



Board Report

File #: 2025-0045, File Type: Contract

Agenda Number: 21.

OPERATIONS, SAFETY, AND CUSTOMER EXPERIENCE COMMITTEE MARCH 20, 2025

SUBJECT: COUNTYWIDE TRANSIT SIGNAL PRIORITY (TSP) CLOUD SOLUTION

ACTION: AWARD CONTRACT

RECOMMENDATION

AUTHORIZE the Chief Executive Officer to award a 30-month, firm-fixed-price Contract No. PS125493000 to JMDiaz, Inc., for the design, development, and implementation of a cloud-based Transit Signal Priority (TSP) system on portions of the NextGen Tier One network in the County of Los Angeles in the amount of \$2,443,389, subject to the resolution of any properly submitted protest (s), if any.

ISSUE

The Countywide TSP Program, which was initiated in 1998, has deployed transit signal priority at 471 intersections along 13 high-ridership corridors in Los Angeles County that traverse through 24 jurisdictions. After more than 20 years, the originally deployed transit signal priority system and hardware along these corridors have reached the end of their useful life. Furthermore, in October 2020, the Board approved the NextGen Transit First Service Plan, necessitating the upgrade and expansion of the Countywide TSP Program and its supporting software and hardware solutions.

BACKGROUND

In 1998, Metro initiated the then Countywide Bus Signal Priority (BSP) Pilot Project as part of an effort to design, develop, implement, and evaluate a multi-jurisdictional bus signal priority system. The BSP Pilot Project was a collaborative effort bringing together multiple jurisdictions and transit operators to develop consensus on a unified signal priority technology approach for the County. In 2005 and 2008, the Board extended the Pilot Project to support the expansion of signal priority to enhance Metro bus operations. Since the inception of the program, a total of 471 signalized intersections along 13 corridors traversing through 24 jurisdictions have been equipped which now require upgrades through this contract.

In 2018, Metro began the process of redesigning the bus system to improve the service for current and future riders. The Plan was approved by the Board in October 2020 after extensive public outreach and review. The public communicated to Metro that improving bus speed and reliability is the single most important step Metro can take to retain and grow ridership by increasing the

throughput capacity of local roadways and shifting regional travel patterns toward more sustainable transportation modes.

The Plan proposed improvements that would speed up buses, double the number of frequent Metro bus lines, and provide over 80 percent of current bus riders with frequent service throughout the day. Implementation of the Plan includes capital investment in transportation infrastructure utilized in high-frequency bus corridors on the NextGen Tier One network, including the upgrade and expansion of transit signal priority.

In November 2022, the Board approved a contract for the NextGen Wireless Cloud-Based TSP System for Metro buses within the City of Los Angeles only. This project is currently underway and will provide a road map and lessons learned for upgrade and expansion work that will take place throughout the County. In addition, the underlying technical strategy for this project will be used as the approach for all subsequent transit signal priority projects, ensuring seamless operational performance throughout the system.

In July 2023, Metro applied for and was successfully awarded \$4,004,028 from the 2021 Southern California Association of Governments (SCAG) Regional Early Action Planning Grant (REAP 2.0) under the County Transportation Commission (CTC) Partnership Program to fund the Countywide TSP Cloud Solution for the LA County project.

DISCUSSION

Approval of this contract award will support the speed and reliability goals of the NextGen Transit First Service Plan and demonstrate Metro's commitment to the 2021 REAP and CTC Partnership Program for Metro-led and Metro-partnered transportation plans, programs, and infrastructure projects.

The Countywide TSP Cloud Solution project will upgrade existing hardware and software, leveraging Metro's existing on-board Global Positioning System (GPS) real-time data and cloud computing services. This technology enhancement will address the inherent technological deficiencies tied to the existing out-of-date TSP solution developed over 20 years ago. In addition, the project upgrades will provide a more customizable, flexible, and scalable solution that will support advanced transit signal priority capabilities beyond those currently supported by the original system.

With this project, all 471 TSP-equipped intersections along 13 Metro NextGen Tier One bus corridors will be fully integrated into the new system by Fall 2027, enabling greater performance, data analysis, more reliable signal priority operations, and lower overall maintenance and support costs.

Metro will continue to partner with all 24 municipalities currently participating in the existing Countywide TSP program. This includes the cities of Alhambra, Bell, Bell Gardens, Commerce, Compton, Cudahy, El Monte, Glendale, Hawthorne, Huntington Park, Inglewood, Lawndale, Lynwood, Maywood, Monterey Park, Pasadena, Pico Rivera, Rosemead, South El Monte, South Gate, South Pasadena, Vernon, West Hollywood and the Los Angeles County Department of Public works. Many of these agencies have existing agreements to support TSP that were executed in the

early 2000s. Metro is currently in the process of renewing or replacing the agreements by July 2025 to reflect new requirements and expand participation in the Regional Integration of Intelligent Transportation Systems partnership.

DETERMINATION OF SAFETY IMPACT

Board approval of this recommendation will not impact safety. Implementing transit signal priority will conform to the California Manual on Uniform Traffic Control Devices (CA MUTCD) standards for traffic signal timing.

FINANCIAL IMPACT

For FY25, \$300,000 has been set aside in Cost Center 4740, Countywide TSP Upgrade & Expansion project #203045, Task #01.001. The project has secured \$4,004,028 from the Southern California Association of Governments (SCAG)'s REAP 2.0 grant. Since this is a multi-year project, the project manager, cost center manager, and Deputy Chief Operations Officer, Shared Mobility will be accountable for budgeting the remaining costs for future fiscal years.

Impact to Budget

The source of fund for the Project is State REAP 2.0 grant fund. This fund is not eligible for bus/rail operating or capital expense.

EQUITY PLATFORM

The speed and reliability improvements with the upgraded TSP systems are part of the NextGen Transit First Service Plan, which directly addresses the critical needs of low-income residents and others who rely on public transit to serve the community-identified destinations with reliable and fast service. Many of our riders reside in the NextGen Tier One network, which primarily operates in the Equity Focus Communities. Wireless cloud-based TSP improves bus speed and reliability by reducing travel time, which translates into more time available for work, leisure, or other activities. These improvements increase the attractiveness of transit, potentially resulting in mode shift opportunities and increases in overall transit ridership.

Request for Proposals (RFP) No. PS125493 was advertised under the Small Business Prime (Set-Aside) program and was open only to Metro-certified Small Businesses. The project is funded with state funds and the recommended firm met the Small Business Prime requirements by committing to perform 30.65% of the work with its own workforce. Additional details on the small business commitment are available in Attachment B - DEOD Summary.

VEHICLES MILES TRAVELED OUTCOME

VMT and VMT per capita in Los Angeles County are lower than national averages, the lowest in the SCAG region, and on the lower end of VMT per capita statewide, with these declining VMT trends due in part to Metro's significant investment in rail and bus transit.* Metro's Board-adopted VMT reduction targets align with California's statewide climate goals, including achieving carbon neutrality by 2045. To ensure continued progress, all Board items are assessed for their potential impact on

VMT.

As part of these ongoing efforts, this item is expected to contribute to further reductions in VMT. This Item supports Metro's systemwide strategy to reduce VMT through equipment and software purchase activities that will improve and further encourage transit ridership by increasing bus speed, reducing service intervals, and increasing the number of frequent Metro bus lines, thus enhancing customer experience. Metro's Board-adopted VMT reduction targets were designed to build on the success of existing investments, and this item aligns with those objectives.

*Based on population estimates from the United States Census and VMT estimates from Caltrans' Highway Performance Monitoring System (HPMS) data between 2001-2019.

IMPLEMENTATION OF STRATEGIC PLAN GOALS

The Project supports the goals outlined in the Metro Vision 2028 Strategic Plan. The recommendation supports strategic plan Goal 1: Provide high quality mobility options that enable people to spend less time traveling and Goal 2: Deliver outstanding trip experience for all users of the transportation system. This project will improve the speed and reliability of Metro NextGen Tier One bus service that runs through the heart of some of the most congested areas in Los Angeles County, comprising equity focus communities. This project will enhance transit customer experience in those areas by reducing travel times and improving schedule adherence.

ALTERNATIVES CONSIDERED

The Board may elect not to award the contract as recommended by staff. However, this is not recommended since the SCAG Regional Council approved project funding on July 6, 2023. Subsequently, Metro executed a Memorandum of Understanding (MOU) with SCAG (MOU # M-008-24) for the \$4,004,028 in REAP grants. Without the implementation of a wireless cloud-based TSP in the County of Los Angeles, Metro will not be able to achieve the speed and reliability improvements outlined in the Next Gen Transit First Service Plan, and the existing system will become inoperable.

NEXT STEPS

Upon Board approval, staff will execute Contract No. PS125493000 with JMDiaz, Inc., and issue a Notice-to-Proceed (NTP) to begin the design, development, and implementation of the Countywide TSP Cloud Solution.

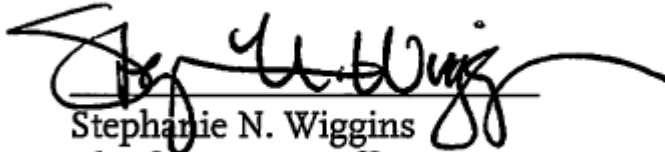
ATTACHMENTS

Attachment A - Procurement Summary
Attachment B - DEOD Summary
Attachment C - Countywide TSP Program Corridors

Prepared by: Eva Moon, Senior Manager, Shared Mobility, (213) 418-3285
James Shahamiri, Senior Director, Shared Mobility, (213) 922-4823
Steven Gota, Executive Officer, Shared Mobility, (213) 922-3043
Shahzad Amiri, Deputy Chief Operations Officer, Shared Mobility, (213) 922-3061

Debra Avila, Deputy Chief Vendor/Contract Management Officer, (213) 418-3051

Reviewed by: Conan Cheung, Chief Operations Officer, (213) 922-2920



Stephanie N. Wiggins
Chief Executive Officer