

City of Santa Fe, New Mexico

memo

Date: May 29, 2023

To: Travis Dutton Leyda, Chief Procurement Officer

Via: 
Regina Wheeler, Public Works Department Director

From: Jeanne Wolfenbarger, PE, Public Works Traffic Engineer 

Subject: Sole Source Request and Determination for Applied Information (Supplier) and Paradigm (Distributor)

ACTION:

Request for Approval of Sole Source Request and Determination for Paradigm and Applied Information to Supply and Test Cellular Modems for 12 Traffic Signals on St. Francis Drive for a cost of \$39,900.

BACKGROUND AND SUMMARY:

The City of Santa Fe Traffic Operations Department needs remote access to 120 traffic signals within the City of Santa Fe for efficiency of traffic management and operations. This purchase of 12 cellular modems for traffic signals on St. Francis Drive represents the first phase of this effort. In February, 2023, The Public Works Department had also met with Edward Duran of the ITT Department separately to make sure that there were no issues with Public Works spending their own funds going through a private VPN on a cloud-based server before moving forward with this purchase.

This is a very unique type of purchase that has a very specific set of capabilities that are outlined in the attached "Key Systems Features for Remote Network Unit" sheet from Applied Information, outlining the level of communication, remote monitoring platform, and the connected vehicle smartphone application. Not all cellular modem services carry these capabilities which involve specifically diagnosing traffic signal malfunctioning from afar, being able to monitor traffic control functions, or change traffic signal timing for changing traffic conditions. However, what makes unique for justifying the Sole Source is the following application that any road user can download for free with the purchase of the cellular modems:

TravelSafely, the smartphone application provides connected vehicle messages to mobile phones, including but not limited to SPaT (Signal Phase and Timing), BSM (Basic Safety Messages), PSM (Personal Safety Messages), and TIM (Traveller Information Messages and provide visual and audible connected vehicle message notifications/alerts/warnings. (Please note Patent 11,069,234 which covers this feature in the attached letter from Applied Information, the supplier.)

If granted, the Public Works Traffic Operations office will move forward with the purchase as part of the first phase to install cellular modems for the traffic signals. Then, in the future, there will be pursuit of installing the rest of the cellular modems with further coordination as necessary.

PROCUREMENT METHOD:

Sole source as per NM Stat § 13-1-126.1 (2020).

BUDGET INFORMATION:

FUND NAME: Operations/Maintenance

ORG: 1000415 **OBJ:** 530200

ATTACHMENTS:

Exhibit A – Sole Source Justification and Determination Form

Exhibit B – Applied Information Sole Source Letter

Exhibit C – Paradigm Requisition, Quote, and Buyboard Update

Exhibit D – “Key Systems Features for Remote Network Unit” from Applied Information



City of Santa Fe, New Mexico



SOLE SOURCE REQUEST AND DETERMINATION FORM

This sole source request form **must** be submitted to the City of Santa Fe, Purchasing Division for authorization, determination and processing by the Chief Procurement Officer (CPO).

Please ensure to complete this form in its entirety - () must be completed.*

*Date: 03/24/2023

*Prepared By: Jeanne Wolfenbarger

*Title: Traffic Engineer

*Vendor Name: Paradigm Traffic Systems & Applied Information (supplier)

*Address: 2201 East Division Street

*City: Arlington

*State: Texas

*Zip Code: 76011

*Description of Goods/Service to be procured:

*Estimated Cost:

\$ 39,900.00

Term of Contract:

One (1) to Four (4) year from award

4

*Sole Source Request Justification Questions 1-3.

1. Explain the purpose/need of purchase. Ensure to include a thorough scope of work for the services, construction or items of tangible personal property (if this is an amendment request to an existing contract, attach current contract).

The purpose for the purchase is to install cellular modems for 12 traffic signalized intersections along the busy corridor of St. Francis Drive within the City of Santa Fe. Installation involves minimal time in the field and will not require construction or traffic control. Then the Glance software from Applied Information (the supplier) will be set up by Paradigm and be connected to these modems through a private VPN on a cloud-based server at no additional cost. Paradigm will test to make sure connection with the cellular modems is working and that the signals can be monitored remotely.

Once this is in place, this will allow Traffic Operations staff to view traffic signal malfunctions, traffic controller properties and traffic signal timing remotely without having to make visits to the field. Then timings can be adjusted remotely if necessary, and malfunctions can possibly be diagnosed remotely. Additionally, alerts can be set up to be sent for any malfunctioning. In addition to safety benefits to staff and road users, this cuts down tremendously on staff time as well as delay time for vehicles if signal is not operating properly.

With the purchase of the cellular modems, the TravelSafely app can be downloaded for free to a smartphone by anybody within the vicinity to have alerts to surroundings while driving, bicycling or walking. Use of this application could help to keep road users safe and accidents from happening.



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2. Provide a detailed explanation of the criteria developed and specified by the department as necessary to perform and/or fulfill the contract.

The contractor has affirmed sole source for the services, construction or items of tangible personal property (*Attach memo from vendor*). Provide documentation of due diligence for other possible vendors/contractors to provide the requested services/goods proved unsuccessful; or

Other: explanation of the reasons, qualifications, proprietary rights or unique capabilities (*unique and how this uniqueness is substantially related to the intended purpose of the contract*) of the prospective contractor that makes the prospective contractor *the one source* capable of providing the required professional service, service, construction or item(s) of tangible personal property. (Please do not state the source is the “best” source or the “least costly” source. Those factors do not justify a “sole source.”) *Unique and how this uniqueness is substantially related to the intended purpose of the contract.*

The unique capabilities of the remote network unit associated with the cellular modems are demonstrated in the attached Key System Features sheet from Applied Information. Some system capabilities are further explained in Section 1 and Section 3 of this form. Please note the US Patent 11,069,234 in the attached memo which relates to the unique TravelSafely app.

In the future, with the purchase of the cellular modems, it also opens up the opportunities to move forward with additional purchases as described by US Patents 11,055,991 and 11,205,345 in the memo.

3. Explain why other similar professional services, services, construction or item(s) of tangible personal property *cannot* meet the intended purpose of the contract.

Other cellular modem services that have been investigated do not allow the capability to demonstrate a wide range of traffic controller qualities and functions such as signal malfunctions, temperature, humidity, and voltage along with signal timing using a remote application.

No other platform offers anything similar to the Travel Safely smart phone application along with SPaT messaging that this platform does. As mentioned in Section 1, this allows road users (drivers, bicyclists, and pedestrians alike) to receive alerts regarding their surroundings including school zone speeding, presence of other vehicles, bicyclists, and pedestrians or emergency vehicles.

The other item that is unique is the over-the-air software and security updates as part of the remote connection and Glance Software from Applied Information.



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***Approvals:**

Based on the above facts, the City of Santa Fe Purchasing Officer has made the determination that the justification for a Sole Source procurement is in accordance with the State Procurement Code, Section 13-1-126 Sole source procurement., NMSA 1978 and shall be posted for a 30-day period prior to award.

Travis Dutton-Leyda

Mar 31, 2023

Travis Dutton Leyda, CPO
Purchasing Officer for the
City of Santa Fe

Date

Pursuant to the State Procurement Code, Section 13-1-126 Sole source procurement., NMSA 1978, the 30-day posting period of the Notice of Intent to Award this Sole Source request was met and no obligation to the award to the above referenced contractor were received. *This Sole Source determination will be valid for a period of one (1) year from the date of the award.*

Travis Dutton Leyda, CPO
Purchasing Officer for the
City of Santa Fe

Date

***Required Attachments:**

****Letter from Contractor acknowledging they are the only source (on their business letterhead and signed by the head of business or financial operations),***

****Quote from sole source Contractor***

****Agenda Item to be presented to City Council if over \$60,000 for Professional Services and \$60,000 for Goods and Non-Professional Services***



March 27, 2023

Santa Fe, NM

To Whom It May Concern,

This letter is in regard to the city of Santa Fe, NM's request for sole source designation, concerning Applied Information's line of systems. This includes the AI-500-052 and all of Applied Information offerings including Glance software, Glance Preempt and Priority Control System, remote communications, cabinet monitoring, school beacon controllers, ITS devices and ancillary matched component equipment.

Please be advised that Paradigm Traffic Systems, Inc. is the only authorized Applied Information distributor of traffic products for the city of Santa Fe, New Mexico. Paradigm Traffic Systems, Inc. has been authorized for product training, technical support, sales, warranty and overall support of Applied Information's products.

In addition, Applied Information has been granted three patents by the U.S. Patent and Trademark Office to date, including U.S. Patents 11,069,234, 11,055,991, and 11,205,345.

U.S. Patent 11,069,234 entitled Systems, Methods, and Devices for Communication Between Traffic Controller Systems and Mobile Transmitters and Receivers provides for smartphones with the Applied Information's TravelSafely app, and other in-vehicle computers, to communicate with properly equipped traffic control devices to deliver traveler information and safety messages such as red-light running and speeding in active school zones. The patent provides for the communication of safety messages between smartphones with TravelSafely enabling pedestrians and cyclists to be warned of a potentially dangerous encounter with a vehicle. In addition, the patent covers the unique ability to determine what lane a vehicle occupies and how that relates to the traffic signal's phase, for example knowing if the vehicle is in a turning lane and providing a "Get Ready for Green" message for that lane. Additionally, the app calculates the trajectory and velocity of the vehicle in relation to the traffic signal to warn of potential red light running.

U.S. Patent 11,055,991 entitled Systems, Methods, and Devices for Communication Between Traffic Controller Systems and Mobile Transmitters and Receivers provides for changing the state of one or more traffic signals using both cellular communications and direct radio signals from a vehicle. The technology can be used to provide first responders with automatic green lights at intersections, thus reducing response times by about 18 percent. Current use of the technology involves fire apparatus, ambulances, snowplows and police vehicles, and is deployed in cities in the U.S. and Canada. The patent also covers the use of providing green light priority to other vehicles such as transit and school buses and delivery vans. Properly equipped automobiles can communicate that they have arrived at a red light providing the traffic signal controller with additional information to reduce wait times.

U.S. Patent 11,205,345 entitled Systems, methods, devices, and apparatuses for intelligent traffic signaling - designed to improve safety when entering a roadway or crossing lanes of oncoming traffic such as at an unprotected left turn - describes systems that include sensors to detect and calculate the speed of crossing or oncoming traffic. Algorithms incorporated in the patented systems can calculate the time to arrival, or gap, and use signs and flashing lights to provide a visible signal when it is safe or unsafe to turn. The technology can be incorporated into connected vehicle applications to warn the driver in the vehicle with audible and additional visual alerts using cellular vehicle to everything (C-V2X). The technology can also be integrated into autonomously controlled vehicles in the future.

Sincerely,

A handwritten signature in black ink, appearing to read 'P. Ashley', with a stylized flourish at the end.

Peter Ashley
VP Business Development
Applied Information Inc.



P.O. Box 5508 – Arlington – Texas – 76005-5508
 817.831.9406 – fax 817.831.9407
 Estimating@Paradigmtraffic.com
 www.paradigmtraffic.com

QUOTATION
REVISED 2-28-23

TO: Paradigm Traffic Systems
 2201 East Division Street
 Arlington, Texas 76011
 attn: Estimating Department
 ph: 817-831-9406
 fx: 817-831-9407

RFQ: CITY OF SANTA FE, NEW MEXICO
 Various
 LETTING DATE: 2/20/2023

DATE	SLSMN	Delivery Date	FREIGHT	SHIP VIA	F.O.B	TERMS	QTE NUMBER
2/20/2023	RK	90 - 120 Days ARO	PPD & Allowed	Best Way	Destination	Net 30	Q31745RK
ITEM	QTY	DESCRIPTION				UNIT PRICE	TOTAL PRICE
PLEASE SEE NOTES THROUGHOUT THIS QUOTE This quote is valid for 60 days. Thereafter it is subject to change without notice.							
1	12	CELLULAR MODEM <i>*NOTE* Cellular Modem consists of Applied Information AI-500-052 with AC Power Supply Kit, Glance License, Configuration and 5 year Connectivity & Service plan with passthrough, Integration, Installation and Training</i> <i>*NOTE* Video not included.</i>				\$3,325.00	\$39,900.00
For any questions, comments or concerns, Please email us at : Estimating@Paradigmtraffic.com							
						TOTAL	\$39,900.00

***This quote is valid for 60 days. Thereafter it is subject to change without notice.**
 *Thank you for the opportunity to submit a proposal to you. Please reference this quotation (by QTE number) when placing order. If you have any questions, please call or send a fax to me.
 *When sending RFQ's, PO's or RFI's, please send to Estimating@paradigmtraffic.com

OFFERED BY:

Robert Kelly
 Paradigm Traffic Systems, Inc.
Estimating@paradigmtraffic.com
 Federal ID# 75-2520341