

STAFF REPORT

SUBJECT: LAVTA Zero-Emission Bus Transition Study
On-Call Task Order for Zero-Emission Bus Consulting Services

FROM: Jennifer Yeamans, Senior Grants & Management Specialist

DATE: July 1, 2019

Action Requested

Staff requests that the Board of Directors authorize LAVTA's Executive Director to execute a task order with the Center for Transportation & the Environment (CTE), to perform zero-emission bus (ZEB) transition planning services pursuant to the terms of LAVTA's existing on-call Zero-Emission Bus Consulting Services Contract (Agreement #831, RFP #2016-04) for \$161,200, with a 10% contingency to be used at the Executive Director's discretion.

Background

In September 2016, the Board of Directors awarded a contract in response to RFP #2016-04 for On-Call Zero-Emission Bus Consulting Services to the Center for Transportation and the Environment to carry out a full range of on-call engineering services providing multi-discipline research, development, design and project management support services for various projects associated with LAVTA's fleet management and transition to zero-emission buses. The initial contract period was for three years, with two one-year options to be exercised at LAVTA's sole discretion.

In March 2018, the Board of Directors approved the first of two annual allocation requests to Caltrans to use Low Carbon Transit Operations Program (LCTOP) funding available to LAVTA by formula to purchase four battery-electric replacement buses as part of the agency's regular bus purchase scheduled for FY2022. LCTOP funds can be rolled over a maximum of four years and would be used to augment FTA formula funding to cover the incremental capital cost of acquiring battery-electric buses compared to conventional diesel-electric hybrids.

In December 2018, the California Air Resources Board (CARB) approved an Innovative Clean Transit Rule requiring the state's public transit agencies to:

1. Transition to all zero-emission bus purchases by 2030; and
2. Submit a board-approved Zero-Emission Bus Rollout Plan to CARB with specific required components by July 1, 2023.

Under the new regulation, CARB will require LAVTA to purchase a minimum of 25% ZEBs beginning in 2026 and ramping up to 100% of future bus purchases in 2029, with the goal of transitioning the state's entire transit fleet to 100% ZEBs by 2040.

Typical ZEB technologies contemplated by this regulation include both battery-electric buses (BEBs) and hydrogen fuel-cell electric buses (FCEBs), both of which lack internal combustion engines in the vehicle's powertrain and use electric propulsion systems, sourced either by on-board batteries that store electricity in the case of BEBs, or a hydrogen tank and fuel cell stack in the case of FCEBs. Both types of buses are currently costlier to acquire than conventional diesel-electric hybrids, require differing types of support infrastructure to power, and have different lifetime maintenance and operating cost considerations.

Discussion

In May 2019, staff solicited a proposal from CTE as LAVTA's on-call ZEB consulting services firm for a ZEB Transition Study consistent with CARB's requirements and to inform LAVTA's more immediate BEB procurement plans utilizing LCTOP funding. Staff has consulted with outside agencies in refining the project scope and convened an internal ZEB Task Force consisting of staff involved in capital planning, procurement, fleet management, maintenance, service planning, and customer service, to help oversee the study and ensure it meets the agency's ZEB requirements and objectives.

Key features of the study informing the eventual ZEB Transition Plan will include:

- Study requirements and data collection to identify key agency-specific parameters to inform subsequent assessments.
- Service assessment using route modeling to calculate expected energy efficiency by route to determine if ZEB technology to replace current buses on a 1:1 basis, or if more vehicles would be required to complete all service blocks.
- Fleet assessment for projected timeline of replacement of current buses with ZEBs consistent with the agency's existing fleet replacement plan.
- Fuel assessment analyzing current daily fuel consumption, projected annual fueling costs, and cost comparisons with current fuel costs.
- Maintenance assessment analyzing labor and materials costs for ZEB maintenance over the transition period as well as major component replacements for each technology type.
- Facilities assessment to define requirements for charging infrastructure and/or hydrogen fueling infrastructure to support the transition to battery electric and/or fuel cell electric buses in terms of equipment and infrastructure costs, design, construction, and installation costs, space and siting requirements, operational impact, and utility service requirements. The assessment will also provide a high-level master plan to define the timeline for various facility and infrastructure projects to build-out the charging capacity consistent with the addition of battery electric buses.
- Total Cost of Ownership (TCO) assessment summarizing the costs of annual bus procurements, annual fuel cost, annual maintenance costs, as well as the costs of charging equipment, hydrogen fueling equipment, supporting infrastructure, facility upgrades, and design, construction and installation over the ZEB transition timeline.
- CARB-compliant ZEB Rollout Plan for LAVTA to submit to CARB to satisfy CARB's Innovative Clean Transit Regulation

The work is expected to take approximately six months to complete and will occur concurrent and be coordinated with other short- and long-rang planning activities LAVTA will be undertaking during the same period.

Budget

Funds for the project are included in the agency’s approved FY19-20 budget for professional services. Based on the proposed scope of work, CTE will provide the work for a firm fixed-price fee of \$161,200. With a standard 10% contingency in place, the total budget for the project to be provided for under this task order is \$177,320.

Next Steps

Upon executing the task order with CTE, LAVTA will issue a Notice to Proceed.

Recommendation

Staff recommends the Board of Directors approve Resolution 24-2019 to execute a task order contract with LAVTA’s on-call zero-emission bus consulting firm Center for Transportation and the Environment (CTE), for a not-to-exceed amount of \$161,200 with a contingency amount of \$16,120 (10%) to be utilized at the discretion of the Executive Director.

Attachment:

1. Resolution 24-2019

Approved: _____

RESOLUTION NO. 24-2019

**A RESOLUTION OF THE BOARD OF DIRECTORS
OF THE LIVERMORE AMADOR VALLEY TRANSIT AUTHORITY
AWARDING A TASK ORDER CONTRACT FOR THE LAVTA ZERO-
EMISSION BUS TRANSITION STUDY**

WHEREAS in December 2018, the California Air Resources Board (CARB) approved an Innovative Clean Transit Rule imposing various requirements of transit agencies to transition to all zero-emission bus purchases by 2030 and requiring agencies to submit a Board-approved Zero-Emission Bus Rollout Plan to CARB with specific required components by July 1, 2023; and

WHEREAS LAVTA requires the services of a zero-emission bus consulting firm to oversee the LAVTA Zero-Emission Bus Transition Study to fulfill CARB's requirement; and

WHEREAS the Center for Transportation and the Environment (CTE) was awarded an on-call zero-emission bus consulting services contract by LAVTA (RFP #2016-04); and

WHEREAS CTE has the qualifications to conduct the work necessary to complete the LAVTA Zero-Emission Bus Transition Study; and

WHEREAS CTE and LAVTA have negotiated a detailed scope of work for the LAVTA Zero Emission Bus Transition Study at a firm fixed fee of \$161,200.

NOW, THEREFORE, BE IT RESOLVED by the Board of Directors of the Livermore/Amador Valley Transit Authority that the Executive Director may enter into a task order contract with the Center for Transportation and the Environment for \$161,200 for this project in a form approved by LAVTA's Legal Counsel; and

BE IT FURTHER RESOLVED that the Board of Directors authorizes the Executive Director to expend a 10% contingency amount not to exceed \$16,120, for a total authorized amount not to exceed \$177,320; and

PASSED AND ADOPTED this 1st day of July 2019

David Haubert, Chair

ATTEST:

Michael Tree, Executive Director

APPROVED AS TO FORM:

Michael Conneran, Legal Counsel