

MAHA MUMBAI METRO OPERATION CORPORATION LIMITED (MMMOCL)



(Public Sector undertaking of Govt. of Maharashtra)

MMMOCL, NaMTRI Building, Plot.no R -13, E-block, Bandra Kurla Complex, Bandra  
(East), Mumbai 400051, India.

**Invitation for Bids for “Design, Supply, Installation, Testing, Commissioning and Training of X-ray Baggage Scanner (60 Cm /40 Cm) Qty -48 Nos with 03 Years of Defect liability period (DLP) and Comprehensive Maintenance Service (07 Years of CAMC)” for Mumbai Metro Line -2B**

Date: [02<sup>nd</sup> Jun 2025]

IFB Number: [GEM/2025/B/6249433]

**Corrigendum No. 1**

Sr. No.	Bidding Documents Reference and Clause No.	Amendment
1	ATC- Bid Specific Terms and Conditions-X-ray Baggage Scanner Machine –  Chapter II Criteria (1) (C) Experience and Past Performance Page no 5 of 24	<p><b><u>Replace</u></b></p> <p>c) Bidders shall submit the copies of end user performance certificates along with bid as a supporting document from the client side proving successful operation of 100% successful operation of 24 nos. of supplied X ray Baggage Scanner machine for atleast last 2 years as on 31st January 2025. These machines shall be of the same make or higher version as being offered in this tender. Work order/ PO and completion certificate should be submitted along with performance certificate.</p> <p><b><u>With</u></b></p> <p>c) Bidders shall submit the copies of end user performance certificates along with bid as a supporting document from the client side proving successful operation of 100% successful operation of 24 nos. of supplied X ray Baggage Scanner machine for atleast last 2 years as on <b>15<sup>th</sup> May 2025</b>. These machines shall be of the same make or higher version as being offered in this tender. Work order/ PO and completion certificate should be submitted along with performance certificate.</p>

2	<p>ATC- Bid Specific Terms and Conditions-X-ray Baggage Scanner Machine –</p> <p>Chapter II Criteria (2) Financial Standing Page no 5 of 24</p>	<p><b><u>Replace</u></b> The average annual financial turnover of the Bidder during the last 03 financial Years, ending on 31 March 2024. As per the annual report (audited balance sheet and profit loss account) of the relevant period, duly authenticated by a chartered accountant/cash accountant in India or equivalent in relevant countries should be: For Bidders: Rs 13.61 Crores (INR) For OEM: Rs 20.40 Crores. (INR)</p> <p><b><u>With</u></b> The average annual financial turnover of the Bidder during the last 03 financial Years, ending on 31 March 2024 <b>or upto 31<sup>st</sup> March 2025 with audited balance sheet.</b> As per the annual report (audited balance sheet and profit loss account) of the relevant period, duly authenticated by a chartered accountant/cash accountant in India or equivalent in relevant countries should be:  For OEM and Bidders: Rs 13.61 Crores (INR)</p>
3	<p>ATC- Bid Specific Terms and Conditions-X-ray Baggage Scanner Machine –</p> <p>Chapter II Criteria (1) (C) Experience and Past Performance Page no 5 of 24</p>	<p><b><u>Replace</u></b> The Bidder shall submit the work completion certificate as a supporting document from the client side substantially completed supply, Installation, Testing, and Commissioning of X-ray Baggage Scanner Machine (Tunnel Size – 60 cm / 40 cm or higher) to any Government Organisation/ Airports/Metro/ Railways henceforth referred to as similar work, during the last 07 (Seven) Years ending 31st January 2025.</p> <p>a) The bidder should have manufactured and /or supplied (erected/installed/commissioned) total Quantity of 48 Nos of X-ray Baggage Scanner Machine (Tunnel Size – 60 cm / 40 cm or higher) in at least One of the last Seven Years to any Government Organisation/ Airports/Metro/Railways henceforth referred to as similar work, during the last 07 (Seven) Years ending 31st January 2025.</p> <p><b><u>With</u></b> The Bidder shall submit the work completion certificate as a supporting document from the client side substantially completed supply, Installation, Testing, and Commissioning of X-ray Baggage Scanner Machine (Tunnel Size – 60 cm / 40 cm or higher) to any Government Organisation/ Airports/Metro/ Railways henceforth referred to as similar work, during the last 07 (Seven) Years ending <b>15<sup>th</sup> May 2025.</b></p>

		a) The bidder should have manufactured and /or supplied (erected/installed/commissioned) total Quantity of 48 Nos of X-ray Baggage Scanner Machine (Tunnel Size – 60 cm / 40 cm or higher) in at least One of the last Seven Years to any Government Organisation/ Airports/Metro/Railways henceforth referred to as similar work, during the last 07 (Seven) Years ending <b>15<sup>th</sup> May 2025</b> .
4	BID Duration  Chapter I Clause 1 Terms And Conditions- X-Ray Baggage Scanner Machine Page no 1 of 24	<p><b><u>Replace</u></b></p> <p>Last date of Bid Submission: 04.06.2025, 18:00 Hrs</p> <p>Date &amp; Time of Opening of Technical Bid: 05.06.2025, 11:00 Hrs</p> <p><b><u>With</u></b></p> <p>Last date of Bid Submission: 10.06.2025, 18:00 Hrs</p> <p>Date &amp; Time of Opening of Technical Bid: 11.06.2025, 11:00 Hrs</p>

Place: Mumbai,

Sd/-  
Director Operation, MMMOCL

## CHAPTER-I

### 1. TERMS AND CONDITIONS- X-RAY BAGGAGE SCANNER MACHINE

<b>Name of Work</b>	Supply, Installation, Testing, Commissioning, and Training of 48 Nos of X-ray Baggage Scanner Machine (Tunnel Size 60 cm x 40 cm) (03 years of Defect Liability period and 07 years of CAMC) for Maha Mumbai Metro Operation Corporation Limited (MMMOCL) Line 2B and connecting Metro Lines. Please refer to this list to understand the synonymous terms used in the document: 1) The Bidder and Tenderer are synonyms. 2) The Bid and Tender are synonyms. 3) DLP and Warranty are synonyms. 4) The Successful bidder/Tenderer, seller, Contractor, vendor, supplier are synonyms. 5) The Employer, Buyer, Purchaser, MMOCL are synonyms.
<b>Completion Period for supply, installation, Testing, Commissioning and Training.</b>	Dates for the supply shall be informed to bidders in advance (minimum 60 days) based on the project progress.
<b>Tender publishing Date</b>	20.05.2025
<b>Pre-bid Meeting and queries submission.</b>	27.05.2025
<b>Location of Pre-bid meeting</b>	2nd Floor, MMOCL, NaMTTRI Building, Plot no. R-13, E-Block, BKC, Bandra East Mumbai-400051 Contact email id: <a href="mailto:mgse@mmmocl.co.in">mgse@mmmocl.co.in</a>
<b>Last date of Bid Submission</b>	04.06.2025, 18:00 Hrs
<b>Date &amp; Time of Opening of Technical Bid</b>	05.06.2025, 11:00 Hrs
<b>Date of Demonstrating the product</b>	Dates Will be intimated to those successful bidders who will qualify in Technical Evaluation of documents.
<b>Date &amp; Time of Commercial Bid Opening</b>	Date to be advised later on
<b>Bid Security / EMD</b>	NIL
<b>Estimated cost</b>	Rs 13,60,86,028/- including GST

### 2. Other Terms and Condition

- a) The Bidders, which are blacklisted or debarred from participating for bid by any Central /State Government Department or Public Sector Undertaking, other govt. entity &

blacklisting persists as on the day of submission of bid, are not allowed to participate in this bid. The Bidder should submit undertaking to this effect.

- b) Those bidders who have been disqualified earlier by MMMOCL or other metro rail company or any airports and who failed to provide their product within stipulated period their offer will not be considered.
- c) The offer shall remain valid for a period of 180 (One Hundred Eighty) days from the date of latest bid submission.
- d) **Site Survey:** Undertaking by the OEM/Bidder will be considered to comply with onsite requirements for supply/installation and commissioning of X-ray Baggage Scanner at designated Metro Stations.

3. **Demonstration:**

- a) The bidder should be in complete readiness to arrange practical product for demonstration as quoted and which meets all the specifications as required by the buyer and Standard specifications of MHA. If the bidder wishes to propose for an upgraded version of the proposed model, bidder shall submit the upgraded version of product brochure during submission of bid and inform prior to MMMOCL in writing regarding the same during demonstration. All relevant original documents as desired shall be ensured to be in readiness & produced during the demonstration. The Demonstration shall be carried out within 10 days from the technical evaluation completion date.
  - b) The Place of Demonstration will be: - Maha Mumbai Metro Operation Corporation Ltd, OCC building, Charkop Metro Depot, Gate. No - 02, Near Bhoomi Mart, Malad (West), Mumbai-400095.
  - c) All the technical specifications as provided by MMMOCL shall be considered for testing further endurance test for 48 hours of continuous operation of the X-ray Baggage scanner machine will be carried out in demonstration.
  - d) The Bidder who qualifies as per eligibility criteria and in the Demonstration will only be considered for opening of financial bid.
  - e) Demonstration charges will be totally catered by the bidder on 'No cost, No commitment' basis.
  - f) If the Bidder fails to show the demonstration within given period, his offer will be liable to be disqualified. No representation against the demo be report of the demonstration committee will be entertained.
4. Though any vendor can participate in the tender, The MMMOCL, reserves the right to select the vendor who has a service centre/Registered Office in Mumbai with valid GST number. If bidder is from outside of the Mumbai Region, then bidder should have authorized sales and service centre at Mumbai responsible for the supply, installation and maintenance services on behalf of bidder.
5. Participant should have after sales and service facilities at Mumbai, Participant should submit Authorised Service centre complete address and office details along with the Bid.
6. The 3 Years warranty period of the equipment / item will start from date of acceptance of equipment after testing and commissioning. After completion of DLP period, seven years comprehensive annual maintenance offer as accepted by MMMOCL shall be made operational for X Ray Baggage Scanner.
7. The price quoted must be inclusive of installation, DLP (Defect liability Period) and supplying the item, anywhere in Mumbai. No request of extra payment of transportation charges on any account to and within Mumbai will be entertained.
8. The commercial evaluation of only those participants will be considered who qualify as per eligibility/technical criteria and other qualifying conditions, as well as for Demonstration.

9. The MMMOCL, reserves the right to inspect the manufacturing unit/OEM unit whenever found necessary, while considering the tender, the Bidder shall facilitate the visit of MMMOCL's representative.
10. In the event of the order being placed against any of the tender and if the bidder fails to supply any stores according to the specifications or the terms and conditions of Acceptance of Tender or fails to replace any stores rejected by the MMMOCL. or their representative within such time as may be stipulated, the MMMOCL reserves the right to purchase such stores from any other sources and at such price as the MMMOCL shall in his sole discretions thinks fit.
11. If action as stipulated above is taken: -
  - (a) The offer of the defaulting contractor after lapse of stipulated time will not be considered.
  - (b) The defaulting contractor will be penalized to the extent of the differences in the rates or 10% of the value of the order pertaining to the store, whichever is higher.
  - (c) If the defaulting contractor fails to pay the penalty, he will be blacklisted and barred from supplying any items to MMMOCL, and the performance security deposit of the contractor shall be forfeited.
12. In case of no delivery and /or delayed delivery against an order placed after Acceptance of Tender the MMMOCL reserves to himself the right to impose such penalty in his sole discretion as he thinks fit
13. Successful bidder (Contractor) will be required to pay Performance Security in the form of Bank Guarantee issued by a Nationalized Bank/Scheduled Commercial Bank except Axis Bank in the prescribed forma, provided on the GeM Portal, which will be 10% of the agreement value, valid for 3 Years and 6 months till the end of DLP/Warranty period. Performance Security will be released after the satisfactory completion of DLP/Warranty. After completion of DLP/Warranty, successful bidder will be required to submit Bank Guarantee of 10% of the total CAMC amount for 7 years as a performance security against the CAMC period and it will be released after satisfactory completion of CAMC. The Bank Guarantee must be as per GeM legislative rules

The bank details are as below:

Account Name: Maha Mumbai Metro M (3) Operation Corporation Limited

Bank Name: STATE BANK OF INDIA

Bank Branch: Government Colony Bandra (East)

Account No.: 39579947249

IFSC Code: SBIN0003838

MICR Code: 400002031

The Performance Bank Guarantee issued on the Structured Financial Messaging Solution (SFMS) platform shall only be acceptable to the Employer. The Bank Guarantee shall be payable at any branch in Mumbai.

Further if and when contract value increases even as a result of revision in Service Tax/GST, the contractor shall be required to deposit additional BG(s) so as to ensure availability of Bank Guarantee with MMMOCL at all times.

14. Failure of the successful bidder to submit the required Performance Security shall constitute sufficient grounds for the annulment of the award of the Tender.

15. Any statutory increases or decreases in an Act of State or the Central Government relating to G.S.T. and other taxes shall be borne by the tenderer.
16. Goods should be dispatched at carrier's risk and should be properly covered by transit insurance with Govt. Insurance Fund. However, the tenderer will be responsible till the entire Stores contracted for arrived in good condition at all Metro Station.
17. Bidders should state the place of inspection of the stores offered, if the goods are offered for inspection outside Maharashtra State, the Successful bidder (Contractor) shall be responsible for making all testing facilities available to the representative of MMMOCL.
18. **Late Bid:** - MMMOCL shall not accept any bid, as it shall be closed automatically the system of online submission after the time and date prescribed in the bidding program. Any Bidder's grievance/ complaint on account of non-submission of Bid due to problem in internet, electricity or any other reason will not be considered.
19. **Payment:** - All the payments of invoice will be made against the supplied items as per below terms and conditions:
  - a. 70% Payment of the equipment cost of invoice against the supplied items will be paid at the time of delivery,
  - b. 20% of the equipment cost of invoice against the supplied items will be paid after successful installation, commissioning, testing and final acceptance of the equipment.
  - c. 10% of the payment will be held as retention money and will be released on completion of the 03 years DLP (Defect liability period). The retention amount may be released to the bidder against the indemnity bond that bidder will maintain the asset/equipment as per DLP and on submission of additional BG/security amount of 10% of the invoice amount including GST.
  - d. Payment will be done only on the quoted price. No escalation/inflation rate due to delay in the progress of project will be applicable.
  - e. Invoices shall be generated for the procured items in the name of below address:  
Maha Mumbai Metro Operation Corporation Limited, NaMTTRI Building, Adjoining MMRDA New Administrative Building, Bandra-Kurla Complex, Bandra (East), Mumbai-400 051.

**Note:** This tender amount is supported by the ADB bank.

20. **Delivery:** - Entire delivery process should be completed within 60 days from the date of MMMOCL order of supply according to the requirements in phased manner. Any delay will attract Late Delivery Charges of 0.5% per week up to the maximum 10% of the total Purchase order amount.
21. **Note:** As per Notification no. Mudrak 2015/1049 CR-(334) M-1 dated 3 June 2016 under Maharashtra Stamp Duty act, Stamp duty has to be paid on contract. Bidder shall refer above order.

## **CHAPTER-II**

### **1. Eligibility & Qualification Criteria for X-ray Baggage Scanner Machine (Size -60 cm/40 cm)**

#### **Criteria 1- Experience and Past Performance:**

The Bidder shall submit the work completion certificate as a supporting document from the client side substantially completed supply, Installation, Testing, and Commissioning of X-ray Baggage Scanner Machine (Tunnel Size – 60 cm / 40 cm or higher) to any Government Organisation/ Airports/Metro/Railways henceforth referred to as similar work, during the last 07 (Seven) Years ending 31st January 2025.

- a) The bidder should have manufactured and /or supplied (erected/installed/commissioned) total Quantity of 48 Nos of X-ray Baggage Scanner Machine (Tunnel Size – 60 cm / 40 cm or higher) in at least One of the last Seven Years to any Government Organisation/ Airports/Metro/Railways henceforth referred to as similar work, during the last 07 (Seven) Years ending 31st January 2025.
- b) Copies of supporting documents i.e., LOA/Purchase Order / Work Order along with Work Completion Certificates issued by the End-user in the name of Bidder shall be submitted along with bid submission. These X-ray Baggage Scanner machines (Tunnel size – 60 cm/40 cm or higher) shall be of the same make or higher version as being offered in this tender, and
- c) Bidders shall submit the copies of end user performance certificates along with bid as a supporting document from the client side proving successful operation of 100% successful operation of 24 nos. of supplied X ray Baggage Scanner machine for at least last 2 years as on 31st January 2025. These machines shall be of the same make or higher version as being offered in this tender. Work order/ PO and completion certificate should be submitted along with performance certificate.

#### **Criteria 2- Financial Standing- Under all conditions:**

##### **Annual Turnover**

The average annual financial turnover of the Bidder during the last 03 financial Years, ending on **31 March 2024**. As per the annual report (audited balance sheet and profit loss account) of the relevant period, duly authenticated by a chartered accountant/cash accountant in India or equivalent in relevant countries should be:

For Bidders: Rs 13.61 Crores (INR)

For OEM: Rs 20.40 Crores (INR)

Net worth: Positive Net worth

Solvency: 20% of estimated tender

**Note 1:** - The tenders for this contract will be considered only from those bidders who meet requisite eligibility criteria.

**Note 2:** If the bidder is OEM himself, then he must submit his credentials / supporting documents to meet both of above laid down eligibility criteria 1 and 2.

## **2. Mandatory Documents for Technical Evaluation**

- a) **For Similar Work Experience:** Copies of Purchase Orders/Work Orders along with work completion certificates should be attached duly signed by the competent authority.
- b) **Performance Certificate:** Work order/ PO and completion certificate should be submitted along with performance certificate.
- c) **Financial Documents:**
  - I. Summary of Audited & certified balance sheet exhibiting the Turn Over, profit & Net worth calculation of last 3 years. In case of financial year of the bidder is as per calendar year, the summary of balance sheet of FY 2021-22, FY 2022-23 and FY 2023-24 shall be attached.
  - II. Last 3 FY ITR, ie; of FY 2021-22, FY 2022-23 and FY 2023-24
  - III. Copy of PAN of Firm/ company
  - IV. Latest Turn Over and positive Net Worth certificate certified by CA with UDIN number.
  - V. Latest Solvency Certificate of 20% of tender estimated cost issued by bank in the Name of Maha Mumbai Metro Operation Corporation Limited.
  - VI. Cancelled Cheque of the bank with bidder's company's name.
- d) **Other necessary documents**
  - I. Copy of registration certificate of firm / company with registrar of firms or under Indian company act/ or as per legislation of country of origin etc. In case of Foreign Company as a sole member/constituent, it should be registration / incorporation under relevant legislation for working in India and certificate of approval /permissions from RBI/FEMA
  - II. GST registration of the company.
  - III. Power of Attorney/ Authority Letter in favour of person signing the bids in technical envelope.
  - IV. Registration Certificate of C.S.P.O. / NSIC / SSI / MSMEDI with validity of registration mentioned clearly. If the validity is expired fresh validity should be uploaded. Please note that tenderer whose validity certificate is expired are not eligible for exemption. Such bids are liable for rejection. Also, applications made to the concerned authority for issuing fresh validity certificate are not acceptable. Only fresh validity certificate is acceptable for exemption. If applicable for the company.
  - V. Authorised Service Centre details in Mumbai or MMR region.
  - VI. The tenderer should be an authorized distributor/ dealer for the tendered item and he should furnish the valid Authorization Letter / Dealerships certificates from the Original Equipment Manufacturer (OEM). Xerox copy of Authorization letter should be attested with valid dates. The name of item should be clearly mentioned in Authorisation Letter. (Original authorisation letter should be submitted for verification at the time of commercial bid opening).
  - VII. Copy of Bid Security / EMD declaration in form of Bank Guarantee.
  - VIII. The tenderer should obtain a letter from the manufacturer that the Model quoted in the tender conforms to the specifications of the products manufactured as on date and latest. Also, the product should not be an old model and service will be provided

for the period as mentioned in the specifications, whichever is higher from the date of acceptance of stores /date of installation. Also, a letter showing that the tenderer is an authorised distributor/dealer.

- IX. Product Brochure clearly mentioning the features, Make/ Model No. etc to be submitted.
- X. Material Lab Test Report of tendered item as specified or mentioned in the specification should be submitted.
- XI. Signed Tender copy and filled/signed & Stamped Appendices as per format attached.
- XII. Bidders shall submit all necessary certificates as per government guidelines to the MMMOCL as required.

**e) Tenderer should submit Comparative chart in the following format only for offered item. Specification should be same as defined in Chapter-IV**

Sr No.	Specification of Tendered Item	Complied Y/N	Specification of Item Offered by the tenderer

- f) List of clients to whom the Bidder has supplied the tendered item earlier mentioning the quantity and date of supply. Copies of supply orders should be uploaded.
- g) The Bidder and OEM shall give an undertaking for supply of spare parts up to the 10 years of the tendered item.

Note : All Mandatory Documents for Technical Evaluation, Financial Documents, Other Necessary Documents Comparative Chart as per parameters mentioned in ch.4 and table mentioned in Page 7 of 24, clause 2 ( e ) and all Appendices must be in sequence along with page no. and index at the beginning to be provided by bidder

## CHAPTER-III

### **1. SCOPE OF WORK:**

Supply, Installation, Testing, Commissioning and Training of 48 Nos of X-ray Baggage Scanner Machine and 3 years of DLP/Warranty with 07 years of CAMC post completion of DLP Period.

### **2 Scope of Work - Guidelines**

(The information given below is Guideline only for understanding the general Scope of Work)

The work in this contract will include but not limited to the following works: -

1. Supply, Installation, Testing, Commissioning, Training of Personnel, 03 (Three) years Defects Liability Period with CAMC during DLP and 07 (Seven) Years of CAMC post DLP.
2. Scope of work includes all allied minor civil works or modifications required for installation of the equipment and restoring to final finishes.
3. Transportation of materials and equipment for installation purposes, laying of power cable from main panel to Door Frame Metal Detector machine.
4. Supply of spare parts, special tools, testing and diagnostic equipment and measuring instruments.
5. Interfacing with other contractors - Power Supply Equipment's, Communications, and others as advised by the Employer and Engineer.
6. Arrangements of all necessary approvals / permissions from concerned authority /agencies in connections with satisfactory parameters for Supply, Installation, Testing, Commissioning and training of equipment.
7. Arrangement & facilitation site visit for all engineers/ officials of any inspection agencies or audit agencies including all co-ordinations, interface, etc.
8. Equipment and Installation shall comply with all relevant Codes, Standards and Regulations specified in the Tender document.
9. The Contractor shall provide a Warranty to make available spares for the X-ray Baggage Scanner machine provided under the Contract for a period of minimum 15 (Fifteen) years from the date of issue of the Performance/ Commissioning Certificate. Only OEM issued certificate shall be Valid.
10. Training – At the time of handover of the X-ray baggage scanner, concerned Station Staff in each station needs to be trained for operation and fault diagnosis etc. Apart from this, training for Operators of the equipment needs to be organised in 10 batches, each batch size not exceeding 15 Operators. No additional payment will be made for this training.
11. Documents – Sets of training manual in two hard copies and two soft copies for each equipment containing details of the technical specifications, installation and commissioning, troubleshooting and maintenance schedule etc. Shall be supplied along with the system. The Operating Manuals, list of spare parts and details of the service centre shall be provided along with equipment by the Contractor.

## CHAPTER-IV

### Technical Specification for X-Ray Baggage Inspection System (60 cm/ 40 cm)

Sl. No	Detail Specification
1.	<b>Tunnel sizes:</b> 600 mm (width) x 400 mm (height)
2.	<b>Conveyor height:</b> Range of 700mm - 800 mm (+/- 10%)
3.	<b>Conveyor belt speed:</b> Should be between 0.18 to 0.3 m/s. Conveyor movement bidirectional.
4.	<b>Power Supply:</b> All machines should operate on 230 VAC, 50 Hz power supply and should be able to withstand voltage fluctuations in the range of 170 V to 260 V, Single phase, 3 to 5 Amp.
5.	<b>Power Consumption:</b> - Should not exceed 1.00 KW on full load
6.	<b>Conveyor capacity:</b> More than 160 Kg (tolerance 10% or more)
7.	<b>Input / Output roller tables</b> - Should be 1000 mm for input and 1500mm for output
8.	<b>Sensor:</b> More than 1000 diodes, L-shaped detector (Folded array type). In case of defective diode arrays scanning should be disabled and error message should be displayed on the screen. Number of Diodes online should be shown in the main application
9.	<b>X-Ray Generation</b> <b>Voltage</b> : 160 KV <b>Tube Current</b> : As per AERB certificate <b>Cooling</b> : Sealed Oil Bath <b>Duty Cycle</b> : 100% <b>X-Ray Detector</b> : "L"-Shaped array
10.	The X-ray beam divergence should be such that the complete image at maximum size of bag is displayed without corner cuts.
11.	The radiation level should not exceed accepted health standard (0.1m R/Hr at a distance of 5 cm from external housing). Relevant certificate from AERB.
12.	<b>Operating Temperature:</b> 0°C to 40°C (Govt. Lab test report to be enclosed).
13.	<b>Storage temperature:</b> 0°C to 50°C (Govt. Lab test report to be enclosed)
14.	<b>Humidity:</b> 90% non-condensing.
15.	<b>Resolution:</b> The machine should be able to display single un-insulated tinned copper wire of 42 SWG or 38 AWG. All penetration and resolution condition should be met without pressing any functional key and should be online.
16.	<b>Zoom:</b> Image Enlargement, Variable zoom up to 64 X, PAN option, 9 Zone Zoom
17.	<b>Display:</b> Dual Displays of 22" LED Monitor or SVGA High resolution, low radiation flicker free, resolution at least 1920 x 1280, and 24-bit colour real time processing.
18.	<b>Color Imaging:</b> 4 Color Imaging or more based on Atomic Number
19.	<b>Image Processing:</b> <b>Penetration:</b> In Steel 35 mm Guaranteed or more <b>Wire Resolution</b> : 42 AWG or 38 AWG Guaranteed or better <b>Contrast Sensitivity</b> : 24 Visible Levels, 4096 Gray Levels <b>Beam Divergence:</b> Diagonal and the X-Ray Image should come without a corner cut

	<p><b>Material Discrimination</b> : Organic and inorganic material discrimination based on atomic number and density.</p> <p>1-liter bottle of water - Should completely come in orange color shades only when put multiple orientation (horizontal/vertical) in a bag</p> <p><b>Image Archive:</b> Up to 5,00,000 images to be stored and should enabled transferring to USB Disk a converting to JPEG format.</p>
20.	The machine should have features of multi energy X-ray imaging facility where materials of different atomic number will be displayed in different colors to distinguish between organic and inorganic materials. With this method to distinguish high density organic materials including explosives. Machine should have variable color or materials stripping to facilitate the operator to monitor images of organic materials for closer scrutiny. All suspicious items (Explosive, High density, material narcotics) should be displayed in one mode and that should be on line.
21.	The vendor shall supply rodent protection, anti-rodent and dust proof cover, Control desk with security housing and locking provision should be available
22.	<b>Radiation Safety:</b> The machine must comply with requirements of health and safety regulations with regard to mechanical, electrical and radiation hazards. The supplier / manufacturer should furnish relevant certificate from Atomic Energy Regulatory Board of India regarding radiation safety. The company manufacturing the equipment should have ISO certification for manufacturing and serving of X-Ray Inspection machine in their technical submissions.
23.	<b>Film safety:</b> Guaranteed safety for high-speed films up to ISO-1600 and above. The machines should be film safe. In other words, photographic films must not be damaged due to X-Ray examination.
24.	Facility for variable contrasts must be incorporated to allow enhancement lighter and darker portion of the image.
25.	The machine should be so designed that software enhancement can be easily implemented to take care of new technique in image processing and pattern recognition.
26.	<b>Through put:</b> Should be <b>200 bags per hour</b> or more.
27.	Full diagnostic built in test facility. All models should have software-controlled diagnosis report facility and system should give printout if printer is connected. Diagnostic Report should be retrievable on a Real-Time Basis (Session should not be logged out in order to see the entry)
28.	The operator personal identification number can be entered the keyboard.
29.	Facility of image enhancement should be available.
30.	All models should have online recording facility and images can be recorded in DVDR/W and USB
31.	Lead impregnated safety screens should be available at either ends of the tunnel. Idle roller provided at either ends of the tunnel to facilitate placing of baggage at input and output.
32.	System should work on one software only. All software features should be controlled from keyboard of machine only. Keyboard function should be user friendly. To enable/disable the software features system should not be rebooted.

33.	If the machine fails to penetrate a particular item, then an alarm video and audio both should be generated to notify the operator.
34.	The threat image projection (TIP) system software to be incorporated in all X-Ray BIS operation as per details given under sub clause 5.2 of clause 5 Software Requirements.
35.	Copy of all software including X-Ray software with recovery CD must be provided.
36.	<b>Operational Training:</b> Operating staff must be provided free training.
37.	One operating & service manual shall be provided with each machine.
38.	<p><b>Computer: Industrial Grade Computer</b> with latest Configuration available in market of HP/Dell or OEM Make, following specification may be used as reference but not limited, any deviation shall be justified:</p> <ol style="list-style-type: none"> <li>1. <b>Processor</b> - Intel@ CoreTM i5 Processor or better</li> <li>2. <b>RAM</b> - 8 GB or better more single channel DDR4</li> <li>3. <b>Hard Disk</b> - <b>256</b> GB of SSD and 1 TB or more 7200 rpm serial ATA HDD / SSD.</li> <li>4. <b>Video Card</b> - 1 GB Video Card with Digital Display,</li> <li>5. <b>Peripherals</b> - Optical Mouse &amp; Keyboard</li> <li>6. <b>Cabinet</b> - Mini tower</li> <li>7. <b>CD-R/RW Drive</b> - DVD writer (optional)</li> <li>8. <b>Ports</b> - 6 No's USB_3.0 ports (with at least 2 in front), 1 serial port, Parallel port, 1PS/2 Key board and 1 PS2 Mouse port, audio ports for microphone and headphone in front.</li> <li>9. <b>Networking Facility</b> - 10/100/1000 on board integrated Network Port with remote booting facility remote system installation, remote wake up, out of bad management using any standard management software.</li> <li>10. <b>Operating System</b> - Windows/Linux</li> <li>11. <b>Loaded Software</b> - Norton, McAfee, E-trust or equivalent Antivirus (Latest version) with license.</li> </ol>
39.	<p>Software Feature should be compatible with following, but not limited to :</p> <ol style="list-style-type: none"> <li>1) All software features of machine should be online and password protected</li> <li>2) Advanced Image Archive, up to 200,000 images</li> <li>3) Thin object Inspection facility like razor blade, envelops etc.</li> <li>4) System should have PAN Option.</li> <li>5) Ability to recall up to minimum 50 images</li> <li>6) Date and Time Display</li> <li>7) Inverse/Negative black and white Imaging.</li> <li>8) Inverse/Negative color imaging based on atomic number.</li> <li>9) High Density Alert - Audio visual alarm and draw square around the object area where High density is found.</li> <li>10) Baggage Counter.</li> <li>11) Horizontal and Vertical Imaging.</li> <li>12) Print Image Function if printer is connected.</li> <li>13) Successful logging in and logging off to be displayed.</li> <li>14) Dynamic Pseudo color and reverse Monochrome, edge &amp; variable edge enhancement, date and time display.</li> <li>15) 2X to 64X Zoom.</li> </ol>

	<p>16) User Defined manual and automatic Access to Image archive.</p> <p>17) Programmable Contrast levels.</p> <p>18) Organic and Inorganic Imaging.</p> <p>19) Color and Black &amp; White Imaging.</p> <p>20) Edge &amp; Variable-enhancement Imaging.</p> <p>21) Machine should be capable of recalling all previous images when screening is switched on.</p> <p>22) Organic &amp; Inorganic material discrimination.</p> <p>23) The system should be user friendly.</p> <p>24) Threat Image Projection (TIP) should be available &amp; programmable.</p> <p>25) Variable brightness and contrast</p> <p>26) Machine shall be properly sealed</p> <p>27) If machine fails to penetrate a particular item then an audio and video alarm shall be generated.</p> <p>28) Reversal Image direction - Ability to reverse the direction from where image is coming.</p>
40.	<b>UPS:</b> 3 KVA or better online with backup time ½ hour to whole system
41.	Defect Liability Period shall be of Three (03) Years from the date of commissioning of complete Lot. During the DLP all the services, spares, consumables shall be supplied by the contractor. Nothing shall be paid extra.
42.	endor shall quote the rates for comprehensive Annual Maintenance Contract for period of Seven years beyond DLP of 3 years. The rates for 7 years CAMC shall clearly show the quoted rates for 1 <sup>st</sup> year and rate of enhancement per year.
43.	<p>The availability of machine during DLP &amp; CAMC shall not be less than 99% this will be calculated in following manner:</p> $\frac{\text{Total Time} - \text{Down Time}}{\text{Total Time}} \times 100$ <p>Total time taken shall be revenue hours of operation of M M M O C L . Typical hours are from <b>05:00 AM to 01.00 AM</b> every day.</p>
44.	Fault in machine should be attended within 1 hours of reporting. The rectification time shall never exceed 48 hours. In case of delay more than 48 hours penalty @ 2000/day shall be levied for additional delay in rectification of machine. This will be applicable during DLP & CAMC period both and same will be recovered from BG amount if not paid by the bidder.
45.	<p><b>General requirement:</b></p> <ul style="list-style-type: none"> <li>➤ Original equipment Manufacturer or their authorized representatives of X-Ray Baggage Inspection System, shall have their services based in India.</li> <li>➤ One <b>Combined Test Piece Kit (CTP Kit)</b> should be provided with each Baggage scanner.</li> <li>➤ X-Ray Baggage Inspection System shall have quality system compliance (ISO 9001 &amp; ISO 14001) certificate for Design, Development, Manufacture, and servicing of x ray machines required CE complied and (AERB) Atomic Energy Regulatory Board of India certified.</li> <li>➤ International Radiation Safety Standards or equivalent is desirable. Manufacturers will</li> </ul>

	<p>have to produce a certificate in this regard for the particular model proposed in the bid.</p> <ul style="list-style-type: none"> <li>➤ The X-Ray Equipment shall comply with the film safety of ten passes of ISO 1600/33 DIN high- speed photographic film.</li> <li>➤ Higher and upgraded version of machine is acceptable, if the machines fulfill the minimum criteria of Government of India establishments like MHA, RDSO, Airport authority etc.</li> <li>➤ All software and firmware upgrades shall be free of cost for lifetime of respective security equipment as per conditions mentioned in the tender. The PC of the Equipment shall be easily accessible and programmable.</li> </ul>
46.	<p><b>Performance Parameters:</b></p> <ol style="list-style-type: none"> <li>1. The image display on the monitor as the baggage moves on the conveyor belt should be smooth.</li> <li>2. Zoom, Pan functions should be accessible through both keypad and mouse for ease in operation</li> <li>3. Operator should be able to Toggle between various image processing functions while the baggage is on the move.</li> <li>4. When stopped halfway through scanning, the image should not be distorted on resumption of scanning.</li> <li>5. The XBIS machine shall have minimum service life of 10 years from the date of commissioning.</li> <li>6. Scheduled maintenance of XBIS machine shall be carried out during non-revenue metro hours (from 1 AM to 4 AM, subject to change as per operational plan). However, in cases where certain XBIS machines are not functional during non-peak hours, then MMMOCL at its sole discretion may permit contractor to undertake CAMC during the period from 4 AM to 1 AM during revenue hours, unscheduled breakdown maintenance will be permitted during 1 AM to 4 AM to reduce the down time of machine.</li> <li>7. Factor Acceptance Test (FAT) shall be carried out before supply of the machines. The bidder has to submit FAT procedure of the equipment and associated parts offered, duly certified by OEM and preferably adopted by security agencies to whom the item has been supplied earlier so that the technical specification of the equipment can be verified/ confirmed by MMMOCL</li> </ol>

## **TESTS TO BE CARRIED OUT**

### **I. SINGLE WIRE RESOLUTION (TEST NO.1)**

A set of uninsulated tinned copper wire of size 25 SWG, 30, 35, 38, 40 and 42 SWG are placed on Perspex sheet. The wires are laid out in "S" shaped curves. The wires are placed behind varying thickness of aluminium. The requirement is to display 42 SWG wire is not covered by step wedge. A tick will indicate the visibility of appropriate wire. Metallic marker should be provided using high density material, so that SWG numbers in the VDU are clearly visible.

### **II. USEFUL PENETRATION (TEST NO.2)**

Definite what level of details can be seen behind a thickness of known material. The requirement of this test is that the 24 SWG wire is seen under second step wedge (5/16"). (Note : This is equivalent to FAA, USA and DOT UK requirement). Tick on log sheet will indicate what wires are visible.

### **III. MULTI ENERGY X-RAY (TEST No.3)**

With multi-energy X-Ray it should be possible to distinguish between materials of different average atomic number. The use of sugar and salt samples encapsulated on the test piece and various materials used in the construction of CTP will check the material discrimination facility. A tick will indicate that the sugar/salt samples are shown in different colour.

### **IV. SIMPLE PENETRATION (TEST No.4)**

This test defines what thickness of steel the machine should be able to penetrate. The steel step wedge on the CTP has steps of 2 mm. from 16 mm. to 30 mm. with a lead strip to check that the machine is above or below the requirement. The requirement is that the lead is visible beneath 35 mm. steel. A tick in log sheet will indicate where a difference between the lead strip and the step wedge is visible.

### **V. SPATIAL RESOLUTION (TEST NO.5)**

This test defines the ability of the system to distinguish and display objects which are close together. The CTP has 16 copper gratings at right angle to each other. The requirement is that a vertical and horizontal grating can be seen. A tick in the log sheet will indicate that gaps in the gratings are visible.

#### **Important Note:**

All tests shall be conducted as per MHA guidelines and for non-compliance of deficiency in tests, bidder shall submit the desired documents within defined period as suggested by the competent authority.

## CHAPTER-V

### APPENDIX – 1

#### Bidders Particulars

#	Description	Details to be filled by Service Provider
1	Name of the Company	
2	Official address	
3	Phone No.	
4	Corporate Headquarters Address	
5	Details of Company's Registration (Please enclose copy of the company registration document)	
6	Name of the Contact Person	
7	Contact Person Mobile No.	
8	Contact Person E-mail id.	
9	Name of the Bank with full address	
10	Bank Account Number (Enclose an unsigned cheque duly cancelled)	
11	Details of Earnest Money Deposit Name of the Bank Banker's Cheque No. & Date	
12	GST registration No	
13	Solvency Certificate to the extent of 20% of the estimated cost.	
14	IT returns of 3 financial years	
15	Permanent Account Number (PAN)	
16	Company's Turnover for last 3 years (Year wise) FY FY 2021-22, FY 2022-23, 2023-24,	

Thanking you.

Yours faithfully,

Name.....

Designation.....

Common Seal.....

Seal and Signature of Bidder with Date.

**APPENDIX – 2**

**Undertaking for Not Blacklisting and Declaration of Ineligibility for  
Corrupt or Fraudulent Practices**

We do hereby undertake that we have not been blacklisted by any Central / State Government department or public sector undertaking or any regulatory institution nor have been declared ineligible for corrupt or fraudulent practices.

Yours faithfully,

For and on behalf of.....

Name.....

Designation.....

Common Seal.....

### APPENDIX - 3

#### FORMAT OF BID SECURITY DECLARATION TO BE SUBMITTED BY THE BIDDERS IN LIEU OF EMD

(On Bidder's Letter head)

**Name of Tender: Supply, Installation, Testing, Commissioning, and Training of 48 Nos of X-ray Baggage Scanner Machine**

We hereby acknowledge and accept that if we withdraw or modify our bids during the period of validity of our Price Bid etc., we will be suspended for a period of five (5) years and we shall not be able to participate in any tender issued by Maha Mumbai Metro Operation Corporation Limited, Mumbai during this period.

**Signature and Seal of Authorised Signatory of bidder**

Name of Authorized Signatory.....

Company Name.....

Seal & Date

*Note: Improper and/ or Conditional Declaration or the Declaration signed by any person other than person holding the Power of Attorney will not be accepted and the bid will be summarily rejected.*

Signature of the authorized person of the firm / Bidder with Seal & Date

## APPENDIX-4

### FORMAT OF TURN OVER

S.No.	Financial Year	Annual Turnover in Rs.
(1)	2021-22	
(2)	2022-23	
(3)	2023-24	
(4)	Total Turnover (1) +(2) +(3)	
(5)	Average Turnover of three Years	

C.A.'s certificate is issued to the bidder (duly signed) of financial turn over report shall be submitted.

## APPENDIX-5

### FORMAT FOR FINANCIAL BID (With covering letter)

Director (Operation),  
Maha Mumbai Metro Operation Corporation  
4th Floor, NaMTTRI Building  
Adjoining MMRDA New Building,  
Bandra Kurla Complex,  
Bandra (E), Mumbai – 400051.  
Tele: 9869223628

Sub: Detailed Break-up of cost - Supply, Installation, Testing, Commissioning, and Training of 48 Nos of X-ray Baggage Scanner Machine

.I/We the undersigned offer to provide services to MMMOCL within the timeframe given by MMMOCL and as per the terms and conditions of the Bid Document, our Techno-commercial proposal and the agreement to be executed between the parties.

- I/We accept the terms and conditions mentioned in the Bid Document, which have been clearly understood by us. I/We have duly signed on each page of the Bid Document.
- I/We understand that MMMOCL reserves the right to reject, accept or consider any offer without assigning any reason whatsoever.
- I/we have duly signed on each page of the Bid document.
- I/We further certify that we are ready to provide services to MMMOCL for the subject tender within the timeframe given by MMMOCL and as per the terms and conditions of the bid document and in the agreement to be executed between the parties.
- I/We understand that MMMOCL reserves the right to reject, accept or consider any offer without assigning any reason whatsoever.

Yours sincerely,

Signature of Authorized Signatory:

Name and Title of Signatory:

Name of Firm:

Address:

**Format for Financial Bid is as under:**

Name of Work: Supply, Installation, Commissioning, Training and CAMC of X-ray Baggage Scanner for Maha Mumbai Metro Operation Corporation Limited at Metro Stations of line 2B and at Mandale Depot.						
<b>Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Amount exclusive of GST</b>	<b>GST Amount</b>	<b>Total Amount With GST</b>
1.	Design, Supply, Installation, Testing, and Commissioning of X-Ray Baggage Inspection System Tunnel Size (600 X 400) mm; including comprehensive Maintenance during <b>3 years DLP</b>	<b>Nos.</b>	<b>48</b>			
	<b>Total – A</b>					
<b>Item No.</b>	<b>Description</b>	<b>Unit</b>	<b>Qty</b>	<b>Amount exclusive of GST</b>	<b>GST Amount</b>	<b>Total Amount With GST</b>
2.	<b>Comprehensive Maintenance:</b> Cost of comprehensive maintenance of X-Ray Baggage Scanner Tunnel Size (600 X 400) including all spare parts, special tools, testing and diagnostic CTP Kit, equipment and measuring instruments for a period of additional Seven 07 years (AMC) after defect liability period of (3 Years).					
2.a	Cost of 1 <sup>st</sup> year CAMC	LS	48			
2.b	Cost of 2 <sup>nd</sup> year CAMC	LS	48			
2.c	Cost of 3 <sup>rd</sup> year CAMC	LS	48			
2.d	Cost of 4 <sup>th</sup> year CAMC	LS	48			
2.e	Cost of 5 <sup>th</sup> year CAMC	LS	48			
2.f	Cost of 6 <sup>th</sup> year CAMC	LS	48			
2.g	Cost of 7 <sup>th</sup> year CAMC	LS	48			
	<b>Total – B (Item 7)</b>					
	<b>Total Quoted Amount (A + B)</b>					
	<b>Quoted amount in words</b>					

Tenderer's quoted percentage (%) including GST, AMC and all taxes/ levies: \_\_\_\_\_ % (in words \_\_\_\_\_ percent) above / below / at par on the Total Price.

<b>S N</b>	<b>Item</b>	<b>Tenderer's Quoted Amount in Rupees as per percentage quoted including all taxes &amp; charges including GST.</b>
1	Total price including all taxes/Charges	Rs. _____ _____ _____ _____

Notes

1. Bids with overwriting, correction or insertion in the table above shall be attested by the signatory.
2. Quantity mention in price bid is indicative only. Payment will be done as per actual service provided and mention payment terms.
3. The Price Bid shall be binding upon us subject to the modifications resulting from negotiations (if any).
4. In case of any discrepancy between the Price Quoted in words and figures, the lower value will be taken into consideration

Yours Sincerely,

Signature of Authorized Signatory.  
Name of Contractor  
Name and Title of Signatory:

## APPENDIX – 6

### Mandatory Information for Eligibility of the Bid

The form below should be filled by Bidder along with all supporting documents as stipulated in the relevant rows. Failure to adhere to the format will lead to rejection of Bid.

N	Techno-Commercial Criteria	Details (to be filled by the bidder)	Page No.
1	Name of the Bidder		
2	Contact person of the Bidder designated for the bid along with Telephone, Fax No. and email ID.		
3	Full address of the Bidder with Telephone No. and Fax No.		
4	Earnest Money Deposit Declaration		
5	Specify the Legal Status of Bidder: Company / Individual		
6	In case of Company, please enclose Memorandum and Articles of Association along with Certificates of Incorporation and date of commencement of business		
7	PAN of the Bidder (Please enclose the attested photocopy of PAN card issued by Income Tax Department)		
8	GST of the Bidder (Please enclose self-attested photocopy of VAT Registration Certificate issued by relevant authorities)		
9	Turnover of the Bidder for the preceding three years, viz. 2020-21, 2021-22, 2022-23. Please enclose a statement duly certified by Chartered Accountant. (Appendix - 4).		
10	Profit and Loss statement for three years, viz. FY 2021-22, , FY 2022-23 & FY 2023-24 (Please enclose a statement duly certified by Chartered Accountant)		
11	IT Returns for last three financial years		

**Note:**

I/We do hereby declare that the entries made are true to the best of my/our knowledge and also that we shall be bound by the acts of my/our duly constituted Attorney.

I/We further understand that in case of any information submitted by me/ us being found to be incorrect either before or even after the award of license, MMMOCL will have the right to summarily reject the bid, cancel the License or revoke the same at any time without assigning any reason whatsoever.

(Signature of the Bidder) SEAL

Date:

Name:

Address:

## APPENDIX – 7

### Checklist of Details and Documents to be submitted

S. N.	Details / Documents submitted	Whether complied – please indicate 'Yes' or 'No'.
1	Have you uploaded system generated receipt for the amount of Tender Document Cost?	
2	Have you attached turn over details furnished as in Form in Appendix -4?	
3	Have you attached mandatory information for eligibility of the Bid with all certified copies	
4	Have you attached declaration about not being black listed company?	
5	Have you submitted the Audited Balance Sheet of previous <i>three financial years</i> ?	
6	Have you submitted certified copy of Income Tax PAN Card	
7	Have you submitted the TDS certificate and GST tax registration	
8	Have you submitted necessary certificates as mentioned in qualification criteria	

Seal of the Bidder

Signature.....

Name of Authorized Signatory: .....

Date:

Place:

**APPENDIX - 8**  
**INITIAL FILTER CRITERIA**  
(On Company's letter head)

Sr. No.	Criteria	Yes	No
1	Has the Bidder abandoned any work in the last five years?		
2	Has the Bidder's contract with any organization ever been terminated due to poor performance?		
3	Has the Bidder's Security Deposit for any contract has ever been forfeited in any Government / PSUs/ Metro Railways?		
4	Has the Bidder been involved in frequent litigations in last five years?		
5	Has the Bidder suffered insolvency/bankruptcy in the last five years?		
6	Has the Bidder been blacklisted by any organization?		
7	Has any misleading information been given in the tender?		
8	Is the Bidder financially not sound to perform the work?		
9	Has the Bidder engaged any Middle men /agent to advance his/her tender?		
10	Has the Bidder failed to certify that no middlemen have been or will be engaged or that any commission has been or will be paid?		