



File #: 2018-0046, File Type: Contract

Agenda Number: 23.

**OPERATIONS, SAFETY AND CUSTOMER EXPERIENCE COMMITTEE
SEPTEMBER 20, 2018**

SUBJECT: BUS SAFETY TECHNOLOGY DEMONSTRATION

ACTION: AUTHORIZE AWARD

RECOMMENDATION

AUTHORIZE the Chief Executive Officer to award a sole source Contract No. PS111340000 to New Flyer of America Inc. in the amount of \$1,191,500 to furnish and install a collision avoidance and mitigation technology system on forty (40) Metro transit buses.

ISSUE

Collisions are a safety and costly concern for transit properties. As reported in the Federal Transit Administration (FTA) National Transit Database (NTD) "Safety & Security Time Series Data", in the 12-year period from 2002-2014 the U.S. bus, paratransit and van pool industry reported 1340 fatalities, more than 201,000 injuries, and casualty and liability expenses in excess of \$5.7 billion dollars.

Metro partnered with New Flyer of America Inc. (New Flyer) and the Center for Transportation and the Environment (CTE) to apply for a grant to demonstrate and evaluate collision avoidance and mitigation technologies for transit buses operating in the Los Angeles environment. The objective is to evaluate the current "state of the art", commercially available, bus collision avoidance and mitigation systems and to assess the ability of such systems to reduce the number of vehicle, pedestrian, and cyclist collisions during transit bus service in a large urban area.

The application was approved by the FTA, Grant Number CA-2017-055, Cooperative Agreement No. 92000000SRD17, under the Safety Research and Demonstration (SRD) Program.

BACKGROUND

In July 2017 the FTA approved Metro's grant application to evaluate and demonstrate bus collision and avoidance technologies for a period of three years. A year of technology assessment, system integration, and prototype testing will proceed the 18 month revenue service demonstration period, which will then be followed by 6 months of data analysis, bus restoration, and preparation of a final report for submission to the FTA. The application was approved by the Federal Transit Administration (FTA), Grant Number: CA-2017-055, Cooperative Agreement No. 92000000SRD17, under the Safety Research and Demonstration (SRD) Program.

DISCUSSION

Two candidate bus collision avoidance systems will be identified for the demonstration. At its new product development facilities New Flyer will install the selected systems, one each on an Xcelsior bus. The buses will then undergo comprehensive functional tests, including simulation of in-service functionality on a closed track. Design refinement may occur based on test results.

At the conclusion of the functional tests, each of the candidate systems will be installed separately on 19 more buses. These 40 buses (including two pilot installations) will begin the 18 month in service demonstration. During the demonstration, collision avoidance data, and near miss/close call data, will be collected from sources identified by CTE. In addition to collecting this data, surveys will be conducted with operators, pedestrians, and maintenance personnel. Metro's Transit Safe system will capture any actual collisions that occur which will also be made available to CTE for analysis. The intent is to gather data that can be compared against a control group of buses operating without collision avoidance technology. Specific technology performance metrics will be finalized prior to the demonstration and data collection activities.

At the conclusion of the demonstration, Metro may decide to either retain the system or remove it. If the decision is to remove it, New Flyer will do so and restore the buses to their original configuration. Also, CTE will examine and analyze the above data, survey responses and draw conclusions regarding the efficacy of each system. CTE will also draft a project report for Metro/New Flyer to review and comment. CTE will then prepare a final report for Metro to submit to the FTA.

Total project cost is anticipated to not exceed \$2 million dollars. The FTA will reimburse Metro for 72.5% of the project cost while Metro is responsible for the remaining 27.5%.

DETERMINATION OF SAFETY IMPACT

It is anticipated that these buses will have a positive effect on safety. If the demonstration is successful, Metro may choose to implement collision avoidance and mitigation technology on its bus fleet, thus enhancing safety and reducing both the number and severity of collisions.

FINANCIAL IMPACT

The total not-to-exceed contract amount is \$1,191,500. Estimated expenditures for FY19 are \$474,460 and will be included in the FY19 Budget in Cost Center 3320 - Account 50320, Project 496002 - Collision Avoidance Demo. Since this is a multi-year contract, the cost center manager and project manager will be responsible for budgeting the balance of funds in future fiscal years.

The FTA will reimburse Metro for 72.5% of the \$2 million while Metro will be responsible for the remaining 27.5%. On a scheduled milestone basis, New Flyer and CTE will submit invoices to Metro for payment. After review and approval, Metro will pay these invoices out of its own funds and seek reimbursement from the FTA. The FTA's reimbursement to Metro will be capped at \$1.45 million providing that Metro fully contributes \$550K to help defray the project cost. In the event that Metro's contribution falls short of \$550K, the FTA's reimbursement will be reduced on a pro rata basis.

Metro's contribution will be in the form of direct labor hours charged by Metro's Operations staff who work to support this demonstration project.

New Flyer has pledged to spend \$100K of its own funds to assist Metro fulfill its contribution of \$550K. Metro's net contribution therefore will be \$450K

Impact to Budget

The recommended action will be funded with Federal 5307, Federal 5339 and Local TDA-4 funds which is eligible for Bus and Rail Operations. Staff will continue to identify alternate Federal and Local funding sources to apply to this action as it becomes available.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

Approval of this recommendation supports the following Metro Strategic Plan Goal: Provide high quality mobility options that enable people to spend less time travelling. This program will improve safety, service, and reduce roadway collisions and injuries, in an effort to provide a world-class transportation system that enhances quality of life for all who live, work, and play within LA County.

ALTERNATIVES CONSIDERED

Staff considered not participating in this bus collision avoidance technology demonstration project. This is not recommended because collision avoidance technologies have advanced in the past decade to the point where they may be applied effectively to a transit bus at a reasonable cost. Metro, being a leader in the transit industry, has an obligation to lead in technology advancement for the benefit of the entire transit industry. If the demonstration proves to be successful, the project cost may be recovered by a reduction in casualty and liability expenses.

NEXT STEPS

If this action is approved, staff will execute Contract No. PS111340000 with New Flyer to perform the tasks outlined in Statement of Work / Project Management Plan (FTA TrAMS Number: CA-2017-055-00) in attachment A.

ATTACHMENTS

Attachment A - Procurement Summary

Attachment B - Statement of Work / Project Management Plan

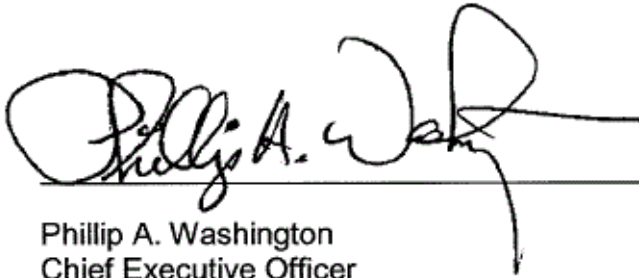
Attachment C - DEOD Summary

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A handwritten signature in black ink, appearing to read "Phillip A. Washington", is written over a horizontal line. The signature is stylized and cursive.

Phillip A. Washington
Chief Executive Officer