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TO: BOARD OF DIRECTORS

THROUGH: PHILLIP A. WASHINGTON *PAW*
CHIEF EXECUTIVE OFFICER

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CHIEF FINANCIAL OFFICER

**SUBJECT: UPDATE ON UPGRADING AGING BUS FAREBOXES AND
STATION VALIDATORS TO PREPARE FOR NEW PAYMENT
TECHNOLOGIES**

ISSUE

Fareboxes for Metro and the Municipal Transit Agency TAP partners were purchased in 2002. This equipment has exceeded its life expectancy by 5 years and in need of an upgrade or replacement. Metro's standalone validators (SAVs) located in light rail stations have exceeded their life expectancy as well. Staff and the Municipal partner agencies are exploring options that would upgrade the hardware and software to enhance security of the TAP card system and to support the benefits of the TAP mobile app, new payment options and technologies.

DISCUSSION

A multiphase approach is being researched and developed to address equipment obsolescence, enhance security of the TAP cards and prepare for new payment technologies including open payment. Phase 1 will consist of hardware and software upgrades to the fareboxes and SAVs to address aging equipment, enhance system security and enable new payment integration. Phase 2 will consist of software enhancements to accept credit and debit card payment (open payment). Phase 2 requires credit and debit card companies to accelerate their verification technology to ensure customers can board buses and trains in a timely manner. While Phase 1 provides the necessary equipment upgrades for open payment, additional software enhancements will be required. This report only addresses Phase 1 upgrades.

TAP Fareboxes

TAP fareboxes are operating beyond their expected life span by 5 years and are in need of an upgrade or replacement. The fareboxes are operating with motherboards that can be repaired but are no longer available for purchase. Unlike station validators and gates, the fareboxes were not designed to communicate in real-time which results in a 24-48 hour latency period between the time a customer purchases a fare product online and the time the fare product can be used aboard the bus. In addition, current fareboxes only have the capacity to process up to 20,000 fare orders at a time. New equipment will enable fareboxes to process double that capacity. With the upgrade, we will be able to process online orders in real time, accept the latest types of smartcards, and be ready for new payment options.

Station Stand Alone Validators (SAVs)

Like the fareboxes, the rail station SAVs are operating beyond their expected life span by five years. The SAVs are operating with circuitry that is obsolete and will need to be upgraded or replaced. This will improve security and new payment options and technologies can be embraced.

Next Steps

Staff will continue working with Munis to explore equipment, cost and funding options to achieve Phase 1 upgrades. Staff will return to the Board within the next several months to recommend approval of an equipment and software upgrade and to present a roadmap for future years to ensure that the region's seamless fare collection system continues to serve the needs of its partner agencies and customers.