

TENDER DOCUMENT

PROVISION OF TYRE-BASED TRAM SERVICES ON A SERVICE-BASED MODEL IN LAHORE



THE PUNJAB MASSTRANSIT AUTHORITY
Government of the Punjab

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Important:

Registered companies and Joint Ventures complying with criteria given in this document are eligible for this tender, hereafter referred to as Bidders.

- This Request for Proposal ('RFP') does not constitute a binding agreement or an offer or invitation by the Punjab Masstransit Authority (PMA) to any party other than the qualified Bidders to submit the Bids. The principle purpose of this RFP is to provide the Bidders with information that shall form the basis of their proposals or bids. This RFP contains the minimum requirements and information desired by the Authority. The contents hereof may be supplemented by the Authority as it deems appropriate. Each Bidder may conduct its own investigations and analysis and check the accuracy, reliability and completeness of the information given in this RFP to its satisfaction. The Authority makes no representation or warranty and shall incur no liability under any law, rules or regulations as to the accuracy, reliability or completeness of the RFP. The Authority may, at its sole discretion but without being under any obligation to do so, update, improve or supplement the information in this RFP.
- Bidders must ensure that they submit all the required documents indicated in the Bidding Documents without fail. Bids received without valid documentary evidence, supporting documents and various requirements mentioned in the Bidding Documents are liable to be rejected at the initial stage. The data sheets, valid documentary evidences for the critical components as detailed hereinafter should be submitted by the Bidder for scrutiny. It is intimated that no objection/revision/supplement shall be entertained regarding the terms and conditions of the Bidding Documents submitted by the Bidder.
- The Bidders are requested to access the E-Pak Acquisition Disposal System (**EPADS**) online platform via URL <http://punjab.eprocure.gov.pk> for all updates on this RFP such as addendums, Minutes of Clarification Meeting etc if any.
- This Bidding Process will be governed under Punjab Procurement Rules, 2014, as amended from time to time;
- The Bidder is advised to obtain for himself, at his own cost and responsibility, all information that may be necessary for preparing the Bid and entering into a Contract for execution of the Works/facility. This shall include but not be limited to the following:
 - relevant laws, rules, and regulations of Pakistan including Income Tax and Sales Tax laws/rules
 - customs duties and other import taxes applicable in Pakistan
 - information regarding port clearance facilities, loading and unloading facilities, storage facilities, transportation facilities and congestion at Pakistan seaports.
 - investigations regarding transport conditions and the probable conditions which will exist at the time the Equipment will be actually transported.

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1. INVITATION TO BID

Punjab Masstransit Authority, Government of the Punjab (GoPb) invites bids for the Tender for “**PROVISION OF TYRE-BASED TRAM SERVICES ON A SERVICE-BASED MODEL IN LAHORE**”. The Tender Number is PMA-TNDA-LMBS /01/2026

1.1. Tender Reserve Price

The Reserve Price for this Tender is **PKR 8,684,860,638.69 (8,684.86 in millions)** excluding Sales Tax on Services. The estimated Contract Price is for a period of 12 years and shall remain subject to adjustments as per provisions in the Contract during such period.

1.2. PPRA Rules to be followed

Punjab Procurement Rules 2014, as modified from time to time, will be strictly followed. These may be obtained from PPRA's website:

<https://ppra.punjab.gov.pk/downloads>

In this document, unless otherwise mentioned to the contrary, "Rule" means a Rule under the Punjab Procurement Rules 2014.

1.3. Mode of Advertisement(s)

As per Rule 12, this Tender is being placed online at PPRA's website, as well as being advertised in print media. The bidding document carrying all details can be downloaded from websites <http://punjab.eprocure.gov.pk>, <http://pma.punjab.gov.pk> and <http://ppra.punjab.gov.pk>,

1.4. Method of Bid Submission

Bids shall be submitted exclusively through the E-Pak Acquisition Disposal System (EPADS) online platform. Bidders are required to upload their bids on EPADS, and no hard copy of the bid shall be submitted directly to the Procuring Agency, except for the documents specified in this RFP.

1.5. Type of Tender

This is a National Tender with response time not less than 15 days as per Rule 14.

1.6. Type of Open Competitive Bidding

As per Rule 38(2), Single Stage - Two Envelope Procedure shall be followed. This is as follows:

- i. The bid shall comprise of a single package containing TECHNICAL PROPOSAL and FINANCIAL PROPOSAL.
- ii. Initially, only the TECHNICAL PROPOSAL shall be opened

- iii. The TECHNICAL PROPOSAL will be evaluated in a manner as per the clauses mentioned in this document; and proposals which do not conform to the specified requirements as listed in said document will be rejected.
- iv. During the technical evaluation no amendments in the technical proposal shall be permitted;
- v. The FINANCIAL PROPOSAL of technically qualified bidders shall be opened at a time, date and venue announced and communicated to the bidders in advance;
- vi. The technically qualified bidder with lowest financial bid will be the successful bidder.
- vii. PMA will invite the successful bidder to enter into an Agreement.

2. BIDDING DETAILS (INSTRUCTION TO BIDDERS)

- 2.1. All bids must be accompanied by a Call Deposit Receipt (CDR), Demand Draft / Pay Order/ Bank Guarantee of PKR 2,000,000 (Two Million Rupees Only) as Tender Security as part of e-bid in favor of “**MASSTRANSIT AUTHORITY NON-FARE REVENUE (NFR) FUND ACCOUNT**” issued by a scheduled bank allowed carrying financial transactions in PAKISTAN (As per provisions of Bid Security Clause 21 of this document).
- 2.2. All interested bidders are required to register themselves by visiting the following link established by PPRA and become a register supplier under e-procurement system.
<https://punjab.eprocure.gov.pk>
- 2.3. After registering on e-procurement system, the potential bidders are required to familiarize themselves with e-PADS which will be the only portal for submission of e-bids.
- 2.4. All bidders are encouraged to carefully study the e-procurement notification No. MMD(PPRA)50-BOM/2024 dated 6th March, 2024 to successfully submit their e-bids by uploading PDF Files in EPADS against the subject tender of PMA.
- 2.5. The e-bids (complete in all respects) must be submitted on EPADS latest by **1200 Hours PST on 16th March, 2026**. Physical Bids received through courier service or delivered by the bidder, shall not be accepted. **The bidder must submit original Bid Security Instrument, Undertakings & Affidavits** in an envelope clearly marked with the Tender Name, Bidder Name, Bidder Address and Bidder Phone Number in the office of the Punjab Masstransit Authority located at 5th floor, Arfa Software Technology Park, 346-B, Ferozepur Road, Lahore, Pakistan, on or before bid submission timeline in addition to the soft copy uploaded on the EPADS.
- 2.6. Any late e-bid submission due to technical glitch on EPADS shall be declared late and rejected.

- 2.7. The Technical Proposals of e-bids will be opened on the EPADS in the **Committee Room of the Punjab Masstransit Authority, 5th Floor, Arfa Software Technology Park (ASTP)**, at **1230 Hours PST on 16th March, 2026**. The Financial Proposals will remain unopened on the EPADS until the specified time of their opening.
- 2.8. The Punjab Masstransit Authority shall hold a **Clarification meeting at 1200 Hours PST on 5th March, 2026**; in the **Committee Room, Punjab Masstransit Authority, 5th Floor, Arfa Software Technology Park (ASTP), Lahore, PAKISTAN**. The bidders in case of any queries for seeking clarifications may send their queries in writing on EPADS or via e-mail at the contact details provided in this section by 8th March, 2026. Clarification Meeting will serve as an interactive session with the objective of providing clarity of the Tender Document to the prospective bidders. The potential bidders may raise queries during this session, however, only those responses that are made in writing by the Procuring Agency against the queries received in writing by the said closing date shall be considered as final. All queries received in writing shall be responded within due time. No query shall be responded if received after the closing date. The minutes of Clarification Meeting shall be considered as part of this RFP.
- 2.9. The bidder must submit e-bids on the basis of complete fulfillment of requirements. Failure to meet this condition will cause disqualification of the bidder. Alternative e-bids will not be considered.
- 2.10. The Procuring Agency will not be responsible for any costs or expenses incurred by bidders in connection with the preparation or delivery of e-bids. As authority competent to accept the tender, Client reserves the right to cancel the tender, or reject all e-bids prior to acceptance of e-bid as per PPRA Rule 35
- 2.11. The **contact detail for all correspondence in relation to this Tender is as follows:**
Email: rizwan.aziz@pma.punjab.gov.pk
Punjab Masstransit Authority
5th Floor, Arfa Software Technology Park (ASTP),
Lahore, PAKISTAN

3. DEFINITIONS

- 3.1 “**AFC-BSS**” Automated Fare Collection and Bus Scheduling System,
- 3.2 “**Applicable Laws**” means the federal, provincial and local laws of Pakistan and laws of any other relevant jurisdiction, and all orders, rules, regulations, executive orders, statutory regulatory orders, decrees, judicial decisions, notifications, or other similar directives issued by any competent entity pursuant thereto, as any of them may be amended from time to time.

- 3.3 **“Applicable Standards”** mean the standards, requirements and criterion applicable to the performance of the Operator’s Obligations as contained in the Applicable Laws; Contract, operation and maintenance manuals and prudent industry practices
- 3.4 **"Clarification Meeting"** means the meeting conducted by the Procuring Agency on given date and time prior to actual date of e-bid opening.
- 3.5 **“Client/Procuring Agency”** means Punjab Masstransit Authority (GoPb)
- 3.6 **“Confirmation”** means confirmation in writing.
- 3.7 **“Contract”** means the contract proposed to be entered into between the Procuring Agency and the Bidder, including all attachments, appendices, and all documents incorporated by reference therein.
- 3.8 **“Contract Kilometers”** means categories of kilometers defined under the Contract as under:
- i. **“Guaranteed Kilometers”** means a minimum guarantee of average 60,000 kms / TBT / year to be paid at Non-Excess Kilometer rate.
 - ii. **“Deficient Kilometers”** means annual kilometers paid at Non-Excess Kilometer Rate that fall short of the Total Guaranteed Kilometers i.e. Guaranteed Kilometers x Fleet Size in a year, excluding any shortfall attributable to the Operator's non-performance, and for which payment is made in accordance with the mechanism specified in the Contract.
 - iii. **“Revenue Kilometers”** means kilometer travelled during operations when trips are scheduled for boarding and alighting of passengers as per assigned schedule or directions from Control Room. Dead mileage shall be considered as Non-Revenue Kilometers.
 - iv. **“Dead Mileage / Non-Revenue Kilometers”** means kilometer travelled when trips are not scheduled for boarding and alighting of passengers. The examples of Dead Mileage are;
 - a) Kilometers travelled from Depot Exit to Route terminal on the route assigned in the schedule to start daily passenger services.
 - b) Kilometers travelled from Route terminal to Depot Entrance on the route assigned in the schedule after completing daily passenger services.
 - c) Kilometers travelled outside of normal operational situations, as directed by the Control Room
 - d) Kilometers travelled from corridor to Depot in case of any maintenance work /

charging / breakdown during operations

- e) Kilometers travelled by an empty TBT which is unable to board passengers during operations due to any reason whatsoever.
 - f) Kilometers travelled that are unassigned by the Client.
 - g) Kilometers travelled in violation of the schedule or conditions/instructions of the schedule.
- v. **"Payable "Dead Mileage / Non Revenue Kilometers"** means those Dead Mileage / Non Revenue Kilometers as defined in Section 3.7(iv) (a), (b) & (c) which will be paid according to the conditions of Contract.
- vi. **"Non-Payable "Dead Mileage / Non-Revenue Kilometers"** means those Dead Mileage / Non Revenue Kilometers as defined in Section 3.7 (iv) (d), (e), (f), (g) which will be not be paid according to the conditions of Contract.
- vii. **"Penalty Kilometers"** means cumulative kilometers for each month which will be fined due to lapses and non-conformances as per Service Level Agreement-Annexure-B. The fines shall be computed as per Service Level Agreement and deducted from monthly payments.
- viii. **"Non-Excess Kilometers"** means kilometers plied in a day up to 657.534 kilometers calculated by the formula as (Guaranteed Kms i.e. 60,000)/ 365) x (Number of TBTs i.e. 4) to be paid at Non-Excess Kilometer rate
- ix. **"Excess Kilometers"** means kilometers plied in a day exceeding the Non-Excess Kilometers to be paid at Excess Kilometer Rate.
- 3.9 **"Contract Price"** means the price payable to the Operator under the Contract for the full and proper performance of its contractual obligations.
- 3.10 **"Currency"** means the monetary unit in which payments to the Operator shall be made, which shall be Pakistani Rupees (PKR).
- 3.11 **"Defects or Deficiencies"** means any obligations forming part of Operator's obligations, that fail to conform to the Applicable Standards in any manner (including any services, performance, materials, design, execution, engineering and/ or workmanship in respect of such obligations and services); and any grammatical forms of such terms shall be construed accordingly.
- 3.12 **"Excess Kilometer Rate"** means bid rate for excess kilometers subject to adjustments as per Annex-C.

- 3.13 **Non-Excess Kilometer Rate"** means bid rate for non-excess kilometers subject to adjustments as per Annex-C
- 3.14 **"GoPb"** means Government of the Punjab
- 3.15 **"GoP"** means Government of Pakistan
- 3.16 **"PMA"** is a **Punjab** Masstransit Authority, established by the Government of Punjab.
- 3.17 **"Procurement Methods"** means any one of the procurement modes / methods as provided in the Punjab Procurement Rules 2014 published by the Punjab Procurement Regulatory Authority (PPRA), Government of Punjab, as amended from time to time.
- 3.18 **"Proposal"** means the Technical Proposal and the Financial Proposal for the provision of the Services submitted by a bidder in response to RFP.
- 3.19 **"RFP"** means Request for Proposals, including any amendments that may be made by the procuring entity for the selection of bidder.
- 3.20 **"Revenue"** means (as applicable) the amount collected by the Operator as the Fare Revenue.
- 3.21 **"Revenue Collection Account Bank"** means the financial institution in which the Employer opens and maintains the Revenue Collection Account.
- 3.22 **"Revenue Collection Account"** means the Pakistani Rupee denominated account to be established and maintained at the designated branch of the Revenue Collection Account Bank for receiving the Revenues, details of which shall be notified in writing by the Employer.
- 3.23 **"SBD"** means Standard Bidding Documents.
- 3.24 **"SCC"** means the Special Conditions of Contract.
- 3.25 **"Services"** means the tasks to be performed by the bidder pursuant to the Contract.
- 3.26 **"Service-Based Model"** means the business model under which the TBT Operator provides the TBTs, Chargers, TBT Depot or any other allied facility using its own investment and delivers the Services, with compensation determined by the number of kilometers operated.
- 3.27 **"TBT" or "TBTs"** means the Tyre-based Trams referring to a vehicle that conforms to the specifications outlined in Annexure-D, procured, operated and maintained by the Operator under the Service-Based Model, for the purposes of this Project, with ownership remaining vested in the TBT Operator at all times.
- 3.28 **"TBT Operator, Operator" or "Successful Bidder"**: The one technically qualified bidder with lowest financial bid, who has the probability of award of Contract, subject to necessary approvals and applicable policies.
- 3.29 **"TBT Breakdown"** means an event in which a TBT encounters a failure in its system making

it incapable of continuing its scheduled trip and leading to disembarking of passenger(s). For the purposes of performance measurement, the distance travelled by the TBT up to the point of breakdown shall be considered.

- 3.30 **“TBT Chargers or Chargers”** shall mean slow and fast chargers procured, installed, tested, commissioned, operated and maintained by the Operator under the Service-Based Model, that conform to the specifications outlined in Annexure-D for the purposes of this Project, with ownership remaining vested in the TBT Operator at all times. These Chargers are to be installed inside the depot or any other location such as along the route or at route terminals as per the system planned and designed by the Operator to achieve TBT mileage.
- 3.31 **TBT Depot" or "Depot"** means performance-based depot to be designed, engineered, procured, constructed, operated, and maintained under the Service-Based Model by the Operator on a land parcel provided by the Client for the purposes of supporting the operation and maintenance of TBTs, with ownership of the immovable assets of Depot to be transferred to the Client upon expiry of the Contract. The Operator will be free to design/build, but still remain fully responsible for meeting operational needs, safety, and legal compliance.
- 3.32 **“TBT Mileage”** means a minimum operational range of 240 kilometers per day for each TBT, achieved through a strategic combination of suitably sized batteries, adequate battery capacity, and a sufficient number of TBT chargers installed at appropriate locations.
- 3.33 **“TEC”** means the Tender Evaluation Committee, constituted for the purpose of evaluating the Proposals received.

4. Headings and Titles

In this document, headings and titles shall not be construed to be part thereof or be taken into consideration in the interpretation of the document and words importing the singular only shall also include the plural and vice versa where the context so requires.

5. Notice

- 5.1 In this document, unless otherwise specified, wherever provision is made for exchanging notice, certificate, order, consent, approval or instructions amongst the Bus Operator and the Client, the same shall be:
- 5.1.1 in writing;
- 5.1.2 issued within reasonable time;
- 5.1.3 served by sending the same by courier or registered post or by hand to their principal office in Pakistan or such other address as they shall notify for the purpose; and
- 5.1.4 The words "notify", "certify", "order", “consent”, “approve”, "instruct", shall be

construed accordingly.

6. Tender Scope

Punjab Masstransit Authority, GoPb, invites/requests Proposals (hereinafter referred to as “the Tender”) for the Provision Of Tyre-Based Tram Services On A Service-Based Model In Lahore as per requirements set forth in this document.

7. TBT Make/Brand

The bidder is required to clearly quote a brand for TBT. The quoted Brand must meet the specifications prescribed in the bidding document.

8. Overview and Objectives

PMA is actively engaged in implementing the vision of the Chief Minister through the provision of modern, sustainable, and environment-friendly transport facilities across Punjab. In line with the Chief Minister’s T-30 Vision—anchored on five key pillars: improved access, decarbonization, road safety, enhanced customer experience, and institutional reforms, a successful test of Tyre-Based-Tram has been conducted in August 2025 on Canal Road in Lahore, showcasing the potential of this technology. The technology received accolades from the Chief Minister, who expressed her desire to integrate it into existing and future public transportation systems in the province of Punjab. A Tyre-Based-Tram, represents a groundbreaking innovation in public transportation. This transit solution eliminates the need for costly infrastructure typically associated with traditional tram or train systems, while still delivering comparable passenger capacity. Keeping this in view, the objectives are:

- To launch a pioneering Tyre-Based-Tram pilot project, providing a safe, efficient, comfortable, and modern transportation system as a formal pilot initiative.
- To transform the public transportation landscape by introducing modern, eco-friendly, and innovative transportation solutions, thereby enhancing the overall image and experience of public transport, while promoting a culture of modernization and innovation in the sector.
- To improve urban mobility, alleviate traffic congestion, and reduce carbon emissions, thereby creating a more livable urban environment for citizens

9. CONTRACT TYPE AND DURATION

Contract will be for a period of 12 Years from commencement of operations. The duration may be extended based on running condition of TBTs as mutually agreed between the Parties.

Sponsorship of Operation: Punjab Masstransit Authority– GoPb

Technical Evaluation: Punjab Masstransit Authority, GoPb.

Contract Signing: Formal Contract will be signed between technically qualified bidder with the lowest financial bid, and the Client (Punjab Masstransit Authority, GoPb).

10. CLIENT’S OBLIGATIONS

- 10.1. Undertake and complete a competitive and transparent bidding process to select the successful bidder.
- 10.2. Follow PPRA Rules 2014, as revised from time to time, and procedures for bidding process to ensure transparency and economically efficient outcome.
- 10.3. Advertise the project to initiate the procurement process and conduct evaluation of bids (technical and financial) submitted against this tender document.
- 10.4. Establish an Operation Control Center for operation of the system. The Control Centre may at its discretion change or cancel the assigned operation/schedule/trip (s).
- 10.5. Provide land parcel to the Operator for development of TBT Depot.
- 10.6. Reimburse the Operator for monthly electricity bills from the date of commencement of operations, upon receipt of a claim supported by documentary evidence.
- 10.7. Provide the Operator with access to the e-Transit Punjab Software, a proprietary system developed by the government of Punjab, for the purpose of recording and analyzing operational data and utilizing the same for payment calculations against kilometers plied. Provide necessary trainings to Operator’s staff through Punjab Information Technology Board (PITB) for usage of e-Transit Punjab Software and its integration with application on the ITS equipment installed in the TBTs such as Driver Consoles / On-Board Unit, Ticket Validators, Route Display Boards, Route Information Screens etc.
- 10.8. Make monthly payments to the Operator against kilometers plied which will be computed on the bases of successfully completed scheduled / assigned trips recorded through e-Transit Punjab Software. The daily kilometers will be categorized into Non-Excess Kilometers and Excess Kilometers for computation of payments using the defined rates. The adjustment to cost matrix will be made as per changes in cost matrix and indication mentioned in agreement.
- 10.9. Ensure that a reconciliation of the Guaranteed Kilometers and their payment at the Non-Excess Rate is performed every 12th invoice cycle. This shall be based on a table that provides a monthly breakdown of the following data from commencement till end of the relevant year:
 - Non-Excess Kilometers

- Excess Kilometers
- Total Guaranteed Kilometers (calculated as Guaranteed Kilometers x Fleet size) distributed evenly across each month
- Deficient Kilometers (calculated as the difference between monthly distributed Guaranteed Kilometers and Non-Excess Kilometers, where the latter is less than the former)

The underlying principle of reconciliation is to exhaust all available plied Excess Kilometers by converting them to Non-Excess Kilometers in order to compensate the Deficient Kilometers. For each month of the year under consideration, reconciliation shall be carried out step-wise by treating the Deficient Kilometers (if any) as under:

- i. If Excess Kilometer $_{(instant\ month)}$ is \geq Deficient Kilometers $_{(instant\ month)}$ then
 - a. Excess Kilometer equal to Deficient Kilometers will be converted into Non-Excess Kilometers resulting into modifications as under;

$$\text{Adjusted Excess Kilometers}_{(instant\ month)} = \text{Excess Kilometer}_{(instant\ month)} - \text{Deficient Kilometers}_{(instant\ month)}$$

$$\text{Adjusted Non-Excess Kilometers}_{(instant\ month)} = \text{Non-Excess Kilometers}_{(instant\ month)} + \text{Deficient Kilometers}_{(instant\ month)}$$
 - b. Payment against Deficient Kilometers $_{(instant\ month)} = \text{Deficient Kilometers}_{(instant\ month)} \times (\text{Non-Excess Kilometer Rate}_{(instant\ month)} - \text{Excess Kilometer Rate}_{(instant\ month)})$
 - c. After adjustments, Deficient Kilometers $_{(instant\ month)}$ will be considered zero.
- ii. If Excess Kilometer $_{(instant\ month)}$ is $<$ Deficient Kilometers $_{(instant\ month)}$ then
 - a. All Excess Kilometers if > 0 will be converted into Non-Excess Kilometers resulting into modifications as under;

$$\text{Adjusted Excess Kilometers}_{(instant\ month)} = 0$$

$$\text{Adjusted Non-Excess Kilometers}_{(instant\ month)} = \text{Non-Excess Kilometers}_{(instant\ month)} + \text{Excess Kilometers}_{(instant\ month)}$$

$$\text{Remaining Deficient Kilometers} = \text{Deficient Kilometers}_{(instant\ month)} - \text{Excess Kilometers}_{(instant\ month)}$$
 - b. For Remaining Deficient Kilometers of the instant month, Excess Kilometers of other months will be considered in chronological order starting from the month of commencement of operations for conversion to Non-Excess

Kilometers_(instant month) and for arriving at Adjusted Non-Excess Kilometers_(instant month) and Adjusted Excess Kilometers_(source month). The process shall be repeated till Deficient Kilometers_(instant month) becomes zero or all available Excess Kilometers of other months are exhausted whichever comes first

c. Payment against Deficient Kilometers_(instant month) = $A + \sum_{k=1}^n B_k$

Where;

$$A = \text{Excess Kilometers}_{(instant\ month)} \times (\text{Non-Excess Kilometer Rate}_{(instant\ month)} - \text{Excess Kilometer Rate}_{(instant\ month)})$$

$$B = \text{Excess Kilometers}_{(source\ month)} \times (\text{Non-Excess Kilometer Rate}_{(instant\ month)} - \text{Excess Kilometer Rate}_{(source\ month)})$$

d. After adjustments, Deficient Kilometers_(instant month) will be considered zero.

iii. If Excess Kilometers_(instant month) = 0 then steps in sub-clause (ii)(b), (ii)c & (ii)d will be followed with value of A as zero

iv. If after following steps in sub-clauses (i), (ii) & (iii), the Deficient Kilometers of instant month still remains, then;

a. Payment against Deficient Kilometers_(instant month) = Deficient Kilometers_(instant month) x (Non-Excess Kilometer Rate_(instant month) – Sum of per km rate of Routine Maintenance, Periodic Maintenance, Lubricants & Tyres quoted in the financial bid subject to adjustments as per the Contract.

b. Adjusted Non-Excess Kilometers_(instant month) = Non-Excess Kilometers_(instant month) + Deficient Kilometers_(instant month)

c. After adjustments, Deficient Kilometers_(instant month) will be considered zero.

v. After following above steps from (i) to (iv), the total Non-Excess Kilometers of the year under consideration should become equal to Total Guaranteed Kilometers

vi. The reconciled sheet with adjusted Excess Kilometers and adjusted Non-Excess Kilometers shall be used for onward reconciliation.

10.10. Be responsible for the conduct and functioning of all staff employed in the PMA. The PMA staff shall provide efficient services, polite and courteous behavior towards operator, and passengers. The Client shall be liable for any misconduct or unreasonable offense of its employees and shall take prompt and appropriate action.

10.11. Provide and notify fare structure and business rules.

- 10.12. Provide Operator the license to operate TBTs on the designated routes and the right to use the land for Depot so that Operator can perform its obligations in a timely manner.
- 10.13. Establish and maintain Revenue Collection Account till the life of the Contract.
- 10.14. Reserve exclusive rights to exploit commercial opportunities within the TBT system, including advertising inside / outside the TBDs and other non-fare revenue generating activities. The Client can call for Expression of Interest (EOI) for Non-Fare Revenue rights, with the Operator having the first right of refusal. If a third-party bid is received, the Client will notify the Operator, who will have 15 days to match or exceed the highest bid. If the Operator exercises its right of refusal, it will submit a Non-Fare Revenue Plan to the Client for approval. After the acceptance by the Client including amendments if any, the Operator will implement the approved plan and start depositing revenue into a designated account.
- 10.15. Implement the Service Level Agreement and levy penalties in case of deficiencies in performance. For purpose of this Sub-clause it is clarified that penalty shall be computed as follows:
Penalty Amount (PKR) = R x \sum K
Where:
R = Adjusted Non Excess Km Rate (Refer to Annexure-C)
 \sum K = Total penalty kilometers in the invoiced month
- 10.16. If any of the tracker devices becomes irresponsive or non-functional due to any reason, keeping in view the public convenience, the operation shall not be terminated. In such an eventuality the Client will make use of the available data including manual log book entries of the Operator, system generated data of the relevant period in the previous month(s), available CCTV footage or any other relevant source of information to ascertain the actual plied kilometers and such validation will be acceptable to the Operator.

11. THE OPERATOR'S OBLIGATIONS:

- 11.1. Provide 04 Brand New, Air Conditioned (AC), electrically operated, Tyre-Based-Trams (TBTs) to be delivered to Depot in Lahore.
- 11.2. Provide TBT chargers, TBT Depot and ensure TBT mileage. A backup power supply system shall be provided for the TBD Chargers to maintain continuous operation during power outages.
- 11.3. Ensure that the entire TBT system including TBTs, TBT Chargers, TBT Depot, and all associated equipment and personnel, is fully operational and ready to provide services within one hundred and fifty (150) calendar days from the effective date of the Contract ("Deadline").

- 11.4. The operator may be directed within first year after commencement of operations to add up to 2 additional units as per requirement of the client/passenger demand. Beyond one year, such addition will be on mutual consent.
- 11.5. Operate and maintain all equipment / machinery under the TBT system throughout the Contract efficiently and ensure that maintenance/replacement of all related equipment/components in the system is carried out in a timely manner and at the cost of Operator. Ensure sufficient availability of spare parts to maintain the quality of operations.
- 11.6. The maintenance of the TBTs for the initial period of two (2) years, commencing from the date of operationalization, shall be carried out exclusively through the Original Equipment Manufacturer (OEM). During this period, the OEM shall assume full responsibility for managing all maintenance activities, including repairs, replacements, and upkeep, in strict accordance with the manufacturer's manuals and guidelines. The OEM will provide technical support and training to the Operator's personnel.

The OEM shall ensure that all maintenance activities are carried out in accordance with the highest industry standards and best practices, and that the TBTs are maintained in a safe and reliable operating condition. The OEM shall submit health report of TBT on quarterly basis to the Client.

Upon completion of the initial two-year period, the Operator shall assume full responsibility for maintaining the TBTs, in accordance with the maintenance system and procedures implemented by the OEM. The Operator shall ensure that all maintenance activities are carried out in letter and spirit, in accordance with the OEM's manuals and guidelines, and in compliance with applicable laws and regulations. By assuming responsibility for maintenance, the Operator acknowledges that it has been fully trained and equipped by the OEM to perform these tasks, and shall hold harmless the OEM from any claims or liabilities arising from the Operator's failure to maintain the TBTs in accordance with the agreed-upon standards.

- 11.7. Prior to procuring, the Operator shall submit detailed specifications, documentation, and manuals of related TBTs being procured for operation and maintenance.
- 11.8. Obtain all necessary permits/licenses/certificates required to procure, operate and maintain the TBTs. Bear the cost of license/Route permit and that for the registration of the TBTs.
- 11.9. Ensure seamless integration of the Intelligent Transport System (ITS), an integral component of the TBTs, with the Automated Fare Collection – Bus Scheduling System (AFC-BSS) deployed on the existing mass transit systems by the Client. The Operator shall collaborate

closely with the Punjab Information Technology Board (PITB), the developer of AFC-BSS, to ensure successful integration.

The Operator will provide demo units with all relevant standard SDK's and API's, including open loop SDKs along with their documentation (complete in all aspects) in English language. The Operator will provide local / international support with arrangement of visits of its technical team to PITB office.

The Operator shall make all necessary provisions to guarantee that data communications from the ITS equipment are transmitted / received in accordance with the specified requirements, ensuring accurate and efficient data exchange with AFC-BSS

- 11.10. Must ensure to ply the TBTs and follow the specified schedules and instructions by the Client. The specified schedule from the client will include at least daily assignment of routes, fleet size requirements, Revenue Trips, Payable Non-Revenue Trips, headways, speed limits, and dwell time limits. Failure to complete the assigned jobs would result in deductions of un-plied kilometers and penalties as per Agreement.
- 11.11. The Operator will be responsible for revenue collection from fare revenue sources and shall be further responsible to deposit the same collection in the Revenue Collection Account. The fare structure will be provided by the Client. The Operator will charge the fare accordingly from the passengers via fare media.
- 11.12. Deploy 3 conductors per TBD, with the following roles and responsibilities:
 - i. Manage fare revenue collection and ensure that no passengers travel without paying the fare unless directed otherwise by the Client.
 - ii. Make sure that all passengers shall tap in and tap out while boarding & alighting.
 - iii. Manage cash transactions with passengers, ensure accurate entry of transactions into the system, and maintain adequate cash floats to provide change to passengers.
 - iv. Extend support to the persons with disabilities in boarding, alighting and occupying seat (except passengers with wheel chair) in the vehicle. The conductor shall assist passengers with wheelchairs in boarding the vehicle via the ramp and ensure they are safely positioned and secured in the designated wheelchair bay. The conductor shall properly engage the wheelchair restraint system to prevent any movement during the journey.
 - v. Collaborate with the Driver to prevent overloading of the vehicle, ensuring a safe and comfortable journey for all passengers. If necessary, the conductor shall direct passengers before they board to wait for the next available vehicle, thereby

maintaining optimal passenger loads and adhering to safety standards.

- vi. Oversee the boarding process, maintaining a safe and orderly queue to prevent crowding and pushing, and ensuring a smooth and efficient boarding experience for all passengers.
 - vii. Maintain the highest level of integrity and accountability in the performance of duties. Any acts of corruption, deceit, unauthorized travel, or cash malhandling will be strictly dealt with and may result in severe consequences, including penalty, FIR, legal action, and termination of employment as decided by the Client.
 - viii. Ensure efficient services, polite and courteous behavior towards passengers
 - ix. Receive comprehensive training by the Operator on passenger safety protocols and emergency handling procedures to ensure a safe and secure environment for all passengers.
- 11.13. Participate in all meetings, committees, etc, as directed by the Client from time to time.
- 11.14. Must employ adequate, well-trained staff including at least one Transport Engineer and one electrical engineer to perform all duties and responsibilities stated in this RFP; including all roles/duties to be performed on the designated routes, Depot, and general fleet management. The Operator must deploy at least one representative to be stationed at the Command-and-Control Center during the operational hours. The representative will act as a liaison for coordination between PMA and the Operator for effective monitoring and control of bus operations.
- 11.15. Be responsible for the conduct and functioning of all staff employed in the Operation. The Operator shall be liable for any misconduct or unreasonable offense of its employees against passengers, representatives of the Client and other related departments/entities of the GoPb. and shall take prompt and appropriate action.
- 11.16. Impart meaningful and timely training to all driver/conductor/staff associated with the operation. Operator will train the drivers for all kind of operational requirements including but not limited to Key Performance Indicators (KPI) and their benchmarks specified in Service Level Agreement, emergency handling including breakdowns / accidents, customer dealing, safe and comfortable driving, reading and understanding English instructions/tabs of On-Board Units (OBU), cooperation with PMA staff, driver actions that can invoke penalties etc. Operator will ensure that these trainings are conducted prior to implementation of operations as well as on time to time basis. Operator will submit the training plans and records if desired by the client. The client may proceed to check and evaluate the results of the training.

- 11.17. Operator will make sure that all hired drivers have valid PSV licenses. For this purpose the Operator shall ensure at its own costs the validity of licenses before hiring any driver.
- 11.18. It is expected that driver must possess preferably graduate degree and shall be tested and declared capable of reading English instruction/tabs. The drivers hired before start of operations will be trained once for the use of the Driver Console by the Client through AFC-BSS; however, the qualification of driver's is mandatory for understanding the system parameter and discipline of the system.
- 11.19. Guarantee smooth operations and functioning of all TBTs during the entire contract period
- 11.20. Allow authorized Punjab Masstransit Authority staff (and other authorized Government personnel) for inspection of TBTs at depot and on the route during operation
- 11.21. Take prompt and reasonable action for resolution of each complaint – including complaints received from the Client related to the operations.
- 11.22. Comply with the provisions of the applicable Motor Vehicles Ordinance / Act, the regulations and rules framed in the standards and all other applicable local, provincial, and federal laws. The Inability to comply with rules, regulations and procedures will be penalized as per penalty mechanism.
- 11.23. Be liable to compensate the affected passenger in case of any injury or death as per Insurance Clause No 12 of conditions of contract. In addition in such an event leading to injury or death of a person, leading to court appeals, by the affected party, the Operator will bear any claim on PMA, made by the affected party, if approved by the court of Pakistan.
- 11.24. Comply, complete, and follow all reasonable commands, directions, and requirements of the Client in respect of the operation, including directions and requirements that ensure public safety and security. The inability of the Operator to comply will be penalized as per penalty mechanism.
- 11.25. Ensure that air-conditioning facility continues uninterrupted during operation in case of a mechanical break-down of the TBTs.
- 11.26. May replace any or all vehicles in the fleet at its own cost in case the vehicles are no longer capable of meeting the operational requirements stated in this RFP. The replaced vehicles shall have the same brand with compliance to specification stated in this RFP.
- 11.27. Take full responsibility of any mechanical, electrical, or system failures in TBTs.

- 11.28. Be responsible for any kind of damage to the Government's property due to negligence on Operator's side. The operator shall be responsible to arrange repair of the damages as per original specs to the satisfaction of the Client. Failure to do so within the prescribed time shall lead to penalties or deduction from the Certificate of Payment (COP).
- 11.29. Arrange, maintain and manage shelter facilities for its staff if required at any stop / route terminals etc.
- 11.30. Provide and install up to Twenty Five (50) stickers per TBT as per instructions/format provided by the Client. The Operator shall also be responsible for their periodic maintenance.
- 11.31. Install surveillance cameras as per specifications. Make necessary arrangements for the extraction on daily basis, and storage of audio and video data for a period no less than fifteen (15) days. The Digital Video Recorder (DVR) should be provisioned and placed in such a way that it ensures its safety and keep it intact during accidents especially including head on collision. Provide data to the Client upon receiving his directions within the specified time frame. In case Operator is unable to provide data, penalties will be invoked as per Service Level Agreement (SLA).
- 11.32. Perform the following activities in the TBT at the end of each trip
1. Dry mobbing and litter picking.
 2. Disinfection.
 3. Spraying air freshener
 4. Collection of any leftover passenger belonging and hand it over to the Client.
- 11.33. Submit implementation plan of TBT system along with design of the TBT Depot to the Client within 15 days from effective date of the Contract.

DEVELOPMENT OF TBT DEPOT

- 11.34. The Operator shall, at its own cost and risk, design, finance, construct, equip, commission, operate and maintain depot as may be required for the performance of its obligations under this Agreement.
- 11.35. The Operator shall have full flexibility and discretion in the planning, design, engineering, layout, phasing, and construction methodology of the Depot, provided that the Depot are adequate and fit for the safe, reliable, and efficient operation, maintenance, charging, and parking of the TBTs in accordance with the service requirements under this Agreement. The Client shall not be responsible or liable for the design, construction, safety, capacity, or performance of the Depot.

- 11.36. Without limiting the Operator's design freedom, the Depot shall be capable of supporting at all times:
- i. stabling and parking of the entire fleet deployed under this Agreement;
 - ii. charging infrastructure of the TBTs;
 - iii. preventive and corrective maintenance of TBTs and associated equipment;
 - iv. washing, cleaning, and routine servicing facilities;
 - v. storage of spare parts, consumables, and tools;
 - vi. staff facilities necessary for depot operations; and
 - vii. safe ingress and egress of vehicles.
 - viii. Building structure to have a minimum life of 25 years
 - ix. Driveways and parking bays will be of rigid pavement or the Operator may use 60 mm thick Pavers of compressive strength 7000 psi.
- 11.37. The Operator shall ensure that the Depot, including all structures, electrical systems, and charging installations, comply with all applicable laws, environmental requirements, building codes, fire safety regulations, electrical safety standards, and any other statutory approvals required from relevant authorities.
- 11.38. The Operator shall be solely responsible for obtaining all permits, licenses, approvals, and clearances required for the development and operation of the Depot, including but not limited to land use approvals, construction permits, power connections, and environmental clearances.
- 11.39. The Operator shall submit conceptual designs, detailed designs, and other relevant documents to the Client for review prior to construction. The Client's review will verify general consistency with performance requirements, safety obligations, and applicable standards. The Client's review does not relieve the Operator of responsibility for design, safety, performance, or compliance. The Operator shall consider and incorporate Client comments related to compliance, safety, or statutory requirements. Upon completion of the Depot, the Operator shall submit as-built drawings, specifications, warranties, and operation manuals as part of handback documentation.
- 11.40. The Operator shall operate and maintain the Depot throughout the term of the Agreement to ensure continuous readiness to support the services and the performance standards specified herein.
- 11.41. Arrange, maintain and manage all utility connections in Depot. The cost of electricity bills shall be reimbursed effective from commencement of operations. Arrange, maintain and

manage connections if deemed necessary on other locations such as route terminals for facilitation of Operator's staff.

- 11.42. Be responsible for the security and safety of Depot.

12. COMMENCEMENT OF OPERATIONS

The Operator shall notify the Client in writing of its readiness to commence commercial operations, accompanied by satisfactory evidence of meeting all requirements within 150 days from the effective date of the Contract. The Client shall assess and verify the Operator's readiness within a reasonable timeframe. The Client may consider Operator's readiness under interim arrangements in case Depot is not fully developed. Upon confirmation that all requirements have been met, the Client shall notify date of commencement of commercial operations along with route details and schedules to be followed. The payments to the Operator will start from date of commencement of operations. In the event of a delay by the Client in confirming the Operator's readiness and notifying the commencement date beyond 30 days, the Client shall be liable to compensate the Operator as per the following formula, effective from the 31st day onwards till commencement of operations:

$$\text{Amount per day (PKR)} = \left[(\text{Non-Excess Kilometer Rate}) - (\text{Sum of per km rate of Routine Maintenance, Periodic Maintenance, Lubricants \& Tyres quoted in the financial bid subject to adjustments as per the Contract}) \right] \times \text{Fleet Size} \times 164.38$$

13. KEY SERVICE-LEVEL PARAMETERS

The performance indicators for provision of service are attached as Annexure-B.

14. BIDDER'S ELIGIBILITY

An eligible Bidder is a Bidder who:

- 14.1 Is legally registered to conduct business in Pakistan
- 14.2 Services can only be supplied / sourced / routed from "origin" in "eligible" member countries "Eligible" is defined as any country or region that is allowed to do business in Pakistan by the law of Government of Pakistan. "Origin" shall be considered to be the place where the company / firm is incorporated
- 14.3 has a registered office in the respective country of origin (In case of JV, Applicable to all members)
- 14.4 has been registered for at least 5 years in country of origin, and has proven experience of operations in transport sector. (In case of JV, Applicable to any one member)

- 14.5 Has valid Registration Certificate for Income Tax, Sales Tax (on goods and services where applicable) or possesses corresponding equivalent certificate from the country of origin. (In case of JV, Applicable to all members)
- 14.6 Has submitted Income Tax Returns for the last three tax years or possesses corresponding equivalent documents from the country of origin (In case of JV, applicable to any one member).

15. Tender Cost

The Bidder shall bear all costs / expenses associated with the preparation and submission of the Tender(s) and the Client shall in no case be responsible / liable for those costs / expenses.

16. Joint Venture

Joint ventures are eligible for this tender, as long as the joint venture complies with the following conditions:

- a. The Bidders may form a joint venture of maximum four Bidders. An Agreement Deed legally executed to that effect, or a Memorandum of Understanding (MOU), signed by all the partners shall be submitted with the Tender. All partners of the JV must be registered in the country of origin.
- b. One partner will be designated the lead partner and would be liable to incur liabilities, receive payments and receive instructions for and on behalf of any or all partners. A power of attorney to that effect, legally executed, signed by all the partners shall be submitted with the Tender.
- c. There must be at least one locally registered company (Partner) of good repute and proven track record, in the joint venture that must be the lead partner.
- d. The Lead Partner in case of joint venture shall not be allowed to assign the contract or any part thereof to another party, without permission of the Client. The Client may perform proper due diligence before granting any permission to lead partner for assignment of contract or part thereof to another party.
- e. All the partners shall be jointly and severally liable for the execution of the Contract in accordance with the terms and conditions of the Contract.

17. Examination of the Tender Document

The Bidder is expected to examine the Tender Document, including all instructions and terms and conditions.

18. Amendment of the Tender Document

- 18.1 The Client may, at any time prior to the deadline for submission of the Tender, at its own

initiative or in response to a clarification requested by the Bidder(s), amend the Tender Document, on any account, for any reason. All amendment(s) shall be part of the Tender Document and binding on the Bidder(s).

- 18.2 The Client may, at its exclusive discretion, amend the Tender Document to extend the deadline for the submission of the Tender, in which case all rights and obligations of the Client and the Bidders previously subject to the deadline shall thereafter be subject to the deadline as extended.

19. Preparation / Submission of Tender

- 19.1 The Bidder is not allowed to bid for partial procurement of services or part of the services.
- 19.2 The Tender and all documents relating to the Tender, exchanged between the Bidder and the Client, shall be in English. Any printed literature furnished by the Bidder in another language shall be accompanied by an English translation duly verified / attested from reputable organization which shall govern for purposes of interpretation of the Tender.
- 19.3 The Tender shall be submitted accompanied by the prescribed Forms, Annexes, Schedules, Charts, Drawings, Documents, Brochures, Literature etc. which shall be typed, completely filled in, stamped and signed by the Bidder's Authorized Representative / Power of Attorney. In case of copies, photocopies may be submitted.
- 19.4 **The Technical Proposal shall contain the following, without quoting the price:**

Documents Required For Substantial Responsiveness:

- 19.4.1 Firm registration record in the country of Origin (In case of JV, applicable to all members)
- 19.4.2 Firm establishment record for at least 5 years in form of firm registration record OR equivalent document as applicable in the country of origin (In case of JV, applicable to any one member)
- 19.4.3 Relevant experience record of operations in transport sector (In case of JV applicable to any one member)
- 19.4.4 Valid Income Tax and Sales Tax (on goods and services where applicable) registrations OR equivalent documents as applicable in the country of origin (In case of JV Applicable to all members)
- 19.4.5 Income tax returns OR equivalent documents as applicable in the country of origin for last three years. (In case of JV, applicable to any one member)
- 19.4.6 Agreement Deed / MOU in case of JV

Documents Required for Technical Evaluation and other requirements

- 19.4.7 Covering letter duly signed and stamped by authorized representative (Form TECH-

0).

- 19.4.8 Technical Proposal Submission Form (Form TECH-1)
 - 19.4.9 Joint Venture Details (Form TECH-2).
 - 19.4.10 Technical Evaluation Form (Form TECH-3) along with evidences required against each criterion.
 - 19.4.11 Financial Strength (Form TECH-4) along with audited financial statements as required in the form.
 - 19.4.12 Power of Attorney (Form TECH-5)
 - 19.4.13 Undertaking (Form TECH-6)
 - 19.4.14 Integrity Pact (Form TECH-7)
 - 19.4.15 Affidavit for non-blacklisting (Form TECH-8)
 - 19.4.16 Quoted vehicle brand, technical brochures / literature
 - 19.4.17 Document stating compliance to each specification mentioned in Annex D
- 19.5 The Financial Proposal shall comprise the following:
- 19.5.1 Financial Proposal Submission Form (Form FIN-1)
 - 19.5.2 Price Table (Form FIN-2)
 - 19.5.3 Price Details-A (Form FIN-3)
 - 19.5.4 Price Details-B (Form FIN-4)
 - 19.5.5 CDR / Demand Draft / Pay Order/ Tender Security Form (Form FIN-3): Tender Security of PKR Two (02) Million vide clause 21 (Tender Security) of tender document).
- 19.6 **Bidder to affix authorized signatures with official seal on all documents submitted as part of the bid by the Bidder.**

20. Tender Price

- 20.1 The quoted price shall be:
- 20.1.1 best / final / fixed and valid until completion of all obligations under the Contract and is subjected to adjustment only as per conditions of the Contract.
 - 20.1.2 Inclusive of all charges including delivery, installation, testing, commissioning, operation and maintenance.
 - 20.1.3 in Pak Rupees (PKR);
 - 20.1.4 is inclusive of all applicable taxes as per Laws of the Government of Pakistan, but shall be exclusive of Sales Tax on Services which shall be added by the Client over

and above the offered amount, as applicable/required under the relevant Tax Laws, to arrive at the Contract Price. Accordingly, the Contract Price shall be subject to adjustments for change in rate of Sales Tax on Services as and when applicable.

- 20.2 If not specifically mentioned in the Tender(s), it shall be presumed that the quoted price is as per the above requirements.
- 20.3 The price hereby quoted by the Bidders would cover the whole scope of services for the contract period.

21. Tender Security

- 21.1 The Bidder shall furnish the bid security as part of the financial bid, failing which will cause rejection of bid; as under:
- 21.1.1 CDR / Demand Draft / Pay Order / Bank Guarantee, issued by a scheduled bank operating in Pakistan, in the name of the Client, as per the format provided in the Tender Document or in form of Demand Draft;
- 21.1.2 A sum of PKR Two (02) Million;
- 21.1.3 Have a validity period of **180 days** from the last date for submission of the Tender
- 21.2 The proceeds of the Tender Security shall be forfeited by the procuring agency, on the occurrence of any / all of the following conditions:
- 21.2.1 If the Bidder withdraws the Tender during the period of the Tender validity; or
- 21.2.2 If the Bidder does not accept the corrections of his Total Tender Price; or
- 21.2.3 If the Bidder, having been notified of the acceptance of the Tender by the Client during the period of the Tender validity, fails or refuses to furnish the Performance Security, in accordance with the Tender Document.
- 21.2.4 If the Bidder fails to provide the performance security in stipulated timeframe or format.
- 21.3 The Tender security shall be returned to the technically unsuccessful Bidder with unopened/sealed financial bid, as well as to the unsuccessful bidders following the financial bid opening procedure. The Tender Security shall also be returned to the successful Bidder on furnishing the Performance Security.

22. Tender Validity

The Tender shall have a validity period of **One Hundred and Eighty days (180) days** from the last date for submission of the Tender. Any extension in the Tender validity period shall be carried out in compliance to PPRA Rule 28.

23. Modification / Withdrawal of the Tender

- 23.1 The Bidder may, by written notice served on the Client, modify or withdraw the Tender after submission of the Tender, prior to the deadline for submission of the Tender.
- 23.2 The Tender, withdrawn after the deadline for submission of the Tender and prior to the expiration of the period of the Tender validity, shall result in forfeiture of the Tender Security.

24. Opening of the Tender

- 24.1 Tenders shall be opened, at the given place, time and date, in the presence of the Bidder(s), if available, for which they shall ensure their presence without further invitation.
- 24.2 The Bidder's name, modifications, withdrawal, security, attendance of the Bidder and such other details as the Client may, at its exclusive discretion, consider appropriate, shall be announced and recorded.

No Bidder or its representative will be allowed to keep any digital device (camera, audio recorder, cell phone etc.) during tender opening meeting at given time and location.

25. Clarification of the Tender by the Client

The Client shall have the right, at his exclusive discretion, to require, in writing, further information or clarification of the Tender, from any or all the Bidder(s). No change in the price or substance of the Tender shall be sought, offered or permitted except as required to confirm the corrections of ambiguities / conflicting statements / arithmetical errors discovered in the Tender. Acceptance of any such correction is solid discretion of the Client

26. Determination of Responsiveness of the Bid (Tender)

- 26.1 The Client shall determine the substantial responsiveness of the Bidder to the Tender Document, prior to the technical evaluation, on the basis of the contents of the Tender itself without recourse to extrinsic evidence. A substantially responsive Tender is one which:
- 26.1.1 meets the eligibility criteria for the Bidder for the Services;
- 26.1.2 is otherwise complete and generally in order;
- 26.1.3 conforms to all terms and conditions of the Tender Document, without material deviation or reservation.
- 26.2 A material deviation or reservation is one which affects the scope, quality or performance of the Services or limits the Client's rights or the Bidder's obligations under the Contract.
- 26.3 The Tender determined as not substantially responsive shall not subsequently be made

responsive by the Bidder by correction or withdrawal of the material deviation or reservation.

27. Correction of errors / Amendment of Tender

27.1 The Tender shall be checked for any arithmetic errors which shall be rectified, as follows:

27.1.1 If there is a discrepancy between the amount in figures and the amount in words for the Total Tender Price entered in the Tender Form; the amount in words, shall govern.

27.2 The Bidder shall state the Tender Price for the payment terms outlined in the Conditions of Contract which will be considered for the evaluation of the Tender.

28. Rejection / Acceptance of the Tender

28.1 The Client shall have the right, at his exclusive discretion, to accept a Tender (lowest evaluated bid) , reject all tender(s), cancel / annul the Tendering process at any time prior to award of formal Contract, and without thereby incurring any liability to the Bidder and the decision of the Client shall be final.

28.2 The Tender shall be rejected if:

28.2.1 it is substantially non-responsive; or

28.2.2 it is submitted in other than prescribed forms, annexes, schedules, charts, drawings, documents / by other than specified mode; or

28.2.3 it is incomplete, partial, conditional, alternative, late; or

28.2.4 it is subjected to interlineations / cuttings / corrections / erasures / overwriting; or

28.2.5 the Bidder submits more than one Tenders; or

28.2.6 the Bidder fails to meet the minimum passing score of 65 in the Technical Evaluation Criteria (Annexure-A); or

28.2.7 the Bidder refuses to accept the corrected Total Tender Price; or

28.2.8 the Bidder has conflict of interest with the Client; or

28.2.9 the Bidder tries to influence the Tender evaluation / Contract award; or

28.2.10 the Bidder engages in corrupt or fraudulent practices in competing for the Contract award.

28.2.11 there is any discrepancy between bidding documents and bidder's proposal i.e. any non-conformity or inconsistency or informality or irregularity in the submitted bid.

28.2.12 the Bidder submits any financial conditions as part of its bid which are not in conformity with tender document.

29. Acceptance Letter (Letter of Intent)

The Client shall, send the Acceptance Letter (Letter of Intent) to the successful Bidder, prior to the expiry of the validity period of the Tender, which shall be made part of the formal contract.

30. Performance Security

- 30.1 The successful Bidder shall furnish Performance Security as under:
- 30.1.1 within ten (15) working days of the receipt of the Acceptance Letter from the Client;
 - 30.1.2 in the form of a Bank Guarantee, issued by a scheduled bank operating in Pakistan, as per the format provided in the Tender Document or in another form acceptable to the Client;
 - 30.1.3 denominated in Pak Rupees;
 - 30.1.4 Have a minimum validity period of one year from the date of Award Notification or until the date of expiry of yearly support period.
 - 30.1.5 The successful Bidder shall submit a Bank Guarantee of 10% of the annual contract value, on a yearly basis, with an undertaking to renew the Bank Guarantee before the end of each year on yearly basis, one month before the expiry period of the submitted bank guarantee.
 - 30.1.6 The proceeds of the Performance Security shall be payable to the Client, on occurrence of any / all of the following conditions:
 - 30.1.6.1 If the Operator commits a default under the Contract;
 - 30.1.6.2 If the Operator fails to submit the bank guarantee for the next year one month before the expiry of already submitted bank guarantee in stipulated timeframe.
 - 30.1.6.3 If the Operator fails to fulfill any of the obligations under the Contract
 - 30.1.6.4 If the Operator violates any of the terms and conditions of the Contract.
 - 30.2 The Operator shall cause the validity period of the performance security to be extended for such period(s) as the contract performance may be extended. The Performance Security shall be returned to the Bidder within thirty working days after the expiry of its validity on written request from the Operator.

31. Redressal of Grievances by the Client

The redressal of grievances (if any) lodged by the bidder(s) shall be dealt as per provisions under Punjab Procurement Rule 67.

TERMS & CONDITIONS OF THE CONTRACT

Contract for

**PROVISION OF TYRE-BASED TRAM SERVICES ON A
SERVICE-BASED MODEL IN LAHORE**

between

PUNJAB MASSTRANSIT AUTHORITY



And

SUCCESSFUL BIDDER

Dated:

1. AGREEMENT

PROVISION OF TYRE-BASED TRAM SERVICES ON A SERVICE-BASED MODEL IN LAHORE

This CONTRACT/ AGREEMENT is made on this **[day]** day of **[month]**, **[year]** (hereafter referred to as “**Agreement**”)

BY AND BETWEEN

The Punjab Masstransit Authority (PMA) established under the Punjab Masstransit Authority Act, 2015 having office at 5th floor, Arfa Software Technology Park, 346-B, Ferozpur Road, Lahore, through Managing Director, Punjab Masstransit Authority (hereinafter referred to as “**PMA**”), Government of the Punjab (hereinafter referred to as “**The Client**”) which term shall, wherever the context so permits or requires, mean and include its successors-in-interest, nominees, legal representatives, executors, administrators, transferees, attorneys and permitted assigns

AND

[full legal name of Operator /Successful Bidder] through its **[Designation of Signatory from Operator’s/Successful Bidder’s side]** having its registered office at **[Address of Operator/Successful Bidder]** on the other part (hereinafter called the “**Operator/Service Provider**” which expression shall include its successors-in-interest, legal representatives, executors, administrators, transferees, attorneys and permitted assigns)

The Client and the Service Provider are hereinafter collectively referred to as the "Parties" and individually as the "Party"

2. RECITALS

WHEREAS,

- (a) The GoPb through the Client intends to spend a part of its budget / funds for making eligible payments under this contract. Payments made under this contract will be subject, in all respects, to the terms and conditions of the Contract in lieu of procurement of services as described in the contract;
- (b) The Client has requested the Operator/Service Provider to provide certain services as described in Tender Document; and
- (c) The Operator/Service Provider, having represented to the Client that it has the required professional skills, personnel technical and financial resources, has agreed to provide such services on the terms and conditions set forth in this Contract.

NOW THEREFORE, the Parties to this Contract agree as follows:

3. COVENANT:

- 3.1. The Operator/Service Provider hereby covenants with the Client to supply the services, in conformity in all respects with the provisions of the Contract, in consideration of the payments to be made by the Client to the Operator/Service Provider.
- 3.2. The Client hereby covenants with the Operator/Service Provider to pay the Operator/Service Provider, the Contract Price or such other sum as may become payable, at the times and in the manner, in conformity in all respects with the provisions of the Contract, in consideration of supply of the Services.

4. ANNEXES TO THE AGREEMENT:

- 4.1 The following shall be deemed to form and be read and construed as part of this Contract:
 - 4.1.1 The Tender Document/RFP
 - 4.1.2 Bidder's Proposal
 - 4.1.3 Acceptance Letter (Letter of Intent)
 - 4.1.4 Performance Security
- 4.2 This Contract shall prevail over all other documents. In the event of any discrepancy / inconsistency within the Contract, the above Documents shall prevail in the order listed above.

5. SERVICES REQUIRED:

As described in RFP Clause 11

6. KEY SERVICE-LEVEL PARAMETERS

As stipulated in Service Level Agreement (SLA) appended as Annex-B to this Tender Document.

7. SIGNING OF THE AGREEMENT

IN WITNESS whereof the Parties hereto have caused this Contract to be executed in accordance with the laws of **Pakistan** as of the day, month and year first indicated above.

For: **Punjab Masstransit Authority (PMA)**

For: **Legal Name of the Operator/Successful Bidder**

Signature _____

Signature _____

Name:

Name:

Witnessed By:

Witnessed By:

WITNESSES

Signature _____

Signature _____

CNIC # _____

CNIC# _____

Name _____

Name _____

Designation _____

Designation _____

Address _____

Address _____

GENERAL CONDITIONS OF CONTRACT

8. CONTRACT

The Client shall, after receipt of the Performance Security from the successful Bidder, send the Contract provided in the Tender Document, to the successful Bidder. Within ten working days of the receipt of such Contract, the Bidder shall sign and date the Contract and return it to the Client.

9. CONTRACT DOCUMENTS AND INFORMATION

The Operator shall not, without the Client's prior written consent, make use of the Contract, or any provision thereof, or any document(s), specifications, drawing(s), pattern(s), sample(s) or information furnished by or on behalf of the Client in connection therewith, except for purposes of performing the Contract or disclose the same to any person other than a person employed by the Operator in the performance of the Contract. Disclosure to any such employed person shall be made in confidence and shall extend only as far as may be necessary for purposes of such performance.

10. CONTRACT LANGUAGE

The Contract and all documents relating to the Contract, exchanged between the Operator and the Client, shall be in English. The Operator shall bear all costs of translation to English and all risks of the accuracy of such translation.

11. PATENT RIGHTS AND RIGHTS TO THE CONTENTS OF THE PROGRAM

The Operator shall indemnify and hold the Client harmless against all third party claims of infringement of patent, trademark or industrial design rights arising from use of the Service or any part thereof. The Client will hold the exclusive rights to the contents of this program.

12. INSURANCE

The Operator shall provide such insurance of the TBTs and allied equipment as is sufficient to protect against their theft, damage or deterioration during course of the operation, storage/ transit to their final destination as indicated in this Contract. During passenger operations, in the event of any accident resulting in death or injury to the passenger, the operator shall pay compensation to legal representatives or to the passengers, as the case may be, under sections 50 and 67 of the Provincial Motor Vehicle Ordinance 1965.

13. EXECUTION SCHEDULE

The Operator shall submit an Execution Schedule, giving details of services to be rendered, as required under the Contract, to the Client, within ten (10) days of the signing of the Contract.

14. PAYMENT

The procedure for payments to operator shall be as under:

- 14.1 The Operator shall submit monthly Application for Payment to the Client; within first five (05) working days of the following month, in the prescribed form and on the quoted rates in the bid after making price adjustments if applicable. The Application for Payment shall be accompanied by such invoices, receipts or other documentary evidence (if any) as the Client may require; state the amount claimed; and set forth in detail, in the order of the Price Schedule, particulars of the Services provided, up to the date of the Application for Payment and subsequent to the period covered by the last preceding Certificate of Payment, if any.
- 14.2 All amounts due and payable shall be paid by the Client within twenty-one (21) days from receipt of the Invoice. If the Operator requests to settle his position by responding to issues that may potentially lead to penalties and invoice deductions and such request is accepted by the Client, the amount due and payable shall be paid within 7 days following the settlement or 21 days from the receipt of invoice, whichever comes later
- 14.3 Disputed amounts (if any) shall become due and payable within 7 days following resolution of the disputes or 21 days from the receipt of invoice, whichever comes later
- 14.4 All Payable Amounts will be paid in Pakistani Rupees.
- 14.5 In case where the Payable Amount is expected to be delayed for reasons attributable to the Client, the Client may choose to pay a provisional payment of up to 80% of the invoiced amount through a provisional certificate of payment against proof of the Company providing the O&M Services under the Agreement.

15. CONTRACT PRICE

- 15.1 The quoted price, in the financial bid, is inclusive of all applicable taxes, as per Laws of the Government of Pakistan, but is exclusive of Sales Tax on Services which shall be added by the Purchaser over and above the quoted amount, as applicable/required under the relevant Tax Laws, to arrive at the Contract Price. Accordingly, the Contract Price shall be subject to adjustments for change in rate of Sales Tax on Services as and when applicable. Furthermore, in future, if the total incidence of taxes imposed on the Contractor increases 10% above the rate that prevailed at the time of the signing of contract, the Operator and the Client shall settle the issue through mutual consultations/agreement. Same dispensation will apply if the incidence of tax reduces over the contract period.

16. CONTRACT AMENDMENT

- 16.1 This Contract may be amended or modified only in writing signed by both Parties. This includes, but is not limited to, changes (hereinafter referred to as the Change) to the scope of Services, payment terms, or any other contractual provisions.
- 16.2 The Change, mutually agreed upon, shall constitute part of the obligations under this Contract, and the provisions of the Contract shall apply to the said Change. No variation in or modification in the Contract shall be made, except by written amendment signed by both the Client and the Operator.

17. ASSIGNMENT / SUBCONTRACT

The Operator will not assign or sub-contract its obligations under the Contract, in whole or in part, except with the Client's prior written consent. The Operator shall guarantee that any and all assignees / subcontractors of the Operator shall, for performance of any part / whole of the work under the contract, comply fully with the terms and conditions of the Contract applicable to such part / whole of the work under the contract.

18. EXTENSIONS IN TIME FOR PERFORMANCE OF OBLIGATIONS UNDER THE CONTRACT

If the Operator encounters conditions impeding timely performance of any of the obligations, under the Contract, at any time, the Operator shall, by written notice served on the Client, promptly indicate the facts of the delay, its likely duration and its cause(s). As soon as practicable after receipt of such notice, the Client shall evaluate the situation and may, at its exclusive discretion, without prejudice to any other remedy it may have, by written order served on the Operator, extend the Operator's time for performance of its obligations under the Contract.

19. LIQUIDATED DAMAGES (LD)

- 19.1 The Liquidated Damages are attributable to such part of the Services as cannot, in consequence of the failure / delay, be put to the intended use, for every day between the scheduled date(s), with any extension of time thereof granted by the Client, and the actual date(s). The Client may, without prejudice to any other right or action / remedy it may have, levy liquidated damages as follows:

a) Delay in readiness to commence operations

LD per day (PKR) = (Factor F x 164.38 x Number of TBTs not in state of readiness x Non-Excess Kilometer Rate)

For 0 – 10 days Factor F = 0.25

For 11– 20 days Factor F = 0.50

For 21 – 30 days Factor F = 0.75

For 31 days and above, Factor F =1.00

b) Failure on the part of the Operator to meet commitments given by him in the technical proposal / Failure in compliance to the TBT specifications / Failure in performance of any of the obligations, under the Contract

LD per day (PKR) = 50,000 per occurrence

19.2 The amount so deducted shall not exceed, in the aggregate, the value of the performance security. It is clarified that LDs stated in this clause may be levied until such time the Operator has failed/delayed the start of operation as per conditions described in this document. After the start of the operation any further service/performance related failures/delays shall be penalized as per Service Level Agreement (Annexure-B).

20. FORFEITURE OF PERFORMANCE SECURITY

Read with Clause 30.1.6 of the RFP, the Client may, without prejudice to any other right or action/remedy it may have, forfeit the performance security of the Operator after serving him with a seven working days notice, in anyone or all of the following events:

1. Complete shutdown of service by the Operator for any-reason whatsoever except those covered under force-majeure.
2. If the penalties exceed 10 % of the monthly payments for 03 months in a year.

21. TERMINATION FOR DEFAULT

If the Operator fails/delays in performance of any of the obligations under the Contract / violates any of the provisions of the Contract / commits material breach of any of the terms and conditions of the Contract, or engages in any illegal activities; where such failure/breach/illegal activity has a material adverse effect on the operations of this Project, the Client may, at any time, without prejudice to any other right or action / remedy it may have, by written notice served on the Operator, indicate the nature of the default(s) and terminate the Contract, in whole or in part; provided that the termination of the Contract shall be resorted to only if the Operator does not cure its failure / breach/ illegal activity, within

twenty one (21) working days (or such longer period as the Client may allow in writing), after receipt of such notice.

If the Client terminates the Contract for default, in whole or in part, the Client may procure, upon such terms and conditions and in such manner as it deems appropriate, Services / Works, similar to those undelivered, and the Operator shall be liable to the Client for any excess costs for such similar Services / Works. However, the Operator shall continue performance of the Contract to the extent not terminated.

If deemed appropriate by the Client, in order to avoid delay in services leading to passenger discomfort or loss to the system, the Client may direct the Operator to continue to operate the terminated part as a stop-gap arrangement till successful hiring of new Operator.

22. TERMINATION FOR INSOLVENCY

If the Operator, or any member in case of JV, becomes bankrupt or otherwise insolvent, the Client may, at any time, without prejudice to any other right or action / remedy it may have, by written notice served on the Operator, indicate the nature of the insolvency and terminate the Contract, in whole or in part.

23. TERMINATION FOR CONVENIENCE

23.1. The Client may, at any time, by written notice of 30 days served on the Operator, terminate the Contract, in whole or in part.

23.2. The Services which are complete, or are scheduled to be completed by the Operator, within thirty working days after the receipt of such notice, shall be accepted by the Client. For the remaining services, the Client may elect:

To have any portion thereof completed and delivered; and

To cancel the remainder and pay the Operator by:

1. Purchasing all vehicles, chargers, tools, equipments, spare parts, furniture, and all items made available by the Operator to deliver the services (taking into consideration depreciated values).
2. Paying an allowance as compensation for overheads and anticipated profit to the Operator, 5% of value of rest of the contract value calculated at the rate of 60,000 km per year per bus.

- 23.3. For purposes of calculations of payments, the Client and the Operator shall appoint a reputed firm of Chartered Accountants through mutual agreement who will follow the methodology of calculation which is just, even and fair to both parties.
- 23.4. All of the accounts or remaining payables under this clause, on the part of either of the parties, shall be paid / adjusted within thirty (30) days (or such longer period as the Client may allow in writing) from the day on which notice of termination under clause 23.1 shall come into effect.

24. FORCE MAJEURE

- 24.1. Force majeure shall mean any event, act or other circumstances not being an event, act or circumstance under the control of the Client or of the operator. Non-availability of materials/supplies or of import license or of export permit shall not constitute Force majeure. If by reasons of Force Majeure supplies or services cannot be delivered by the due delivery date then the delivery date may be extended appropriately by the Client keeping in view all the circumstances and requirements of the Client.
- 24.2. The Operator shall not be liable for liquidated damages, forfeiture of its Performance Security, blacklisting for future tenders, termination for default, if and to the extent of his failure / delay in performance /discharge of obligations under the Contract is the result of an event of Force Majeure.
- 24.3. If a Force Majeure situation arises, the Operator shall, by written notice served on the Client, indicate such condition and the cause thereof. Unless otherwise directed by the Client in writing, the Operator shall continue to perform 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.

25. DISPUTE RESOLUTION

- 25.1. The Client and the Operator shall make every effort to amicably resolve, by direct informal negotiation, any disagreement or dispute arising between them under or in connection with the Contract.
- 25.2. If, after thirty working days, from the commencement of such informal negotiations, the Client and the Operator have been unable to amicably resolve a Contract dispute, the dispute may be referred to arbitration under the Arbitration Act, 1940 (as amended, substituted or repealed and re-enacted from time to time) by making a formal request in writing. The arbitration shall be conducted by a sole arbitrator to be appointed by the mutual consent of both Parties within 15 days of the request of arbitration.

25.3. The venue and seat of arbitration shall be Lahore, Pakistan

26. STATUTES AND REGULATIONS

The Contract shall be governed by and interpreted in accordance with the laws of Pakistan. The Operator shall, in all matters arising in the performance of the Contract, conform, in all respects, with the provisions of all Central, Provincial and Local Laws, Statutes, Regulations and By-Laws in force in Pakistan, and shall give all notices and pay all fees required to be given or paid and shall keep the Client indemnified against all penalties and liability of any kind for breach of any of the same. The Courts at Lahore shall have the exclusive territorial jurisdiction in respect of any dispute or difference of any kind arising out of or in connection with the Contract.

27. TAXES AND DUTIES

The Contractor shall be responsible for the payment, if any is required, of all Pakistani Income Tax, Duties any other taxes on income arising out of the Contract, and the financial bid shall be deemed to cover all such taxes.

28. CONTRACT COST

The Operator shall bear all costs / expenses associated with the preparation of the Contract and the Client shall in no case be responsible / liable for those costs / expenses e.g. Contract Stamp duty charges etc.

29. AUTHORIZED REPRESENTATIVE

- 29.1. The Client, or the Operator may, at their exclusive discretion, appoint their Authorized Representative and may, from time to time, delegate any / all of the duties / authority, vested in them, to their authorized Representative(s), including but not limited to, signing on their behalf to legally bind them, and may, at any time, revoke such delegation.
- 29.2. The Authorized Representative shall only carry out such duties and exercise such authority as may be delegated to him, by the Client, or the Operator
- 29.3. Any such delegation or revocation shall be in writing and shall not take effect until notified to the other parties to the Contract.

- 29.4. Any decision, instruction or approval given by the Authorized Representative, in accordance with such delegation, shall have the same effect as though it had been given by the Principal.
- 29.5. Notwithstanding above Clause, any failure of the Authorized Representative to disapprove Services or Works shall not prejudice the right of the Client to disapprove such Services or Works and to give instructions for the rectification thereof.
- 29.6. If the Operator questions any decision or instruction of the Authorized Representative of the Client, the Operator may refer the matter to the Client who shall confirm, reverse or vary such decision or instruction

30. WAIVER

Failure of either party to insist upon strict performance of the obligations of the other party, under the Contract, shall in no way be deemed or construed to affect in any way the right of that party to require such performance.

ANNEXURES

ANNEXURE-A: TECHNICAL EVALUATION CRITERIA

*It is mandatory to score minimum 65 marks and non-zero marks in each criterion
In case of JV, marks shall be evaluated jointly for all member unless stated otherwise.*

Sr No.	Criteria	Max. Marks	Comment/Description	Evidence Required
1	Number of Mass Transit Routes operated successfully for a period of no less than 01year	15	Number of bus routes operated: Less than 1 = 0 Points 1 to 2= 5 Points 4 to 5= 10 Points 6 or more =15 Points In case of mass transit vehicle other than buses: Less than 1 = 0 Points 1 or more = 15 Points	Copy of Route Permits OR Contract Document OR Letter of Award OR Any other valid document for evidence
2	Mass Transit Fleet maintained and operated	15	Less Than 10 = 0 Points 10 to 20= 4 Points 21 to 30= 8 Points 31 to 50 = 12 Points 51 or more =15 Points	Contract Document OR Letter of Award OR Any other valid document for evidence
3	Total number of human resources managed related to Mass Transit Operations	10	Less than 30 = 0 Points 30 to 50 = 4 Points 51 to 100= 6 Points 101 to 300= 8 Points 301 or more = 10 Points	List of Human Resources Employed stating Designation and numbers
4	Number of years of experience in Mass Transit Operations	10	Number of years: Less than 5 = 0 Points 5 to 6 = 6 Points > 6 to 7= 8 Points More than 7 = 10 Points	Copy of Route Permits OR Contract Document OR Letter of Award OR Any other valid document for evidence (In case of JV, applies to any one single member with maximum years of experience)
5	Average Annual Turnover in last three years in PKR Millions	20	< 400 = 0 Points 400 to 600 = 5 Points >600 to 800 = 10 Points >800 to 1000 = 15 Points >1000 = 20 Points	Form Tech-4 along with its attachments
6	Net Worth in Last Year in PKR Millions (Total Assets - Total Liabilities)	15	Less than 150 = 0 Points > 150 to 200 = 3 Points >200 to 300 = 6 Points >300 = 10 Points	Form Tech-4 along with its attachments
7	CURRENT RATIO (Ratio of current assets of the firm to its current liabilities in the last Fiscal Year)	10	1 and More = 10 Points 0.9 to less than 1 = 8 Points 0.8 to less than 0.9= 6 Points 0.7 to less than 0.8 = 4 Point 0.6 to less than 0.7 = 2 Point Less than 0.6 = 0 Marks	Form Tech-4 along with its attachments

8	DEBT RATIO (ratio of total liabilities to total assets in the last Fiscal Year)	5	0.5 and Less = 5 Points More than 0.5 to 0.6 = 4 Points More than 0.6 to 0.7= 3 Points More than 0.7 to 0.8= 2 Points More than 0.8 = 0 Marks	Form Tech-4 along with its attachments
TOTAL		100		Minimum Passing Marks = 65

Note:

For the purpose of this tender:

1. Mass Transit Fleet will include buses, metro buses, trains, trams and monorails.
2. Mass Transit Operations will include operating and maintaining Mass Transit Fleet on urban and intercity routes. Such route will be considered as Mass Transit Route.
3. If the experience cited by the bidder for criteria 1, 2, 3, and 4 is as a member of a JV, the full experience will be considered if the bidder is the lead member of the JV. Otherwise, the experience will be evaluated based on the specific tasks performed as outlined in the particular JV agreement.

ANNEXURE-B: SERVICE LEVEL AGREEMENT (SLA)

In case of breach of SLA parameters, penalties will apply supported by concrete evidence.

Scope:

- The SLA describes target performance levels which the bidder shall aim to deliver for the Services outlined in this RFP. It also lists the procedures for managing unavailability of Services / negligence / inefficiency on part of the Operator, and associated penalties which will be applied if bidder fails to deliver any service performance targets in accordance with this Agreement.
- The Operator will be exempted from delays or slippages on SLA parameters arising out of delays in execution or due to delay in approval or review from the Client's side. Any such delays will be notified in writing.
- Penalties shall be levied as per the following formula:-

$$\text{Penalty Amount (PKR)} = R \times \sum K$$

Where:

R = Adjusted Non Excess Km Rate of the invoiced month (Refer to Annex-C)

$\sum K$ = Total penalty kilometers in the invoiced month

- The total monthly penalty amount shall not exceed more than 10% of same monthly payment to the Operator. The amount so deducted shall be adjusted in the same monthly payment.
- In the event that the monthly penalty amount exceeds 10% of the monthly payment for three months in a calendar year, the Client shall have the right to either forfeit the Performance Guarantee or terminate the contract for default.
- Successful bidder / Operator must notify the vehicle defect to the Authority affecting daily operations ,via email, fax, and/or telephone, as soon as it becomes aware of the fault, and must also keep the monitoring cell informed of progress towards resolution in a timely manner.

TABLE: KEY PERFORMANCE INDICATORS

S.No	Key Performance Indicators (KPIs)	Formula	Standard (Per Month)	Kilometers fined based on Monthly evaluation	
1	Trip Efficiency/ Regularity of Operation	(No of Trips operated x 100) / (No of trips assigned in Schedule)	More than 95%	More than 91%- 95% 80%-91% Below 80%	40 x Number of Trips Missed 45 x Number of Trips Missed 90 x Number of Trips Missed
2	Tram Bunching	On the basis of occurrences			2 x Number of Occurrences
3	Reliability of Trams/ No. of Breakdowns		Maximum 2	3-5 6-8 Above 8	300 x Number of Breakdowns 350 x Number of Breakdowns 700 x Number of Breakdowns
4	Cleanness of Trams / Number of Trams found dirty		Maximum 10	11-30 Above 30	30 x Number of vehicles observed dirty 50 x Number of vehicles observed dirty
5	Safety of Operation/ Rate of Accidents		Nil	1-5 6-10 Above 10	250 x Number of Accidents 300 x Number of Accidents 600 x Number of Accidents
6	User Satisfaction / Number of verified Passenger Complaints		Maximum 20	21-50 Above 50	2 x Number of Complaints 5 x Number of Complaints

The details of other fines are provided here as under. The penalties will be invoked on per instant basis unless otherwise defined

FINES FOR DEFICIENCIES RELATED TO THE CONDITIONS OF THE VEHICLES

Description of the infraction	Fine (No. of KM's)
To place any type of decoration or non-functional items inside or outside the vehicle, which have not been installed by the original manufacturer of the chassis or body	15
To polarize, totally or partially, side, front or back windows.	15
To use or to modify colors and designs of the external paintwork of the vehicle outside the standards parameters established by Client.	15
To install additional lamps such as “explorers”, chassis illumination or decoration, which are not regulatory or installed by the original manufacturer	15
To place advertising material not authorized by the PMA or to infringe regulation regarding advertising material in vehicles.	15
To drive with lights off at night.	15
To operate equipment with sound inside the vehicle, or to read announcements not authorized by the Client	15
To use unauthorized electronic equipment by the driver (cell phones, walkman, etc.) during driving	50
To drive with defective front, side and/or back or brake lights.	15
Broken, ripped or loose seat(s)	15
Section of handrail Missing / loose or with cutting edges.	15
Missing / Broken / Insufficient number of grab handles	15
Broken / Cracked side, Window, Front or back screen, Rear View Mirrors	15
Lack of illumination or incorrect arrangement in terms of visibility of interior and exterior route displays OR Non functional interior or exterior route displays	20
To operate vehicle with visible dents/impacts/breakage. (inside and outside)	20
Inadequate operation of passenger access doors, either due to damage or incorrect operation including nonfunctional door cameras and display units which affects boarding and alighting times or safety of passengers.	20

Description of the infraction	Fine (No. of KM's)
Incorrect operation or damage to doors for emergency exits.	25
To violate or to alter without prior authorization of the system's manager its control or any of its parts (On Board Unit (OBU), GPS Antena and all other equipment for that purpose).	25
Improper / No Announcements	30
Missing (As per quantity installed by the manufacturer) / non-functional fire extinguishers	30
Missing (As per quantity installed by the manufacturer) Emergency Glass Breaking Hammers	30
Tyres worn out or in unsuitable condition	50
Non-compliant Bus Specification. Fine shall be imposed against number of buses with non-compliance.	100 for each non compliance x No of days of non-compliance
CAN Module is unable to provide data as prescribed in specifications	50

FINES FOR DEFICIENCIES RELATED TO USER OPERATION

Description of the infraction	Fine(No. of KM's)
Parking/Not Parking vehicles at locations and/or quantity and/or time other than specified by the client. Fine shall be imposed against number of vehicles with non-compliance.	30
Stopping at a station and/or platform not established on the route Schedule for a service without the prior authorization or instruction of the PMA / Client	25
Changing the route of a service without the prior authorization or instruction of the PMA / Client	30
Operating hours or services not authorized by the PMA / Client	20
Taking up or setting down passengers at points other than the station stops.	20
Driving outside the routes or trunk routes established by the PMA without its authorization.	20
Delaying operation without cause.	15

Stopping bus at station for a time lesser than specified in the schedule	50
Overtaking vehicles of the same service without the authorization of PMA / Client	25
To run out of charge during trip	50
Air Conditioning not as per the prescribed bus specifications	35
Failure to deliver bus camera video to The Client <i>(The penalty will be 500 Km if the video demanded is expected to reveal critical incident such as accident or Operator is unwilling to share the video for his own vested interest)</i>	50
Failure to follow or acknowledge instructions issued by the Control Center, operations personnel OR Any act/instance which is non-conforming to Authority's Rules/Regulations/Contract/Instructions , not covered in other sections of SLA	30 x A Where A = 1 to 100 depending upon sensitivity of event and decision from The Client
Failure to arrange repairs of the damages to PMA Property caused by the Operator within the prescribed time frame.	25 x No of days delayed
Injury caused to the passenger due to negligence in operations including but not limited to improper docking, improper dwell time, improper door operations, improper vehicle acceleration and deceleration etc. In addition to the penalty the case will be dealt as per RFP clause 11.23	1000

SANCTIONS AGAINST DRIVERS

CONDUCT DESCRIPTION	FINE (NO. OF KMS)
Failure to carry personal and/or vehicle identification.	5
Using non-personal On Board Unit (OBU) Driver Card	50
Communicating with passengers without any purpose or authorization during normal operations.	35
Refusal to provide information	10
Slight infringement with other traffic	10
To cross a red light	50
To reverse in trunk routes, stations or portals without authorization	20
To carry weapons of any kind	10

CONDUCT DESCRIPTION	FINE (NO. OF KMS)
Disobedience to authorities	20
Drunkness on duty or smoking while driving	20
To cause an accident due to irresponsible behavior	20
Improper parking of bus at stops posing a risk to passenger safety and/or causing potential or actual obstruction to traffic flow.	30
To drive above speed limits	50
Stopping bus ahead of the stop bar	10
To take Passengers illegally	5
Abandoning and/or alighting from vehicle without cause and/or authorization from the PMA / Client	100
Verbal or physical ill-treatment with passenger (referring to driver)	Termination of the Driver
To charge tariffs inside the vehicles of the trunk route system	10
To move the tram without fully closing the doors	500

FINES OF INSTITUTIONAL OR ADMINISTRATIVE NATURE

Description of the infraction	Fine (No. of KM's)
Failure delivers information required by the PMA / Client, or delivers same outside the terms which for this purpose the PMA / Client may establish.	25
To refuse to accept the visits of the PMA's / Client's inspectors, to hide information or to provide partial or erroneous information.	25
To implement administrative and accounting practices which impair the reliability of the accounting and financial information which the Operator will keep in accordance with this Contract.	10
When it is shown that there are deliberate practices which restrict free competition or which imply abuse of the dominant position which the Operator could have obtained as a result of this contract, or of this Contract in conjunction with other contracts related to the functionality of the Metro Bus System.	10

Description of the infraction	Fine (No. of KM's)
To omit specifications, limitations of content or norms contained in the manuals and regulations which the PMA / Client issues or has issued regarding placement of advertising material inside the trunk route buses.	10
To omit compliance with obligations regarding driver training	50
To omit compliance with obligations established by the employment and social security regime regarding drivers.	10
To breach contractual provisions regarding financial mechanisms and liens on vehicles.	10
To transfer title of vehicles without the prior, express and written authorization of the PMA / Client	10

Fines for Environmental violations

Description of the Infraction	Fine (No. of Km's)
Noise emissions above environmental standards	50
To operate with leaking lubricants.	25
Non-compliance with the acceptable waste disposal	50

ANNEXURE-C: ADJUSTMENT OF THE RATE PER KM

Non Excess and Excess Rate Adjustment

- The adjustments in the rate per km will be subjected to subsequent variations in the base values and procedures laid down in the coming sections.
- Calculation of adjustments is subjected to variation in base values. The base values considered shall be of the first complete calendar month after bid submission.
- The parameters established for calculating the cost basket are estimates and therefore, failure to actually meet the same will not entitle any party to request adjustments in the calculation procedure of tariffs nor in the economic compensation of any kind.
- The Adjusted Bid Rate for monthly payment shall govern irrespective of whether it is higher or lower than the original Bid Rate.
- Adjustments to the Monthly Payments will be made on the following indexation parameters:

Rate	Indexations	Frequency
Per Kilometer Routine Maintenance (PKRM)	Consumer price index variation in Motor Vehicle Accessories mentioned in Price Statistics published by Pakistan Bureau of Statistics (PBS), Government of Pakistan	Quarterly
Per Kilometer Periodic Maintenance (PKPM)	Consumer price index variation in Motor Vehicle Accessories mentioned in Price Statistics published by PBS	Quarterly
Per Kilometer Tyres (PKT)	Wholesale price index variation in Auto Tires mentioned in Price Statistics published by PBS	Annual
Per Kilometer Lubricants / Other Fluids (PKL)	Wholesale price index variation in Mobil Oil mentioned in Price Statistics published by PBS	Monthly
Per Kilometer Salaries (PKS)	CPI inflation measured in increase percentage on year-on-year basis published by PBS	Annual

Adjustments to Routine Maintenance

$$\text{PKRM Adjusted} = \text{PKRM Reference} \times \text{MVAI Revised} / \text{MVAI Reference}$$

Where;

PKRM Adjusted: Adjusted per kilometer routine maintenance rate

PKRM Reference: Per kilometer rate of routine maintenance in the Financial Bid

MVAI Revised: Motor Vehicle Accessories Index at the end of each quarter

MVAI Reference: Motor Vehicle Accessories Index at the time of bid submission

Adjustments to Periodic Maintenance

PKPM Adjusted = PKPM Reference x MVAI Revised / MVAI Reference

Where;

PKPM Adjusted: Adjusted per kilometer periodic maintenance rate

PKPM Reference: Per kilometer rate of periodic maintenance in the Financial Bid

MVAI Revised: Motor Vehicle Accessories Index at the end of quarter

MVAI Reference: Motor Vehicle Accessories Index at the time of bid submission

Adjustments to Tyres

PKT Adjusted = PKT Reference x ATI Revised / ATI Reference

Where;

PKT Adjusted: Adjusted per kilometer tyres rate

PKT Reference: Per kilometer rate of tyres in the Financial Bid.

ATI Revised: Auto Tires Index at the end of each year

ATI Reference: Auto Tires Index at the time of bid submission

Adjustments to Lubricants / Other Fluids

PKL Adjusted = PKL Reference x MOI Revised / MOI Reference

Where;

PKL Adjusted: Adjusted per kilometer lubricants / other fluids rate

PKL Reference: Per kilometer rate of lubricants / other fluids in the Financial Bid

MOI Revised: Mobil Oil Index at the end of each year

MOI Reference: Mobil Oil Index at the time of bid submission

Adjustments to Salaries

PKS Adjusted = PKS Reference x CPI Revised / CPI Reference

Where;

PKS Adjusted: Adjusted per kilometer Salary rate

PKS Reference: Per kilometer Salary rate in the Financial Bid.

CPI Revised: Revised CPI at the end of each year.

CPI Reference: Reference CPI at the time of commencement of operations.

TOTAL MONTHLY PER KILOMETER RATE

Non-Excess Kilometer Rate = Applicable Per Kilometer Investment Rate (*as quoted in the bid*) + PKRM Adjusted + PKPM Adjusted + PKT Adjusted + PKL Adjusted + PKS Adjusted

Excess Kilometer Rate = PKRM Adjusted + PKPM Adjusted + PKT Adjusted + PKL Adjusted

ANNEXURE-D: SPECIFICATIONS FOR TYRE BASED TRAM (TBT)

Operator has to conform to the following specifications for brand new TBT

Section 1: General		
1.1	Introduction	
	<p>This document defines the minimum technical, functional, and performance requirements for Tyre based Trams (TBTs) vehicles intended for high-capacity urban transit corridors. The bidder must meet or exceed the mentioned specifications. The complete vehicle will be rattle free. All safety aspects should be considered while designing and fabricating the vehicle. The vehicle shall be designed to present a modern Light Rail Transit /tram-like external appearance, particularly when viewed from the front and along the lateral elevation, such that the rubber-tyred nature of the vehicle is not visually apparent under normal operating conditions. The vehicle shall be capable of delivering high passenger comfort, safety, and reliability under intensive urban service conditions. The Client reserves the right to permit minor variations to the specifications provided below, provided such variations do not compromise the overall objective.</p>	
Section 2: Design & Performance		
2.1	Capacity / Dimension	
A	Capacity	From 240 to 300 Passengers
B	Overall Length	28 m – 33.0 m
C	Overall Width	2.5 m – 2.65 m exclusive of side mirror
D	Articulator	Double Articulated combining 3 carriages / modules
E	Center Line Turning Radius at Front Axle	Not exceeding 16m
F	No. of axles	4-6 (depending on vehicle length and articulation)
H	Overall Height	Max 3600 mm
I	Gradeability (Fully Laden)	Min 8 %
J	Angle of Approach (Unladen)	7 to 8 degrees
K	Angle of Departure (Unladen)	7 to 8 degrees
L	Shape	<p>The vehicle shall feature</p> <ul style="list-style-type: none"> • a streamlined and aerodynamically contoured tram like shape, incorporating an energy-absorbing crash structure, panoramic windshield for optimal driver visibility, and integrated lighting assemblies. • Fully integrated, smooth, and continuous curved nose profile extending from roofline to lower bumper level.

		<ul style="list-style-type: none"> All front and rear tyres shall be concealed within enclosed wheel housings through the use of fixed or semi-fixed, flush-mounted external body skirting / wheel arch covers to maintain a continuous tram like side profile
2.2	Performance Features:	
A	Acceleration (Fully Laden with A/C On)	0–20 km/h: ~8–10 s; 0–50 km/h: ~20–30 s
B	Braking distance at 30 Km /h (Fully Laden)	Max ~10–12 m
C	Battery Range (fully laden and with all accessories, HVAC functional)	At least 220 KM (with 20% SoC remaining)
D	Emission	Zero tailpipe emissions (electric)
E	External Noise	Max ~80–85 dBA
F	Internal Noise	Max ~75–80 dBA
2.3	Steering Position	Driver cabin (right side or center aligned); multi-axle electronic trajectory guidance system
2.4	Battery Energy Storage System (BESS)	
A	Battery Type	LTO / NMC / LFP
B	Minimum Usable Energy Capacity	The size and capacity of batteries should be adequate to achieve TBT Mileage through a strategic combination with sufficient number of TBT chargers installed at appropriate locations.
C	Battery Life	Minimum 8 years with defined cycle life.
D	Charging Type	Mode-4 Type-2 CCS Plug
E	Charging Power	CCS Plug : Up to 360 kW or more
F	Charging Features	Suitable Fast and Slow/Normal Charging
2.5	Slow and Fast Chargers	
	The Operator shall have full flexibility and discretion in the planning, installing, testing and commissioning of number of slow and fast chargers and their strategic combination with TBT battery size and capacity in order to achieve TBT Mileage. (Daily 240 Kms for each TBT)	
Section:3 Accessibility		
3.1	Doors	
a	Doors Quantity, Direction and interspacing	Single carriage / module to be equipped with 2 doors on each side (total 4 doors in single carriage / module) The TRT set with 3 carriages / modules will have total 6 doors on each side (total 12 doors in TRT)

b	Door size & type	Preferable clear door width: ≥ 1400 mm & Minimum clear door width: ≥ 1300 mm (wide doors oriented for rapid flow and accessibility, consistent with rail vehicle standards). Door type: Electrically powered sliding doors configured for level boarding with minimal threshold.
c	Door Opening and Closing requirements	Doors shall be electronically / electro - pneumatically controlled and aligned with platform/kerb for level boarding (no steps). Doors shall not protrude beyond the vehicle's external envelope. Actuation shall be via driver switch and passenger push buttons where applicable with master control for simultaneous closure.
d	Safety Provisions	<ul style="list-style-type: none"> • Door position indicators on driver console. Obstruction detection sensors that reverse door closure if passengers or objects are in the doorway (effective until fully closed). • Warning signage and audible alarms during door movements. • Emergency exits provided as per international tram/rail vehicle standards. • CCTV or door cameras with in-cab displays for safe door operation (compatible with ITS requirements)
3.2	Ergonomics	
a	Interior Free-Standing Height (Front)	Minimum 2 m
b	Floor Height from road level	Level boarding design with low-floor configuration ~330–380 mm above guideway / road surface
Section 4: Passenger Safety		
4.1	Introduction	
	Passenger safety, speed, and secure movement while boarding, accessing or leaving seats, and alighting are paramount to ensure service is attractive, timely, and instills passenger confidence.	
4.2	Stanchions/handrails and Grab Handles	
	High-visibility contrasting colors, installed from floor to ceiling or seatback to ceiling as appropriate. Fitted throughout vehicle length near aisles for standing passenger support. Height designed for comfortable grip for passengers of all heights.	
4.3	Over hang hand rails: Maximum height: 1900 mm from floor level, consistent with light rail vehicle standards.	
4.4	Knurling is not encouraged for general cleanliness and hygiene reasons.	

4.5	Safety and Emergency Provisions: <ul style="list-style-type: none"> • Emergency exits, including roof hatches. • Fire extinguishers, emergency hammers, bells, alarms. • Pneumatic doors switchable to manual during emergencies. • CCTV/door cameras with in-cab displays. • Clear passenger signage and instructions. • Compliant with international safety standards. 	
Section 5: Passenger comfort and Use		
5.1	Seating	
a	Passenger Area	Minimum 0.25 m ² per standing passenger 0.35–0.40 m ² per seated passenger
b	Seat design & material	Ergonomically designed, durable, fire-retardant, water- and dust-proof. Seats withstand high-frequency daily use; modular layout allows flexibility.
c	Provisions for specially challenged people	Minimum 1 wheelchair space with seat belt and anchorage per module At least 4 color-coded seats near doors for people with disabilities, elderly, or specially challenged passengers Manual pulldown ramp at each door for wheelchair access
5.2	Lighting Passenger Comfort	Energy-efficient LED lighting throughout saloon. Minimum 200 LUX at seat level. Even distribution in all modules.
Section 6: Design Features of TBT		
6.1	Vehicle Drive / Control	Steering on the right side or centered aligned.
6.2	Vehicle Design	Designed for 16–20 hours daily operation in high-capacity urban corridors. Capable of handling up to 120% of design capacity, with average passenger weight ~68 kg. Frequent starts/stops with average operational speed ~18–20 km/h, maximum design speed ~70–80 km/h (electronically limited). All components of heavy-duty urban standard.
6.3	Vehicle Suitability	Proven design adapted for local climate, urban infrastructure, road conditions, and passenger demand. Modular for single or multi-articulated sections (up to 3 modules / 40 m).
6.4	Vehicle Structure	Compliant with structural strength, stability, deflection, vibration, crashworthiness, and roll-over protection standards. Loads considered include: <ul style="list-style-type: none"> • Static Loads • Dynamic Loads • Single/Double wheel bump loads • Braking & acceleration loads • Front impact loads • Speed bump & pothole loads

6.5	Vehicle Body Design	Conforms to international code of practice. Modular body allows flexibility for maintenance and passenger flow.
6.6	Anti-Corrosion Treatment	Multi-stage anti-rust/corrosion treatment for flooring, sides, roof, undercarriage, bogies, and suspension components. Designed to resist atmospheric corrosion, water, dust, and road salts for 8+ years of service.
6.7	Under Structure Treatment	All exposed surfaces treated with corrosion-resistant and flame-retardant coatings. Wheel housings designed to contain tyre/road debris and provide adequate clearance and ventilation to prevent overheating of wheels/brakes.
6.8	Floor Treatment	Anti-slip, fire-retardant flooring with full sealing to prevent ingress of water, dust, or gases. Level-floor design ensures step-free access.
6.9	Driver Cabin	The design of Driver Cabin would be such that it prevents passenger-driver interaction in normal conditions, does not block the view of side mirrors and with proper air conditioning inside. The design will be approved by the Client.
6.10	Rear View Mirrors	Exterior mirrors or cameras on both sides for side/rear visibility. Interior cameras allow monitoring of saloon for passenger safety. Ensures standing passengers do not obstruct driver sightlines.
6.11	Electrical Wiring	Flame-proof, durable cabling. Positive terminals secured; cables and conduits loomed for vibration resistance.
6.12	Treatment for Resonant Vibrations	All structure, body, and panel-bending mode frequencies, including vertical, lateral, and torsional modes, would be sufficiently removed from all primary excitation frequencies to minimize audible, visible, or sensible resonant vibrations during normal service.
6.13	Deflection under GVW: Fully loaded TBT under static or crush load conditions shall not impair vehicle operation, including doors, passenger escape mechanisms, and electrical/electronic systems.	
6.14	Operational Life: Designed to operate 12 years or 1.2 million km, whichever occurs earlier, under urban transit conditions.	
6.15	Materials	As per internationally acceptable standards

6.16	Front, Rear and Side Windows Glass	Tinted, safety glass to reduce glare and enhance comfort. Tint color and light transmission to be determined by the Client Windows should be durable, scratch-resistant, and integrate with vehicle insulation.
Section 7: Propulsion / Power System (Electric TBT)		
7.1	Electric traction motors or hydrogen-electric hybrid system designed for urban TBT operation. Power rated to ensure required acceleration, speed, and load performance without overheating. Motors optimized for high torque at low RPM and efficient energy use over frequent stops/starts.	
a	Motor Specification	The electric motor(s) that will provide the power for electric portion of the vehicle’s propulsion system for each power axle shall be at least 230 kW (rated power) and 350 kW (peak power) in size.
b	Motor Controller	<p>The Motor Controller regulates energy flow throughout Bus propulsion system components in order to provide motive performance and accessory loads, as applicable, while maintaining critical system parameters (e.g., voltages, currents, temperatures, etc.) within specified operating ranges.</p> <p>The Controller shall monitor and process inputs and execute outputs as appropriate to control the operation of all propulsion system components. The data from such controller should be retrievable by diagnostic equipment provided and readable for data analysis to ensure performance metrics are met.</p> <p>The temperatures of motor controller should be displayed on the dashboard and warning of overheating should be triggered if the temperature is beyond the optimal operating range.</p> <p>Fuses should be placed before the motor controller in the wire bringing current to MCU so in case of any positive variation of current, fuses should blow to protect any voltage variation resulting in capacitors overheating.</p> <p>Motor Controller must be able to perform following function: Under-voltage protection and alarm; Control on power reduction for under-voltage; Overvoltage protection function; Over-current and short circuit protection; Overheat protection of motor controller: grading mode, warning in advance, and cooling in the mode of reducing power.</p>

		<p>Controllers must incorporate a range of additional features which oversee other vehicle and battery systems, including:</p> <p>Vehicle control interfaces (accelerator and brake pedal etc.); Battery communications and pre-charge and isolation systems; Auxiliary inverters for driving external pump motor and external air compressor motor.</p>
c	Motor Controller Protection	<p>At least IP69k certification for Controller protection.</p> <p>The system includes Integrated drive motor controller, DC/DC converter, steering motor controller, air compressor controller, and high-voltage distribution module.</p>
7.2	Ambient Conditions:	
a	Operating Temperature	-5 to 50 degrees centigrade
b	Humidity Level	5% to 100%
c	Dust Level	Dust stirred up from paved and unpaved roads, windblown dust, dust from construction activity near corridor.
d	Altitude Level	Over 700 m
7.3	Insulation / Compartment Separation	Engine / traction motor and battery compartments insulated to prevent heat and noise transfer to passenger saloon. Bulkheads separate passengers from propulsion equipment.
7.4	Protection against Fire	Non-flammable or fire-resistant materials used in motor/battery compartments. Heat-resistant partitions installed. Battery packs include thermal runaway protection and fire suppression systems.
7.5	Air Intake / Cooling	Air intake design ensures dust-free, filtered airflow to traction motors, inverters, and batteries. Cooling systems (liquid or forced-air) designed to maintain optimal operating temperature under full load.
7.6	Cooling System	Heavy-duty electric or hybrid cooling systems with redundant circuits for traction motors, battery packs, and electronics. Designed for continuous operation in urban conditions.
Section 8: Paint		
	All the structural members of the bus would be treated for corrosion prevention internally as well as externally and painted wherever required.	
8.1	Internal Paint	

	Multi-layer anti-corrosion coating on interior surfaces. Durable against daily wear and cleaning, with 12-year expected life. Color scheme to be decided by the Client	
8.2	External Paint	
	Multi-layer anti-corrosion and UV-resistant coating. Durable for 12 years in urban exposure conditions. Color scheme to be decided by the Client	
8.3	Overall Structural Protection	All structural members (floor, roof, sides, underframe) treated internally and externally for corrosion prevention.
Section 9: Color Scheme/ Graphics		
	Client-directed color scheme for exterior, interior, and doors. Reserved seating for persons with disabilities, ladies, and senior citizens clearly marked. Vehicle branding and graphics in compliance with TBT corporate identity.	
Section 10: Air Conditioning / Thermal Comfort		
10.1	<p>Saloon Temperature Control: Maintain max 25°C throughout the vehicle under:</p> <ul style="list-style-type: none"> • Hot ambient temperatures up to 50°C • Cold temperatures down to -1°C • 100% humidity • Dusty environments • Vehicle loaded to 120% of the design capacity • Frequent door operations (45 sec open/dwell/close) with 700–1200 m interstation distance 	
10.2	Air curtains installed at all passenger doors to minimize heat/cool loss during boarding/alighting. Minimum air flow 1000 ±50 m ³ /hr. Design accounted for in vehicle energy budget and power management.	

Section 11: Intelligent Transportation System (ITS) – TBT		
11.1	Overview Of ITS System	<p>The ITS equipment will consist of components that will be procured and installed by the Company. It includes:</p> <ul style="list-style-type: none"> • Vehicle Performance Monitoring • Vehicle Weight • Vehicle Logic Unit (VLU) • Communications Unit • Driver Data Terminal (DDT) • Mobile Digital Video Recorder (MDVR) • Vehicle WiFi system • UHF/VHF/Wifi Communication System • External Variable Messaging Display • Internal Variable Messaging Display / Passenger information system • Internal Infotainment Display • Infotainment Display Back Screen

Section 11: Intelligent Transportation System (ITS) – TBT		
		<ul style="list-style-type: none"> • Audio System • Driver Display Unit And On-Board CCTV Cameras • Driver Panic Alarm • USB ports • Driver Console • Fare Validator • Automated Vehicle Location System (AVLS) • UHF/VHF/Wifi Communication System <p>The aforementioned ITS equipment will be fitted, installed, operated and maintained by the Operator</p>
11.2	Vehicle Performance Monitoring	<p>Vehicle performance monitoring is an essential element for effective fleet management and driver control. The Operator will monitor and record the most pertinent performance statistics of the major mechanical and electrical components.</p> <p>It is essential that all the vehicles are equipped with performance monitoring that will provide information of, at least, the following:</p> <ul style="list-style-type: none"> • Speed (wheel based and Tachometer based) • Battery Management System (BMS) • Energy used and remaining energy levels (Battery) • Vehicle distance • Tachograph performance • Handling information • Ambient air temperature • Status of doors and boarding bridges • Time/date • Brake pressures • Parking brake status • Gears and alternator status • Direction indicators • Vehicle weight • Battery On/Off Status • Vehicle Health Monitoring <p>Data outputs from the monitoring equipment shall be recorded onto the Vehicle Logic Unit (VLU) for later compilation and analysis. The Operator shall confirm or cause to be confirmed the required interfaces and applicable standards during the final design approval process.</p> <p>The driver panel shall include one display meter of carbon footprint/emissions savings compared to a diesel bus, based on battery KWh dispensed. The readings on the meter shall display instant values, daily values and values since commencement of commercial operations of the bus.</p>

Section 11: Intelligent Transportation System (ITS) – TBT		
		The monitoring system must comply with an open interface standard for information exchange typically used for Fleet Management Systems (FMS). It shall be capable of transmitting all readings to a remote control room.
11.3	Vehicle Weight	<p>The Operator shall measure and record the vehicle weight at different points of time. The data recorded will include the total weight of the vehicle. Preferably, this data will also include the distribution of the weight, and in particular, will include measurement of the axle loads.</p> <p>There will be at least two general uses for the data collected. First, this data shall be correlated to GPS position to estimate the number of passengers on board the vehicle at different segments of the route.</p> <p>The weight values shall thus be used to estimate the number of passengers boarding and alighting at each bus stop. Second, the axle load data will help ensure compliance to the legal load- carrying limits of the vehicle.</p> <p>Data from the vehicle weight device shall be recorded onto the Vehicle Logic Unit (VLU) and made available through the interface.</p>
11.4	Vehicle Logic Unit (VLU)	<p>The VLU is the core computer server for most of the data and ITS functions onboard the vehicle.</p> <p>The VLU shall be placed in a location that allows effective connectivity to the various ITS components over the LAN. The location shall also ensure that the VLU is physically well-protected.</p> <p>The Operator will provide all necessary wiring and cabling for the system and must be completed in all aspects.</p> <p>The Operator will provide complete SDKs of VLU to the Client.</p> <p>The VLU must be compatible to function with the ITS components in this specification.</p> <p>The Company shall provide or cause to be provided a description of the technical specifications (hardware, interfaces, and operating system) of the VLU and interface specifications allowing the integration of the unit with:</p> <ul style="list-style-type: none"> • Vehicle performance monitoring (CAN data) • Communications unit • GPS positioning data • Mobile Digital Video Recorder

Section 11: Intelligent Transportation System (ITS) – TBT

		<ul style="list-style-type: none"> • External variable messaging display • Internal variable messaging display • Internal infotainment display • Audio system • Panic alarm <p>Note: (Company may provide an integrated unit or a standalone unit)</p> <table border="1" data-bbox="618 510 1453 1102"> <tr> <th colspan="2" data-bbox="618 510 1453 577">Minimum Hardware Specifications</th> </tr> <tr> <td data-bbox="618 577 847 682">Accuracy</td> <td data-bbox="847 577 1453 682">The device must be able to track the location of buses with an accuracy of +/- 10 meters.</td> </tr> <tr> <td data-bbox="618 682 847 787">Update Frequency</td> <td data-bbox="847 682 1453 787">The device must update the location of buses at least once every second.</td> </tr> <tr> <td data-bbox="618 787 847 892">Communication Protocol</td> <td data-bbox="847 787 1453 892">The device must communicate smoothly with other on-board components.</td> </tr> <tr> <td data-bbox="618 892 847 997">Power Requirements</td> <td data-bbox="847 892 1453 997">built-in power supply for last status update.</td> </tr> <tr> <td data-bbox="618 997 847 1102">Durability</td> <td data-bbox="847 997 1453 1102">The VLU must be durable enough to withstand the rigors of everyday use.</td> </tr> </table> <p>Real-time location tracking: The device must be able to track the real-time location of buses.</p> <p>Data logging: The device must be able to log data about the bus's location, speed, and other operational parameters.</p> <p>Communication with other systems: The device must be able to communicate with other systems in the bus, such as the Driver Console and the fare collection system.</p> <p>Fault detection and reporting: The device must be able to detect and report faults.</p> <p>Note: All relevant functional SDK's & API's, along with their documentation (complete in all aspects) in English Language must be provided but not limited to DOT.NET/Android with Local/International support.</p>	Minimum Hardware Specifications		Accuracy	The device must be able to track the location of buses with an accuracy of +/- 10 meters.	Update Frequency	The device must update the location of buses at least once every second.	Communication Protocol	The device must communicate smoothly with other on-board components.	Power Requirements	built-in power supply for last status update.	Durability	The VLU must be durable enough to withstand the rigors of everyday use.
Minimum Hardware Specifications														
Accuracy	The device must be able to track the location of buses with an accuracy of +/- 10 meters.													
Update Frequency	The device must update the location of buses at least once every second.													
Communication Protocol	The device must communicate smoothly with other on-board components.													
Power Requirements	built-in power supply for last status update.													
Durability	The VLU must be durable enough to withstand the rigors of everyday use.													
11.5	Communication System	The Communications Unit will control the flow of communications and information between the vehicle and the control center. This includes												

Section 11: Intelligent Transportation System (ITS) – TBT		
		<p>both real-time data exchange as well as stored information for later downloads at the depot.</p> <p>The communication system will also permit verbal communication between the driver and the control center. The verbal communications system will be designed so that the driver may communicate hands-free of the device, but still capable of hearing vehicle cabin sound.</p> <p>The Communications Unit will provide connectivity through 3G and 4G mobile networks. The Communications Unit will provide at least two slots for different SIM cards, and thus enabling the option of multiple simultaneous 3G/4G connections. Due to concerns regarding the reliability of the existing 3G and 4G mobile networks, the provision of communications via UHF/VHF radio bandwidths with all the necessary peripherals on both sending and receiving ends should also be provided by the Company as a complete communication solution over UHF/VHF.</p> <p>Note: Equipment will be covered under 01 (one) year standard warranty to be provided by the Operator.</p>
11.6	Driver Data Terminal (DDT)	<p>The Driver Data Terminal (DDT) is a computing device that enables the driver to visually understand vehicle performance and parameters.</p> <p>The device shall be equipped with a color LCD touchscreen display designed for operation in a public transport environment and shall be managed and controlled by the VLU.</p> <p>Note: Equipment will be covered under 01 (one) year standard warranty to be provided by the Company.</p> <p>QTY: 1 in each TBT</p>
11.7	Mobile Digital Video Recorder (MDVR)	<p>All CCTV footage shall be recorded on-board by the Mobile Digital Video Recorder (MDVR). The MDVR shall be connected to the VLU for management purposes. Video footage on the MDVR will be downloadable at the depot if required.</p> <p>MDVR must have the capability to store recordings for fifteen (15) days. The device must be able to record video and audio.</p> <p>MDVR should support real-time video streaming to a third-party server over the internet via secure transmission protocol, ensuring low-latency data transfer and compliance with network security standards.</p> <p>The MDVR should feature a combination of multiple industrial Ethernet and analog ports while ensuring seamless integration with all onboard</p>

Section 11: Intelligent Transportation System (ITS) – TBT

devices via dedicated LAN interface. The system must support Ethernet-based connectivity for data transmission, device synchronization, and efficient network communication, enabling a unified and scalable architecture.

The MDVR should be compatible with AI camera systems installed in the TBTs.

Minimum Hardware Specifications	
OS	Linux or Android
CPU	Dual-core with 1.3Mhz at least
Communication	WIFI, 3G, 4G,
Minimum Resolution	1080p
Video Input	8 Channel with 4 additional digital input (minimum 720p, 25/30fps per channel, H.264/H.265 encoding)
Video Output	1 Channel
GPS	The device must be able to track the location of buses with an accuracy of +/- 10 meters and should have an external antenna.
Storage	Min 1TB SATA
Interface	RS232, RS485, Digital IOs for bus sensors interface Industrial-grade LAN connected with all devices installed in the bus LAN interface (100M/1G) CAN Bus, USB
Power Input	Built-in power supply for last status update
Alarms	Panic, Over speed, Geo-Fence Power Failure, Gate Opening
Device Maintenance	OTA, USB Upgrade, Remote management (Refer to 11.18)
Additional Software feature	FTP, remote and local SSH, root access, RTSP Hardware shall be capable to realize the required features. All features related to software will be responsibility of software developer.

Data Required using CAN Bus:

- Acceleration and Deceleration
- Breaking (All kind of brakes)

Section 11: Intelligent Transportation System (ITS) – TBT		
		<ul style="list-style-type: none"> • Gear Shifting for automatic transmission • Battery Capacity Information • Motor RPM • Speed • Doors Control (Open/Close) Information • Bus Saloon Temperature • Motor Temperature • Battery On/Off Status • Passenger Count • Mileage <p>DBC file or equivalent documentation for precise signal decoding The device must be able to record video and audio.</p> <p>Note: Equipment will be covered under 01 (one) year standard warranty to be provided by the Company.</p> <p>QTY: 1 in each TBT</p> <p>Note: All relevant functional SDK's & API's, along with their documentation (complete in all aspects) in English Language must be provided but not limited to DOT.NET/Android with Local/International support.</p>
11.8	Vehicle Wi-Fi	<p>The vehicle shall provide free Wi-Fi to passengers. The Company will procure and install the vehicle Wi-Fi system.</p> <p>The Wi-Fi equipment will include a 4G receiver and router. The minimum download speed for the Wi-Fi system within the vehicle shall be at least 3.0 megabits per second (Mbps).</p> <p>The Operator will be responsible for fitting, installing, operating and maintaining the Wi-Fi receiver and router into the vehicle. The fitting of the equipment will be provided in a manner to ensure Wi-Fi connectivity in all passenger sections of the vehicle. The Operator will provide all necessary wiring and cabling for the system.</p> <p>The passenger Wi-Fi may also be provided by a receiver and router integrated with the vehicle Communication Unit (see 11.5 above).</p> <p>QTY: 1 in each TBT</p> <p>Note: Equipment will be covered under 01 (one) year standard Company's warranty.</p>

Section 11: Intelligent Transportation System (ITS) – TBT

11.9	External Variable Messaging Display	<p>An external variable messaging display shall be provided on the top front and back of the vehicle, as well as on each side of each module of TBT. The external variable messaging display will indicate three possible types of information:</p> <p>Route destination;</p> <p>Name of route; and</p> <p>Emergency messages.</p> <p>The external display shall utilize high brightness, wide viewing angle, and amber LED technology. LED brightness shall be controlled by photocells installed as part of the sign.</p> <p>The controller shall communicate with the on-vehicle VLU. It shall also be possible to override messages directly from the control center under emergency conditions.</p> <p>The display shall be capable of showing upper- and lower-case characters with proportional fonts. The display shall be capable of showing double-stroke width (bold) fonts. The front face of the display shall be designed to minimize glare.</p> <p>The display shall have the functionality to display messages in the following modes, set through configuration data:</p> <p>A single, non-scrolling or changing message</p> <p>A right-to-left scrolling message</p> <p>An alternating (between two states) message.</p> <p>The LEDs shall have a minimum service life of 80,000 hours in their installed configuration. The system shall be designed for continuous operation. Visible messages shall begin playing within five (05) second of being triggered.</p> <p>External variable message signs shall be capable of displaying the message in Urdu and English dynamically/remotely.</p> <p>QTY: One at front One at back of TBT, one at each side (left and right) of each carriage.</p> <p>Note: Equipment will be covered under 01 (one) year standard warranty to be provided by the Company.</p>
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Section 11: Intelligent Transportation System (ITS) – TBT

Note: All relevant functional SDK’s & API’s, along with their documentation (complete in all aspects) in English Language must be provided but not limited to DOT.NET/Android with Local/International support.

11.10 Internal Variable Messaging Display / Passenger Information System (Vehicle Grade)

Two internal variable messaging displays in each module (total 6 in TBT) shall be provided in the front portion and middle of the module. The display will provide the following types of information:

Name of next stop/station

Route name and route map

Route destination Time

The onboard displays shall utilize high brightness, wide viewing angle, liquid crystal display (LCD) technology. The display will be readable for a distance of up to 8 meters. Messages on the displays shall be legible during any time of day and from any designated passenger position on the bus.

During the pre-production stage, the Client will specify the font type, color of the background, color of the lettering, and the use of any branding on the display.

Internal variable message sign shall be capable of displaying the message in Urdu and English.

Minimum Hardware Specifications	
Screen Size	28 to 34 inches AS per the size available in Bus
Luminance	Must be clearly visible in day light
Display Colors	16M
Operating System	Android 9.0 or higher
Resolution	720p or higher
Display Interface	HDMI/VGA/or any other interface
Networking Interface	LAN interface
Peripherals	USB2.0/USB3.0 x1, SD Card, Audio Output
Memory	2GB RAM, 8GB Storage
Protection	4mm tampered protective glass on screen Metal Case
Video Support	MP4, AVI
Image Support	JPEG

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Audio Support	MP3
Device Maintenance	OTA, USB Upgrade, Remote management (Refer to 9.18)
Additional Software feature	FTP, remote and local SSH, root access Hardware shall be capable to realize the required features. All features related to software will be responsibility of software developer.

1) THE PASSENGER INFORMATION SHALL COMPRISE OF FOLLOWING FEATURES:

- a. The Passenger Information System Display Unit shall receive display information and voice announcement commands from the on-board GPS vehicle control module based on stored memory on the bus.
- b. The Passenger Information System Display Unit shall function as independent system and shall not be directly dependent on the Central System.
- c. There shall be scrolling display of destination in Urdu & English alternatively along with fixed route number.
- d. The audio message and the video display shall be clearly audible/visible in all weathers inside the bus.
- e. Integration of Multimedia System to broadcast audio messages.
- f. Link to the internal/external system(s) remote & local server in real-time. All relevant SDK's and API's in English Language is compulsory with Local/International support.

2) ALL SUPPLIED AFC ITEMS (INCLUDING ALL HARDWARE, SOFTWARE, NETWORKING, FARE MEDIA ETC.) SHOULD BE INTEGRATED WITH THIRD PARTY MOBILE APPLICATION BOTH ANDROID & IOS.

3) ALL RELEVANT FUNCTIONAL SDK'S & API'S, ALONG WITH THEIR DOCUMENTATION (COMPLETE IN ALL ASPECTS) IN ENGLISH LANGUAGE MUST BE PROVIDED WITH LOCAL/INTERNATIONAL SUPPORT.

Provided hardware should have capability to work in decentralized/centralized mode.

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		Note: Equipment will be covered under 01 (one) year standard manufacturer’s warranty.
11.11	Infotainment Display Back Screen	<p>An internal rectangular infotainment display screen shall be provided at the back of the bus for advertisement purposes. This screen shall be visible to commuters outside the bus in mixed traffic and pedestrians.</p> <p>The displays shall utilize high brightness, wide viewing angle, LCD technology. The display resolution shall be at least 1920 x 1080p.</p> <p>The displays will be enclosed in a tamperproof casing with toughened glass. The surface of the display shall be coated with an anti-glare layer to enable viewing during any time of the day.</p> <p>Content for the infotainment display will be stored and connected via the VLU. Standard video signal input ports will be provided.</p> <p>The size of the screen shall be finalized at the concept design stage of bus. However, it is envisaged that this screen will cover entire back windscreen.</p>
11.12	Audio System	<p>The audio system shall be capable of both digital audio messages programmed into the Vehicle Logical Unit (VLU)/MDVR as well as public address messages from the driver.</p> <p>The audio system will be programmable in relation to the vehicle position in order to automatically deliver specific bus stop information. Upon arriving at a bus stop, the digitally-recorded message will announce the bus stop name as well as the name of possible transfer routes. A digital announcement will also be made noting that the doors are opening. Upon departing a station, a</p> <p>digitally-recorded message will note the doors are closing. The digital announcement will then note the route name, final destination, and the next bus stop.</p> <p>Messages from the driver on the public address system will only occur to announce special messages or situations, such as reasons for delays or emergency instructions. The digital recording of the messages will be the responsibility of the Purchaser.</p> <p>The volume of the announcements shall be adjustable to a standard level through configuration data. The system shall include an automatic gain control to automatically and independently adjust interior and exterior volumes depending on interior and exterior ambient noise levels.</p>

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		<p>The audio system will be controlled by the VLU/MDVR and the input ports must therefore be able to interface with the VLU/MDVR.</p> <p>Note: Equipment will be covered under 01 (one) year standard warranty to be provided by the Company.</p> <p>QTY: 1 in each TBT</p>
11.13	Driver Displays And On-Board CCTV Cameras	<p>Closed-circuit television (CCTV) cameras shall be provided for vehicle surveillance to ensure passenger security and vehicle safety.</p> <p>Output from the cameras will be shown through a visual display on or near the dashboard. The driver shall have a visual digital display of the area behind the vehicle whenever the vehicle is in reverse gear.</p> <p>The video footage from these cameras shall also be stored on-board on the Mobile digital video recorder (MDVR). The Company will provide all cabling and connectivity between the cameras and the MDVR.</p> <p>In normal conditions, the video footage will be downloaded when the vehicle enters the depot. The Company must design the system so the data can be readily downloaded after the vehicle enters the depot. In emergency situations, the system shall allow streaming of onboard footage to the control center.</p> <p>The Operator shall ensure the video output can be integrated with the control center’s hardware and software.</p> <p>All cameras will be integrated into the interior layout of the vehicle in a visually appealing manner. The precise location of the cameras will be determined in the pre-production phase with approval from the Purchaser. Both the cameras and the dashboard displays should ideally be highly visible to the passengers to give assurances that their security is being surveilled.</p> <p>Note: Equipment will be covered under 01 (one) year standard warranty to be provided by the Company.</p> <p>QTY:</p> <p>AI CAMERAS: DMS (Driver Behavior Monitoring System) x1</p> <p>Passenger Counting at entry/exit passenger gate x12</p> <p>SURVEILLANCE CAMERAS: General surveillance x2 in each module (Total 6 in TBT)</p>

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		Reverse Gear x1 Dashcam x1
11.14	Driver Panic Alarm	<p>The panic alarm will be utilized in circumstances in which the driver is not able to utilize the normal communications system.</p> <p>The panic alarm shall be located discretely in the driver’s compartment. The location should be such that it is known to the driver but not clearly evident to passengers. The Operator shall provide the button and the wiring required to connect it to the VLU.</p> <p>Note: Equipment will be covered under 01 (one) year standard warranty to be provided by the Company.</p> <p>QTY: 1 in each TBT</p>
11.15	USB Ports For Passenger Devices	<p>The provision of USB ports in the passenger seating area will allow customers to charge their personal devices while travelling on public transport. This service helps further encourage ridership.</p> <p>The preferable configuration would be a USB Type-A & Type-C ports provided behind each seat or at the vehicle interior sidewall for seats without another seat directly in front.</p> <p>Note: Equipment will be covered under 01 (one) year standard warranty to be provided by the Company.</p> <p>QTY: 1 (Type A & Type B) for each seat</p>
11.16	Fare Validator	<p>The on-board fare validators will be required at the curbside doorways.</p> <p>The on-board fare validators will be pre-installed by the Operator.</p> <p>The Operator will be responsible for purchasing, fitting, installing and testing the on-board fare validators into the vehicle. The Operator will also ensure the integration of the on- board fare validators with the VLU/MDVR over a dedicated wired connection, preferably LAN interface. The Operator will provide the wiring and cabling to connect the fare validators.</p> <p>A total of two fare validators in each module (total 6 in TBT)</p> <p>LAN connectivity, along with LAN cabling shall be ensured by the Operator with the rest of the ITS ecosystem.</p>

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		<p>Must be covered in concealed Anti-dust casing</p> <p>Position (Protection from frequent contact / damage)</p> <p>Wiring (Concealed & not exposed to public)</p> <p>Buttons (Not exposed to public)</p> <p>The software development for Fare Validation will be done by an ITS service provider, which is contracted by the Client. The Operator will work closely with the ITS service provider to determine the size and location of installation of the on-board fare validators in the TBT.</p> <p>During the pre-production and production period, the Operator shall communicate with the ITS service provider regarding any clarifications required. A representative of the ITS company will inspect the prototype bus to ensure all issues are resolved The Operator shall work in close consultation with the ITS service provider to ensure full functionality with physical and software integration, including the exact size of the units and the electrical requirements.</p> <table border="1" data-bbox="613 1003 1450 1866"> <thead> <tr> <th colspan="2">Minimum Hardware Specifications</th> </tr> </thead> <tbody> <tr> <td>Payment Modes</td> <td>Smart card, bank EMV card, mobile QR payment, NFC payment</td> </tr> <tr> <td>Processing</td> <td>4 cores, at least 2.0 GHz, 3GB RAM 16GB flash MicroSD support 500,000 data record supported</td> </tr> <tr> <td>Operating System</td> <td>Android 9.0 or higher</td> </tr> <tr> <td>Display</td> <td>7 inch, 1024*600 resolution</td> </tr> <tr> <td>Indications</td> <td>Two (2) LED status indicators Four (4) function keys Built-in buzzer Built-in speaker Real-time Clock</td> </tr> <tr> <td>Contactless Smart Card Reader</td> <td>Support ISO / IEC 14443 A & B, Mifare EV1 EV2, Felica Card, in line with EMV specifications, NFC enabled</td> </tr> <tr> <td>SAM slots</td> <td>ISO07816 SAM slot x1</td> </tr> </tbody> </table>	Minimum Hardware Specifications		Payment Modes	Smart card, bank EMV card, mobile QR payment, NFC payment	Processing	4 cores, at least 2.0 GHz, 3GB RAM 16GB flash MicroSD support 500,000 data record supported	Operating System	Android 9.0 or higher	Display	7 inch, 1024*600 resolution	Indications	Two (2) LED status indicators Four (4) function keys Built-in buzzer Built-in speaker Real-time Clock	Contactless Smart Card Reader	Support ISO / IEC 14443 A & B, Mifare EV1 EV2, Felica Card, in line with EMV specifications, NFC enabled	SAM slots	ISO07816 SAM slot x1
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		Physical Interface	1x RS232/RS485 interface x1, 1 x RJ45 LAN interface x 1 1x USB 2.0/3.0 interface x1 1x USB debugging interface 1 x power interface x1
		Wireless Connectivity	4G, Wi-Fi, and GPS All interfaces should be registered from concerned authorities
		Device Maintenance	OTA, USB Upgrade, Remote management (Refer to 9.18)
		Additional Software feature	FTP, remote and local SSH, root access Hardware shall be capable to realize the required features. All features related to software will be responsibility of software developer.
		Certifications	EMV L1, EMV L2 certificates must be provided by the supplier. EMV L3 certification is the responsibility of the Employer however, the support should be ensured by the bidder in order to achieve the EMV L3 certification
		Durability	Robust and rugged design, suitable for in-vehicle use
		Operating Temperature	-10°C to +70°C
		Vibration and Shock testing(s)	60068-2-6, 60068-2-27, EN60721-3-5
	<p>The Fare Validator shall comprise of following features:</p> <p>The Validator shall be capable of performing a transaction with ISO 14443 “Type A/B” cards, including the reading and writing of user data in memory.</p> <p>For all its data connection, recording, and transmission, validator shall use the latest security standards.</p> <p>The Validator must have capability to accept not only contactless cards but also QR tickets and mobile application generated QR codes as a payment option.</p>		

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		<p>The validator should read cards at a distance of 0mm to 30mm, but shall not operate at a distance that introduces a risk of unintentional operation (tolerance limit $\pm 5\%$).</p> <p>The validator shall read, write and verify all required data for the transactions associated with fare media to permit the application of all the business rules and collection of all records required for the accounting and reporting purposes.</p> <p>Transaction time shall not exceed 300ms.</p> <p>Validator should have RTC in-built for clock management and should have onboard memory to manage business rules.</p> <p>The validator will be integrated with the VLU/MDVR in order to process fare data.</p> <p>Link to internal/external system(s) remote & local server.</p> <p>All relevant functional SDK's and API's, including open loop SDKs along with their documentation (complete in all aspects) in English language must be provided with Local/International support but not limited to Android.</p> <p>Payment Application: Complete functional payment application for open loop payment such as visa, master and other payment schemes must be provided by Operator. EMV L3 certification is the responsibility of the Employer however, the support should be ensured by the bidder in order to achieve the EMV L3 certification.</p> <p>The fare validator must have the ability to read QR and NFC through an integrated or separate module.</p> <p>All supplied AFC items (including hardware, software, networking, fare media etc.) should be integrable/compatible with third party Mobile application both Android & IOS.</p> <p>Provided hardware should have capability to work in decentralized/centralized mode.</p> <p>Note: Equipment will be covered under 02 (two) years standard warranty to be provided by the Company.</p> <p>QTY: 6 (2 in each module)</p>
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11.17	Automatic Vehicle Location (Avl) System	<p>All vehicles in the system will be tracked by an Automated Vehicle Location (AVL) system utilizing Global Positioning System (GPS) technology. Data from this system will form the basis of compensation to the vehicle operators, and therefore, this represents a critical data collection feature for the overall operation of the system.</p> <p>The AVL system also provides instructions to the drivers to maintain the correct headway between vehicles. The AVL system will provide real-time, automatic information to drivers on the correct speed in order to maintain the headway. The system will clearly display on the driver console the target speed in real-time to maintain the headway. The AVL system thus encompasses all hardware and software components to achieve real-time positioning control of the vehicle. The AVL unit will be fitted into the driver console in an ergonomic manner. The AVL unit will also be integrated with the Vehicle Logic Unit (VLU), allowing it to:</p> <ul style="list-style-type: none"> Relay vehicle performance data to the Control Centre Receive GPS positioning data Relay the video to the Control Centre Control the content on all messaging and infotainment displays Feed the audio system with audio Relay panic messages to the Control Centre. <p>The AVL system of the entire fleet will be monitored from the operational control center.</p> <p>The AVL and GPS shall be pre-fitted in the vehicle.</p> <p>The Operator will work closely with the Client/ITS company to determine the size and location of the AVL system being provided by the Operator. During the pre-production and production period, the Operator shall communicate with the Purchaser and ITS service company. The Operator shall work in close consultation with the ITS company to ensure full functionality with physical and software integration, including the exact size of the units and the electrical requirements.</p> <p>Note: Equipment will be covered under 01 (one) year standard warranty to be provided by the Company.</p>
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Section 11: Intelligent Transportation System (ITS) – TBT

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11.18	Driver Console	<table border="1"> <tr> <td colspan="2">Minimum Hardware Specifications</td> </tr> <tr> <td>Processor</td> <td>Minimum quad-core processor</td> </tr> <tr> <td>RAM</td> <td>Minimum 4GB RAM</td> </tr> <tr> <td>Flash</td> <td>16GB flash</td> </tr> <tr> <td>Storage Capacity</td> <td>Minimum 64GB or equivalent</td> </tr> <tr> <td>External Card Reader</td> <td>MicroSD card reader</td> </tr> <tr> <td>Display</td> <td>Touchscreen display with a size of 9- 12 inches with 720p 1280*720 min and viewing angle 178/178 (Left, right/up, down)</td> </tr> <tr> <td>GPS</td> <td>High sensitivity GPS module with external antenna</td> </tr> <tr> <td>Connectivity</td> <td>GSM/GPRS, 4G/LTE module, Wi-Fi connectivity and GPS connectivity with external antenna</td> </tr> <tr> <td>Contactless Card Reader</td> <td>Support ISO / IEC 14443 A & B, Mifare</td> </tr> <tr> <td>Durability</td> <td>ISO7816 SAM slots x1</td> </tr> <tr> <td>SAM slots</td> <td>Robust and rugged design, suitable for in-vehicle use</td> </tr> <tr> <td>Physical Interface</td> <td>1x RS232/RS485 interface, 1 x RJ45 LAN interface 1x USB 2.0/3.0 interface 1x USB debugging interface 1x power interface</td> </tr> <tr> <td>Operating Temperature</td> <td>-10°C to +70°C</td> </tr> <tr> <td>Vibration and Shock testing(s)</td> <td>60068-2-6, 60068-2-27, EN60721-3-5</td> </tr> <tr> <td colspan="2">Minimum Software Specifications</td> </tr> <tr> <td>Operating System</td> <td>Android 9.0 or above</td> </tr> </table>	Minimum Hardware Specifications		Processor	Minimum quad-core processor	RAM	Minimum 4GB RAM	Flash	16GB flash	Storage Capacity	Minimum 64GB or equivalent	External Card Reader	MicroSD card reader	Display	Touchscreen display with a size of 9- 12 inches with 720p 1280*720 min and viewing angle 178/178 (Left, right/up, down)	GPS	High sensitivity GPS module with external antenna	Connectivity	GSM/GPRS, 4G/LTE module, Wi-Fi connectivity and GPS connectivity with external antenna	Contactless Card Reader	Support ISO / IEC 14443 A & B, Mifare	Durability	ISO7816 SAM slots x1	SAM slots	Robust and rugged design, suitable for in-vehicle use	Physical Interface	1x RS232/RS485 interface, 1 x RJ45 LAN interface 1x USB 2.0/3.0 interface 1x USB debugging interface 1x power interface	Operating Temperature	-10°C to +70°C	Vibration and Shock testing(s)	60068-2-6, 60068-2-27, EN60721-3-5	Minimum Software Specifications		Operating System	Android 9.0 or above
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Fare Collection System Integration	Complete Compatibility with the third-party Automated Fare Collection System
Communication	Real-time communication with the internal/external system and other modules
Localization and Language Support	Localization options and support for multiple Languages
External Antennas for GPS	For strong signal strength external antennas may be installed
Maintenance and Support	OTA, USB Upgrade, Remote management (Refer to 11.18)
Additional Software feature	FTP, remote and local SSH, root access Hardware shall be capable to realize the required features. All features related to software will be responsibility of software developer.
Compliance	Compliance with relevant industry standards and security regulations
Documentation	Comprehensive documentation, user manuals, and training materials in English Language

The Driver Console shall comprise of following features:

The Driver's console must be able to display dispatch plan/schedule, interval information to the bus driver including location, current speed, time headway, distance from the previous and next bus, alert messages and play voice recordings accordingly to timely inform passengers of the next approaching bus.

Drive console unit shall be used to provide vehicle tracking accurately and reliably utilizing Global Positioning System (GPS).

Must have fully functional and advanced GPS system that can gather location wise data and transmit to central servers and related software modules.

Handling and storing MP3-files for announcements, as well as manual override for Passenger Information System.

Control destination and line number signs.

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		<p>Control interior information and display & announcement (In English, as well as in Urdu).</p> <p>Keep track of the vehicle's Real-time position via GPS and distance counting etc.</p> <p>Map applications, navigation and driver guidance.</p> <p>Driver console may receive other information relating to Realtime traffic information (accidents, breakdowns and traffic conditions etc.)</p> <p>Must have capability to change the route manually if it is incorrect and once confirmed, bus stages will be automatically updated based on GPS position.</p> <p>Communication and interface with other onboard units, e.g. passenger information system and fare validators etc.</p> <p>GPS time synchronization</p> <p>Clock and Date Function</p> <p>Link to the internal/external system(s) remote & local server in real-time (all relevant functional SDK's and API's in English language is compulsory with Local/International support)</p> <p>Business rules customization compliance</p> <p>Collection of all records required for the accounting and reporting purposes.</p> <p>All supplied AFC items (including hardware, software, networking, fare media etc.) should be integrable/compatible with third party Mobile application both Android & IOS.</p> <p>All relevant functional SDK's & API's, along with their documentation (complete in all aspects) in English must be provided for Android but not limited to DOT.NET/Android with Local/International support.</p> <p>Provided hardware should have the capability to work in decentralized/centralized mode.</p> <p>The Driver Console should be capable of display messages and play voice recordings accordingly, to timely inform passengers of the next approaching station as well as to make any other critical announcements. The Driver Console should also be capable storing these other critical</p>
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Section 11: Intelligent Transportation System (ITS) – TBT

		<p>announcements of at least one (01) hour duration and playing some prescribed voice recordings through driver OBU interface.</p> <p>The Driver Console must be capable of collecting, transmitting and reporting in a prescribed Format following data from Controller Area Network (CAN) Bus module.</p> <ul style="list-style-type: none"> • Acceleration and Deceleration • Breaking (All kind of brakes) • Gear Shifting indications • Battery Capacity Information • Motor RPM • Bus Speed • Doors Control (Open/Close) Information • Bus Saloon Temperature • Motor Temperature • Battery On/Off Status • Auto rear view on reversing the bus • The DBC file or equivalent documentation for precise signal decoding <p>Note: Equipment will be covered under 01 (one) year standard warranty to be provided by the Company.</p> <p>QTY: 1 in each TBT</p>
11.19	UHF /VHF /Wifi Mesh System	<p>Due to concerns over the reliability of mobile telephone networks, the vehicles will also be fitted with a communications system along with master controller based on UHF/VHF/Wifi Mesh radio bandwidth technology.</p> <p>Note: Equipment will be covered under 02 (two) years standard warranty to be provided by the Company.</p> <p>QTY: 1 in each TBT</p>
11.20	MDM Mobile Device Management/ Terminal Management System	<p>A remote device management system required for configuration and installations, deployed locally. All devices must be pre-configured in the system in groups.</p>
11.21	Charging management system Camera	<p>API for remote monitoring and data analytics</p> <p>Local Data Storage: 128MB onboard memory for offline data logging</p> <p>Scheduled Charging Configurable through remote management system</p>

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		<p>Remote Firmware Updates: OTA support for software enhancements</p> <p>User Interaction: RFID, Mobile App, Web Portal,</p> <p>Live updates on charging status, duration, energy consumed</p> <p>Instant notifications for malfunctions</p> <p>CAN bus interface for battery management system (BMS) integration</p>
11.22	Certifications and Approvals	<p>Provision of all relevant documents / specifications or any other necessary requirement for certification and approvals from local authorities such as PTA etc. will be the responsibility of the Operator. The approval from the relevant authorities will be obtained by the Procuring Agency.</p>
11.23	Provision of Testing Hardware	<p>Two (02) sets as per above specifications complete hardware set with all relevant functional SDKs, APIs and SDK documentation complete in all aspects i.e. all cables and accessories, simulators, are required within 30 days after the signing of the Contract.</p>
11.24	Documentations and SDKs	<p>All relevant functional SDK's & API's, along with their documentation (complete in all aspects) in English Language must be provided but not limited to DOT.NET/Android with Local/International support.</p>
11.25	Installation	<p>All cables and peripherals must be properly installed within designated compartments and concealed from view.</p>
11.26	Redundant Internet Provider	<p>SIM Based industrial gated network router with Wifi and LAN interfaces must be provided as a redundant internet provider to all devices. It must be interfaceable with MDVR over LAN interface and automatically manage availability of internet.</p> <p>GUI and remote management must be provided.</p>

ANNEXURE-E: PERFORMANCE SECURITY FORMAT

Issuing Authority:

Date of Issuance:

Date of Expiry:

Claim Lodgment Date:

WHEREAS [Name and Address of the Operator] (hereinafter called "the Operator") has agreed to supply the Services and render the Services against Tender Name (hereinafter called "the Contract") for the Contract Value of PKR (in figures _____) (in words _____).

AND WHEREAS it has been stipulated in the Tender Document that the successful Operator shall furnish Performance Security, within fifteen (15) working days of the receipt of the Acceptance Letter from the Client, in the form of a Bank Guarantee, issued by a scheduled bank operating in Pakistan, as per the format provided in the Tender Document or in another form acceptable to the Client, valid from the date of issue until all obligations have been fulfilled in accordance with the Contract;

AND WHEREAS [Name of the Bank] having registered office at [Address of the Bank] (hereinafter called "the Guarantor") has agreed to give the Operator a Guarantee;

THEREFORE the Guarantor hereby affirms to bind himself, his successors and his assigns to the Client, for the sum of PKR (in figures _____) (in words _____) and undertakes to pay to the Client, upon receipt of his written demand(s), any sum(s) as specified by him, not exceeding the above limit in aggregate, without cavil / argument and without the Client having to substantiate / prove or to show grounds / reasons for such claim(s), on the occurrence of any / all of the following conditions:

1. If the Operator commits a default under the Contract;
2. If the Operator fails to fulfill any of the obligations under the Contract;
3. If the Operator violates any of the provisions of the Contract.

Provided that the Client shall specify the occurred condition(s) owing to which the said sum is due to him.

And further provided that any demand(s) / claim(s) from the Client shall reach the Guarantor within thirty working days after the expiry of the Guarantee.

This guarantee shall remain valid up to _____ or until expiry of warranties or all obligations have been fulfilled in accordance with the Contract, whichever is later.

Date this _____ day of 20__.

GUARANTOR

Signature _____
CNIC # _____
Name _____
Designation _____
Address _____

TECHNICAL PROPOSAL SUBMISSION - STANDARD FORMS

Technical Proposal Standard Forms shall be used for the preparation of the Technical Proposal as required in this Request for Proposal. The Bidder has to provide information using the forms provided in this section along with other requirements where mentioned . The Client reserves the right to request additional information for clarification or further establishment of information provided.

FORM TECH-0	Cover Letter.
FORM TECH-1	Technical Proposal Submission Form.
FORM TECH-2	Joint Venture Details
FORM TECH-3	Details Required for Technical Evaluation
FORM TECH-4	Financial Strength
FORM TECH-5	Power of Attorney
FORM TECH-6	Undertaking
FORM TECH-7	Integrity Pact
FORM TECH-8	Affidavit for Non-Blacklisting

FORM TECH-0 COVER LETTER

[Date]

To
(Name and address of Client)

Sub: _____.

Dear Sir,

- a) Having examined the tender document and Appendixes we, the undersigned, in conformity with the said document, offer to provide the said items on terms of reference to be signed upon the award of contract for the sum indicated as per financial bid.
- b) We undertake, if our proposal is accepted, to provide the items/services comprise in the contract within time frame specified, starting from the date of receipt of notification of award from the client Department / Office.
- c) We agree to abide by this proposal for the period of ____ days (as per requirement of the Operation) from the date of bid opening and it shall remain binding upon us and may be accepted at any time before the expiration of that period.
- d) We hereby irrevocably agree to execute a contract in the form to be provided by [insert name of the Client], which shall incorporate all agreements and undertakings contained herein, without any alterations, modifications, or amendments to the terms and conditions set forth in the tender documents.
- e) Unless and until a formal agreement is prepared and executed this proposal together with your written acceptance thereof shall constitute a binding contract agreement.
- f) We understand that you are not bound to accept a lowest or any bid you may receive, not to give any reason for rejection of any bid and that you will not defray any expenses incurred by us in bidding.

- g)** We would like to clearly state that we qualify for this work as our company meets all the criteria indicated in your tender document. The details are as under:

Authorized Signatures with Official Seal

FORM TECH-1 TECHNICAL PROPOSAL SUBMISSION FORM

[Date]

To _(Name and address of Client / Client)_

Dear Sir,

We, the undersigned, offer to provide the _(insert title of assignment)_ in accordance with your Request for Proposal/Tender Document dated _(insert date)_ and our Proposal. We are hereby submitting our Proposal, which includes the Technical Proposal and the Financial Proposal.

We undertake, if our Proposal is accepted, to provide the _(insert title of assignment)

We also confirm that the Government of Pakistan / Punjab has not declared us ineligible on charges of engaging in corrupt, fraudulent, collusive or coercive practices. We furthermore, pledge not to indulge in such practices in competing for or in executing the Contract, and we are aware of the relevant provisions of the Proposal Document.

We understand you are not bound to accept any Proposal you receive.

We remain,

Yours sincerely,

Authorized Signature

(In full and initials)

Name and Designation of Signatory

Name of Firm

Address

FORM TECH-2 JOINT VENTURE DETAILS

To be filled in case of Joint Venture only

Name of Member	Lead Member / Associate Member	Short description of the role of Member

FORM TECH-3 DETAILS REQUIRED FOR TECHNICAL EVALUATION

The Bidder, and all partners jointly in the case of a Joint Venture, shall complete the following data form, providing supporting documentation as specified in Annex A. The Client reserves the right to request additional information to substantiate the values or information submitted by the Bidder against any criteria.

Sr No.	Criteria	Enter Value/information
1	Number of Mass Transit Routes operated successfully for a period of no less than 01 year	
2	Mass Transit Fleet maintained and operated	
3	Total number of human resources managed related to Mass Transit Operations	
4	Number of years of experience in Mass Transit Operations	
5	Average Annual Turnover in last three years in PKR Millions	
6	Net Worth in Last Year in PKR Millions (Total Assets - Total Liabilities)	
7	CURRENT RATIO (Ratio of current assets of the firm to its current liabilities in the last Fiscal Year)	
8	DEBT RATIO (ratio of total liabilities to total assets in the last Fiscal Year)	

FORM TECH-4 FINANCIAL STRENGTH

The following financial data form shall be filled out by the Bidder; and by all partners in case of a Joint Venture and along with one summary form for all partners.

Information from Balance Sheet:(In PKR) for the last Fiscal Year	
(1) Total Assets	
(2) Current Assets	
(3) Total Liabilities	
(4) Current Liabilities	
Information from Income Statement: Total Revenue (including subsidy from the Government if any) for last three (03) applicable Fiscal Years: (In PKR)	
(5) First Year	
(6) Second Year	
(7) Third Year	

Current Ratio (2) / (4)	
Debt Ratio (3) / (1)	
Average Annual Turnover [(5) + (6) + (7)] / 3	

Provide information on current or past litigation or arbitration over the last three (3) years as shown in the form below if any:-		
Year	Matter in Dispute	Value of Award Against the Bidder (USD)

Bidder has to provide copies of the original audited financial statements for the last three financial years. In case the currency used in financial audited statements is not PKR, use the PKR equivalent figures required in the Form Tech-8 worked out by using the average exchange rate for the relevant time period obtained from xe.com. Where the financial statements are not in English, attested and notarized English-copies or in form of Foreign Apostille Certificate, of the Income Statement (and Statement of Other Comprehensive Income), Balance Sheet, Statement of Cash Flows and Statement of Shareholders' Equity must be provided.

Authorized Signatures with Official Seal

FORM TECH-5 POWER OF ATTORNEY

(On a Legal / Revenue Stamp Paper of PAKISTAN of the requisite value)

We [name of the company and address of the registered office] do hereby appoint and authorize Mr. / Ms. (full name and residential address) bearing National Identity Card (CNIC) of PAKISTAN OR equivalent as in Bidder's country of origin. (Ref No _____, copy enclosed) who is presently engaged with us and holding the position of _____, as our attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our proposal for [Name of the Tender] in response to the tenders invited by the Punjab Masstransit Authority including signing and submission of all documents and providing information/responses to Punjab Masstransit Authority in all matters in connection with our Bid.

We hereby agree to ratify all acts, deeds and things lawfully done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall and shall always be deemed to have been done by us.

Dated this ____ day of ____ 20__

For _____

(Signature)

(Name, Designation and Address)

Accepted

(Signature)

(Name, Title and Address of the Attorney)

Date:

Instructions for preparation of power of attorney

- a) To be executed by an authorized representative of the bidder.*
- b) The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executants and when it is so required the same should be under common seal affixed in accordance with the required procedure.*
- c) Also, wherever required, the Bidder should submit for verification of the extract of the charter documents and documents such as a resolution/power of attorney in favor of the Person executing this Power of Attorney for the delegation of power hereunder on behalf of the Bidder.*
- d) In case the Application is signed by an authorized Director / Partner or Proprietor of the Applicant, a certified copy of the appropriate resolution / document conveying such authority may be enclosed in lieu of the Power of Attorney.*

FORM TECH-6 UNDERTAKING

(On a Legal / Revenue Stamp Paper of PAKISTAN of the requisite value.)

It is certified that the information furnished herein and as per the document submitted is true and correct and nothing has been concealed or tampered with. We have gone through all the conditions of tender and are liable to any punitive action for furnishing false information / documents.

Dated this _____ day of _____ 20__

Signature

(Company Seal)

In the capacity of

Duly authorized to sign bids for and on behalf of:

FORM TECH-7 INTEGRITY PACT

(On a Legal / Revenue Stamp Paper of PAKISTAN of the requisite value.)

DECLARATION OF FEES, COMMISSIONS AND BROKERAGE ETC. PAYABLE BY THE SUPPLIERS/CONTRACTORS OF GOODS, SERVICES & WORKS

[Name of bidder / supplier] hereby declares its intention not to obtain or induce the procurement of any contract, right, interest, privilege or other obligation or benefit from Government of Punjab or any administrative subdivision or agency thereof or any other entity owned or controlled by it (GoPb) through any corrupt business practice.

Without limiting the generality of the foregoing, [Name of bidder / supplier] represents and warrants that it has fully declared the brokerage, commission, fees etc. paid or payable to anyone and not given or agreed to give and shall not give or agree to give to anyone within or outside Pakistan either directly or indirectly through any natural or juridical person, including its affiliate, agent, associate, broker, consultant, director, promoter, shareholder, sponsor or subsidiary, any commission, gratification, bribe, finder's fee or kickback, whether described as consultation fee or otherwise, with the object of obtaining or including the procurement of a contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoPb, except that which has been expressly declared pursuant hereto.

[Name of bidder / supplier] certifies that it has made and will make full disclosure of all agreements and arrangements with all persons in respect of or related to the transaction with GoPb and has not taken any action or will not take any action to circumvent the above declaration, representation or warranty.

[Name of bidder / supplier] accepts full responsibility and strict liability for making any false declaration, not making full disclosure, misrepresenting facts or taking any action likely to defeat the purpose of this declaration, representation and warranty. It agrees that any contract, right, interest, privilege or other obligation or benefit obtained or procured as aforesaid shall, without prejudice to any other right and remedies available to GoPb under any law, contract or other instrument, be voidable at the option of GoPb.

Notwithstanding any rights and remedies exercised by GoPb in this regard, [Name of bidder / supplier] agrees to indemnify GoPb for any loss or damage incurred by it on account of its corrupt business practices and further pay compensation to GoPb in an amount equivalent to ten times the sum of any commission, gratification, bribe, finder's fee or kickback given by [Name of service provider/operator] as aforesaid for

the purpose of obtaining or inducing the procurement of any contract, right, interest, privilege or other obligation or benefit in whatsoever form from GoPb.

Signature & Stamp

Subscribed and sworn to me this _____ day of _____ 20__

FORM TECH-8 AFFIDAVIT FOR NON-BLACKLISTING

(On a Legal / Revenue Stamp Paper of PAKISTAN of the requisite value.)

In response to the Tender Document for [*Tender Name*] We hereby solemnly declare that presently [*Name of Bidder / Supplier*] is having unblemished record and is not presently blacklisted on any grounds whatsoever by any Government entity (Federal, Provincial, Local Body) or Public Sector Organization in the country of origin and Pakistan.

It is understood that if this declaration is found to be incorrect for [*Name of Bidder / Supplier*] or any member in case of Joint Venture, then without prejudice to any other action that may be taken, our Tender Security shall be forfeited in full and our bid shall be cancelled.

Dated this _____ day of _____ 20__

Signature

(Company Seal)

In the capacity of

Duly authorized to sign bids for and on behalf of:

FINANCIAL PROPOSAL SUBMISSION - STANDARD FORMS

Financial Proposal Standard Forms shall be used for the preparation of the Financial Proposal as required in this Request for Proposal.

FORM FIN-1	Financial Proposal Submission Form.
FORM FIN-2	Price Table
FORM FIN-2	Price Details-A
FORM FIN-3	Price Details-B
FORM FIN-4	Tender Security Format

FORM FIN-1 FINANCIAL PROPOSAL SUBMISSION FORM

[Location, Date]

To (Name and address of Client / Client)

Dear Sir,

We, the undersigned, offer to provide the (Insert title of assignment) in accordance with your Request for Proposal dated (insert date) and our Technical Proposal. Our attached Financial Proposal is for the sum of PKR (insert amount in words and figures). This amount is inclusive of all applicable taxes as per Laws of the Government of Pakistan, but is exclusive of Sales Tax on Services which shall be added by the Client over and above the offered amount, as applicable/required under the relevant Tax Laws, to arrive at the Contract Price. Accordingly, the Contract Price shall be subject to adjustments for change in rate of Sales Tax on Services as and when applicable.

Our Financial Proposal shall be binding upon us, up to expiration of the validity period of the Proposal

We also declare that the Government of Pakistan / Punjab has not declared us or any Sub-Operators for any part of the Contract, ineligible on charges of engaging in corrupt, fraudulent, collusive, or coercive practices. We furthermore, pledge not to indulge in such practices in competing for or in executing the Contract, and are aware of the relevant provisions of the Proposal Document.

We understand you are not bound to accept any Proposal you receive.

Signed

In the capacity of:

Duly authorized to sign the proposal on behalf of the Applicant.

Date:

FORM FIN-2 PRICE TABLE

Sr No	Item	PKR
1	Provision of Tyre-Based-Tram services on a service based model for 12 years including supply, operation & maintenance of 4 brand new Tyre-Based-Trams, development, operation & maintenance of depot and all allied components required to successfully deliver the services along with all expenditure such as driver, mechanics, interest charges, depreciation, tyre, lubricants, spare parts, management, all applicable taxes, insurance, duties, freight charges etc.	Z (In numbers and words)

Notes to the Price Table:

- 1) *Lowest value of “Z” will determine the successful bidder, provided mandatory requirements are met and bidder has qualified technical evaluation successfully.*
- 2) *No advance payments will be made. Contract Payment will be made on monthly basis against plied kilometers as per terms and conditions of the Contract*
- 3) *The quoted price is inclusive of all applicable taxes as per Laws of the Government of Pakistan, but is exclusive of Sales Tax on Services which shall be added by the Client over and above the offered amount, as applicable/required under the relevant Tax Laws, to arrive at the Contract Price. Accordingly, the Contract Price shall be subject to adjustments for change in rate of Sales Tax on Services as and when applicable.*

Date _____

Signature of authorized person

Name:

(Company Seal)

In the capacity of Duly authorized by

Note: No cutting or overwriting is allowed. Any cutting or overwriting will lead to rejection of the financial bid.

FORM FIN-3 PRICE DETAILS-A

COMPUTATION OF Z

Year	O&M Rate (A) PKR/ Km	Investment Rate (B) PKR/ Km	Non-Excess Km Rate (C = A+B) PKR/ Km	Annual Price (D = C x 4 x 60,000) PKR
1	X			
2	X			
3	X			
4	X			
5	X			
6	X			
7	X			
8	X			
9	X			
10	X			
11	X			
12	X			
TOTAL (T) =				Sum (D_{Year 1} to D_{Year 12})
SALVAGE VALUE OF TYRE-BASED-TRAMS, CHARGERS AND ALLIED EQUIPMENT / MACHINERY (SV) =				
Z =				T - SV

Note:

- *The SV shall be adjusted on prorata basis from each monthly invoice*
- *O&M Rate (X) shall remain subject to adjustments as per provisions in Annex-C*

FORM FIN-4 PRICE DETAILS-B

BREAKUP OF O&M Rate (X)

Sr. No	CATEGORY	RATE IN PKR / KM
1	Routine Maintenance	RM
2	Periodic Maintenance	PM
3	Tyres	T
4	Lubricants / Other Fluids	L
5	Salaries	S
	TOTAL =	X = RM+PM+T+L+S

EXCESS-KILOMETER RATE (Y)

RM + PM + T + L = _____ **Y** _____

FORM FIN-5 TENDER SECURITY FORMAT

WHEREAS [Name and Address of the Bidder] has submitted Tender against _(Insert title of assignment)_ (hereinafter called "the Tender") to the Punjab Masstransit Authority 5th Floor, Arfa Software Technology Park, 346-B, Ferozpur Road, Lahore (hereinafter called "the Client")

AND WHEREAS [Name of the Bank] having registered office at [Address of the Bank] (hereinafter called "the Guarantor") has agreed to give the Bidder a Guarantee;

THEREFORE the Guarantor hereby affirms to bind himself, his successors and his assigns to the Client, for the sum of PKR (in figures _____) (in words _____) and undertakes to pay to the Client, upon receipt of his written demand(s), any sum(s) as specified by him, not exceeding the above limit in aggregate, without cavil / argument and without the Client having to substantiate / prove or to show grounds / reasons for such claim(s), on the occurrence of any / all of the following conditions:

1. If the Bidder withdraws the Tender during the period of the Tender validity specified in the Tender Documents; or
2. If the Bidder does not accept the corrections of his Total Tender Price; or
3. If the Bidder, having been notified of the acceptance of the Tender by the Client during the period of the Tender validity, fails or refuses to furnish the Performance Security, in accordance with the Tender Document.

Provided that the Client shall specify the occurred condition(s) owing to which the said sum is due to him. Provided further that any demand(s) / claim(s) from the Client shall reach the Guarantor within thirty working days after the expiry of the bid validity period.

This guarantee shall remain valid up to _____ or until furnishing of the Performance Security, whichever is earlier.

Date this _____ day of 20____.

GUARANTOR

Signature _____
CNIC # _____
Name _____
Designation _____
Address _____