



**February 4, 2019**

**To:** Regional Planning and Highways Committee

**From:** Darrell E. Johnson, Chief Executive Officer

**Subject:** Consultant Selection for Intelligent Transportation Systems and Traffic Engineering Services for Regional Traffic Signal Synchronization Projects

### **Overview**

On September 24, 2018, the Orange County Transportation Authority Board of Directors approved the release of a request for proposals for a consultant to provide intelligent transportation systems and traffic engineering services for Garden Grove Boulevard and Los Alisos Boulevard regional traffic signal synchronization projects. Board of Directors approval is requested for the selection of the firm to perform the required work.

### **Recommendations**

- A. Approve the selection of Advantec Consulting Engineers, Inc., as the firm to provide intelligent transportation systems and traffic engineering services for the Garden Grove Boulevard Regional Traffic Signal Synchronization Project.
- B. Approve the selection of Advantec Consulting Engineers, Inc., as the firm to provide intelligent transportation systems and traffic engineering services for the Los Alisos Boulevard Regional Traffic Signal Synchronization Project.
- C. Authorize the Chief Executive Officer to negotiate Agreement No. C-8-1910 between the Orange County Transportation Authority and Advantec Consulting Engineers, Inc., to provide intelligent transportation systems and traffic engineering services for the Garden Grove Boulevard Regional Traffic Signal Synchronization Project.
- D. Authorize the Chief Executive Officer to negotiate Agreement No. C-9-0940 between the Orange County Transportation Authority and Advantec Consulting Engineers, Inc., to provide intelligent transportation systems and traffic engineering services for the Los Alisos Boulevard Regional Traffic Signal Synchronization Project.

***Discussion***

The Orange County Transportation Authority (OCTA) provides funding and assistance to implement multi-agency signal synchronization as part of the Measure M2 (M2) Regional Traffic Signal Synchronization Program (RTSSP or Project P). OCTA provides competitive capital grants and operations funding for the coordination of traffic signals across jurisdictional boundaries.

During the competitive grant application process, applicant agencies may request that OCTA lead and administer these multi-agencies traffic signal synchronization projects. OCTA usually contracts with highly-specialized traffic engineering and intelligent transportation systems (ITS) firms to accomplish these projects. The scope of the services will allow OCTA to implement the M2 RTSSP or Project P.

The 2018 call for projects (call), Project P, as approved by the Board of Directors (Board), is comprised of a set of projects that will synchronize 310 signalized intersections along six regional corridors. These six projects span a total 78.3 miles throughout Orange County. The applicant agencies requested OCTA to lead four of these projects. This procurement includes two of the four corridors that will synchronize 74 signalized intersections over 19.5 miles. The two remaining OCTA-led projects are being procured under a separate procurement. The respective project goals are to improve travel times, reduce emissions, and provide savings to motorists in reduced fuel consumption by optimizing coordinated or synchronized traffic signal timing at all intersections along and in proximity to these high-volume regional arterial highways. This program is consistent with the countywide multi-jurisdictional goals set by Project P.

For this procurement, the table below summarizes the two corridors where OCTA will act as lead agency.

Arterials	Project Intersections	Project Miles	Applicant Lead Agency	Participating Agencies
Garden Grove Boulevard	34	8.6	Garden Grove	4
Los Alisos Boulevard Route	40	10.9	Mission Viejo	5

***Procurement Approach***

This procurement was handled in accordance with OCTA's Board-approved procedures for architectural and engineering (A&E) services that conform to both state and federal laws. Proposals are evaluated and ranked in accordance with the qualifications of the firm, staffing and project organization, and work plan. As this is an A&E procurement, price is not an evaluation criterion pursuant to state and federal laws. Evaluation of the proposals was conducted on the basis of overall qualifications to develop a competitive range of offerors. The highest-ranked firm is requested to submit a cost proposal, and the final agreement is negotiated. Should negotiations fail with the highest-ranked firm, a cost proposal will be solicited from the second-ranked firm in accordance with Board-approved procurement policies.

This Request for Proposals (RFP) 8-1910 was issued as a single procurement utilizing a single scope of work and two sets of project specifications. The RFP stated its intent to award two contracts, one each for the Garden Grove Boulevard project and Los Alisos Boulevard project. Offerors were instructed to specify the project on which they preferred to work. Offerors interested in proposing both projects were instructed to submit with their proposal a separate work plan for each project.

Proposals were ranked with respect to the qualifications of the firm, staff and project organization, and workplan. Evaluation of the proposals was conducted on a per project basis to develop a competitive range for each project. The award for each contract is based on the offeror with the highest ranking for each project.

The Board authorized the release of RFP 8-1910 on September 24, 2018, which was electronically issued on CAMM NET. The project was advertised on September 24 and October 1, 2018, in a newspaper of general circulation. A pre-proposal conference was held on October 4, 2018, and was attended by ten firms. Five addenda were issued to provide pre-proposal conference information, responses to questions received, and handle administrative issues related to the RFP.

On October 24, 2018, six proposals were received for the Garden Grove Boulevard project, and five proposals were received for the Los Alisos Boulevard project.

An evaluation committee consisting of members from Contracts Administration and Materials Management and Strategic Planning departments, as well as external representatives from the cities of Garden Grove, Mission Viejo, and Westminster met to review all submitted proposals.

The proposals were evaluated based on the following Board-approved evaluation criteria and weights:

- |                                     |            |
|-------------------------------------|------------|
| • Qualifications of the Firm        | 25 percent |
| • Staffing and Project Organization | 40 percent |
| • Work Plan                         | 35 percent |

The evaluation criteria are consistent with the weightings developed for similar A&E procurements for traffic engineering services. In developing these weights, several factors were considered, giving the greatest importance to staffing and project organization of the firm, as the qualifications of the project manager and other key personnel are very important to the successful and timely delivery of the project. Similarly, high importance was given to the work plan criterion to emphasize the importance of the team's understanding of the project, its challenges, and its approach to implementing the various elements of the scope of work. The technical approach to the project is critical to the successful performance of the project. The final criterion, qualifications of the firm, evaluated the firm's experience in performing work of similar scope and size.

The evaluation committee reviewed all proposals based on the evaluation criteria and found the following firms most qualified to perform the required services. The most qualified firms are listed below in alphabetical order:

**Firm and Location - Garden Grove Boulevard Project**

Advantec Consulting Engineers, Inc. (Advantec)  
Irvine, California

DKS Associates (DKS)  
Anaheim, California

KOA Corporation (KOA)  
Orange, California

Firm and Location - Los Alisos Boulevard Project

Advantec Consulting Engineers, Inc. (Advantec)  
Irvine, California

DKS Associates (DKS)  
Anaheim, California

On December 3 and 4, 2018, the evaluation committee interviewed the short-listed firms. The interviews consisted of a presentation allowing each team to present its qualifications, highlight its proposal, and respond to evaluation committee questions. Each firm was asked general questions related to its qualifications, relevant experience, project organization, and approach to the work plan. Firms also highlighted their staffing plan, work plan, and perceived project issues. Each team was asked general questions regarding the team's approach to the requirements of the scope of work, management of the projects, coordination with various agencies, experience with similar projects, and the team's solutions in achieving the project's goals. After considering the responses to the questions asked during the interviews, the evaluation committee adjusted the preliminary score for all firms; however, Advantec remained as the top-ranked firm with the highest cumulative score for both projects.

Based on the evaluation of written proposals and information obtained during the interviews, staff recommends Advantec as the firm to provide consultant services for traffic engineering and ITS for the Garden Grove Boulevard and Los Alisos Boulevard projects. This firm ranked highest amongst the proposing firms based on the team's relevant experience in traffic engineering and ITS. Advantec's proposed teams are comprised of highly-qualified key personnel with relevant and recent experience in traffic signal synchronization and ITS projects. The firm demonstrated an excellent understanding of the project requirements and presented a comprehensive work plan addressing key issues that are critical to the success of the project. The following is a summary of the results of the proposal evaluations.

**Qualifications of Firm**

All three short-listed firms are highly qualified and have relevant experience in the type of services required by the scope of work. Each firm has identified experience providing signal timing and traffic coordination.

Advantec specializes in multimodal transportation planning, engineering, and technology services since 1998. The firm has 35 employees and six offices, including an office in Irvine. Advantec has demonstrated proficiency in traffic engineering, traffic studies, transportation planning and engineering, complete streets, smart cities, traffic signal timing, traffic coordination and operations, ITS, and automated transportation technologies. Recent and similar projects Advantec has successfully completed include: OCTA 2017 Corridor Operations Performance Report, Orange County; California Department of Transportation (Caltrans) District 12, North Orange County Triangle Transportation Systems Management and Operations Plan; Fairview Road Traffic Signal Synchronization (TSS) Plan, Costa Mesa; Citywide Traffic Message Center (TMC) and ITS improvements, Seal Beach; and Regional TSS Program, Coachella Valley Association of Governments (CVAG), Riverside. The firm has demonstrated experience working with Caltrans and stakeholders.

DKS provides transportation planning and engineering services to public agencies across the country. The firm has 131 professionals in seven offices and ten staff locally in Anaheim. DKS has experience and skilled services in traffic operational analysis, traffic signal synchronization, traffic signal design, systems engineering, and integration services in ITS and transportation communications networks. The majority of DKS' signal timing projects involve multiple jurisdictions and required consensus building amongst multiple agencies. Some of DKS recent and relevant projects include: Westminster Avenue/17<sup>th</sup> Street Traffic Signal Synchronization Projects (TSSP), Orange County; Anaheim Boulevard TSSP, Orange County; Olympiad Road – Felipe Road TSSP, Mission Viejo; State College Blvd. TSSP; and Los Alisos Boulevard Corridor, TSSP, Mission Viejo.

KOA was founded in 1987 and has relevant experience with traffic engineering, transportation planning, and construction management services. The firm has offices in Orange County and various other locations in California. KOA has similar experience in signal timing optimization, and related projects include: City of South Pasadena Fair Oaks Avenue Signal/Metro Improvement Project, Pasadena; City of Long Beach Citywide Multi-Corridor TSSP, Long Beach; and Metro Blue Line and Atlantic Avenue TSSP, Long Beach; as well as numerous other signal projects.

#### **Staffing and Project Organization**

The short-listed firms proposed qualified project managers, key personnel, and subconsultants with relevant traffic engineering, signal coordination, and ITS services.

Advantec proposed a separate staffing and project organization for each of the projects. Advantec proposed experienced project teams with expertise and relevance in transportation engineering, transportation planning, and traffic engineering. The project teams consist of experts to include transportation planners, civil engineers, signal synchronization and traffic coordinators. The proposed team and subconsultants have demonstrated experience working on numerous projects of similar size and scope. Advantec proposed the same project director and project coordinator for both projects to allow for improved coordination and oversight of projects. The proposed project director has 29 years of experience in transportation systems and traffic engineering, and extensive experience managing transportation planning, design traffic engineering and ITS projects for numerous agencies. Projects include, the OCTA Corridor Operation Performance Report, Caltrans District 12 North OC Triangle, OCTA Bus Rapid Transit Program, OCTA Kraemer Boulevard - Glassell Street RTSSP, Ball Road TSSP, and CVAG RTSSP. The project coordinator has 25 years of experience, as a professional civil and traffic engineer, as well as operations and safety liaison. The project coordinator has extensive experience in performing similar tasks for the City of Irvine for traffic signal components, and recently completed State Route 91 Corridor Improvement Program, Riverside, as a design manager.

The proposed project manager for Los Alisos Boulevard project has 28 years of experience as project manager and operations task leader in ITS. The project manager has expertise in traffic operations and traffic engineering conducting and managing traffic signal synchronization and ITS projects. Projects include: Fairview Road Traffic Signal TSSP, Costa Mesa; Arterial Performance Measurement System-Design and Specification Development, Culver City; Irvine Boulevard Regional TSSP, Irvine; Citywide ITS and Transportation Management System improvements, Seal Beach; OCTA Corridor Operations Performance Report, Orange County; and Seal Beach Traffic Management Center and ITS improvements, Seal Beach.

Advantec's project manager for Garden Grove Boulevard has 19 years of experience in the field of ITS, transportation planning and design, traffic engineering, and transportation planning. Relevant project experience includes: Citywide ITS improvement in La Quinta; Imperial Highway ITS and signal synchronization in Norwalk; CVAG RTSSP, Coachella Valley; OCTA Communication Study, Orange County; Citywide Fiber Optic Communication System and TMC upgrade in Garden Grove.

Advantec's other key personnel include task leaders highly experienced in ITS, traffic engineering, operation maintenance and monitoring, systems communications, traffic collection, TMC, and signal improvements.

The project director led the team in in-depth presentations and interviews for both projects, with participation from all personnel present. Advantec's proposed project team demonstrated proven expertise in the areas deemed critical to the success and has functioned as a cohesive team for many years on numerous traffic engineering and ITS projects.

DKS proposed the same project team for the Garden Grove Boulevard and Los Alisos Boulevard projects. DKS' proposed team has implemented numerous signal timing and synchronization projects and is experienced in transportation planning and signal synchronization projects. The principal-in-charge for DKS has four years at DKS and has been involved with over 350 traffic signal design and coordination projects. The proposed team has successfully worked together on numerous recent and relevant projects. The proposed project manager has over seven years with DKS and over 30 years of experience managing corridor studies, arterial signal systems projects, ITS planning and development projects. Relevant projects include: TSSP Westminster/17<sup>th</sup> Street, TSSP Goldenwest Street, Orange County; TSSP Los Alisos Boulevard, Orange County; and TLSP Street of Four Name, Orange County.

DKS' key personnel and support staff have experience in traffic operations, and transportation engineering including traffic signal timing, operational analysis, traffic signal and communication design and systems engineering for ITS. Relevant projects include: OCTA Regional Communication Network Study, Ontario Fiber Optic Communication Design, and Clark County Signal Timing Evaluation. Although all proposed personnel responded well to the interview questions, in comparison, the team's overall experience was not as extensive. During the interview, the project team demonstrated its knowledge related to traffic synchronization projects and provided good responses to questions.

KOA proposed on the Garden Grove Boulevard Project only. The proposed project team has experienced and qualified personnel. The proposed project manager and task leader have experience in signal timing optimization and various signal and ITS projects. The KOA senior advisor has over 40 years of experience in transportation planning design, and operations experience with emphasis in traffic engineering, traffic safety, and design for active transportation. Members of the proposed team have worked on similar projects together and have been involved on projects with OCTA and other local agencies. During the interview, the project team demonstrated its knowledge related to TSSP, but demonstrated limited knowledge related to the project corridor.



## Work Plan

All three short-listed firms met the scope requirements of the RFP, and each firm effectively discussed its approach to the projects.

Advantec's project approach conveyed a clear and distinct project understanding, project management approach, quality assurance and quality control methods adherence to schedule and budget, and provides traffic signal equipment and communication upgrades to enhance operations. The firm demonstrated a thorough understanding of both project corridors by identifying the traffic conditions, pedestrian and school activity, signal synchronization timing and delays, and equipment upgrades. The firm proposed several enhancements, such as reviewing existing transportation infrastructures along the corridor, using data sources to determine origin/destination patterns and seasonality, and conducting case studies at certain locations along the corridors to assess the effects of proposed improvements on actual operations of the streets. In addition, the firm detailed how it would reach out to different stakeholders and build consensus to ensure that recommendations are locally-adopted and implemented.

Advantec's work plan for the Los Alisos corridor discussed the improvement to the signal cabinets and controllers, pedestrian signals, conduit and cables, detailed routes with regards to morning and evening traffic flow, school traffic impacts, and corridor synchronization. The work plan for Garden Grove Boulevard thoroughly discussed TMC improvements, with regards to closed circuit television equipment, video management/detection systems, communication/hardware equipment, emergency vehicle preemption systems, and other various traffic management systems equipment. Other key operational elements presented were critical travel times, cross-coordination, pedestrian signals, railroad crossings, and Caltrans coordination. Both interviews for Los Alisos Boulevard and Garden Grove Boulevard projects detailed solutions to key project issues, such as pedestrian safety, community safety, outreach to the business community, school, and residents. Both work plans detailed equipment upgrades to enhance corridor operations with the latest technologies.

The work plans for DKS demonstrated a clear understanding of the project's key requirements, project challenges, and practical recommendations and solutions for both projects. Work plans addressed traffic volumes and synchronization performance, pedestrian challenges, transit operations, and proposed recommendations and potential solutions. DKS addressed their approach to timing and how this would be performed, as well as presenting traffic enhancement solutions. Main goals presented for each project were operation and timing analysis to develop and implement timing plans at signalized

intersections, and determination and recommendations of traffic equipment to improve synchronization. The interview demonstrated a good understanding of key issues and proposed solutions, gave specific corridor and signal timing issues, as well as detailed consensus building and project coordination. DKS' work plan approach was more detailed for the Los Alisos Boulevard project than for the Garden Grove Boulevard project.

KOA proposed a work plan only for Garden Grove Boulevard. KOA's work plan demonstrated their overall understanding of the project requirements. The firm discussed specifics on the tasks to be performed but did not complete a detailed work plan of the corridor nor address issues. KOA's team interview did not fully respond to the evaluation committees' questions.

#### **Procurement Summary**

Based on the evaluation of the written proposals, the team qualifications, and information obtained during the interviews, the evaluation committee recommends the selection of Advantec Consulting Engineers, Inc. as the top-ranked firm to provide intelligent transportation systems and traffic engineering services for Garden Grove Boulevard and Los Alisos Boulevard RTSSP. Advantec demonstrated relevant experience, submitted a comprehensive and responsive proposal, proposed highly skilled staff for both projects and presented a thorough interview highlighting the firm's relevant experience and understanding of the overall projects.

#### **Fiscal Impact**

The project is included in OCTA's Fiscal Year 2018-2019 Budget, Strategic Planning Division, Account 0017-7519-SPF23-P57 and 0017-7519-SPF25-P57. The local agencies will provide 20 percent of the total project cost in matching funds. The remaining funding will come from SB 1 (Chapter 5, Statutes of 2017) Local Partnership Program.

#### **Summary**

Staff requests Board of Directors' approval for the Chief Executive Officer to negotiate and execute Agreement No. C-8-1910 and Agreement No. C-9-0940 with Advantec Consulting Engineers, Inc., to provide intelligent transportation systems and traffic engineering services for Garden Grove Boulevard and Los Alisos Boulevard regional traffic signal synchronization projects.

***Attachments***

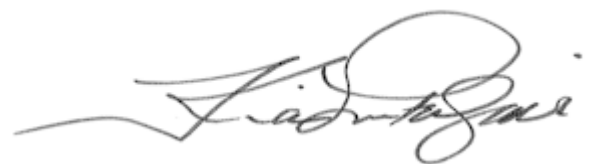
- A. Review of Proposals, RFP 8-1910 Consultant Services for Intelligent Transportation Systems and Traffic Engineering Services for Regional Traffic Signal Synchronization Project - Garden Grove Boulevard
- B. Review of Proposals, RFP 8-1910 Consultant Services for Intelligent Transportation Systems and Traffic Engineering Services for Regional Traffic Signal Synchronization Project - Los Alisos Boulevard
- C. Proposal Evaluation Criteria Matrix - Short-Listed Firms, RFP 8-1910 Consultant Selection for Traffic and Intelligent Transportation Systems Engineering Services, Garden Grove Boulevard Regional Traffic Signal Synchronization Project
- D. Proposal Evaluation Criteria Matrix - Short-Listed Firms, RFP 8-1910 Consultant Selection for Traffic and Intelligent Transportation Systems Engineering Services, Los Alisos Boulevard Regional Traffic Signal Synchronization Project
- E. Contract History for the Past Two Years, RFP 8-1910, Consultant Services for Intelligent Transportation Systems and Traffic Engineering Services for Garden Grove Boulevard and Los Alisos Boulevard Regional Traffic Signal Synchronization Projects

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