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Joe
Los Angeles County
Metropolitan
Transportation
Authority

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TO: BOARD OF DIRECTORS
FROM: JOSEPH E. DREW, CHIEF EXECUTIVE OFFICER
**SUBJECT: DEVELOPMENT OF A STANDARD REGIONAL
FARE REVENUE PROCESSING SYSTEM**

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RECOMMENDATIONS

1. Amend MTA Fare Debit Card contract ST-005 with GFI Genfare from \$4.6 million to \$5.027 million (an increase of \$427,000) to develop a fully-integrated regional electronic fare revenue processing system ("Standard Regional Revenue Processing System") that allows transit operators to accept Metrocard and other fare card technologies, tokens and cash, and to issue transfers and electronic change on the bus.
2. Approve utilization of \$427,000 in the 1995-96 Call for Projects Countywide Multimodal Electronic Fare Payment System project (Project ID #2440) for the GFI ST-005 Standard Regional Revenue Processing System development tasks.
3. Authorize staff to develop an interagency agreement between interested transit operators to oversee development of the specification and potential procurement, operation and maintenance of Standard Regional Revenue Processing System components.

ORGANIZATIONAL IMPACT

To implement a seamless regional fare collection system, a complex cooperative decision-making and procurement process is essential. The inter-agency agreement would allow a common procurement and administrative structure for the adoption of a system standard and procurement of systems or services which would ensure regional compatibility while accommodating each operator's individual preferences for system components and funding strategies.

BUDGET IMPACT

Funding totaling \$427,000 is available for development of the Standard Regional Revenue Processing System in the 1995-96 Call For Projects' MTA Countywide Multimodal Electronic Fare Payment System project (Project ID #2440). Some transit agencies have budgeted their own agency funds for new

fareboxes and may be interested in using these funds as a local match to fund Standard Regional Revenue Processing System components from the TDM category of the FY 96-97 Call for Projects. The Standard Regional Revenue Processing System specification and component pricing should be complete by March 1997 for timely consideration of any Call for Projects applications.

ALTERNATIVES CONSIDERED

Without an interagency agreement and a regional system standard, it will be increasingly difficult to assure component compatibility and system integration. The current procurement environment provides no incentive for individual operators to procure hardware and software that is compatible with neighboring operators. For example, Ventura, Torrance and Los Angeles City have tested or are initiating procurement of stand-alone electronic fare collection systems that are incompatible with the current Metrocard systems.

The integration of electronic fare collection with cash processing on the bus was not originally described in ST-005. However, the research and development nature of the contract has required previous changes in contract scope. Issuance of a new RFP to develop the integrated specification was also considered; however, staff recommends completion of the development process under the current contract with GFI. Once the specifications and bench testing are complete, staff will return to the Board with recommended procurement alternatives.

BACKGROUND

Historically, each transit operator in Southern California has developed fare collection equipment and software specifications and procured its system independently with the result that many of the electronic bus and rail system fare collection systems are incompatible. This standard regional system also will play an increasingly important role in meeting the complex requirements of the MTA's fare lawsuit consent decree by providing MTA and other operators the opportunity to offer more complex fare structures (such as fares based on distance traveled, time of day, and income level) and seamless transfers between bus and rail transit.

The GFI ST-005 contract amendment will include a requirement to incorporate open hardware and software system architecture. The amendment also will include development of an engineer's cost estimate based on Standard Regional Revenue Processing System specifications for equipment, software and clearinghouse functions. The amendment also will include assembly and testing of a working model to allow confirmation of system hardware and software integration.

The development of Standard Regional Revenue Processing System specifications will also be important as operators are asked to begin acceptance of bank-issued stored value cards. The new scope will result in a standard specification for a fully-integrated multi-

media fare collection system that integrates currently-available components that accept cash and tokens, Metrocard and other types of fare cards. The system would also issue electronically-readable transfers, make electronic change and vend temporary Metrocards on the bus while retaining flexibility for new electronic fare collection technologies as they emerge. The Standard Regional Revenue Processing System will be controlled by a single operator console that can control other functions on the bus such as bus stop announcements, automated head signs, bus diagnostics and automated passenger counting. The system would also produce a single integrated report of all fare collection financial transactions which is produced and reconciled for each operator by a centralized data and financial transaction clearinghouse.

The MTA Board approved a contract with GFI for the Metrocard in December 1991. A prototype was developed, tested and is currently in revenue service in nearly 400 buses operated by Culver City, Foothill, Montebello, and Norwalk transit systems. The initial contract approved by the Board also included an option to purchase up to 3,000 additional Metrocard units. After the Standard Regional Revenue Processing System has been tested and accepted, staff will return to the Board with recommendations on procuring the regional system.

This requested action has been reviewed with all current Metrocard system operators and several prospective operators. It would advance development of the regional system and lead to an integrated regional electronic fare collection system. Such a regional system in Southern California requires integration of more than 300 Metrolink/ Metrorail station ticket vending machines with more than 3,000 buses operated by 20 transit agencies. The system could also be extended to hundreds of paratransit and private operators in the region.

Timely development of Standard Regional Revenue Processing System specifications would allow operators in need of new fare collection equipment to consider adopting the new specifications in upcoming fare collection equipment procurements. This will also establish a system standard that could be more fully developed as smart chip cards and turnkey issues emerge. Funding from the MTA Call for Projects could be used to supplement each operator's capital costs beyond the regular farebox replacement costs. Elements of a regionally integrated electronic fare processing system are described on Attachment A.

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STANDARD REGIONAL REVENUE PROCESSING SYSTEM ELEMENTS

- Compatible system hardware and fare media options (including the magnetic stripe Metrocard, proximity cards and other emergent store-value electronic fare payment technologies such as smart chip cards) that allow incremental upgrades of system components as budgets allow, technology evolves or as older equipment is replaced.
- An integrated operator console to control driver log-on, all cash and electronic fare transactions and other optional operator-controlled in-vehicle systems (i.e.: automated passenger counting, automated head signs, automated stop announcements, passenger security systems, automatic vehicle locator systems, smart bus stops).
- An integrated software system and regional financial clearinghouse to collect data from cash and electronic transactions of all participating operators, reconcile interagency transactions and produce integrated financial reports at the end of each service day.
- Convenient off-bus value restoration systems for each electronic medium accepted (Metrocard and others) to allow high value, credit card and debit card transfers to the stored value fare cards.
- The ability to electronically issue and accept Metrocard transfers on the bus.
- An ergonomic design that replaces current fareboxes, meets ADA requirements, does not delay passenger loading and improves current ergonomics of the entrance and/or exits of the bus and rail station.
- A life-cycle capital and operating cost that does not adversely affect operator cost-effectiveness.
- A system that is able to be procured, operated and maintained using traditional or non-traditional financing (i.e.: vendor financing, turnkey proposals).
- An optional on-bus Metrocard sales system that accepts coins, \$1 and \$5 bills and provides electronic change in the form of a paper Metrocard or added value to the Metrocard and other electronic fare cards in the Standard Regional Revenue Processing System. Such a system could issue tickets and would replace the traditional electronic registering cash farebox and back room cash collections systems and equipment.