



March 4, 2024

To: Regional Transportation Planning Committee

From: Darrell E. Johnson, Chief Executive Officer

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

Subject: Consultant Selection for the Harbor Boulevard Pilot Innovative Transit Signal Priority Study

Overview

On November 27, 2023, the Orange County Transportation Authority Board of Directors authorized the release of a request for proposals to retain a consultant to conduct a comprehensive study and sample implementation of innovative transit and advanced detection solutions as part of the Harbor Boulevard Pilot Innovative Transit Signal Priority Study. Board of Directors' approval is requested for the selection of a firm to perform the required work.

Recommendations

- A. Approve the selection of Arcadis U.S., Inc., as the firm to conduct the Harbor Boulevard Pilot Innovative Transit Signal Priority Study.
- B. Authorize the Chief Executive Officer to negotiate and execute Agreement No. C-3-2944 between the Orange County Transportation Authority and Arcadis U.S., Inc., in the amount of \$1,197,912, for a two-year term, to conduct the Harbor Boulevard Pilot Innovative Transit Signal Priority Study.

Discussion

Harbor Boulevard is a multimodal corridor in central Orange County spanning the cities of Anaheim, Fountain Valley, Fullerton, Garden Grove, and Santa Ana. The 12-mile Harbor Boulevard Bravo! 543 and 43 bus routes have a combined average of more than 10,000 daily boardings. Eight percent of all Orange County Transportation Authority (OCTA) bus ridership and over 50,000 vehicles travel this route each day. Harbor Boulevard connects key destinations including medical facilities, California State University, Fullerton, Disneyland, Santa Ana College, places of worship, and shopping.

On November 18, 2022, OCTA applied for Strengthening Mobility and Revolutionizing Transportation (SMART) grants program for Stage 1 funds to pilot innovative transit signal priority (TSP) and advanced detection solutions at sample intersections along Harbor Boulevard. On May 9, 2023, OCTA applied for matching funds from the Regional Early Action Planning Grants of 2021 (REAP 2.0) administered by the Southern California Association of Governments (SCAG). On July 24, 2023, the OCTA Board of Directors (Board) approved the acceptance of grant funds to cover the \$1.8 million budget, for the pilot as an innovative TSP solution study.

The Harbor Boulevard Pilot Innovative TSP Study (Project) aims to enhance bus operations along Harbor Boulevard through a comprehensive study and sample implementation of innovative TSP and advanced detection solutions at nine intersections, with plans for wider deployment. The idea is to use wireless internet capabilities to enable the local traffic management centers to sense the location of buses and whether there are methods that would allow for minor signal timing changes to reduce the time the buses are stopped at red lights. The study will include data collection, field reviews, prototype deployment, technology assessment, and conceptual planning for future improvements. Improved bus reliability and predictability will allow commuters to reach their jobs, medical appointments, schools, and homes in a safe and timely manner. Additionally, traffic management centers can obtain more information about movements at signalized intersections from the advanced detection solutions to identify potential intersection modifications that can improve the safe travel of all modes through the intersection. Further, the Project has the potential to enhance OCTA's bus utilization, leading to more efficient operations, and it could contribute to an improved driving experience for OCTA coach operators.

Procurement Approach

This procurement was handled in accordance with Board-approved procedures for professional and technical services. In addition to cost, many other factors are considered in the award for professional and technical services. Award is recommended to the firm offering the most comprehensive overall proposal considering such factors as prior experience with similar projects, staffing and project organization, work plan, as well as cost and price.

On November 27, 2023, the Board authorized the release of Request for Proposals (RFP) 3-2944 and the proposed evaluation criteria and weightings, which was issued electronically through OCTA's procurement system. The RFP was advertised in a newspaper of general circulation on November 27 and December 4, 2023. A pre-proposal conference was held on December 6, 2023, with eight attendees representing three firms. Three addenda were issued to make available the pre-proposal conference presentation and registration sheets, provide responses to questions received, and handle administrative issues related to the RFP.

On December 20, 2023, four proposals were received. An evaluation committee consisting of members from OCTA's Contracts Administration and Materials Management and Strategic Planning departments, as well as external representatives from the cities of Anaheim, Fullerton, and Santa Ana, met to review all submitted proposals. The proposals were evaluated utilizing the following Board-approved evaluation criteria and weightings:

- Qualifications of the firm 20 percent
- Staffing and project organization 25 percent
- Work plan 30 percent
- Cost and price 25 percent

Several factors were considered in developing the evaluation criteria weightings. Qualifications of the firm was weighted at 20 percent as the firm must demonstrate experience with TSP, intelligent transportation systems (ITS) detection technology, and performance measures of a similar scope and scale. Staffing and project organization was weighted at 25 percent as the firm must demonstrate the level of expertise, resource availability, and involvement for the various roles of the proposed project team. The work plan was weighted at 30 percent as the firm's proposed technology solution must be able to meet the functional and technical requirements and challenges for a pilot implementation with plans to scale up on a corridor with multiple stakeholders. Cost and price was weighted at 25 percent to ensure that OCTA receives value for the services provided.

The evaluation committee reviewed all proposals based on the Board-approved evaluation criteria and short-listed the two most qualified firms listed below in alphabetical order:

Firm and Location

Arcadis U.S., Inc. (Arcadis)
Irvine, California

Kimley-Horn and Associates, Inc. (KHA)
Orange, California

On January 16, 2024, the evaluation committee interviewed the two short-listed firms. The interviews consisted of a presentation allowing each team to present its qualifications, highlight its proposal, and respond to the evaluation committee questions. Each firm also discussed its staffing plan, work plan, and perceived Project challenges. Each firm was asked general questions related to qualifications, staffing availability, proposed project organization, and approach to the work plan. Both firms were asked questions specific to their proposals regarding their teams' approach to the requirements of the scope of work,

management of the Project, coordination with the various agencies, experience with similar projects, and the proposed solutions toward achieving the Project goals.

After considering responses to the questions asked during the interviews, the evaluation committee adjusted the preliminary scores of both firms but did not change the overall ranking. Arcadis remained the top-ranked firm with the higher cumulative score.

Based on the evaluation of the written proposals and the information obtained during the interviews as well as cost and price, the evaluation committee recommends Arcadis as the top-ranked firm to conduct the study. The following is a summary of the proposal evaluation results.

Qualifications of the Firm

Both short-listed firms demonstrated relevant experience providing TSP, ITS detection technology, and performance measures of a similar scope and scale services for other agencies.

Founded in 1957, Arcadis is a global consulting firm with over 36,000 employees specializing in the design, construction, inspection, and traffic management of roads, highways, bridges, and railroads. Arcadis has more than 700 employees within its 13 California offices with local offices in the cities of Irvine, Los Angeles, San Diego, and Riverside. Arcadis has experience supporting OCTA along the Harbor Boulevard corridor as part of the Regional Traffic Signal Synchronization Program (RTSSP), which implemented signal synchronization and equipment upgrades. Arcadis demonstrated recent experience with its proposed TSP solution, LYT, through its effort with Tri-County Metropolitan District of Oregon which was deployed across 62 signals shared between three agencies. Other experience with relevant scope elements includes putting into operation a TSP functionality along the mid-city bus rapid transit corridor for the San Diego Association of Governments (SANDAG). Additionally, Arcadis designed a full fiber signal interconnect for a project consisting of 29 signalized intersections for the Nashville Department of Transportation. During the interview, when asked to expand on the specific duties that Arcadis performed on a relevant project from its proposal, Arcadis noted the individual experience of its key personnel and involvement with OCTA's OC Streetcar project. Arcadis proposed to utilize three subconsultants providing traffic, signal and data analytics, installation, and the cloud-based TSP solution, LYT. Positive references were received for the firm.

KHA was founded in 1967 as an engineering, planning, and environmental consulting firm with over 7,500 employees. KHA has 12 offices in California with a local office in the City of Orange. The firm detailed recent experience including an on-going project with the Los Angeles County Metropolitan Transportation

Authority in which KHA is implementing its cloud-based TSP solution, Traction Priority, in more than 1,600 signals. KHA also noted other projects in which its Traction Priority solution is being implemented for agencies such as SANDAG, the City of Austin, and the City of Indianapolis among others. KHA proposed to utilize one subconsultant to provide transportation strategies and solutions and detailed the firm's experience in the cities of Costa Mesa and Garden Grove related to installing new video detection systems for RTSSP projects. Positive references were received for the firm.

Staffing and Project Organization

Both short-listed firms proposed experienced project managers, key personnel, and subconsultants with relevant experience in TSP, ITS detection technology, and performance measures.

Arcadis proposed a comprehensive project team. The proposed project manager (PM) has over 34 years of experience in the industry. Arcadis proposed two senior advisors, each with 25 years of experience, in addition to specific task leaders with a range of 12 to 36 years of experience. Arcadis' proposal lacked detail on the specific roles of the key personnel on the Project; however, when asked to expand on them during the interview, the team was able to delineate the duties and responsibilities of the key personnel and discussed the strengths they bring to the Project. The PM will oversee scheduling, communication with the stakeholder agencies, and installation of the technology. The proposed senior advisors have relevant TSP experience and will be the link between the technology and customer experience, providing the 'big picture' in terms of work plan approach. Additionally, during the interview, each of the Arcadis team members participated in their respective areas of expertise during the presentation and when responding to evaluators' questions.

KHA proposed an experienced and knowledgeable project team. The proposed PM has over 17 years of experience with KHA. The PM has delivered projects deploying the Traction Priority solution and served as expert advisor on OCTA's Traffic Signal Synchronization Master Plan 2021 update. The PM will primarily focus on systems engineering for TSP concept development with the software engineering team based in Phoenix, Arizona. The deputy PM has four years of experience and will be responsible for day-to-day project tasks including scope, budget, invoicing, grant reporting and stakeholder coordination. During the interview, the KHA team members participated in providing responses within their areas of expertise. However, during the presentation and when responding to evaluators' questions the team did not demonstrate a strong understanding of the corridor.

Work Plan

Both short-listed firms met the requirements of the RFP, and each firm adequately discussed its approach to conducting the Project.

Arcadis presented a comprehensive work plan that demonstrated an understanding of the Project requirements and challenges, particularly related to grant funding requirements and project delivery. Arcadis proposed to utilize LYT as its cloud-based TSP solution. Arcadis made this selection based upon its experience and access to nearly all cloud-based solutions. Arcadis stated that LYT is the most widely deployed and time-tested system and further emphasized it would perform a detailed and thorough analysis of the LYT solution to ensure all functionalities desired by OCTA and its stakeholders are evaluated. Arcadis proposed to install a detection solution that is more comprehensive along the prototype area. When asked about this during the interview, Arcadis noted that while evaluating the corridor, the detection systems in the same environment will result in a direct comparison and allow for some cost savings. Additionally, during the interview, the team discussed its qualifications and provided an overview of the solution for completing the Project. The team underscored the need of an objective assessment of the performance of the proposed TSP and ITS detection technical solutions.

KHA provided a detailed work plan that demonstrated an understanding of the Project scope of work and grant funding requirements. The firm's proposed TSP solution, Traction Priority, was developed by KHA. The work plan emphasized that its solution would come with a one-time perpetual license should the results of the study recommend the technology be more widely deployed. During the interview, the team discussed its qualifications and provided an overview of the Traction Priority software and its dashboards. While KHA emphasized the benefits of its proposed solution, when asked whether the team could provide an objective review of its proposed solution, KHA did not demonstrate how their solution could be objectively evaluated as the most advantageous solution available to OCTA and its stakeholders. The team emphasized it created and developed the proposed technology solution and believed it to be the most optimal solution available; however, did not describe any experience with other existing solutions.

Cost and Price

Pricing scores were based on a formula which assigned the highest score to the firm with the lowest total firm-fixed price and scored the other proposals' total firm-fixed price based on its relation to the lowest total firm-fixed price. Arcadis proposed the lowest overall cost, which was lower than the OCTA project manager's independent cost estimate of \$1,800,000 and is therefore considered fair and reasonable.

Procurement Summary

Based on the evaluation of the written proposals, the firms' qualifications, work plan approach, the information obtained from the interviews, as well as cost and price, the evaluation committee recommends the selection of Arcadis as the top-ranked firm to provide professional services for the Project. Arcadis delivered a comprehensive proposal and an interview that was responsive to all the requirements of the RFP.

Fiscal Impact

This project was approved in OCTA's Fiscal Year 2023-2024 Budget, Planning Division, Account No. 0017-7519-SPT01-0Q7, and will be funded using the SMART and REAP 2.0 program funds.

Governor Gavin Newsom's (Governor) fiscal year 2024-25 budget proposal includes partial reversion of REAP 2.0 funds that may impact project funding. The impacts of the Governor's budget proposal will not be known until approval by California State Legislature, which is expected in June 2024. If funds are rescinded by the State and SCAG, staff will propose use of State Transportation Improvement Program Planning, Programming and Monitoring (STIP-PPM) funds to replace the REAP 2.0 funds, if necessary. The STIP-PPM supports transportation planning and feasibility studies, and the Harbor Boulevard Pilot Innovative Transit Signal Priority Study is an eligible project.

Summary

Staff is recommending the Board authorize the Chief Executive Officer to negotiate and execute Agreement No. C-3-2944 between OCTA and Arcadis, in the amount of \$1,197,912, for a two-year term, to conduct the Project.

Attachments

- A. Review of Proposals, RFP 3-2944, Harbor Boulevard Pilot Innovative Transit Signal Priority Study
- B. Proposal Evaluation Matrix (Short-Listed Firms), RFP 3-2944, Harbor Boulevard Pilot Innovative Transit Signal Priority Study
- C. Contract History for the Past Two Years, RFP 3-2944, Harbor Boulevard Pilot Innovative Transit Signal Priority Study

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