

CITY OF SANTA ROSA  
CITY COUNCIL

TO: MAYOR AND CITY COUNCIL  
FROM: ROBERT M. SPRINKLE, DEPUTY DIRECTOR - TRAFFIC  
ENGINEERING, TRANSPORTATION AND PUBLIC WORKS  
SUBJECT: PROFESSIONAL SERVICES AGREEMENT WITH MCCAIN, INC.  
FOR ADVANCED TRAFFIC MANAGEMENT SYSTEM

AGENDA ACTION: RESOLUTION

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RECOMMENDATION

It is recommended by the Transportation and Public Works Department that the Council, by Resolution, approve a Professional Services Agreement with McCain, Inc. for a traffic signal controller management system in an amount not to exceed \$169,354.

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EXECUTIVE SUMMARY

This agreement provides Traffic Engineering and the Electrical Section with the software, support and services for the implementation and integration of the "Transparity" advance traffic management system. It allows the City to transition from our discontinued Type 170 traffic signal controls to Type 2070 traffic signal controllers. Transparity will replace an aging central software system at up to 250 traffic signal locations within the City and allow for continued operation and communication with our existing traffic signals during this transition.

Additionally, this agreement provides essential communication hardware and 10 traffic signal controllers that will upgrade the existing adaptive signal operations on Santa Rosa Avenue between the intersections of Burt Street and Maple Avenue with the Transparity adaptive system.

BACKGROUND

Transportation and Public Works is using a traffic surveillance system that is based on traffic management features that are over 25 years old. This current system, QuicnetPro, communicates with Type 170 traffic signal controllers in the field that were developed in the 1970's. Type 170 controllers are being phased out nationwide and are currently only being manufactured by one company. The industry is transitioning to

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Advance Traffic Controllers such as the Type 2070. The City has migrated approximately 60 of our 205 signalized intersections to the Type 2070 controller.

The Transparency central system allows remote access to the signalized traffic system where technicians can continue to troubleshoot problems, modify signal timing, and run diagnostic reports to pin-point issues that may arise in real-time. It also allows the user to measure performance for individual intersections and coordinated systems, analyze pedestrian, vehicle, emergency vehicle preemption, and transit preemption, modify phase sequencing and patterns in response to traffic conditions that ultimately will reduce congestion and increase efficiency. The Transparency central system also has the capability to interface with advance features at intersections including connected vehicle functions where the traffic signal communicates information to vehicles. Although this project is not taking the step to integrate with connected vehicles, it allows the City for that capability in the future.

PRIOR CITY COUNCIL REVIEW

None.

ANALYSIS

The Deputy Director - Traffic Engineering, Assistant Engineer - Traffic Engineering, and the Supervising Traffic Signal Technician all participated in the evaluation of several central software systems. The evaluation process involved inviting major manufacturers including Trafficware, McCain, Siemens, Econolite, and Intelight to provide a demonstration of their central and local controller software. All but Econolite responded to our initial invitations and provided demonstrations.

Each manufacturer provided the City with an overview of their product, a demonstration on translating signal timing of one of our more complex intersections into their system and navigated through their central software dashboard interface. Additionally, all manufacturers loaned the City a stand-alone PC or laptop hosting their Advance Traffic Management System (ATMS) software so that we could evaluate it "hands-on" in our office, connected to a local traffic signal controller.

Transportation and Public Works, Traffic Engineering Division and the Electrical Section have evaluated the major manufacturers of Advanced Traffic Management Systems (ATMS) central software solutions. During this evaluation, McCain Transparency ATMS was determined to be the best solution moving forward. Because we already utilize a McCain QuicnetPro system, the McCain Transparency TMS has backwards compatibility in communication with its prior controller software versions. This allows the City to continue to communicate with all existing intersections controllers without a system wide upgrade of nearly 150 remaining signalized intersections. Upgrading the central software to Transparency provides additional information to our Traffic Engineering staff and traffic signal maintenance staff to aid in more efficient operations as well as

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maintaining the software on an up to date server operating system. It allows the City to upgrade our traffic signal controllers while maintaining critical communication to the entire signal system.

FISCAL IMPACT

Funding for this project has been identified through two sources: the Technology Upgrades account JL17003 will fund the software upgrade totaling \$89,325 of General Fund, and the Intelligent Transportation System account JL17156 will fund the communication equipment, adaptive licenses, and controller upgrades for the adaptive system totaling \$80,029 of Capital Improvement Fees.

ENVIRONMENTAL IMPACT

This action is exempt from the California Environmental Quality Act (CEQA) because it is not a project which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment, pursuant to CEQA Guideline section 15378.

BOARD/COMMISSION/COMMITTEE REVIEW AND RECOMMENDATIONS

Not Applicable

NOTIFICATION

Not Applicable

ATTACHMENTS

- Resolution/Professional Services Agreement with McCain, Inc.

CONTACT

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