



June 11, 2020

To: Transit Committee
From: Darrell E. Johnson, Chief Executive Officer
Subject: OC Streetcar Project Quarterly Update

A handwritten signature in blue ink, appearing to read "Darrell E. Johnson", is written over the "From:" line of the header.

Overview

The Orange County Transportation Authority is currently implementing the OC Streetcar project. Updates are provided to the Board of Directors on a quarterly basis. This report provides an update on OC Streetcar project activities from March 2020 through May 2020.

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 (SARTIC) 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 route OC Streetcar line involves complex and specialized work, including the installation of embedded track in streets, an overhead catenary 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, changeable

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. Also included is the installation of new traffic signals and transit signal priority at intersections.

The MSF can accommodate up to 15 modern streetcar vehicles and accommodates 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 OCTA 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 million in federal New Starts discretionary funding for the Project. In February 2019, the FFGA was awarded through the FTA Transit Award Management System, which was the final step necessary to begin the drawdown of federal funding. Through May 2020, \$31.5 million has been drawn down on the FFGA.

Discussion

The following is a status of ongoing Project activities. Also included is a brief summary of novel coronavirus (COVID-19) impacts for both the construction contractor and vehicle manufacturer.

Construction Activities

Construction activities continued throughout the Project, with the focus on construction of the Santa Ana River and Westminster Avenue bridges, the MSF, and relocation of storm drain, sewer, and water systems within the City's streets. Walsh has continued to follow state and local health care agency requirements regarding COVID-19 safety precautions, including appropriate social distancing and face coverings. While Walsh has submitted a force majeure letter and notified OCTA of potential supply chain disruptions, no COVID-19 cost or schedule impacts have been reported to date.

Bridges and Pacific Electric Right-of-Way (PEROW)

The Santa Ana River Bridge foundations, columns, and abutments were installed during the 2019 dry season. Bridge beams were pre-cast offsite and installed in mid-May, and the bridge deck will be cast-in-place concrete on top of the pre-cast beams. Work on the retaining walls on both sides of the Santa Ana River Bridge is progressing, with the walls scheduled to be completed in July 2020.

Foundations, abutments, and the center pier for the bridge over Westminster Avenue were completed in December 2019. Falsework and reinforcing steel was installed for the soffit and stem and concrete placed in April 2020. The bridge deck concrete pour is scheduled for early June 2020.

Hauling of hazardous materials from the PEROW was delayed in March 2020 due to the contractor's non-compliance with federal and state contract requirements for hazardous waste handling and management. OCTA is coordinating closely with the contractor on preparation of a hazardous waste management work-plan that fulfills these requirements. Hauling and disposal of the hazardous materials will resume in June 2020.

Rail fabrication is in the final stages after challenges relating to quality verification requirements were addressed. Following completion of the PEROW grading, rail sticks will be delivered and then welded into several hundred-foot-long rail strings for installation in City streets and on the PEROW. Special track will be fabricated beginning in June 2020.

Maintenance and Storage Facility

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. Construction of the service and inspection pit has been delayed by contractor quality issues, primarily from not properly protecting the excavation site from the heavy rainfalls experienced in March 2020. This resulted in substandard structural backfill soil compaction results and rejection of the work. OCTA is coordinating closely with Walsh to resolve the issues and continue work. Structural steel members for the building frame have been fabricated and will be installed following completion of the building slab.

City Streets

Wet utilities (sewer, water, and storm drains) are being relocated by Walsh as part of the construction contract. With the temporary closure of several businesses on Fourth Street and a significant reduction in traffic resulting from

stay at home orders, installation of the new water main on Fourth Street was expedited due to the City allowing a full street closure. However, relaxed closure requirements began diminishing the end of May 2020 as the City began allowing businesses to reopen. The City has also issued an executive order allowing restaurants to utilize on-street parking areas and side streets along Fourth Street for outdoor dining setup to mitigate COVID-19 social distancing business impacts. This may have short-term impacts on construction activities along Fourth Street. Most of the water mains are installed, with several cut-overs from the old mains to the new mains scheduled to be completed in June 2020. Sewer work is complete, with the exception of a line on French Street, which is scheduled to be completed this summer.

Storm drain relocations have been especially challenging to complete due to the extensive number of undocumented underground utilities that have been encountered. The approach of opening up a large section of the street to expose and survey all potential utility conflicts and adjusting the profile of the storm drain has been successful. The significant storm drains remaining are on Broadway and Main Street, which are expected to be completed this summer.

To accommodate the OCS, approximately 250 foundations are being installed in the sidewalk area, or planter strip between the curb and sidewalk, in the street running segment between Raitt Street and SARTC. In over half of the locations excavated to date, the contractor has encountered numerous additional undocumented underground utilities, including small conduits for irrigation, street lights, traffic signals, and residential service laterals. Hand digging up to the first five feet of each OCS foundation is the best approach to minimize the risk of damaging an undocumented utility. A similar approach is recommended for the installation of the traffic signal and street light pole foundations. A contract change order to accommodate this work is being prepared and will be presented to the Board in June 2020 for approval.

OCTA is coordinating closely with the City to enhance the quality of pavement affected by the significant amount of utility work. The contractor has complied with requests to temporarily restore pavement conditions, recognizing that the pavement conditions will again be disrupted with the start of the embedded track installation. OCTA is committed to continuing to coordinate with the City and the contractor to ensure pavement conditions meet contract requirements and City standards.

Dry utilities (electric, communications, and gas) are being relocated by the owners of these systems, with most of these third-party utility relocations complete. Remaining work includes Southern California Edison's removal of underground vaults on Santa Ana Boulevard after Verizon completes its

relocations. The relocations of dry utilities have stayed ahead of Walsh’s activities.

Vehicle Manufacturing and Delivery

On March 19, 2020, OCTA was notified by Siemens that production had ceased on all vehicles due to a health order issued by Sacramento County. Once Siemens was determined to be an essential business, the production plant was subsequently reopened in a phased manner. In early April 2020, Siemens returned to a 100 percent production level of the OC Streetcar vehicle. In addition to the brief closing of the plant, Siemens reported some initial material shortages and delivery delays from suppliers. However, OCTA has not been notified by Siemens of any reported impacts to the overall delivery schedule.

During the reporting period, the first article inspection (FAI) was conducted for the truck assembly. The trucks contain the motor, gearbox, braking system, and the vehicle steel wheels. Outstanding FAIs that require out-of-state travel are on hold due to current travel restrictions.

The following is a summary of each of the eight vehicles’ production status:

Vehicle No.	Status
01	<ul style="list-style-type: none"> • Girder and carshell complete. • Doors and windows installed • Floor painted • Roof installed • Water test conducted • Trucks staged for installation
02	<ul style="list-style-type: none"> • Girder and carshell complete. • Truck painted and staged for equipping
03-04	<ul style="list-style-type: none"> • Car shell fabrication in process
05-08	<ul style="list-style-type: none"> • Girder set complete

Parallel to production of the vehicle carshells, final design review continues for remaining vehicle components, including the crash energy management and energy absorbing bumper, emergency battery drive, and flange lube system. These items are anticipated to be closed out next quarter.

Staff continues to receive weekly reports from OCTA’s on-site vehicle inspector with details of production progress, pictures of the work completed, and the upcoming production schedule and milestones. The on-site vehicle inspector also reviews the subcontractors’ manufacturing processes and performs critical quality control checks.

Coordination is ongoing between Conduent Transportation, OCTA, and Siemens in the design of the computer-aided dispatch and automated vehicle location, as well as the communications equipment on the vehicles. Coordination also continued between OCTA, Siemens, and Walsh in the integration of the streetcar vehicle with the infrastructure, including the tracks, platforms, MSF, and wayside equipment and systems.

Operations and Maintenance (O&M) Contract

On May 22, 2020 the OCTA Board approved the award of the O&M contract to Herzog Transit Services (Herzog). In the next quarter, staff will finalize negotiations with Herzog, execute the contract, and prepare for issuance of the Notice to Proceed.

Public Outreach

Outreach activities in this quarter remained focused on keeping the community and stakeholders informed of construction activities along the corridor with increasing focus on digital communication tools. The biweekly construction news email alert was refreshed with simplified formatting for easier viewing on phones and other handheld devices.

In mid-March 2020, direct contact in the community was halted due to newly-established COVID-19 protocols. Community events were cancelled, and outreach staff suspended tabletop presentations. Outreach staff provided electronic and phone communications to inform residential and business owners of specific activities, such as interruptions to water service or connections to fire service lines. When electronic and phone communications were not available, door hangers were used to ensure notification.

The Project app remains a source of current information about Project activities. The photo library within the app continues to offer a variety of images for those interested in seeing the Project's progress, including the Westminster Bridge.

As businesses in downtown Santa Ana (downtown) shifted focus from in-person dining to delivery and pick-up services, outreach provided coordination for allowing access to businesses and deliveries when construction had closed streets. The City works closely with the downtown businesses through its economic liaison office, and a weekly call has been established with members of the Santa Ana Business Improvement District to discuss needs throughout the COVID-19 response. OCTA outreach staff also participates on the calls to provide construction updates and assist with resolving access issues and accommodations the City is making to expand outdoor dining opportunities.

Although in-person events are cancelled, some such as the Santa Ana Artwalk have gone virtual. OCTA supports these events through ads on the Project's social media platforms.

The Eat Shop Play (ESP) program has grown to 25 members and the program's website continues to be updated with new profiles. More than 29 social media ads have run in the past few months highlighting the ESP businesses offering take-out and delivery services.

On February 24, 2020, the Board approved entering into agreements with two business associations that directly support Santa Ana's Business Improvement District. The two business associations will provide quarterly updates to OCTA., with the first update expected in July 2020. OCTA staff and association representatives meet on a monthly basis to discuss the coordination between its business activities and OCTA outreach efforts.

Cost and Schedule

The Project cost, as included in the FFGA, remains at \$407.7 million, including \$37.96 million in contingency. As of May 2020, approximately \$22.8 million in contingency has been expended or committed. As reported to the Board in February 2020, the revenue service date is anticipated for mid-2022. Work is underway on an updated risk analysis to adjust the Project cost estimate and schedule. Staff will return to the Board to present the results of this analysis and any cost and schedule adjustments that are needed.

Next Steps

Construction activities in the next quarter are scheduled to include preparation of pits and slabs for the MSF building foundations, constructing retaining walls and approach fills for the Westminster Avenue and Santa Ana River bridges, the superstructure for the Westminster Avenue Bridge, preparation for ballasted track installation in the PEROW, and the start of in-street embedded track installation. Next steps for vehicles include finalizing design for remaining vehicle components, additional first article inspections, and continued production and assembly for the remaining vehicles. Upcoming outreach activities include coordination with the construction team and the City regarding traffic control measures that will be needed for the in-street embedded track installation.

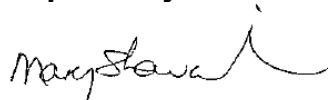
Summary

An OC Streetcar project update is provided for the Orange County Transportation Authority Board of Directors' review.

Attachment

None.

Prepared by:



Mary Shavalier
Program Manager
(714) 560-5856

Approved by:



James G. Beil, P.E.
Executive Director, Capital Programs
(714) 560-5646