July 8, 2021

To: Transit Committee

From: Darrell E. Johnson, Chief Executive Officer

Subject: OC Streetcar Project Quarterly Update

Overview

The Orange County Transportation Authority is implementing the OC Streetcar project, and updates are provided to the Board of Directors on a quarterly basis. This report provides an update on OC Streetcar project activities from April 2021 through June 2021.

Recommendation

Receive and file as an information item.

Background

The Orange County Transportation Authority (OCTA), in cooperation with the cities of Santa Ana and Garden Grove, is implementing a modern streetcar running between the Santa Ana Regional Transportation Center in the City of Santa Ana (City) and the intersection of Harbor Boulevard and Westminster Avenue in the City of Garden Grove. The OC Streetcar project (Project) will improve transit connectivity and accessibility, increase transit options, relieve congestion, and provide benefits to the community and traveling public. The Project is being implemented as part of Measure M2 Project S – Transit Extensions to Metrolink, approved by Orange County voters in November 2006.

Construction of the 4.15-mile project line involves complex and specialized work, including the installation of embedded track in existing streets, an overhead contact system (OCS) to supply power to the vehicles, stops with canopies, bridges, and a maintenance and storage facility (MSF).

The Project includes ten streetcar stops in each direction (four shared center platforms and six side platforms in each direction, for a total of 16 platforms). Each stop includes a canopy, benches, leaning rails, trash cans, lighting,

variable message signs, video cameras, a public address system, and ticket vending machines, which will be procured separately. Platforms will be 14 inches high to enable level boarding to streetcar vehicles. Furthermore, the installation of new traffic signals and transit signal priority at intersections along the route is also included.

The MSF can accommodate up to 15 modern streetcar vehicles, as well as all necessary administration, operations, vehicle maintenance, parts storage, and maintenance-of-way needs for the Project. Secured exterior vehicle storage, including a wye track for turning vehicles end-for-end, a free-standing vehicle wash, employee parking, and fire department/delivery access will also be included.

On March 26, 2018, the Board of Directors (Board) awarded a contract to Siemens Mobility, Inc., (Siemens) for the manufacture and delivery of eight modern streetcar vehicles, spare parts, and special tools. On September 24, 2018, the Board awarded the project construction contract to Walsh Construction Company II, LLC (Walsh). On November 30, 2018, the Federal Transit Administration (FTA) executed the Full Funding Grant Agreement (FFGA), securing $149,000,000 in federal New Starts discretionary funding for the Project. In February 2019, the FFGA was funded through the FTA Transit Award Management System, which was the final step necessary to begin the drawdown of federal funding. Through June 4, 2021, $71,295,408 has been drawn down on the FFGA.

Discussion

The following is the status of ongoing project activities related to construction, vehicle manufacturing, and public outreach.

Construction

In the Pacific Electric Right-of-Way (PEROW), Walsh continues to install OCS pole foundations, duct banks, and foundation and block for three soundwalls. The Fairview grade crossing was completed with installation of rail and crossing panels, while preparations began for the Fifth Street crossing. Construction of the Westminster Bridge and Santa Ana River Bridge (SARB) is substantially complete, and work is underway to prepare for rail installation on both bridges. A quality issue at the SARB has been identified in regard to installation of the deck. The Project team is working with Walsh to resolve this issue, and staff will report back with the resolution in next quarter’s report.

Double-sided station platforms at Fairview Street and Raitt Street are under construction, and conduits are being installed at the Harbor Station. Electrical conduits are being placed to serve traction power substations near Westminster Avenue and at the northwest corner of the MSF.

Construction of the MSF is critical to the Project schedule, as it is needed to accept delivery and conduct final acceptance testing for the eight vehicles being manufactured by Siemens. OCTA continues to coordinate with the FTA and the Most Likely Descendant on the reinterment of the Native American cultural remains encountered during excavations at the MSF site in fall 2020. Construction work continues on the site utilities, foundation slab, wheel-truing pit, service and inspection pits, and perimeter block wall, and the storm drainage infiltration basin was installed. While there were some construction delays at the MSF while waiting for design and material procurement for cathodic and stray current protection, the majority has been installed and placement of reinforced concrete and vapor barrier continues. MSF yard utilities and the car wash building slab have also been completed. Staff will be seeking Board approval of a construction change order (CCO) to compensate Walsh for changes to the MSF plans associated with building permit design compliance requirements in the third quarter of 2021.

Construction of westbound track on Santa Ana Boulevard between Bristol Street and Raitt Street is complete. Construction of eastbound track within the same limits is underway. On Santa Ana Boulevard between French Street and Parton Street Walsh encountered conflicting utilities within the excavation for track construction, which was addressed by employing a re-designed track slab to avoid the utilities, reducing the overall depth of excavation and allowing construction to advance. Track was also placed on Santa Ana Boulevard across the Main Street and Broadway intersections, as well as along the north-south running Mortimer Street from Fourth Street to Sixth Street, with street paving planned in this location in mid-June.

To better assist in detecting utility conflicts, Walsh is utilizing ground penetrating radar equipment to provide additional data on utilities and identify other potential unknown or unmarked utilities. Other significant construction activities in the quarter include continued installation of OCS and traffic signal pole foundations, reconstruction of impacted sidewalks and curb ramps, and inspection of special track work at the fabrication site.

During the reporting quarter, the construction management team worked on preparation of additional CCOs, including additional funding for exploratory potholing allowance, which staff will seek Board approval for in July 2021. Other CCOs planned for Board approval in the third quarter of 2021 include design modifications to the traction power substations, traffic signal interconnects, additional removal and disposal of contaminated soil in the PEROW and treated

wood waste, and installation of a fiber optic backbone network system redundancy.

Vehicle and Operations

Siemens continues production of eight S700 streetcar vehicles. OCTA has an on-site resident inspector at the Siemens facility to oversee the vehicle manufacturing process and ensure compliance with the technical specifications. Currently, cars 1-7 are in final stages of equipping with installation of the last remaining vehicle components. Car 8 is in final assembly and is anticipated to begin static and dynamic testing in the next quarter. Static testing is when the vehicle is stationary inside the facility to verify functionality of the components in a controlled environment. Dynamic testing is performed on the test track when the vehicle is in motion and allows the vehicle manufacturer to observe the functional behavior of the vehicle, monitor system functionality and performance in vehicle operation, and verify response time.

During the reporting period, a First Article Inspection (FAI) was conducted to observe the Computer Aided Dispatching (CAD) and Automated Vehicle Location (CAD/AVL) systems in a simulated environment at the manufacturer's facility. The CAD system monitors the OC Streetcar systems' schedule adherence performance, provides communications between the Operations Control Center (OCC)/dispatcher and streetcar operator, as well as real-time communication between streetcar vehicles to ensure adequate headways. The Automated Vehicle Location system feeds information to the CAD system and provides data to the OCC for the location of each streetcar vehicle on the OC Streetcar system. During the FAI, staff witnessed the systems pass multiple performance tests. In conjunction with the FAI for CAD/AVL, staff also witnessed the OC Streetcar vehicle Automated Passenger Counter. FAIs are a contract requirement and a critical component of the manufacturing process to ensure that each component is built according to specifications and quality control measures are met.

Ongoing coordination with Siemens on the design features and FAIs of multiple vehicle components, as well as extended testing efforts for the vehicle door, energy absorbing bumper, and emergency battery drive, has impacted the anticipated dates for delivery of the S700 vehicles. Staff is in negotiations with Siemens on an updated master program schedule, including options for vehicle storage to align with the availability of the project infrastructure that is needed to accept and test the vehicles. Staff will return to the Board later this year with any contract amendments required for Siemens as a result of these discussions.

Last quarter, it was reported that staff would seek Board approval in June 2021 for a rail tow vehicle contract award. That procurement was subsequently cancelled as a result of only receiving one bid that didn't meet federal

requirements. After further review, it was determined that a 16-ton boom truck, which was already planned for OCS and system maintenance, can also serve the same function as the rail tow vehicle. The boom truck can tow a streetcar vehicle in the unlikely event that it would not be able to move either under its own power or with the assistance of another streetcar vehicle. Work was completed during the quarter for the technical specifications to support this procurement.

The limited Notice to Proceed (NTP) for the operations and maintenance (O&M) contractor, Herzog, began in May 2021. The general manager has been coordinating with staff on several processes which will be performed by the O&M contractor during system integration testing, pre-revenue operations, and revenue operations. The full NTP will be issued to Herzog pending discussions related to the revised revenue service date with FTA and OCTA later this year.

Public Outreach

OCTA outreach staff continued to provide door-to-door construction notifications to residents and businesses regarding nearby activities. Electronic and social media posts supported and amplified the messaging to use detours to avoid specific activities.

During the reporting period, there were full closures of two busy intersections, Santa Ana Boulevard at Main Street and Broadway, for track installation activities. In addition to electronic and social media, a targeted flyer for Hall of Administration stakeholders was developed and distributed through the County of Orange distribution channels. The flyer directed staff to a route that provided them access to all parking structures.

OCTA and City staff continue to meet and discuss the needs of the visitors and businesses along Segment 4 (Fourth Street between Parton Street and Mortimer Street). The contractor has identified the two subsegments where they plan to initiate the work. The outreach team developed and distributed a bilingual postcard identifying the detours available when the traffic control is set. In addition, a flyer detailing track installation activities was also distributed. There will be additional door-to-door outreach prior to the work beginning.

Outreach staff presented a project update to the City’s Environment and Transportation Committee and attended a field meeting with Communication Linkage Forum (Com-Link) committee members to discuss project activities in Segment 2 (Santa Ana Boulevard between Raitt Street and Bristol Street). Com-Link partners with the City to promote the exchange of ideas and information between neighborhoods and community leaders.

Outreach staff continues to brief the business associations at its meetings to keep the stakeholders informed of Walsh's preparations and plans for work in the Downtown Santa Ana segment.

OCTA's Eat Shop Play program has expanded to 54 participants, exceeding the goal of 40 businesses. Targeted social media campaigns and biweekly newsletters continue to feature businesses and include information about local community events.

Cost and Schedule

As discussed with the Board in March 2021, the Project cost and schedule to complete the Project is under review by OCTA and FTA, considering the challenges encountered and outstanding project risks. Staff will return to the Board on or before November 2021 to present the results of FTA's risk analysis, as well as recommendations for the cost and schedule adjustments needed to complete the Project.

Next Steps

Construction activities in the next quarter will focus on completing the floor slabs in the MSF building, installation of embedded track in the street and ballasted track in the PEROW, installing OCS poles, delivering the traction power substations, and constructing station stop platforms. Next steps for vehicles include finalizing design for remaining vehicle components, as well as continued production, assembly, and ongoing static and dynamic testing. Upcoming outreach activities include ongoing coordination with the construction team and the City regarding traffic control measures that are needed for the in-street embedded track installation, particularly along Fourth Street where businesses are more prevalent.

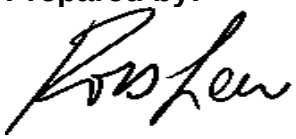
Summary

An OC Streetcar project update covering April 2021 through June 2021 is provided for the Orange County Transportation Authority Board of Directors' review.

Attachments

None.

Prepared by:



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