City of Norman, OK

Municipal Building
Council Chambers
201 West Gray
Norman, OK 73069

Master

File Number: K-1415-76

File ID:	K-1415-76	**Type:**	Contract	**Status:**	Consent Item
Version:	1	**Reference:**	Item No. 19	**In Control:**	City Council
Department:	Public Works Department	**Cost:**	$105,000.00	**File Created:**	11/10/2014
File Name:	System Supply Agreement with Econolite			**Final Action:**	

Title: CONTRACT NO. K-1415-76: A SYSTEM SUPPLY AGREEMENT BY AND BETWEEN THE CITY OF NORMAN, OKLAHOMA, AND ECONOLITE CONTROL PRODUCTS, INC., IN THE AMOUNT OF $105,000 FOR THE IMPLEMENTATION OF AN ADAPTIVE CONTROL SIGNAL SYSTEM FOR STATE HIGHWAY 9 FROM 24TH AVENUE S.W. TO JENKINS AVENUE.

Notes: ACTION NEEDED: Motion to approve or reject Contract No. K-1415-76 with Econolite Control Products, Inc., in the amount of $105,000; and, if approved, authorize the execution thereof.

ACTION TAKEN:_____

Agenda Date: 11/25/2014

Agenda Number: 19

Attachments: Text File K-1415-76.pdf, Location Map, Norman Adaptive Quote, Supply Agreement, Econolite PR.pdf

Project Manager: David Riesland, Traffic Engineer

Entered by: michelle.rudder@NormanOK.gov

Effective Date:

History of Legislative File

Version:	Acting Body:	Date:	Action:	Sent To:	Due Date:	Return Date:	Result:
1	City Council	11/25/2014					

Text of Legislative File K-1415-76

Body

BACKGROUND: The Traffic Control Division manages traffic signal timing in a variety of ways. The simplest is an isolated traffic signal, such as the one located at the intersection of 12th Avenue NE and Franklin Road. Traffic signals such as this one operate in response to the traffic demand independent of the operation of other nearby traffic signals. In situations where the City has a series of traffic signals along a busy arterial roadway, in close proximity to each other, it becomes necessary to coordinate the operation of the signals. This is done by physically interconnecting each signal with fiber optic cable to assure that the beginning and end of the green interval from one signal to the next is programmed in a way that facilitates the flow of traffic along the more heavily traveled roadway. An example of this is the ten (10) signalized intersections on Robinson Street, between 36th Avenue NW and Porter Avenue.

Over the years, City staff has work diligently to modernize the traffic control equipment used at intersections in a coordinated corridor. This effort has allowed the City to begin considering the use of higher-level systems

such as “adaptive control”. This modernization effort has included the use of fiber optic cable to interconnect intersections, video to detect vehicular traffic, rather than in-pavement loop detection, and the most modern traffic signal controllers.

Since November of 2009, City staff has used a computerized traffic signal management system called Centracs. Traffic signals with fiber optic interconnect are included in the network. Currently, 75 of our 143 traffic signals are on the Centracs Traffic Signal Management System.

A project was requested as part of the FYE 2015 Capital Budget to implement a higher-level, traffic signal adaptive control system for State Highway 9, between 24th Avenue SW and Jenkins Avenue. This corridor, which is depicted in the attached location map, was chosen because of heavy use during special events at the University of Oklahoma. Conventional signal systems, such as the one on Robinson Street, use pre-programmed daily signal timing schedules. Adaptive signal control technology constantly adjusts the timing of red, yellow and green lights to accommodate changing traffic patterns to ease traffic congestion while maintaining coordination for good traffic flow along the major street during all hours of the day. The main benefits of adaptive signal control technology over conventional coordinated signal systems are that it can:

Continuously distribute green light time equitably for all traffic movements,
Improve travel time reliability by progressively moving vehicles through green lights,
Reduce congestion by creating smoother flow, and
Prolong the effectiveness of traffic signal timing.

On October 14, 2014, City Council approved funding in the total amount of $105,000 to fully implement an adaptive signal control system for the portion of State Highway 9, between 24th Avenue SW and Jenkins Avenue. The source of funds is the FYE 2015 Capital Fund (Account No. 050-9080-431.61-01, Project No. TC-0040 - Traffic Signal Adaptive Control System).

DISCUSSION: The adaptive traffic signal control system offered by our supplier, Econolite Control Products, is a module that can work within the existing Centracs system. For this reason, a quotation was sought from Econolite Control Products, Inc. to implement this system on State Highway 9.

Following the approval of the full funding for the adaptive system at the October 14th Council meeting, staff began working with Econolite on an agreement to implement the system. The resulting contract has been reviewed and approved by the City Attorney’s office.

If the contract is approved, this project will be completed during the first half of January 2015, which will allow the system to be utilized for the majority of the University of Oklahoma basketball season as well as Commencement activities in the spring of 2015. Of course, the new system will be in service 24 hours per day, seven days per week for all other fluctuations in traffic patterns along this portion of State Highway 9.

RECOMMENDATION: Staff recommends approval of Contract No. K-1415-76 with Econolite Control Products, Inc. to implement an adaptive signal system on State Highway 9, between 24th Avenue SW and Jenkins Avenue.