



City of Culver City

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Staff Report

File #: 20-154, **Version:** 1

Item #: C-9.

CC - Approval of an Amendment to the Existing Professional Services Agreement with Advantec Consulting Engineers in an Additional Amount Not-to-Exceed \$111,000 for Traffic Engineering Support Services for the Adaptive Traffic Control System (ATCS) Project, PL-005

Meeting Date: August 26, 2019

Contact Person/Dept: Hong Wang/Public Works

Phone Number: (310) 253.5604

Fiscal Impact: Yes ☒ No ☐

General Fund: Yes ☒ No ☐

Public Hearing: ☐ **Action Item:** ☐ **Attachments:** ☐

Commission Action Required: Yes ☐ No ☒ **Date:**

Public Notification: (E-Mail) Meetings and Agendas - City Council (08/21/19);

Department Approval: Charles D. Herbertson (08/14/19)

RECOMMENDATION

Staff recommends the City Council approve an amendment to the existing professional services agreement with Advantec Consulting Engineers (Advantec) in an additional amount not-to-exceed \$111,000 for traffic engineering support services for the Adaptive Traffic Control System (ATCS) Project, PL-005.

BACKGROUND/DISCUSSION

The City was awarded funding by Los Angeles County Metropolitan Transportation Authority (Metro) in the category of Signal Synchronization for an Adaptive Traffic Control System (Project) as part of the 2011 Metro Call for Projects competitive process. The Project includes upgrading the current central Traffic Control System (TCS) to an Adaptive Traffic Control System (ATCS), replacement of all existing Type 170 signal controllers with Type 2070 controllers, and installation of additional vehicle detectors in roadway, and upgrading of the communication network and equipment.

The ATCS is designed to dynamically control all signalized intersections in the City in real-time. Adaptive mode operations for arterial roadway network optimization will improve mobility at all times

and directly benefit motorists, goods delivery, as well as transit providers and users. The ATCS will allow for more automated operations and enhanced overall performance of the traffic control system.

On September 19, 2016, the City Council approved the professional services agreement with McCain Inc. for the implementation of Adaptive Traffic Control System (ATCS) Project, PL-005 and a professional services agreement with Advantec for System Manager and Construction Management/Inspection Services in an amount of \$160,420.

During the course of the ATCS project implementation, due to limited in-house traffic engineering staff availability and capability, Advantec was directed to take on additional responsibilities beyond the original approved scope of work to bring this project to a successful completion. The following are the additional tasks:

- The amount of hours to review the signal timing sheets at each of the 102 traffic signals submitted by McCain was significantly increased.
- Engineering support to integrate the traffic signal interconnect communication network to provide redundancy and thereby improve reliability.
- Additional level of services required to fine tune the adaptive parameters during commissioning.

On February 25, 2019, the City Council approved a contract amendment to Advantec's contract in the amount of \$70,295 for additional work as described above.

Since February 2019, the delay on McCain's contract due to persistent systemic issues and extensive fine-tuning requirements has caused Advantec's staff time and effort to increase accordingly. To date, the ATCS project is approximately 80% complete. All traffic signal controllers have been replaced with new signal baseline timing and the communication system has been upgraded. Currently, the project team is working on Transparity software improvements and traffic timing adaptive functionalities to meet the project goals and objectives. The project is anticipated to be substantially completed by early 2020.

Because of the uncertainty of the time McCain needs to resolve the software problems related to the systemic issues, it is difficult to ascertain Advantec's final cost. It is recommended that Advantec to provide the ATCS System Manager Services on a "Time and Material" basis. In the event that McCain achieves faster progress than anticipated, this estimated amount will be reduced and not be billed to the City. The table below summarizes Advantec's estimated effort to complete the project based on their contract rates:

| Month | Tasks | Estimated Cost |
|----------------|---|----------------|
| August 2019 | Work with McCain to fix offsets | \$12,000 |
| September 2019 | Adaptive Fine-tuning | \$15,000 |
| October 2019 | Adaptive Fine-tuning + Syst. Acceptance | \$30,000 |
| November 2019 | Adaptive Fine-tuning | \$12,000 |
| December 2019 | Adaptive Fine-tuning | \$12,000 |
| January 2020 | Evaluate After runs | \$10,000 |

| | | |
|---------------|------------------------|------------------|
| February 2020 | Training | \$10,000 |
| March 2020 | Review Documentation | \$10,000 |
| | Total requested budget | \$111,000 |

Once approved, the aggregate amount of the agreement with Advantec on this project would be \$341,715 (\$160,420+\$70,295+\$111,000). The increased system manager/technical assistance project management fee is roughly 16% of McCain's construction contract value of \$2.1 million, which is within industry standards.

FISCAL ANALYSIS

There are sufficient funds in the current PL-005 CIP budget (42080000.730100.PL005) to fund this contract amendment.

| Project Funding: | Amount |
|--|---------------------|
| Metro LA County Prop C (42380000.730100.PL005) | \$ 1,180,048 |
| City's required match and additional contribution (42080000.730100.PL005) | <u>\$ 1,124,243</u> |
| Total: | \$ 2,304,291* |

In accordance with the Metro funding agreement, up to \$350,000 of the total expense spent on City network-wide traffic signal timing update and synchronization task completed on the ATCS project would be charged to another Metro funded project, Network-Wide Traffic Signal Synch with VID & Arterial Performance Measurement System Project, PL-008. Additionally, funds received from Los Angeles World Airport (LAWA) as a result of the Memorandum of Understanding between Culver City and LAWA regarding Intelligent Transportation System Improvements will be used to offset the required City match for the project.

ATTACHMENT

None.

MOTION

That the City Council:

1. Approve an amendment to the existing professional services agreement with Advantec Consulting Engineers in an amount of \$111,000 for traffic engineering support services the Adaptive Traffic Control System (ATCS) Project, PL-005; and
2. Authorize the City Attorney to review/prepare the necessary documents; and

3. Authorize the City Manager to execute such documents on behalf of the City.