Invitation to Request for Qualification ("RFQ")

Empanelment of Agencies for Design, Supply, Installation, Testing, Commissioning and Operation & Maintenance of Goods Movement Mechanism Package (GMMP) in Maharashtra and Other States".

15th May, 2026

MAHATMA PHULE RENEWABLE ENERGY & INFRASTRUCTURE TECHNOLOGY LTD. (MHAPREIT),
A Govt. of Maharashtra Undertaking

Pinnacle Corporate Park B-501, Next to Trade Center, Bandra Kurla Complex, Bandra East, Mumbai 400051.
https://mahapreit.in

MAHATMA PHULE RENEWABLE ENERGY & INFRASTRUCTURE TECHNOLOGY LTD. (MAHAPREIT)

Index

Sr. No.	Section No.	Particulars	Page No.	
			From	To
1	Section – 1	Detailed Invitation to Offer Notice	3	5
2	Section – 2	General Information	6	8
3	Section – 3	Instructions to Bidders	9	25
4	Section – 4	Scope Of Work	26	28
5	Section – 5	Evaluation Criteria	29	30
5	Section – 6	Empanelment Agreement Framework	31	31
6	Section – 7	Annexures	32	66

SECTION-1

DETAILED INVITATION TO OFFER NOTICE

MAHATMA PHULE RENEWABLE ENERGY AND INFRASTRUCTURE TECHNOLOGY LTD.

RFQ No.: - MAHAPREIT/ETAP/RFQ – 14/2026

Online electronic bid for below-mentioned work is invited by the Executive Director (Operations) on behalf of MAHAPREIT, Mumbai from the prospective, reputed, experienced and technically sound parties **for Empanelment of Agencies for Design, Supply, Installation, Testing, Commissioning and Operation & Maintenance of Goods Movement Mechanism Package (GMMP) in Maharashtra and Other States".**

The time schedule for various bidding phases is given in the detailed e- RFQ notice, which is also available on the website as part of the bid document.

Sr. No	Name of work	Estimated Cost	RFQ Document Cost (Rs.)	EMD Amount (Rs)	Period of Empanelment
1	**Empanelment of Agencies for Design, Supply, Installation, Testing, Commissioning and Operation & Maintenance of Goods Movement Mechanism Package (GMMP)in Maharashtra and Other States".**	-----	Rs. 1000/ + 18% GST	Rs. 1,00,000/-	2 years (From the date of issuing of LoE)

The RFQ document is available on the websites https://mahatenders.gov.in and www.mahapreit.in from 15/05/2026 to 02/06/2026 online. RFQ shall be accepted on website https://mahatenders.gov.in only.

All Bidders are hereby cautioned that the e-bid containing any deviation from the contractual terms and conditions, and other requirements and conditional e-RFQ will be rejected.

1. Validity Period: The bid of the Bidder shall remain valid for 180 days from the date of opening of the RFQ.
2. The Bidders participating for the first time in e-RFQ will have to procure Digital Signature Certificate as well as should compulsory get themselves enrolled on e-tendering portal https://mahatenders.gov.in
3. If any assistance is required regarding e-RFQ (upload and download), please contact CGM (IT) of MAHAPREIT at cgm.it@mahapreit.in

4. In view of the conflict of Interest, the Agencies having relation in whatsoever manner with any Key Resource Person/Key Resource Institution or the Member of MAHAPREIT Task Force shall be barred from applying to the said RFQ.
5. All requisite information required for the submission of RFQ is available on the above website.
6. All rights are reserved by the Competent Authority to reject any or all RFQ in full or in part of without assigning any reason or accept the bid beyond the validity period.
7. To search MAHAPREIT tenders Select Organisation as "Social Justice and Special Assistance" and Department as "MAHATMA PHULE RENEWABLE ENERGY AND INFRASTRUCTURE TECHNOLOGY".
8. For new Bidders kindly go through the Bidders Manual Kit **https://mahatenders.gov.in/nicgep/app?page=BiddersManualKit&service=page** particularly **Registration of Bidders** document.
9. For FAQ's pls go through **https://mahatenders.gov.in/nicgep/app?page=FAQFrontEnd&service=page**

10. Bidders who are using State Bank Multiple Option Payment System ("SB MOPS") other banks **(Other than SBI Bank)** Internet Banking are requested to make online payment **four days in advance**.

11. For **online Payment related issues**, kindly send an email with Bank Reference Number to this email ID **merchant@sbi.co.in** for clarifications.

12. For any technical related queries please call at **24 x 7 Help Desk Numbers** as below 0120-4001 005, 0120- 4493395. **International Bidders** are requested to prefix 91 as the country code.

    E-Mail Support
    A) For any Issues or Clarifications relating to the published tenders,
    Bidders are requested to contact the respective Tender Inviting Authority
    Technical - support-eproc@nic.in

Time Schedule for RFQ

S. N	Particulars	Details
1	RFQ No.	MAHAPREIT/ETAP/RFQ – 14/2026
2	Name of Work	**Empanelment of Agencies for Design, Supply, Installation, Testing, Commissioning and Operation & Maintenance of Goods Movement Mechanism Package (GMMP) in Maharashtra and Other States".**
3	Cost of RFQ Document (Non-Refundable)	Rs. 1000/- (+ 18% GST)
4	Earnest Money Deposit EMD	Rs. 1,00,000/- (In words- Rs. One Lakh only). (Payment through Online Mode Only through payment gateway only) (MSME Bidders shall be exempted from payment of EMD fees, provided the MSMEs submit valid MSME registration certificate)
5	Start Date for downloading the RFQ	15/05/2026
6	Last date of Submission of bids in response to RFQ	02/06/2026 at 15.00 Hrs
7	Time and date of Opening of RFQ	03/06/2026 at 16.00 Hrs
8	Pre-bid meeting	20/05/2026 at 15: 00 Hrs
9	Submission of Pre-bid queries	21/05/2026 at 18: 00 Hrs
8	Contact No. in case of any queries.	Contact No. 02269214431/426
9	Email Id for clarification of RFQ	gm.bdresco@mahapreit.in

SECTION-2
General Information

2.1. DEFINITIONS:

2.1.1 MAHAPREIT- MAHAPREIT shall mean Mahatma Phule Renewable Energy and Infrastructure Technology Ltd. (a Subsidiary Company of MPBCDC Ltd.). The Headquarter of MAHAPREIT is Mumbai.

2.1.2 **REGISTERED ADDRESS FOR COMMUNICATION**

Mahatma Phule Renewable Energy and Infrastructure Technology Ltd (MAHAPREIT),
(A Subsidiary Company of MPBCDC Ltd)
B-501 Pinnacle Corporate Park, Next to Trade Centre,
Bandra Kurla Complex, Bandra East, Mumbai 400051.

2.1.3 **WEBSITE:**

Website means official web sites for e-tendering having following web address https://mahatenders.gov.in

2.1.4 **EXECUTIVE DIRECTOR**

Executive Director shall mean Executive Director of MAHAPREIT.

2.1.5 **COMPETENT AUTHORITY:**

Competent Authority shall mean the Managing Director of MAHAPREIT.

2.1.6 **CONTRACTOR:**

Contractor shall mean the firm or company or agency who enters into contract with MAHAPREIT and shall include their executors, administrators, successors and submitted assignees.

2.1.7 **WORK:**

Work shall mean the work to be executed in accordance with the Scope of Work of Contract.

2.2 RFQ DATA AT A GLANCE:

Sr. No	Particular	Details
2.2.1	Name of work	**Empanelment of Agencies for Design, Supply, Installation, Testing, Commissioning and Operation & Maintenance of Goods Movement Mechanism Package (GMMP) in Maharashtra and Other States".**
2.2.2	Estimated Cost	**Not applicable.**
2.2.3	RFQ Document Cost Rs	**Rs. 1000/- plus 18% GST.**
2.2.4	Earnest money Deposit (EMD)	**Rs. 1,00,000/- Rs. One Lakh only. (Online Mode Only through payment gateway)** (MSMEs shall be exempted

		from payment of EMD fees provided, the MSMEs submit valid MSME registration certificate)
2.2.5	Empanelment Fees	Rs. 50,000/- + 18% GST (to be paid by qualified successful Bidders prior to issue of Letter of Empanelment ("LoE") by MAHAPREIT.
2.2.6	Mode of payment (EMD)	RFQ document cost and EMD amount shall be paid through **E-payment gateway.**
2.2.7	Security Deposit	At the time of work allocation.
2.2.8	Mode of submission of tender	Bid should be submitted on-line on https://mahatenders.gov.in and https://mahapreit.in/ only.
2.2.9	Any addendum / corrigendum /cancellation	Any addendum/ corrigendum/ cancellation of above RFQ will be published on the websites https://mahatenders.gov.in and https://mahapreit.in/
2.2.10	Bid Documents	Bid Documents consisting of, information and eligibility criteria, plans, specification and schedule of quantities of the works are available on web site https://mahatenders.gov.in and https://mahapreit.in/ and the set of terms and conditions of contract and other necessary documents can be seen on the above websites till last date of sale and receipt of RFQ. Interested Bidders may obtain further information at the website https://mahatenders.gov.in and https://mahapreit.in/
2.2.11	Bid acceptance period	The bid for the work shall remain open for acceptance for a period of 180 days from the date of opening of technical bid. If any Bidder withdraws his bid/ offer before the said period or makes any modification in the terms and condition of the bid, the EMD at the time of submission of tender shall stand forfeited.
2.2.12	Other Details	Other details including details of Portal Registration, Submission of bid, Resubmission and withdrawal of bid can be seen in the bidding documents which is available on the websites https://mahatenders.gov.in and https://mahapreit.in/
2.2.13	Documents to be uploaded	The PDF copies of original documents should be uploaded on above mentioned website and should be produced for the verification on demand after opening of the RFQ bid. The Bidders who have participated in the on-line bidding can witness opening of the bid from any system by logging on to the portal, https://mahatenders.gov.in away from the bid

		opening place. The bid can only be opened by the pre-designated officials only after the opening time mentioned in the bid. In the event of the specified date of bid opening being declared a holiday the bid will be opened at the appointed time and transaction in the next working day.	
2.2.14	RFQ Acceptance Authority	Executive Director (Operations), MAHAPREIT	
2.2.15	MAHAPREIT bank details	Bank Name	Bank of Maharashtra
		Account Name	MAHATMA PHULE RENEWABLE ENERGY AND INFRA STRUCTURE TECHNOLOGY
		Account No	60436723381
		IFSC:	MAHB0000164
		Branch Code:	00164
		Branch Address	CENTRAL ADMN. BLDG, M.H.B. KALANAGAR, BANDRA (E), MUMBAI 400051

The detailed step by step procedure for uploading the Main Documents, required RFQ papers, Payment of RFQ fee, and E.M.D through E payment Gateway is available on the e-Tendering website https://mahatenders.gov.in and https://mahapreit.in

Bidders have to follow the instructions given on the above websites for filling up Main Tender Forms Online and submission thereof.

SECTION - 3 INSTRUCTIONS TO BIDDERS for Empanelment of Agencies for Design, fabrication, Installation, testing and commissioning and operating of Goods Movement Mechanism Package in Maharashtra and Other States

3.1 BACKGROUND & OBJECTIVES -

Mahatma Phule Renewable Energy and Infrastructure Technology Limited (MAHAPREIT), a wholly owned subsidiary of the Mahatma Phule Backward Classes Development Corporation (MPBCDC), Government of Maharashtra, was established in April 2021 to promote projects in Renewable Energy, Green Technology, and Sustainable Infrastructure. Vide Government Resolution dated 10th July 2023, MAHAPREIT has been authorized to undertake Government-to-Government (G2G) projects in these sectors across Maharashtra and other States.

In line with its mandate to develop innovative, sustainable, and technology-driven infrastructure solutions, MAHAPREIT now proposes to undertake projects for the automation of intra logistics and movement of material across various urban complexes, townships, industrial areas, and localities, hospitals, commercial developments, Stadiums, Smart cities, etc in Maharashtra and other States.

This initiative aims to address the growing challenges of adoption of new technologies for movement of material including the adoption of automated, underground, and closed-loop systems, which enable efficient, hygienic, and environmentally friendly waste collection and disposal.

The implementation of such systems will contribute significantly towards achieving the goals of Swachh Bharat Mission (Urban), Smart City Mission, and the State's Clean and Green Urban Development Vision.

NAVYUG SCHEME

MAHAPREIT implements "NAVYUG SCHEME" to get the integrated, inclusive and comprehensive effects of all the input supports of MAHAPREIT company to the target beneficiaries of MPBCDC Limited as defined from time to time by Govt of Maharashtra.

MAHAPREIT undertakes such projects under different verticals like –

1) Renewable Energy with Solar Power, hybrid and RE centric Projects,
2) ESCO model (Energy Saving Company) Energy saving Scheme for Urban Local Bodies ("ULB") & Government of Maharashtra agencies.
3) Agro Processing Value Chain and Biofuels,
4) Affordable Housing, Affordable Rental Housing Scheme ("ARHS") and schemes under MoUHA, GoI under EWS and PMAY,
5) Highway and Infrastructure Projects,
6) Environment and Climate Change,
7) New and Emerging Technology Projects especially in Green Hydrogen, Futuristic Energy Integration Projects,
8) Software Technology and Application-Based Services and CSR Projects.
    - MAHAPREIT is working in different sectors in Maharashtra like large-scale Renewable Energy projects especially solar PV, Hybrid with BESS, floating solar, EV charging stations, energy management and energy auditing for buildings, industries, carbon capture, affordable housing etc.

3.1.2 Objectives:

Mahatma Phule Renewable Energy and Infrastructure Technology Limited (MAHAPREIT) intends to adopt and implement various technologies and systems for movement of material in facilities and smart waste management systems as a modern, sustainable solution for efficient management. These advanced systems would significantly reduce environmental pollution, minimizes human intervention, enhances hygiene, and ensures cost-effective movement and waste handling. By utilizing a fully enclosed, automated network for waste transportation, the system eliminates issues related to odor, spillage, and manual collection, thereby contributing to a cleaner and healthier urban environment. MAHAPREIT's adoption of this system reflects its commitment to promoting innovative, eco-friendly, and sustainable infrastructure solutions in alignment with national and state urban development goals.

1. Objective of Empanelment

MAHAPREIT intends to empanel qualified and experienced agencies for the design, engineering, implementation, operation, and maintenance of smart technologies for intra logistic automation via suction piped Systems across healthcare, urban, industrial, institutional, stadiums, mixed-use developments, etc.

Empanelment under this RFQ shall establish a pool of technically and financially capable agencies eligible to participate in future projects facilitated or implemented by MAHAPREIT. Empanelment does not guarantee award of work, and individual projects shall be taken up through separate work orders, agreements, or competitive processes, as may be decided by MAHAPREIT.

2. Nature of Engagement

The empanelled agencies shall be capable of undertaking GMMP projects on a Design–Build–Operate–Maintain (DBOM) / PPP / Concession-based model, SITC based, wherein the agency may be required to:

2.1 Invest in the capital cost of the system, or/and
2.2 Execute the project as per end client's requirements, or/and
2.3 Operate and maintain the system for a tenure based on project to project basis for a minimum duration of eight (8) years from the date of commissioning or Go-Live, or such other period as may be mutually agreed under the project-specific agreement.

The commercial structure, revenue model, tenure, and risk allocation shall be finalized separately for each project.

At this stage, bids are invited for empanelment of the agencies. The financial offers will be called from empanelled agencies as and when the requirement of such service/work arises.

3.2 INFORMATION AND INSTRUCTIONS TO BIDDERS:

MAHAPREIT invites online e-RFQ for **Empanelment of Agencies for Design, fabrication, Installation, testing and commissioning and operating of Goods Movement Mechanism Package (GMMP) in Maharashtra and Other States.**

3.2.1 The Bidders should download the Main e-RFQ Document from the websites: https://mahatenders.gov.in and https://mahapreit.in/

3.2.2 The Online forms of master filter should be filled in completely and all questions should be answered. All information requested for in the enclosed forms should be furnished against the respective columns in the form. If any query is not relevant, it should be stated as "Not Applicable". Only 'dash' reply will be treated as incomplete information. All Bidders are cautioned that incomplete information in the application or any change(s) made in the prescribed forms will render application to be treated as nonresponsive.

3.2.3 The Main e-RFQ document shall be typed on Bidder's letterhead and the signed scanned copy shall be uploaded.

3.2.4 Any overwriting or correction shall be attested. All pages of the Main e-RFQ document shall be numbered and should be submitted as a package with a signed letter of transmittal.

3.2.5 All the information must be filled in English language only.

3.2.6 Information and certificate(s) furnished along with the application form (the respective application that vouches to the suitability, technical know-how and capability of the Bidders) should be signed by the bidders.

3.2.7 The Bidders are encouraged to attach any additional information. No further information will be entertained after submission of Main RFQ document unless it is requested by **MAHAPREIT.**

3.2.8 The Main e-RFQ document in prescribed forms as required in this booklet duly completed and signed should be uploaded on web site along with all relevant documents. The documents submitted in connection with the pre- qualification shall be treated as confidential and will not be returned.

3.2.9 The cost incurred by Bidders in preparing this bid, in providing clarification or attending discussions, meetings, conferences in connection with this document, shall not be reimbursed by the MAHAPREIT under any circumstances.

3.3 METHOD OF APPLYING: -

3.3.1 If the application is made by a firm in partnership, it shall be digitally signed by all Partners of the firm giving their full Typewritten names and current addresses or by a partner holding valid power of attorney on behalf of the firm by signing the application, in which case a certified copy of the power of attorney shall accompany the application. A certified copy of the partnership deed, and the current address of all the partners of the firm shall also accompany the application.

3.3.2 If the application is made by an LLP, it shall be digitally signed by a duly authorized person holding the power of attorney for signing the application, in which case a certified copy of the power of attorney shall accompany the application. Such an LLP may be required to furnish satisfactory evidence of its existence before the pre-qualification is awarded.

3.3.3 The application shall be signed to be legally binding on all partners.

3.4 REVISION OR AMENDMENT OF RFQ DOCUMENTS: -

3.4.1 All Rights are reserved to revise or amend the RFQ document released on website, prior to time specified in time schedule for main e-RFQ preparation. Any further revisions, amendments or time extensions shall be communicated to all be displayed on website: https://mahatenders.gov.in and https://mahapreit.in/

3.4.2 The amendment shall be part of the RFQ Documents and will be notified by publication in the MAHAPREIT website as well as 'mahatender website' and will be binding on the prospective Bidders.

3.4.3 All the intending Bidders are advised to keep a close watch on the website of MAHAPREIT and mahatender in their own interest.

3.5 EARNEST MONEY DEPOSIT: -

All bidders shall pay their entire E.M.D. and payment shall be made through E- Payment gateway (uploading payment receipts). EMD Exemption is allowed to Bidder having valid MSME certificate.

3.6 REFUND OF EARNEST MONEY: -

After acceptance of the bid of successful Bidders, the E.M.D. of other bidders will normally be refunded within 28 days. The earnest money amount shall not carry any interest whatsoever.

3.7 EMPANELMENT FEES:

The successful bidder shall have to pay one time Rs. 50,000/- (Fifty thousand only) plus 18% GST, non-refundable empanelment fees prior to the issue of Letter of Empanelment (LoE) by MAHAPREIT for the period of three years.

3.8 MANNER OF SUBMISSION OF RFQ AND ITS ACCOMPANIMENTS:

3.8.1 The bidder must download the bid document from website, fill it completely and upload on website by scanning and digitally signing wherever necessary. Main RFQ Documents are to be prepared and submitted online only.

3.8.2 The detailed step by step procedure for uploading the Main RFQ Documents, required RFQ papers, payment of RFQ fee and E.M.D through E payment Gateway is available on the e-Tendering website of Govt. of Maharashtra https://mahatenders.gov.in and https://mahapreit.in/. Bidders must follow the instructions given on the above web site for filling up Main RFQ Forms Online.

3.8.3 The Bidder shall submit the tender and documents online as per the E-Tendering procedure.

3.9 CONFLICT OF INTEREST: -

3.9.1 The selected Bidders should provide transparent, professional, objective, impartial service and hold MAHAPREIT's interest paramount with utmost integrity.

3.9.2 The selected Bidders shall not downstream or outsource any part of the scope of work from any agency or the advisors appointed by the MAHAPREIT or sublet the total work assigned.

3.9.3 Non-disclosure of such an association will lead to termination of the Agency.

3.9.4 In view of the conflict of Interest, the professional agency/bidding firm having a relation in a Member of the MAHAPREIT shall be barred from applying to the said RFQ.

3.10 QUALIFYING CONDITIONS: -

MAHAPREIT invites bids for empanelment for specialized agencies for design and execution of Goods Movement Mechanism Package (GMMP) for all current and upcoming projects. It will cover all project types namely residential, commercial, educational, institutional, redevelopment, etc. For the empanelment with MAHAPREIT, the prospective Bidders should fulfil the following eligibility criteria:

3.10.1 A company incorporated under the Companies Act, 2013 / 1956,

3.10.2 The Bidder must demonstrate capability to design, supply, install, commission, and operate both technologies under GMMP, namely:

- Stationary Transport Waste Logistics (STWL), and
- Stationary Transport of Other Items (STOI)

Bidders not complying with both technologies shall not be considered for empanelment.

3.10.3 It is imperative that both the technologies are compiled by the bidder as per the below attached specifications and conditions. In case any bidder is not complying with either of the technologies then the same will not be considered for empanelment.

3.10.4 The Bidder should have ISO 9001 and ISO 14001 for both technologies.

3.10.5 The Applicant shall have Designed, supplied, installed, commissioned **at least two (2) operational projects** technology from the Goods Movement Mechanism Package (GMMP), anywhere in the India operational for a minimum period of one (1) year.

The cited projects shall meet the following minimum criteria:

a) The **combined installed contract value** of the projects shall be **not less than INR 4 Crore**; and

b) At least **one (1) project shall be located in India or in a comparable regulatory environment**; and

c) Each project shall have either: A **minimum installed contract value of INR 2 Crore**.

Documentary evidence such as work orders, completion certificates, and client certifications shall be submitted.

3.10.6 The Bidder shall have an average annual turnover of **30 Cr** for the last 3 years ending financial year 2024 on the date of call of the bid (FY 2022-23, FY 2023-24, FY 2024-25). Chartered Accountant's ("CA") Certificate shall be attached. The empanelled agencies shall be eligible for the submission of the bid as per prevailing guidelines.

3.10.7 The Bidder shall have positive Net-worth for FY 2024-25. CA Certificate shall be attached. Further, the Bidder's net worth shall not have been negative for more than one (1) year during the last three (3) financial years.

3.10.8 Consortium / Joint Venture not allowed.

3.10.9 The Bidder shall have valid GST registration.

3.10.10 The Bidder should not be black listed by any Central or State Government or Public sector undertaking in India.

3.10.11 The Bidder must be a company registered and incorporated in India.

3.10.12 Bidder should be a 10-year-old company registered in India to prove its longevity. Proof of the same should be submitted for the same.

3.10.13 The Applicant shall submit: An undertaking confirming its ability to mobilize capital investment for projects on DBOM / PPP basis Indicative financing approach (equity, debt, internal accruals) if applicable for a certain project and after considering project viability.

3.10.14 The Bidder must be registered and incorporated in India, possessing a valid legal entity status.

3.11 OTHER CONDITIONS:

3.11.1 The interested Bidder has to submit the bid online only and no offline bid is accepted.

3.11.2 The interested agencies may also send their queries by email on the following email Id. cgm.etap@mahapreit.in. Queries received after the pre-bid meeting date shall not be considered for clarification.

3.11.3 The interested parties / agencies shall submit all the relevant papers online in soft copy with the bid. No hard copy submission is accepted.

3.11.4 Any disputes or differences that may arise out of or in connection with this RFQ, shall have exclusive jurisdiction of Mumbai Court.

3.11.5 The RFQ will be evaluated on eligibility criteria mentioned above for the bid submitted by Bidders.

3.11.6 MAHAPREIT reserves the right to reject any or all bid in part or full without assigning any reasons.

3.11.7 Information relating to the examination, clarification, evaluation, and comparison of submitted bid and recommendations for the award of an empanelment shall not be disclosed to Bidders or any other persons not officially concerned with such process until the award of empanelment to the successful Bidder has been announced. Any effort by a Bidder to influence the Employer's processing of bid or award decisions may result in the rejection of his Bid.

3.11.8 Any effort by the Bidder to influence the Competent Authority in the Competent Authority's Bid evaluation, Bid comparison or award of empanelment or any decisions may result in the rejection of the Bidders 'Bid.

Meeting the eligibility criteria does not guarantee empanelment. MAHAPREIT reserves the right to assess the Applicant's overall capability, past performance, and suitability.

3.11.9 Allotment of empanelment to more than one Bidder: -

"MAHAPREIT reserves the right to empanel more than one Bidder.

MAHAPREIT reserves the right to allot the work as per the policies / objectives of MAHAPREIT. MAHAPREIT reserves the right to withdraw the work and get it completed by any other agency at the risk and cost of the Bidder if performance of the agency is unsatisfactory. Further, the said agency may be de-listed for a period of one year for participating in any of the bids invited by MAHAPREIT. The Bidder must possess the ability to effectively manage stakeholders, performance contracts, meetings.

3.11.10 MAHAPREIT facilitation charges

The Bidder will have to pay pmc charges to MAHAPREIT for which separate offer will be obtained from the successful empanelled Bidder on case to case basis.

3.12 GENERAL INSTRUCTIONS: -

3.12.1 General: -

The special conditions of contract are to be read in conjunction with General conditions of contract. If there are any variations or discrepancies or conflicting provisions, the provisions in Special Conditions shall take precedence over the provisions in the General Conditions of contract.

3.12.2 Goods and Service Tax:

The RFQ rates are inclusive of all taxes, except Goods and Service Tax payable on value of the contract as applicable from time to time, however the Fee and Taxes shall be shown separately.

3.12.3 Conditional Offer:

Conditional offers will be summarily rejected. The RFQs which do not fulfil any of the conditions of the notified requirements laid down in this detailed RFQ, the general rules and directions for the guidance of the Bidders as mentioned in this RFQ are incomplete in any respect are likely to be rejected without assigning reasons thereof.

3.12.4 Validity of 180 days:

The offer shall remain valid for a period of 180 days (One Hundred Eighty) day from the date of the opening price quote unless extended. If the acceptance offer is not communicated within 180 days and if the offer is withdrawn by the MAHAPREIT the earnest money shall be refunded in full.

3.13 PREPARATION OF BID: -

3.13.1 Language of Bid: -

The bid prepared by the Bidder and all correspondence, drawing(s), document(s), certificate(s) etc. relating to the bid exchanged by Bidder and MAHAPREIT shall be written in English language only. In case a document, certificate, printed literature, etc. furnished by the Bidder in a language other than English, the same should be accompanied by an English translation duly authenticated by the Indian Chamber of Commerce, in which case, for the purpose of interpretation of the Bid, the English translation shall govern.

3.14 DETAILED INSTRUCTIONS & DOCUMENTS TO BE FURNISHED FOR BIDDING:

3.14.1 Scanned copies of the following documents:

3.14.1.1 Tender fee and EMD receipt.

3.14.1.2 Company registration certificate & PAN, TAN, GST Tax Registration.

3.14.1.3 Audited Balance sheet of last three years (CA certified)

3.14.1.4 Positive net worth certificates from Charted Accountant.

3.14.2 Annexures:

3.14.2.1 Annexure-1: Checklist for technical bid.

3.14.2.2 Annexure-2: Covering letter

3.14.2.3 Annexure-3: Format of Power of Attorney for signing bid authorization letter.

3.14.2.4 Annexure 4: Information about the bidding firm.

3.14.2.5 Annexure-5: Annual Turnover and Positive Net Worth.

3.14.2.6 Annexure-6: Assignment of similar nature of works.

3.14.2.7 Annexure-7: Contact Person for the RFQ.

3.14.2.8 Annexure-8: Declaration by the Bidders.

3.14.2.9 Annexure – 9 – Details of Technical Specifications

3.14.2.10 Annexure 10 - (Draft Empanelment Agreement)

3.14.2.11 Annexure 11 – Technical Specifications

The Bidders have to submit all documents with an authorized Signature and company stamp. Documents without authorized signatures and stamps will not be accepted.

3.14.3 INSTRUCTIONS:

While submitting the Technical bid, the Bidders shall, in particular, ensure that:

3.14.3.1 A brief description of the firm and an outline of the relevant past experience on assignments and highlighting experiences on the implementation of Goods Movement Mechanism Package (GMMP) in the format given in Form.

3.14.3.2 The composition of the team of personnel which the Bidders would propose to provide with the details of name of the key personnel, his/ her area of expertise, position and the tasks which would be assigned to each team member as well as previous experience.

3.14.3.3 Key Personnel Requirement:

The Bidder shall submit detailed Curriculum Vitae (CVs) of at least the following key technical personnel:

a) Project Manager – with experience in execution of infrastructure / GMMP / pneumatic systems projects;
b) Lead Systems Engineer / Design Engineer – with relevant experience in system design, engineering, and integration of similar technologies.

The CVs shall clearly indicate qualifications, years of experience, and details of relevant projects handled

3.14.3.4 The Bid without the cost of the RFQ document shall not be considered for evaluation & shall be out rightly rejected.

3.14.3.5 MAHAPREIT reserves the right to verify all statements, information and documents submitted by the Bidders in response to the RFQ. The limitation of MAHAPREIT to undertake such verification shall not relieve the Bidders of its obligations or liabilities here under nor will it affect any rights of MAHAPREIT there under. In case it is found during the evaluation or at any time before the Empanelment or after and during the period of subsistence thereof, that one or more of the eligibility conditions have not been met by the Bidders or the bidders has made material misrepresentation or has

given any materially incorrect or false information, the bidders shall be disqualified forthwith if not yet empanelled as the auditor by a communication in writing by MAHAPREIT without MAHAPREIT being liable in any manner whatsoever to the Bidders, as the case may be.

3.15 DISQUALIFICATIONS:

MAHAPREIT may at its sole discretion and at any time during the evaluation of the bid, disqualify any Respondent if the Respondent has:

3.15.1 Submitted the bid documents after the response deadline;

3.15.2 Made misleading or false representations in the forms, statements and attachments submitted in proof of the eligibility requirements;

3.15.3 Submitted a bid that is not accompanied by required documentation or is non-responsive;

3.15.4 Failed to provide clarifications related thereto, when sought;

3.15.5 Submitted more than one bid;

3.15.6 Declared ineligible by the Government of India/State/UT Government for corrupt and fraudulent practices or blacklisted on the last day of submission of this RFQ.

3.16 PRE-BID MEETING: -

3.16.1 The Bidder(s) or his designated representative are required to attend an Online/Offline “Pre-Bid Meeting" which will be held at MAHAPREIT head office.

3.16.2 The purpose of the meeting will be to clarify issues and to answer questions on any matter that may be raised at that stage and give hands-on e-tendering.

3.16.3 Text of the questions raised, and the responses given, together with any responses prepared after the meeting, will be uploaded on MAHAPREIT website / MAHAPREIT e-tendering website. Any modification of the Contents of Bidding Documents that may become necessary as a result of the Pre-Bid Meeting shall be made through the issue of a Corrigendum published on https://mahatenders.gov.in and https://mahapreit.in/.

3.16.4 Attendance at the Pre-Bid Meeting is strongly encouraged for all prospective Bidders to obtain clarifications and better understanding of the RFQ requirements. However, non-attendance of the Pre-Bid Meeting shall not, by itself, be a ground for disqualification of any Bidder.

3.17 FORMAT AND SIGNING OF BID: -

3.17.1 The original and all copies of the Bid shall be typed or written in indelible ink [in the case of copies, photocopies are also acceptable] and shall be signed by a person or persons duly authorized to sign on behalf of the Bidder (as per POA). The name and position held by each person signing must be typed or printed below the signature. All pages of the Bid except for unamendable printed literature where entry(s) or amendment(s) have been made shall be initialled by the person or persons signing the bid.

3.17.2 The Bid shall contain no alterations, omissions, or additions unless such corrections are initialled by the person or persons signing the bid.

3.17.3 In case of e-tendering, signed documents to be uploaded.

3.18 SUBMISSION OF BID: -

The Bid shall be submitted through e-tender mode in the manner specified elsewhere in RFQ document. No Manual/ Hard Copy (Original) Bid shall be acceptable.

3.19 DEADLINE FOR SUBMISSION OF BID: -

The Bid must be submitted through e-tender mode not later than the date and time specified in the tender documents/BID.

3.20 MODIFICATION AND WITHDRAWAL OF BID: -

The Bidder may withdraw or modify its Bid after Bid submission but before the due date and time for submission as per the tender document.

3.21 MAHAPREIT Vendor Registration Procedure: - Bidder shall complete the vendor registration before apply on the tender portal. The procedure for vendor registration is given below: -

1) Steps involved in the Vendor Registration: - The bidder / vendor has to follow steps for Vendor Registration.

a) Step-1 - Log – in in vendor registration site

i) Log in to MAHAPREIT website

ii) Go to link Register now.

b) Step -2 – Filling in details of vendor in the Vendor Registration Form (Online Form)

i. Mention the category for Vendor Registration :- Manufacturers / Authorized Dealers or Channel Partners / Suppliers / Consultants / Service Providers, Contractors / RE Project Developers / Infrastructures Developers / Software Programmers / Hardware Suppliers / Investors / Fund Arrangers/ ESG Agencies/ Any other category etc.
ii. Enter the details of vendor and upload scanned copies of Incorporation certificate / Proprietary certificate / Partnership Deed/Shop & Establishment Act Certificate. Or any other relevant certificate etc.
iii. PAN, GST Registration.
iv. Experience: - Purchase / Work Order Copies.
v. List of orders executed.
vi. Reputed Clientele details if any.
vii. Turnover and Net-worth certificate for last three years from CA.
viii. MSME / Udyam Registration.
ix. ISO Certification, if any.

x. Company Incorporation

xi. Authorised Dealership certificate.

c) Step -3 – Payment of vendor registration fee.

d) Step – 4 – Physical verification of vendor's documents.

e) Step -5 – Inspection of factory if necessary.

f) Step -6 – Recommendation from concerned vertical heads.

g) Step -7 – Submission of proposal to Hon. MD for approval.

h) Step -8 – Registration of vendor in the System in the appropriate category by IT Department of MAHAPREIT.

i) Step- 9 – Intimation to Vendor.

2) Online Link for Vendor Registration Form: - The bidders / vendors are requested to use the online Vendor Registration Form available on this online link and submit the same duly filled in with all relevant information, required documents and registration fee.

3) Vendor Registration Fee :- The bidder has to deposit a vendor registration fee of 2500/- plus 18 % GST by Cash / NEFT in the following bank.

Name of the organization:- Mahatma Phule Renewable Energy and Infrastructure Technology Ltd.

Name of the bank:- Bank of Maharashtra.

Branch:- Kalanagar Bandra (E).

Account No:- 60436723381.

IFS Code:- MAHB0000164.

4) Disclaimer: -

4.1 The vendor registration is compulsory for each participating bidder in the tender / RFP/RFQ/EoI of MAHAPREIT. Hence, unregistered vendor may not be able to participate in MAHAPREIT tendering process. This vendor registration / enrolment does not guarantee any work allocation for MAHAPREIT projects to the registered vendors. Even after the registration, the registered vendors shall have to participate in the tender process of MAHAPREIT and become technically qualified for the tender / RFP/ RFQ/ EoI as the case may be and shall have to stand lowest."

4.2 Though adequate care has been taken while preparing the Tender / RFP / RFQ/ EoI document, the bidder(s) shall satisfy themselves that the document is complete in all respect. Intimation regarding any discrepancy shall be given by the prospective bidders to the office of MAHAPREIT immediately. If no intimation is received from any bidder within 07 (Seven) days from the date of issuance of Tender / RFP /RFQ/ EoI documents, it shall be considered that the document is complete in all respect and has been received / acknowledged by the bidder(s).

4.3 Mahatma Phule Renewable Energy and Infrastructure Technology Limited (MAHAPREIT) reserves the right to modify, amend or supplement this document.

4.4 This Tender /RFP /RFQ/ EoI document has been prepared in good faith, and on best endeavour basis. Neither MAHAPREIT nor their employees or advisors make any representation or warranty, express or implied, or accept any responsibility or liability, whatsoever, in respect of any statements or omissions herein, or the accuracy, completeness or reliability of information, and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of this

document, even if any loss or damage is caused by any act or omission on their part.

4.5 In case of any discrepancy in the documents uploaded on the websites of MAHAPREIT, https://mahapreit.in/ and https://mahatenders.gov.in/nicgep/app, the documents uploaded on the https://mahatenders.gov.in/nicgep/app website will prevail.

5) Contact Person:- For IT related queries,

Shri. Sunil Mahajan, Chief General Manger (IT) – 9594077550.

3.22 BID OPENING AND EVALUATION: -

3.22.1 Employer's right to accept any Bid and to Reject any or all Bid: -

MAHAPREIT reserves the right to accept or reject any Bid and to annul the Bidding process and reject all Bid, at any time prior to award of Contract, without thereby incurring any liability to the affected Bidder or Bidders or any obligations to inform the affected Bidder or Bidders of the ground for MAHAPREIT's action.

3.22.2 Bid Opening: -

3.22.2.1 Technical bid Opening: -

MAHAPREIT will open Bid, in the presence of Bidders' designated representatives who choose to attend, at date, time and location stipulated in the Bid Document.

Note: In the event of any unforeseen closure of work/holiday on any of the above days, the bid will be opened on the next working day without any further notice.

3.23 EMPANELMENT OF BIDDERS: -

Subject to all terms and conditions of RFQ / Tender documents & its amendments, MAHAPREIT will empanel the qualified successful Bidders.

3.24 PERIOD OF ENGAGEMENT:

The empanelment shall be valid for a period of 24 months (from the date of empanelment LoE issuing date) which may be extended by another One year by MAHAPREIT based on the requirement and at whole discretion of MAHAPREIT.

3.25 MUTUAL DISCUSSIONS: -

In the event of a dispute or difference of any kind whatsoever shall arise between the Parties in connection with or arising out of this Agreement or the breach, termination or validity hereof, the Parties shall endeavour to resolve such dispute in good faith in the first instance within 30 (thirty) days of the notice of such a dispute by mutual discussions between the Parties.

3.26 ARBITRATION: -

In the event of any dispute, controversy, or claim arising out of or in connection with this RFQ, Empanelment, or any subsequent Agreement, including any question regarding its existence, validity, interpretation, performance, breach, or termination, and which cannot be resolved amicably through mutual discussions as per Clause 3.25, the same shall be referred to arbitration. The arbitration shall be conducted in accordance with the provisions of the Arbitration and Conciliation Act, 1996, as amended from time to time.

The dispute shall be referred to a sole arbitrator to be appointed by MAHAPREIT. The arbitration proceedings shall be conducted in accordance with the rules of the Mumbai Centre for International Arbitration (MCIA). The seat and venue of arbitration shall be Mumbai, Maharashtra. The language of arbitration shall be English. The arbitral award shall be final and binding on the Parties and shall be enforceable in accordance with applicable law.

3.27 TERMINATION OF CONTRACT/EMPANELMENT AGREEMENT:

The MAHAPREIT may by giving not less than thirty (30) days written notice of termination to the Bidder, terminate this agreement upon the occurrence of any of the events specified in paragraph as below.

3.27.1 If the Bidder fails to remedy a failure in the performance of his obligations hereunder, as specified in a notice of suspension pursuant thereof, within thirty (30) days of receipt of such notice of suspension or within such further period as the MAHAPREIT may have subsequently approved in writing. Or

3.27.2 If the Bidder becomes insolvent or bankrupt or enter into any agreement with his creditors for relief of debt or take advantage of any law for the benefit of debtors or go into liquidation or receivership whether compulsory or voluntary; or

3.27.3 If MAHAPREIT found that the Bidder has provided false, & wrong information while Bid submission; the Bidder shall be given a notice of 15 (fifteen) days to provide clarification or remedy the breach, failing which MAHAPREIT may terminate the Agreement. or

3.27.4 If the Bidder submits to the MAHAPREIT a statement which has an effect on the rights, obligations or interests of the MAHAPREIT and/or which the Bidder knows to be false; the Bidder shall be provided a notice of 15 (fifteen) days to cure the default, except in cases involving fraud or wilful misrepresentation, where immediate termination may be effected. or

3.27.5 If as the result of a Force Majeure Event, the Bidder is unable to perform the Services for a period of not less than sixty (60) days, or

3.27.6 If MAHAPREIT found any defect/inadequacy/errors/inability/non-competency etc. in the Bidder in relation to the performance of the Services which are not in accordance to the Good Industry Practices or the provisions of this RFQ, MAHAPREIT shall issue a notice providing 15 (fifteen) days to cure such deficiencies, failing which termination may be effected. or

3.28 FINAL DECISION-MAKING AUTHORITY:

The Competent Authority of MAHAPREIT reserves the right to accept or reject any or all the RFQ in part or full for this RFQ without assigning any reasons thereof and his decision will be final.

3.29 FORCE MAJEURE:

3.29.1 Force Majeure Event : The Parties hereto agree that a Force Majeure Event shall mean any unforeseeable act or event that prevents the affected Party from performing its obligations under this Agreement or complying with any conditions required by the other Party under this RFQ and such act or even is beyond the reasonable control and not because of any fault of the affected Party and such Party has been unable to avoid such an act or event by the exercise of prudent foresight and due diligence.

Without prejudice to the foregoing, the Parties hereto agree that the occurrence of any of the events shall also be deemed to be a Force Majeure Event:

3.29.1.1 War and other hostilities whether war to be declared or not, invasion, act of foreign enemies, mobilization, requisition or embargo that directly impacts the provision of services by the Bidder under the Agreement.

3.29.1.2 Rebellion, revolution, insurrection, military or usurped power and civil war that directly impacts the provision of services by the Bidder under the Agreement.

3.29.1.3 Riot, civil commotion, terrorism, or disorder that directly impacts the provision of services by the Bidder under the Agreement.

3.29.1.4 Pestilence, epidemics, inclement weather causing floods or lightning or cyclone, typhoon, or earthquake and which directly impacts the provision of services by the Bidder under the Agreement.

3.29.1.5 The Parties hereto agree that the following events are explicitly excluded from and do not constitute a Force Majeure Event and is solely the responsibility of the affected Party.

3.29.1.6 Strikes, collective bargaining agreements of either Party resulting in delay in the provision of Services or stoppage of work; or

3.29.1.7 Labour disputes of any kind; or

3.29.1.8 Economic hardship; or

3.29.1.9 Any act, event, or occurrence listed above or asserted as a Force Majeure Event that results materially from the negligence or intentional acts of the affected Party.

3.30 FINANCIAL BID:

Bidders are not required to submit any financial bid for this RFQ. However, after due Empanelment of agencies, MAHAPREIT will invite financial RFQ from only successful empanelled agencies for each work as and when requirement arises.

3.31 POST BIDDING CORRESPONDENCE:

The Bidder should note that no correspondence shall be entertained or considered after the due date and time of submission of bid unless otherwise sought by MAHAPREIT.

3.32 NOTIFICATION OF AWARD OF EMPANELMENT/CONTRACT:

The notification of award of Empanelment shall be communicated to the successful Bidder by Letter of Empanelment ("LoE") by email or Registered Post/Air mail or hand delivery. In case of issuance of LoE, the same shall be followed by letter of confirmation by Registered Post/ Air Mail. The Empanelment shall be considered as having come into force from the date of issue of Letter of Empanelment (LoE) by the MAHAPREIT. This date will be called the effective date of Empanelment.

3.33 SIGNING OF AGREEMENT of EMPANELMENT:

3.33.1 The successful Bidders shall have to furnish acceptance of Letter of Empanelment (LoE) within 10 calendar days from the date of issue of LoE. The successful Bidders shall have to sign a formal Empanelment agreement with the MAHAPREIT within 30 calendar days from the date of issue of LoE. Under certain circumstances, MAHAPREIT may give an extension of time for signing of contract.

3.33.2 All charges for preparing the contract documents including legal fee, stamp fee etc. shall be borne by the successful Bidder.

3.34 CONFIDENTIALITY:

3.34.1 Information relating to the examination, clarification, evaluation and comparison of bid, and recommendations for the award of a Contract, shall not be disclosed to Bidder(s) or any other persons not officially concerned with such process.

3.34.2 All plans, design calculations, studies, data, maps, drawings and specifications prepared by the Bidder in connection with the services to be provided under the Agreement shall be the property of the MAHAPREIT. As and when required or upon termination of the contract, the aforesaid documents prepared specifically for the projects (including originals) shall be handed over to the MAHAPREIT.

3.34.3 Provided however, that any pre-existing intellectual property, proprietary technologies, designs, methodologies, software, product specifications, systems, or OEM-based components owned or developed by the Bidder prior to or independently of this Agreement shall remain the sole and exclusive property of the Bidder.

3.34.4 MAHAPREIT shall have a non-exclusive, perpetual, royalty-free license to use such deliverables and embedded proprietary elements strictly for the purposes of the Project and its operation, maintenance, and future reference, but shall not commercially exploit, transfer, or disclose the Bidder's proprietary intellectual property to third

parties without prior written consent of the Bidder, except as required under applicable law.

3.34.5 The Bidder shall ensure confidential handling of all information received from MAHAPREIT and shall not disclose any such information to third parties without prior written approval, except as required for performance of the Agreement.

3.34.6 The Bidder shall take all necessary steps to ensure confidential handling of all matters pertaining to plans, designs, drawings, specifications, method, and any other information developed or acquired by him from the MAHAPREIT under terms of the Contract.

3.34.7 Bid Confidentiality and Disclosure

All bids, documents, data, and information submitted by the Bidders shall be treated as confidential and shall not be disclosed by MAHAPREIT to any third party, except for the purpose of evaluation, empanelment process, or as required under applicable laws, including the provisions of the Right to Information Act, 2005.

MAHAPREIT, including its officers, employees, consultants, and members of the evaluation committee, shall maintain strict confidentiality of all proprietary, technical, financial, and commercial information submitted by the Bidders and shall take reasonable measures to safeguard such information against unauthorized access, use, or disclosure.

The confidentiality obligations under this clause shall survive the completion, termination, or expiry of the empanelment process.

3.35 INDEMNITY:

The Parties hereto agree that the Bidder shall indemnify and defend the MAHAPREIT and its representatives and employees, and hold the Owner, its representatives, employees harmless from:

3.35.1 Damages and losses caused by its negligent or intentional act or omission, or any damages and losses caused by the negligent act of any third party or sub-contractor or agency engaged by consultant or sub-contractor of empanelled bidder.

3.35.2 Damages and losses resulting from the non-compliance with the obligations established hereunder.

3.35.3 Any environmental damage caused by it and/or its representatives or employees or employees.

3.35.4 Breach (either directly by it or through its representatives and/or employees) of any representation and warranty declared herein by it;

3.35.5 From all claims, actions, suits, proceedings, taxes, duties, levies, costs, expenses, damages and liabilities, including attorneys‟ fees, arising out of, connected with, or resulting from or arising in relation to this RFQ due to neglect, omission or intentional act of Energy Savings.

3.36 PERFORMANCE CONTRACT TERMS AND CONDITIONS:

3.36.1 Duration of Contract: This will be project specific and every project will have its own criteria.

3.37 PROGRESS REPORT:

3.37.1 The Empaneled Agency shall periodically submit a Progress Report on the status of work entrusted i.e. monthly as mentioned or as may be mutually agreed upon bringing out the details of the works completed, works in hand, bottlenecks, if any, and efforts being made to improve upon the time schedule.

3.37.2 The Empaneled Agency shall also be called to make presentations on the various activities in respect of the project as and when required by MAHAPREIT without any additional cost.

3.37.3 The copyrights of all documents provided by the Empaneled Agency and the documents provided by the MAHAPREIT to the Empaneled Agency for reviewing of any project shall at all stages be the property of the MAHAPREIT and while in the custody of the Empaneled Agency shall be fully available to the MAHAPREIT and its duly authorized representatives. On completion of the provision of the Services, all drawings, documents etc. in relation to the Project shall be delivered/handed over by the Empaneled Agency to MAHAPREIT.

SECTION 4 - SCOPE OF WORK

Note:- This is a tentative scope of work for the purpose of empanelment only. Actual scope of work will be decided based on project-to-project basis.

Scope of Services (Indicative and Non-Exhaustive)

The empanelled agencies shall be expected to provide end-to-end services covering the following activities but which is not limited to:-

INTRODUCTION OF GMMP TECHNOLOGIES:

The Goods Movement Mechanism Package (GMMP) covered under this RFQ comprises two mandatory technology streams, namely:

i. Suction Tube for Waste or Laundry (STWL) – comprising underground / overhead piped systems typically using 400 mm / 500 mm diameter SS 304 pipelines for transport of waste, linen, or similar materials; and

ii. Suction Tube for Other Items (STOI) – comprising pneumatic tube systems using 90 mm / 110 mm / 160 mm / 200 mm diameter PVC / steel pipelines for transport of items such as documents, medicines, laboratory samples, cash, and other materials.

Empanelment under this RFQ requires bidders to demonstrate capability in both STWL and STOI technologies. Bidders not meeting both requirements shall not be considered for empanelment.

4.1 Design and Engineering

4.1.1 Preparation of conceptual designs, system layouts, and technical specifications tailored to site conditions and operational requirements.

4.1.2 Conduct of feasibility studies, site surveys, and assessments to determine optimal pipe routing, station locations, Plant rooms, etc.

4.1.3 Development of scalable, efficient, and maintainable system designs in line with national and international best practices.

4.2 Design Review, Vetting and Approvals

4.2.1 Submission of design documents, drawings, and execution plans for review and approval by MAHAPREIT and the concerned Client/Authority.

4.2.2 Coordination with MAHAPREIT, the Client, and any appointed technical consultants during the review process.

4.2.3 Vetting and approval of system design by a **reputed technical institution** (such as IIT or an equivalent expert body or third party consultant), as may be specified at the project level.

4.2.4 Incorporation of recommendations arising from the vetting process prior to finalization of designs.

4.3 Procurement and Supply

4.3.1 Procurement and supply of all equipment and components.

4.3.2 Ensuring that all equipment conforms to applicable **national and international standards** (such as CE, EN, ISO) and is sourced from certified manufacturers.

4.4 Installation and Construction

4.4.1 Execution of all civil, mechanical, electrical, and integration works, or as the case maybe, required for complete installation of the 2 systems part of the Goods Movement Mechanism Package (GMMP) .

4.4.2 Installation of pipe networks in coordination with other infrastructure works at the project site.

4.4.3 Compliance with applicable safety, quality, and environmental management requirements during construction.

4.5 Testing, Commissioning and Go-Live

4.5.1 Conduct of comprehensive testing including pressure testing, airflow calibration, leak detection, and operational trials.

4.5.2 Preparation and submission of test reports, commissioning documents, and performance validation certificates.

4.5.3 Commissioning of the system in the presence of representatives of the Client, MAHAPREIT, and, where applicable, third-party quality assurance agencies.

4.6 Training and Capacity Building

4.6.1 Training of Client personnel, municipal staff, and operational teams in system operation, safety, and routine maintenance.

4.6.2 Preparation and handover of Operation & Maintenance (O&M) manuals, safety procedures, and troubleshooting guides.

4.6.3 Provision of technical support during the initial operational phase and defects liability period.

4.7 Operation and Maintenance (O&M)

4.7.1 Provision of comprehensive O&M services during the contract period, including preventive maintenance, inspections, and breakdown response.

4.7.2 Deployment of qualified and trained manpower for system operation and upkeep in accordance with agreed service levels.

4.7.3 Submission of periodic performance, operational, and maintenance reports to the Client and MAHAPREIT.

4.8 Sustainability, Environmental and Regulatory Compliance

4.8.1 Design and operation of STWL in compliance with:

4.8.1.1 Solid Waste Management Rules, 2016

4.8.1.2 Swachh Bharat Mission guidelines

4.8.1.3 Applicable MoHUA, State Government norms

4.8.1.4 Adoption of energy-efficient systems, odor control, noise mitigation, and environmentally sustainable practices.

4.8.1.5 ISO 9001, ISO 14001

4.8.1.6 CE

4.8.2 Design and operation of STOI in compliance with:

4.8.2.1 Best Engineering practice

4.8.2.2 Applicable ISO 9001, ISO 13485, ISO 14001

4.8.2.3 Applicable CPWD norms

4.8.2.4 Adoption of energy-efficient systems, odor control, noise mitigation, and environmentally sustainable practices.

4.9 Safety, Health and Statutory Compliance

4.9.1 Implementation of robust safety protocols including personnel training, safety equipment, and emergency shutdown procedures.

4.9.2 Compliance with all applicable safety, health, labour, environmental, and energy efficiency regulations at the local, state, and national levels.

4.9.3 Preparation and implementation of site-specific safety and risk management plans.

4.9.4 Methodology and Project Execution Framework

For projects awarded under the empanelment, the Successful Agency shall follow a structured implementation methodology, including:

4.9.4.1 Project kick-off and submission of a Project Implementation Schedule

4.9.4.2 Detailed site surveys and data collection

4.9.4.3 Preparation of preliminary and detailed designs

4.9.4.4 Design approvals and technical vetting

4.9.4.5 Mobilization and execution

4.9.4.6 Testing, commissioning, and operational handover

4.9.4.7 Continuous coordination, reporting, and performance monitoring

Detailed execution requirements shall be specified in the project-specific agreement.

4.10 Flexibility of Scope

MAHAPREIT reserves the right to:

4.10.1 Modify, expand, or restrict the scope of services for any project

4.10.2 Allocate partial or full scope to empanelled agencies

4.10.3 Engage empanelled agencies under different contractual structures depending on project requirements

4.11 No Commitment Clause

Empanelment under this RFQ shall not be construed as a commitment by MAHAPREIT to award any project. MAHAPREIT shall not be liable for any costs incurred by applicants in connection with empanelment.

SECTION – 5: EVALUATION CRITERIA

Evaluation Criteria:

The firms who respond to this RFQ shall be evaluated based on the following evaluation criteria and marking system.

Sr. No.	Evaluation Parameter	Sub-Criteria	Maximum Marks
1	**Project Experience - any of the 2 technology only (directly or through any associate)**	➢ Completed projects. 1 project - 3 marks 3 projects & more -10 marks ➢ Similar ongoing projects 1 project - 2 marks 3 projects & more-10 marks	**25**
2	**Design & Engineering Capability**	➢ In-house design team, if yes then 7 marks ➢ Technology integration, if yes then 4 marks. ➢ Innovation & system reliability, if yes then 4 marks.	**15**
3	**Financial Strength**	➢ Turnover 30 crores - 2 marks 50 crores & above - 3 marks ➢ Net worth Positive in - 2 years - 2 marks Positive in - 3 years - 3 marks	**10**
4	**O&M / after-sales capability**	➢ Experience in operation & maintenance of similar systems – 4 marks ➢ Availability of service teams and response capability – 3 marks ➢ Track record of long-term system performance -3 marks	**10**
5	**Presentation**		**40**
Total			**100 Marks**

bidder should secure a minimum 70% marks shall be considered for further Empanelment. (Bidders scoring less than 70 marks out of 100 shall not be considered for empanelment. MAHAPREIT reserves the right to lower or waive this threshold if an insufficient number of qualifying bids are received).

SECTION 6 - Empanelment Agreement Framework

The Empanelled Bidder/bidders need to sign Empanelled Agreement with MAHAPREIT. The framework for the empanelled Agreement can be referred in Annexure 10.

SECTION 7 -ANNEXURES

Annexure-1 Check List of Technical bid

Sr. No.	Particulars	Uploaded or not	Page No. in the Technical Bid
1	GST registration certificate		
2	PAN Card		
3	CIN Number		
4	Audited balance sheet of last 3 years		
5	Checklist for technical bid (Annexure-1)		
6	Covering letter (Annexure-2)		
7	Authorization letter (Annexure-3)		
8	Information about the applying firm (Annexure-4)		
9	Annual turnover and Net Worth CA Certified (Annexure-5)		
10	Assignment of similar nature of Design, Fabrication, Installation, testing and Commissioning and Operating of Goods Movement Mechanism Package (GMMP)(Annexure-6)		
11	Contact person for the RFQ (Annexure-7)		
12	Declaration by the Bidders (Annexure-8)		
13	Other if any		

*** Please write page number as in the box.**

Please ensure:

I. That all information is provided strictly in the order mentioned in the check list mentioned above.

II. Bidders are advised to strictly confirm compliance to mentioned conditions in the RFQ document, and not to stipulate any deviation/conditions in their submission. Subsequent to technical Bid submission, MAHAPREIT may or may not seek confirmations/clarifications and bid not in line with conditions of the RFQ shall be liable for rejection.

III. Any clarification/confirmation Bidders may require shall be obtained from MAHAPREIT before submission of the Bid. Bidders shall submit complete bidding document including subsequent amendment, modification and revision, duly signed and stamped as a token of having read, understood and accepted all the terms and condition mentioned therein.

(Signature of Authorized Signatory) Name:
Designation:
Company Seal:

Annexure-2

Covering Letter (On Bidder's letter head)

From:

To,
Managing Director,
MAHAPREIT,
BKC, Mumbai

Sub: Empanelment of Agencies for Design, fabrication, Installation, testing and commissioning and operating of Goods Movement Mechanism Package in Maharashtra and Other States.

Hon. Sir,

We, the undersigned, hereby submit our Technical Bid for the Empanelment of Agencies for Design, Fabrication, Installation, Testing and Commissioning and Operating of Goods Movement Mechanism Package in Maharashtra and Other States.

Having thoroughly examined the Request for Qualification (RFQ) document, we hereby propose for empanelment with MAHAPREIT, in full conformity with the said RFQ and all its terms and conditions.

We have read and understood all the provisions, specifications, and instructions contained in the RFQ document and confirm that these are acceptable to us without any deviation or condition. We further declare that no additional conditions, variations, or deviations are stipulated in our bid.

We agree to abide by this bid, which consists of this covering letter, the duly completed qualification and technical bid, the notarized Power of Attorney, and all required annexures and attachments. This bid shall remain binding upon us for the validity period specified in the RFQ.

We understand that until a formal Empanelment Agreement is prepared and executed, this bid, together with your written acceptance via a Letter of Empanelment (LoE), shall constitute a binding contract between us.

We hereby solemnly declare that all the information, statements, and documents made in this bid are true and accurate to the best of our knowledge. We accept that any misrepresentation or false information contained herein may lead to our immediate disqualification.

We understand and acknowledge that MAHAPREIT is not bound to accept any or all bids received and reserves the right to reject any bid without assigning any reason.

We look forward to a positive and fruitful association.

Yours faithfully,

For [Your Company Name]

(Signature)

Name: [Name of Authorized Signatory]
Designation: [Designation of Authorized Signatory]
Duly authorized to sign the bid for and on behalf of [Your Company Name]

Company Seal/Stamp

Annexure-3

Format of Power of Attorney for Signing Bid Authorization letter

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to place of execution.)

POWER OF ATTORNEY

We, _____ [Name of the Company/Firm], a company incorporated under the laws of India, having its registered office at _____ [Full Address of the Registered Office] (hereinafter referred to as the "Principal"),

Do hereby constitute, appoint and authorize Mr./Ms. _____, son/daughter/wife of _____, residing at _____, who is presently employed with us and holding the position of _____, as our true and lawful attorney (hereinafter referred to as the "Attorney"), to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to our application for Empanelment of Agencies for Design, fabrication, Installation, testing and commissioning and operating of Goods Movement Mechanism Package (GMMP) in Maharashtra and Other States, including but not limited to:

Signing, submitting, and uploading the Request for Qualification (RFQ) and all related documents on the e-tendering portal (https://mahatenders.gov.in).

Providing any information, clarifications, or representations required by Mahatma Phule Renewable Energy & Infrastructure Technology Ltd. (MAHAPREIT).

Attending pre-bid meetings, presentations, and any other correspondence in relation to the said RFQ.

Negotiating and finalizing any terms, and executing any subsequent Empanelment Agreement or contract that may arise from this RFQ.

Generally dealing with MAHAPREIT in all matters in connection with our application for the said Empanelment.

We hereby agree to ratify and confirm all acts, deeds, and things lawfully done or performed 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.

IN WITNESS WHEREOF, the Principal has caused this Power of Attorney to be executed in its name and on its behalf, as of this _____ day of _____, 2026.

For and on behalf of [Name of the Company/Firm]

(Signature)
Name:
Designation:
Witness:

Name:
Address:
Signature:

(Common Seal)

ACCEPTANCE

I, the within-named Attorney, do hereby accept this Power of Attorney.

(Signature of the Attorney)
Name:
Designation:
Address:
Date:

Note: The mode of execution of the Power of Attorney should be in accordance with the procedure, if any, lay down by the applicable law and the charter documents of the executants (s) and when it is so required the same should be under common seal affixed in accordance with the required procedure.

Annexure-4 Information about the Bidders Firm

(To be submitted in the official letter head of the company)

SL. No.	Particulars	
1	Name of the Bidders	
2	Address of Bidders with Telephone, email	
3	Address of the Registered Office	
4	Name & Designation of Authorized Signatory for Correspondence (Attach Power of Attorney as per Annexure-3)	
5	Nature of Firm (Proprietorship/Partnership /Pvt. Ltd./Public Ltd. Co./Public Sector)	
6	Permanent Account Number (PAN)/TIN (Attach proof)	
7	Firm's Registration Number (Attach proof)	
8	GST Registration Number (Attach proof)	
9	CIN Number	
9	Other details and remarks, if any	

(Separate sheet may be used for giving detailed information duly signed)

Yours faithfully,

(Signature of Authorized Signatory) Name:
Designation:
Company Seal:

Annexure-5

[On the letterhead of Bidding Company]

To,
The Managing Director,
Mahatma Phule Renewable Energy & Infrastructure Technology Ltd. (MAHAPREIT),
Pinnacle Corporate Park, B-501,
Next to Trade Center, Bandra Kurla Complex,
Bandra East, Mumbai – 400051.

Date: [Date of Submission]

Subject: Certification of Average Annual Turnover and Positive Net Worth – RFQ No.: MAHAPREIT/ETAP/RFQ – 14/2026

Dear Sir/Madam,

With reference to the above-mentioned Request for Qualification (RFQ) for "Empanelment of Agencies for Design, fabrication, Installation, testing and commissioning and operating of Goods movement mechanism package (GMMP) in Maharashtra and Other States", we hereby submit the following certificates from our Statutory Auditors:

1. CERTIFICATE OF AVERAGE ANNUAL TURNOVER

This is to certify that M/s. [Full Legal Name of the Bidder], having PAN [Bidder's PAN], has an Average Annual Turnover of ₹ [Insert Amount in Figures] Crores / [Insert Amount in Words] , calculated based on the audited financial statements for the last three financial years: FY 2022-23, FY 2023-24, and FY 2024-25.

2. CERTIFICATE OF POSITIVE NET WORTH

This is to further certify that as per the audited financial statements for the financial year ended 31st March 2025 (FY 2024-25), the Net Worth of M/s. [Full Legal Name of the Bidder] is positive, amounting to ₹ [Insert Amount in Figures] Crores / [Insert Amount in Words].

The copies of the relevant audited balance sheets and profit & loss accounts are attached for your reference.

We confirm that the information provided is true and correct to the best of our knowledge.

For [Name of the Chartered Accountancy Firm]
(Chartered Accountants)

Signature: _____

Name: [Name of the Certifying CA]
Membership No.: [Membership Number]
Firm Registration No.: [FRN of the CA Firm]
Place: [City]
Date: [Date of Certificate, prior to bid submission]

(Company Seal / Stamp of the CA Firm)

Authorized Signatory for the Bidder
(Power of Attorney Holder)

Signature: _____
Name: [Name of Authorized Signatory]
Designation: [Designation]

(Stamp & Signature)

Name of the Company/Firm: [Bidder's Company Name]
Company Seal/Stamp:

Annexure-6 ASSIGNMENTS OF SIMILAR NATURE DURING LAST 10 YEARS

Sub: Empanelment of Agencies for Design, fabrication, Installation, testing and commissioning and operating of Goods Movement Mechanism Package in Maharashtra and Other States.

S.NO	Name of the assignment and brief scope	Name of the Project	Name of the Client	Cost of the Assignment	Date of Commencement	Date of completion	Assignment Satisfactorily completed (Enclose Proof/certificate from the client)
1	2	3	4	5	6	7	9

Note: Please attach documentary proof.

(Signature of Authorized Signatory) Name:
Designation:
Company Seal:

Annexure-7 Contact Person for the RFQ

[On the letterhead of Bidding Company]

1	Contact Person name for RFQ	
2	Designation	
3	Contact No. (phone & mobile)	
4	e-mail ID	
5	Corresponding address with Pin code	
6	Remarks	

(Signature of Authorized Signatory) Name:
Designation:
Company Seal:

Annexure-8: Declaration by the Bidders
(To be submitted on the official letterhead of the company)

To,
The Managing Director,
Mahatma Phule Renewable Energy & Infrastructure Technology Ltd. (MAHAPREIT),
B-501, Pinnacle Corporate Park,
Next to Trade Center, Bandra Kurla Complex,
Bandra East, Mumbai 400051.

Sub: Declaration for RFQ No.: MAHAPREIT/ETAP/RFQ – 14/2026 for Empanelment of Agencies for Design, Fabrication, Installation, Testing and Commissioning and Operating of Goods Movement Mechanism Package in Maharashtra and Other States

I/We [Full Legal Name of the Bidder] (hereinafter referred to as the "Bidder"), being desirous of applying for the empanelment for the work mentioned in the subject Request for Qualification (RFQ) and having fully understood the nature of the work and having carefully noted all the terms and conditions, specifications, etc., as mentioned in the RFQ document, DO HEREBY SOLEMNLY DECLARE AND AFFIRM THAT:

The Bidder is fully aware of all the requirements of the RFQ document and agrees with and accepts, without reservation, all provisions, instructions, and conditions contained therein.

The Bidder is technically competent, adequately equipped, and financially solvent to execute and complete the work as required in the RFQ.

The Bidder accepts all risks and responsibilities directly or indirectly connected with the performance of the tender and the subsequent contract, should it be awarded.

The Bidder has no collusion with any employee of MAHAPREIT or with any other person or firm in the preparation or submission of this bid.

The Bidder has not been influenced or induced by any statement or promises of any MAHAPREIT employee or representative, but has based its bid solely on the RFQ document.

The Bidder is sufficiently experienced and competent to perform the contract to the entire satisfaction of MAHAPREIT.

All information and statements submitted with the RFQ bid, including all annexures and supporting documents, are true, accurate, and complete to the best of our knowledge and belief.

The Bidder is familiar with and shall comply with all applicable general and special laws, acts, ordinances, rules, and regulations of the Municipal, District, State, and Central Government that may affect the work, its performance, or personnel employed therein.

The Bidder has not been blacklisted from participating in tenders by any State/Central Government Department, Public Sector Undertaking (PSU), or any other competent authority on the day of submission of the bid.

The Bidder hereby confirms that it meets all the Qualifying Conditions / Eligibility Criteria as stipulated in Section 3.10 of the RFQ document.

We understand that any misrepresentation, false statement, or concealment of fact contained in this declaration or in our bid submission shall render us liable for disqualification, forfeiture of the Earnest Money Deposit (EMD), and/or any other action as deemed fit by MAHAPREIT.

Place: [City, State]
Date: [Date]

Yours faithfully,

For [Full Legal Name of the Bidder]

(Signature of Authorized Signatory)

Name: [Name of Signatory]
Designation: [Designation of Signatory]
Company Seal/Stamp:

Annexure 9
(On the letterhead of the Bidding Company)

DETAILS OF TECHNICAL SPECIFICATIONS OF GOODS MOVEMENT MECHANISM PACKAGE

To,
The Executive Director (Operations),
Mahatma Phule Renewable Energy and Infrastructure Technology Ltd. (MAHAPREIT),
Pinnacle Corporate Park, 5th Floor,
Bandra Kurla Complex, Bandra East,
Mumbai, Maharashtra 400051.

Subject: Confirmation of meeting Technical Specifications for Goods Movement Mechanism Package

RFQ No.: MAHAPREIT/ETAP/RFQ – 14/2026 for Empanelment of Agencies for Design, fabrication, Installation, testing and commissioning and operating of Goods Movement Mechanism Package in Maharashtra and Other States.

This is with reference to the above-mentioned RFQ document.

M/s. [Insert Your Company Name Here] hereby confirms and undertakes that the Goods Movement Mechanism Package (GMMP) we propose to supply, install, and operate fully meets and complies with the technical specifications, performance requirements, and scope of work as detailed in the RFQ document, including but not limited to Section 4 (Scope of Work) and any associated technical schedules.

We affirm that our system conforms to the following key specifications and principles:

System Type: Fully Automated, Closed-Loop and as per the technical Specifications of this RFP. Technology: Utilizes air pressure system and as per the technical specifications attached.

Operation: 24/7 automated operation with sensor-based activation.

.

We understand that any deviation from the stipulated specifications without prior written approval from MAHAPREIT may lead to disqualification.

Attached please find the supporting line wise compliance and catalogues for the proposed system.

(Signature of Authorised Signatory)

Name of Authorised Signatory: [Your Name]
Designation: [Your Designation]
Name of the Company/Firm: [Your Company Name]

COMPANY ORIGINAL SEAL

Annexure 10 (Framework for DRAFT EMPANELMENT AGREEMENT)

This Empanelment Agreement is made and entered into on this ___ day of _____, 2026, at Mumbai, Maharashtra,

BY AND BETWEEN

Mahatma Phule Renewable Energy & Infrastructure Technology Ltd. (MAHAPREIT), a Government of Maharashtra Undertaking, having its registered office at B-501 Pinnacle Corporate Park, Bandra Kurla Complex, Bandra East, Mumbai – 400051 (hereinafter referred to as the "Authority" or "MAHAPREIT", which expression shall, unless repugnant to the context or meaning thereof, mean and include its successors and permitted assigns)

OF THE FIRST PART

AND

_____, a [company/LLP/firm] registered under the laws of India, having its registered office at _____,

(hereinafter referred to as the "Agency", which expression shall, unless repugnant to the context or meaning thereof, mean and include its successors, legal representatives and permitted assigns)

OF THE SECOND PART

WHEREAS:

A. MAHAPREIT issued a Request for Qualification (RFQ No. MAHAPREIT/ETAP/RFQ – 14/2026) dated _____, inviting proposals from eligible agencies for empanelment for Design, Fabrication, Installation, Testing, Commissioning and Operating of Goods Movement Mechanism Package in Maharashtra and Other States.

B. The Agency submitted its response and has been found eligible for empanelment as per the terms and conditions of the said RFQ.

C. MAHAPREIT has agreed to empanel the Agency to participate in future projects under this scheme on a non-exclusive basis for a period of three years, extendable at MAHAPREIT's discretion.

NOW, THEREFORE, THIS AGREEMENT WITNESSETH AS FOLLOWS:

1. SCOPE OF EMPANELMENT

1.1. The Agency is hereby empaneled to undertake the complete scope of services as detailed in the RFQ and Section 4 of the bidding document, which includes, but is not limited to:

- Design and Engineering of the Goods Movement Mechanism Package (GMMP).
- Fabrication/Procurement of all system components.
- Installation, Testing, and Commissioning.
- Operation and Maintenance (O&M) for the contracted period (typically a minimum of 8 years per project).
- Training and capacity building for client personnel.

1.2. The actual allocation of work will be through subsequent project-specific tenders or financial bids invited from empaneled Agencies. Empanelment does not guarantee any work order.

2. TERM AND TERMINATION

2.1. This Empanelment Agreement shall be valid for a period of three (3) years from the date of its execution.

2.2. MAHAPREIT may, at its sole discretion, extend this empanelment for a further period of up to three (3) years based on the Agency's performance and requirement.

2.3. MAHAPREIT may terminate this Agreement by giving thirty (30) days' prior written notice without assigning any reason.

2.4. This Agreement may be terminated immediately by MAHAPREIT upon the occurrence of any of the following events:
a) Breach of any terms of this Agreement by the Agency.
b) Submission of false or misleading information by the Agency.
c) Insolvency, bankruptcy, or winding up of the Agency.
d) Consistent non-performance or failure to respond to project bids.
e) Blacklisting by any Government/PSU.

2.5. In the event of non-performance of an assigned project or breach of a project-specific contract, MAHAPREIT may remove the Agency from the empanelled list and take appropriate action as per the project contract, including forfeiture of security deposits.

3. OBLIGATIONS OF THE AGENCY

3.1. The Agency shall maintain its eligibility criteria, as defined in the RFQ, throughout the empanelment period.

3.2. The Agency shall pay a one-time, non-refundable empanelment fee of Rs. 50,000/- (Fifty Thousand Only) plus applicable GST prior to the execution of this Agreement.

3.3. The Agency shall submit financial and technical bids for specific projects as and when invited by MAHAPREIT.

3.4. The Agency shall ensure strict adherence to all technical specifications, quality standards, safety protocols, and timelines as stipulated in project-specific contracts.

3.5. The Agency shall comply with all applicable laws, regulations, and standards, including those related to environmental protection and waste management.

4. PROJECT-SPECIFIC CONTRACTS

4.1. Each project awarded under this empanelment shall be governed by a separate, detailed Project Agreement.

4.2. The Project Agreement will define the specific scope, contract value, performance guarantees, O&M period if any, payment terms, liquidated damages, and other commercial and technical conditions.

5. CONFIDENTIALITY

5.1. The Agency shall maintain strict confidentiality of all proprietary information, designs, data, and documents obtained from MAHAPREIT or its clients during the empanelment period and project execution. Such information shall not be disclosed to any third party without the prior written consent of MAHAPREIT.

6. INTELLECTUAL PROPERTY

6.1. All designs, drawings, reports, documents, and software specifically developed for any project under this empanelment shall be the sole property of MAHAPREIT or the respective client.

7. DISPUTE RESOLUTION

7.1. The parties shall first attempt to resolve any dispute arising out of or in connection with this Agreement amicably through mutual discussions within thirty (30) days.

7.2. In the event of any dispute, controversy, or claim arising out of or in connection with this Agreement, including its interpretation, performance, breach, or termination, which cannot be resolved amicably between the Parties, the same shall be referred to arbitration in accordance with the provisions of the Arbitration and Conciliation Act, 1996, as amended from time to time. The arbitration shall be conducted under the rules of the Mumbai Centre for International Arbitration (MCIA). The arbitral tribunal shall consist of a sole arbitrator, who shall be appointed in accordance with the MCIA Rules. The seat and venue of arbitration shall be Mumbai, Maharashtra. The language of arbitration shall be English. The arbitral award shall be final and binding on the Parties.

8. GOVERNING LAW AND JURISDICTION

8.1. This Agreement shall be governed by and construed in accordance with the laws of India.

8.2. The courts at Mumbai shall have exclusive jurisdiction over any matters arising out of this Agreement.

9. MISCELLANEOUS

9.1. No Conflict of Interest: The Agency declares that it has no conflict of interest that may impair its ability to provide impartial services. The Agency shall promptly disclose any potential conflict of interest that may arise during the empanelment period.

9.2. Indemnity: The Agency shall indemnify, defend, and hold harmless MAHAPREIT, its employees, and officers from and against any and all claims, losses, damages, liabilities, costs, and expenses arising out of or relating to the Agency's acts, omissions, or breach of this Agreement.

9.3. Force Majeure: Neither party shall be liable for any failure or delay in performing its obligations if such failure or delay is due to a Force Majeure event as defined in the RFQ document.

9.4. Records: The Agency shall maintain all records related to bids submitted and projects executed for a period of at least five (5) years from the completion of each project and shall make them available for audit by MAHAPREIT upon request.

9.5. Entire Agreement: This Agreement, along with the RFQ document and its annexures, constitutes the entire understanding between the parties and supersedes all prior discussions and agreements.

IN WITNESS WHEREOF, the parties hereto have executed this Empanelment Agreement on the day and year first above written.

For MAHAPREIT

(Signature)

Name:

Designation:

Seal:

WITNESSES:

Name:
Designation:

For the Agency

(Signature)

Name:

Designation:

Seal:

WITNESSES:

Name:
Designation:

Annexure-11: Technical Specification for Goods Movement Mechanism Package (GMMP)

TECHNICAL SPECIFICATIONS

Technical Specifications - Goods Movement Mechanism Package

Note:- This is a tentative scope of work for the purpose of empanelment only. Actual scope of work will be decided based on project-to-project basis.

1. MAHAPREIT invites bids for empanelment for specialized agencies for design and execution of Goods Movement Mechanism Package (GMMP) in Maharashtra and Other States for all current and upcoming projects. It will cover all project types namely residential, commercial, educational, institutional, hospital, redevelopment, stadium, etc.
2. The empanelment will engage a single, specialized vendor responsible for the complete design and implementation of GMMP across various project types.
3. It is important that the selected agency utilizes its expertise and technical knowledge to evaluate and suggest the best available technical options suitable for MAHAPREIT''s diverse project portfolio.
4. The GMMP includes 2 types of Suction Tubes (ST). 1. ST for waste or laundry (STWL). 2. ST for Other items (STOI) like medicines, cash, hospital samples, hot items of up to 500 degree celsius for industries, etc. MAHAPREIT' or its selected PMC, Architect, Consultant can further ask suggestions and technical inputs from the empanelled agencies to design the best possible solution or prepare a scheme of proposal to be executed by the empanelled agencies.
5. In case of design build or EPC projects, all empanelled agencies will have to share an efficient solution with benefits, MAHAPREIT' will then select the scheme of any one empanelled agency or combination of multiple agencies which will be then put up for execution. The exercise of scheme preparation is part of empanelment conditions and no agency will be reimbursed for its expenses or paid for this exercise.
6. It is imperative that the bidder should be able to give both the types of ST required. ST for waste or laundry will be 400 or 500mm steel tubes and ST for other items will be 90/110/160/200 mm pipes of steel or pvc as per the below attached specifications and conditions. In case any bidder is not complying with either of the technologies then the same will not be considered for empanelment.
7. OEM should have ISO 9001 and ISO 13485 for at least 3 years from the date of call of this tender. Both the technologies should be from the same OEM so the same can be integrated if required.

TECHNICAL SPECIFICATIONS

1. Suction Tubes for waste or laundry (STWL)

A. DEFINITIONS

- The following definitions shall pertain to words or phrases as utilized in this section:
- "STWL." acronym for Suction tube for waste or laundry.
- "Pipe net" means stainless steel 304 grade pipes used to transport the waste from the inlet stations and discharge valves to the collection station.
- "MS" shall mean Mild Steel.
- "GI" shall Galvanize Iron.
- "SS" shall mean SS 304 stainless steel.
- "Y Sections" means pipe junction connection which connects the individual plot waste transport pipe to the main transport pipe.
- "Chute" means garbage vertical pipe.

- “Access Control Cards” means complex wide ID cards provided by others which will be programmed individually to allow the operator access into the waste room or inlet door to dispose of waste.
- “Storage Section” means temporary storage section below the garbage pipe used to collect the waste prior to emptying into the pipe net for transportation to the collection station. The storage section is connected to the discharge valve.
- “Level Sensor” means analogy level indicator in the storage section to indicate the CCA that waste has reached maximum storage capacity in the storage section.
- “DV” means Discharge valve which prevents waste or Waste from entering into the pipe network and is normally closed.
- “AV” means Air Inlet Valve.
- “Sorter” means the fraction waste sorter which is linked by plc to the inlet door and diverts waste into its dedicated fraction holding storage unit.
- “Transport Air” means the airflow that moves the waste through the pipe net.
- “Collection Cycle” means the collection pattern.
- “Central Collection Area” (CCA) shall mean the receiving station for the waste.
- “Waste Container” means a specialized designed storage unit where the waste is collected after its movement to the collection station
- “Trolley” means a transport wagon for waste shifting and movement.
- “Downtime” means the time period when the collection process is stopped by an alarm due to system and not manual operating error.
- “Blower System” means transport fan used for the transport suction.
- “In-Building Station” (IBS) means the full double door station which is used to dispose of the waste in the system.
- “Out-Building Station” (OBS) means the full station which is used to dispose of the waste in the system.

STWL is a system in which the solid waste is transported through a network of SS 304 pipe networks to a CCA, where it is collected in closed containers or trollies. The waste is disposed of through the IBS located on each floor. Double door IBS is connected to a chute which is connected to an automated waste collection pipe network. The Waste pipes finally end in the CCA. Dry and wet waste disposed into the IBS is temporarily stored in a storage chamber known as substations. When the waste level sensor switch is activated, the Automated tube system for waste (ATSW) will start automatically to pull and unload all the waste from the substation to CCA. The automated tube system for waste (ATSW) uses air to transport the waste.

The Waste from the Complex would be segregated at the source as dry, wet waste.
Waste can be disposed of into loading doors at any time. An interlock control for the loading doors should be provided. With this control, loading station sliding doors of the same vertical riser are locked by software while the bottom air valve and the blower is active by executing a cleaning cycle upon completion of waste discharge after a few seconds. Vertical and horizontal garbage pipes will transport waste from individual IBS/OBS to CCA through the SS tube network and Blower. All system components will be controlled by a sub panel. Future up-gradation of the system should be kept in mind when designing the system. Provision of more stations and pipelines added to the same system should be there. Factory-assembled pre-fabricated, Transport piping mounting frames of the steel plate and steel angles should have continuous welded construction. All welds should conform to accepted workmanship standards. Each bend and in-line component should be supported, wherever applicable.

1. **Vertical Waste Pipes**
   - Vertical pipes will be installed inside shafts.
   - MS Structural frame fabricated from 50x50x5mm angles or ISMC 75/100 as required to adequate support should be provided on every floor to support the chute.
   - Preposition support frames to ensure proper intake levels and plumpness. Reinforce and support separately discharge doors and offsets at the impact area.
   - Anchor fastened with floor/beam.
   - Factory assembly chute of 1.5 mm thickness with all joints welded and interconnecting joints at each floor.
   - The pipe should be 400 or 500 mm dia.
   - Vertical Pipe should be made up of SS 304 grade.
   - Weld and dress smooth connection joints between vertical shafts and horizontal intakes with no projections that may catch or tear waste.
   - Provide telescopic adjustment between floors. Dust sealing joints should be provided.
   - Offsets (bends) in the chute, if required, shall be made of the same diameter as the chute and have thickness of 2mm, for the impact.
   - Hangers: Conveyance lines and air intake and exhaust ducts: When proper hanger spacing does not correspond with a joist or rib spacing, structural steel channels may be attached to joists or ribs and tubing suspended therefrom. Vertical Runs: Support at each floor line and at the roofline.
   - Flash chutes section inside the sections below with no bolts, clips or other projections inside the chute to snag the flow of material.
   - Assemble the chute and chute accessories in place; align and anchor in accordance with the manufacturer's instructions.
   - Stainless steel construction (SS-304 x 1.5 thick) 400/ 500 mm Dia.

2. **In Building Station (IBS):**

   The inlet points will be located at locations as marked in the layout/ drawings approval The waste collected through these inlet points is disposed of through the IBS and further to the vertical chute. These IBS should interlock double door types. It should have 5inch HMI Touch screen Panels to initiate the process. The inner doors should be sliding closed and they should remain open for 7 to 10 seconds or as per design requirements during the collection cycle. Both doors should have an Interlocking System.
   - Loading stations (IBS) on all floors shall consist of outer sliding door/hinge door opening and self-latching devices with lock, having a clear size 300x300mm for 400 mm pipe and 400x400mm for 500 mm pipe, installed behind a frontal frame. The door frame should be 1.5mm thick & the other parts in 1.2mm thickness Stainless Steel 304 grade.
   - The inner door should be an automatic up-sliding mechanism (opening/ closing) implemented by pneumatic pressure. This should be interlocked with the outer door and should only open when the outer door is closed.
   - Option to provide password/ access card readers for WASTE which are only accessible to designated staff authorized to use these inlets should be there.
   - Surfaces of door and frames to be unmarred by lapped joints, bolted frame, screws, or rivets. The door and frame should be mounted into the intake throat with sheet metal screws into the anchor plate and straps welded to the intake throat making door and frame readily removable without marring the finished wall. Intake doors will be provided with an interlocking mechanism. At all times, the doors shall be positively locked until the attendant

is authorized by passcode at touch screen / RFID SYSTEM and the door can be used. When the inner door is opened, the other inner doors shall be locked out while the chute is in use. The outer door should be accessible at all times without any waiting time dependent on other floors.

- Each intake door shall have a touch screen showing when the door is locked or in use.
- Provide switch safety maintenance on the front panel to lock out all the doors during a cleaning period or maintenance.
- Chute Loading Stations should be attached with a faceplate to support with stainless steel screws.
- The "throat" between the inner and outer door should be sized by the contractor in such a way that it should have the capacity to store 2 waste bags or as per the size of the shaft.
- Assemble the chute and chute accessories in place; align and anchor in accordance with the manufacturer's instructions.
- IBS frames shall be set square and flush with the finish wall line before the walls are erected.
- The outer door should not be locked in case the IBS of another floor is being used. Interlocking of the outer door of IBS due to usage of another otter door of ibs on another floor is not permitted under any circumstances.
- Outer Doors: hand-operated hinged type/sliding type outer doors, self-closing. Inner door to be up-sliding pneumatically driven.
- Standard Accessories: ½"sprinkler. The connection to these sprinklers will be the responsibility of the main civil contractor but coordination to be done by the specialized vendor.
- Stations should allow access 24x7.
- The loading stations should have a storage capacity of 30 liters or as per the size of shaft.
- The touch screen should offer the segregation of waste. There should be 2 or 3 segregations of waste (as the case maybe), which will be discussed with the selected contractor.
- The touch screen should show the segregation options with color code also.
- Anchor fastened with floor / beam.
- Disposal is independent in every floor and it allows simultaneous disposal from every IBS.

3. Material Substation - Storage Section

- Storage sections are the intermediate temporary holding areas in every riser for the garbage bags deposited by the personnel via the garbage chutes and inlet doors prior to transportation through the horizontal transport pipe to the collection station. They are fabricated from MS and are custom-made to suit the site dimensions.
- Verticals pipe are connected with a horizontal pipeline through a "y" bend or as per design. Next to this area, a vertical divider will be installed in order to split the different types of waste. The bottom of every vertical has to be equipped with an inspection opening of 1m in length or as per space possible at site.

4. Discharge Valve

Discharge valves separate the horizontal transport from the vertical chutes. At the bottom of each Waste chute, there should be a discharge valve. Each dv should be connected to a substation where Waste is stored between emptying cycles. When the valves are closed, the waste which falls by gravity within the discharging station is retained by the closing element of the valve. When a valve opens, the waste falls by gravity/suction into the air stream in the Waste pipe. The valves should be operated by the compressed air and opening and closing are controlled automatically from the logic-based computer system/ main software. A discharge valve should be used for each waste type at every riser. Made in India products will only be acceptable.

- Discharge valves are normally closed and open only for 7 to 10 seconds/ or as per oem recommendation during the discharge cycle. Only one valve can open at a time at the same vertical. When a valve opens, the waste falls by gravity/suction in the horizontal transport pipe
- Discharge valves are installed in every inlet chute.
- Discharge valves are opened and closed by pneumatic cylinders.
- Waste from the inlet is temporarily stored in the substation above the discharge valve. Upon receiving an open order from the control system, the sliding inlet valve opens to let the waste fall into the horizontal pipe where it is transported to the collection station by the rapid air stream. The valve closes upon receiving the closing order from the control system.
- A central control panel at the CCA controls the operation of the valves. The subpanel in the respective valve area/riser verifies and executes the orders transmitted from the main control system.
- The respective valves will be actuated by pneumatic cylinders.
- The DV is made of SS 304 and should be compatible to the size of the horizontal pipe.

5. Vertical Diverter (VD)

- The two fraction diverter device is to be designed and provided. This device consists of two units of fractions diverter in a serial configuration. It should have the ability to sort waste into two fractions from a single vertical chute. The device is to be installed at the bottom of the chute (ground/basement level). The VD will be connected to its subpanel with a control unit which will get its signal based on the actions and options chosen at the IBS/OBS with regard to the user selector in every inlet door/chute.
- The VD shall be manufactured in SS 304 and fully capable of functioning and serve the required purpose. 400 or 500mm dia.

6. Horizontal Pipe

- The horizontal pipe of dia 400 or 500 mm and thickness of 3mm (+/- 10%) network designed to hold from the basement ceiling/ underground to transport the waste from the IBS/OBS to the CCA. An Airtight service door for inspection of the pipe network is to be provided at approx. every 45-50 m length and at critical points of the pipe network.
- Bends will be longitudinally welded or as per oem recommendations.
- Pipe and bends of only SS 304 grade will be acceptable.
- Flange welding of pipe and bends would be preferred.
- The pipe should be without any air leaks. Weld and dress smooth connection joints between vertical shafts and horizontal intakes with no projections that may catch or tear waste.
- Connections to waste chutes valves and air inlet valves shall be provided with clamps / or flanges for installation.
- Each horizontal bend and in-line component should be supported, wherever applicable.
- Hangers: When proper hanger spacing does not correspond with joist or rib spacing, structural steel channels may be attached to joists or ribs and tubing suspended therefrom.
- Electric cables and compressed air tubes, which connect all valves of the system with the collection terminal, shall be installed in trays /conduits together with the transport pipes.
- One inspection hatch point shall be installed in a horizontal line every 45-50 meters.
- It should include all accessories to install and support the pipe.

7. Electric Cable Tray

Suitable size of electric Cable Tray shall protect the control and distribution cables placed along the pipe system between the control boxes of the valves. The cables to control the system and the compressed air tubing will be laid on the cable trays.

8. Control cables

The system will communicate through the Client's LAN. Ethernet sockets will be provided in every control box or wherever required for the system by the main contractor. Modbus TCP protocol will communicate with ECC. UTP cat 6 will plug every control box and Ethernet socket or as per oem design and recommendation.

9. Compressed air ipes

Plastic PU tubes will also be laid on the cable tray, along with the pipe system. The compressed air tube is used to connect the control unit for the valves with the compressed air unit in the terminal.

10. Exhaust air

The transport air from the pipe outlet will be routed through the blowers to the filter and after the filtration; air will be discharged through the exhaust outlet. The exhaust outlet will be located till the end of the central collection area or exhaust shaft or as per design requirements and oem recommendation. The exhaust pipe should be SS 304 and atleas 600mm dia.

11. Collectors

- Collectors are fabricated from suitable thickness MS steel and reinforced to withstand full system vacuum.
- The collector should be rectangular in shape or as per oem design.
- A collector should be as per OEM design or as per site requirement.
- Collectors are sized and screened to receive 10 bags of material without restricting airflow.
- Collectors should have a drop box operation and discharge into waste Carts/containers when the pneumatically operated doors open or as per oem recommendation.
- Rigidly braced to prevent movement when the material arrives.
- The empanelled agencies shall prepare such scheme proposals as part of their empanelment obligations, and no separate remuneration shall be payable for this activity.
- However, agencies that are subsequently awarded project-specific contracts may factor and recover such pre-bid design and preparation costs within their project pricing, subject to applicable procurement norms.

12. Dry/ Wet Waste Container and Dry Waste Compactor (optional)

The waste will finally get collected in the two separate containers, which will be located in the Central Collection room.

The dry container to be connected to a compactor. Dry waste should be compacted inside the container, which will be carried away by the waste-carrying vehicles (the coordination for the same will be done by the client with concerned municipal authority and not in scope of the specialized vendor). A spare separate dry container will be placed in the trash room so that once filled dry container is removed and spare dry container to be placed with guided rails. The wet waste container should have screw mechanism/ automatic conveyor belt mechanism to push the waste after dropping from one side to another side to another conveyor belt for the . The waste collected in the wet waste container will be further pushed and treated in the organic waste composter to make compost. The containers should be made of MS and should be at least 16 cbm.

13. Blowers

- The Exhauster pump will be used to create the vacuum in the Waste pipes. Vacuum exhausters generate a negative pressure in the pipes which, when the discharge valve is opened, sucks in the bags of garbage. The blower should be of 90 Kw.
- It should generate enough vacuum flow for transporting material.
- The Exhauster should be centrifugal type including motors, pre tested, electro dynamically balanced heavy duty, industrial direct drive fan with VFD control of approved make, mounted

on MS steel frames and are anti-vibration system, vibration switch, vibration sensor monitor suitable to operate on AC three phase 440v 50 Hz equipped with required airflow monitor to transport the waste at required air pressure etc. complete.

- The blower is installed within the central collection station to induce the necessary airflow and cater for changes in pressure requirements due to differences in the length of waste conveyance pipe net.
- The Blowers fans units should be designed sized so that the conveyance velocity shall be 18-25 meters/second or as per oem design.
- The noise level of the air blowers shall be 70-80 db. The noise level of the remaining machinery is relatively low and no special acoustic treatment is required.

14. **Velocity regulating equipment**- The purpose of the air speed regulating system is to maintain a constant air speed in the system. The air speed value is compared with the expected value, and the exhauster speed is adjusted accordingly. Frequency inverter control shall be provided for this purpose.

15. **Section Valve (sliding) :-** Supply, Installing, Testing and Commissioning of 500mm dia pneumatically operated Cut Off, Sliding valve fabricated from SS 304 including cutting, welding, fabricating, hoisting, erecting, fixing in position at specified places, making riveted/bolted/ welded connections, gaskets, pneumatic cylinder of suitable capacity, any other required necessary accessories. Sectioning valves are used to track the system from the inlet point until the hopper.

16. **Main Valve:-** Supply, Installing, Testing and Commissioning of 500 mm dia pneumatically operated MAIN valve fabricated from SS 304 including cutting, welding, fabricating, hoisting, erecting, fixing in position at specified places, making riveted/bolted/ welded connections, gaskets, epoxy painting, pneumatic cylinder of suitable capacity, any other required necessary accessories,

17. **Compressed Air System:**
    One Compressor is required for each riser/CCA/as per OEM. Compressed air is required to operate the valve in the pipe system and necessary equipment in the collection terminal and feeder inlet and outdoor valve. The compressor shall produce a suitable working pressure appropriate capacity to maintain the required system working pressure. The system consists of a compressor unit, air-dryer, air-cooled after cooler and shall be located inside the Central Collection Area. All automatically operated valves such as air inlet valves, discharge valves and shut-off valves shall be operated by compressed air cylinders. 5 HP compressors to be used.

18. **Filtration and Pressure Reduction unit**
    To keep the surroundings of the collection station, particles/dust needs to be removed To keep the surroundings of the collection station, particles/dust needs to be removed from the air before it is released to the surroundings. The central collection room shall house the air filtration unit. Wet/ dry scrubber or filter system technology may be used.

    The cleaning efficiency of the purification of the air from exit to the atmosphere has to be a minimum 80%. Air filter should be installed downstream. It should be sized according to the outflow of the air. All air downstream should be ventilated back to the environment only after being filtered. Exhaust air scrubber wet/dry scrubber/ filtering system to ease and slow down the exhaust air before discharging into the atmosphere.

19. **Disinfection system - BRUSHING TECHNOLOGY - optional**
    Brushing technology eliminates the most stubborn duct dirt, bacteria and viruses. Exhaust cleaning

& disinfecting system shall include:

- Connection for compressed air.
- Supports Equipped with quick plugs Nylon brush.
- Manual controls
- Pneumatic motor with left and right spin.

20. Ventilation and Air Conditioning Facilities in Central Collection System (by third party)

Mechanical ventilation for plant and service areas and air conditioning for the control room, exhauster room, container hall shall be designed and provided by the bidder to maintain a suitable environment within the central waste collection plant for the operation of the ATSW. Appropriate acoustic treatment shall be included for the facilities. Inspection, cleaning and draining facilities shall be provided for all ventilation ductworks. Ventilation rate in the plant and service areas shall be 1 – 2 air changes per hour. Appropriate acoustic treatment shall be provided for the facilities. Inspection, cleaning and draining facilities shall be provided for all ventilation ductworks. Ventilation rate in the plant and service areas shall be 1 – 2 air changes per hour. Ventilation requirements for both central trash rooms have to be considered by the HVAC team.

General

Work shall be carried out in accordance with the accompanying specifications and shall comply with the latest relevant Indian Standards and Electricity Rules and Regulations.

All motor control centers shall be suitable for operation on 3 Phase/single phase, 11,000/415/240 volts, 50 cycles, 4 wire system with neutral grounded at transformer. All MCCs are CPRI tested design and manufactured by an approved manufacturer. CPRI certificate be made available.

MCCs comply with the latest Relevant Indian Standards and Electricity Rules and Regulations and shall be as per IS-8623. MCCs / starter panels for outdoor equipment shall be suitable for outdoor duty application.

21. Control System

1. Control of the STWL shall be fully automatic and micro-processor based. A control and monitoring station consisting of a personal computer, Central Control Processor CCP, with necessary peripherals shall be provided in the control room of the Central Collection Station. The CCP shall be used for operator interface such as programming, control, monitoring and supervision of the ATSW. operation.
   a. Computer – INDUSTRIAL ONE
   b. Screen – LG 17 / 21 inch
   c. Operating Systems – Windows 10 or Similar.
2. readings such as the BLOWER PERFORMANCE in the waste pipes, pressure loss at filters and vacuum readings at various points shall be shown on a panel. Monitoring software used shall operate on "Windows"/ linux based platform with dynamic graphic display of the various operation parameters and fault conditions.
3. Logging/analysis software and associated equipment shall be provided to record relevant parameters for subsequent analyses so that adjustments and fine tuning of the STWL can be carried out to optimize the waste collection.
4. Normally the plant should be unmanned, but all mechanical equipment, motors and electrical parts need regular maintenance.
5. The control system calls for attendance by giving an alarm signal.
   a. The Electric Control System shall consist of the following major subsystems and parts:
   b. PLC: Preferential logic Control Processor

a. ECP: Electric Control Panel.

1. The ECP is the basic unit of the system and shall be IP55. All subunits are electrically connected to it. It distributes the Main power supplies to the motors and other electromechanical devices. The ECP shall include necessary circuit breakers and fuses.

2. Normally all operations are performed from the CCP. There shall be an operator panel, which shall be used in case of a computer breakdown. This panel, shall control all machines in the Central Collection Station, operate the Air inlet valves and Discharge valves.

3. The equipment in the ECP includes PLC, operator control platform, urgent control board and monitoring instrument systems. In normal cases, all the operations are done automatically under the monitoring by PLC.

b. CCP: Central Control Processor.

CCP includes CPU, I/O module, memory module and communication module and can perform data collection and equipment monitoring. Through the following connections, PLC can realize communications with all the components required.

Main Control Panel

The main panel has switches for start-up (and emergency stops) and lights for alarm conditions which are deemed critical. Internally in the main panel is a Solid State Processor which monitors and controls the entire system on a daily basis. The control system has the ability to provide complete system control and monitoring to both dedicated standard PC computers located anywhere.

Control System Functions:

1. To make the system automatic and rational it is necessary to provide a centralized logic making decisions based on efficient algorithms and parameters for the emptying process.
2. Control systems should have an alarm signal system which should classify it into two categories:
   - General Alarms: Do not need immediate attention.
   - Critical Alarms: Prevent the emptying process to continue.
3. Electronic control centers should communicate with air inlet valves and discharge valves.
4. The remote control function should be there. It should be possible to control all functions and monitor all status remotely.
5. Alarms and messages should be able to be stored in a downloadable log file on the computer.
6. It should be possible to view live operations of the system and components.
7. It should have sufficient nos. of pressure transducer to monitor the pressure and velocity at all times.
8. The system should be able to control all the air movement and control the air flow direction and change it per requirement of the transaction.
9. It should monitor the velocity of the air and pressure control it as per requirement.
10. Access to the system should be restricted to the concerned user.

22. Out- Building Stations (OBS)

1. Self-standing Out Building Stations (OBS) will be installed on every platform at a suitable distance from each other which varies between 20 Meters to 30 meters area.
2. Each OBS will be installed at a distance less than 30 meters from the previous one.
3. These dustbins should be aesthetically designed with two discharge valves at the bottom of OBS

replicating the bottom of the vertical riser along with the air valves. In the case of OBS also, the space between the top and bottom valve is also the secondary interim storage.

4. The horizontal pipeline will transport the garbage from OBS to the Central Collection Area (CCA) located at a convenient location from where the waste collected can be treated as per the treatment system defined here.
5. There will only be one Centre Collection Area (CCA) for the entire development and this should be strategically located in one corner of the entire development, either on ground floor or basement so that it has minimal crowd movement around it and should have good and easy access to trucks and service facilities.
6. IBS, OBS, Software, Blower, Discharge Valve, Horizontal Divider, Collector, Vertical Pipe, Compressors, Horizontal Pipe, OWC, Conveyor system and Compactors should be of the same make. Declaration along with the main bid should be submitted by the main bidder in the main tender else the bid will be not considered further.

23. Organic Waste Composter

- Should be able to treat 100/250/500/1000 kg/ day.
- The operation should be fully automatic & it should be able to do Organic Manure.
- It should be almost plugged & play, Vent should be connected outdoors or storm water lines. There should be no need for a water inlet. Water only should be required only to clean the machine externals and any spilled waste.
- It should have HMI “PLC Based” Control System
- Construction: Composting tank of SS 304, Outside Housing SS 304
- It should have a separate door for inputting waste & another separate door for getting out compost.
- It should have the following additional features:-
- Should be provided with waste overload function
- Should have Indicators for Power mode, heater & power saving mode
- Should have stainless steel shaft & mixing blades
- Should have Safety feature, Internal mixing blades should be automatically stop when hopper door is opened
- Should be able to run in auto mode or manual mode.

24. Conveyor Belt System

- Belt width should be 400mm minimum
- Bulk Density : ~400 Kg/m3
- Belt speed should be ~22 mtr /min minimum
- It should have the capacity Upto 500 Kg/Hr minimum

25. Design & Construction

- The belt should be of PVC Green/Black DE 400 mm wide with bottom profiles for guiding, For Inclined Conveyors, Special Cleats 20mm Tall.
- Drive pulley should be 125 mm dia x 500mm lg machined and Rubber Lagged 6 thk with bearings, Shaft - 40 mm Dia at Bearing.
- Tail pulley should be 112 mm dia x 900mm lg machined and Rubber Lagged 10 thk with bearings, Shaft - 60 mm Dia at Bearing.
- Return roller should be of PVC min Dia. 40 mm dia x 500 mm Lg. at 1500mm pitch return side.
- Skirt Board should be a minimum 5mm thick plate with 6 mm thick White Rubber Lip-Full

Length.

- Internal scrapper should be Single Blade Plough Type.
- External Scrapper should be Single Blade Type at discharge end (2 sets)
- Conveyor Side Frame should be DE S.S. Folded Sheet Metal 3mm Thk Powder Coated for Full Length both Sides.
- Top & Bottom Covering should be made of S.S. Folded Sheet Metal DE 3mm thick.
- All M.S. Parts should be Painted in smoke gray Synthetic enamel paint.
- Motor should be 3 hp,1440 rpm 3 phase IP 55 squirrel cage induction motor, class B
- The motor should be of greenvac/ siemens/ crompton make.
- Electrical Control should be controlled through Manual Start/Stop Push buttons connected to a Common Control Panel of Conveyors with Variable Frequency Speed Drive Unit for Speed Control and in synchronous automation with the Automatic Compost Converters.

2. Technical Specification of Suction Tube for other Items (STOI)

1. The entire system has to be electronically controlled by microprocessors with a software unit and the main control unit, which controls the sending process and the compressor unit, supervises all system components. The Main Controller of the System must remain fully available without any restrictions.
2. The sending process has to be indicated on display devices. Customer-specific data such as the system's layout, target numbers, target names, arrival signals, and priority and special functions must be selectable on site without change or external reprogramming of memory devices.
3. All components of the STOI should be constantly monitored; the operating software has to be based on action reaction control for any device. The status of each device should be checked by the master control unit. A test program must be included to automatically check, move and supervise all of the system's devices, or specific selected devices, by access via service code from the Station control panel.
4. During both normal operation and testing, all devices should inform the master control unit that the selected functional position has been reached. The system should be designed in such a way that it does not allow the unobserved pivoting of devices.
5. The system has to come with an efficient fault-clearance program that automatically recognizes operating errors, power failures, time-out errors and other system errors. It should also allow the system to continue functioning.
6. It should be possible to redirect empty containers which have exceeded the pre-allocated distance limit to a station for maintenance to be carried out.
7. The system should be Linux or Windows based. The bidder should use the latest technology or devices.
8. The demonstration of Station, Diverter, Blower, Rotary Transfer system may be asked.

1. Main Controller should include the following:

- Main Control Unit Hardware for main controller.
- UPS Uninterruptible Power Supply for Monitoring
- Software package for main controller includes the following:-
  - Software for the system including extension lines, as required.
  - Software for Code-Tag System/Transponder System.
  - Software for Visualization & Editor.

- Dongle
- Linux or windows based.
- Carrier Management
- Editor software for 1 line
- Software for History & Evaluation
- Power Supply Unit

PC with CPU with INTEL i7 with SMPS Cabinet 8GB RAM1 TB HDDRS232 Port. Keyboard Standard Optical mouse; 22" flat LCD Monitor Standard Mono laser A4 printer Original licensed UPS for PC Backup and necessary software etc.

2. Side Channel Blower with VFD:

- It should have a separate Blowers maximum 2.3-5.5 kW, 3 phase 400v/50Hz, minimum 2800 rpm with minimum 200 mbar pressure, with low noise, unidirectional rotation with electronic air switch to switch between compressed air and vacuum.
- Each blower should have IP 54/55 protection
- Each blower should be provided with a Frequency Converter or VFD for Control of slow speed for sensitive laboratory samples by frequency control of Compressor.
- The blower should be set to 75Hz with the help of Frequency Converter. It should be provided with all the mounting accessories and soundproof enclosure.
- It should have a desired air flow.

3. Compact End Station

- The Station should be designed as a fully automatic dispatch and receiving unit and used as an end station.
- The Station should be able to send and receive containers.
- Inserting a container into the Station and selecting a target number should be possible independent from system status.
- The Station should be Steel or moulded plastic made, maintenance free mechanism, with self-adjusting optical switches, with self-adjusting maintenance free gaskets for noise less operations, contact less censoring of the unit positions. There should not be any air exiting at the station. With RFID readers for container ID and inventory, which should ensure automatic container redistribution to its home address & also non-acceptance of any items than authorized containers.
- The bidder should use the latest technology or devices.
- Should have Air cushioned soft landing facility for arriving container to protect samples. Provided with container rack and receiving basket with cushion. Make in India product will be Preferred.

4. Top Load Pass through Stations:

- The Station should be designed as a fully automatic dispatch and receiving unit and used as a pass-through station.
- The Station should be able to send and receive containers.
- The conveying direction of the containers should be both sided (single tube reversing principle).
- Inserting a container into the Station and selecting a target number should be possible independent from system status.
- The container should be loaded on the top side of the Station.
- The Station should be Steel or moulded plastic made, maintenance free mechanism, with self-

adjusting optical switches, with self-adjusting maintenance free gaskets for noise-less operations, contact less censoring of the unit positions. There should not be any air exiting at the station. With RFID readers for container ID and inventory, which should ensure automatic container redistribution to its home address & also non-acceptance of any items than authorized containers.

- The Station should have an Air cushioned soft landing facility for arriving containers to protect samples. Provided with container rack and receiving basket with cushion.

5. Multi send & Multi Receive Station:

- The Station should be able to receive containers from the same unit.
- It should control the condition of the receiving station when sending to the selected receiving station is possible.
- It should be a Microprocessor-controlled.
- The main Lab should be provided with a Multi Receive/Send Station to handle bulk loads.
- It should be designed as a fully automatic receiving unit and can only be used as an end station.
- The Station should be Steel or moulded plastic made, maintenance free gear mechanism, with self-adjusting optical switches, with self-adjusting maintenance free gaskets for noise-less operations, contact less censoring of the unit positions. With RFID readers for container ID and inventory, which should ensure automatic container redistribution to its home address & also non-acceptance of any items than authorized containers.
- It should be built in a way that after a power failure it is self-examining and if necessary self-repairing. It should have an air-cushioned soft-landing facility for arriving containers to protect samples.
- It should be provided with container rack & PVC Slide bend, sliced from the top for soft landing of the samples. Make in India products will be Preferred.

6. Disinfection Gate Station

- There should be one disinfection gate station in each blower room.
- An empty/loaded carrier should reach the disinfection gate and the receiving air should stop, when the carrier is on the slider.
- The rubber stamp should automatically move upwards.
- When the carrier reaches the top position, the slider should open and the carrier should drop inside the disinfection module.
- The rubber stamp should move down and close the slider before the UV-C lamps starts to disinfect for further protection.
- The Disinfection period should be up to 120 seconds.
- The XCB display light should turn yellow when the disinfection process is on.
- The carrier should automatically return when the disinfection process is over.

7. Anti-Virus Filter

- Anti-Virus Filter of class H14 (EN1822) having fire protection class of E dO (EN 13501) with a dia of 200 x 400 x 1 mm depth with plastic frame material on aluminum grid suitable for air volume of 250 m3/h.
- The filter should be capable of separating bacteria virus from the air and compressed air. The system should be capable of creating a germ free environment in the operation of suction tubes.
- It should have an efficiency of 99.95% for particles between 0.1 and 0.3 µm having ability to separate particles like dust, viruses, pollen and bacteria.
- The filters should be used for every end station, blowers and wherever required and necessary

8. Rotary Transfer Zone System:

- The system is provided with a Rotary Transfer Zone with multiple storage units in the device, which is an interface between all the lines and with its smooth operations provides an excellent throughput for fast inter line transfers.
  System should have the following features: -
    - That allows the Container containing Emergency Samples to overtake the other Carriers.
    - Have chambers inbuilt in the transfer unit with extra empty Carriers and any user can call for it from the station, by simply dealing a number.
    - Contactless positioning, two directions operation.
    - Should keep the storage units inbuilt in the transfer unit vacant for the Emergency Carriers.
    - Should occupy less space and less height.
    - Should be able to connect 14 lines without the need of a diverter.
    - Carrier holders should rotate clockwise and anticlockwise in a circular movement to transfer carriers from one line to another. Linear movement will not be accepted.
    - Should have a Multi storage unit in the device its & not in the incoming tubes.
    - Should have a minimum 32 empty carriers holders (dedicated space) to hold emergency carriers at all given times.
    - Devices should have only one pipe for incoming and outgoing and not 2 pipes incoming and outgoing.
    - Only one outgoing & incoming tube for one line, multiple lines should not have separate incoming & outgoing as it increases time to transfer.
    - Devices should have only one pipe for incoming and outgoing and not 2 pipes incoming and outgoing.

9. Forwarding Tube (Grey):

- Forwarding tube should include the cost of cable and other tube mounting accessories as are required for networking between Stations.
- The forwarding tube should be made of PVC of 90/110/160/200 mm OD. Good Physical tensile strength, general medium density, absorption of water, combustibility self-extinguishing. Colour RAL 7000.

  Tubes Grey - Air Tube
- The forwarding tube should be made of PVC of 90/110/160/200 mm OD. Good Physical tensile strength, general medium density, absorption of water, combustibility self-extinguishing.

  Bends (Grey)
- It should be 90 deg. with radius not more than 800 mm (center) with length approx. 1.5 mtrs, for optimal space utilization, grey colour. The material should be made up of Polyvinylchloride PVC. Weight: 3.3kg (approx.).

  Bends (Transparent)
- The forwarding tube should be made of UPVC of 90/11/160/200 mm OD. Good Physical tensile strength, general medium density, absorption of water, combustibility self-extinguishing. Colour Clear, Transparent. Bidders should have ISO 9001 & 13485 for at least 3 years.

  Bends (Grey)
- It should be 90 deg. with radius not more than 800 mm (center) with length approx. 1.5 mtrs, for optimal space utilization, grey colour. The material should be made up of Polyvinylchloride PVC. Weight: 3.3kg (approx.).

  End piece above - 160mm

- Should be made of UPVC of 90/11/160/200 mm OD. Good Physical tensile strength, general medium density, absorption of water, combustibility self-extinguishing. colour RAL 7000. With a T-Part to allow air to exit.

Sleeves

- It should be made up of Polyvinylchloride PVC with length approx. 150 mm. The Inner Dia should be 90/11/160/200 mm. Colour RAL 7000.

Adhesive Glue:

- It can be used for bonding thermoplastic pressure piping systems made of rigid PVC. The boiling point should be 66°C (150.8 °F) and the Explosion limit should be lower 1.36% (V) and upper 12.6% (V). It should be easy bonding, even of larger dimensions and clean handling. It should have excellent gap bridging capability,

Cleaner:

- It should be capability to remove loose and adhering dirt, oily and nikotinhnbedingte impurities. The antistatic effect of the recent soiling should be prevented. It should be dries quickly and streak. The State of aggregation should be Liquid.

Composite System Cable:

- It should be from the principle equipment manufacturer with the company brand name marked. It should be a Pollex- screened combination cable and combined with supply and signal wires. The wrapping should be double with polyester tape overlapped min 20%, thickness: 0.036 mm, minimum dielectric strength of 10kV. It should be 4 core cable and not less. If any cable wills less in terms of 4 cores, the tender will be Outrightly or rejected.

SS Clamps:

- The materials should be made up of SS of high quality steel. It can be used at PVC, halogen-free PS/ABS and high quality steel tubes

Clutch Clamps:

- The materials should be made up of INOX- high quality steel. It can be used at PVC, halogen-free PS/ABS and high quality steel tubes.

Inserts:

- The Material should be made up of Foam PU and it can be used to transport various types of test tubes. It should be with suitable holders of vacationers and a pair shuttle bung for each carrier.

Tubing Material & Other Accessories:

- Screw Bolts 2 mtr Length Cable Tie/Clip 300MM Dowel - M10
- Conduite for cable - PVC Carrier Rack S.S.
- Baskets S.S. for each station
- Foam Cushion for Baskets
- Eprouvette insert for carrier 160 PU foam - 5 per carrier.
- Inserts for auto unload station: Zip lock type- 10 per carrier.

10. Routing Device (3/4 way Diverter):

- The diverters are to be designed as so-called active (own control computers) 3 or 4 way-diverters. The maintenance-free operation and contact free position and tube switches are fundamentally required.
- Self-adjusting sealing rings have to ensure the pneumatic tightness of the device.
- The electronic overload protection for the diverter-motor must reset itself automatically after it has been triggered; manual intervention on the device is not permitted.
- The casing must be full steel cover, powder coated to prevent the unit against fire.
- The electronics must be inside the metal cover and have to be tested against electromagnetic

interference.

11. Carriers

- All carriers must be designed for both end open and close and RFID on both ends. The individual programming of carriers for pharmacy and using special laboratory carriers protects the user and transported samples against cross contamination.
- Swivel-Lid for standard transaction and pharmacy use only.
- Carriers for hospital use should be with easy to operate swivel top mechanic, sealed load chamber, to prevent contamination of tubing in the unlikely event of spill of transported goods. This must be realized only by closing the sealed swivel top mechanism.
- The "closed" position should be fastened in a lock-in position. The lid should be kept in this position by a spring force and has to be equipped with seals. Furthermore, the design of the carrier must be done in a way that an open container can't be sent.
- Carrier should be equipped with two free programmable data transponders, system according to send receive device used by the manufacturer in the Stations send magazines.
- Transponders are used to electronically identify any carrier by a unique address and to offer the user automatic redistribution to home Station and optionally a second address for dedicated locations or special container use.
- Two size of carriers must be provided for small loads and large loads.
- For large loads: Inside-loading-dimension for Container 160mm swivel top 115 x 400mm approx. Outer-dimension for Container 160mm swivel top 150 x 410mm approx.
- For small loads: Inside-loading-dimension for Container 160mm swivel top 115 x 330mm approx. Outer-dimension for Container 160mm swivel top 150 x 340mm approx.
- OEM should have ISO 9001 & 13485 for at least 3 years, declaration on oem letter to be submitted along with the bid else the bid will be not considered further.

RFID

- The system should be provided with RFID as a standard solution, this helps in proper management of Carriers with the help of return of empty carriers. It also does not allow anything else to go in the system, but the carrier.
- All stations should have RFID reader Cards for the carrier, duly installed in the dispatch magazine. All the carriers should have RFID programmable chips on both sides of the carrier (2 per carrier).

12. Carrier Basket

- Should have powder coated steel baskets of wire mesh of required size for the station where the carrier will drop on receiving.

13. Carrier Rack

- Should have steel powder coated racks to hold 6 carriers of required size for each station.

14. Basket Upholstery

- Cushion for soft landing of the carriers should be there in each carrier basket. The cushion should be of exact size as that of the basket.

15. Station Directory

- Station Directory should be there for each station after programming, identifying and marking

each station number for the ease of the users.

16. Arrival Signals

- The system should be provided with an Arrival Signal indicating to the users to collect the contents from the station upon arrival of carriers.

- List of approved makes for Goods Movement Mechanism Package is Greenvac/ Eagle Pneumatic/ Vaculog-usa/ Medikraft/ Ecosir.