City and County of
San Francisco

Request for Information
for
the SFMTA Smart and Integrated Management and Fleet Charging (SIM-FC) Project

RFI No. SFMTA-2025-53-FTA
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San Francisco Municipal Transportation Agency (SFMTA)

Request for Information for the SFMTA SIM-FC Project

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1. Disclaimer

1.1. Effect of the RFI and Use of Information

This Request for Information (RFI) is solely intended to assist the San Francisco Municipal Transportation Agency (SFMTA) at an administrative level and does not constitute the initiation of a procurement process for any project. This RFI does not represent a commitment by the SFMTA to issue a Request for Proposals (RFP) in the future.

Responding to this RFI will not result in an organization being deemed a “Proposer” on any project. Responding to this RFI is not a prerequisite for participating in any future procurement. Similarly, responding to this RFI will not confer on the participant any preference, special designation, advantage or disadvantage whatsoever in any subsequent procurement process related to this specific project or any other project. The Agency will use the responses to the RFI to review its procurement and delivery approach for the project.

The proposed Project is only a potential project at this time and is outlined at a conceptual level.

1.2. Information Preparation and Participation Costs

The SFMTA shall not be liable for any costs incurred by respondents in the preparation, submission, revision or any other aspect of a response to this RFI. All such costs shall be borne solely by the entities responding to the RFI.

1.3. Disclosure of Information Contents

All materials and information submitted in response to this RFI are subject to applicable public record laws once consolidated and processed by SFMTA in a summary response document. No explicit link between a given participant and a specific response will be made in such summary response document.

1.4. Ownership of Submitted Materials

All materials and information submitted in response to or in connection with this RFI shall become the SFMTA’s property and will not be returned. The SFMTA shall have the right to use such materials, information and ideas without restriction.

1.5. Accuracy of Information

The SFMTA makes no representations, warranties or guarantees that the information contained in this RFI, directly and/or by reference, is accurate or that such information accurately represents the conditions that would be encountered during any subsequent procurement or contract.

1.6. Waiver

By submitting a response to this RFI, each respondent and meeting participant, as applicable, expressly agrees that it shall not have any rights against the SFMTA arising from the information described in the “Accuracy of Information” section above.

2. Project Description

2.1. Context

The San Francisco Municipal Transportation Agency (SFMTA) designs, builds, operates, regulates, and maintains a comprehensive transportation network which includes five modes of public transit in San Francisco—motor coach, trolley coach, light rail, historic streetcar, and cable car. SFMTA is embracing cleaner technology by moving towards electrifying its entire bus fleet, including its fleet of 585 hybrid diesel motorcoaches. The SFMTA is committed to converting its fleet to all-electric by 2040 to cut down on harmful emissions and benefit communities that rely on public transit. To support the evolution of the mixed rubber-tire fleet, the SFMTA must create a smarter bus yard to adapt to the new challenges.

The Smart & Integrated Management and Fleet Charging (SIM-FC) project will use state-of-the-art software platforms combined with customer-side Internet of Things (IoT) devices, sensors, and algorithms to address the inefficiencies from a fragmented, outdated, and manual bus yard management system. This system will increase efficiencies and decrease risk of human-caused errors associated with managing a mixed-fleet. SIM-FC intends to combine the benefits and functionality of a fleet yard management system with a smart charge management system for Zero Emission Buses. The proposed SIM-FC system will have three key attributes:

- A real-time digital map of the yard, including bus parking areas and maintenance bays, which displays the live vehicle location (ideally refreshed every 5-10 seconds) for all propulsion types
- Automated yard management which will identify and assign specific service blocks to available vehicles, facilitated by integration with SFMTA's existing technology systems including: service scheduling system, Enterprise Asset Management (EAM) system, and vehicle telematics system(s)
- A Charge Management System (CMS) which manages the charging of their electric vehicles, including how much energy is dispensed into each electric vehicle based on existing battery state of charge (SOC) and its upcoming assigned service schedule via interfaces vehicles, charging infrastructure, and utility infrastructure behind the meter

SIM-FC vendors may choose to integrate with SFMTA's existing vehicle location information, such as the CAD/AVL system or vehicle telematics, if appropriate, or may provide another real-time location system with a higher frequency that potentially includes ultra-wideband for areas that may experience connectivity challenges - such as inside maintenance bays or parking locations under overhead gantry structures for charging pantograph dispensers. The initial SIM-FC Pilot will take place at the SFMTA Woods Division located at 1098 23rd St, San Francisco, CA 94107, and already houses diesel hybrid buses and is adding charging infrastructure to accommodate its increasing BEB fleet.

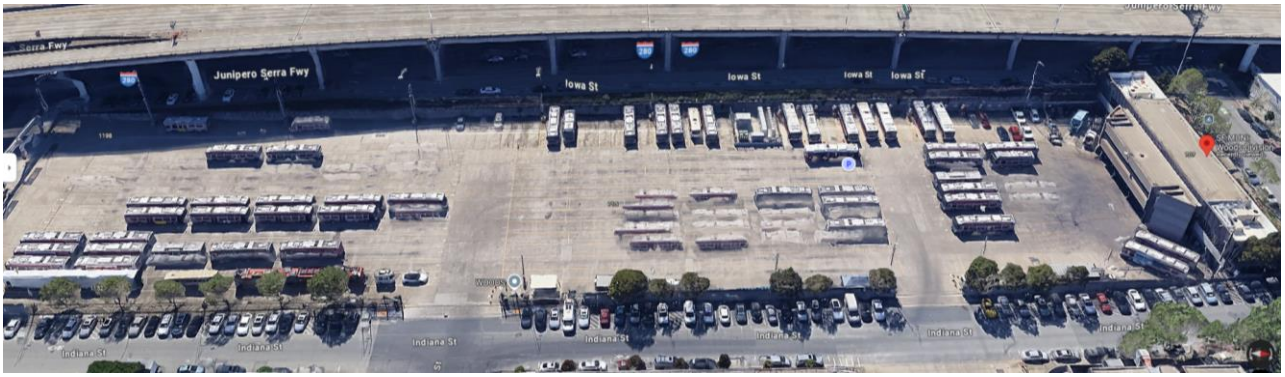

Figure 1 - SFMTA Woods Bus Division. Location of initial SIM-FC Pilot Deployment.

2.2. Project Objectives

The Project objectives can be summarized as follows:

Operational

- Less labor effort required to assign buses to service blocks and dispatch buses from the yard with operators
- SFMTA personnel will have a real-time view into bus availability and battery diagnostics
- Elimination of labor hours required to walk the yard and manually record buses in lanes
- Reduced mistakes made by manual data entry
- Improved utilization of BEBs due to optimal charging strategy
- Reduced potential for uncharged buses not available for service

Financial

- Significant cost savings by minimizing seasonal and peak demand charges from PG&E. While SFMTA currently has a flat rate of $.08 per kW, the SIM-FC will have the capability to plan for potential future demand charges if CPUC decides to change its current policy for public transit agencies.
- Reduced infrastructure CAPEX from design of new PG&E utility service sized for managed peak load rather than full connected load.

Maintenance

- The SIM-FC system will make it easier to more effectively balance the mileage across the entire mixed propulsion fleet.
- SIM-FC will track preventative maintenance (PM) and corrective maintenance (CM) required for both fleet and charging infrastructure which may increase efficiency for mechanics to better balance their workload and resource management. Furthermore, the storage and structure of this vehicle and maintenance data will help aid in the development of predictive maintenance failures if SFMTA is interested to pursue in the future.
- SIM-FC will incorporate end-of-day SOC of BEBs and next day service block assignment information to inform how much energy is required to charge the BEB. As an example, if a BEB comes back to the yard with 40% SOC and only requires 70% SOC to conservatively complete next day work assignment, SIM-FC shall automatically stop charging the BEB once it reaches 70%. This

battery charging optimization approach should improve the lifespan of the battery cells.

2.3. Proposed Procurement Approach

SFMTA is developing a procurement approach to meet its objectives and plan, which draws on the SFMTA's past experiences and lessons learned, uses industry best practices, and adapts these ideas to the practicalities of San Francisco's regulatory, labor and legislative environment.

The SFMTA intends to conduct a process to select a prime contractor for a single SIM-FC contract that will include a pilot deployment and test at the Woods Yard (Figure 1), and long-term support and options for expansion to other yards if the test is successful. Under this approach, at the SFMTA's discretion, the Agency would require the contractor to deliver the system and to commit through the (potential) 10-year term of the agreement to provide support, regular software updates, and the opportunity to upgrade any hardware when it has been superseded by new versions.

The SFMTA expects to issue a Request for Proposals (RFP) that generally follows the above procurement approach. The selection process will be on a "best value" basis rating the proposers on many of the considerations described above. The goal of the RFP will be to secure a single contract for design, procurement, testing, commissioning, and long-term support of a state-of-the-art SIM-FC system. This program consists of two phases of procurement.

1. Phase 1 implementation at Woods Yard will be an 18-month project. This phase includes the following:
    - The contract will include a design and test period with a term of approximately 18 months .
    - The contractor providing design services to develop system and engineering design details to meet the SFMTA's technical system requirements.
    - The contractor furnishing all software, equipment, and materials for the complete system.
    - The contractor monitoring, testing, and certifying the system and equipment after installation to ensure that the installed system meets its quality and safety standards.
    - The contractor providing training for all departments utilizing the system
    - The contractor providing support services that are performance-based
    - The contractor providing spare parts and software upgrades
2. The 2nd phase of procurement is based on the successful implementation of Phase 1 and subsequent funding availability:
    - Phase 2 will be implementing successful solutions in various yards at SFMTA.
    - Phase 2 will be implemented for the next 8 years of the contract.
    - The agency will negotiate with the vendor prior to the execution of the 2nd phase.
    - If funding is not available, if implementation of phase 1 is unsatisfactory, or negotiation is unsuccessful, SFMTA reserves the right not to pursue with phase 2 implementation.

2.4. Preliminary Schedule for Phase 1

Table 1 as follows depicts the current schedule that the SFMTA is considering.

Table 1 Preliminary Project Schedule:

Activity	Tentative Program Schedule
Request for Information - Industry outreach	April 2025
Request for Proposals advertisement	August 2025
Proposals due	Mid-September 2025

Contract Award	April 2026

3. RFI Procedure

To respond to this RFI, respondents should provide written answers to the questions in Appendix A.

3.1. Completing the RFI Table

Responses to this RFI are not limited in page length or detail, however, responses should be provided within the table format supplied. It is acceptable to provide additional information in the form of appendices or annexes to the response, if relevant and such appendixes or annexes are clearly referenced to each question. Respondents should keep their materials succinct and relevant to the Project. The response may be submitted in either Word or PDF format.

3.2. Contact

For all matters regarding this RFI, as well as for final response, contact Kathy Larson. Please submit all questions in writing, via email to Kathy.larson@sfmta.com.

All responses to this RFI must be received by 2:00 PM PT on June 2, 2025. The subject in the email should read: “SFMTA-2025-53-FTA: SFMTA Smart & Integrated Management and Fleet Charging Project RFI Response”

The SFMTA thanks all respondents to this RFI. All feedback given is highly appreciated.

Appendix A – RFI Questionnaire

SFMTA is interested in receiving answers from respondents to several questions presented in the table below:

Question No.	Question	Response
1	Would you be interested in submitting a bid as a prime contractor or as a subcontractor and the composition of potential team? Please provide your full company name and contact information.	
2	Do you and your team have domestic or international experience successfully implementing a smart yard management and charge management solutions within the past 3 years? If so, can you provide references contact information?	
3	What, if any, issues do you foresee with SFMTA owning all data produced by the SIM-FC system and being responsible for all required integrations with existing legacy SFMTA information technology systems?	
4	Do you have any recommendations for SFMTA as it develops its solicitation for the SIM-FC? Please provide details.	
5	Do you foresee any issues or problems SFMTA should consider?	