

CITY COUNCIL AGENDA MEMORANDUM

SUBJECT:

Resolution No. 8897 authorizing execution of the ninth amendment to the purchase agreement with Transcore ITS, LLC for the SCATS traffic adaptive signal control system in an amount not to exceed \$320,000.

FISCAL IMPACT:

This action will obligate the City for up to \$320,000 in consulting services that will be fully funded through the Traffic Computer System Upgrade project (CIP Plan No. PW-R-155). Sufficient budget exists in this program to fully fund this project.

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POLICY CONSIDERATION:

Comprehensive Plan:

Polices TR-40, TR-46 and TR-54 provide support for the use of signal coordination to facilitate traffic flow and to improve opportunities for pedestrians to safely cross streets at intersections.

BACKGROUND:

The SCATS traffic adaptive signal system being deployed in Bellevue provides many advantages over traditional signal systems. Traditional signal systems are able to provide a few different timing plans to a heavily travelled corridor per day. The timing plans typically change by the time of day, without regard to the actual traffic conditions occurring on that day. The advantage of traffic adaptive signal technology is that traffic is continuously monitored in all lanes approaching all intersections in the corridor. This traffic information is sent back via Bellevue's communication network to a central computer at the Traffic Management Center at City Hall, where the SCATS system updates the corridor's signal timing plan every signal cycle (typically 30 times per hour). This allows signal timing to be better matched to actual traffic conditions, rather than to a static signal timing plan that runs for multiple hours and that might have been designed years previously. The SCATS traffic adaptive signal system is the centerpiece of the Traffic Computer System Upgrade project (PW-R-155).

Staff is now seeking approval to amend the purchase agreement to finish the last phase (Phase 5) of the city-wide SCATS traffic adaptive signal control system implementation, and to provide support for the ongoing operation of SCATS beyond this initial city-wide implementation.

The scope of work includes purchasing the remaining needed new SCATS licenses for: 1) the completion of the initial city-wide SCATS deployment (SCATS Phase 5); and, 2) new traffic signals in Bellevue that will be installed in the near future as part of development projects or the Capital Investment Program. SCATS Phase 5 will add the remaining 32 intersections onto the SCATS system, bringing the total intersections to 197 (100% of existing

intersections). SCATS Phase 5 includes intersections on the Richards Road, Eastgate Way, and Lakemont Boulevard corridors, the three remaining WSDOT signals not currently under Bellevue operation (the Lakemont/I-90 interchange and the 142nd Place SE/I-90 Direct Access Ramp), as well as other isolated intersections throughout Bellevue.

The scope of work also includes updating all SCATS intersections to the current programming standard. To provide enhanced benefit to the public, SCATS programming standards have improved over the various SCATS phases as Transcore ITS and Bellevue staff have worked together to get enhanced functionality out of features such as the Flashing Yellow Arrow (FYA) left turns. Now that the city-wide deployment of SCATS is nearing completion, it is very important to upgrade the programming for previous phases so malfunctions are minimized and the technicians and engineers operating and troubleshooting SCATS are working from a common platform. This work item will also allow a new feature to the SCATS system, namely FYA right turns at three intersections for enhanced pedestrian safety. This new feature will be implemented at 20 intersections as part of this amendment.

Lastly, the scope of work includes the purchase and installation of Short Message Service (SMS) software so engineers and technicians can receive immediate notification of critical SCATS system failures so the system can be more quickly restored, reducing impact to the traveling public.

Schedule for deployment of the improvements listed above are as follows:

- SCATS Phase 5 – September/October 2015
- Programming standards update – early 2016
- Short message service – September/October 2015.

If approved by Council, implementation of this amendment is anticipated to conclude the major portions of work funded by the Traffic Computer System Upgrade project (CIP Plan No. PW-R-155).

Prior Council actions relating to deployment of SCATS:

On June 7, 2010, Council approved a purchase agreement for the initial phase of the SCATS traffic adaptive signal system. In November 2010, SCATS Phase 1 was successfully implemented on NE 8th Street, NE 4th Street, and Bellevue Way in the Downtown, as well as on Factoria Boulevard (31 intersections total). An additional seven intersections (four on Coal Creek Parkway and three around Bellevue Square) were implemented in May 2011 to complete the Phase 1 effort of 38 intersections total (20% complete).

On September 7, 2010, Council approved the execution of a grant agreement to accept a Transportation, Community, and System Preservation Program (TCSP) grant in the amount of \$360,000. Council also amended the CIP to place this \$360,000 grant into the Traffic Computer System Upgrade project (CIP Plan No. PW-R-155). This grant was sought specifically to advance implementation of the SCATS Traffic Adaptive signal system along the remaining corridors in the Downtown, as well as intersections in the Hospital District, consistent with corridors identified for implementation with SCATS Phase 2.

On September 6, 2011, Council approved the fourth amendment to the purchase agreement to authorize SCATS Phase 2 installations in the downtown, Hospital District and 116th Avenue.

Installation of Phase 2 was completed in January 2012, increasing the number of intersections on SCATS to a total of 69 (37% complete).

On April 16, 2012, Council approved the sixth amendment to the purchase agreement to implement Phase 3 on the important 148th Avenue corridor as well as key corridors in Overlake, Eastgate, and SE 8th/I-405. Phase 3 added 41 intersections to SCATS for a total of 110 (59% complete).

On July 2, 2012, Council approved the execution of two grant agreements to accept two federal City Safety Program grants in the total amount of \$432,900. Council also amended the CIP to place these grants totaling \$432,900 into the Traffic Computer System Upgrade project (CIP Plan No. PW-R-155). These grants were awarded to the City due to the anticipated safety benefits of adaptive signal timing, audible pedestrian systems, and countdown pedestrian signals.

On April 1, 2013, Council approved the seventh amendment to the purchase agreement to authorize SCATS Phase 4 on key corridors in Crossroads, Bel-Red, and West Bellevue including NE 20th Street, 156th Avenue NE, Bel-Red Road, and Bellevue Way SE, adding 45 intersections to the SCATS traffic adaptive system for a total of 165 (86% complete).

For reference, the eighth amendment to the purchase agreement was authorized by the Transportation Director (due to smaller agreement amount) on May 20, 2014, to begin software development work on SCATS Phase 5 while Bellevue waited for the City Safety Program grants referenced above to be obligated by WSDOT. This action enabled Bellevue to keep the entire SCATS project on schedule for completion by the end of 2015.

EFFECTIVE DATE:

If approved, this Resolution becomes effective immediately upon Council adoption.

OPTIONS:

1. Adopt the Resolution authorizing execution of the ninth amendment to the purchase agreement with Transcore ITS, LLC for the SCATS traffic adaptive signal control system, in an amount not to exceed \$320,000.
2. Do not adopt the Resolution and provide alternative direction to staff.

RECOMMENDATION:

Option 1.

MOTION:

Move to adopt Resolution No. 8897 authorizing execution of the ninth amendment to the purchase agreement with Transcore ITS, LLC for the SCATS traffic adaptive signal control system, in an amount, not to exceed \$320,000.

ATTACHMENTS:

CIP Project Description

Proposed Resolution No. 8897

AVAILABLE IN COUNCIL DOCUMENT LIBRARY:

Proposed purchase agreement amendment