22.2	The Bidder shall submit an acceptable authorization within 14 days.
D. Submission and Opening of Bids	
ITB 23.1	Bidders shall not have the option of submitting their bids electronically.
ITB 23.1 (b)	If Bidders shall have the option of submitting their bids electronically, the electronic bidding submission procedures shall be: Not Applicable
ITB 23.2 (c)	The identification of this bidding process is: Indicate "PROCUREMENT FOR SUPPLY OF 05 DIESEL MULTIPLE UNITS FOR SRI LANKA RAILWAYS - MT/04/09/02/CT/571" at the top left hand corner of the Inner and Outer envelopes.
ITB 24.1	For <u>bid submission purposes</u> only, the Purchaser's address is : Attention: Chairman, High Level Procurement Committee Address: C/o Secretary, Ministry of Transport, Highways and Urban Development, 7 th Floor, Sethsiripaya Stage II, Battaramulla. Country: Sri Lanka
ITB 24.1	The deadline for bid submission is: Date: 21/07/2026 Time: 2.00 P.M. (Sri Lanka Time)
ITB 27.1	The technical bid opening shall take place at: Conference Room , Ministry of Transport, Highways and Urban Development, 7 th Floor, Sethsiripaya Stage II, Battaramulla. Date: 21/07/2026 Time: 2.00 P.M. (Sri Lanka Time)
ITB 27.1	The electronic bid opening procedure shall be as follows: Not Applicable
ITB 27.6	The Technical Bid Submission Sheet shall be initialed by three (3) representatives of the Purchaser attending Technical Bid opening.

ITB 27.11	The Price Bid Submission Sheet and Price Schedules shall be initialed by three (3) representatives of the Purchaser attending Price Bid opening.
E. Evaluation and Comparison of Bids	
ITB 37.1	The currency that shall be used for bid evaluation and comparison purposes to convert all bid prices expressed in various currencies into a single currency is: USD The source of the selling exchange rate shall be: Central Bank of Sri Lanka The date for the selling exchange rate shall be: 28 Days Prior to the Closing date of Bid The evaluation is based on FOB value.
ITB 38.1	A margin of preference shall not apply.
ITB 40.2	Add Post-qualification requirement If the substantially responsive lowest evaluated manufacturer has not supplied Diesel Multiple Units or Locomotives to Sri Lanka Railways, factory visit shall be arranged with the participation of technical team including senior Mechanical and Electrical Engineers to inspect the manufacturing facility and infrastructure to verify the capacity and quality of the rolling stock manufacturing before final selection is done. Cost of this factory inspection is borne by the purchaser. However, bidder shall agree to provide all necessary arrangement including access to the facility to the satisfaction of the purchaser. On the request received from purchaser to arrange to factory inspection, bidder shall arrange factory inspection within one month from the date of request.
F. Award of Contract	
ITB 43.1	The maximum percentage by which quantities may be increased is: Not applicable. The maximum percentage by which quantities may be decreased is: Not applicable.
ITB 44.4	ADD Within one (01) week of being informed of the determination of the HLPC, all the bidders shall be informed in writing individually by the respective authority, of the selection of successful bidder and the intention to award the contract to such bidder. Any unsuccessful bidder, who is not satisfied with the decision to award the contract, may debriefing to the PE (Procurement Entity) against the determination of the HLPC to award the contract to the successful bidder.

	The standstill period shall be 10 working days from the date of letter of intention to award the contract. Unsuccessful bidder wishes to make an appeal against the determination of the HLPC shall be followed the Procurement Guideline 2024. Accordingly such party makes an appeal to the appeal court with the payment of non-refundable cash deposit of One Hundred Thousand (LKR.100,000/=). Each appeal which shall be made in writing shall be accompanied.
ITB 47	ADD Bidder must furnish the following details of their local agent in addition to the requirement of local agent given in this document. i. The name and address of the local agent(s). ii. The year of registration of the business of the agent(s) in Sri Lanka.

Section 3 - Evaluation and Qualification Criteria

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1. Technical Evaluation

1.1 Technical Criteria

The cost of all quantifiable deviations or deficiencies from the technical requirements as specified in Section 6 (Schedule of Supply) shall be evaluated. The Purchaser will make its own assessment of the cost of these deviations or deficiencies for the purpose of ensuring fair comparison of Bids.

During manufacturing of Diesel Multiple Units, quality assurance shall be according to ISO standard 9000 series. Valid ISO 9000 series certificate of the manufacturer shall be attached to the Bids.

2. Qualification Criteria

Bidders shall meet the qualification criteria set by the Purchaser on a pass-fail basis. Unless specifically indicated otherwise, it is the legal entity or entities comprising the Bidder and not the Bidder's parent companies, subsidiaries, or affiliates that must satisfy these criteria.

Part 1 of Section 3 provides recommended sets of criteria for supply contracts of high-value and technically complex items (Contract Type B). Part 2 provides the specific requirements corresponding to the selected criteria from Part 1.

Information Copy Not for Bidding

Part 2: Specific Requirements for the Criteria

2.1 Eligibility and Pending Litigation

2.1.1 Eligibility

Criteria	Compliance Requirements			Documents	
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	

2.1.1.1 Nationality - NOT APPLICABLE

Nationality in accordance with ITB Sub clause 4.2.					
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2.1.1.2 Conflict of Interest

No conflicts of interest in accordance with BDS ITB Sub clause 4.2.	must meet requirement	must meet requirement	must meet requirement	not applicable	Technical Bid Submission Sheet
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2.1.1.3 ADB Eligibility - NOT APPLICABLE

Not having been declared ineligible by ADB, as described in ITB Sub clause 4.4.					
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2.1.1.4 Government-Owned Enterprise - NOT APPLICABLE

Bidder required to meet conditions of ITB Sub clause 4.5.					
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2.1.1.5 United Nations Eligibility - NOT APPLICABLE

Not having been excluded by an act of compliance with a United Nations Security Council resolution in accordance with ITB Sub clause 4.7.					
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2.1.2 Pending Litigation

2.1.2.1 Pending Litigation and Arbitration

Criteria	Compliance Requirements				Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
All pending litigation and arbitration, if any, shall be treated as resolved against the Bidder and so shall in total not represent more than fifty (50) percent of the Bidder's net worth calculated as the difference between total assets and total liabilities.	must meet requirement by itself or as partner to past or existing Joint Venture	not applicable	must meet requirement by itself or as partner to past or existing Joint Venture	not applicable	Form LIT - 1

2.2 Experience and Technical Capacity

2.2.1 Contractual Experience

Bidder shall fill the submission form for each requirement filling all the details stipulate in the form and also provide documentary proof for each information given in the form.

Criteria	Compliance Requirements				Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
(i) The main supplier shall have at least past 10 years' experience in supplying of DMU, EMU, Locomotives or Railway Passenger coaches to the international market	must meet requirement	not applicable	must meet requirement	not applicable	Form EXP - 1
(ii) Successful completion of orders as main supplier within the past fifteen (15) years, of at least three (3) contracts, each valued at least USD 44,000,000.00 (Forty Four Million), out of which at least one (1) should be outside of the Bidder's own country with nature, and complexity similar to the DMU, EMU, Locomotives or Railway Passenger coaches	must meet requirement	must meet requirement	not applicable	not applicable	Form EXP - 1
(iii) Relevant ISO certificate or equivalent international quality standard certificate	must meet requirement	must meet requirement	must meet requirement	not applicable	Form EXP - 1
(iv) Shall have a Local agent to the supplier having experience in acting as an agent either on	must meet requirement	not applicable	not applicable	not applicable	Form EXP - 1
(a) Supplying rolling stock or					
(b) Supplying major components of rolling stock to Sri Lanka Railways value of which is above LKR 250 million during last five years or					
(c) Handle any other project related to the					

railway or transport sector, or machinery / equipment supply value of which is above LKR 300 million per year and total for last 3 years more than LKR 1 billion.					
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2.2.2 Technical Experience

Bidder shall fill the submission form for each requirement filling all the details stipulate in the form and also provide documentary proof for each information given in the form.

Criteria	Compliance Requirements				Documents
	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
(i) The manufacturing organization shall be a reputed firm with minimum of 20 years' experience in manufacturing of brand new Diesel Multiple Units of similar or higher capacity.	must meet requirement	not applicable	not applicable	not applicable	Form EXP – 2
(ii) The manufacturer shall have at least 15 years' experience in manufacturing of brand new Diesel Multiple Units for export market.					Form EXP – 2
(iii) The manufacturer shall have experience in manufacturing of at least 40 Nos. of brand new DMU/EMU. At least 20 nos. shall be for export sales in more than two countries within last 15 years.					Form EXP – 2
(iv) The end user certificates shall be enclosed for at least for two supplies similar to the Scope of supply in Section 6 with regard to the quality and performance of those Diesel Multiple Units.					Form EXP – 4A
(v) Specially the manufacturer should have sufficient experience in design and build Diesel Multiple Units which are dedicated for the tracks climbed up to high altitudes in hill country having sharp curves with steep gradient. The end					Form EXP – 4A

user certificates should be enclosed with the bids with regard to the quality and performance of those Diesel Multiple Units. (vi) The manufacturer shall have experience in manufacturing Diesel Multiple Units for broad gauge (1676 mm) tracks. The end user certificates should be enclosed with the bids with regard to the quality and performance for at least 10 years of those Diesel Multiple units. (vii) Relevant ISO certificate with regard to design and manufacture of Diesel Multiple Units shall be enclosed with the bid (not expired to the date of submission of bid). (viii) Manufacturer shall have sufficient experience in installation of Diesel Engine in DMU which has similar to the scope of supply (ix) (a) The manufacturers of traction machines shall have at least 10 years of experience in manufacturing of such electrical machines. (b) The performances of the particular models have been proved for minimum 5 years in passenger railway applications. (x) (a) The manufacturer shall have experience in manufacturing of propulsion control system for at least 10 years. It shall have to be installed on at least 300 nos of passenger train sets. Out of those at least 30 systems had been exported to over two countries other than the manufacturing country. Details shall be forwarded with the bid. (b) Manufacturer shall also have sufficient experience in installation of Ac-Dc-Ac Propulsion Control System for export supplies within last 5 years which are similar to scope of supply (xi) Manufacturer shall have sufficient experience in installation of Centralized Hotel					Form EXP – 4A Form EXP-2 Form EXP – 2 Form EXP – 2 Form EXP – 2 Form EXP – 2
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Load Power System for export supplies which are similar to scope of supply					Form EXP – 2
(xii) Manufacturer shall have sufficient experience in installation of integrated Train control and monitoring System for export supplies which are similar to scope of supply					Form EXP – 2
(xiii) Manufacturer shall have sufficient experience in installation of coach Air conditioning systems which are similar to scope of supply. Similar type Air condition units shall have to be installed in at-least 10 nos., passenger train sets in manufacturer's country as well as countries other than the manufacturer's country.					Form EXP – 2
(xiv) Manufacturer shall have sufficient experience in installation of centralized controlled automatic doors, semi-permanent couplers and bellow type vestibules for supplies which are similar to scope of supply. At-least 5 nos. passenger coach sets/DMUs shall be in active service with same make and country of origin of each item specified above.					Form EXP – 2
(xv) The bogie design shall be a proven with at least 15 years of trouble free past records in railway applications.					
<i>Note 01 : Any passenger train with multiple coaches supply experience is also acceptable for above (xii), (xiii) and (xiv) requirements,</i> <i>Note 02 : The requirements stipulates under (ix) - (xvi) can be fulfill through sub contracting or out sourcing. Details shall be provided.</i>					

2.2.3 Production Capacity

Criteria	Compliance Requirements				Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
(i) The manufacturer shall demonstrate that it can supply the type, size, and quantity of the goods as required by Purchaser in accordance with the Delivery and Completion Schedule in Section 6 (Schedule of Supply)	must meet requirement	not applicable	not applicable	not applicable	Form EXP - 3
(ii) For fulfill this requirement, manufacturer shall provide its annual output of each type of rolling stock for last three (03) years with sufficient details including quantity and throughput					
(iii) Ongoing manufacturing projects or orders currently processing at manufacturing facility with necessary details					

- Note -

^a Manufacturer shall provide evidence of production output.

2.3 Financial Situation

2.3.1 Historical Financial Performance

Criteria	Compliance Requirements				Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
Submission of audited financial statements or, if not required by the law of the Bidder's country, other financial statements acceptable to the Purchaser, for the last five (5) years to demonstrate the current soundness of the Bidder's financial position. As a minimum, the Bidder's net worth for the last year calculated as the difference between total assets and total liabilities should be positive.	must meet requirement	not applicable	must meet requirement	not applicable	Form FIN - 1

2.3.2 Size of Operation (Average Annual Turnover)

Criteria	Compliance Requirements				Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
Minimum average annual turnover of USD Seventy (70) Million calculated as total payments received by the Bidder for contracts completed or under execution over the last five (5) years.	must meet requirement	must meet requirement	must meet 25% of the requirement	must meet 40% of the requirement	Form FIN - 2

2.3.3 Cash Flow Capacity

Criteria	Compliance Requirements				Documents
Requirement	Single Entity	Joint Venture			Submission Requirements
		All Partners Combined	Each Partner	One Partner	
Availability of or access to liquid assets, lines of credit, and other finances sufficient to meet cash flow requirement which is USD Forty five (45) Million.	must meet requirement	must meet requirement	must meet 25% of the requirement	must meet 40% of the requirement	Form FIN - 3

3. Economic Evaluation

Economic criteria are applied when evaluating a Bid to determine the lowest evaluated Bid. These criteria are the bid price and other factors expressed in monetary terms such as those related to characteristics, performance, and terms and conditions of the purchase of the goods. The monetary values of the factors provide the adjustment of the bid price for comparison purposes.

Economic evaluation shall be based on FOB price given in the price schedule and also evaluation done on package basis. Substantially responsive lowest evaluated bidder is selected based on Grand total of the FOB price.

3.1 Adjustment for Scope

3.1.1 Local Handling and Inland Transportation

Costs for inland transportation, insurance, and other incidental costs for delivery of the goods from the EXW premises, to the port of shipping to be included to the FOB price which shall be quoted in the price schedule provided in section 4 (Bidding Form). This FOB price will be taken into account during bid evaluation.

3.1.2 Minor Omissions or Missing Items

Pursuant to ITB 33.3, the cost of all quantifiable nonmaterial nonconformities or omissions from the contractual and commercial conditions shall be evaluated. The Purchaser will make its own assessment of the cost of any nonmaterial nonconformities and omissions for the purpose of ensuring fair comparison of Bids.

3.2 Post qualification Requirements (ITB 40.2)

After determining the lowest evaluated bid in accordance with ITB Sub-Clauses 34.1 and 40.1, the Purchaser shall carry out the post qualification of the Bidder in accordance with BDS ITB 40.2, using only the requirements specified. If factory inspection stated in BDS ITB 40.2 found unsatisfactory or bidder fail to arrange factory inspection within the given period, the bid will be treated as disqualified.

3.3 Adjustment for Deviations from the Terms of Payment

Deviations from the Terms of Payment as specified in SCC 16.1 are not permitted.

3.4 Adjustment for Deviations in the Delivery and Completion Schedule

Bidders are required to base their prices on the Delivery and Completion Schedule specified in Section 6 (Schedule of Supply).

Deviations from the Delivery and Completion Schedule specified in Section 6 (Schedule of Supply) are not permitted.

Section 4- Bidding Forms

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Technical Bid Submission Sheet

-- Note --

The Bidder must accomplish the Technical Bid Submission Sheet on its letterhead clearly showing the bidder's complete name and address.

Date: _____
International Competitive Bidding (ICB) No.: _____

To: Chairman
Standing High Level Procurement Committee
Ministry of Transport, Highways & Urban Development

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Document, including the Addenda issued in accordance with Instructions to Bidders (ITB) 8.
- (b) We offer to supply in conformity with the Bidding Document and in accordance with the delivery schedule specified in Section 6 (Schedule of Supply), the following Goods and Related Services: . . . [insert a brief description of the goods and related services] . . .
- (c) Our Bid consisting of the Technical Bid and the Price Bid shall be valid for a period of [insert validity period as specified in ITB 20.1 of the BDS] days from the date fixed for the bid submission deadline in accordance with the Bidding Document, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- (d) Our firm, including any subcontractors or suppliers for any part of the Contract, have nationalities from eligible countries in accordance with ITB 4.2. - **Not applicable for this bid**
- (e) We, including any subcontractors or suppliers for any part of the contract, do not have any conflict of interest in accordance with ITB 4.2.
- (f) We are not participating, as a Bidder in more than one Bid in this bidding process in accordance with ITB 4.2. (b), other than alternative offers in accordance with the Bidding Document.
- (g) Our firm, its affiliates or subsidiaries, including any subcontractors or suppliers for any part of the Contract, has not been declared backlisted by department of public finance Sri Lanka.
- (h) [We are not a government-owned enterprise] / [We are a government-owned enterprise but meet the requirements of ITB 4.5].¹ - **Not applicable for this bid**

¹ Use one of the two options as appropriate.

- (i) We understand that this bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal contract is prepared and executed.
- (j) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

Price Bid Submission Sheet

-- Note --

The Bidder must accomplish the Price Bid Submission Sheet on its letterhead clearly showing the bidder's complete name and address.

Date: _____
International Competitive Bidding (ICB) No.: _____

To: Chairman
Standing High Level Procurement Committee
Ministry of Transport, Highways & Urban Development

We, the undersigned, declare that:

- (a) We have examined and have no reservations to the Bidding Document, including the Addenda issued in accordance with Instructions to Bidders (ITB) 8.
- (b) We offer to supply in conformity with the Bidding Document and in accordance with the delivery schedule specified in Section 6(Schedule of Supply), the following Goods: . . . *[insert a brief description of the goods]* . . .
- (c) The total price of our Bid, excluding any discounts offered in item (d) below, is

[amount of foreign currency in words], [amount in figures], and [amount of local currency in words], [amount in figures]

The total bid price from the price schedules should be entered by the Bidder inside this box. Absence of the total bid price in the Price Bid Submission Sheet may result in the rejection of the bid.

- (d) The discounts offered and the methodology for their application are as follows:

Discounts: If our Bid is accepted, the following discounts shall apply: *[specify in detail each discount offered and the specific item of the Schedule of Supply to which it applies]*

Methodology of Application of the Discounts: The discounts shall be applied using the following method: *[specify in detail the method that shall be used to apply the discounts]*

- (e) Our bid shall be valid for a period of *[insert validity period as specified in ITB 20.1 of the BDS]* days from the date fixed for the submission deadline in accordance with the Bidding Documents, and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- (f) If our Bid is accepted, we commit to obtain a Performance Security in the amount of *[specify a figure, which should be consistent with that of SCC 18.1]* percent of the Contract Price for the due performance of the Contract.

- (g) The following commissions, gratuities, or fees have been paid or are to be paid with respect to the bidding process or execution of the Contract:¹

Name of Recipient	Address	Reason	Amount

- (h) We understand that this Bid, together with your written acceptance thereof included in your notification of award, shall constitute a binding contract between us, until a formal Contract is prepared and executed.
- (i) We understand that you are not bound to accept the lowest evaluated bid or any other bid that you may receive.

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

¹ If none has been paid or is to be paid, indicate "None."

Schedule 01

Schedule of Requirements / Bill of Quantity

Procurement for the Supply of Design, Manufacturing and Supply of 05 Nos. Diesel Multiple Unit

Procurement No. SRS F/8156

Item No.	Description	Total Quantity (Nos.)	Unit FOB Values	Total FOB Value	Freight in CSCL (Colombo) Value	Freight in Other Vessels (Colombo)	Total Value in CSCL Vessels (Colombo)	Total Value in Other Vessels (Colombo)	Total Value in CSCL Vessels (Colombo)	Total Value in Other Vessels (Colombo)
1	2	3	4	5= 3x4	6	7	8	9	10	11
01	Supply of MCG	05								
02	Supply of DEC with Disable and Guard Toilet	05								
03	Supply of BC (with Toilet)	02								
04	Supply of BC (without Toilet)	02								
05	Supply of EC (with Toilet)	05								
06	Supply of EC (without Toilet)	04								
07	Supply of SBC	12								
08	Supply of Type 01* DMU Sets	02								
09	Supply of Type 02* DMU Sets	03								
	Supply of Total 05 Nos. Diesel Multiple Units* to Sri Lanka Railways (08+09)									

* Type 01 –MCG +2BC + 3EC + DEC

Type 02 - MCG + 4SBC + 1EC + DEC

N.B. -Bidders shall submit the following details. All matters related in the price shall be indicated in this form. Bidder shall fill all the columns in this form.

Notes:

Incoterm in accordance with ITB 14
Currency in accordance with ITB 15
Please clearly specify the type of currency.

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

Information Copy Not for Bidding

Schedule 02

Schedule of Requirements / Bill of Quantity

Procurement for the Supply of 05 Nos. Diesel Multiple Units to Sri Lanka Railways.

Procurement No. SRS F/8156

Item No.	Description	Total Quantity (Nos.)	Unit FOB Values	Total FOB Value	Freight in CSCL (Colombo) Value	Freight in Other Vessels (Colombo)	Total Value in CSCL Vessels (Colombo)	Total Value in Other Vessels (Colombo)	Total Value in CSCL Vessels (Colombo)	Total Value in Other Vessels (Colombo)
01	Supply of SBC	04								

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

Schedule No. 3:

Price Schedule for Consumable Spare Parts required during the warranty period

Item	Description	Quantity	Unit Price	Total Price
			FOB Imported Parts Foreign Currency	FOB Imported Parts Foreign Currency
1	2	3	4	5 = 3x4
1				
2				
3				
4				
5				
TOTAL				

Notes:

Columns 4 and 5: Currencies in accordance with ITB 15

The prices of the Spare Parts will not consider for evaluation and it is only for future reference

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

Schedule No. 4: Grand Summary

Schedule No.	Title	Total FOB Values
1	Supply of Total 05 Nos. Diesel Multiple Units* to Sri Lanka Railways	
2	Supply of additional 04 nos. of SBC type coaches	

Grand Total to be carried forward to Letter of Price Bid

Notes:

Columns 3 : Currencies in accordance with ITB 15
Evaluation criteria is the Grand Total of the Bid Price.

Name _____

In the capacity of _____

Signed _____

Duly authorized to sign the Bid for and on behalf of _____

Date _____

Schedule No. 5:

Compliance with Specifications

	Description	Yes/No	Remarks	Signature
1	We agree to comply all the requirements in the Paragraph 1.1.1 (i) of Technical Specifications (Section 6)			
2	We agree to comply all the requirements in the Paragraph 1.1.1 (ii) of Technical Specifications (Section 6)			
3	We agree to comply all the requirements in the Paragraph 1.1.1 (iii) (a) of Technical Specifications (Section 6)			
4	We agree to comply all the requirements in the Paragraph 1.1.1 (iii) (b) of Technical Specifications (Section 6)			
5	We agree to comply all the requirements in the Paragraph 1.1.1 (iii) (c) of Technical Specifications (Section 6)			
6	We agree to comply all the requirements in the Paragraph 1.1.1 (iii) (d) of Technical Specifications (Section 6)			
7	We agree to comply all the requirements in the Paragraph 1.1.1 (iii) (e) of Technical Specifications (Section 6)			
8	We agree to comply all the requirements in the Paragraph 1.1.1 (iii) (f) of Technical Specifications (Section 6)			
9	We agree to comply all the requirements in the Paragraph 1.1.1 (iii) (g) of Technical Specifications (Section 6)			
10	We agree to comply all the requirements in the Paragraph 1.1.1 (iv) of Technical Specifications (Section 6)			
11	We agree to comply all the requirements in the Paragraph 1.1.2 (i) of Technical Specifications (Section 6)			
12	We agree to comply all the requirements in the Paragraph 1.1.2 (ii) of Technical Specifications (Section 6)			
13	We agree to comply all the requirements in the Paragraph 1.1.2 (iii) of Technical Specifications (Section 6)			
14	We agree to comply all the requirements in the Paragraph 1.1.3 (i) of Technical Specifications (Section 6)			
15	We agree to comply all the requirements in the Paragraph 1.1.3 (ii) of Technical Specifications (Section 6)			
16	We agree to comply all the requirements in the Paragraph 1.1.3 (iii) of Technical Specifications (Section 6)			
17	We agree to comply all the requirements in the Paragraph 1.1.4. (i) of Technical Specifications (Section 6)			
18	We agree to comply all the requirements in the Paragraph 1.1.4 (ii) of Technical Specifications (Section 6)			
19	We agree to comply all the requirements in the Paragraph 1.1.4 (iii) of Technical Specifications (Section 6)			

20	We agree to comply all the requirements in the Paragraph 1.1.4 (iv) of Technical Specifications (Section 6)			
21	We agree to comply all the requirements in the Paragraph 1.1.4 (v) of Technical Specifications (Section 6)			
22	We agree to comply all the requirements in the Paragraph 1.1.5 (i) of Technical Specifications (Section 6)			
23	We agree to comply all the requirements in the Paragraph 1.1.5 (ii) of Technical Specifications (Section 6)			
24	We agree to comply all the requirements in the Paragraph 1.1.5 (iii) of Technical Specifications (Section 6)			
25	We agree to comply all the requirements in the Paragraph 1.1.5 (iv) of Technical Specifications (Section 6)			
26	We agree to comply all the requirements in the Paragraph 1.1.5 (v) of Technical Specifications (Section 6)			
27	We agree to comply all the requirements in the Paragraph 1.1.5 (vi) of Technical Specifications (Section 6)			
28	We agree to comply all the requirements in the Paragraph 1.1.6 (i) of Technical Specifications (Section 6)			
29	We agree to comply all the requirements in the Paragraph 1.1.6 (ii) of Technical Specifications (Section 6)			
30	We agree to comply all the requirements in the Paragraph 1.1.6 (iii) of Technical Specifications (Section 6)			
31	We agree to comply all the requirements in the Paragraph 1.1.6 (iv) of Technical Specifications (Section 6)			
32	We agree to comply all the requirements in the Paragraph 1.1.6 (v) of Technical Specifications (Section 6)			
33	We agree to comply all the requirements in the Paragraph 1.1.7 (i) of Technical Specifications (Section 6)			
34	We agree to comply all the requirements in the Paragraph 1.1.7 (ii) of Technical Specifications (Section 6)			
35	We agree to comply all the requirements in the Paragraph 1.1.7 (iii) of Technical Specifications (Section 6)			
36	We agree to comply all the requirements in the Paragraph 1.1.8 (i) of Technical Specifications (Section 6)			
37	We agree to comply all the requirements in the Paragraph 1.1.8 (ii) of Technical Specifications (Section 6)			
38	We agree to comply all the requirements in the Paragraph 1.1.8 (iii) of Technical Specifications (Section 6)			
39	We agree to comply all the requirements in the Paragraph 1.1.8 (iv) a of Technical Specifications (Section 6)			
40	We agree to comply all the requirements in the Paragraph 1.1.8 (v) of Technical Specifications (Section 6)			
41	We agree to comply all the requirements in the Paragraph 1.1.9 (i) (a) of Technical Specifications (Section 6)			
42	We agree to comply all the requirements in the Paragraph 1.1.9 (i) (b) of Technical Specifications (Section 6)			
43	We agree to comply all the requirements in the Paragraph 1.1.9 (i) (c) of Technical Specifications (Section 6)			
44	We agree to comply all the requirements in the Paragraph 1.1.9 (i) (d) of Technical Specifications (Section 6)			
45	We agree to comply all the requirements in the Paragraph 1.1.9 (i) (e) of Technical Specifications (Section 6)			
46	We agree to comply all the requirements in the Paragraph			

	1.1.9 (i) (f) of Technical Specifications (Section 6)			
47	We agree to comply all the requirements in the Paragraph 1.1.9 (ii) of Technical Specifications (Section 6)			
48	We agree to comply all the requirements in the Paragraph 1.1.10 (i) of Technical Specifications (Section 6)			
49	We agree to comply all the requirements in the Paragraph 1.1.10 (ii) of Technical Specifications (Section 6)			
50	We agree to comply all the requirements in the Paragraph 1.1.11 (i) (a) of Technical Specifications (Section 6)			
51	We agree to comply all the requirements in the Paragraph 1.1.11 (i) (b) of Technical Specifications (Section 6)			
52	We agree to comply all the requirements in the Paragraph 1.1.11 (i) (c) of Technical Specifications (Section 6)			
53	We agree to comply all the requirements in the Paragraph 1.1.11 (i) (d) of Technical Specifications (Section 6)			
54	We agree to comply all the requirements in the Paragraph 1.1.11 (i) (e) of Technical Specifications (Section 6)			
55	We agree to comply all the requirements in the Paragraph 1.1.11 (ii) of Technical Specifications (Section 6)			
56	We agree to comply all the requirements in the Paragraph 1.1.12 of Technical Specifications (Section 6)			
57	We agree to comply all the requirements in the Paragraph 1.2.1 (i) of Technical Specifications (Section 6)			
58	We agree to comply all the requirements in the Paragraph 1.2.1 (ii) of Technical Specifications (Section 6)			
59	We agree to comply all the requirements in the Paragraph 1.2.1 (iii) of Technical Specifications (Section 6)			
60	We agree to comply all the requirements in the Paragraph 1.2.2 (i) of Technical Specifications (Section 6)			
61	We agree to comply all the requirements in the Paragraph 1.2.2 (ii) of Technical Specifications (Section 6)			
62	We agree to comply all the requirements in the Paragraph 1.2.2 (iii) of Technical Specifications (Section 6)			
63	We agree to comply all the requirements in the Paragraph 1.2.2 (iv) of Technical Specifications (Section 6)			
64	We agree to comply all the requirements in the Paragraph 1.2.2 (v) of Technical Specifications (Section 6)			
65	We agree to comply all the requirements in the Paragraph 1.2.2 (vi) of Technical Specifications (Section 6)			
66	We agree to comply all the requirements in the Paragraph 1.2.2 (vii) of Technical Specifications (Section 6)			
67	We agree to comply all the requirements in the Paragraph 1.2.2 (viii) of Technical Specifications (Section 6)			
68	We agree to comply all the requirements in the Paragraph 1.2.2 (ix) of Technical Specifications (Section 6)			
69	We agree to comply all the requirements in the Paragraph 1.2.2 (x) of Technical Specifications (Section 6)			
70	We agree to comply all the requirements in the Paragraph 1.2.2 (xi) of Technical Specifications (Section 6)			
71	We agree to comply all the requirements in the Paragraph 1.2.2 (xii) of Technical Specifications (Section 6)			
72	We agree to comply all the requirements in the Paragraph 1.2.2 (xiii) of Technical Specifications (Section 6)			
73	We agree to comply all the requirements in the Paragraph			

	1.2.2 (xiv) of Technical Specifications (Section 6)			
74	We agree to comply all the requirements in the Paragraph 2.1.1 (i) of Technical Specifications (Section 6)			
75	We agree to comply all the requirements in the Paragraph 2.1.1 (ii) of Technical Specifications (Section 6)			
76	We agree to comply all the requirements in the Paragraph 2.1.1 (iii) of Technical Specifications (Section 6)			
77	We agree to comply all the requirements in the Paragraph 2.1.1 (iv) of Technical Specifications (Section 6)			
78	We agree to comply all the requirements in the Paragraph 2.1.1 (v) of Technical Specifications (Section 6)			
79	We agree to comply all the requirements in the Paragraph 2.1.1 (vi) of Technical Specifications (Section 6)			
80	We agree to comply all the requirements in the Paragraph 2.1.2 (i) of Technical Specifications (Section 6)			
81	We agree to comply all the requirements in the Paragraph 2.1.2 (ii) of Technical Specifications (Section 6)			
82	We agree to comply all the requirements in the Paragraph 2.1.2 (iii) of Technical Specifications (Section 6)			
83	We agree to comply all the requirements in the Paragraph 2.1.2 (iv) of Technical Specifications (Section 6)			
84	We agree to comply all the requirements in the Paragraph 2.1.3 (i) of Technical Specifications (Section 6)			
85	We agree to comply all the requirements in the Paragraph 2.1.3 (ii) of Technical Specifications (Section 6)			
86	We agree to comply all the requirements in the Paragraph 2.1.3 (iii) of Technical Specifications (Section 6)			
87	We agree to comply all the requirements in the Paragraph 2.1.3 (iv) of Technical Specifications (Section 6)			
88	We agree to comply all the requirements in the Paragraph 2.1.3 (v) of Technical Specifications (Section 6)			
89	We agree to comply all the requirements in the Paragraph 2.1.4 (i) of Technical Specifications (Section 6)			
90	We agree to comply all the requirements in the Paragraph 2.1.4 (ii) of Technical Specifications (Section 6)			
91	We agree to comply all the requirements in the Paragraph 2.1.4 (iii) of Technical Specifications (Section 6)			
92	We agree to comply all the requirements in the Paragraph 2.1.4 (iv) of Technical Specifications (Section 6)			
93	We agree to comply all the requirements in the Paragraph 2.1.4 (v) of Technical Specifications (Section 6)			
94	We agree to comply all the requirements in the Paragraph 2.1.4 (vi) of Technical Specifications (Section 6)			
95	We agree to comply all the requirements in the Paragraph 2.1.4 (vii) of Technical Specifications (Section 6)			
96	We agree to comply all the requirements in the Paragraph 2.1.4 (viii) of Technical Specifications (Section 6)			
97	We agree to comply all the requirements in the Paragraph 2.1.5 (i) of Technical Specifications (Section 6)			
98	We agree to comply all the requirements in the Paragraph 2.1.5 (ii) of Technical Specifications (Section 6)			
99	We agree to comply all the requirements in the Paragraph 2.1.5 (iii) of Technical Specifications (Section 6)			
100	We agree to comply all the requirements in the Paragraph			

	2.1.5 (iv) of Technical Specifications (Section 6)			
101	We agree to comply all the requirements in the Paragraph 2.1.5 (v) of Technical Specifications (Section 6)			
102	We agree to comply all the requirements in the Paragraph 2.2.1 (i) of Technical Specifications (Section 6)			
103	We agree to comply all the requirements in the Paragraph 2.2.1 (ii) (a) of Technical Specifications (Section 6)			
104	We agree to comply all the requirements in the Paragraph 2.2.1 (ii) (b) of Technical Specifications (Section 6)			
105	We agree to comply all the requirements in the Paragraph 2.2.1 (ii) (c) of Technical Specifications (Section 6)			
106	We agree to comply all the requirements in the Paragraph 2.2.1 (ii) (d) of Technical Specifications (Section 6)			
107	We agree to comply all the requirements in the Paragraph 2.2.1 (ii) (e) of Technical Specifications (Section 6)			
108	We agree to comply all the requirements in the Paragraph 2.2.1 (ii) (f) of Technical Specifications (Section 6)			
109	We agree to comply all the requirements in the Paragraph 2.2.1 (ii) (g) of Technical Specifications (Section 6)			
110	We agree to comply all the requirements in the Paragraph 2.2.1 (iii) of Technical Specifications (Section 6)			
111	We agree to comply all the requirements in the Paragraph 2.2.1 (iv) of Technical Specifications (Section 6)			
112	We agree to comply all the requirements in the Paragraph 2.2.1 (v) of Technical Specifications (Section 6)			
113	We agree to comply all the requirements in the Paragraph 2.2.1 (vi) of Technical Specifications (Section 6)			
114	We agree to comply all the requirements in the Paragraph 2.2.1 (vii) of Technical Specifications (Section 6)			
115	We agree to comply all the requirements in the Paragraph 2.2.1 (viii) of Technical Specifications (Section 6)			
116	We agree to comply all the requirements in the Paragraph 2.2.1 (ix) of Technical Specifications (Section 6)			
117	We agree to comply all the requirements in the Paragraph 2.2.1 (x) of Technical Specifications (Section 6)			
118	We agree to comply all the requirements in the Paragraph 2.2.1 (xi) of Technical Specifications (Section 6)			
119	We agree to comply all the requirements in the Paragraph 2.2.1 (xii) of Technical Specifications (Section 6)			
120	We agree to comply all the requirements in the Paragraph 2.2.1 (xiii) of Technical Specifications (Section 6)			
121	We agree to comply all the requirements in the Paragraph 2.2.1 (xiv) of Technical Specifications (Section 6)			
122	We agree to comply all the requirements in the Paragraph 2.2.1 (xv) of Technical Specifications (Section 6)			
123	We agree to comply all the requirements in the Paragraph 2.2.1 (xvi) of Technical Specifications (Section 6)			
124	We agree to comply all the requirements in the Paragraph 2.2.1 (xvii) of Technical Specifications (Section 6)			
125	We agree to comply all the requirements in the Paragraph 2.2.1 (xviii) of Technical Specifications (Section 6)			
126	We agree to comply all the requirements in the Paragraph 2.2.1 (xix) of Technical Specifications (Section 6)			
127	We agree to comply all the requirements in the Paragraph			

	2.2.1 (xx) of Technical Specifications (Section 6)			
128	We agree to comply all the requirements in the Paragraph 2.2.1 (xxi) of Technical Specifications (Section 6)			
129	We agree to comply all the requirements in the Paragraph 2.2.1 (xxii) of Technical Specifications (Section 6)			
130	We agree to comply all the requirements in the Paragraph 2.2.2 (i) of Technical Specifications (Section 6)			
131	We agree to comply all the requirements in the Paragraph 2.2.2 (ii) of Technical Specifications (Section 6)			
132	We agree to comply all the requirements in the Paragraph 2.2.2 (iii) of Technical Specifications (Section 6)			
133	We agree to comply all the requirements in the Paragraph 2.2.2 (iv) of Technical Specifications (Section 6)			
134	We agree to comply all the requirements in the Paragraph 2.2.3 (i) of Technical Specifications (Section 6)			
135	We agree to comply all the requirements in the Paragraph 2.2.3 (ii) of Technical Specifications (Section 6)			
136	We agree to comply all the requirements in the Paragraph 2.2.3 (iii) of Technical Specifications (Section 6)			
137	We agree to comply all the requirements in the Paragraph 2.2.3 (iv) of Technical Specifications (Section 6)			
138	We agree to comply all the requirements in the Paragraph 2.2.3 (v) (a) of Technical Specifications (Section 6)			
139	We agree to comply all the requirements in the Paragraph 2.2.3 (v) (b) of Technical Specifications (Section 6)			
140	We agree to comply all the requirements in the Paragraph 2.2.3 (v) (c) of Technical Specifications (Section 6)			
141	We agree to comply all the requirements in the Paragraph 2.2.3 (vi) of Technical Specifications (Section 6)			
142	We agree to comply all the requirements in the Paragraph 2.2.4 (i) of Technical Specifications (Section 6)			
143	We agree to comply all the requirements in the Paragraph 2.2.4 (ii) of Technical Specifications (Section 6)			
144	We agree to comply all the requirements in the Paragraph 2.2.5 (i) of Technical Specifications (Section 6)			
145	We agree to comply all the requirements in the Paragraph 2.2.5 (ii) of Technical Specifications (Section 6)			
146	We agree to comply all the requirements in the Paragraph 2.2.5 (iii) of Technical Specifications (Section 6)			
147	We agree to comply all the requirements in the Paragraph 2.2.5 (iv) of Technical Specifications (Section 6)			
148	We agree to comply all the requirements in the Paragraph 2.2.6 (i) of Technical Specifications (Section 6)			
149	We agree to comply all the requirements in the Paragraph 2.2.6 (ii) of Technical Specifications (Section 6)			
150	We agree to comply all the requirements in the Paragraph 2.2.6 (iii) of Technical Specifications (Section 6)			

151	We agree to comply all the requirements in the Paragraph 2.2.7 of Technical Specifications (Section 6)			
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152	We agree to comply all the requirements in the Paragraph 2.3.1 (i) of Technical Specifications (Section 6)			
153	We agree to comply all the requirements in the Paragraph 2.3.1 (ii) of Technical Specifications (Section 6)			
154	We agree to comply all the requirements in the Paragraph 2.3.1 (iii) of Technical Specifications (Section 6)			
155	We agree to comply all the requirements in the Paragraph 2.3.1 (iv) of Technical Specifications (Section 6)			
156	We agree to comply all the requirements in the Paragraph 2.3.2.1 (i) of Technical Specifications (Section 6)			
157	We agree to comply all the requirements in the Paragraph 2.3.2.1 (ii) of Technical Specifications (Section 6)			
158	We agree to comply all the requirements in the Paragraph 2.3.2.1 (iii) of Technical Specifications (Section 6)			
159	We agree to comply all the requirements in the Paragraph 2.3.2.1 (iv) of Technical Specifications (Section 6)			
160	We agree to comply all the requirements in the Paragraph 2.3.2.1 (v) of Technical Specifications (Section 6)			
161	We agree to comply all the requirements in the Paragraph 2.3.2.1 (vi) of Technical Specifications (Section 6)			
162	We agree to comply all the requirements in the Paragraph 2.3.2.2 (i) of Technical Specifications (Section 6)			
163	We agree to comply all the requirements in the Paragraph 2.3.2.2 (i) (a) of Technical Specifications (Section 6)			
164	We agree to comply all the requirements in the Paragraph 2.3.2.2 (i) (b) of Technical Specifications (Section 6)			
165	We agree to comply all the requirements in the Paragraph 2.3.2.2 (i) (c) of Technical Specifications (Section 6)			
166	We agree to comply all the requirements in the Paragraph 2.3.2.2 (i) (d) of Technical Specifications (Section 6)			
167	We agree to comply all the requirements in the Paragraph 2.3.2.2 (i) (e) of Technical Specifications (Section 6)			
168	We agree to comply all the requirements in the Paragraph 2.3.2.2 (i) (f) of Technical Specifications (Section 6)			
169	We agree to comply all the requirements in the Paragraph 2.3.2.2 (i) (g) of Technical Specifications (Section 6)			
170	We agree to comply all the requirements in the Paragraph 2.3.2.2 (i) (h) of Technical Specifications (Section 6)			
171	We agree to comply all the requirements in the Paragraph 2.3.2.2 (i) (i) of Technical Specifications (Section 6)			
172	We agree to comply all the requirements in the Paragraph 2.3.2.2 (i) (j) of Technical Specifications (Section 6)			
173	We agree to comply all the requirements in the Paragraph 2.3.2.3 (i) of Technical Specifications (Section 6)			
174	We agree to comply all the requirements in the Paragraph 2.3.2.3 (ii) (a) of Technical Specifications (Section 6)			
175	We agree to comply all the requirements in the Paragraph 2.3.2.3 (ii) (b) of Technical Specifications (Section 6)			
176	We agree to comply all the requirements in the Paragraph 2.3.2.3 (ii) (c) of Technical Specifications (Section 6)			
177	We agree to comply all the requirements in the Paragraph 2.3.2.3 (ii) (d) of Technical Specifications (Section 6)			
178	We agree to comply all the requirements in the Paragraph 2.3.2.3 (ii) (e) of Technical Specifications (Section 6)			

179	We agree to comply all the requirements in the Paragraph 2.3.2.3 (iii) of Technical Specifications (Section 6)			
180	We agree to comply all the requirements in the Paragraph 2.3.2.3 (iii) (a) of Technical Specifications (Section 6)			
181	We agree to comply all the requirements in the Paragraph 2.3.2.3 (iii) (b) of Technical Specifications (Section 6)			
182	We agree to comply all the requirements in the Paragraph 2.3.2.3 (iii) (c) of Technical Specifications (Section 6)			
183	We agree to comply all the requirements in the Paragraph 2.3.2.3 (iii) (d) of Technical Specifications (Section 6)			
184	We agree to comply all the requirements in the Paragraph 2.3.2.3 (iii) (e) of Technical Specifications (Section 6)			
185	We agree to comply all the requirements in the Paragraph 2.3.2.3 (iv) of Technical Specifications (Section 6)			
186	We agree to comply all the requirements in the Paragraph 2.3.2.3 (v) of Technical Specifications (Section 6)			
187	We agree to comply all the requirements in the Paragraph 2.3.2.3 (vi) of Technical Specifications (Section 6)			
188	We agree to comply all the requirements in the Paragraph 2.3.2.3 (vii) of Technical Specifications (Section 6)			
189	We agree to comply all the requirements in the Paragraph 2.3.2.3 (viii) of Technical Specifications (Section 6)			
190	We agree to comply all the requirements in the Paragraph 2.3.3 (i) of Technical Specifications (Section 6)			
191	We agree to comply all the requirements in the Paragraph 2.3.3 (ii) of Technical Specifications (Section 6)			
192	We agree to comply all the requirements in the Paragraph 2.3.3 (iii) of Technical Specifications (Section 6)			
193	We agree to comply all the requirements in the Paragraph 2.3.3 (iv) of Technical Specifications (Section 6)			
194	We agree to comply all the requirements in the Paragraph 2.3.3 (v) of Technical Specifications (Section 6)			
195	We agree to comply all the requirements in the Paragraph 2.3.3 (vi) of Technical Specifications (Section 6)			
196	We agree to comply all the requirements in the Paragraph 2.3.3 (vii) of Technical Specifications (Section 6)			
197	We agree to comply all the requirements in the Paragraph 2.3.4 (i) of Technical Specifications (Section 6)			
198	We agree to comply all the requirements in the Paragraph 2.3.4 (ii) of Technical Specifications (Section 6)			
199	We agree to comply all the requirements in the Paragraph 2.3.4 (iii) of Technical Specifications (Section 6)			
200	We agree to comply all the requirements in the Paragraph 2.3.5 (i) of Technical Specifications (Section 6)			
201	We agree to comply all the requirements in the Paragraph 2.3.5 (ii) of Technical Specifications (Section 6)			
202	We agree to comply all the requirements in the Paragraph 2.3.5 (iii) of Technical Specifications (Section 6)			
203	We agree to comply all the requirements in the Paragraph 2.3.5 (iv) of Technical Specifications (Section 6)			
204	We agree to comply all the requirements in the Paragraph 2.3.5 (v) of Technical Specifications (Section 6)			
205	We agree to comply all the requirements in the Paragraph 2.3.5 (vi) of Technical Specifications (Section 6)			

206	We agree to comply all the requirements in the Paragraph 2.3.6 (i) of Technical Specifications (Section 6)			
207	We agree to comply all the requirements in the Paragraph 2.3.6 (ii) of Technical Specifications (Section 6)			
208	We agree to comply all the requirements in the Paragraph 2.3.6 (iii) of Technical Specifications (Section 6)			
209	We agree to comply all the requirements in the Paragraph 2.3.6 (iv) of Technical Specifications (Section 6)			
210	We agree to comply all the requirements in the Paragraph 2.3.6 (v) of Technical Specifications (Section 6)			
211	We agree to comply all the requirements in the Paragraph 2.3.6 (vi) of Technical Specifications (Section 6)			
212	We agree to comply all the requirements in the Paragraph 2.3.7 (i) of Technical Specifications (Section 6)			
213	We agree to comply all the requirements in the Paragraph 2.3.7 (ii) of Technical Specifications (Section 6)			
214	We agree to comply all the requirements in the Paragraph 2.3.7 (iii) of Technical Specifications (Section 6)			
215	We agree to comply all the requirements in the Paragraph 2.3.7 (iv) of Technical Specifications (Section 6)			
216	We agree to comply all the requirements in the Paragraph 2.3.7 (v) of Technical Specifications (Section 6)			
217	We agree to comply all the requirements in the Paragraph 2.3.7 (vi) of Technical Specifications (Section 6)			
218	We agree to comply all the requirements in the Paragraph 2.4.1 (i) of Technical Specifications (Section 6)			
219	We agree to comply all the requirements in the Paragraph 2.4.1 (ii) of Technical Specifications (Section 6)			
220	We agree to comply all the requirements in the Paragraph 2.4.1 (iii) of Technical Specifications (Section 6)			
221	We agree to comply all the requirements in the Paragraph 2.4.1 (iv) of Technical Specifications (Section 6)			
222	We agree to comply all the requirements in the Paragraph 2.4.2 of Technical Specifications (Section 6)			
223	We agree to comply all the requirements in the Paragraph 2.4.3 (i) of Technical Specifications (Section 6)			
224	We agree to comply all the requirements in the Paragraph 2.4.3 (ii) of Technical Specifications (Section 6)			
225	We agree to comply all the requirements in the Paragraph 2.5.1 (i) of Technical Specifications (Section 6)			
226	We agree to comply all the requirements in the Paragraph 2.5.1 (ii) of Technical Specifications (Section 6)			
227	We agree to comply all the requirements in the Paragraph 2.5.1 (iii) of Technical Specifications (Section 6)			
228	We agree to comply all the requirements in the Paragraph 2.5.1 (iv) of Technical Specifications (Section 6)			
229	We agree to comply all the requirements in the Paragraph 2.5.2 (i) of Technical Specifications (Section 6)			
230	We agree to comply all the requirements in the Paragraph 2.5.2 (ii) of Technical Specifications (Section 6)			
231	We agree to comply all the requirements in the Paragraph 2.5.2 (iii) of Technical Specifications (Section 6)			
232	We agree to comply all the requirements in the Paragraph 2.5.2 (iv) of Technical Specifications (Section 6)			

233	We agree to comply all the requirements in the Paragraph 2.5.2 (v) of Technical Specifications (Section 6)			
234	We agree to comply all the requirements in the Paragraph 2.5.2 (vi) of Technical Specifications (Section 6)			
235	We agree to comply all the requirements in the Paragraph 2.5.2 (vii) of Technical Specifications (Section 6)			
236	We agree to comply all the requirements in the Paragraph 2.5.2 (viii) of Technical Specifications (Section 6)			
237	We agree to comply all the requirements in the Paragraph 2.5.3 (i) of Technical Specifications (Section 6)			
228	We agree to comply all the requirements in the Paragraph 2.5.3 (i) (a) of Technical Specifications (Section 6)			
239	We agree to comply all the requirements in the Paragraph 2.5.3 (i) (b) of Technical Specifications (Section 6)			
240	We agree to comply all the requirements in the Paragraph 2.5.3 (i) (c) of Technical Specifications (Section 6)			
241	We agree to comply all the requirements in the Paragraph 2.5.3 (i) (d) of Technical Specifications (Section 6)			
242	We agree to comply all the requirements in the Paragraph 2.5.3 (i) (e) of Technical Specifications (Section 6)			
243	We agree to comply all the requirements in the Paragraph 2.5.3 (ii) of Technical Specifications (Section 6)			
244	We agree to comply all the requirements in the Paragraph 2.5.3 (iii) of Technical Specifications (Section 6)			
245	We agree to comply all the requirements in the Paragraph 2.5.3 (iv) of Technical Specifications (Section 6)			
246	We agree to comply all the requirements in the Paragraph 2.5.3 (v) of Technical Specifications (Section 6)			
247	We agree to comply all the requirements in the Paragraph 2.5.3 (vi) of Technical Specifications (Section 6)			
248	We agree to comply all the requirements in the Paragraph 2.5.3 (vii) of Technical Specifications (Section 6)			
249	We agree to comply all the requirements in the Paragraph 2.5.3 (viii) of Technical Specifications (Section 6)			
250	We agree to comply all the requirements in the Paragraph 2.5.3 (ix) of Technical Specifications (Section 6)			
251	We agree to comply all the requirements in the Paragraph 2.5.3 (x) of Technical Specifications (Section 6)			
252	We agree to comply all the requirements in the Paragraph 2.5.3 (xi) of Technical Specifications (Section 6)			
253	We agree to comply all the requirements in the Paragraph 2.5.3 (xii) of Technical Specifications (Section 6)			
254	We agree to comply all the requirements in the Paragraph 2.5.3 (xiii) of Technical Specifications (Section 6)			
255	We agree to comply all the requirements in the Paragraph 2.5.3 (xiv) of Technical Specifications (Section 6)			
256	We agree to comply all the requirements in the Paragraph 2.5.3 (xv) of Technical Specifications (Section 6)			
257	We agree to comply all the requirements in the Paragraph 2.5.3 (xvi) of Technical Specifications (Section 6)			
258	We agree to comply all the requirements in the Paragraph 2.5.3 (xvii) of Technical Specifications (Section 6)			
259	We agree to comply all the requirements in the Paragraph			

	2.5.4 of Technical Specifications (Section 6)			
260	We agree to comply all the requirements in the Paragraph 2.5.5 (i) of Technical Specifications (Section 6)			
261	We agree to comply all the requirements in the Paragraph 2.5.5 (ii) of Technical Specifications (Section 6)			
262	We agree to comply all the requirements in the Paragraph 2.5.5 (iii) of Technical Specifications (Section 6)			
263	We agree to comply all the requirements in the Paragraph 2.5.5 (iv) of Technical Specifications (Section 6)			
264	We agree to comply all the requirements in the Paragraph 2.5.5 (v) of Technical Specifications (Section 6)			
265	We agree to comply all the requirements in the Paragraph 2.5.5 (vi) of Technical Specifications (Section 6)			
266	We agree to comply all the requirements in the Paragraph 2.5.5 (vii) of Technical Specifications (Section 6)			
267	We agree to comply all the requirements in the Paragraph 2.5.5 (viii) of Technical Specifications (Section 6)			
268	We agree to comply all the requirements in the Paragraph 2.5.5 (ix) of Technical Specifications (Section 6)			
269	We agree to comply all the requirements in the Paragraph 2.5.5 (x) of Technical Specifications (Section 6)			
270	We agree to comply all the requirements in the Paragraph 2.5.5 (xi) of Technical Specifications (Section 6)			
271	We agree to comply all the requirements in the Paragraph 2.5.5 (xii) of Technical Specifications (Section 6)			
272	We agree to comply all the requirements in the Paragraph 2.6.1 (i) of Technical Specifications (Section 6)			
273	We agree to comply all the requirements in the Paragraph 2.6.1 (ii) of Technical Specifications (Section 6)			
274	We agree to comply all the requirements in the Paragraph 2.6.1 (iii) of Technical Specifications (Section 6)			
275	We agree to comply all the requirements in the Paragraph 2.6.1 (iv) of Technical Specifications (Section 6)			
276	We agree to comply all the requirements in the Paragraph 2.6.1 (v) of Technical Specifications (Section 6)			
277	We agree to comply all the requirements in the Paragraph 2.6.1 (vi) of Technical Specifications (Section 6)			
278	We agree to comply all the requirements in the Paragraph 2.6.1 (vii) of Technical Specifications (Section 6)			
279	We agree to comply all the requirements in the Paragraph 2.6.1 (viii) of Technical Specifications (Section 6)			
280	We agree to comply all the requirements in the Paragraph 2.6.1 (ix) of Technical Specifications (Section 6)			
281	We agree to comply all the requirements in the Paragraph 2.6.1 (x) of Technical Specifications (Section 6)			
282	We agree to comply all the requirements in the Paragraph 2.6.2.1 of Technical Specifications (Section 6)			
283	We agree to comply all the requirements in the Paragraph 2.6.2.2 (1) (i) (A) of Technical Specifications (Section 6)			
284	We agree to comply all the requirements in the Paragraph 2.6.2.2 (1) (i) (B) (a) of Technical Specifications (Section 6)			
285	We agree to comply all the requirements in the Paragraph 2.6.2.2 (1) (i) (B) (b) of Technical Specifications (Section 6)			

286	We agree to comply all the requirements in the Paragraph 2.6.2.2 (1) (ii) (a) of Technical Specifications (Section 6)			
287	We agree to comply all the requirements in the Paragraph 2.6.2.2 (1) (ii) (b) of Technical Specifications (Section 6)			
288	We agree to comply all the requirements in the Paragraph 2.6.2.2 (1) (ii) (c) of Technical Specifications (Section 6)			
289	We agree to comply all the requirements in the Paragraph 2.6.2.2 (1) (ii) (d) of Technical Specifications (Section 6)			
290	We agree to comply all the requirements in the Paragraph 2.6.2.2 (1) (iii) of Technical Specifications (Section 6)			
291	We agree to comply all the requirements in the Paragraph 2.6.2.2 (1) (iv) of Technical Specifications (Section 6)			
292	We agree to comply all the requirements in the Paragraph 2.6.2.2 (2) of Technical Specifications (Section 6)			
293	We agree to comply all the requirements in the Paragraph 2.6.3.1 (i) (a) of Technical Specifications (Section 6)			
294	We agree to comply all the requirements in the Paragraph 2.6.3.1 (i) (b) of Technical Specifications (Section 6)			
295	We agree to comply all the requirements in the Paragraph 2.6.3.1 (i) (c) of Technical Specifications (Section 6)			
296	We agree to comply all the requirements in the Paragraph 2.6.3.1 (i) (d) of Technical Specifications (Section 6)			
297	We agree to comply all the requirements in the Paragraph 2.6.3.1 (i) (e) of Technical Specifications (Section 6)			
298	We agree to comply all the requirements in the Paragraph 2.6.3.1 (i) (f) of Technical Specifications (Section 6)			
299	We agree to comply all the requirements in the Paragraph 2.6.3.1 (i) (g) of Technical Specifications (Section 6)			
300	We agree to comply all the requirements in the Paragraph 2.6.3.1 (i) (h) of Technical Specifications (Section 6)			
301	We agree to comply all the requirements in the Paragraph 2.6.3.1 (i) (i) of Technical Specifications (Section 6)			
302	We agree to comply all the requirements in the Paragraph 2.6.3.1 (i) (j) of Technical Specifications (Section 6)			
303	We agree to comply all the requirements in the Paragraph 2.6.3.1 (i) (k) of Technical Specifications (Section 6)			
304	We agree to comply all the requirements in the Paragraph 2.6.3.1 (i) (l) of Technical Specifications (Section 6)			
305	We agree to comply all the requirements in the Paragraph 2.6.3.1 (i) (m) of Technical Specifications (Section 6)			
306	We agree to comply all the requirements in the Paragraph 2.6.3.1 (ii) of Technical Specifications (Section 6)			
307	We agree to comply all the requirements in the Paragraph 2.6.3.1 (iii) of Technical Specifications (Section 6)			
308	We agree to comply all the requirements in the Paragraph 2.6.3.1 (iv) of Technical Specifications (Section 6)			
309	We agree to comply all the requirements in the Paragraph 2.6.3.2 (i) of Technical Specifications (Section 6)			
310	We agree to comply all the requirements in the Paragraph 2.6.3.2 (ii) of Technical Specifications (Section 6)			
311	We agree to comply all the requirements in the Paragraph 2.6.3.2 (iii) of Technical Specifications (Section 6)			
312	We agree to comply all the requirements in the Paragraph 2.6.3.2 (iv) of Technical Specifications (Section 6)			

313	We agree to comply all the requirements in the Paragraph 2.6.3.2 (v) of Technical Specifications (Section 6)			
314	We agree to comply all the requirements in the Paragraph 2.6.3.2 (vi) of Technical Specifications (Section 6)			
315	We agree to comply all the requirements in the Paragraph 2.6.3.2 (vii) of Technical Specifications (Section 6)			
316	We agree to comply all the requirements in the Paragraph 2.6.3.3 (a) of Technical Specifications (Section 6)			
317	We agree to comply all the requirements in the Paragraph 2.6.3.3 (b) of Technical Specifications (Section 6)			
318	We agree to comply all the requirements in the Paragraph 2.6.3.3 (c) of Technical Specifications (Section 6)			
319	We agree to comply all the requirements in the Paragraph 2.6.3.3 (d) of Technical Specifications (Section 6)			
320	We agree to comply all the requirements in the Paragraph 2.6.3.3 (e) of Technical Specifications (Section 6)			
321	We agree to comply all the requirements in the Paragraph 2.6.3.4 (i) of Technical Specifications (Section 6)			
322	We agree to comply all the requirements in the Paragraph 2.6.3.4 (ii) of Technical Specifications (Section 6)			
323	We agree to comply all the requirements in the Paragraph 2.6.3.4 (iii) of Technical Specifications (Section 6)			
324	We agree to comply all the requirements in the Paragraph 2.6.3.5 (i) of Technical Specifications (Section 6)			
325	We agree to comply all the requirements in the Paragraph 2.6.3.5 (i) (a) of Technical Specifications (Section 6)			
326	We agree to comply all the requirements in the Paragraph 2.6.3.5 (i) (b) of Technical Specifications (Section 6)			
327	We agree to comply all the requirements in the Paragraph 2.6.3.5 (i) (c) of Technical Specifications (Section 6)			
328	We agree to comply all the requirements in the Paragraph 2.6.3.5 (i) (d) of Technical Specifications (Section 6)			
329	We agree to comply all the requirements in the Paragraph 2.6.3.5 (ii) of Technical Specifications (Section 6)			
330	We agree to comply all the requirements in the Paragraph 2.6.3.5 (iii) of Technical Specifications (Section 6)			
331	We agree to comply all the requirements in the Paragraph 2.6.3.5 (iv) of Technical Specifications (Section 6)			
332	We agree to comply all the requirements in the Paragraph 2.6.3.5 (v) of Technical Specifications (Section 6)			
333	We agree to comply all the requirements in the Paragraph 2.6.3.5 (vi) of Technical Specifications (Section 6)			
334	We agree to comply all the requirements in the Paragraph 2.6.3.6 (i) of Technical Specifications (Section 6)			
335	We agree to comply all the requirements in the Paragraph 2.6.3.6 (ii) of Technical Specifications (Section 6)			
336	We agree to comply all the requirements in the Paragraph 2.6.3.7 (i) of Technical Specifications (Section 6)			
337	We agree to comply all the requirements in the Paragraph 2.6.3.7 (ii) of Technical Specifications (Section 6)			
338	We agree to comply all the requirements in the Paragraph 2.6.3.7 (ii) (a) of Technical Specifications (Section 6)			
339	We agree to comply all the requirements in the Paragraph 2.6.3.7 (ii) (b) of Technical Specifications (Section 6)			

340	We agree to comply all the requirements in the Paragraph 2.6.3.7 (ii) (c) of Technical Specifications (Section 6)			
341	We agree to comply all the requirements in the Paragraph 2.6.3.7 (ii) (d) of Technical Specifications (Section 6)			
342	We agree to comply all the requirements in the Paragraph 2.6.3.7 (ii) (e) of Technical Specifications (Section 6)			
343	We agree to comply all the requirements in the Paragraph 2.6.3.7 (ii) (f) of Technical Specifications (Section 6)			
344	We agree to comply all the requirements in the Paragraph 2.6.3.7 (ii) (g) of Technical Specifications (Section 6)			
345	We agree to comply all the requirements in the Paragraph 2.6.3.7 (ii) (h) of Technical Specifications (Section 6)			
346	We agree to comply all the requirements in the Paragraph 2.6.3.7 (ii) (i) of Technical Specifications (Section 6)			
347	We agree to comply all the requirements in the Paragraph 2.6.3.7 (ii) (j) of Technical Specifications (Section 6)			
348	We agree to comply all the requirements in the Paragraph 2.6.3.7 (ii) (k) of Technical Specifications (Section 6)			
349	We agree to comply all the requirements in the Paragraph 2.6.3.7 (ii) (l) of Technical Specifications (Section 6)			
350	We agree to comply all the requirements in the Paragraph 2.6.3.7 (ii) (m) of Technical Specifications (Section 6)			
351	We agree to comply all the requirements in the Paragraph 2.6.3.7 (ii) (n) of Technical Specifications (Section 6)			
352	We agree to comply all the requirements in the Paragraph 2.6.3.7 (ii) (o) of Technical Specifications (Section 6)			
353	We agree to comply all the requirements in the Paragraph 2.6.3.7 (ii) (p) of Technical Specifications (Section 6)			
354	We agree to comply all the requirements in the Paragraph 2.6.3.7 (ii) (q) of Technical Specifications (Section 6)			
355	We agree to comply all the requirements in the Paragraph 2.6.3.7 (ii) (r) of Technical Specifications (Section 6)			
356	We agree to comply all the requirements in the Paragraph 2.6.3.7 (iii) of Technical Specifications (Section 6)			
357	We agree to comply all the requirements in the Paragraph 2.6.3.7 (iv) of Technical Specifications (Section 6)			
358	We agree to comply all the requirements in the Paragraph 2.6.3.7 (v) (a) of Technical Specifications (Section 6)			
359	We agree to comply all the requirements in the Paragraph 2.6.3.7 (v) (b) of Technical Specifications (Section 6)			
360	We agree to comply all the requirements in the Paragraph 2.6.3.7 (v) (c) of Technical Specifications (Section 6)			
361	We agree to comply all the requirements in the Paragraph 2.6.3.7 (v) (d) of Technical Specifications (Section 6)			
362	We agree to comply all the requirements in the Paragraph 2.6.3.7 (vi) of Technical Specifications (Section 6)			
363	We agree to comply all the requirements in the Paragraph 2.6.4 (i) of Technical Specifications (Section 6)			
364	We agree to comply all the requirements in the Paragraph 2.6.4 (ii) of Technical Specifications (Section 6)			
365	We agree to comply all the requirements in the Paragraph 2.6.4 (iii) of Technical Specifications (Section 6)			
366	We agree to comply all the requirements in the Paragraph 2.6.4 (iv) of Technical Specifications (Section 6)			

367	We agree to comply all the requirements in the Paragraph 2.6.4 (v) of Technical Specifications (Section 6)			
368	We agree to comply all the requirements in the Paragraph 2.6.4 (vi) (a) of Technical Specifications (Section 6)			
369	We agree to comply all the requirements in the Paragraph 2.6.4 (vi) (b) of Technical Specifications (Section 6)			
370	We agree to comply all the requirements in the Paragraph 2.6.4 (vii) of Technical Specifications (Section 6)			
371	We agree to comply all the requirements in the Paragraph 2.6.4 (viii) of Technical Specifications (Section 6)			
372	We agree to comply all the requirements in the Paragraph 2.6.4 (ix) of Technical Specifications (Section 6)			
373	We agree to comply all the requirements in the Paragraph 2.6.4 (x) of Technical Specifications (Section 6)			
374	We agree to comply all the requirements in the Paragraph 2.6.4 (xi) of Technical Specifications (Section 6)			
375	We agree to comply all the requirements in the Paragraph 2.6.4 (xii) of Technical Specifications (Section 6)			
376	We agree to comply all the requirements in the Paragraph 2.6.5.1 (i) of Technical Specifications (Section 6)			
377	We agree to comply all the requirements in the Paragraph 2.6.5.1 (ii) of Technical Specifications (Section 6)			

378	We agree to comply all the requirements in the Paragraph 2.6.5.1 (iii) of Technical Specifications (Section 6)			
379	We agree to comply all the requirements in the Paragraph 2.6.5.2 (i) of Technical Specifications (Section 6)			
380	We agree to comply all the requirements in the Paragraph 2.6.5.2 (ii) of Technical Specifications (Section 6)			
381	We agree to comply all the requirements in the Paragraph 2.6.5.2 (iii) of Technical Specifications (Section 6)			
382	We agree to comply all the requirements in the Paragraph 2.6.5.2 (iv) of Technical Specifications (Section 6)			
383	We agree to comply all the requirements in the Paragraph 2.6.5.2 (v) of Technical Specifications (Section 6)			
384	We agree to comply all the requirements in the Paragraph 2.6.5.2 (vi) of Technical Specifications (Section 6)			
385	We agree to comply all the requirements in the Paragraph 2.6.5.3 (i) of Technical Specifications (Section 6)			
386	We agree to comply all the requirements in the Paragraph 2.6.5.3 (ii) of Technical Specifications (Section 6)			
387	We agree to comply all the requirements in the Paragraph 2.6.5.3 (iii) of Technical Specifications (Section 6)			
388	We agree to comply all the requirements in the Paragraph 2.6.5.4 (i) of Technical Specifications (Section 6)			
389	We agree to comply all the requirements in the Paragraph 2.6.5.4 (ii) of Technical Specifications (Section 6)			
390	We agree to comply all the requirements in the Paragraph 2.6.5.4 (iii) of Technical Specifications (Section 6)			
391	We agree to comply all the requirements in the Paragraph 2.6.5.4 (iv) of Technical Specifications (Section 6)			
392	We agree to comply all the requirements in the Paragraph 2.6.5.4 (v) of Technical Specifications (Section 6)			
393	We agree to comply all the requirements in the Paragraph			

	2.6.5.4 (vi) of Technical Specifications (Section 6)			
394	We agree to comply all the requirements in the Paragraph 2.6.5.5 of Technical Specifications (Section 6)			
395	We agree to comply all the requirements in the Paragraph 2.6.5.6 of Technical Specifications (Section 6)			
396	We agree to comply all the requirements in the Paragraph 2.6.5.7 of Technical Specifications (Section 6)			
397	We agree to comply all the requirements in the Paragraph 2.6.5.8 (i) of Technical Specifications (Section 6)			
398	We agree to comply all the requirements in the Paragraph 2.6.5.8 (ii) of Technical Specifications (Section 6)			
399	We agree to comply all the requirements in the Paragraph 2.6.5.8 (iii) of Technical Specifications (Section 6)			
400	We agree to comply all the requirements in the Paragraph 2.6.5.8 (iv) of Technical Specifications (Section 6)			
401	We agree to comply all the requirements in the Paragraph 2.6.5.9 of Technical Specifications (Section 6)			
402	We agree to comply all the requirements in the Paragraph 2.6.5.10 of Technical Specifications (Section 6)			
403	We agree to comply all the requirements in the Paragraph 2.6.6.1 (i) of Technical Specifications (Section 6)			

404	We agree to comply all the requirements in the Paragraph 2.6.6.1 (ii) of Technical Specifications (Section 6)			
405	We agree to comply all the requirements in the Paragraph 2.6.6.1 (iii) of Technical Specifications (Section 6)			
406	We agree to comply all the requirements in the Paragraph 2.6.6.2 (i) of Technical Specifications (Section 6)			
407	We agree to comply all the requirements in the Paragraph 2.6.6.2 (ii) of Technical Specifications (Section 6)			
408	We agree to comply all the requirements in the Paragraph 2.6.6.2 (iii) of Technical Specifications (Section 6)			
409	We agree to comply all the requirements in the Paragraph 2.6.6.2 (iv) of Technical Specifications (Section 6)			
410	We agree to comply all the requirements in the Paragraph 2.6.6.2 (v) of Technical Specifications (Section 6)			
411	We agree to comply all the requirements in the Paragraph 2.6.6.2 (vi) of Technical Specifications (Section 6)			
412	We agree to comply all the requirements in the Paragraph 2.6.6.2 (vii) of Technical Specifications (Section 6)			
413	We agree to comply all the requirements in the Paragraph 2.6.6.3 (i) of Technical Specifications (Section 6)			
414	We agree to comply all the requirements in the Paragraph 2.6.6.3 (ii) of Technical Specifications (Section 6)			
415	We agree to comply all the requirements in the Paragraph 2.6.6.3 (iii) of Technical Specifications (Section 6)			
416	We agree to comply all the requirements in the Paragraph 2.6.6.4 of Technical Specifications (Section 6)			
417	We agree to comply all the requirements in the Paragraph 2.6.6.5 (i) of Technical Specifications (Section 6)			
418	We agree to comply all the requirements in the Paragraph 2.6.6.5 (ii) of Technical Specifications (Section 6)			
419	We agree to comply all the requirements in the Paragraph 2.6.6.5 (iii) of Technical Specifications (Section 6)			

420	We agree to comply all the requirements in the Paragraph 2.6.6.5 (iv) of Technical Specifications (Section 6)			
421	We agree to comply all the requirements in the Paragraph 2.6.6.5 (v) of Technical Specifications (Section 6)			
422	We agree to comply all the requirements in the Paragraph 2.7.1 (i) of Technical Specifications (Section 6)			
423	We agree to comply all the requirements in the Paragraph 2.7.1 (ii) of Technical Specifications (Section 6)			
424	We agree to comply all the requirements in the Paragraph 2.7.1 (iii) of Technical Specifications (Section 6)			
425	We agree to comply all the requirements in the Paragraph 2.7.2 (i) of Technical Specifications (Section 6)			
426	We agree to comply all the requirements in the Paragraph 2.7.2 (ii) of Technical Specifications (Section 6)			
427	We agree to comply all the requirements in the Paragraph 2.7.3 of Technical Specifications (Section 6)			
428	We agree to comply all the requirements in the Paragraph 2.7.4 (i) 1.of Technical Specifications (Section 6)			
429	We agree to comply all the requirements in the Paragraph 2.7.4 (i) 2.of Technical Specifications (Section 6)			
430	We agree to comply all the requirements in the Paragraph 2.7.4 (i) 3.of Technical Specifications (Section 6)			
431	We agree to comply all the requirements in the Paragraph 2.7.4 (i) 4.of Technical Specifications (Section 6)			
432	We agree to comply all the requirements in the Paragraph 2.7.4 (i) 5.(a) of Technical Specifications (Section 6)			
433	We agree to comply all the requirements in the Paragraph 2.7.4 (i) 5.(b) of Technical Specifications (Section 6)			
434	We agree to comply all the requirements in the Paragraph 2.7.4 (i) 5.(c) of Technical Specifications (Section 6)			
435	We agree to comply all the requirements in the Paragraph 2.7.4 (i) 5.(d) of Technical Specifications (Section 6)			
436	We agree to comply all the requirements in the Paragraph 2.7.4 (i) 5.(e) of Technical Specifications (Section 6)			
437	We agree to comply all the requirements in the Paragraph 2.7.4 (i) 5.(f) of Technical Specifications (Section 6)			
438	We agree to comply all the requirements in the Paragraph 2.7.4 (i) 5.(g) of Technical Specifications (Section 6)			
439	We agree to comply all the requirements in the Paragraph 2.7.4 (i) 5.(h) of Technical Specifications (Section 6)			
440	We agree to comply all the requirements in the Paragraph 2.7.4 (i) 5.(i) of Technical Specifications (Section 6)			
441	We agree to comply all the requirements in the Paragraph 2.7.4 (i) 5.(j) of Technical Specifications (Section 6)			
442	We agree to comply all the requirements in the Paragraph 2.7.4 (i) 6.of Technical Specifications (Section 6)			
443	We agree to comply all the requirements in the Paragraph 2.7.4 (i) 7.of Technical Specifications (Section 6)			
444	We agree to comply all the requirements in the Paragraph 2.7.4 (i) 8.of Technical Specifications (Section 6)			
445	We agree to comply all the requirements in the Paragraph 2.7.4 (i) 9.of Technical Specifications (Section 6)			
446	We agree to comply all the requirements in the Paragraph 2.7.4 (i) 10.of Technical Specifications (Section 6)			

447	We agree to comply all the requirements in the Paragraph 2.7.4 (i) 11.of Technical Specifications (Section 6)			
448	We agree to comply all the requirements in the Paragraph 2.7.4 (i) 12.of Technical Specifications (Section 6)			

449	We agree to comply all the requirements in the Paragraph 2.7.4 (ii) of Technical Specifications (Section 6)			
450	We agree to comply all the requirements in the Paragraph 2.8 (i) of Technical Specifications (Section 6)			
451	We agree to comply all the requirements in the Paragraph 2.8 (ii) of Technical Specifications (Section 6)			
452	We agree to comply all the requirements in the Paragraph 2.8 (iii) of Technical Specifications (Section 6)			
453	We agree to comply all the requirements in the Paragraph 2.8 (iv) of Technical Specifications (Section 6)			
454	We agree to comply all the requirements in the Paragraph 2.8 (v) of Technical Specifications (Section 6)			
455	We agree to comply all the requirements in the Paragraph 2.8 (vi) of Technical Specifications (Section 6)			
456	We agree to comply all the requirements in the Paragraph 2.8 (vii) of Technical Specifications (Section 6)			
457	We agree to comply all the requirements in the Paragraph 2.8 (viii) of Technical Specifications (Section 6)			
458	We agree to comply all the requirements in the Paragraph 2.8 (ix) of Technical Specifications (Section 6)			
459	We agree to comply all the requirements in the Paragraph 2.8 (x) of Technical Specifications (Section 6)			
460	We agree to comply all the requirements in the Paragraph 2.8 (xi) of Technical Specifications (Section 6)			
461	We agree to comply all the requirements in the Paragraph 2.8.1.1 (i) of Technical Specifications (Section 6)			
462	We agree to comply all the requirements in the Paragraph 2.8.1.1 (ii) of Technical Specifications (Section 6)			
463	We agree to comply all the requirements in the Paragraph 2.8.1.2 of Technical Specifications (Section 6)			
464	We agree to comply all the requirements in the Paragraph 2.8.1.2 (i) of Technical Specifications (Section 6)			
465	We agree to comply all the requirements in the Paragraph 2.8.1.2 (ii) of Technical Specifications (Section 6)			
466	We agree to comply all the requirements in the Paragraph 2.8.1.2 (iii) of Technical Specifications (Section 6)			
467	We agree to comply all the requirements in the Paragraph 2.8.1.2 (iv) of Technical Specifications (Section 6)			
468	We agree to comply all the requirements in the Paragraph 2.8.1.2 (v) of Technical Specifications (Section 6)			
469	We agree to comply all the requirements in the Paragraph 2.8.1.2 (vi) of Technical Specifications (Section 6)			
470	We agree to comply all the requirements in the Paragraph 2.8.1.2 (vii) of Technical Specifications (Section 6)			
471	We agree to comply all the requirements in the Paragraph 2.8.1.2 (viii) of Technical Specifications (Section 6)			
472	We agree to comply all the requirements in the Paragraph 2.8.1.2 (ix) of Technical Specifications (Section 6)			

473	We agree to comply all the requirements in the Paragraph 2.8.1.2 (x) of Technical Specifications (Section 6)			
474	We agree to comply all the requirements in the Paragraph 2.8.1.2 (xi) of Technical Specifications (Section 6)			
475	We agree to comply all the requirements in the Paragraph 2.8.1.2 (xii) of Technical Specifications (Section 6)			
476	We agree to comply all the requirements in the Paragraph 2.8.1.2 (xiii) of Technical Specifications (Section 6)			
477	We agree to comply all the requirements in the Paragraph 2.8.1.3 of Technical Specifications (Section 6)			

478	We agree to comply all the requirements in the Paragraph 2.8.1.3 (i) of Technical Specifications (Section 6)			
479	We agree to comply all the requirements in the Paragraph 2.8.1.3 (ii) of Technical Specifications (Section 6)			
480	We agree to comply all the requirements in the Paragraph 2.8.1.3 (iii) of Technical Specifications (Section 6)			
481	We agree to comply all the requirements in the Paragraph 2.8.1.3 (iv) of Technical Specifications (Section 6)			
482	We agree to comply all the requirements in the Paragraph 2.8.1.3 (v) of Technical Specifications (Section 6)			
483	We agree to comply all the requirements in the Paragraph 2.8.1.3 (vi) of Technical Specifications (Section 6)			
484	We agree to comply all the requirements in the Paragraph 2.8.1.3 (vii) of Technical Specifications (Section 6)			
485	We agree to comply all the requirements in the Paragraph 2.8.1.4 of Technical Specifications (Section 6)			
486	We agree to comply all the requirements in the Paragraph 2.8.1.4 (a) of Technical Specifications (Section 6)			
487	We agree to comply all the requirements in the Paragraph 2.8.1.4 (b) of Technical Specifications (Section 6)			
488	We agree to comply all the requirements in the Paragraph 2.8.1.4 (c) of Technical Specifications (Section 6)			
489	We agree to comply all the requirements in the Paragraph 2.8.1.4 (d) of Technical Specifications (Section 6)			
490	We agree to comply all the requirements in the Paragraph 2.8.1.4 (e) of Technical Specifications (Section 6)			
491	We agree to comply all the requirements in the Paragraph 2.8.1.4 (f) of Technical Specifications (Section 6)			
492	We agree to comply all the requirements in the Paragraph 2.8.1.4 (g) of Technical Specifications (Section 6)			
493	We agree to comply all the requirements in the Paragraph 2.8.1.4 (h) of Technical Specifications (Section 6)			
494	We agree to comply all the requirements in the Paragraph 2.8.1.4 (i) of Technical Specifications (Section 6)			
495	We agree to comply all the requirements in the Paragraph 2.8.1.4 (j) of Technical Specifications (Section 6)			
496	We agree to comply all the requirements in the Paragraph 2.8.1.4 (k) of Technical Specifications (Section 6)			
497	We agree to comply all the requirements in the Paragraph 2.8.1.4 (l) of Technical Specifications (Section 6)			
498	We agree to comply all the requirements in the Paragraph 2.8.1.4 (m) of Technical Specifications (Section 6)			
499	We agree to comply all the requirements in the Paragraph			

	2.8.1.4 (n) of Technical Specifications (Section 6)			
500	We agree to comply all the requirements in the Paragraph 2.8.1.4 (o) of Technical Specifications (Section 6)			
501	We agree to comply all the requirements in the Paragraph 2.8.1.4 (p) of Technical Specifications (Section 6)			
502	We agree to comply all the requirements in the Paragraph 2.8.1.4 (q) of Technical Specifications (Section 6)			
503	We agree to comply all the requirements in the Paragraph 2.8.1.5 (i) of Technical Specifications (Section 6)			
504	We agree to comply all the requirements in the Paragraph 2.8.1.5 (ii) of Technical Specifications (Section 6)			
505	We agree to comply all the requirements in the Paragraph 2.9.1 (i) of Technical Specifications (Section 6)			
506	We agree to comply all the requirements in the Paragraph 2.9.1 (ii) of Technical Specifications (Section 6)			
507	We agree to comply all the requirements in the Paragraph 2.9.1 (iii) of Technical Specifications (Section 6)			
508	We agree to comply all the requirements in the Paragraph 2.9.1 (iv) of Technical Specifications (Section 6)			
509	We agree to comply all the requirements in the Paragraph 2.9.1 (v) of Technical Specifications (Section 6)			
510	We agree to comply all the requirements in the Paragraph 2.9.1 (vi) of Technical Specifications (Section 6)			
511	We agree to comply all the requirements in the Paragraph 2.9.1 (vii) of Technical Specifications (Section 6)			
512	We agree to comply all the requirements in the Paragraph 2.9.2.1 of Technical Specifications (Section 6)			
513	We agree to comply all the requirements in the Paragraph 2.9.2.2 of Technical Specifications (Section 6)			
514	We agree to comply all the requirements in the Paragraph 2.9.3.1 of Technical Specifications (Section 6)			
515	We agree to comply all the requirements in the Paragraph 2.9.3.2 of Technical Specifications (Section 6)			
516	We agree to comply all the requirements in the Paragraph 2.9.3.3 of Technical Specifications (Section 6)			
517	We agree to comply all the requirements in the Paragraph 2.9.4.1 (i) of Technical Specifications (Section 6)			
518	We agree to comply all the requirements in the Paragraph 2.9.4.1 (ii) of Technical Specifications (Section 6)			
519	We agree to comply all the requirements in the Paragraph 2.9.4.1 (iii) of Technical Specifications (Section 6)			
520	We agree to comply all the requirements in the Paragraph 2.9.4.1 (iv) of Technical Specifications (Section 6)			
521	We agree to comply all the requirements in the Paragraph 2.9.4.2 (i) of Technical Specifications (Section 6)			
522	We agree to comply all the requirements in the Paragraph 2.9.4.2 (ii) of Technical Specifications (Section 6)			
523	We agree to comply all the requirements in the Paragraph 2.9.5 (i) of Technical Specifications (Section 6)			
524	We agree to comply all the requirements in the Paragraph 2.9.5 (ii) of Technical Specifications (Section 6)			
525	We agree to comply all the requirements in the Paragraph 2.10.(i) of Technical Specifications (Section 6)			
526	We agree to comply all the requirements in the Paragraph			

	2.10.(ii) of Technical Specifications (Section 6)			
527	We agree to comply all the requirements in the Paragraph 2.10.(iii) of Technical Specifications (Section 6)			
528	We agree to comply all the requirements in the Paragraph 2.11. (i) of Technical Specifications (Section 6)			
529	We agree to comply all the requirements in the Paragraph 2.11. (ii) of Technical Specifications (Section 6)			
530	We agree to comply all the requirements in the Paragraph 2.11. (iii) of Technical Specifications (Section 6)			
531	We agree to comply all the requirements in the Paragraph 2.11. (iv) of Technical Specifications (Section 6)			
532	We agree to comply all the requirements in the Paragraph 2.11. (v) of Technical Specifications (Section 6)			
533	We agree to comply all the requirements in the Paragraph 2.11. (vi) of Technical Specifications (Section 6)			

534	We agree to comply all the requirements in the Paragraph 2.12 (i) of Technical Specifications (Section 6)			
535	We agree to comply all the requirements in the Paragraph 2.12 (ii) of Technical Specifications (Section 6)			
536	We agree to comply all the requirements in the Paragraph 3.(i) of Technical Specifications (Section 6)			
537	We agree to comply all the requirements in the Paragraph 3.(i) (a) of Technical Specifications (Section 6)			
538	We agree to comply all the requirements in the Paragraph 3.(i) (b) of Technical Specifications (Section 6)			
539	We agree to comply all the requirements in the Paragraph 3.(i) (c) of Technical Specifications (Section 6)			
540	We agree to comply all the requirements in the Paragraph 3.(ii) of Technical Specifications (Section 6)			
541	We agree to comply all the requirements in the Paragraph 4.(i) of Technical Specifications (Section 6)			
542	We agree to comply all the requirements in the Paragraph 4.(i) (a) of Technical Specifications (Section 6)			
543	We agree to comply all the requirements in the Paragraph 4.(i) (b) of Technical Specifications (Section 6)			
544	We agree to comply all the requirements in the Paragraph 4.(i) (c) of Technical Specifications (Section 6)			
545	We agree to comply all the requirements in the Paragraph 4.(i) (d) of Technical Specifications (Section 6)			
546	We agree to comply all the requirements in the Paragraph 4.(ii) of Technical Specifications (Section 6)			
547	We agree to comply all the requirements in the Paragraph 5. (i) of Technical Specifications (Section 6)			
548	We agree to comply all the requirements in the Paragraph 5. (ii) of Technical Specifications (Section 6)			
549	We agree to comply all the requirements in the Paragraph 5. (iii) of Technical Specifications (Section 6)			
550	We agree to comply all the requirements in the Paragraph 5. (iv) of Technical Specifications (Section 6)			
551	We agree to comply all the requirements in the Paragraph 5. (v) of Technical Specifications (Section 6)			
552	We agree to comply all the requirements in the Paragraph			

	5. (vi) of Technical Specifications (Section 6)			
553	We agree to comply all the requirements in the Paragraph 5. (vii) of Technical Specifications (Section 6)			
554	We agree to comply all the requirements in the Paragraph 6.1.(i) of Technical Specifications (Section 6)			
555	We agree to comply all the requirements in the Paragraph 6.1.(ii) of Technical Specifications (Section 6)			
556	We agree to comply all the requirements in the Paragraph 6.1.(iii) of Technical Specifications (Section 6)			
557	We agree to comply all the requirements in the Paragraph 6.1.(iv) of Technical Specifications (Section 6)			
558	We agree to comply all the requirements in the Paragraph 6.1.(v) of Technical Specifications (Section 6)			
559	We agree to comply all the requirements in the Paragraph 6.1.(vi) of Technical Specifications (Section 6)			
560	We agree to comply all the requirements in the Paragraph 6.1.(vii) of Technical Specifications (Section 6)			
561	We agree to comply all the requirements in the Paragraph 6.1 (viii) of Technical Specifications (Section 6)			
562	We agree to comply all the requirements in the Paragraph 6.1 (ix) of Technical Specifications (Section 6)			
563	We agree to comply all the requirements in the Paragraph 7.1 (i) of Technical Specifications (Section 6)			
564	We agree to comply all the requirements in the Paragraph 7.1 (ii) of Technical Specifications (Section 6)			
565	We agree to comply all the requirements in the Paragraph 7.1 (iii) of Technical Specifications (Section 6)			
566	We agree to comply all the requirements in the Paragraph 7.2 (i) of Technical Specifications (Section 6)			
567	We agree to comply all the requirements in the Paragraph 7.2 (i) (a) of Technical Specifications (Section 6)			
568	We agree to comply all the requirements in the Paragraph 7.2 (i) (b) of Technical Specifications (Section 6)			
569	We agree to comply all the requirements in the Paragraph 7.2 (i) (c) of Technical Specifications (Section 6)			
570	We agree to comply all the requirements in the Paragraph 7.2 (i) (d) of Technical Specifications (Section 6)			
571	We agree to comply all the requirements in the Paragraph 7.2 (i) (e) of Technical Specifications (Section 6)			
572	We agree to comply all the requirements in the Paragraph 7.2 (ii) of Technical Specifications (Section 6)			
573	We agree to comply all the requirements in the Paragraph 7.2 (iii) of Technical Specifications (Section 6)			
574	We agree to comply all the requirements in the Paragraph 7.3 (i) of Technical Specifications (Section 6)			
575	We agree to comply all the requirements in the Paragraph 7.3 (ii) of Technical Specifications (Section 6)			
576	We agree to comply all the requirements in the Paragraph 7.3 (iii) of Technical Specifications (Section 6)			
577	We agree to comply all the requirements in the Paragraph 7.3 (iv) of Technical Specifications (Section 6)			
578	We agree to comply all the requirements in the Paragraph 7.3 (v) of Technical Specifications (Section 6)			
579	We agree to comply all the requirements in the Paragraph			

	7.3 (vi) of Technical Specifications (Section 6)			
580	We agree to comply all the requirements in the Paragraph 7.3 (vii) of Technical Specifications (Section 6)			
581	We agree to comply all the requirements in the Paragraph 7.3 (viii) of Technical Specifications (Section 6)			
582	We agree to comply all the requirements in the Paragraph 7.3 (ix) of Technical Specifications (Section 6)			
583	We agree to comply all the requirements in the Paragraph 7.3 (x) of Technical Specifications (Section 6)			
584	We agree to comply all the requirements in the Paragraph 7.3 (xi) of Technical Specifications (Section 6)			
585	We agree to comply all the requirements in the Paragraph 7.3 (xii) of Technical Specifications (Section 6)			
586	We agree to comply all the requirements in the Paragraph 7.3 (xiii) of Technical Specifications (Section 6)			
587	We agree to comply all the requirements in the Paragraph 7.3 (xiv) of Technical Specifications (Section 6)			
588	We agree to comply all the requirements in the Paragraph 7.3 (xv) of Technical Specifications (Section 6)			

589	We agree to comply all the requirements in the Paragraph 7.3 (xvi) of Technical Specifications (Section 6)			
590	We agree to comply all the requirements in the Paragraph 7.4.1. (i) of Technical Specifications (Section 6)			
591	We agree to comply all the requirements in the Paragraph 7.4.1. (ii) of Technical Specifications (Section 6)			
592	We agree to comply all the requirements in the Paragraph 7.4.1. (iii) of Technical Specifications (Section 6)			
593	We agree to comply all the requirements in the Paragraph 7.4.1. (iv) of Technical Specifications (Section 6)			
594	We agree to comply all the requirements in the Paragraph 7.4.1. (v) of Technical Specifications (Section 6)			
595	We agree to comply all the requirements in the Paragraph 7.4.1. (vi) of Technical Specifications (Section 6)			
596	We agree to comply all the requirements in the Paragraph 7.4.1. (vii) of Technical Specifications (Section 6)			
597	We agree to comply all the requirements in the Paragraph 7.4.2 of Technical Specifications (Section 6)			
598	We agree to comply all the requirements in the Paragraph 7.5.1 (i) of Technical Specifications (Section 6)			
599	We agree to comply all the requirements in the Paragraph 7.5.1 (ii) of Technical Specifications (Section 6)			
600	We agree to comply all the requirements in the Paragraph 7.5.1 (iii) of Technical Specifications (Section 6)			
601	We agree to comply all the requirements in the Paragraph 7.5.1 (iv) of Technical Specifications (Section 6)			
602	We agree to comply all the requirements in the Paragraph 7.5.1 (iv) (a) of Technical Specifications (Section 6)			
603	We agree to comply all the requirements in the Paragraph 7.5.1 (iv) (b) of Technical Specifications (Section 6)			
604	We agree to comply all the requirements in the Paragraph 7.5.1 (iv) (c) of Technical Specifications (Section 6)			
605	We agree to comply all the requirements in the Paragraph 7.5.1 (v) of Technical Specifications (Section 6)			

606	We agree to comply all the requirements in the Paragraph 7.5.1 (vi) of Technical Specifications (Section 6)			
607	We agree to comply all the requirements in the Paragraph 7.5.1 (vii) of Technical Specifications (Section 6)			
608	We agree to comply all the requirements in the Paragraph 7.5.1 (viii) of Technical Specifications (Section 6)			
609	We agree to comply all the requirements in the Paragraph 7.5.1 (ix) of Technical Specifications (Section 6)			
610	We agree to comply all the requirements in the Paragraph 7.5.1 (x) of Technical Specifications (Section 6)			
611	We agree to comply all the requirements in the Paragraph 7.5.2 (i) of Technical Specifications (Section 6)			
612	We agree to comply all the requirements in the Paragraph 7.5.2 (ii) of Technical Specifications (Section 6)			
613	We agree to comply all the requirements in the Paragraph 7.5.2 (iii) of Technical Specifications (Section 6)			

614	We agree to comply all the requirements in the Paragraph 7.5.2 (iv) of Technical Specifications (Section 6)			
615	We agree to comply all the requirements in the Paragraph 7.5.2 (v) of Technical Specifications (Section 6)			
616	We agree to comply all the requirements in the Paragraph 7.5.3 (i) of Technical Specifications (Section 6)			
617	We agree to comply all the requirements in the Paragraph 7.5.3 (ii) of Technical Specifications (Section 6)			
618	We agree to comply all the requirements in the Paragraph 7.5.3 (iii) (a) of Technical Specifications (Section 6)			
619	We agree to comply all the requirements in the Paragraph 7.5.3 (iii) (b) of Technical Specifications (Section 6)			
620	We agree to comply all the requirements in the Paragraph 7.5.3 (iv) (1) of Technical Specifications (Section 6)			
621	We agree to comply all the requirements in the Paragraph 7.5.3 (iv) (2) of Technical Specifications (Section 6)			
622	We agree to comply all the requirements in the Paragraph 7.5.3 (v) of Technical Specifications (Section 6)			
623	We agree to comply all the requirements in the Paragraph 7.5.3 (vi) of Technical Specifications (Section 6)			
624	We agree to comply all the requirements in the Paragraph 7.6 of Technical Specifications (Section 6)			
625	We agree to comply all the requirements in the Paragraph 8 of Technical Specifications (Section 6)			

Bid Security Bank Guarantee

*[insert bank's name, and address of issuing branch or office]*¹

Beneficiary: *[insert name and address of the purchaser]*

Date: *[insert date (as day, month, and year)]*

Bid Security No.: *[insert number]*

We have been informed that *[insert name of the bidder]* (hereinafter called "the Bidder") has submitted to you its bid dated *[insert date (as day, month, and year)]* (hereinafter called "the Bid") for the execution of *[insert name of contract]* under Invitation for Bids No. *[insert IFB number]* ("the IFB").

Furthermore, we understand that, according to your conditions, bids must be supported by a bid guarantee.

At the request of the Bidder, we *[insert name of bank]* hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *[insert amount in words]* *[insert amount in figures]* upon receipt by us of your first demand in writing accompanied by a written statement stating that the Bidder is in breach of its obligation(s) under the bid conditions, because the Bidder

- (a) has withdrawn its Bid during the period of bid validity specified by the Bidder in the Technical Bid Submission Sheet and Price Bid Submission Sheet; or
- (b) does not accept the correction of errors in accordance with the Instructions to Bidders (hereinafter "the ITB"); or
- (c) having been notified of the acceptance of its Bid by the Purchaser during the period of bid validity, (i) fails or refuses to execute the Contract Agreement; or (ii) fails or refuses to furnish the Performance Security, in accordance with the ITB.

This guarantee will expire: (a) if the Bidder is the successful Bidder, upon our receipt of copies of the Contract Agreement signed by the Bidder and the Performance Security issued to you upon the instruction of the Bidder; or (b) if the Bidder is not the successful Bidder, upon the earlier of (i) our receipt of a copy of your notification to the Bidder of the name of the successful Bidder, or (ii) 28 days after the expiration of the Bidder's bid.

Consequently, any demand for payment under this guarantee must be received by us at the office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458.²

..... *Authorized signature(s) and bank's seal (where appropriate)*

-- Note --

In case of a joint venture, the bid security must be in the name of all partners to the joint venture that submits the bid.

¹ All italicized text is for use in preparing this form and shall be deleted from the final document.

² Or 758 as applicable.

Manufacturer's Authorization

Date: *[insert date (as day, month, and year) of bid submission]*

ICB No.: *[insert number of bidding process]*

To: *[insert complete name of the purchaser]*

WHEREAS

We *[insert complete name of the manufacturer]*, who are official manufacturers of *[insert type of goods manufactured]*, having factories at *[insert full address of manufacturer's factories]*, do hereby authorize *[insert complete name of the bidder]* to submit a bid the purpose of which is to provide the following goods, manufactured by us *[insert name and/or brief description of the goods]*, and to subsequently negotiate and sign the Contract.

We hereby extend our full guarantee and warranty in accordance with Clause 28 of the General Conditions, with respect to the goods offered by the above firm.

Signed: *[insert signature(s) of authorized representative(s) of the manufacturer]*

Name: *[insert complete name(s) of authorized representative(s) of the manufacturer]*

Title: *[insert title]*

Duly authorized to sign this Authorization on behalf of *[insert complete name of the manufacturer]*

Dated on _____ day of _____, _____ *[insert date of signing]*

-- Note --

All italicized text is for use in preparing this form and shall be deleted from the final document.

The bidder shall require the manufacturer to fill out this form in accordance with the instructions indicated. This letter of authorization should be signed by a person with the proper authority to sign documents that are binding on the manufacturer. The bidder shall include it in its bid, if so indicated in the Bid Data Sheet (BDS).

Bidder's Qualification

To establish its qualifications to perform the contract in accordance with Section 3 (Evaluation and Qualification Criteria), the Bidder shall provide the information requested in the corresponding Information Sheets included hereunder.

Information Copy Not for Bidding

Form ELI - 1: Bidder's Information Sheet

Bidder's Information	
Bidder's legal name	
In case of a Joint Venture, legal name of each partner	
Bidder's country of constitution	
Bidder's year of constitution	
Bidder's legal address in country of constitution	
Bidder's authorized representative (name, address, telephone number(s), fax number(s) and e-mail address)	
☐ Attached are copies of the following documents:	
☐ 1. In case of a single entity, articles of incorporation or constitution of the legal entity named above, in accordance with ITB 4.1 and ITB 4.2	
☐ 2. Authorization to represent the firm or Joint Venture named above, in accordance with ITB 22.2	
☐ 3. In case of a Joint Venture, a letter of intent to form a Joint Venture or Joint Venture agreement, in accordance with ITB 4.1	

Form ELI - 2: Joint Venture Information Sheet

Each member of the Joint Venture must fill out this form separately.

Joint Venture Information	
Bidder's legal name	
Joint Venture Partner's legal name	
Joint Venture Partner's country of constitution	
Joint Venture Partner's year of constitution	
Joint Venture Partner's legal address in country of constitution	
Joint Venture Partner's authorized representative information (name, address, telephone number(s), fax number(s) and e-mail address)	
☐ Attached are copies of the following documents:	
☐ 1. Articles of incorporation or constitution of the legal entity named above, in accordance with ITB 4.1	
☐ 2. Authorization to represent the firm named above, in accordance with ITB 22.2	

Form LIT – 1: Pending Litigation and Arbitration

Each Bidder must fill out this form if so required under Criterion 2.1.2 of Section 3 (Evaluation and Qualification Criteria) to describe any pending litigation or arbitration formally commenced against it.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner's name below:

Joint Venture Partner: _____

Pending Litigation and Arbitration			
Choose one of the following: ☐ No pending litigation and arbitration. ☐ Below is a description of all pending litigation and arbitration against the Bidder (or each Joint Venture member if Bidder is a Joint Venture).			
Year	Matter in Dispute	Value of Pending Claim in \$ Equivalent	Value of Pending Claim as a Percentage of Net Worth

- Note -

This form shall only be included if Criterion 2.1.2 of Section 3 (Evaluation and Qualification Criteria) is applicable.

Form EXP - 1: Contractual Experience

Fill out one (1) form per contract. Contractual Experience

Contract No of		Contract Identification	
Award Date		Completion Date	
Role in Contract	☐ Manufacturer ☐ Supplier ☐ Subcontractor		
Total Contract Amount			
If partner in a joint venture or subcontractor, specify participation of total contract amount	Percent of Total	Amount	
Purchaser's name Address Telephone/Fax Number E-mail			
Description of the Similarity in Accordance with Criterion 2.2.1 of Section 3 (Evaluation and Qualification Criteria)			
(i) The main supplier shall have at least 10 years' experience in supplying of DMU, EMU, Locomotives or Railway Passenger coaches to the international market. Successful completion of order as main supplier within the fifteen (15) years, of at least three (3) contracts, each valued at USD 44,000,000.00 (Forty Four Million), out of which at least one (1) should be outside of the Bidder's own country with nature, and complexity similar to the DMU, EMU, Locomotives or Railway Passenger coaches Relevant ISO certificate or equivalent international quality standard certificate. Shall have a Local agent to the supplier having experience in acting as an agent either on Supplying rolling stock or Supplying major components of rolling stock to Sri Lanka Railways value of which is above LKR 250 million during last five years or Handle any other project related to the railway or transport sector, or machinery / equipment supply value of which is above LKR 300 million per year and total for last 3 years more than LKR 1 billion.			

- Note -

This form shall only be included if Criterion 2.2.1 of Section 3 (Evaluation and Qualification Criteria) is applicable.

Form EXP - 2: Technical Experience

Fill out one (1) form per contract.

Technical Experience	
Name of Product	
Manufacturer:	Address and Nationality:
Requirements in Accordance with Criterion 2.2.2 of Section 3 (Evaluation and Qualification Criteria)	
(i) The manufacturing organization shall be a reputed firm with minimum of 20 years experience in manufacturing of brand new Diesel Multiple Units of similar or higher capacity.	
(ii) The manufacturer shall have at least 15 years experience in manufacturing of brand new Diesel Multiple Units for export market.	
(iii) The manufacturer shall have experience in manufacturing of at least 40 Nos. of brand new DMU/EMU. At least 20 nos. shall be for export sales in more than two countries within last 15 years	
(iv) The end user certificates shall be enclosed for at least for two supplies similar to the Scope of supply in Section 6 with regard to the quality and performance of those Diesel Multiple Units.	

(v) Specially the manufacturer should have sufficient experience in design and build Diesel Multiple Units which are dedicated for the tracks climbed up to high altitudes in hill country having sharp curves with steep gradient. The end user certificates should be enclosed with the bids with regard to the quality and performance of those Diesel Multiple Units.	
(vi) The manufacturer shall have experience in manufacturing Diesel Multiple Units for broad gauge (1676 mm) tracks. The end user certificates should be enclosed with the bids with regard to the quality and performance for at least 10 years of those Diesel Multiple Units.	
(vii) Relevant ISO certificate with regard to design and manufacture of Diesel Multiple Units shall be enclosed with the bid (not expired to the date of submission of bid).	
(viii) Manufacturer shall have sufficient experience in installation of Diesel Engine in DMU which has similar to the scope of supply	
(ix) (a) The manufacturers of traction machines shall have at least 10 years of experience in manufacturing of such electrical machines. (b) The performances of the particular models have been proved for minimum 5 years in passenger railway applications.	

(x) (a) The manufacturer shall have experience in manufacturing of Propulsion control system for at least 10 years. It shall have to be installed on at least 300 nos of passenger train sets. Out of those at least 30 systems had been exported to over two countries other than the manufacturing country. Details shall be forwarded with the bid. (b) Manufacturer shall also have sufficient experience in installation of Ac-Dc-Ac Propulsion Control System for export supplies within last 5 years which are similar to scope of supply	
(xi) Manufacturer shall have sufficient experience in installation of Centralized Hotel Load Power System for export supplies which are similar to scope of supply	
(xii) Manufacturer shall have sufficient experience in installation of integrated Train control and monitoring System for export supplies which are similar to scope of supply	
(xiii) Manufacturer shall have sufficient experience in installation of coach Air conditioning systems which are similar to scope of supply similar type Air condition units shall have to be installed in at least 10 nos. passenger train sets in manufacturer's country as well as countries other than the manufacturer's country.	

(xiv) Manufacturer shall have sufficient experience in installation of centralized controlled automatic doors, semi-permanent couplers and bellow type vestibules for supplies which are similar to scope of supply. At-least 5 nos. passenger coach sets/DMUs shall be in active service with same make and country of origin of each item specified above.	
(xv) The bogie design shall be a proven with at least 15 years of trouble free past records in railway applications. Note : Any passenger train with multiple coaches supply experience is also acceptable for above (xii), (xiii) and (xiv) requirements,	

Note -

This form shall only be included if Criterion 2.2.2 of Section 3 (Evaluation and Qualification Criteria) is applicable. Add pages as necessary. The Purchaser reserves the right to verify authenticity of Bidder submissions.

Form EXP - 3: Production Capacity

Fill out one (1) form per product and manufacturer.

Production Capacity	
Name of Product	
Manufacturer:	Address and Nationality:
Requirements in Accordance with Criterion 2.2.3 of Section 3 (Evaluation and Qualification Criteria)	
Production facility 1 (include location):	
Production facility 2 (include location):	
Production facility 3 (include location):	

- Note -

This form shall only be included if Criterion 2.2.3 of Section 3 (Evaluation and Qualification Criteria) is applicable. The Purchaser reserves the right to verify authenticity of Bidder submissions.

Form EXP –4 A: Client Certification

Fill out one separate form for 1 (ii) and 1 (iv) in **2.2.2 Technical Experience**. A separate end user certificate/ customer satisfaction letter should be submitted for each and every supply. In addition to the above, it shall include purchaser's declaration on the performance and safety operation of the supplied DMUU during the initial period of operation (initial 5 years) for the supplies outside the bidder's own country.

	Name of the client	Country	Details of DMUU supplied	Year of sale	Present operating condition

Form EXP –4B: Client Certification

A separate end user certificate/ customer satisfaction letter should be submitted for each and every supply.

	Name of the client	Details of DMUU supplied	Name of the DMUu Manufacturer	Year of Sale	Present operating condition

Form FIN - 1: Historical Financial Performance

Each Bidder must fill out this form.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner's name below:

Joint Venture Partner:

Financial Data for previous 5 years (\$ Equivalent)					
Years	Year 1:	Year 2:	Year 3:	Year 4:	Year 5:
Information from Balance Sheet					
Total Assets (TA)					
Total Liabilities (TL)					
Net Worth = TA-TL					
Current Assets (CA)					
Current Liabilities (CL)					
Working Capital = CA - CL					
Information from Income Statement					
Total Revenues					
Profits Before Taxes					
Profits After Taxes					
☐ Attached are copies of financial statements (balance sheets including all related notes, and income statements) for the last ____ years, as indicated above, complying with the following conditions: • Unless otherwise required by Section 3 of the Bidding Documents, all such documents reflect the financial situation of the legal entity or entities comprising the Bidder and not the Bidder's parent companies, subsidiaries, or affiliates. • Historical financial statements must be audited by a certified accountant. • Historical financial statements must be complete, including all notes to the financial statements. • Historical financial statements must correspond to accounting periods already completed and audited (no statements for partial periods shall be requested or accepted).					
Most Recent Working Capital To be obtained for most recent year and carried forward to FIN - 3 Line 1; in case of joint ventures, to the corresponding Joint Venture Partner's FIN - 3.					

- Note -

This form shall only be included if Criterion 2.3.1 of Section 3 (Evaluation and Qualification Criteria) is applicable.

Form FIN - 2: Size of Operation (Average Annual Turnover)

Each Bidder must fill out this form.

The information supplied should be the Annual Turnover of the Bidder or each member of a Joint Venture in terms of the amounts billed to clients for each year for work in progress or completed, converted to US dollars at the rate of exchange at the end of the period reported.

In case of a Joint Venture, each Joint Venture Partner must fill out this form separately and provide the Joint Venture Partner's name below:

Joint Venture Partner: _____

Annual Turnover Data for the Last three (3) Years			
Year	Amount Currency	Exchange Rate	\$ Equivalent
Average Annual Turnover			

- Note -

This form shall only be included if Criterion 2.3.2 of Section 3 (Evaluation and Qualification Criteria) is applicable.

Form FIN - 3: Cash Flow Capacity

Specify proposed sources of financing, such as working capital, liquid assets,¹ lines of credit, and other financial resources (other than any contractual advance payments) available to meet the cash flow requirements indicated under Criterion 2.3.3 of Section 3 (Evaluation and Qualification Criteria).

Financial Resources		
No.	Source of financing	Amount (\$ equivalent)
1		
2		
3		

- Note -

This form shall only be included if Criterion 2.3.3 of Section 3 (Evaluation and Qualification Criteria) is applicable.

¹ Liquid assets mean cash and cash equivalents, short-term financial instruments, short-term available-for-sale-securities, marketable securities, trade receivables, short-term financing receivables, and other assets that can be converted into cash within one (1) year.

Section 5 - Eligible Countries

Not applicable

Information Copy Not for Bidding

Section 6 - Schedule of Supply

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1. List of Goods and Related Services

Lot No. :[Not applicable]				
Lot Name :[Not applicable]				
Item No.	Name of Goods or Related Services	Description	Unit of Measurement	Quantity
1	Five (05) sets of Fully Air-Conditioned Diesel Multiple Units (DMU)	Design, Manufacture, Supply, Commissioning and Handing Over of Fully Air-Conditioned Diesel Multiple Units (DMU)	Sum	1
2	Four (04) number of additional air-conditioned SBC coaches.	Design, Manufacture, Supply, Commissioning and Handing Over of additional coaches	Sum	1
3	Training	Foreign and Local training of SLR staff <i>(cost is to be included to the price schedule 1 & 2)</i>	Sum	1
4	Maintenance of Diesel Engine during warranty period	Carry out the preventive maintenance activities of the Diesel Engine during the warranty period of two (02) years. <i>(Costs except material/ components are to be included to the price schedule 1)</i>	Year	2
5	Maintenance of major electrical systems during their warranty period	Carry out the preventive maintenance activities of the Train Control and monitoring system including propulsion/Traction control system, Driver/Guard cab and coach Air conditioning system and Automatic Door control system during the warranty period of five (05) years. <i>(Costs except material/ components are to be included to the price schedule 1 & 2)</i>	Year	5

2. Delivery and Completion Schedule

The delivery period shall start as of _____.

Item No.	Description of Goods or Related Services	Delivery / completion Schedule (Duration)	Location	Required Arrival Date of Goods or Completion Date for Related Services
1.a	Single set of Fully Air-Conditioned Diesel Multiple Unit (DMU)	Nine (09) months from the date of opening of the Letter of Credit	Port of Shipping	
3.a	Foreign Training	Before arrival of DMUs	Manufacturer's location	
1.b	Commissioning and Handing Over of the First DMU	Within four (04) weeks of the arrival of the DMU to SLR	SLR Premises	
1.c	Balance 4 sets of Fully Air Conditioned Diesel Multiple Units (DMUs)	Twelve (12) months from the date of opening of the Letter of Credit	Port of Shipping	
2.a	Additional Coaches	Twelve (12) months from the date of opening of the Letter of Credit	Port of Shipping	
1.d	Commissioning and Handing Over of the balance 4 sets of DMUs	Within eight (08) weeks of the arrival of the DMUs to SLR	SLR Premises	
2.b	Commissioning of additional coaches	Within four (04) weeks of the arrival of the DMUs to SLR	SLR Premises	
3.b	Local Training	Within eight (08) weeks of the arrival of the DMUs to SLR	SLR Premises	
4	Maintenance of Diesel Engine during warranty period	Whenever necessary as per the Maintenance Manual, during the first two (02) years from the date of commissioning	Relevant SLR workshops and sheds	
5	Maintenance of Train Control and monitoring system including propulsion/Traction control system, Driver/Guard cab and coach Air conditioning system and Automatic Door control system during their warranty period	Whenever necessary as per the Maintenance Manual, during the first five (05) years from the date of commissioning	Relevant SLR workshops and sheds	

3. Technical Specifications for Fully Air Conditioned Diesel Multiple Unit (DMU) for Sri Lanka Railways

The formation of type 01 DMU set - 02 Nos.

MCG + 2BC + 3EC + DEC

The formation of type 02 DMU set - 03 Nos.

MCG + 4SBC + 1EC + DEC

(Additional 04 units of SBC to use as spare coaches as well as to attach extra coach when DMU sets are utilized on low country where maximum gradient is 1:80)

1 General Specifications

1.1 DMU

1.1.1 Major Dimensions

- (i) Track Gauge – Broad Gauge (5'6" or 1676 mm)
- (ii) Rolling Stock Construction Gauge – Refer to Drawing No. S 613/03
- (iii) Approximate dimensions of the coach and power car shall be as follows.

(a) Length of the MCG body shell	16,500 mm
(b) Length of the coach body shell	16,000 mm
(c) Width of the body with guard's lookout	3,200 mm
(d) Width of the coach body	2,900 mm
(e) Height of the floor from the rail head	1,300 mm
(f) Height of the roof at center from the rail head	3,900 mm
(g) Height of the roof at either sides from the rail head	3,400 mm

- (iv) However the dimensions of the DMU should be in accordance with the Rolling Stock Construction Gauge

1.1.2 Passenger Capacity

- (i) Number of passenger seats required in various types of coaches is as follows.

Type		No. of Seats*
BC without toilet	Business class coach (Air conditioned)	52
BC with toilet	Business class coach (Air conditioned)	48
EC without toilet	Economy class coach (Air conditioned)	56
EC with toilet	Economy class coach (Air conditioned)	50
SBC without toilet	Suburban coach with metro style seats (Air conditioned)	60 seated passengers
DEC with toilets	Driving Trailer Car (Economy Class-Air conditioned)	20 (including wheel chairs parking facility)
MCG with toilet	Motor Car	Nil

* This number of seats is approximate only for bidding purposes. Actual number of seats shall vary depending on the design requirement and approved conceptual drawings.

- (ii) The coach shall be designed to withstand the overloading condition with 300 passengers (18 Tons).
- (iii) The foot boards and external handrails shall be strong enough to withstand the load of overhanging passengers (1 Ton), in a possible worst scenario of overloading.

1.1.3 Weight

- (i) Maximum allowable axle load of MCG is 20.0 Tons
- (ii) The maximum weight of the MCG should be less than 80 Tons.
- (iii) The design of each type of coach shall be such that the weight shall be minimum as possible without compromising the strength of same.

1.1.4 Construction, Strength and Safety

- (i) The structure of the coach and the motor car shall be proven designs with draw and buffing strength, according to the relevant UIC/AAR standard which is sufficient for the railway DMU application defined in this document.
- (ii) All parts of each unit of the DMU shall be designed and manufactured to withstand the forces, shocks and vibrations developed while running on the tracks of Sri Lanka Railways, under extreme loading conditions.
- (iii) The DMU shall be designed and manufactured in compliance with the relevant UIC or AAR standard to ensure the safety of the passengers, even at a collision and a derailment.
- (iv) The roof joints and door seals should be perfect and long lasting to prevent rainwater getting into the DMU.
- (v) The draw and buffing strength of the under frame shall be given.

1.1.5 Material

- (i) The superstructure and under frame of each unit of DMU shall be made out of proven types of steel, according to the UIC/AAR standards which suit for rolling stock applications subject to heavy shocks and vibrations. The car body shall not be subject corrosion due to the effect of saline, tropical environment of Sri Lanka.
- (ii) There should not be any bimetallic reactions in between the materials of superstructure and the under frame. Both materials shall be weldable, having high fatigue strength, non-corrosive and durable while satisfying the required Mechanical, Chemical and Engineering properties of them. If there are two types of metals combined together for carbody it should be suitably isolated to avoid corrosion.
- (iii) **Certificates must be provided in this regard and to certify that the steel used will not be subjected to fatigue cracks.**
- (iv) The details of the materials to be used for the superstructure and the under-frame of the proposed DMU shall be submitted with the bid.
- (v) If the material standards should not be given in AAR the equivalent standards of particular AAR standards shall be given. In case, of which no AAR equivalents are

available, the material composition and the properties of them shall be given. The details of the material shall be forwarded with the bid.

- (vi) All the supporting steel frames for panels, ceiling, windows etc shall be made out of non-corrosive steel.

1.1.6 Other Metallic Material

- (i) All other metallic materials shall be of best quality both in physical property and chemical composition and should conform to the AAR/BSS applicable to that application. The steel sections used shall be of the corrosion free types.
- (ii) If the material standards have not been given in BS/ AAR the equivalent standards of BS shall be given. In case, of which no BS/AAR equivalents are available, the material composition and the properties of them shall be given. **The details of the material shall be forwarded with the bid.**
- (iii) Mono block wheels (Solid wheels) shall be in accordance with the relevant BSS 5892 Part 3 of 1992 Grade R9E or T or with the relevant UIC/AAR standards.
- (iv) Axles - B.S.S. 5892 Part 1 of 1992 – Grade A3T or with the relevant UIC/AAR standards.
- (v) Steel castings - B.S.S. 3100 of 1991 or equivalent

1.1.7 Non Metallic Material

- (i) Non Metallic Material such as materials of the panels, insulators, seat cushions and covers, plastics and rubber components shall be of best quality both in physical property and chemical composition and should conform to the BSS applicable to that material.
- (ii) If the material standards have not been given in BS, the equivalent standards of BS shall be given. In case, of which no BS equivalents are available, the material composition and the physical properties of them shall be given. **The details of the material shall be forwarded with the bid.**
- (iii) Special care must be exercised to ensure that such materials are free from any kind of fungus attacks that are possible in humid tropical environment in Sri Lanka.

1.1.8 Paints

- (i) The marine paints shall be of an accepted chemical formula for rail coach / MCG applications in hot, humid, rainy and salty atmosphere, prevails in Sri Lanka. The approvals of Sri Lanka Railways must be obtained by the supplier, prior to the painting of DMU, with regard to the formula of the paints, applying method, the colour scheme and nameplates and indicator symbols.
- (ii) Topcoat and varnish should have good resistance against Ultraviolet radiation to prevent fading and surface cracks for long term. Localized repainting shall be possible as an accidental repair.

- (iii) Details such as formula of the paints, surface preparation, base coat application, final surface preparation, primary coat, topcoat application, applying method should be forwarded with the bid.
- (iv) Bogie frames, bogie mounted components and all under carriage auxiliaries shall be painted with suitable high solids polyurethane enamel paint after preparation of the surface by grit blasting to SA 2.5.
- (v) The whole train including the MCG shall have a uniform, streamlined shape and colour scheme.

1.1.9 Speeds and DMU moving procedure

- (i) Major design parameters shall as follow
 - (a) Design speed of DMU shall be - 120 km/hr
 - (b) Maximum speed shall not be less than 40 km/hr on the track with ruling gradient 1:44 and the sharp curves having minimum radius of 80 m.
 - (c) Acceleration and deceleration shall be sufficient enough to operate the DMU in suburban area effectively where the stations are located within short distance. DMU shall be able to operate smoothly in suburban service with sufficient acceleration without any time loss between stations.
 - (d) Speed, instantaneous acceleration at each speed, average acceleration, traction time and traction distance at each speed shall be provided for both type of DMU sets along with the bid.
 - (e) Any longitudinal movements and jerks which affect the passenger comfort shall be avoided at all the speeds either using by suitably arranged buffer mechanism or alternative arrangement.
 - (f) Additional coaches of SBC to use as spare coaches as well as to attach extra coach when DMU sets are utilized on low country where maximum gradient is 1:80. DMU set shall have to be designed to fulfill this requirement.
- (ii) When the DMU is running in forward direction, it is to be operated from the driving cab of front MCG, and when it is running in other direction, it is to be operated from the driving cab of DEC. When the driver is changing the driving cab, he should be able to do that without shutting down the engines.

1.1.10 Re-railing and Lifting

- (i) The design of the car bodies of coaches & MCG shall be such that they shall be able to lift by jacking underneath of center buffer coupler in re-railing operations.
- (ii) Also four places for lifting the entire body off from the bogies by using the overhead cranes or jacks at the workshops shall be provided. All those lifting points shall be painted in yellow for easy identification.

1.1.11 Wheel Slip Detection and Sanding

- (i) Special attention of the designers is drawn to the following facts.

- (a) Mechanisms shall be robust and reliable.
 - (b) All powered wheels shall be provided with sanders.
 - (c) Sand ejection control shall be automatic and manual.
 - (d) Sand ejection over a long period shall not affect the air pressure necessary for the other functions of the MCG.
 - (e) Sand capacity shall be sufficient for uninterrupted operations between destinations.
 - (f) Sanding should not be infringed with brake gearing.
- (ii) The wheel slip control system shall be very effective and it shall be independently measured the RPM of each of the traction motor or axle and use this data to identify the wheel slip condition and accordingly take appropriate action. The description of the proposed wheel slip control philosophy shall be given with the bid.

1.1.12 Cow catchers

Cowcatchers shall be provided at each end to protect the under slung equipment from being hit by the foreign objects. The lower edge of the cowcatcher must be 100 mm above the railhead and an adjustable strip shall be provided to adjust the gap between the rail head and the lower edge of the strip, depending on the condition of the track and the suspension springs and the wheel thickness. A locomotive shall be able to couple the DMU without removing or adjusting the cowcatchers.

1.2 The Weather and Track

1.2.1 Weather and Environmental Factors

- (i) The heavy rains are frequent in the up country and the rails are often wet. Therefore, due consideration shall be given when designing the DMUs to minimize wheel slips with sanders.
- (ii) Maximum altitude of operation above sea level is 1900 m. Minimum ambient temperature would be 5°C.
- (iii) The DMUs will also be operated in the corrosive saline atmosphere with dust and the humidity of 80 % to 95 % and the temperature variations from 20°C to 45°C. Accordingly, adequate precautions should be taken to prevent corrosion.

1.2.2 Track Parameters

- (i) The DMU should be able to operate in the Up country of Sri Lanka Railways and should be performed the Low Country requirements when they operate in Low Country.
- (ii) Ruling gradient 1:44
- (iii) Minimum radius of the curves is 80m.

- (iv) Several sections in the up country track having 1: 44 gradient are with long stretchers of reversed curves as tight as 80 m & checked rails. Minimum straight length between two reverse curves is 4.5 meters.
- (v) Minimum radius of curves of low country track is 100 m.
- (vi) Maximum gradient available in the low country track is 1:80.
- (vii) Super Elevation and Gauge Widening in curves,
Maximum Super Elevation – 140 mm
Maximum Gauge Widening – 16 mm
Vogel diagram of each coach shall be provided along with the bid.
- (viii) Stone ballasted track with rails spiked or screwed to wooden sleepers, concrete or steel sleepers with resilient rail fastenings.
- (ix) Rail sections in use are 60 kg/m, BS 80, BS 88, and BS 90A / EN 45E1.
- (x) Rail lengths vary from 4.5 to 20 meters and the continuous welded rails have been introduced in some area. However most of the sections are with rail joints with fish plates.
- (xi) Sleepers are spaced at a distance of 0.66 meters.
- (xii) Check rail clearance at minimum radius is 73 mm.
- (xiii) Maximum platform height is 1000 mm from rail head. Minimum platform height is 450mm.
- (xiv) Bidders are advised to visit SLR rail network and yards to assess the track condition before bid.

2 Detailed Specifications

2.1 Running Gear

2.1.1 Wheels

- (i) The wheels shall be of the 'mono block' type to match the following dimensions and drawings.
- (ii) Wheel diameter (tread) 915 mm to 950 mm
- (iii) Wheel Profile Dimensions of mono block wheel– Refer to Drawing DE 3221/01
- (iv) Wheel Gauge – Refer to Drawing No H 207/01
- (v) Two holes of 50 mm diameter shall be provided in the wheel in diametrically opposite positions. These holes of the two wheels on an axle must be in line to insert a sprag in case of an emergency.
- (vi) Oil injecting holes shall be provided to remove the wheel without damaging the axle seat.

2.1.2 Axles, Axle Bearings and Axle Boxes

- (i) The axles of coach / MCG shall comply with the BSS 5892 Part 1 of 1992- Grade A3T or equivalent International standards.
- (ii) The axle bearings shall be of a reputed brand and well proven in railway applications able to withstand all the forces, shocks and vibrations. The bearings of MCG shall be specially designed to withstand the forces due to traction and the weight of the MCG. **Details such as make, type & origin of bearings shall be given with the bid.**
- (iii) The maintenance (greasing) frequency of the bearing assembly shall not be less than once in three years.
- (iv) Axle boxes shall be of a proven design with sufficient strength to withstand the loads and shocks that are present in the specified application. The axle box design shall be a proven with at least 15 years of trouble free past record in railway applications.

2.1.3 Primary and Secondary Suspension Systems

- (i) The suspension system shall comprise the primary and secondary suspension systems. The primary suspension system shall be helical springs. The secondary suspension system shall be well proven design and details shall be provided along with the bid.
- (ii) The shock absorbers where it is required shall be of a robust design to ensure maintenance free life period of at least three years and which shall be able to recondition by using repair kits.
- (iii) Rubber resilient pads may be used wherever necessary.
- (iv) All rubbing surfaces shall be padded with replaceable liners of manganese steel or other acceptable material.
- (v) The sizes, types and the design of equipment in the suspension system of the MCG and other coaches may be different.

2.1.4 Bogies and Bogie Frames

- (i) Bogie frames and cross members which shall be made of suitable corrosion resistive structural steel.
- (ii) Bogie frame consists of welded steel or cast steel side frames welded together with structural steel cross members. The bogies shall be designed to withstand all the possible static and dynamic loads due to speeds, environmental and other conditions specified.
- (iii) The bogies shall be capable of negotiating the curves with minimum radius of 80 m.
- (iv) Bogie design shall ensure movements like pitching, yawing and rolling are within permissible limits as per the applicable standards.
- (v) Bogie center bearings shall be of a maintenance free type, which needs attention only at periodical overhauls (Once in 4 years)
- (vi) Provision shall be incorporated for adjusting the coupler / buffer height of a coach by at least 50mm, in order to maintain the height of the coach / MCG as the wheels getting thinner. A quick adjusting mechanism shall be provided to make this adjustment possible.

- (vii) The sizes, types and the design of equipment in the bogie and bogie frame of the MCG and other coaches may be different due to different loading conditions.
- (viii) The bogies must be secured to the body by suitable chains to prevent them from running away in a derailment.

2.1.5 Brake Gear on Bogies

- (i) Brakes shall be of the 'Clasp' type for all wheels on both sides.
- (ii) All the links must be of a reliable and proven design.
- (iii) The links must be provided with suitable replaceable bushes and pins for easy and quick maintenance. Such pivot points must be "maintenance free" for at least 4 years.
- (iv) All hanging parts such as brake beams shall be secured by providing suitable cradles or hung them by chains to prevent from falling on the rail and causing derailments.
- (v) Brake blocks shall be of composite material as per SLR available block.

2.2 Brake

2.2.1 Brake System

- (i) The DMU shall have a compressed air brake system of twin pipe.
- (ii) The brakes of DMU shall consist of the following features.
 - (a) Service air brake for the DMU
 - (b) Emergency brake for the DMU
 - (c) Independent air brake for the MCG & DEC
 - (d) Train Guards at MCG and DEC together shall be able to apply Parking brakes so that train set can be kept stable at 1:44 gradient with safety.
 - (e) Parking brake for EC, BC, SBC & DEC operated by rotating a hand wheel from outside.
 - (f) Separate emergency brake valve in each driver's cab and Guard cab.
 - (g) Electrical Dynamic Brake system with self-load testing facility.
- (iii) The compressed air brake system in SLR is the 5 bar (BP), 10 bar (MRP) dual pipe system. The brake system which is installed in the DMU utilized for up country service is a product of KNORR Breamse-Germany, Faiveley- France, Webtec-USA. Since there should be compatibility among the brake systems of DMUs which are operated in the Sri Lanka Railways, and the requirement of high quality that should be maintained with the brake system. Further details of this system are available with SLR on request.
- (iv) The system shall be incorporated with facility to cut off the hauling power when the compressed air brakes are applied to a certain extent.
- (v) However the DMU shall be able to pick up when the DMU is stopped on gradients using service brakes.
- (vi) The operation of the emergency brake shall cut off the traction power and reduce engine speed to idle.
- (vii) The automatic brake valve shall be suitably graduated and shall include an emergency application position.

- (viii) The maximum brake force under normal application shall not lead to any wheel slides.
- (ix) The system shall be incorporated with all the safety requirements according to the UIC standard.
- (x) Brake gear of each bogie must work independently. No brake cylinder should be shared by the two bogies. The brake power of brake cylinders should be able to cut off suitably, in case of a failure by using vented cut out cock.
- (xi) The size of brake block is to be decided in the design stage. SLR brake block holder drawing is DE 989/08
- (xii) Steel pins and bushes on all brake gearing shall be made out from 80M46 steel to BSS or a steel of better quality. Manganese Steel bushes also may be used.
- (xiii) Provision shall be made to compensate the effect of wheel and brake shoe wear.
- (xiv) Compressed air brake fittings at end of the MCG& DEC shall be in accordance with the 5 bar BP / 10 bar MRP dual pipe standard and end fittings shall be a reputed brand & must be complied with air the hose coupling of SLR (Knorr make) given in SLR drawing DP 1622/00 & DP 1621/00. The two pipes must be duplicated, either side of the center coupler, as per SLR's convention shown in SLR Drawing DL 702/00.
- (xv) Other than steel pipe, joint and air reservoirs all other components of brake system must be the products of reputed brand and well proven design.
- (xvi) Brake gearing shall be grease lubricated except where hardened pins and Manganese steel bushes are used. 3/8" grease nipples to BSS 1486 Part 2 type 281 or to its equivalent standard shall be provided.
- (xvii) In a level track braking distance with full service brake application shall be less than 500m for the DMU operates at 100 kmph.
- (xviii) Suitable auto and manual drain valves to drain the condensed water in the compressed air system shall be supplied.
- (xix) System shall be equipped with regeneration type air dryer system.
- (xx) Air reservoir shall be provided with a sufficient capacity to haul the DMU specified in this document. Those shall be equipped with safety valves, auto drain and manual drain valves. The air reservoirs shall have sufficient capacity to ensure trouble free operation of both the air compressor and the brake system.
- (xxi) Provisions shall be given for attaching the DMU to a locomotive and move it when DMU set became defective.
- (xxii) A reliable and automatically regulated electrical dynamic braking system shall be provided to control the DMU specified in this document especially on down gradients.

2.2.2 Dynamic Brake Capacity

- (i) Traction system shall be incorporated with dynamic brakes. The resistance grid of the dynamic braking system shall be capable of handling 100% of the full power rating of the traction alternator, so that it could be safely used for the load testing of the MCG.
- (ii) Dynamic braking shall be able to safely apply at any speed of the train.
- (iii) Dynamic brake capacity of the MCG shall be capable enough to work the train down gradient of 1: 44 safely at controlled speed.
- (iv) Performance characteristics of the dynamic braking shall be given.

2.2.3 Piping and Connections

- (i) All piping shall be of stainless steel of adequate thickness and to be specified. The connections shall be with standard threads and unions. The diameter of BP & MRP air pipes shall be 25 mm.
- (ii) Stop cocks (shut-off valves) of proven design and reputed brand shall be provided for each end of the pipeline at the end plates of the MCG and DEC.
- (iii) All piping shall be painted according to BSS 1710 – 2014
- (iv) All pipes shall be properly clamped on to the car body with padded clamps to prevent metal to metal rubbing.
- (v) The following auxiliary supply lines shall be fitted with cut out cocks
 - (a) Front end sand system
 - (b) Rear end sand system
 - (c) Horn and wipers
- (vi) The coach-to-coach connection of 25 mm diameter shall be with quick coupling and decoupling facility.

2.2.4 Brake Cylinders

- (i) Brake cylinders of reputed brand and proven design shall be provided in required numbers to give the required brake power. They shall be of a long-lasting design, with replaceable rubber bucket seals.
- (ii) The brake cylinders must be provided with the facility to blank each bogie by closing a vented cut-out cock to operate the DMU in an emergency when the cylinder is defective.

2.2.5 Brake Gear on Frame

- (i) All components must be of a reliable and proven design.
- (ii) Brake cylinders with automatic slack adjustment or manually operated slack adjusters of a proven type shall be provided in the system to adjust the slack caused by the wearing parts. The design of Slack Adjuster shall be of a proven design with at least 15 years of trouble-free past record in railway applications.
- (iii) The links must be provided with suitable replaceable bushes and pins for easy and quick maintenance. Such pivot points must be maintenance free for at least 4 years.
- (iv) Provision must be provided to release the brake to move the MCG or coach in an emergency, without coupling the air brake system to a locomotive. (Air source)

2.2.6 Parking Brake

- (i) Parking brake of MCG and DEC shall be applied by driver or guard from their cabs. Parking brake of MCG and DEC shall be provided to apply for both bogies.

- (ii) Other coaches including DEC shall equip with a parking brake to be operated from either side of the vehicle (outside) by rotating a hand wheel. This wheel shall be painted yellow for easy identification.
- (iii) The parking brake of both MCG and DEC shall be capable of holding a loaded standard train set (DMU) on 1:44 gradient with safety when service brake is not active.

2.2.7 Passenger Emergency Brake

The brake system of the coach shall be equipped with an emergency braking facility for the passengers, and its operating handle / switch shall be located in the coach. This brake shall activate the main train brakes. The Guard should be able to identify the coach, in which the emergency brake has been applied. This shall comply with UIC standards.

2.3 Coach Body

2.3.1 Under frame and Superstructure

- (i) The under frame and superstructure shall be a proven design suitable for Diesel Multiple Units and design to ensure the necessary strength with respect to the maximum design speed and maximum loading condition of the train on SLR tracks.
- (ii) Structure of the coach body shall be designed with sufficient over loading capacity for running with overcrowded conditions and running on weak track conditions available at some parts of the railway network and yard in Sri Lanka. Bidder/manufacturer is advised to inspect the various track and yard conditions available in Sri Lanka.
- (iii) The design of DMU set must be ensured that there should not be any form of car body cracks, under frame sagging and car body twisting at any stage of service life.
- (iv) The MCG and DEC shall provide a Guard's compartments so that the Guard can access the passenger compartment through the vestibule. No passenger compartment is expected in MCG.

2.3.2 Windows and Doors

2.3.2.1 Windows

- (i) Flap large size windows are preferred to improve the ventilation and lighting in the coach. The bottom or top part shall be able to open in case of failure of Air condition or passenger requirement.
- (ii) The window frame shall be best quality, weather resistance, and metallic frame.
- (iii) Window shutter shall comprise with a toughen safety glass of at least 5mm thick.
- (iv) The window flap holding mechanism shall be robust, durable and easy to operate.
- (v) Window flaps shall not be able to open from outside.
- (vi) Window blinds/ curtains shall be provided in BC type coaches.

2.3.2.2 Passenger compartment Entrance Side Doors

- (i) There shall be four sliding type electrically operated automatic entrance doors available two at each side in EC, BC and SBC type coaches. Minimum opening shall be 1000mm. It shall be able to enter a wheel chair from these doors. All entrance doors shall contain manually retractable flap for facilitate wheel chair access fitted under the door. The design and the technology of the automatic doors shall be a proven and widely used in passenger train sets. These doors shall have following features.
- (a) Centralized control –. The door control switches shall be arranged on both driver cab and guard room. Generally, the door opening and closing shall be controlled by Guard. Whenever the Guard requires, door's control shall have to be possible to divert to the Driver cab
- (b) Driving can only be started after closing all doors. Otherwise, no Traction Power available.
- (c) In the case of an obstacle found while closing the door, it shall stop the closing and after some delay closing shall continue. This function shall be repeated for few cycles. Details shall be given with the bid.
- (d) The doors cannot be opened when the train speed is greater than 5km/h to ensure passenger safety.
- (e) In the case of a fault in a door, it shall have to be isolated and manually locked.
- (f) Emergency door opening devices shall have to be installed inside the coach to manually operated doors when the speed is less than 5km/h.
- (g) There shall be a method to open automatic doors by Railway staff in the case of Hotel Load Power failure.
- (h) The faults of the doors shall be diagnostic through train control-monitoring system.
- (i) The dual redundancy power supply shall be established for powering the doors to ensure the safety of the passengers.
- (j) All entrance doors shall contain manually retractable flap for facilitate wheel chair access under the door.

2.3.2.3 Other Doors

- (i) Two vestibule sliding doors shall be provided in each side of the coach.
- (ii) Following doors are necessary on the MCG.
 - (a) A door on either side of the driving cab.
 - (b) A door on either side of guard's cab.
 - (c) Provisions shall be provided to enable the driver and guard to pass through the engine room.
 - (d) One vestibule sliding door between the Guard's Compartment and next coach.
 - (e) Inspection door shall be provided on either side of the engine room.

- (iii) Following doors are necessary on the DEC.
 - (a) A door on either side of the driving cab.
 - (b) A door on either side of guard's cab.
 - (c) One vestibule sliding door between the Guard's Compartment and next coach.
 - (d) Two automatic type entrance doors, one on either side for passenger area.
 - (e) A door between Driven Cab and Guard Cab.
- (iv) Rainwater gutters over all the exterior doors have to be provided.
- (v) The interior paneling of the doors shall be to match the interior finish of the coach.
- (vi) The doors shall be able to lock both in open and close positions, to prevent flapping, and shall be able to lock from outside using the special key.
- (vii) The vestibule doors shall be of sliding type and lockable in both open and close positions using the same special key. When the vestibule door is not locked by the special key, it shall be able to open from the outside by a passenger comes through the vestibule of the next coach. All components must be corrosion free and less maintenance type. The interior and exterior of the vestibule doors shall be to match the interior and exterior finish of the carriage respectively.
- (viii) Both the entrance and vestibule doors shall have a fixed Toughen Glass of at least 5 mm thick located in alignment with the windows.

2.3.3 Ceiling, Paneling and Insulation

- (i) The ceiling and paneling shall be from a strong elegant and fire-resistant material. All the paneling and doors shall be properly fitted using suitable fasteners to withstand the shocks and vibration.
- (ii) Suitable sound and heat insulation material shall be inserted between the external metal and the internal panels. Such material should be an accepted and proven material with no health, environmental or fire hazards.
- (iii) The ceiling and side panels shall be able to remove and refit for easy maintenance.
- (iv) The repairs of windows and electrical system shall be able to carry out without disturbing the main panels.
- (v) All material used for ceiling, panels and insulation shall be non- inflammable.
- (vi) All the structural members shall be steel with corrosion resistance properties.
- (vii) The Ceiling, Paneling and Insulation of the engine compartment of MCG shall be suitable for an engine room of a diesel locomotive. All material used for the ceiling, paneling and insulation shall be non- inflammable and nonabsorbent of oil.

2.3.4 Floor

- (i) The floor of driver's, guard's and engine compartments of the MCGs shall be of stainless steel chequered plate with sufficient thickness.
- (ii) The floor of passenger coaches shall be weather resistance steel sheet adequately supported by the steel structure of the under frame and on it a layer of sufficient

thickness of sound absorption, low density composite material and a floor carpet to Highest grade commercially available Homogeneous Polyvinyl Chloride or similar material which has very high wear resistance and long life. The carpet shall be an easy to clean, water proof type.

- (iii) Drain holes to be suitably provided on the floor for all the coaches, MCG and DEC.

2.3.5 Vestibule

- (i) Bellow type Vestibules shall be provided at each end of the coach and non-driving ends of MCG and DEC. Every vestibule shall have a sliding door.
- (ii) The width of the vestibule passage should not be less than 700 mm.
- (iii) The foot plates of the vestibule shall be of nonskid stainless steel and shall be designed to minimize noise. When a coach is coupled to an end of a train, the foot plate shall be able to lift upward and locked for extra safety of the passenger and easy access for maintenance of couplers.
- (iv) The rainwater shall not get into the compartment through the vestibule.
- (v) Passengers should be able to pass through the vestibule safely, even when the train is running on the minimum curvature and higher speeds.
- (vi) Hand rails shall be provided to facilitate the passengers who pass across the passage. The foot plates of the vestibule shall be strong enough to bear the load of 4 passengers (250 kg)

2.3.6 Foot Board

- (i) The side entry doors of driving cabs and guard compartments and all passenger compartment automatic sliding doors shall be provided with foot boards.
- (ii) All the side entry doors shall be provided with foot boards of adequate strength to withstand the loading conditions as explained in section 1.1.2 of this document.
- (iii) The foot boards shall be made out of non-skid stainless steel plates and measures to be taken to prevent galvanic action. The width of the foot board shall be equal to the door width.
- (iv) They should strictly be located within the rolling stock construction gauge to prevent them hitting the curved platforms of Sri Lanka Railways.
- (v) The foot boards are especially for the use when the coach is stopped outside a platform. The foot boards shall be suitably projected outward for the convenience of the passengers. Passenger should be able to step the bottom most foot board from the ground.
- (vi) A light shall be provided to light the foot board in the night.

2.3.7 Hand Rails

- (i) All the side entry doors shall be provided with handrails of adequate strength to withstand the loading conditions as explained in section 1.1.2 of this document.

- (ii) The handrails shall be made out of stainless steel pipes.
- (iii) They should strictly be located within the rolling stock construction gauge to prevent them hitting the outside objects and disturbing guards view through the observation glass.
- (iv) The handrails should be extended downward up to the floor level of the coach to facilitate passenger when the coach is stopped outside a platform.
- (v) The ends of handrails shall be painted in luminous yellow to see clearly.
- (vi) Sufficient number of roof mounted handrails with canvas loops and vertical poles all of stainless steel shall be provided for the use of standing passengers in EC, BC, DEC and SBC type coaches.

2.4 Draw and Buffing Gear

2.4.1 Auto Couplers

- (i) Semi-Permanent coupler with center buffer able to negotiate 80m curve shall be provided in all vestibule ends.
- (ii) Driving ends of MCG and DEC of the train shall be provided with automatic side swiveling type center couplers and draft gear with transitional heads similar to that shown on sketch No. DC 1174/01 drawing No. P 3274/04 and drawing No. P. 4034/00 with the parking cotter inserted from top.
- (iii) Material and testing procedure should comply with AAR M -201 Grade E.
- (iv) The contour of the head shall conform to A.A.R 10A and coupler is required both for buffing and drawing and should stand up to a minimum of 200 Tons of the instantaneous and snatch load in buffing and drawing.

2.4.2 Buffers

Self-contained plunger type side buffers with at least 165mm stroke which is fully compatible with available buffers of SLR fleet shall be provided to both ends of the DMU.

2.4.3 Dimensional Compatibility

- (i) The center height of the side buffers from the rail head level shall be 1143mm at no load condition.
- (ii) The center height of the coupler from the rail head level shall be 1054mm at no load condition.

2.5 Interior Furnishing and Facilities.

2.5.1 Seats and Tables

- (i) Seats for the EC coaches shall be individual cushioned seats with backrest. Seats also shall have hand rests, head rests and footrests fitted to the seat. They also can be dual units all facing same direction. The material of the seat cover shall be Vinyl coated upholstery fabric (Artificial Leather) to ISO 7617:Pt2:2003 or superior type and base fabric shall be Polyester heat set woven fabric. It shall be durable and washable.
- (ii) Seats for the BC coaches shall be individual cushioned seats with backrest able to recline. Seats also shall have hand rests, head rests and footrests fitted to the seat. They also can be dual units all facing same direction. The material of the seat cover shall be Vinyl coated upholstery fabric (Artificial Leather) to ISO 7617:Pt2:2003 or superior type and base fabric shall be Polyester heat set woven fabric. It shall be durable and washable. Suitable arrangement shall be provided to facilitate cup and snack holders and phone charging.
- (iii) Seats for the SBC coaches shall be provided with Metro Style, Bench Type seats along two sides of the coach and suitable other places to facilitate about 60 seating passengers. Other coach space shall be arranged so that standing passengers can travel with safely. For standing passengers sufficient amount of vertical poles and hand holds and other suitable arrangement shall be provided.
- (iv) Space should be allocated for minimum 02 Nos. wheel chairs for disables in DEC. The entrance door size shall be accordingly.

2.5.2 Coach Illumination

- (i) Each passenger compartment shall be provided with sufficient number of lights for cab illumination. Those lights shall be LED lights which shall be tested and proven design for use in railway passenger coaches. Lights shall be covered with suitable shades/mesh to prevent pilferage. Such shades/meshes shall be fastened with special bolts with non-standard heads (Required tools should be supplied).
- (ii) The LED lights shall ensure guaranteed operation lifespan of at least 50,000 burning hours of accumulative operation and suitable for continuous operation. Adequate heat sink with proper thermal management shall be provided (if applicable).
- (iii) Sub components of LED light assembly with part numbers shall be provided for procurement purposes.
- (iv) The passages, foot boards, toilets, vestibule, guard and driver cabs (including reading lamps for driver and guard), and any other necessary places of the DMU shall be provided with sufficient and suitable LED lights.
- (v) Engine room and coach exterior where necessary shall be provided with suitable lights.
- (vi) The lights shall be in 4 sub circuits including an emergency light circuit each controlled by a circuit breaker located in the electrical panel.
- (vii) Coach Lighting shall be controlled by the Control Panel in Guard Compartment.
- (viii) All the coach lights shall be 110V DC type. They shall be designed to withstand in over/under voltages, transient voltages.

2.5.3 Toilets and Water System

- (i) Coaches with toilets shall have vacuum operated western type toilet system with necessary electronic control system and storage facility. System shall ensure hygiene, water efficiency and environmental compliances while reducing long term maintenance cost. They shall have,

- (a) Water saving – 0.4 to 0.5 liters per flush
- (b) Seal vacuum technology for odor free operation
- (c) Compliance with global standards (EN 45545)
- (d) Low life cycle cost
- (e) Sufficient waste storage capacity

- (ii) Distribution of the toilets shall be as follows,

Type	Number of Vehicles	Normal Passenger Toilet	Disable Passenger Toilet	Small Size toilet for train crew
MCG	05	-	-	√
DEC	05	-	√	√
EC	05	√	-	-
BC	02	√	-	-

- (iii) A quick coupling socket shall be provided in each toilet to enable cleaning staff to get some water for cleaning purpose on the way.
- (iv) Toilet floor shall be sufficiently lower enough to prevent spreading out of water used in the toilet. (Except toilet for disable people located in DEC)
- (v) All toilet floors shall be fully stainless steel or GRP (Glass Reinforced plastic)
- (vi) Drain holes shall be provided in each corner of the toilet.
- (vii) Each toilet shall equip with a stainless-steel wash basin with a bib tap, bidet shower, wall tap, two cloth hangers, a mirror, towel rack and a toilet paper holder.
- (viii) The water taps shall be of a special design to push to open and automatically close as soon as the knob is released. The mechanism shall be hidden under the panel and only the knob and outlet shall available to the passenger.
- (ix) Exhaust fan shall be provided on the toilet.
- (xi) The toilet door shall be a plain door and it opens into the toilet. The "Engage/ vacant" indicator working with the lock shall be provided. They shall be robust maintenance free type.
- (x) The water tanks shall be located at the roof to facilitate gravity flow in to the toilets.
- (xi) Tanks, piping and other accessories of the water system shall be from food grade stainless steel or any suitable material which can withstand for vibrations and shocks. Material detail shall be provided.
- (xii) The capacity of the water tanks per coach shall be approximately 600lts.
- (xiii) The water tank shall be fitted to the roof of the coach above the toilet.

- (xiv) The tanks shall be able to fill from the floor level using a water hose/filling mechanism. A suitable air vent passage shall be provided.
- (xv) DEC coach shall have a toilet for disable passengers.
- (xvi) MCG and DEC (Guards compartment) shall be provided with smaller toilet for train operation crew.
- (xvii) All other coaches with toilets shall be provided with standard size toilets for general passengers.

2.5.4 Parcel Racks

Overhead parcel racks made of stainless steel shall be provided along the sides of each coach where possible. They shall be strong enough to keep hand held parcel and luggage. It also able to withstand the forces exerted by any passengers who use the edge of the parcel rack as their hand rail, when traveling standing.

2.5.5 Coach Air Conditioning (AC)

- (i) All passenger compartments shall have to be air conditioned. The air-conditioned units have to be installed on the roof of the passenger compartments. The passenger compartments air conditioning shall have to be fulfilled following requirements.
- (ii) Cooling capacity of the compartment Air-conditioning units shall have to be designed to provide passenger comfort even at the maximum designed passenger load. Cooling has to be self-adjusted based on the passenger capacity.
- (iii) SBC Coach Air conditioning units shall consist of metro train type air diffuser and higher capacity to enable more comfort to the passengers even doors open more frequently and have large number of standing passengers.
- (iv) Centralized control from Guard control panel shall be provided.
- (v) Electrical Power to the whole coach Air conditioning units is to be fed from a single central Power source as per the 2.7.2.2 Auxiliary Power.
- (vi) The dual redundancy power supply shall be established for powering Air conditioning units to ensure the availability 50% of the Air conditioning in the failure of one power circuit.
- (vii) The operating voltage of the Air Conditioning System and as well as the compressor type shall be clearly specified.
- (viii) Air condition plant shall be a module that can be easily taken out from the coach with the associated parts for maintenance.
- (ix) Air conditioned units shall be easily accessible and removable for maintenance.
- (x) Control unit of AC system incorporated with PLC system of reputed brand is preferred. Whenever electronic controls such as PLC are used in air condition system, all components used shall be of commonly available brand and type. Details shall be submitted along with the bid. All necessary software, instruction and maintenance manuals, fault diagnostic interfaces shall be supplied.
- (xi) Refrigerant must be environmentally friendly and shall be a type freely available in Sri Lanka. Type of refrigerant to be used shall be specified.

- (xii) In the event of power failure to all air conditioned units in a coach, there shall be a method to introduce fresh air to the coach.

2.6 Electrical System

2.6.1 Electrical Standard

- (i) The DMU shall be driven by 3 phase AC traction motors adopting AC-DC-AC power transmission system.
- (ii) The standard of electrical system shall be in accordance to the international standards for Railway applications or substantially equivalent to internationally accepted standards.
The applicable standard shall be clearly specified.
- (iii) Special consideration shall be given in the design of the electrical equipment for easy access for inspection and maintenance requiring minimum attention.
- (iv) All electrical/Electronic equipment shall comply with relevant latest to the international standards for Railway applications or substantially equivalent to internationally accepted standards.
The applicable standard shall be clearly specified.
- (v) The Electronic components used shall be of Industrial Grade.
- (vi) The current capacity of power distribution cables shall be determined considering the train length of including additional two (02) coaches into the train formation of seven coaches.
- (vii) Although the nominal operating voltage is 110 VDC, all the components and devices of the coaches shall be designed to withstand in over/under voltages, transient voltages.
- (viii) While selecting power handling equipment and traction equipment/machines, sufficient safety margin and excess capacity shall have to be maintained.
- (ix) All the electrical components and equipment of DMU shall be of good quality, tested and proven design widely used in railway rolling stock and shall be manufactured to withstand over voltage, under voltage, short circuits and surges.
- (x) The insulation between body and electrical system (both control and traction) should be higher than 5 Mega Ohms.

2.6.2 Power Supply

2.6.2.1 Traction Power

Traction power of the DMU shall be generated from Traction Alternator which is driven by the Diesel Engine installed on the MCG.

2.6.2.2 Auxiliary Power

1. Power source

- (i) The method of powering the following purposes shall be clearly specified including the rated power and voltage of them.
 - (A) Control and auxiliary equipment in MCG –electrical power for Traction control components and auxiliary equipment and machines such as blowers, battery charging, motors, cab lighting and cab AC

- (B) Hotel load -
 - (a) Air conditioning units of trailer cars
 - (b) Train lighting – electrical power for Train lighting and trailer car auxiliaries
- (ii) Self-generating equipment provided on each of the coaches will not be allowed for Hotel load requirement. The power source for the coach set hotel load shall be
 - (a) Separate additional electronic converters fed from traction alternator or
 - (b) Separate generator/ alternator driven by main diesel engine or
 - (c) Separate generator/ alternator driven by separate diesel engine installed in either MCG or DEC or
 - (d) Any other proven method
- (iii) The method of providing the Auxiliary power shall be proven and widely used in DMU train sets.
- (iv) Details shall be submitted along with the bid.

2. Power Distribution

Power distribution shall be in accordance with clause 2.7.5.3 and 2.7.5.4.

2.6.3 Control System

2.6.3.1 Train Control and Monitoring System

- (i) Train Control and Monitoring system shall perform following major functions.
 - (a) Multiple Unit operation
 - (b) Diesel engine cranking /stop and speed regulation
 - (c) Propulsion Control
 - (d) Traction control
 - (e) Traction Alternator excitation
 - (f) Self-load, Dynamic braking control
 - (g) Auxiliary motors control
 - (h) Over speed, vigilance, smoke and fire detection
 - (i) All protections
 - (j) Train Auxiliary Systems control
 - (k) Maintain train communication network
 - (l) Monitoring of all systems and functions
 - (m) Display of operating status and faults
- (ii) The train control and monitoring system shall be PLC, Microprocessor or PLC – Microprocessor combined type. Whenever PLCs are used in any control function, they shall be SIEMENS or MITSUBISHI brand. The type of train control and monitoring system shall be a proven and widely used in DMU train sets.
- (iii) Details shall be submitted along with the bid.
- (iv) A block diagram represents the Train Control and Monitoring System function shall also have to be submitted

2.6.3.2 Propulsion Control System and Traction Control System

- (i) The type of the Propulsion -traction control system of the DMU and its details shall be provided with the bid.
- (ii) This control system shall perform Engine control, Excitation control, traction control, DMU control stand integration, managing Driver Display unit and communication with Remote MCG/DEC's and any other essential functions.

Suppliers' certificate shall be provided regarding the offered control system to certify its' performance being well proven, and suitable for the particular application.

- (iii) IGBT based Traction converters sets have to be incorporated to drive AC Traction motors.
- (iv) Inverter (IGBT phase modules) Protection System shall be used to protect the inverters from over voltage and over current conditions on supply as well as load side. In additionally, there exist over temperature and short circuit protection functions for IGBT phase modules.
- (v) The complete system shall be designed as simple as possible with reduced number of components without compromising reliability and efficiency.
- (vi) Details regarding working principles, operating instructions and fault finding of control systems such as Traction control system, Diesel engine control system, etc. shall be provided. A section shall be included for training schedule in this regard.
- (vii) There shall be a provision for upgraded to Remote Monitoring of major parameters of the train.

2.6.3.3 Train Auxiliary Systems control

There shall be reliable and proven system for performing following controls.

- (a) Centralized Air conditioning control
- (b) Centralized Automatic coach doors control
- (c) Public address system
- (d) Passenger Information System (PIS)
- (e) Driver intercom telephone

2.6.3.4 Communication and Monitoring

- (i) Train Control and Monitoring System shall ensure monitoring, fault diagnosis, data recording and communication throughout the functioning all related subsystems and components.
- (ii) Easy fault finding shall also be possible. All necessary fault diagnostic interfaces and software shall be provided along with the DMUs. Details shall be provided along with the bid.
- (iii) A dual redundant communication networks to be adopted throughout the whole DMU to do data communication.

Details shall be submitted along with the bid.

2.6.3.5 Software, programmable electronics and technology

- (i) Whenever software programmable devices are used, necessary software required to access the system for adjusting/configuring the settings/parameters, maintenance and troubleshooting should be provided. Training (included to 7.4.1 (ii)) and free access to those shall be provided. Major software programmable devices shall be as follows
 - (a) Train control and Management System
 - Propulsion / Traction control system
 - Air Condition control
 - Automatic door control
 - PIS
 - (b) Toilet Flushing system
 - (c) Audio Visual Display System
 - (d) Any other
- (ii) In addition to above (i), required interfaces and necessary equipment such as scanners to access the Diesel engine and electronic governor for adjusting/configuring the settings/parameters and fault diagnostic shall be provided along with necessary training (included to 7.4.1 (iii)) and free access. Details shall be provided along with the bid.
- (iii) Password protection shall be provided for configurable parameters.
- (iv) There shall be a method of manual data entry through HMI and ability to connect external devices like Laptop for bulk data uploading, downloading or configuring.
- (v) Instruction manuals and maintenance interfaces such as Laptop computers with all the supplementary software installed (with backups), hardware accessories, cables, etc. required to connect with the system shall be supplied with DMUs (minimum 5 sets).
- (vi) All the software shall be able to operate in English language.

Details in relation to the above (iii) to (vi) shall be forwarded along with the bid.

2.6.3.6 Testing facilities of electronic cards.

- (i) Whenever electronic cards and sensors are used, application simulators capable of testing all major electronic cards and sensors for correct functionality as well as ensure the correct functionality after the repair before installing to the DMU, test equipment, instruction books shall be supplied with DMUs to facilitate testing and repairing of those in workshops.

Details of the application simulators which will be supplied along with the DMU supplies shall be given along with the bid.

- (ii) A complete set of spare electronic cards and sensors shall have to be supplied along with the above testing simulator for necessary calibrations and adjustments.

Details shall be forwarded with the bid.

2.6.3.7 Protections

- (i) All functions of the DMU shall be fully interlocked and supervised by the control system, which shall be electric or electronic. In case of electronic system, items shall be fully tropicalized.
- (ii) Following safety control functions shall be incorporated in addition to those considered necessary by the manufacturer of the DMU, against
 - (a) Low lubrication oil pressure
 - (b) High lubrication oil temperature
 - (c) High cooling water temperature
 - (d) Low cooling water level
 - (e) Overloading of traction machines
 - (f) Excess thermal load of traction machines
 - (g) Engine cab under fire
 - (h) DMU over speed
 - (i) Engine over speed
 - (j) Positive or Negative earth fault in traction and auxiliary circuits. (Protection system shall be provided to ensure the safety of the system and which shall be able to measure the earth leakage current).
 - (k) Non response of the driver (vigilance system)
 - (l) Over voltage/ Over current in traction and auxiliary system.
 - (m) Wheel Slip
 - (n) Locked axle (Anti-skid)
 - (o) Over current and earth fault in Hotel load power system.
 - (p) Air pipes parting-off
 - (q) Low air pressure
 - (r) Other protection where necessary
- (iii) Audible buzzer shall be activated when DMU speed goes beyond 80 km/h, and the application of automatic brake when it passes 110km/h. Speed settings shall be adjustable and able to change by authorized staff.
- (iv) There shall be facility to cut-off traction motors automatically in case of a faulty situation in addition to the manual cut-off facility.
- (v) Response to the above cases shall result in
 - (a) Total shut down of the diesel engine or
 - (b) Return of engine to idle on no load or
 - (c) Power cut off with the application of the train brakes
 - (d) Protect the system by either shut off or providing limited power operation
- (vi) As per the case may be, according to the faulty condition and as recommended by the manufacturer of the diesel engine, traction machines and other components.

2.6.4 Electrical Traction machines and Auxiliaries

- (i) The traction alternator must be a reputed brand of European/ USA/ Japanese make or substantially equivalent brand with proven track records similar to Sri Lanka Conditions and a proved design which can withstand for all the possible electrical surges and loads, all the forces, shocks and vibration due to all rpm of diesel engine and shocks and vibrations due to track conditions prevail in Sri Lanka even at maximum designed speed and loading.
- (ii) Traction motors shall be 3 phase AC traction motors with suitable cooling mechanism for Sri Lankan Tropical conditions with high humidity and salty environment along the coastal bed. They must be a reputed brand and a proved design which can withstand for all the possible electrical surges and loads, and all the forces, shocks and vibrations due to track conditions prevail in Sri Lanka even at maximum designed speed and loading.
- (iii) All the electrical rotating machines of the DMU shall be manufactured using high quality materials and bearings, which can withstand for required loading, rotating speeds, and shocks and vibrations developed while running on SLR tracks (vide section 1.2.2).
- (iv) All the bearings shall be reputed brand of European make.
- (v) Drive end and non-drive end of the traction motors shall have grease lubricated bearings.
- (vi) Details in relation to followings shall be submitted along with the bid.
 - (a) Brand, model and origin and country of manufactured of traction machines and bearings
 - (b) Certificate from the equipment manufacturer shall be provided to certify quality and durability of the traction and auxiliary machines.
- (vii) Electrical machines shall also be designed to suit for Sri Lankan tropical, saline and dusty environment conditions. Car body filters shall be incorporated suitably to minimize dust ingress.
- (viii) Insulation of windings of all electrical traction machines and auxiliary machines of the DMU shall be of Class H or higher.
- (ix) If the greasing intervals of the bearings of alternators, generators and traction motors are less than five years, provision shall be made to lubricate the bearings without dismantling the components.
- (x) The greasing nipples of above equipment shall be located as enable the maintenance staff to do the lubrication /greasing easily without removing motors/generators from the MCG
- (xi) Maximum and rated power of traction motor and traction alternator / generator, auxiliary alternator shall be furnished.
- (xii) The method of bearing used and other arrangements used for traction motor installation to the bogies and axles shall be proven and reliable method with sufficient track records. Details of the design shall be submitted along with the bid.

2.6.5 Major Electrical Components

2.6.5.1 Wiring, Switching and Junction boxes.

- (i) Two junction boxes shall be provided one at each end of a coach. Alternating connecting system be provided at ends to prevent crossing of cables.
- (ii) The electrical circuit of each coach shall be able to isolate from the supply cables by a two-pole circuit breaker in case of an over current or earth leakage fault. All electrical sub circuits shall be protected to avoid danger from overheating or arcing.
- (iii) Conduits shall be of high quality, fire retardant material.

2.6.5.2 Electrical cables and component quality

- (i) Cabling and wiring of DMU shall be done using high quality Halogen free flame retardant (HFFR) railway applicable cables, conduits, etc. having lifespan at least 15 years.
- (ii) Traction and control cables shall be flexible enough to prevent the possible damages at the cable lugs.
- (iii) Cables of diesel engine (or closer to it) shall have additional resistant to oil, fuel and heat.
- (iv) Colour code and labeling of the cables shall be in accordance to the international standards
- (v) Datasheets/ details of the power and control cables shall be submitted.
- (vi) All the electrical components and equipment of DMU shall be of good quality, tested and proven design widely used in railway coaches and shall be manufactured to withstand over voltage, under voltage, short circuits and surges.

2.6.5.3 Coach Exterior Cabling:

- (i) Coach to coach electrical connection shall be accomplished by flexible jumper cables with male and female plugs and sockets connecting together.
- (ii) In the case of Train lighting power supply and Coach Air conditioning power supply are different, separate sets of jumper cables and couplers shall be installed.
- (iii) To prevent jumper cables crossing the center coupler, electrical socket outlets shall be duplicated at the ends of coach and provide at two points which are at either side of the vestibule.

2.6.5.4 Jumper Couplers

- (i) Jumper couplers shall be easily removable and connectable between coaches. The mechanism shall be foolproof to prevent wrong polarities coupling together.
- (ii) Protection caps should be provided for coach wall sockets to protect them from dust and water whenever a cable is not connected.
- (iii) All the cables, plugs, sockets, etc. used in outer side of coaches shall be water and dust proof and should adhere to relevant quality standards for railway applications and suitable for outdoor use.

- (iv) Coach underneath cabling shall be done through the steel conduits. Further the steel conduit bends and steel flexible conduits shall be used where ever necessary.
- (v) Train light and as well as Train control sockets shall be provided in front side of each MCG to feed the train lights of the DMU when the same is pulled by another locomotive in case of an emergency.
- (vi) Safety for Jumper cable disconnection

In case of an accidental disconnection of a jumper cable fixed between any coaches, there should be an automatic power cutoff or safety action with warning indication for driver. Or otherwise cable interconnection design shall be fail safe in such a situation.

2.6.5.5 Coach Exterior Light fittings:

Exterior light fittings of coaches should be water and dust proof.

2.6.5.6 Switchgears

All the switchgears of the DMU such as Relays, Contactors, etc. shall be of railway applicable, good quality reputed brand. Test certificate/ Manufacturer certificate shall be provided to certify the quality and durability.

2.6.5.7 Location of Electrical switchgears

Location of electrical switchgears shall be done effectively to minimize the maintenance difficulties and ensure safety of those. Wiring between controls and switchgears shall be laid properly.

2.6.5.8 Sensors and Transducers

- (i) Voltage, Current, Temperature, Pressure, Speed, etc parameters shall be monitored through sensors of adequate rating.
- (ii) Sensors used in the system shall be based on the latest technology prevalent for the Rolling Stock application in the world.
- (iii) All sensors, limit switches and transducers shall be reputed brand of European, USA or Japanese make.
- (iv) List of items with the brand and country of manufactured shall be provided along with the bid.

2.6.5.9 Head Lamps

Two head lamp sets each with sufficient luminosity shall be installed on the top center and the two sides of the bottom of the front face respectively of MCG. Headlights shall be long life; high power LED with High and Low beams. Operating voltage of them shall be 110Vdc or 24Vdc. If it is 24Vdc, 110Vdc to 24/12Vdc converters can be introduced. Light beam shall be spread out to illuminate the objects by the side of the railway track. Details shall be provided.

2.6.5.10 Fog and Parking light

Two High power Fog lights (LED preferred) and parking lights shall be provided at the bottom of the front face of MCG. The exact installation location shall be decided at the conceptual drawing approval stage.

2.6.6 Special systems and components**2.6.6.1 Public address system:**

- (i) A reliable public address system used in rolling stock shall be installed to address whole train passengers.
- (ii) The control cabinet of the public address system shall be installed in the guard's cab.
- (iii) The guard's cab shall equip a gooseneck microphone, which can broadcast to the entire train;

2.6.6.2 Passenger Information System (PIS)

- (i) GPS based information display shall be incorporated to make aware the passengers about the train halt information throughout the journey.
- (ii) Information to be displayed on minimum 2 nos. displays (LCD/LED monitors preferred) mounted on each side of passenger coach. Display units shall be suitably fixed to the walls to avoid pilferage.
- (iii) Information such as passed or stopped station, en-route, next stopping station, remaining distance to next stoppage, any other necessary details shall be displayed.
- (iv) Station location data shall be taken via GPS system so that data will be updated automatically and Guard shall have the facility to set the train number and to activate the system to work accordingly. Control system and user friendly interface shall be provided in the guards' compartment to feed the data to the system.
- (v) Apart from the default stoppages of the journey, facility shall be available for the guard to set the stoppages in special case.
- (vi) The recorded information of next stopping station by voice also shall be broadcasted automatically by the system at suitable intervals.
- (vii) However, provisions shall be made to adjust the system for optimization the system by negotiation with SLR staff and by initial trial runs.

2.6.6.3 Audio Visual Display System

- (i) All coaches shall be equipped with Audio visual display system of having sufficient nos. of LCD/ LED monitors for Advertisement and promotional purposes.
- (ii) The audio/ visual system shall consist of USB and SD card playbacks.
- (iii) The audio/video player shall be installed in Guard Compartment of the coach and securely covered to prevent unauthorized access. The player shall support video selection, fast forward, backward functions.

2.6.6.4 Laptop Charging Facility

In BC coaches, electrical socket outlet of G type should be provided for each passenger seat row at suitable safer place for charging laptops and other portable electronic devices of passengers. Socket should be suitably protected against accidental contacts and causing harm for children, etc.

2.6.6.5 Event Recorder

- (i) The DMU control system shall be inclusive of event recording unit. This is in addition to the fault data recording function.
- (ii) Event recording shall be an encased module with lock and key to avoid unauthorized access. The module shall be designed to withstand harsh environment conditions and tough handling by shed personnel.
- (iii) Event recorder shall have built in memory with sufficient capacity and USB interface for easy download of data on a laptop computer. This inbuilt memory should not require any external power to store and retain data
- (iv) The event recorder shall include parameters such as drive speed, time, travelling directions, notch position, brake pipe pressure, km count (distance), etc. The memory of recording shall store data for at least 96 Hrs. at one second interval.
- (v) Instruction manual including procedures of data viewing from event recorder shall be provided. Practical training session to be included for local training session in this regard.

2.7 Special Facility in Guard's Compartments

2.7.1 Guards Lookouts

- (i) Guard's portion of the MCG shall be provided with guard's lookouts as per the Sketch No. DC 1166/01 on both sides of the coach, as a projection of nearly 15cm with long strips of glass, fixed along the two vertical side of the projection, to see both the front and rear sides of train.
- (ii) The Guard's seat shall be placed in such a way that the Guard could see the forward and backward directions along the lengthwise of the train, through the Guard's Lookout, while seated.
- (iii) Details of this arrangement shall be finalized during the stage of drawing approval.

2.7.2 Guards Brakes

The Guard's compartment shall be provided with two means of braking the train.

- (i) Air Brake

An emergency brake shall be provided to stop the train completely in an emergency. In addition to that suitable brake device shall be provided to apply only an amount of partial brake which should not be affected to the dynamic brakes which has been applied.

(ii) **Mechanical Brake**

A hand brake (parking brake) to be applied by rotating a hand wheel shall be provided to the Guard. By applying of hand brakes of MCG and DEC, fully loaded DMU should be able to hold on 1:44 gradient.

2.7.3 Last Van indication

Red color Tail lamps and white color side lamps (LED lights preferred), shall be provided at end coaches to identify the 'Last Van' indication. Switch shall be provided in the guard room.

2.7.4 Other Facilities of Guards Compartment

(i) The Guard's compartment shall have the following

1. Seats and Tables on both sides
2. Locker
3. Pigeon holes to keep documents etc.
4. Dual indicated pressure gauge for BP and FP.
5. Control Panel
 - (a) Train speedometer
 - (b) Train Light control
 - (c) Tail light switches
 - (d) Passenger compartment Air-conditioning control
 - (e) Passenger compartment automatic side door control
 - (f) Communication telephone (Intercom telephone)
 - (g) Passenger information system (PIS) broadcasting host
 - (h) Gooseneck microphone
 - (i) Audio visual system
 - (j) PIS operating screen
6. Place for stretcher, flags, signal lights and other equipment.
7. First aid Box
8. Separate toilet
9. Lockable place to keep travel kit bag of the Guard.
10. Fire extinguisher
11. Reading lamps
12. Suitable ceiling mounted fan

Details of these facilities shall be finalized during the stage of drawing approval.

- (ii) Guard's compartment shall be adequately insulated and suitably air conditioned. In case of failure of air conditioner provisions shall be made to provide ceiling mounted

fan the compartment to ensure the comfort of the guard. Electrical socket outlet should be provided at suitable safer place for charging laptops and other portable electronic devices.

2.8 Driving Cabs

- (i) The structure of the front face of the MCG shall be designed with less aerodynamic drag and noise.
- (ii) The floor of the driving cab shall be elevated from the under frame level.
- (iii) Working space of the driver's cab shall be not less than 1600 mm.
- (iv) The compression strength of the front face of the MCG and DEC shall be sufficient to provide protection for the train crew. Specially, when collided with fallen tree or heavy object with small cross section up to the wind screen level.
- (v) A cabinet, which is large enough to keep the kit boxes of the train crew, shall be provided in the driver's cab. Two water bottle holders shall be provided.
- (vi) Provision shall be provided to enable the crew to reach the wind screen area from outside for cleaning manually. Suitable sun visor shall be provided for both driver and driver assistant sides.
- (vii) A CCTV camera shall be installed in the driver's cab to view the track, signaling and way side equipment.
- (viii) Electrical socket outlet should be provided at suitable safer place for charging laptops and other portable electronic devices.
- (ix) Driver shall be seated at the left side and the assistant shall be seated at the right side of the cab, when facing the driving direction. Both seats shall be adequately comfortable for long journeys and suitably located to ensure visibility and close to the side windows to see through while driving.
- (x) Horn and cab light switches shall be made available for both the driver and assistant. Head light switch shall be made available for the driver.
- (xi) Side window and a door with glass shutter shall be provided at both sides of the driver's cab. The opening of the shutter shall be large enough to facilitate Tablet exchanging. Suitable guard shall be provided to protect the window glass from hitting the tablet while exchanging tablets.

2.8.1.1 Air conditioning

- (i) Driving cabs shall be adequately insulated and suitably air conditioned. In case of failure of air conditioner provisions shall be made to ventilate the cab to ensure the comfort of the operating crew. However, two fixed positioned personal cooling fans shall be fitted on the front desk.
- (ii) The air condition system shall be a proven design for rail application. Refrigerant must be environmentally friendly and shall be a type freely available in Sri Lanka.

2.8.1.2 Driving Controls

The driving positions shall be equipped with the following controls in addition to those considered necessary by the manufacturer.

- (i) One master controller with 8 (or 7) steps for the control of both tractive power and dynamic braking, and an idle step. Master controller shall be operated by the driver's left hand.
- (ii) The changeover from traction mode to dynamic brake mode shall be implemented so as to avoid damage to traction components.
- (iii) A removable direction control handles, also to be operated by the driver's left hand.
- (iv) The master controller and the direction controller must be mechanically interlocked against undesirable operation.
- (v) A graduated service application of driver's brake control valve for the application of brakes of the DMU to be operated by the driver's right hand.
- (vi) A driver's brake control valve for operation of the independent brakes of the MCG, also to be operated by the driver's right hand.
- (vii) Any other brake controls such as required for rapid release of brake.
- (viii) Necessary equipment for the controlling of the air brakes in the rolling stock. Separate emergency air brake valve installed at the driver's assistant side in the driver's cab.
- (ix) Horn controls – two horns are required; one is low pitch and other is high pitch for both driver and driver assistant.
- (x) Sanding controls
- (xi) Head light and windscreen wiper controls. Electrically operate wiper incorporated with windscreen washer is required. Reliable wiper supported with two arms shall be given for each wind shield of driver cab.
- (xii) Starting key, starting button, shut down buttons and a starting alarm button switch should sound a bell fitted in the engine room to warn persons in the engine room before starting.
- (xiii) Controls, instruments and indicators necessary for the multiple engine operation.

2.8.1.3 Driving Instruments

The driving positions shall be equipped with the following instruments in addition to those considered necessary by the manufacturer.

- (i) Recording speedometer with km counter to indicate the DMU speed in mph and in kmph.
- (ii) Pressure gauges necessary to indicate the air pressure of the compressed air brake system and main reservoir. The measurements of the pressure gauges shall be both in kPa.
- (iii) Visible indicators using indicator lamps for all the operating conditions of the engine and transmission.
- (iv) Wheel slip indicator and provision to reduce the sensitivity of the wheel slip detection for emergency conditions.

- (v) Audible warnings where applicable, such as in the case of wheel slip, fire, earth faults etc.
- (vi) Gauges indicating engine lubricating oil pressure, engine cooling water temperature, quantity of fuel in the fuel tank, meters for auxiliary and train lighting voltages and currents.
- (vii) Engine RPM meter and engine hour counter.

2.8.1.4 Display parameters for driver

All the necessary display parameters of the diesel engine, MCG and train set shall be provided for driver in driver console mainly including the following,

- (a) Engine RPM
- (b) Train speed
- (c) Air pressures
- (d) Each traction motor ampere values
- (e) Main generator voltage
- (f) Dynamic braking current.
- (g) Output power (kW)
- (h) Auxiliary generator voltage and ampere values
- (i) Driving and loading state parameters.
- (j) Diesel engine parameters such as Coolant temperature, Lube oil pressure, etc.
- (k) Display of error and warning indications issued by diesel engine control system.
- (l) Fault indications with audible buzzer.
- (m) Fault recording display function with simple troubleshooting guide.
- (n) Battery voltage and charging current
- (o) Indicator for actuating of vigilance device
- (p) Other necessary parameters.
- (q) Other auxiliary controls such as circuit breakers, engine starting controls, etc. shall be arranged on a separate auxiliary control panel.

2.8.1.5 Vigilance system

- (i) Well tried out vigilance system to check the alertness of the driver shall be provided. Pedal operated switch in parallel connection with a push button in driver desk is preferred. Fixing the vigilance reset button in drivers throttle shall be avoided. Power cutoff and the application of the full service brake of the DMU shall take place in case the driver does not respond properly to the system. The warning buzzer shall sound every 30 seconds with the pedal either in depressed state or in the released state. If the buzzer is ignored by the driver, by his failure to change the state of the pedal for more than 15 seconds, power cut off and full brake application shall take place.
- (ii) Further, drivers' response to any control device (such as throttle, horn) shall also be taken to reset the vigilance timer (same action as pressing vigilance pedal/ button).

2.9 Detailed Specification of the Engine Plant (in MCGs only)

2.9.1 The Diesel Engine

- (i) Powerful engine of reputed brand and proven design (MTU, Cummins) with at-least 1700kWpower to haul proposed DMU under the conditions specified in this document.
- (ii) Engine power shall be sufficient reserve power to give the required traction power and acceleration under all loading conditions and track conditions with full load specified in this document and other requirements stipulated in sub clause 1.1.9.
- (iii) Starting method shall be by either the auxiliary generator working as a motor during starting and generator thereafter or by electrical starting motors. If starter motors are used, electrically operated auxiliary loads shall be used to minimize the starting load for the starter motor.
- (iv) Exhaust emission standard shall be at least UIC III (or Tier 3) standard or equivalent level of any other international standard. The test certificates of the emission level of this model of engine issued by the relevant authority shall be provided.
- (v) Exhaust gas emission shall be from the top. The exhaust system shall consist of necessary after processing equipment to ensure low noise and smooth exhaust flow. Components of the exhaust system shall be corrosion proof less quality material for long trouble free service life. Engine noise must be minimized and details with applicable standards shall be provided with the bid.
- (vi) Air intake shall be through suitable air filtration system which can ensure filtration of all dust and other particles in the environment which is extremely dusty. The system also shall have method to avoid water or moisture ingress during heavy raining. Air intake shall be suitably located to avoid getting polluted air such as exhaust gas.
- (vii) Brake power and Indicated power of Diesel Engine under various conditions shall be provided along with the standard of testing and other details.

2.9.2 Filters

2.9.2.1 Clean and dust-free environment of the engine room

Suitable system shall be provided to have clean and dust free environment inside engine room so that electronic, electrical and other components will not get affected. Also, this system should be able to maintain acceptable temperature and humidity condition under all weather conditions to ensure correct functionality of the engine room components.

2.9.2.2 Compressor Air Filters

As recommended by the air compressor manufacturer.

2.9.3 Cooler Group

2.9.3.1 Radiators

Radiators shall have extra capacity to meet maximum demand under most critical conditions. Radiator elements shall be seamless, mechanically bonded. Cooling

capacity of the radiators shall be selected considering diesel engine operation under long static conditions as well as operate inside long tunnels,

2.9.3.2 Radiator Fans

Radiator fans shall be able to provide sufficient air flow, as required by the engine manufacturer.

2.9.3.3 Cooling System

As recommended by the engine manufacturer. Anyway, system shall be pressurized thermostatically controlled closed system which is having large capacity expansion tank as well as reserve tank for emergency top up.

2.9.4 Fuel System

2.9.4.1 Fuel Tanks and Capacity

- (i) Fuel tank shall have sufficient strength with baffle plates. The capacity shall be at least 3500Lts.
- (ii) Provision (manholes) shall be made on the tanks to open and clean completely. The fuel tank shall be constructed to resist damage from hits by foreign objects from the track.
- (iii) Suitable sight glasses shall be provided either side of the MCG to monitor fuel level in the tank.
- (iv) Electronically operated fuel level sensing system shall be provided to the driver cab.

2.9.4.2 Fuel circuit

- (i) Fuel circuit as recommended by engine manufacturer.
- (ii) The diesel engines shall be able to work with commercially available ordinary diesel fuel available in Sri Lanka.

2.9.5 Lubricating Oil System

As recommended by engine manufacturer.

- (i) Diesel engine shall have sufficient lube oil capacity to ensure extended hours of trouble free operation with minimum maintenance.
- (ii) Provision shall be made to conveniently fill and drain the oil completely.

2.10 Air Compressors

- (i) Air compressor shall be a motor driven screw type compressor. It shall be a reputed brand and proven design for railway application which is having at-least 10 years track records.

- (ii) The capacity of each compressor shall be sufficient to haul the DMU in case of extra two coaches attached.
- (iii) The details and the capacity of the compressor shall be given.

2.11 Batteries

- (i) The batteries shall be less maintenance Alkaline type of sufficient capacity and service life not less than 10 years under normal running conditions.
- (ii) Starting battery set shall be capable of giving 10 starts of 6 seconds duration with the battery 20% discharged.
- (iii) Necessary safety circuitry should be provided to safeguard the equipment.
- (iv) Battery box shall be designed for easy removal of batteries for inspection and maintenance.
- (v) Tools required for battery maintenance shall be provided.
- (vi) If there exist, any battery sets other than the starting battery set, they shall have to be complied with all above (i) and (iii) to (v) conditions stated.

2.12 Dynamic Grids

- (i) High quality corrosion proof Dynamic grids shall be provided which has proven track records for at-least 10 years of service under high humidity and salty conditions like coastal belt in Sri Lanka.
- (ii) The Grid resistors and the grid blower should be so designed to withstand the temperatures that are likely to arise during continuous Dynamic Braking.

3 Drawing Approval

- (i) Approval for the conceptual drawings must be obtained from SLR before commencing the manufacturing. Conceptual drawing approval process shall be as follows,
 - (a) Conceptual drawing shall be prepared covering all the agreed specification during the bidding process compiling to terms and conditions given in the contract agreement.
 - (b) Conceptual drawings shall be submitted to the SLR, within three weeks from the date of signing the contract agreement.
 - (c) Conceptual drawings shall be checked by SLR engineers and if need any adjustments will be notify to the contractor/manufacturer. Once all the drawings are acceptable to SLR, acceptance will be issued by the GMR.
- (ii) Manufacturer can carry out his manufacturing process strictly following contract agreement and approved conceptual drawings. If there exists any difference between documents, conceptual drawing shall prevail.

4 Inspection

- (i) The bidder & manufacturer should provide required coordination and assistance, including access to drawings and furnishing of production data for the inspectors appointed by

the Sri Lanka Railways to inspect the process of the manufacturing of DMUs. Such inspectorate shall comprise as follows;

- (a) Two (02) railway engineers and one (01) material specialist at the initial stage. Period of inspection shall be not less than 10 days excluding traveling.
- (b) Two (02) railway engineers at a time and in 4 stages. Period of inspection for one stage shall be not less than 10 days excluding traveling.
- (c) Three (03) railway engineers at the final stage for pre shipment inspection of 1st DMU set. Period of inspection shall be not less than 10 days excluding traveling.
- (d) Three (03) railway engineers at the final stage for pre shipment inspection of balance four (04) DMU sets. Period of inspection shall be not less than 10 days excluding traveling.

- (ii) The production schedule of each DMU shall be furnished after the approval of drawings to enable to arrange inspection.

5 Commissioning

- (i) It is Supplier's responsibility to hand over the DMU at Purchaser's satisfaction.
- (ii) Supplier shall arrange all necessary lubricants, grease, coolant and any other materials and consumable spare parts which are required for commissioning at his own cost. Anyway, commercially available normal diesel fuel can be supplied by the SLR.
- (iii) Supplied DMUs will be commissioned and tested under supervision of SLR engineer(s).
- (iv) Supplier or his authorized representatives shall have to carry on the commissioning work together with the SLR staff at SLR tracks and as well as Sheds and Workshops.
- (v) Purchaser shall issue the acceptance certificate after ensuring the machine is in good working condition, at his satisfaction. Supplied machine will be commissioned and tested under supervision of SLR engineer(s).
- (vi) All costs related to travel, boarding and lodging, local conveyance etc. will be borne by the bidder. SLR will not pay any per day chargers or allowances towards such services.
- (vii) Bidder shall confirm that the bid price is inclusive of these service charges and that no separate charges shall be demanded towards these services.

6 Technical Support and Maintainability

6.1 Catalogues, Drawings and Manuals

- (i) Detailed and dimensioned working drawings must be supplied in A2 size paper, bind as A3 size album and in a soft copy of PDF format. All dimensions must be given in millimeters. All lettering and markings on drawings shall be in English language and internationally accepted symbols. Electrical circuit/wiring diagrams of each sub circuit of DMU should be provided along with component descriptions mentioned. Position diagram shall be integrated to the wiring diagram to indicate the location of items in the DMU.
- (ii) Detailed Mechanical and Electrical parts and maintenance catalogues must be provided in the form of a A4 size book, and the language must be English, giving explored views of all assemblies, part numbers and dimensions or generalized specification (where applicable), and all these information in a softcopy in PDF format. Separate maintenance & operation manuals and spare parts catalogues shall be supplied for the diesel engine and other major components. Those shall be compiled as enable to refer easily. The list of major components is attached in Annexure 1.

- (iii) Further, spare parts catalogue shall include all the parts and sub-units of the DMU with the part numbers and drawing references. Catalogues shall be well organized for easy identification of particular parts. For Electrical section, wiring diagrams of all the control and power circuits, auxiliary and sub units of the DMU shall be furnished.
- (iv) Maintenance manual shall also include the maintenance procedures of all the relevant items which require periodical maintenance. Photos shall be incorporated to the manual for easy identification of the process
- (v) Spare parts catalogue shall be standard, well organized and complete with all the parts of the DMU with part numbers and drawing references.
- (vi) Operating instructions and troubleshooting guides of sub units of the DMU shall be provided where necessary.
- (vii) Fifteen (15) hard copies shall be provided from each of the above catalogues, drawings, manuals and guides.
- (viii) Five hundred (500) copies of driver's hand books shall be provided.
- (ix) All above documents shall be supplied in full quantity before releasing the 20% payment after commissioning and put in to the service.

7 Workmanship and Maintainability

7.1 Workmanship

- (i) Workmanship shall be of the highest grade in accordance with the modern accepted standards. (ISO or equivalent) Principal parts such as diesel engine, traction machines, auxiliaries, bogies, brake gear details, draw gear details, springs, locks etc. shall be made to ensure interchangeability.
- (ii) All surfaces of metals which are to be painted shall be grit blasted to SA 2.5 before painting. The design should facilitate easy access to the parts and ensure maintainability.
- (iii) Welding and fabrication work shall follow accepted international standards and recommended materials. Work shall be completed with highest grade of the industrial standards applicable for similar work.

7.2 Replacing items during maintenance

- (i) The design of DMU shall facilitate easy maintenance and repair. The convenience and economy of maintenance shall be improved by adopting standardized and modular in construction to the extent possible. In additionally following are to be introduced to ease the maintenance process.
 - (a) Introduce sufficient inspection points
 - (b) Visual indications by means of LEDs for easy trouble shooting by maintenance staff
 - (c) Adopt standardized interfaces
 - (d) Minimizing the maintenance duration through simplifying the disassembly and assembly process by adopting quick-release structures
 - (e) Tool-free disassembly structures or non-destructive disassembly structures.

- (ii) At the same time, daily maintenance operations such as oiling, water filling and cleaning or filter element replacement shall be easy to operate. For high-value or difficult-to-repair components, maintenance shall be minimized as much as possible during design stage. The bidder shall provide a detailed maintenance plan for DMU, including maintenance intervals, maintenance tasks and information on replacement components.
- (iii) Schematic diagrams and testing details shall be provided at locations where necessary for diagnostic purposes.

7.3 Warranty

- (i) The DMU shall carry a warranty, issued by the Supplier, for 5 years, from the date, they are commissioned and acceptance given in Sri Lanka, against corrosion taking place on the car body, under frame and the metallic fittings in the DMU.
- (ii) The DMU shall carry a warranty, issued by the Supplier, for 2 Years, from the date, they are commissioned and acceptance given in Sri Lanka, against any manufacturing defects, material failure and design faults of mechanical items.
- (iii) The DMU shall carry a warranty, issued by the Supplier, for 5 Years, from the date, they are commissioned and acceptance given in Sri Lanka, against any manufacturing defects, material failure and design faults of electrical items. (Propulsion/ Traction and auxiliary control systems and related components/equipment, Electrical and Electronic components fitted to the diesel engines and other auxiliary equipment, power systems and related components/equipment, traction/auxiliary electrical machines, air conditioning and all batteries shall be included to electrical scope).
- (iv) Any replacing part during warranty shall also be under the effect of warranty throughout the remaining warranty period of relevant DMU.
- (v) If the normal warranty period is expired during the period of six months from the date of replacement, the warranty of such replacement to be extended further six months from the date of replacement.
- (vi) If any defect of component or equipment found within the warranty period and the replacement are done after the warranty period, such components or equipment shall be guaranteed for a six month from the date of replacement.
- (vii) Due to manufacturing defects, material failure and design faults occurred within the warranty period, the failure investigation shall arrange according to the following protocol.
- (viii) When a coach or MCG breakdown, the representative of the Supplier resident in Sri Lanka and SLR shall jointly investigate and establish the course of the breakdown, whether it is due to any manufacturing defect, material failure or design fault. If supplier's representative fail to attend within one week after the written notice, SLR shall reserve the right to consider it as a liability under warranty.
- (ix) The supplier will be given a period of one (01) month from the date that the coaches or MCG are commissioned in Sri Lanka, to rectify any teething problems encountered. The aforesaid payment of compensation is applicable for those manufacturing defects, material failure or design fault encountered after this one (01) month period.
- (x) The supplier will be given a grace period of eight (08) weeks, in extreme case he has to import any spare part for the repairs from countries other than supplier's country,

provided the overall availability is above 80% of the DMU. Import and supply of such spares shall be carried out by the supplier themselves.

- (xi) After commissioning and put in to commercial service if some components or system fail supplier shall attend it within two (02) week time if items are commonly available in the market. If component is not readily available, they shall be given four weeks.
- (xii) The supplier must ensure the availability of all essential items with them to minimize the delays during warranty period. It is expected to stock critical components such as sensors, control cards and auxiliary units make available for early warranty replacement.
- (xiii) If the supplier fails to remedy the defects within the period specified in the SCC 28.5(a), (b) and (c), he shall compensate the Sri Lanka Railways, by paying:
 - US\$ 250 for an MCG Day lost
 - US\$ 50 for a coach day lost
- (xiv) The amount incurred shall be recovered from the warranty retention money.
- (xv) English speaking technical residential staff of the manufacturer who is capable of handling all types of maintenance and repair of the DMU shall be available in Sri Lanka during the warranty periods.
- (xvi) From the date of delivery, the first DMU shall be operated in Sri Lanka for at-least one (01) month. Deficiencies and defects due to design failures identified during this period in operation should be rectified and the necessary design changes and the alterations shall be executed to the balance DMUs before their shipment. The general terms and conditions under the warranty and penalty shall not be affected on this.

7.4 Training and Technology Transfer

7.4.1 Overseas Training:

- (i) **General Maintenance Training**– A training must be provided to the SLR mechanical and electrical maintenance staff at manufacturer's workshops for 60 persons in minimum two stages for 3 weeks (total working days shall be 15 days excluding international travel, Saturday, Sunday and holidays) duration each stage. This training should focused on the overall knowledge of DMU electrical and mechanical maintenance.
- (ii) **Train control and monitoring system** - The supplier shall arrange separate training session mainly focused on Train control and monitoring system including DMU Propulsion-Traction Control Systems, all other auxiliary sub systems, Sensors, Software handling, Fault diagnosis tools, troubleshooting etc. of the MCG. (Minimum 20 personnel for 3 weeks (total working days shall be 15 days excluding international travel, Saturday, Sunday and holidays)
- (iii) Where in case the OEM is not the DMU builder, the OEM recommended trainings for sub-units of the DMU, such as diesel engine, electronic governor and electrical components, shall also be arranged separately

(Mechanical - Minimum 8 personnel for 2 weeks - total working days shall be 10 days excluding international travel, Saturday, Sunday and holidays)).

(Electrical - Minimum 6 personnel for 1 week - total working days shall be 5 days excluding international travel, Saturday, Sunday and holidays).

- (iv) Operational staff training- The operational staff to be trained will include the DMU drivers, transportation executives, guards etc. (Minimum 14 personnel for two weeks - total working days shall be 10 days excluding international travel, Saturday, Sunday and holidays)
- (v) Suitable training modules should be provided to suite the job specifications of the personnel to be trained during the training program.
- (vi) All costs related to international travel, boarding and lodging, local conveyance etc. for the SLR staff should be borne by the bidder. Training should be provided free of charge.
- (vii) Training contents/schedule shall be provided with the bid regarding above requirements. Training contents and stages shall be negotiable.

	Course		Total days (total working days excluding travel, Saturday, Sunday and holidays)	Total nos. of participants	SLR Engineers		Supervisory managers	Technicians	Electricians	Operating Executives	DIM	Lomomotive Drivers	DTI	Guards
					Mechanical	Electrical								
(i)	Maintenance Training	Mechanical	15	40	6	-	10	24	-	-	-	-	-	-
		Electrical	15	20	-	2	6	-	12	-	-	-	-	-
(ii)	Train control and monitoring system		15	20	1	3	4	-	12	-	-	-	-	-
(iii)	Diesel Engine	Mechanical	10	8	2	-	2	4	-	-	-	-	-	-
		Electrical	5	5	-	1	2	-	2	-	-	-	-	-
(iv)	Operating staff training		10	14	-	-	-	-	-	2	2	4	2	4

7.4.2 Local Training:

After dispatching the DMUs to Sri Lanka, the manufacturers' staff should jointly work with SLR staff for knowledge sharing with hands-on experience as follows,

It is expected from the representative staff to give fullest cooperation in sharing of knowledge with SLR staff during warranty period.

Details shall be provided with the bid.

7.5 After sales support

7.5.1 Spare part Support

- (i) The manufacturer shall guarantee to undertake to supply the spare parts necessary for the maintenance of the DMU for 25 years.
- (ii) The manufacturer shall provide a priced spare parts catalogue along with the supply of DMU, and thereafter update it annually and at intervals as per SLR's request.
- (iii) Part numbers and the names and addresses of each manufacturer of the spare parts necessary for the maintenance of the DMU, shall be provided by the DMU supplier with

the DMU, so that the Sri Lanka Railways could source those spare parts directly from the original manufacturers.

- (iv) For major items, supplier's consent to allow original equipment manufacturers to supply spare parts directly to SLR and as well as original equipment manufacturers obligation to supply spare parts directly to SLR shall be proved through the letters of;
 - (a) Letter of giving supplier's consent to each original equipment manufacturers in writing with copy to SLR to supply their products directly to SLR
 - (b) Original equipment manufacturers' consent to supply spare parts directly to the SLR (not through supplier, DMU manufacturer or local agent)
 - (c) Original equipment manufacturers' consent to supply spare parts, repair kits, special tools and sub components of the major items

These letters shall be submitted along with the bids. The major items are Diesel engine and its related components, Air Compressor, Brake system, Suspension, Semi Permanent coupler, Traction Alternator, traction motor, Train control and monitoring system, Propulsion/traction Control system, AC units and Automatic Doors.

- (v) The bidder shall be responsible for fulfilling all the requirements stipulated in this document, even for those parts sourced from other Companies, by the bidder in order to manufacture DMUs.
- (vi) All the necessary tools for the maintenance and major overhauls must be supplied along with the DMU. A general tool kit shall be provided for each MCG.
- (vii) One complete set of tools, gauges, jigs & fixtures required for major overhaul of diesel engine, electrical traction machines and major components shall be provided.
- (viii) Two complete sets of tools and gauges required for maintenance of diesel engine, electrical traction machines and major components shall be provided.
- (ix) With the bid the list of the tool and tool kits (for above (v) to (vii)) to be supplied shall be provided.
- (x) A list of consumable spares and recommended critical materials required for maintenance and major overhauls during the warranty period with the prices shall be provided separately with the bid. (Schedule 3)

7.5.2 Maintenance during warranty period

- (i) The bidder/manufacturer/local agent shall be responsible for ensuring the smooth operation of the machine against any faulty design, inferior material and bad workmanship by sourcing spares, components throughout the warranty period.
- (ii) The bidder/manufacturer/local agent shall be responsible to carry out the preventive maintenance activities such as necessary services and overhauls of the Diesel Engine during the warranty period of two (02) years and Train Control and monitoring system including propulsion/Traction control system, Driver/Guard cab and coach Air conditioning system and Automatic Door control system during their warranty period of five (05) years as specified in the manufacturer's maintenance catalogues.
- (iii) Cost of these services and maintenance activities mentioned in above (ii), shall be included into the bid price of each item in Price Schedule 1 and 2. Cost of materials required for these services shall be borne by SLR.

- (iv) Necessary spare parts and materials required for fulfill the services specified in above point (ii), will be provided by SLR after procuring necessary items from OEM or OES.
- (v) The bidder/manufacturer/local agent shall maintain a technical assistance with trained staff especially including engineers, supervisors and skilled technicians. The maintenance team of the bidder/manufacturer/local agent will be allowed to use existing SLR maintenance facilities and as well as unskilled and semi-skilled staff available at each maintenance facility at SLR. This work will be carried out under the supervision of engineering and technical staff of Sri Lanka Railways. Maintenance staff from bidder/manufacturer/local agent shall comprise at least 30% from the manufacturer those who have sufficient training and experience related to the DMUs.

7.5.3 Maintenance after completing the warranty period

- (i) Bidder shall submit written consent to the purchaser confirming their willingness to attend annual maintenance if requested after completing the warranty period.
- (ii) Bidder shall submit the work to be carried out and their terms and conditions of the draft Annual Maintenance Agreement with the bid.
- (iii) Following maintenance activities to be included to the scope
 - (a) necessary services and overhauls of the machine as specified in the manufacturer's maintenance catalogues
 - (b) Corrective maintenance such as repairs and defective or prone to defective component replacement, adjustment or calibration of it.
- (iv) The bidder/ manufacturer shall forward a quotation for the Annual Maintenance of the following items

1	Diesel Engine	for the third year
2	Train Control and monitoring system including propulsion/Traction control system, Driver/Guard cab and coach Air conditioning system and Automatic Door control system	for the sixth year from the date of commissioning

Price shall include cost for the material and spare parts separately.

- (v) The bidder/manufacturer/local agent shall maintain a technical assistance with trained staff especially including engineers, supervisors and skilled technicians. The maintenance team of the bidder/manufacturer/local agent will be allowed to use existing SLR maintenance facilities and as well as unskilled and semi-skilled staff available at each maintenance facility at SLR. This work will be carried out under the supervision of engineering and technical staff of Sri Lanka Railways.
- (vi) Purchaser shall enter the Annual Maintenance Agreement with the supplier after the completion of warranty period or carry out the recommended services and corrective maintenance activities by own at his discretion.

7.6 Standards, Standardization and Interchangeability

Except for those special bolts and nuts of the diesel engine and other major equipment, all the other bolts, nuts, washers and screws shall be of metric standards. Quality of components shall be in accordance with the relevant British Standard, UIC, AAR or equivalent.

The Brake System couplers shall be compatible with the existing Air Brake Coaches of Sri Lanka Railways. Brake system couplers shall be in accordance to Sketch No. DP 1621/00, DP 1622/00 and DL 643/03

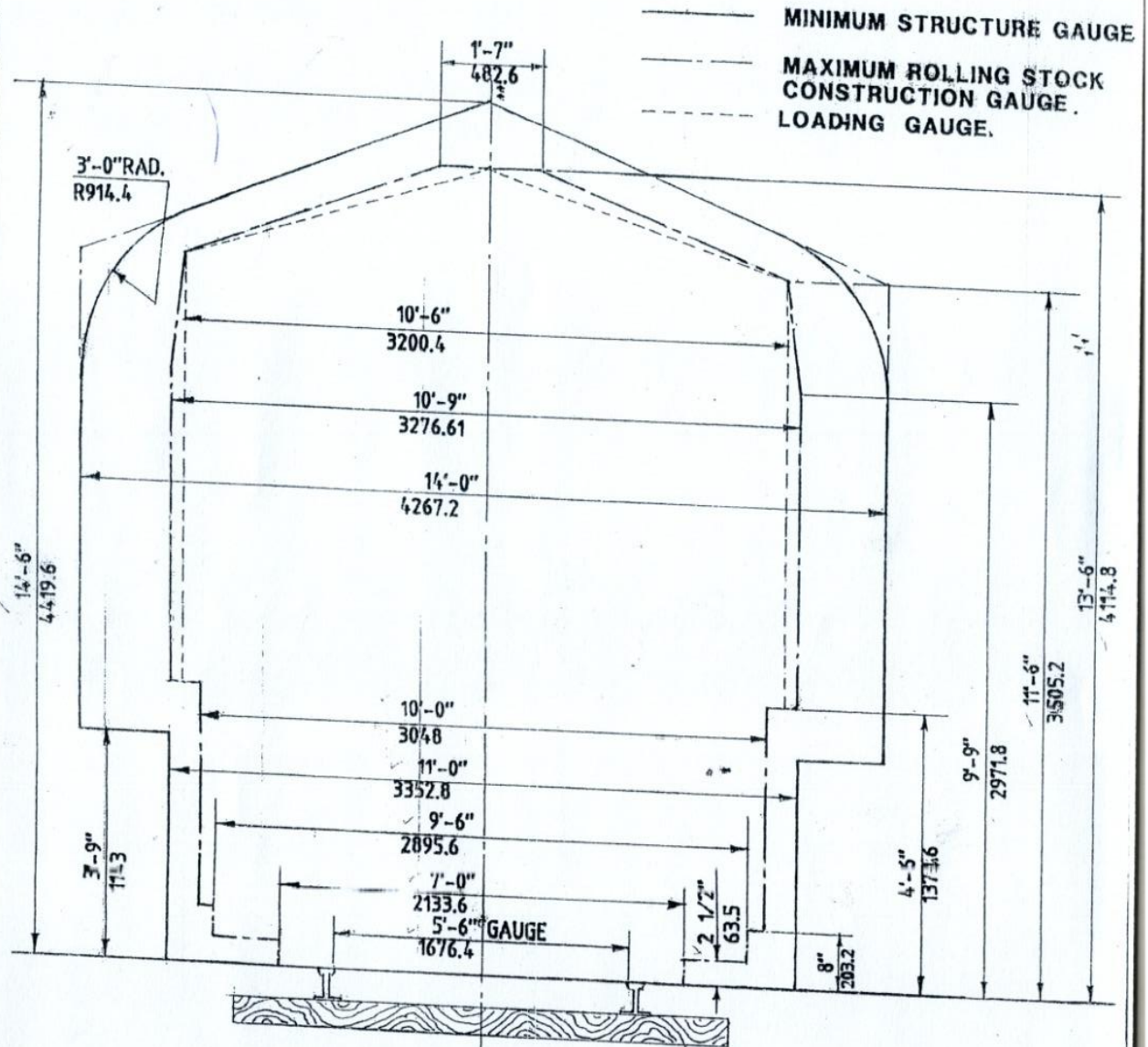
Similar parts and sub components of the DMU shall be interchangeable with each other in order to minimize maintenance difficulties.

8 Note:-

- It is required to provide the relevant certificates to prove the experience mentioned in Clause
- Relevant documents are required to prove that the material used for interior of the coach is non-inflammable

4. Drawings

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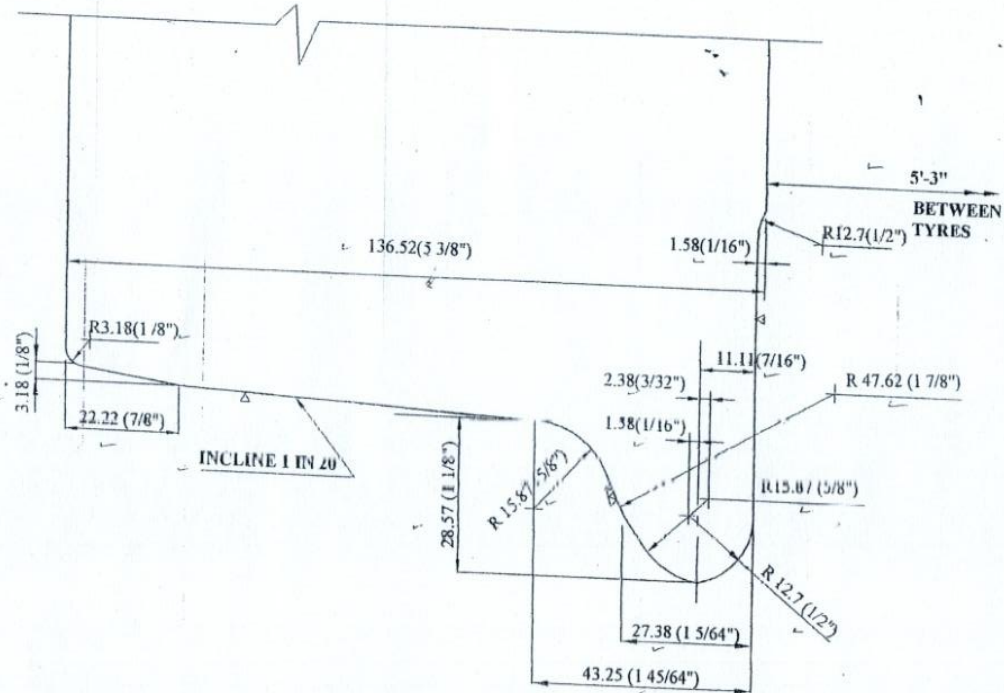
**NOTE:-**

1. FOR VEHICLES NOT EXCEEDING 61'-0" (18592.8mm) OVER BODY 63'-0" (19202.4mm) OVER BUFFERS AND 42'-2" (12852.4mm) CENTRES OF BOGIES.
2. FOR K.V. AND U.P.R. MAXIMUM ROLLING STOCK CONSTRUCTION GAUGE SEE S 1366/00
3. DIMENSIONS SHOWN IN IMPERIAL & METRIC

REDRAWN ON 31.01.2002

SUPERSEDES DRG. NO.:- D 11, S.613/02	DRG. NO	REFERENCE DRGS.
SUPERSEDES BY DRG. NO.:-		
CEYLON GOVERNMENT RAILWAY - MECHANICAL DEPARTMENT		
DRAWN BY:- P. Uduwasaka	ALTER. SLIP No	TITLE:- MAXIMUM ROLLING STOCK CONSTRUCTION GAUGE
CHECKED BY:- P. Uduwasaka		SUB-DIVISION:- BROAD GAUGE
APPROVED (MED):-		DIVISION:- PLANT AND MACHINERY
APPROVED (CME):-		
INKED BY:- P. Uduwasaka		
DATE:-		

6-49

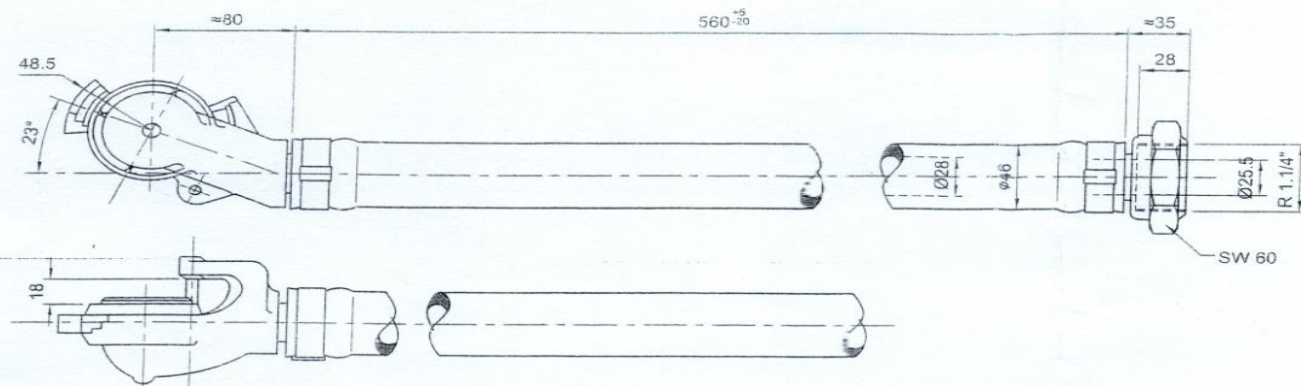


MATERIAL-

GRADE B6 E STEEL TO BSS 5892 Pt. 4 OF 1992

☐ ROUGH MACH D	☐ FINISH MACH D	☐ TYPE FINISH MACH D	☐ GROUND	☐ HARDENED & GROUND	☐ FIELD OR ROUGH GROUND	☐ CASE HARD D & GROUND	☐ SKIN HARDENED				
SUPERSEDES DRG. NO.											
SUPERSEDED BY DRG. NO.											
SRILANKA RAILWAYS - MECHANICAL DEPARTMENT								DRG. NO.	REFERENCE DRGS.		
DRAWN BY: <i>P. Uthman</i>		ALT. SLIP NO		TITLE:		LOCO TYRE PROFILE					
CHECKED BY: <i>P. N. S. I. Jones</i>				SUB-DIVISION:		WHEELS & AXLES					
APPROVED (MED): <i>P. N. S. I. Jones</i>				DIVISION:		LOCOMOTIVES					
APPROVED (CME): <i>P. N. S. I. Jones</i>											
INKED BY:											

SUPERSEDED DRG. NO.			
SUPERSEDED BY DRG. NO.		DRG. NO.	REFERENCE DRGS.
SRILANKA RAILWAY AUTHORITY			
DRAWN BY: <i>Ch. 72</i>	ALT. SLIP No	TITLE: OVERALL TYRE PROFILE GAUGE (CONTOUR A)	
CHECKED BY: <i>S. Udumaka</i>	D T8/42	SUB-DIVISION : LOCO DIESEL RAIL CARS BROAD GAUGE	
APPROVED (ME): <i>[Signature]</i>		DIVISION : GAUGES	
APPROVED (CNE): <i>[Signature]</i>			
INKED BY:		SCALE:	
DATE: 25/1/2018		DRAWER NO. 37	D.NO.: H207/01

**NOTE :-**

DATE OF MANUFACTURE, MANUFACTURE'S SYMBOL AND OWNER'S MARK
SHOULD BE INDICATED ON THE HOSE.

SERVICE PRESSURE MAX.. - 11 bar (air)

TEST PRESSURE MAX.. - 14 bar (air)

SMALLEST PERMISSIBLE RADIUS OF CURVATURE R = 140

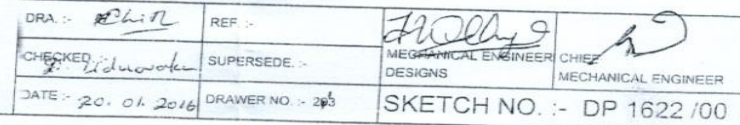
TEMPERATURE RANGE - 30°C TO 80°C

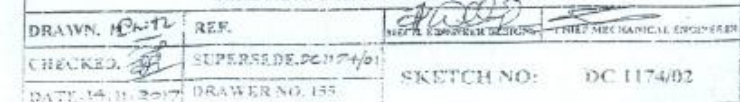


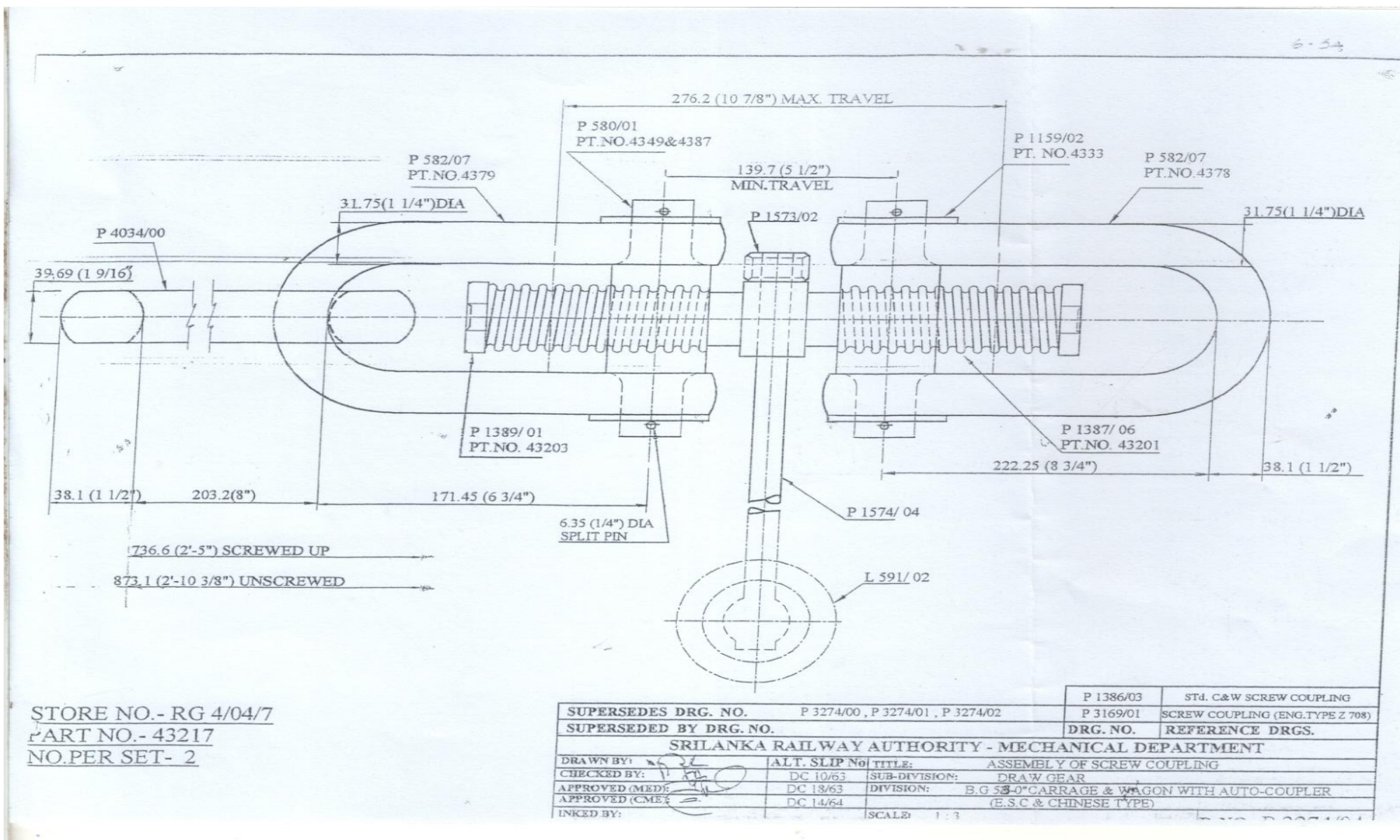
BRAKE COUPLING 1 INCH X R1.1/4"

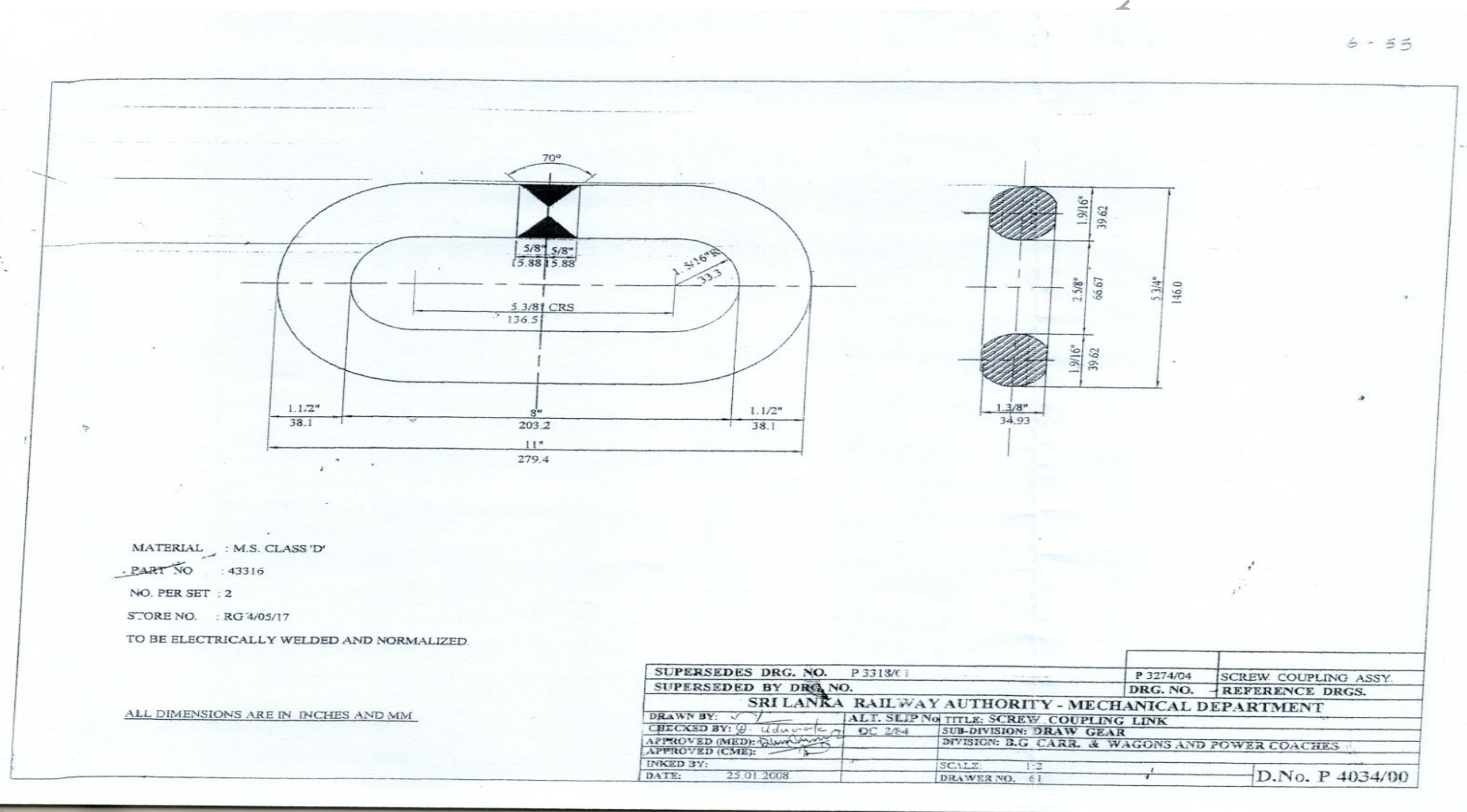
SRI LANKA RAILWAYS
CHIEF MECHANICAL ENGINEER'S DEPARTMENT

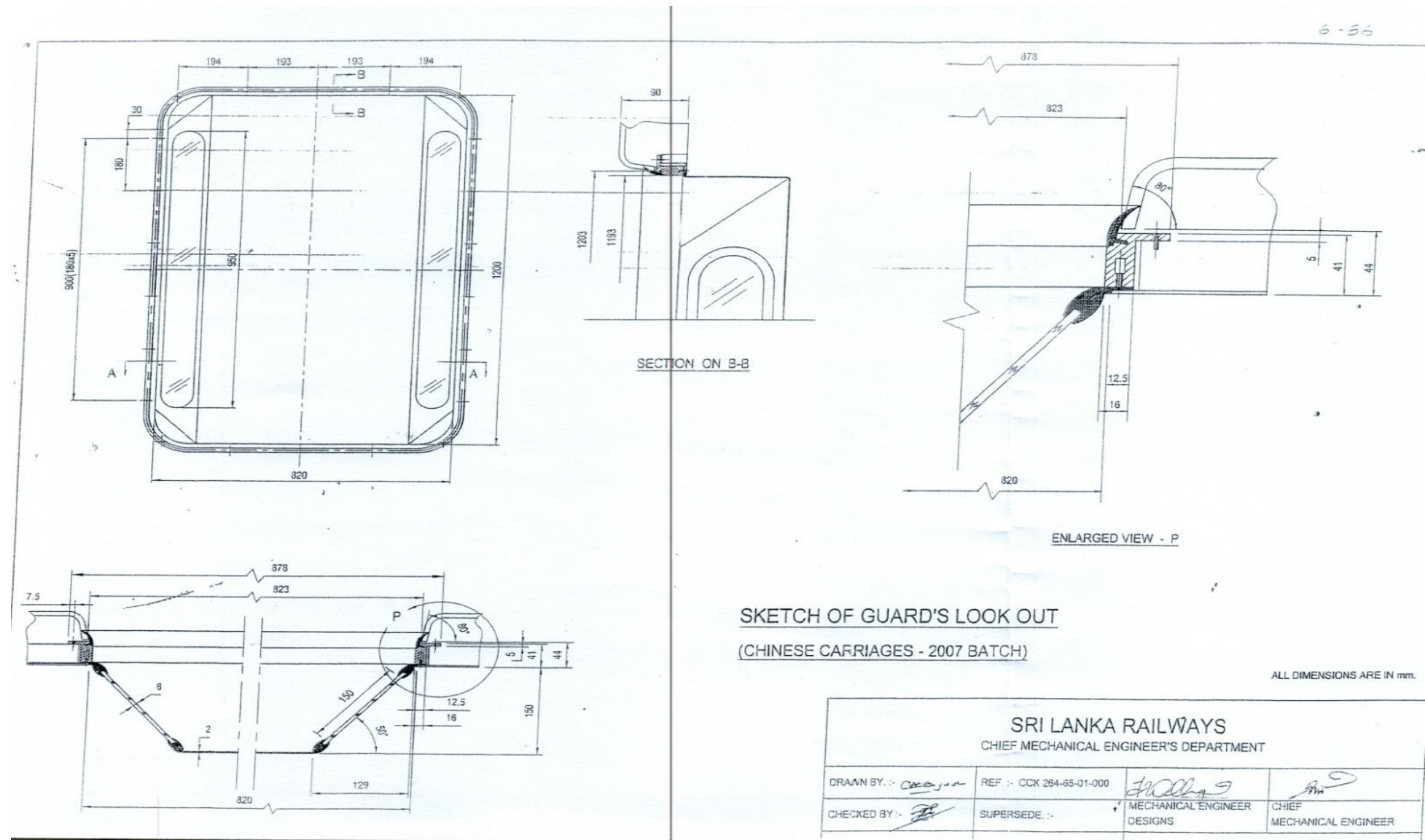
DRA. :- <i>M. W. J. L.</i>	REF. :-	<i>[Signature]</i> MECHANICAL ENGINEER DESIGNS	<i>[Signature]</i> CHIEF MECHANICAL ENGINEER
CHECKED :- <i>[Signature]</i>	SUPERSEDE. :-		
DATE :- <i>20.01.2016</i>	DRAWER NO. :- <i>203</i>	SKETCH NO. :- DP 1621/00	

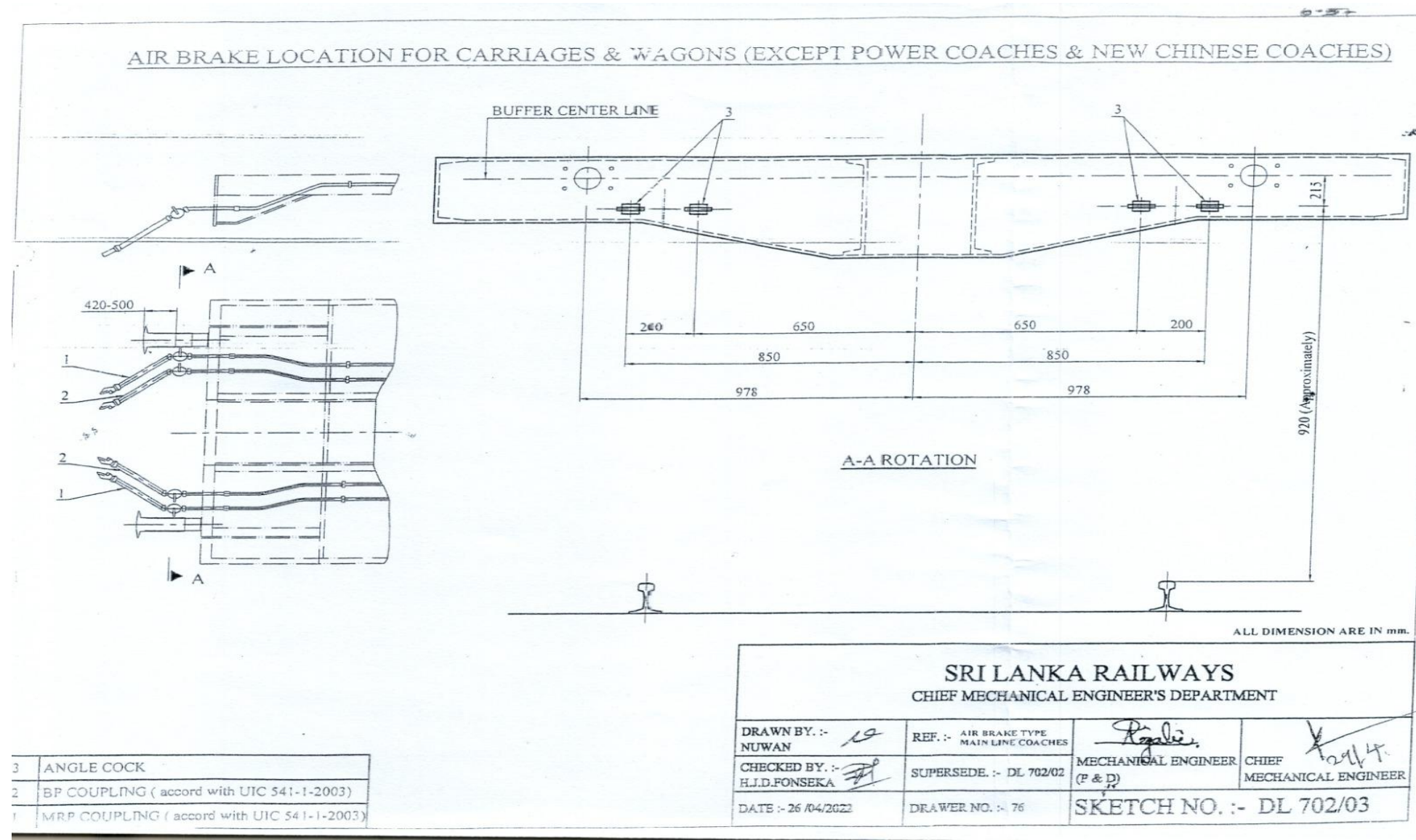


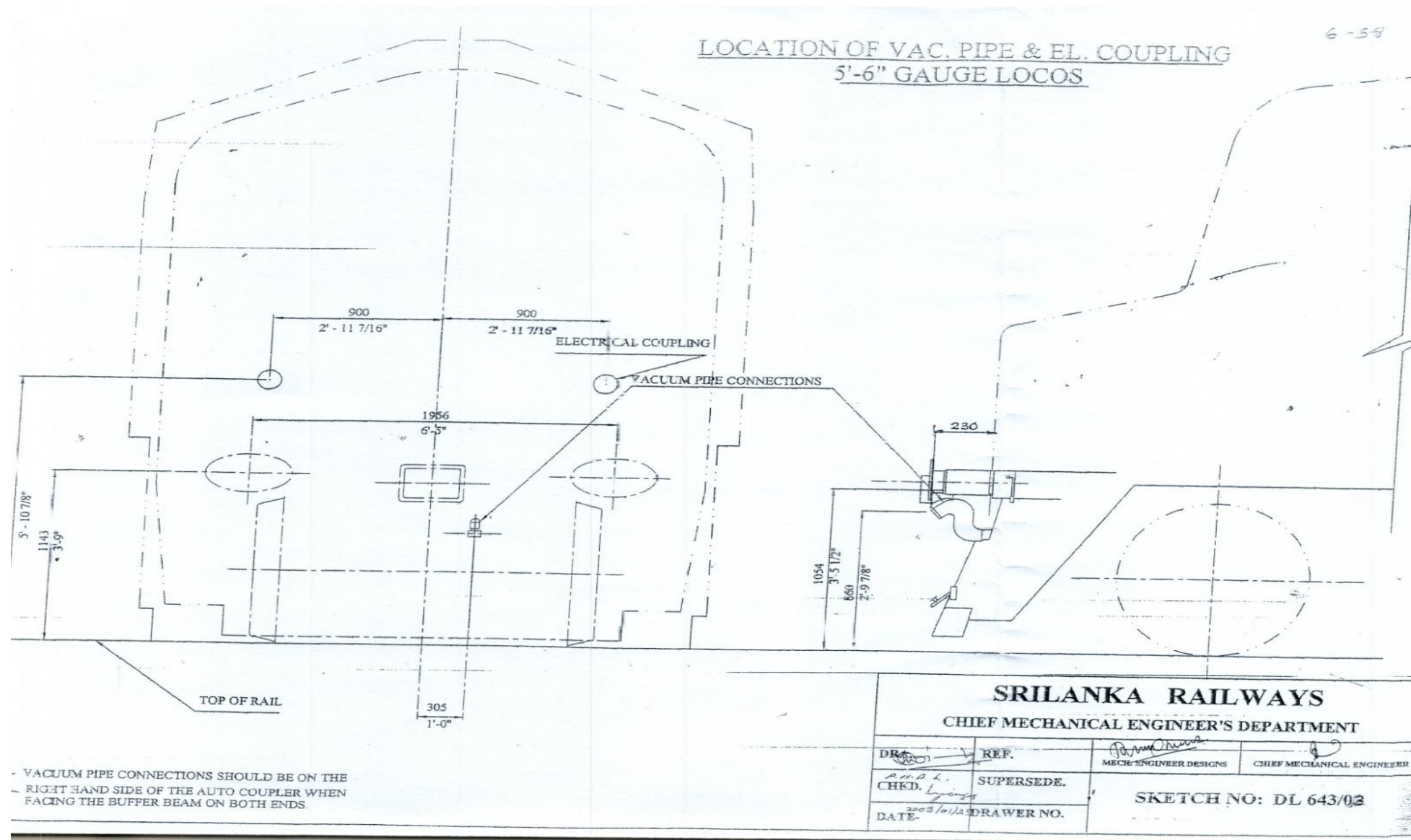












5. Annexures

No Description

- | | |
|--|--|
| <ol style="list-style-type: none"> 1. Coupler 2. Driver Console 3. Driver and Assistant Seat 4. Electric apparatus cabinet 5. Dynamic Braking 6. Front gearbox 7. Starting generator/ Motor 8. Main generator 9. Diesel engine 10. Air dryer 11. Coupling transmission box 12. Ventilators (Blowers) 13. Transmission oil radiator 14. Lavatory 15. Brake valve rack 16. Air compressor 17. Auxiliary power system equipment and components 18. Main rectifier cabinet 19. Hand brake 20. Coupler and draft gear 21. Bogie 22. Fuel tank and battery box 23. Rubber vestibule 24. Roof ventilator 25. Diesel engine cooling water radiator 26. Exhaust device 27. Head lamp 28. Electric wiper 29. Loudspeaker system | <ol style="list-style-type: none"> 30. Air Pipe 31. Passing beam headlamp and fog lamp 32. Air Horn 33. Distributing valve 34. Automatic brake valve 35. Independent brake valve 36. Steel Structure and Car Body 37. Interior Equipment 38. Brake Cylinders 39. Air Conditioning System 40. Traction Motors 41. Motor Suspension Unit 42. Auxiliary electrical machines 43. Power and control cables 44. Automatic doors 45. Passenger Coach lights, cab lights 46. All equipment and components related to following <ol style="list-style-type: none"> i) Train Control and management system <ol style="list-style-type: none"> (a) Propulsion/ Traction Control (b) Air Condition (c) Automatic Door Control (d) PIS ii) Toilet Flushing System iii) Auto Visual Display System iv) Any other control equipment 47. Jumper couplers 48. Traction Power System Equipment and Components 49. Event recorder and vigilance system 50. Batteries |
|--|--|

Section 7 - General Conditions of Contract

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1. Definitions

1.1 The following words and expressions shall have the meanings hereby assigned to them:

- (a) "Contract" means the Agreement entered into between the Purchaser and the Supplier, together with the Contract Documents referred to therein, including all attachments, appendixes, and all documents incorporated by reference therein.
- (b) "Contract Documents" means the documents listed in the Agreement, including any amendments thereto.
- (c) "Contract Price" means the price payable to the Supplier as specified in the Agreement, subject to such additions and adjustments thereto or deductions therefrom, as may be made pursuant to the Contract.
- (d) "Day" means calendar day.
- (e) "Delivery" means the transfer of the Goods from the Supplier to the Purchaser in accordance with the terms and conditions set forth in the Contract.
- (f) "Completion" means the fulfillment of the Related Services by the Supplier in accordance with the terms and conditions set forth in the Contract.
- (g) "Eligible Countries" means the countries and territories eligible as listed in Section 5.
- (h) "GCC" means the General Conditions of Contract.
- (i) "Goods" means all of the commodities, raw material, machinery and equipment, and/or other materials that the Supplier is required to supply to the Purchaser under the Contract.
- (j) "Purchaser's Country" is the country specified in the Special Conditions of Contract (SCC).
- (k) "Purchaser" means the entity purchasing the Goods and Related Services, as specified in the SCC.
- (l) "Related Services" means the services incidental to the supply of the goods, such as insurance, installation, training and initial maintenance and other similar obligations of the Supplier under the Contract.
- (m) "SCC" means the Special Conditions of Contract.
- (n) "Subcontractor" means any natural person, private or government entity, or a combination of the above, including its legal successors or permitted assigns, to whom any part of the Goods to be supplied or execution of any part of the Related Services is subcontracted by the Supplier.
- (o) "Supplier" means the natural person, private or government entity, or a combination of the above, whose bid to perform the

Contract has been accepted by the Purchaser and is named as such in the Agreement, and includes the legal successors or permitted assigns of the Supplier.

(p) "ADB" is the Asian Development Bank.

(q) "The Site," where applicable, means the place named in the SCC.

2. Contract Documents

2.1 Subject to the order of precedence set forth in the Agreement, all documents forming the Contract (and all parts thereof) are intended to be correlative, complementary, and mutually explanatory.

3. Fraud and Corruption

3.1 ADB's Anticorruption Policy requires Borrowers (including beneficiaries of ADB-financed activity), as well as Bidders, Suppliers, and Contractors under ADB-financed contracts, observe the highest standard of ethics during the procurement and execution of such contracts. In pursuance of this policy, ADB

(a) Defines, for the purposes of this provision, the terms set forth below as follows:

(i) "Corrupt practice" means the offering, giving, receiving, or soliciting, directly or indirectly, anything of value to influence improperly the actions of another party;

(ii) "fraudulent practice" means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;

(iii) "Coercive practice" means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of the party to influence improperly the actions of a party;

(iv) "Collusive practice" means an arrangement between two or more parties designed to achieve an improper purpose, including influencing improperly the actions of another party;

(v) "obstructive practice" means (a) deliberately destroying, falsifying, altering, or concealing of evidence material to an ADB investigation; (b) making false statements to investigators in order to materially impede an ADB investigation; (c) failing to comply with requests to provide information, documents, or records in connection with an Office of Anticorruption and Integrity (OAI) investigation; (d) threatening, harassing, or intimidating any party to prevent it from disclosing its knowledge of matters relevant to the investigation or from pursuing the investigation; or (e) materially impeding ADB's contractual rights of audit or access to information; and

(vi) "integrity violation" is any act which violates ADB's Anticorruption Policy, including (i) to (v) above and the following: abuse, conflict of interest, violations of ADB sanctions, retaliation against whistleblowers or witnesses, and other violations of ADB's Anticorruption Policy,

including failure to adhere to the highest ethical standard.

- (b) will reject a proposal for award if it determines that the Bidder recommended for award has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations in competing for the Contract;
- (c) will cancel the portion of the financing allocated to a contract if it determines at any time that representatives of the borrower or of a beneficiary of ADB-financing engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations during the procurement or the execution of that contract, without the borrower having taken timely and appropriate action satisfactory to ADB to remedy the situation; and
- (d) will impose remedial actions on a firm or an individual, at any time, in accordance with ADB's Anticorruption Policy and Integrity Principles and Guidelines (both as amended from time to time), including declaring ineligible, either indefinitely or for a stated period of time, to participate¹ in ADB-financed, -administered, or -supported activities or to benefit from an ADB-financed, -administered, or -supported contract, financially or otherwise, if it at any time determines that the firm or individual has, directly or through an agent, engaged in corrupt, fraudulent, collusive, coercive, or obstructive practices or other integrity violations.

- 3.2 The Supplier shall permit ADB to inspect the Supplier's accounts and records relating to the performance of the Supplier and to have them audited by auditors appointed by ADB, if so required by ADB.

4. Interpretation

- 4.1 If the context so requires it, singular means plural and vice versa.

4.2 Incoterms

- (a) The meaning of any trade term and the rights and obligations of parties thereunder shall be as prescribed by Incoterms.
- (b) EXW, CIF, CIP, and other similar terms, shall be governed by the rules prescribed in the current edition of Incoterms, published by the International Chamber of Commerce at the date of the Invitation for Bids or as specified in the SCC.

4.3 Entire Agreement

The Contract constitutes the entire agreement between the Purchaser and the Supplier and supersedes all communications, negotiations, and agreements (whether written or oral) of parties with respect thereto made prior to the date of Contract.

¹ Whether as a Contractor, Subcontractor, Consultant, Manufacturer or Supplier, or Service Provider; or in any other capacity (different names are used depending on the particular Bidding Document).

4.4 Amendment

No amendment or other variation of the Contract shall be valid unless it is in writing, is dated, expressly refers to the Contract, and is signed by a duly authorized representative of each party thereto.

4.5 Nonwaiver

- (a) Subject to GCC Subclause 4.5(b) below, no relaxation, forbearance, delay, or indulgence by either party in enforcing any of the terms and conditions of the Contract or the granting of time by either party to the other shall prejudice, affect, or restrict the rights of that party under the Contract, neither shall any waiver by either party of any breach of Contract operate as waiver of any subsequent or continuing breach of Contract.
- (b) Any waiver of a party's rights, powers, or remedies under the Contract must be in writing, dated, and signed by an authorized representative of the party granting such waiver, and must specify the right and the extent to which it is being waived.

4.6 Severability

If any provision or condition of the Contract is prohibited or rendered invalid or unenforceable, such prohibition, invalidity or unenforceability shall not affect the validity or enforceability of any other provisions and conditions of the Contract.

5. Language

- 5.1 The Contract as well as all correspondence and documents relating to the Contract exchanged by the Supplier and the Purchaser, shall be written in the language specified in the SCC. Supporting documents and printed literature that are part of the Contract may be in another language provided they are accompanied by an accurate translation of the relevant passages in the language specified in the SCC, in which case, for purposes of interpretation of the Contract, this translation shall govern.
- 5.2 The Supplier shall bear all costs of translation to the governing language and all risks of the accuracy of such translation.

6. Joint Venture

- 6.1 If the Supplier is a Joint Venture all of the parties shall be jointly and severally liable to the Purchaser for the fulfillment of the provisions of the Contract and shall designate one party to act as a leader with authority to bind the Joint Venture. The composition or the constitution of the Joint Venture shall not be altered without the prior consent of the Purchaser.

7. Eligibility

- 7.1 The Supplier and its Subcontractors shall have the nationality of an eligible country. A Supplier or Subcontractor shall be deemed to have the nationality of a country if it is a citizen or constituted, incorporated, or registered, and operates in conformity with the provisions of the laws of that country.

- 7.2 All Goods and Related Services to be supplied under the Contract and financed by ADB shall have their origin in Eligible Countries. For the purpose of this clause, "country of origin" means the country where the goods have been grown, mined, cultivated, produced, manufactured, or processed; or through manufacture, processing, or assembly, another commercially recognized article results that differs substantially in its basic characteristics from its imported components.
- 8. Notices**
- 8.1 Any Notice given by one party to the other pursuant to the Contract shall be in writing to the address specified in the SCC. The term "in writing" means communicated in written form with proof of receipt.
- 8.2 A Notice shall be effective when delivered or on the Notice's effective date, whichever is later.
- 9. Governing Law**
- 9.1 The Contract shall be governed by and interpreted in accordance with the laws of the Purchaser's country, unless otherwise specified in the SCC.
- 10. Settlement of Disputes**
- 10.1 The Purchaser and the Supplier shall make every effort to resolve amicably by direct informal negotiation any disagreement or dispute arising between them under or in connection with the Contract.
- 10.2 If the parties fail to resolve such a dispute or difference by mutual consultation within 28 days from the commencement of such consultation, either party may require that the dispute be referred for resolution to the formal mechanisms specified in the SCC.
- 11. Scope of Supply**
- 11.1 Subject to the SCC, the Goods and Related Services to be supplied shall be as specified in Section 6 (Schedule of Supply).
- 11.2 Unless otherwise stipulated in the Contract, the Scope of Supply shall include all such items not specifically mentioned in the Contract but that can be reasonably inferred from the Contract as being required for attaining Delivery and Completion of the Goods and Related Services as if such items were expressly mentioned in the Contract.
- 12. Delivery**
- 12.1 Subject to GCC Subclause 33.1, the Delivery of the Goods and Completion of the Related Services shall be in accordance with the Delivery and Completion Schedule specified in the Section 6 (Schedule of Supply). The details of shipping and other documents to be furnished by the Supplier are specified in the SCC.
- 13. Supplier's Responsibilities**
- 13.1 The Supplier shall supply all the Goods and Related Services included in the Scope of Supply in accordance with GCC Clause 11, and the Delivery and Completion Schedule, as per GCC Clause 12.
- 14. Purchaser's Responsibilities**
- 14.1 Whenever the supply of Goods and Related Services requires that the Supplier obtain permits, approvals, and import and other licenses from local public authorities, the Purchaser shall, if so required by the Supplier, make its best effort to assist the Supplier in complying with such requirements in a timely and expeditious manner.

- 14.2 The Purchaser shall pay all costs involved in the performance of its responsibilities, in accordance with GCC Subclause 14.1.
- 15. Contract Price**
- 15.1 The Contract Price shall be as specified in the Agreement subject to any additions and adjustments thereto, or deductions therefrom, as may be made pursuant to the Contract.
- 15.2 Prices charged by the Supplier for the Goods delivered and the Related Services performed under the Contract shall not vary from the prices quoted by the Supplier in its bid, with the exception of any price adjustments authorized in the SCC.
- 16. Terms of Payment**
- 16.1 The Contract Price shall be paid as specified in the SCC.
- 16.2 The Supplier's request for payment shall be made to the Purchaser in writing, accompanied by invoices describing, as appropriate, the Goods delivered and Related Services performed, and by the documents submitted pursuant to GCC Clause 12 and upon fulfillment of all the obligations stipulated in the Contract.
- 16.3 Payments shall be made promptly by the Purchaser, no later than 60 days after submission of an invoice or request for payment by the Supplier, and the Purchaser has accepted it.
- 16.4 The currency or currencies in which payments shall be made to the Supplier under this Contract shall be specified in the SCC.
- 17. Taxes and Duties**
- 17.1 For goods supplied from outside the Purchaser's country, the Supplier shall be entirely responsible for all taxes, stamp duties, license fees, and other such levies imposed outside the Purchaser's country.
- 17.2 For goods supplied from within the Purchaser's country, the Supplier shall be entirely responsible for all taxes, duties, license fees, etc., incurred until delivery of the contracted Goods to the Purchaser.
- 17.3 If any tax exemptions, reductions, allowances or privileges may be available to the Supplier in the Purchaser's Country, the Purchaser shall use its best efforts to enable the Supplier to benefit from any such tax savings to the maximum allowable extent.
- 18. Performance Security**
- 18.1 The Supplier shall, within 28 days of the notification of Contract award, provide a Performance Security for the due performance of the Contract in the amounts and currencies specified in the SCC.
- 18.2 The proceeds of the Performance Security shall be payable to the Purchaser as compensation for any loss resulting from the Supplier's failure to complete its obligations under the Contract.
- 18.3 The Performance Security shall be denominated in the currencies of the Contract, or in a freely convertible currency acceptable to the Purchaser, and shall be in one of the forms stipulated by the Purchaser in the SCC, or in another form acceptable to the Purchaser.

- 18.4 The Performance Security shall be discharged by the Purchaser and returned to the Supplier not later than 28 days following the date of completion of the Supplier's performance obligations under the Contract, including any warranty obligations, unless specified otherwise in the SCC.
- 19. Copyright**
- 19.1 The copyright in all drawings, documents, and other materials containing data and information furnished to the Purchaser by the Supplier herein shall remain vested in the Supplier, or, if they are furnished to the Purchaser directly or through the Supplier by any third party, including suppliers of materials, the copyright in such materials shall remain vested in such third party.
- 20. Confidential Information**
- 20.1 The Purchaser and the Supplier shall keep confidential and shall not, without the written consent of the other party hereto, divulge to any third party any documents, data, or other information furnished directly or indirectly by the other party hereto in connection with the Contract, whether such information has been furnished prior to, during or following completion or termination of the Contract. Notwithstanding the above, the Supplier may furnish to its Subcontractor such documents, data, and other information it receives from the Purchaser to the extent required for the Subcontractor to perform its work under the Contract, in which event the Supplier shall obtain from such Subcontractor an undertaking of confidentiality similar to that imposed on the Supplier under GCC Clause 20.
- 20.2 The Purchaser shall not use such documents, data, and other information received from the Supplier for any purposes unrelated to the Contract. Similarly, the Supplier shall not use such documents, data, and other information received from the Purchaser for any purpose other than the design, procurement, or other work and services required for the performance of the Contract.
- 20.3 The obligation of a party under GCC Subclauses 20.1 and 20.2 above, however, shall not apply to information that
- (a) the Purchaser or Supplier needs to share with ADB or other institutions participating in the financing of the Contract;
 - (b) now or hereafter enters the public domain through no fault of that party;
 - (c) can be proven to have been possessed by that party at the time of disclosure and which was not previously obtained, directly or indirectly, from the other party; or
 - (d) Otherwise lawfully becomes available to that party from a third party that has no obligation of confidentiality.
- 20.4 The above provisions of GCC Clause 20 shall not in any way modify any undertaking of confidentiality given by either of the parties hereto prior to the date of the Contract in respect of the Supply or any part thereof.

- 20.5 The provisions of GCC Clause 20 shall survive completion or termination, for whatever reason, of the Contract.
- 21. Subcontracting**
- 21.1 The Supplier shall notify the Purchaser in writing of all subcontracts awarded under the Contract if not already specified in the Bid. Subcontracting shall in no event relieve the Supplier from any of its obligations, duties, responsibilities, or liability under the Contract.
- 21.2 Subcontracts shall comply with the provisions of GCC Clauses 3 and 7.
- 22. Specifications and Standards**
- 22.1 Technical Specifications and Drawings
- (a) The Supplier shall ensure that the Goods and Related Services comply with the technical specifications and other provisions of the Contract.
 - (b) The Supplier shall be entitled to disclaim responsibility for any design, data, drawing, specification or other document, or any modification thereof provided or designed by or on behalf of the Purchaser, by giving a notice of such disclaimer to the Purchaser.
 - (c) The Goods and Related Services supplied under this Contract shall conform to the standards mentioned in Section 6 (Schedule of Supply) and, when no applicable standard is mentioned, the standard shall be equivalent or superior to the official standards whose application is appropriate to the country of origin of the Goods.
- 22.2 Wherever references are made in the Contract to codes and standards in accordance with which it shall be executed, the edition or the revised version of such codes and standards shall be those specified in the Section 6 (Schedule of Supply). During Contract execution, any changes in any such codes and standards shall be applied only after approval by the Purchaser and shall be treated in accordance with GCC Clause 33.
- 23. Packing and Documents**
- 23.1 The Supplier shall provide such packing of the Goods as is required to prevent their damage or deterioration during transit to their final destination, as indicated in the Contract. During transit, the packing shall be sufficient to withstand, without limitation, rough handling and exposure to extreme temperatures, salt and precipitation, and open storage. Packing case size and weights shall take into consideration, where appropriate, the remoteness of the final destination of the Goods and the absence of heavy handling facilities at all points in transit.
- 23.2 The packing, marking, and documentation within and outside the packages shall comply strictly with such special requirements as shall be expressly provided for in the Contract, including additional requirements, if any, specified in the SCC, and in any other instructions ordered by the Purchaser.

- 24. Insurance** 24.1 Unless otherwise specified in the SCC, the Goods supplied under the Contract shall be fully insured, in a freely convertible currency from an eligible country, against loss or damage incidental to manufacture or acquisition, transportation, storage, and delivery, in accordance with the applicable Incoterms or in the manner specified in the SCC.
- 25. Transportation** 25.1 Unless otherwise specified in the SCC, obligations for transportation of the Goods shall be in accordance with the Incoterms specified in Section 6 (Schedule of Supply).
- 26. Inspections and Tests**
- 26.1 The Supplier shall at its own expense and at no cost to the Purchaser carry out all such tests and/or inspections of the Goods and Related Services as are specified in Section 6 (Schedule of Supply).
- 26.2 The inspections and tests may be conducted on the premises of the Supplier or its Subcontractor, at point of delivery, and/or at the final destination of the Goods, or in another place in the Purchaser's country as specified in the SCC. Subject to GCC Subclause 26.3, if conducted on the premises of the Supplier or its Subcontractor, all reasonable facilities and assistance, including access to drawings and production data, shall be furnished to the inspectors at no charge to the Purchaser.
- 26.3 The Purchaser or its designated representative shall be entitled to attend the tests and/or inspections referred to in GCC Subclause 26.2, provided that the Purchaser bear all of its own costs and expenses incurred in connection with such attendance including, but not limited to, all traveling and board and lodging expenses.
- 26.4 Whenever the Supplier is ready to carry out any such test and inspection, it shall give a reasonable advance notice, including the place and time, to the Purchaser. The Supplier shall obtain from any relevant third party or manufacturer any necessary permission or consent to enable the Purchaser or its designated representative to attend the test and/or inspection.
- 26.5 The Purchaser may require the Supplier to carry out any test and/or inspection not required by the Contract but deemed necessary to verify that the characteristics and performance of the Goods comply with the technical specifications, codes, and standards under the Contract, provided that the Supplier's reasonable costs and expenses incurred in the carrying out of such test and/or inspection shall be added to the Contract Price. Further, if such test and/or inspection impedes the progress of manufacturing and/or the Supplier's performance of its other obligations under the Contract, due allowance will be made in respect of the Delivery Dates and Completion Dates and the other obligations so affected.
- 26.6 The Supplier shall provide the Purchaser with a report of the results of any such test and/or inspection.
- 26.7 The Purchaser may reject any Goods or any part thereof that fail to pass any test and/or inspection or do not conform to the specifications. The Supplier shall either rectify or replace such rejected Goods or parts thereof or make alterations necessary to meet the specifications at no cost to the Purchaser, and shall repeat

the test and/or inspection, at no cost to the Purchaser, upon giving a notice pursuant to GCC Subclause 26.4.

- 26.8 The Supplier agrees that neither the execution of a test and/or inspection of the Goods or any part thereof, nor the attendance by the Purchaser or its representative, nor the issue of any report pursuant to GCC Subclause 26.6, shall release the Supplier from any warranties or other obligations under the Contract.

27. Liquidated Damages

- 27.1 Except as provided under GCC Clause 32, if the Supplier fails to deliver any or all of the Goods or perform the Related Services within the period specified in the Contract, the Purchaser may without prejudice to all its other remedies under the Contract, deduct from the Contract Price, as liquidated damages, a sum equivalent to the percentage specified in the SCC of the Contract Price for each week or part thereof of delay until actual delivery or performance, up to a maximum deduction of the percentage specified in the SCC. Once the maximum is reached, the Purchaser may terminate the Contract pursuant to GCC Clause 35.

28. Warranty

- 28.1 The Supplier warrants that all the Goods are new, unused, and of the most recent or current models, and that they incorporate all recent improvements in design and materials, unless provided otherwise in the Contract.
- 28.2 Subject to GCC Subclause 22.1, the Supplier further warrants that the Goods shall be free from defects arising from any act or omission of the Supplier or arising from design, materials, and workmanship, under normal use in the conditions prevailing in the country of final destination.
- 28.3 Unless otherwise specified in the SCC, the warranty shall remain valid for 12 months after the Goods, or any portion thereof as the case may be, have been delivered to and accepted at the final destination indicated in the SCC, or for 18 months after the date of shipment or loading in the country of origin, whichever period concludes earlier.
- 28.4 The Purchaser shall give Notice to the Supplier, stating the nature of any such defects together with all available evidence thereof, promptly following the discovery thereof. The Purchaser shall afford all reasonable opportunity for the Supplier to inspect such defects.
- 28.5 Upon receipt of such Notice, the Supplier shall, within the period specified in the SCC, expeditiously repair or replace the defective Goods or parts thereof, at no cost to the Purchaser.
- 28.6 If having been notified, the Supplier fails to remedy the defect within the period specified in the SCC, the Purchaser may proceed to take within a reasonable period such remedial action as may be necessary, at the Supplier's risk and expense and without prejudice to any other rights which the Purchaser may have against the Supplier under the Contract.

29. Patent Indemnity

29.1 The Supplier shall, subject to the Purchaser's compliance with GCC Subclause 29.2, indemnify and hold harmless the Purchaser and its employees and officers from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Purchaser may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract by reason of

- (a) the installation of the Goods by the Supplier or the use of the Goods in the country where the Site is located; and
- (b) The sale in any country of the products produced by the Goods.

Such indemnity shall not cover any use of the Goods or any part thereof other than for the purpose indicated by or to be reasonably inferred from the Contract, neither any infringement resulting from the use of the Goods or any part thereof, or any products produced thereby in association or combination with any other equipment, plant, or materials not supplied by the Supplier, pursuant to the Contract.

29.2 If any proceedings are brought or any claim is made against the Purchaser arising out of the matters referred to in GCC Subclause 29.1, the Purchaser shall promptly give the Supplier a notice thereof, and the Supplier may at its own expense and in the Purchaser's name conduct such proceedings or claim and any negotiations for the settlement of any such proceedings or claim.

29.3 If the Supplier fails to notify the Purchaser within 28 days after receipt of such notice that it intends to conduct any such proceedings or claim, then the Purchaser shall be free to conduct the same on its own behalf.

29.4 The Purchaser shall, at the Supplier's request, afford all available assistance to the Supplier in conducting such proceedings or claim, and shall be reimbursed by the Supplier for all reasonable expenses incurred in so doing.

29.5 The Purchaser shall indemnify and hold harmless the Supplier and its employees, officers, and Subcontractors from and against any and all suits, actions or administrative proceedings, claims, demands, losses, damages, costs, and expenses of any nature, including attorney's fees and expenses, which the Supplier may suffer as a result of any infringement or alleged infringement of any patent, utility model, registered design, trademark, copyright, or other intellectual property right registered or otherwise existing at the date of the Contract arising out of or in connection with any design, data, drawing, specification, or other documents or materials provided or designed by or on behalf of the Purchaser.

- 30. Limitation of Liability**
- 30.1 Except in cases of gross negligence or willful misconduct,
- (a) neither party shall be liable to the other party for any indirect or consequential loss or damage, loss of use, loss of production, or loss of profits or interest costs, provided that this exclusion shall not apply to any obligation of the Supplier to pay liquidated damages to the Purchaser; and
 - (b) the aggregate liability of the Supplier to the Purchaser, whether under the Contract, in tort, or otherwise, shall not exceed the amount specified in the SCC, provided that this limitation shall not apply to the cost of repairing or replacing defective equipment, or to any obligation of the Supplier to indemnify the Purchaser with respect to patent infringement.
- 31. Change in Laws and Regulations**
- 31.1 Unless otherwise specified in the Contract, if after the date of the Invitation for Bids, any law, regulation, ordinance, order or bylaw having the force of law is enacted, promulgated, abrogated, or changed in the place of the Purchaser's country where the Site is located (which shall be deemed to include any change in interpretation or application by the competent authorities) that subsequently affects the Delivery Date and/or the Contract Price, then such Delivery Date and/or Contract Price shall be correspondingly increased or decreased, to the extent that the Supplier has thereby been affected in the performance of any of its obligations under the Contract. Notwithstanding the foregoing, such additional or reduced cost shall not be separately paid or credited if the same has already been accounted for in the price adjustment provisions where applicable, in accordance with GCC Clause 15.
- 32. Force Majeure**
- 32.1 The Supplier shall not be liable for forfeiture of its Performance Security, liquidated damages, or termination for default if and to the extent that its delay in performance or other failure to perform its obligations under the Contract is the result of an event of Force Majeure.
- 32.2 For purposes of this clause, "Force Majeure" means an event or situation beyond the control of the Supplier that is not foreseeable, is unavoidable, and its origin is not due to negligence or lack of care on the part of the Supplier. Such events may include, but not be limited to, acts of the Purchaser in its sovereign capacity, wars or revolutions, fires, floods, epidemics, quarantine restrictions, and freight embargoes.
- 32.3 If a Force Majeure situation arises, the Supplier shall promptly notify the Purchaser in writing of such condition and the cause thereof. Unless otherwise directed by the Purchaser in writing, the Supplier shall continue to perform its obligations under the Contract as far as is reasonably practical, and shall seek all reasonable alternative means for performance not prevented by the Force Majeure event.
- 33. Change Orders and Contract Amendments**
- 33.1 The Purchaser may at any time order the Supplier through Notice in accordance GCC Clause 8, to make changes within the general scope of the Contract in any one or more of the following:

- (a) drawings, designs, or specifications, where Goods to be furnished under the Contract are to be specifically manufactured for the Purchaser;
- (b) the method of shipment or packing;
- (c) the place of delivery; and
- (d) the Related Services to be provided by the Supplier.

33.2 If any such change causes an increase or decrease in the cost of, or the time required for, the Supplier's performance of any provisions under the Contract, an equitable adjustment shall be made in the Contract Price or in the Delivery and Completion Schedule, or both, and the Contract shall accordingly be amended. Any claims by the Supplier for adjustment under this Clause must be asserted within 28 days from the date of the Supplier's receipt of the Purchaser's change order.

33.3 Prices to be charged by the Supplier for any Related Services that might be needed but which were not included in the Contract shall be agreed upon in advance by the parties and shall not exceed the prevailing rates charged to other parties by the Supplier for similar services.

34. Extensions of Time

34.1 If at any time during performance of the Contract, the Supplier or its Subcontractors should encounter conditions impeding timely delivery of the Goods or completion of Related Services pursuant to GCC Clause 12, the Supplier shall promptly notify the Purchaser in writing of the delay, its likely duration, and its cause. As soon as practicable after receipt of the Supplier's notice, the Purchaser shall evaluate the situation and may at its discretion extend the Supplier's time for performance, in which case the extension shall be ratified by the parties by amendment of the Contract.

34.2 Except in case of Force Majeure, as provided under GCC Clause 32, a delay by the Supplier in the performance of its Delivery and Completion obligations shall render the Supplier liable to the imposition of liquidated damages pursuant to GCC Clause 27, unless an extension of time is agreed upon, pursuant to GCC Subclause 34.1.

35. Termination

35.1 Termination for Default

- (a) The Purchaser, without prejudice to any other remedy for breach of Contract, by Notice of default sent to the Supplier, may terminate the Contract in whole or in part,
 - (i) if the Supplier fails to deliver any or all of the Goods within the period specified in the Contract, or within any extension thereof granted by the Purchaser pursuant to GCC Clause 34; or
 - (ii) if the Supplier fails to perform any other obligation under the Contract.

(iii) if the Supplier, in the judgment of the Purchaser has engaged in fraud and corruption, as defined in GCC Clause 3, in competing for or in executing the Contract.

(b) In the event the Purchaser terminates the Contract in whole or in part, pursuant to GCC Clause 35.1(a), the Purchaser may procure, upon such terms and in such manner as it deems appropriate, Goods or Related Services similar to those undelivered or not performed, and the Supplier shall be liable to the Purchaser for any additional costs for such similar Goods or Related Services. However, the Supplier shall continue performance of the Contract to the extent not terminated.

35.2 Termination for Insolvency

The Purchaser may at any time terminate the Contract by giving Notice to the Supplier if the Supplier becomes bankrupt or otherwise insolvent. In such event, termination will be without compensation to the Supplier, provided that such termination will not prejudice or affect any right of action or remedy that has accrued or will accrue thereafter to the Purchaser.

35.3 Termination for Convenience

(a) The Purchaser, by Notice sent to the Supplier, may terminate the Contract, in whole or in part, at any time for its convenience. The Notice of termination shall specify that termination is for the Purchaser's convenience, the extent to which performance of the Supplier under the Contract is terminated, and the date upon which such termination becomes effective.

(b) The Goods that are complete and ready for shipment within 28 days after the Supplier's receipt of the Notice of termination shall be accepted by the Purchaser at the Contract terms and prices. For the remaining Goods, the Purchaser may elect

(i) to have any portion completed and delivered at the Contract terms and prices; and/or

(ii) to cancel the remainder and pay to the Supplier an agreed amount for partially completed Goods and Related Services and for materials and parts previously procured by the Supplier.

36. Assignment

36.1 Neither the Purchaser nor the Supplier shall assign, in whole or in part, their obligations under this Contract, except with prior written consent of the other party.

Section 8 - Special Conditions of Contract

The following Special Conditions of Contract (SCC) shall supplement the General Conditions of Contract (GCC). Whenever there is a conflict, the provisions herein shall prevail over those in the GCC.

GCC 1.1(j)	The Purchaser's country is: Sri Lanka
GCC 1.1(k)	The Purchaser is: Sri Lanka Railways
GCC 3.1	To be replaced with The Government of Sri Lanka requires the Purchaser as well as bidders, suppliers, contractors, and consultants to observe the highest standard of ethics during the procurement and execution of such contracts. (In pursuit of this policy): (i) "Corrupt Practice" means offering, giving, receiving, or soliciting, directly or indirectly, of anything of value to influence the action of a public official in the procurement process or in contract execution; (ii) "Fraudulent Practice" means a misrepresentation or omission of facts in order to influence a procurement process or the execution of a contract; (iii) "Collusive Practice" means a scheme or arrangement between two or more bidders, with or without the knowledge of the Purchaser to establish bid prices at artificial, non-competitive levels; and (iv) "Coercive Practice" means harming or threatening to harm, directly or indirectly, persons or their property to influence their participation in the procurement process or affect the execution of a contract.
GCC 3.2	Not applicable

GCC 4.2 (b)	The version of Inco terms shall be: <u>2010</u>
GCC 5.1	The language shall be: English The language for translation of supporting documents and printed literature is: English
GCC 7.1	Replace The goods supplied under this contract shall conform to Specifications issued with this Bid. Eligible Bidders: a) All bidders shall possess legal rights to supply the Goods under this Contract. b) A bidder shall not have a conflict of interest. All bidders found to have conflict of Interest shall be disqualified. Bidders may be considered to have a conflict of interest with one or more parties in this bidding process, if they submit more than one bid in this bidding process. c) A bidder that is under a declaration of ineligibility at the date of submission of bid or at the date of Contract Award, shall be disqualified.
GCC 7.2	Not applicable
GCC 8.1	For <u>notices</u> , the Purchaser's address shall be: Attention: General Manager, Sri Lanka Railways Address: Olcott Mawatha, Colombo 10. Country: Sri Lanka Telephone: 94 (11) 2431177 or 94(11) 2438078 Fax: 94(11) 2446490 or 94 (11) 2432044 E-mail: gmrslr@sltnet.lk
GCC 9.1	The governing law shall be: The Law of Sri Lanka
GCC 10.2	The formal mechanism for the resolution of disputes shall be: In the case of a dispute between the Purchaser and the Supplier, the dispute shall be settled by arbitration in accordance with the Laws of Sri Lanka as per the Arbitration Act No.11 of 1995 (as amended). Place of arbitration: Colombo, Sri Lanka
GCC 11.1	The Scope of Supply shall be defined in : Section 6, Schedule of Supply. [Note: At the time of awarding the contract, the Purchaser shall specify any change in the scope of

	supply with respect to Section 6 (Schedule of Supply) included in the Bidding Document. Such changes may be due, for instance, if the quantities of Goods are increased or decreased at the time of award.]”
GCC 12.1	Details of shipping and documents to be furnished by the Supplier shall be: For Goods supplied from abroad as per Inco terms FOB Upon shipment, the Supplier shall notify the Purchaser by telex or fax the full details of the shipment, including Contract number, description of Goods, quantity, the vessel, the bill of lading number and date, port of loading, date of shipment, port of discharge, etc. The Supplier shall send the following documents to the Purchaser. (i) Two (2) copies of the Supplier’s invoice showing the description of the Goods, quantity, unit price, and total amount; (ii) A copy of the negotiable, clean, on-board bill of Lading marked “freight prepaid” and two (02) copies of nonnegotiable bill of lading. Upon unloading at destination, the supplier shall send the following documents to the purchaser “Original and two copies of tax and duty payment certificates” (iii) Two (2) copies of the packing list identifying contents of each package; (iv) Manufacturer’s warranty certificate; (v) Inspection certificate issued by General Manager Railways or authorized officer appointed by Ministry of Transport, Highways and Urban Development. (vi) Certificate of origin The Purchaser shall receive the above documents at least one (1) week before arrival of the Goods at the destination port or place of arrival and, if not received, the Supplier will be responsible for any consequent expenses.
GCC 15.2	The price adjustment shall be: Not applicable

GCC 16.1	Payment shall be made as follows:- (i) 75% of the contract price of the goods delivered shall be paid through irrevocable and without recourse Letter of Credit opened in favour of the supplier upon submission of documents specified in GCC Clause 12 of SCC above and in the Letter of Credit. or An advanced payment up to 20% can be considered upon submission of Unconditional Advanced Payment Guarantee through a registered commercial Bank operating in Sri Lanka approved by the Central Bank of Sri Lanka. In such case 55% of the contract price of the goods delivered shall be paid through LC opened upon submission of documents in GCC clause 12.1 of SCC (ii) 20% of the contract price of the goods deliver shall be paid when commissioning is completed and acceptance is given by the purchaser. (iii) 60% of the balance 05% of the Contract Price shall be paid on successful completion of the first two (2) years of Mechanical warranty period and the balance shall be paid on the successful completion of the period of rest of the warranties, after deducting the dues. (iv) The purchaser shall release the payment specified under Clause (iii) above at the request of the supplier, provided the supplier submits an unconditional and irrevocable Bank Guarantee issued through a registered Commercial Bank operating in Sri Lanka approved by the Central Bank of Sri Lanka.
GCC 16.4	The currencies for payments shall be in USD.
GCC 18.1	The Supplier shall provide a Performance Security of 10% percent of the Contract Price. The Performance Security shall be denominated in the following amounts and currencies: The Performance Security shall be denominated in LKR in the form of a Bank Guarantee.

GCC 18.3	The forms of acceptable Performance Security are: The Performance security shall be in the form of a bank guarantee issued by a reputed local bank or internationally reputed bank counter guaranteed by a bank operating in Sri Lanka approved by the central Bank in Sri Lanka as form included in section 9, Contract Forms in the amount of 10% of the contract Price in Sri Lankan currency or in any freely convertible currency in the bid of the successful bidder. The amount shall be decided using the selling exchange rate at 28 days prior to the closing date of the Bid.
GCC 18.4	Discharge of the Performance Security shall take place: 28 days following the data of completion of the supplier's performance obligation under the contract including warranty obligations.
GCC 23.2	The packing, marking, and documentation within and outside the packages shall be: The supplier shall provide such packing of the goods as is required to prevent their damage or deterioration during transit to their final destination which is Colombo Sri Lanka as indicated in the contract.
GCC 25.1	Obligations for transportation of the Goods shall be in accordance with Incoterms 2010.
GCC 26.2	Inspections and tests specified in Section 6 (Schedule of Supply), shall be carried out at the following times or milestones, and places: The bidder & manufacture should provide required coordination and assistance, including access to drawings and furnishing of production data for the inspectors appointed by the Sri Lanka Railways to inspect the process of the manufacturing of DMUs. Such inspectorate shall comprise as follows; (a) Two (02) railway engineers and one (01) material specialist at the initial stage. Period of inspection shall be not less than 10 days excluding traveling. (b) Two (02) railway engineers at a time and in 4 stages. Period of inspection for one stage shall be not less than 10 days excluding traveling. (c) Three (03) railway engineers at the final stage for pre shipment inspection of 1st DMU set. Period of inspection shall be not less than 10 days excluding traveling. (d) Three (03) railway engineers at the final stage for pre shipment inspection of balance four (04) DMU sets. Period of inspection shall be not less than 10 days excluding traveling. The production schedule of each DMU shall be furnished after the approval of drawings to enable to arrange inspection.
GCC 27.1	The applicable rate for liquidated damages for delay shall be: <i>The applicable rate for liquidated damages for delay shall be: 0.5% of the Contract Price per week or part thereof.</i>

GCC 27.1	The maximum amount of liquidated damages shall be: 05 % of the contract price
GCC 28.3	(i) The DMU shall carry a warranty, issued by the Manufacturer , for 5 years, from the date they are commissioned and acceptance given in Sri Lanka, against corrosion taking place on the car body, under frame and the metallic fittings in the DMU. (ii) The DMU shall carry a warranty, issued by the Manufacturer , for 2 Years, from the date they are commissioned and acceptance given in Sri Lanka, against any manufacturing defects, material failure and design faults of mechanical items. (iii) The DMU shall carry a warranty, issued by the Manufacturer , for 5 Years, from the date they are commissioned and acceptance given in Sri Lanka, against any manufacturing defects, material failure and design faults of electrical items. (Propulsion/ Traction and auxiliary control systems and related components/equipment, Electrical and Electronic components fitted to the diesel engines and other auxiliary equipment, power systems and related components/equipment, traction/auxiliary electrical machines, air conditioning and all batteries shall be included to electrical scope). (iv) Any replacing part during warranty shall also be under the effect of warranty throughout the remaining warranty period of relevant DMU. (v) If the normal warranty period is expired during the period of six months from the date of replacement, the warranty of such replacement to be extended further six months from the date of replacement. (vi) If any defect of component or equipment found within the warranty period and the replacement are done after the warranty period, such components or equipment shall be guaranteed for a six month from the date of replacement.
GCC 28.4	(i) Due to manufacturing defects, material failure and design faults occurred within the warranty period, the failure investigation shall arrange according to the following protocol. (ii) When a coach or MCG breakdown, the representative of the Supplier resident in Sri Lanka and SLR shall jointly investigate and establish the course of the breakdown, whether it is due to any manufacturing defect, material failure or design fault. If supplier's representative fails to attend within one week after the written notice, SLR shall reserve the right to consider it as a liability under warranty.

GCC 28.5	(i) The Manufacturer shall be given a period of one (01) month from the day the coaches or MCG are commissioned in Sri Lanka, to rectify any teething problems encountered. The aforesaid payment of compensation is applicable for those manufacturing defects, material failure or design fault encountered after this one (01) month period. (ii) The Manufacturer shall be given a grace period of eight (08) weeks, in extreme case he has to import any spare part for the repairs from countries other than supplier's country, provided the overall availability is above 80% of the DMU. Import and supply of such spares shall be carried out by the supplier themselves. (iii) After commissioning and put into commercial service if some components or system fail supplier shall attend it within two (02) week time if items are commonly available in the market. If component is not readily available, they shall be given four weeks. (iv) The supplier must ensure the availability of all essential items with them to minimize the delays during warranty period. It is expected to stock critical components such as sensors, control cards and auxiliary units make available for early warranty replacement.
GCC 28.6	If the supplier fails to remedy the defects within the period specified in the GCC Clause 28.5(a) ,(b) and (c) of SCC, he shall compensate the Sri Lanka Railways, by paying: • US\$ 250 for an MCG Day lost • US\$ 50 for a coach day lost The amount incurred shall be recovered from the warranty retention money.
Add GCC 28.7	(i) English speaking technical residential staff of the manufacturer who is capable of handling all types of maintenance and repair of the DMU shall be available in Sri Lanka during the warranty periods. (ii) From the date of delivery, the first DMU shall be operated in Sri Lanka for at-least one (01) month. Deficiencies and defects due to design failures identified during this period in operation should be rectified and the necessary design changes and the alterations shall be executed to the balance DMUs before their shipment. The general terms and conditions under the warranty and penalty shall not be affected on this.
GCC 30.1 (b)	The amount of aggregate liability shall be: 100% of the Contract Price

Section 9 - Contract Forms

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Notification of Award

---- on letterhead of the purchaser ----

Letter of Acceptance

..... date.

To: name and address of the supplier

Subject: Notification of Award Contract No.

This is to notify you that your Bid dated date for execution of the name of the contract and identification number, as given in the Bid Data Sheet for the Accepted Contract Amount of the equivalent of amount in words and figures and name of currency, as corrected and modified in accordance with the Instructions to Bidders is hereby accepted by our Agency.

You are requested to furnish the Performance Security within 28 days in accordance with the Conditions of Contract, using for that purpose the Performance Security Form included in Section 9 (Contract Forms) of the Bidding Document.

Authorized Signature:

Name and Title of Signatory:

Name of Agency:

Attachment: Contract Agreement

Contract Agreement

THIS AGREEMENT made on the *[insert date]* day of *[insert month]*, *[insert year]*, between *[insert complete name of the Purchaser]* of *[insert complete address of the purchaser]* (hereinafter "the Purchaser"), of the one part, and *[insert complete name of the supplier]* of *[insert complete address of the supplier]* (hereinafter "the Supplier"), of the other part:

WHEREAS the Purchaser invited Bids for certain Goods and Related Services, viz., *[insert brief description of the goods and related services]* and has accepted a Bid by the Supplier for the supply of those Goods and Related Services in the sum of *[insert currency or currencies and amount of contract price in words and figures]* (hereinafter "the Contract Price").

NOW THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. In this Agreement, words and expressions shall have the same meanings as are respectively assigned to them in the Contract referred to.
2. The following documents shall be deemed to form and be read and construed as part of this Agreement, viz.:
 - (a) The Letter of Acceptance;
 - (b) The Price Bid Submission Sheet and the Price Schedules submitted by the Supplier;
 - (c) The Technical Bid Submission Sheet submitted by the Supplier;
 - (d) The Special Conditions of Contract;
 - (e) The General Conditions of Contract;
 - (f) The Schedule of Supply; and

This Contract shall prevail over all other Contract documents. In the event of any discrepancy or inconsistency within the Contract documents, then the documents shall prevail in the order listed above.

3. In consideration of the payments to be made by the Purchaser to the Supplier as indicated in this Agreement, the Supplier hereby covenants with the Purchaser to provide the Goods and Related Services and to remedy defects therein in conformity in all respects with the provisions of the Contract.
4. The Purchaser hereby covenants to pay the Supplier in consideration of the provision of the Goods and Related Services and the remedying of defects therein, the Contract Price or such other sum as may become payable under the provisions of the Contract at the times and in the manner prescribed by the Contract.

IN WITNESS whereof the parties hereto have caused this Agreement to be executed in accordance with the laws of *[indicated name of country]* on the day, month and year indicated above.

Signed by *[insert authorized signature for the purchaser]* (for the Purchaser)

Signed by *[insert authorized signature for the supplier]* (for the Supplier)

Performance Security

*Bank's name, and address of issuing branch or office*¹

Beneficiary: *insert name and address of the purchaser*

Date: *insert date (as day, month, and year)*

Performance Guarantee No.:

We have been informed that *name of the supplier*. (hereinafter called "the Supplier") has entered into Contract No. *reference number of the contract*. dated with you, for the execution of *name of contract and brief description of goods and related services*. (hereinafter called "the Contract").

Furthermore, we understand that, according to the conditions of the Contract, a performance guarantee is required.

At the request of the Supplier, we *name of the bank*. hereby irrevocably undertake to pay you any sum or sums not exceeding in total an amount of *name of the currency and amount in words*². (*amount in figures*.) such sum being payable in the types and proportions of currencies in which the Contract Price is payable, upon receipt by us of your first demand in writing accompanied by a written statement stating that the Supplier is in breach of its obligation(s) under the Contract, without your needing to prove or to show grounds for your demand or the sum specified therein.

This guarantee shall expire, no later than the day of ,³ and any demand for payment under it must be received by us at this office on or before that date.

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458 , except that subparagraph (ii) of Sub-article 20(a) is hereby excluded.⁴

.....
Signature(s) and seal of bank (where appropriate)

-- Note to Bidder --

If the bank issuing the performance security is located outside the country of the purchaser, it shall have a correspondent local bank or internationally reputed bank counter guaranteed by a bank operating in Sri Lanka approved by the central bank of Sri Lanka, located in the country of the purchaser to make it enforceable.

- ¹ All italicized text is for guidance on how to prepare this demand guarantee and shall be deleted from the final document.
- ² The guarantor shall insert an amount representing the percentage of the contract price specified in the contract and denominated either in the currency(ies) of the contract or a freely convertible currency acceptable to the purchaser.
- ³ Insert the date 28 days after the expected completion date. The purchaser should note that in the event of an extension of the time for completion of the contract, the purchaser would need to request an extension of this guarantee from the guarantor. Such request must be in writing and must be made prior to the expiration date established in the guarantee. In preparing this guarantee, the purchaser might consider adding the following text to the form, at the end of the penultimate paragraph: "The Guarantor agrees to a one-time extension of this guarantee for a period not to exceed [six months][one year], in response to the Purchaser's written request for such extension, such request to be presented to the Guarantor before the expiry of the guarantee."

Advance Payment Security

[insert complete name and number of contract]

To: [insert complete name of the purchaser]

In accordance with the payment provision included in the Contract, in relation to advance payments, [insert complete name of the supplier] (hereinafter called "the Supplier") shall deposit with the Purchaser a security consisting of [indicate type of security], to guarantee its proper and faithful performance of the obligations imposed by said Clause of the Contract, in the amount of [insert currency and amount of guarantee in words and figures].

We, the undersigned [insert complete name of the guarantor], legally domiciled in [insert full address of the guarantor] (hereinafter "the Guarantor"), as instructed by the Supplier, agree unconditionally and irrevocably to guarantee as primary obligor and not as surety merely, the payment to the Purchaser on its first demand without whatsoever right of objection on our part and without its first claim to the Supplier, in the amount not exceeding [insert currency and amount of guarantee in words and figures].

This security shall remain valid and in full effect from the date of the advance payment being received by the Supplier under the Contract until [insert date (as day, month, and year)].

This guarantee is subject to the Uniform Rules for Demand Guarantees, ICC Publication No. 458 [or ICC Publication No. 758 as applicable].

Name: [insert complete name of person signing the Security]

In the capacity of [insert legal capacity of person signing the Security]

Signed: [insert signature of person whose name and capacity are shown above]

Duly authorized to sign the security for and on behalf of [insert seal (where appropriate) and complete name of the guarantor]

Date: [insert date of signing]

-- Note to Bidder --

If the bank issuing the advance payment security is located outside the country of the purchaser, it shall have a correspondent local bank or internationally reputed bank counter guaranteed by a bank operating in Sri Lanka approved by the central bank of Sri Lanka, located in the country of the purchaser to make it enforceable.

⁴ Or the same or similar to this clause specified in the Uniform Rules for Demand Guarantees, ICC Publication No. 758 where applicable.

THE LIST OF FOREIGN MISSION ABROAD

1. The Ambassador for the Democratic Socialist Republic of Sri Lanka in Austria, Belgium, France, People's Republic of China, Cuba, Egypt, Berlin, Indonesia, Iran, Iraq, Italy, State of Israel, Japan, Jordan, Republic of Korea, State of Kuwait, Lebanon, Myanmar, Kathmandu, The Netherlands, Sultanate of Oman, The Philippines, Poland, State of Qatar, Russian Federation, Kingdom of Saudi Arabia, Sweden, Thailand and U.A.E.
2. The High Commissioner for the Democratic Socialist Republic of Sri Lanka in Australia, Bangladesh, Canada, India, Kenya, Malaysia, Republic of Maldives, Pakistan, Singapore, South Africa and United Kingdom.
3. The Consulate General of the Democratic Socialist Republic of Sri Lanka in Australia, Canada, Bonn, India, Norway, Pakistan, Kingdom of Saudi Arabia, U.A.E. and Los Angeles.
4. The Deputy High Commissioner of the Democratic Socialist Republic of Sri Lanka in Chennai.
5. Permanent Mission of the Democratic Socialist of Sri Lanka in U.S.A. and Switzerland.