



**March 12, 2020**

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

### **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 October 2019 through February 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 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-route-mile OC Streetcar line involves complex and specialized work, including the installation of embedded track in streets, an overhead catenary system 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 includes Project administration, operations, vehicle maintenance, parts storage, and maintenance-of-way. 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), which was a significant milestone as it secured \$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 January 2020, \$26.81 million has been drawn down on the FFGA.

### ***Discussion***

The following is a status of ongoing OC Streetcar activities.

#### **Construction Activities**

The Notice to Proceed with construction was issued to Walsh on March 4, 2019. 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.

Foundations, abutments, and the center pier for the bridge over Westminster Avenue were completed in December 2019. The temporary falsework to support bridge construction is being installed. Furthermore, foundations for the retaining wall approaches for the bridges over Westminster Avenue and the Santa Ana River are also underway.

Testing, manifesting, and hauling of contaminated materials to approved disposal facilities from the Pacific Electric Right-of-Way (PEROW) and other project areas is progressing. This will allow for construction of retained fill

approaches to the bridges and establishment of areas for rail deliveries and rail welding. Additionally, the prototype station canopy is being fabricated.

## **MSF**

Construction of the MSF is critical to the Project schedule as the MSF is needed to accept delivery and conduct final acceptance testing for the eight vehicles being manufactured by Siemens. Spread footings and conduits have been installed at the MSF, and construction of the service and inspection pits has begun and will be followed by the pouring of the building slab. Structural steel members for the building frame are being fabricated.

## **Utility Relocation**

Wet utilities (sewer, water, and storm drains) are being relocated by Walsh as part of the construction contract. Utility relocations from Raitt Street to Bristol Street are complete; therefore, the in-street embedded trackwork construction can begin once the rail strings have been welded. Sewer relocations are approximately 80 percent complete. Water line relocations are approximately 56 percent complete, and storm drain relocations for all of the street-running portions of the Project are approximately 17 percent complete.

There have been challenges installing storm drains and sewers due to the discovery of utilities that were either not shown on any of the record drawings or shown at different locations or elevations than on the plans. Some of the utility conflicts have been taking longer to resolve due to the need for additional potholing and/or excavation work to expose the utility and determine how it should be relocated. A supplemental change order for the additional work to address the unknown utilities was approved by the Board in November 2019.

Dry utilities (electric, communications, and gas) are being relocated by the owners of these systems, with most of these third-party utility relocations having been completed. Remaining work includes Southern California Edison's removal of underground vaults on Santa Ana Boulevard, one final relocation being scheduled by AT&T, and a few communications facilities.

## **Vehicle Manufacturing and Delivery**

The production of the Siemens S700 vehicles is underway with six of the eight vehicles in various stages of early production. To date, first article inspections have been conducted for the braking system, first welded carshell, auxiliary power supply, and the painted carshell. Parallel to production of the vehicle carshells, final design review continues for a few remaining vehicle components, which include the train to wayside communication, monitoring and diagnostic

system, crash energy management, energy absorbing bumper, and the emergency battery drive.

In January 2020, the California Public Utilities Commission approved a variance request for the use of rearview cameras in lieu of rearview mirrors. OCTA elected to utilize a camera and monitor system instead of rearview mirrors on the vehicles in order to allow operators a clearer view of the rear and both sides of the vehicle for the full length of the vehicle. The rearview cameras are a component of the vehicles' safety and security measures, which include monitoring and recording of forward-facing cameras, passenger area cameras, and in-cab inward facing cameras.

Staff continues to receive weekly reports from OCTA's on-site vehicle inspector with details of production progress, pictures of the work completed, and 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

The O&M contractor selection process is progressing. Best and final offers have been submitted and reviewed in response to the request for proposals. Award of the O&M contract is anticipated for consideration by the Board in April 2020.

#### Public Outreach

Outreach activities continue to focus on keeping the community and project stakeholders aware of ongoing construction activities with a targeted focus on expanding project awareness to visitors in Downtown Santa Ana (Downtown).

The biweekly Construction News email alert looks ahead to general activities along the alignment, as well as segment-by-segment details. In addition to email alerts, individual notifications are provided with multilingual doorhangers describing the activities in detail. The alerts also are available on the project website, and social media channels are used to broaden its availability and awareness. OCTA launched a promotional campaign for the Project's digital

application (app) to encourage downloads. The app includes information about current construction activities, locations of parking facilities in Downtown, and links to additional Project information.

A construction safety campaign is under way, and messaging has been added to the website, social media, and other collateral. The safety campaign includes an activity book for school-age children and an overview flyer. Both collateral pieces will be distributed to all schools on the Project alignment.

OCTA and the City partnered to design and install large-format banners on several of the parking structures in Downtown. The banners help to attract drivers to the parking structures and remind the public that businesses are open during construction. In addition, OCTA has provided additional parking structure signage, A-frame street signs, and printed maps promoting the City's two-hour free parking program.

OCTA outreach staff works proactively with representatives from the cities of Santa Ana and Garden Grove to provide periodic closed-caption slides on major construction activities for display before city council meetings. OCTA is collaborating with City staff to monitor community events in Downtown and ensures that the contractor is aware and can coordinate activities accordingly. This coordination also offers opportunities for the outreach team to host information tables at the events, such as the Downtown art walk.

OCTA has introduced the Eat, Shop, Play (ESP) program to provide assistance to local businesses and to promote the Downtown area. OCTA has partnered with both Downtown business associations to share the ESP program enrollment application with the more than 700 businesses in Downtown. OCTA also assisted Downtown, Inc., with rebranding its dining guide to include an updated business listing, safety messaging, ESP program information, and a campaign encouraging jurors to eat at Downtown restaurants. As Project construction continues, OCTA has encouraged its employees to show continued support of the businesses in Downtown.

Tabletop and free-standing lobby displays with literature holders were created to disseminate general Project information and promote the ESP program. These displays will be available at city halls, libraries, community centers, municipal buildings, and the 4<sup>th</sup> Street Market. The literature holders will include materials such as construction brochures, dining guides, and safety information.

On February 24, 2020, the Board approved entering into agreements with two business associations that directly support Santa Ana's Business Improvement District. The efforts of Downtown, Inc., and the Santa Ana Business Council support more than 700 businesses in the district and share the goal of bringing

more awareness and customers to Downtown. Staff will report on the progress of these enhanced efforts in future updates.

In addition, a phased marketing program to create awareness, interest, and anticipation began in late 2019, and will run through the start of revenue service. Key initiatives for the first phase of the marketing program include a brand video showcasing vehicle renderings travelling along the corridor, a revitalized website, multilingual branded brochures, and a themed digital campaign set to begin in spring 2020.

#### Cost and Schedule

The Project cost, as included in the FFGA, remains at \$407.7 million, including \$37.96 million in contingency. As of February 2020, approximately \$17.09 million in contingency has been expended or committed.

As discussed with the Board in February 2020, the revenue service date is anticipated for mid-2022. Staff will continue to keep the Board apprised of schedule updates.

#### 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.

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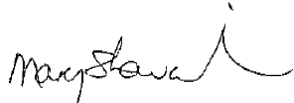
***Summary***

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

***Attachment***

None.

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