

★ **Roll Call Number**

**Agenda Item Number**

24

Date June 23, 2008

WHEREAS, the City of Des Moines Police Department is applying for a grant from the U.S. Department of Justice, Office of Community Oriented Policing Services in the amount of \$140,295, to be utilized for the voice communications project to improve interoperability; and

WHEREAS, the grant period is anticipated to be from October 1, 2008 through September 30, 2011; and,

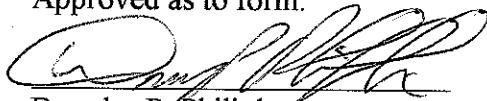
WHEREAS, there is no cash match requirement for this grant,

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Des Moines, Iowa, that the 2008 COPS Technology Grant application to improve voice communications through interoperability from the Department of Justice, Office of Community Oriented Policing Services is hereby approved, with the Mayor authorized to sign on behalf of the City, with the City Clerk to attest to the mayor's signature, and the City Manager or his designee is authorized and directed to take any and all steps necessary to submit the grant application and carry out the terms and conditions of the grant award.

(Council Letter Number 08-376 attached)

Moved by \_\_\_\_\_ to approve

Approved as to form:



Douglas P. Philip  
Assistant City Attorney

COUNCIL ACTION	YEAS	NAYS	PASS	ABSENT
COWNIE				
COLEMAN				
HENSLEY				
KIERNAN				
MAHAFFEY				
MEYER				
VLASSIS				
<b>TOTAL</b>				
MOTION CARRIED		APPROVED		
Mayor				

**CERTIFICATE**

I, DIANE RAUH, City Clerk of said City hereby certify that at a meeting of the City Council of said City of Des Moines, held on the above date, among other proceedings the above was adopted.

IN WITNESS WHEREOF, I have hereunto set my hand and affixed my seal the day and year first above written.

\_\_\_\_\_  
City Clerk

**2008 COPS TECHNOLOGY GRANT**  
City of Des Moines, Iowa Police Department  
**PROGRAM NARRATIVE**

Date \_\_\_\_\_

Agenda Item 24-1

Roll Call # \_\_\_\_\_

*The 2008 COPS Technology Grant will be used to compliment the Des Moines Metropolitan Statistical Area (MSA) interoperability project funded in part by a 2005 COPS Interoperability Grant.*

**Problem Identification and Justification**

Law Enforcement, Fire, Emergency Medical Services (EMS) and Public Works for the Des Moines, Polk County Metropolitan Statistical Area (MSA) places a high priority on improving interoperability. We envision through well coordinated deployment of new technologies, the ability of public safety agencies to talk across disciplines and jurisdictions by way of radio voice communication with one another on demand, in real time, when needed, dramatically improving emergency preparedness and response capabilities.

The City of Des Moines received a 2005 COPS Interoperability Grant to assist in the expansion of our overall efforts for emergency preparedness and enhance the functionality of day-to-day operations. The proposal planned for the expansion of our current single channel system that is overtaxed and unable to support the twenty-five law enforcement agencies and eighteen fire departments by increasing our current level of interoperability to a multi-channel system. The \$140,295 available by the 2008 COPS Technology grant will provide additional funds towards this crucial interoperable project.

Initial cost estimates of this project were \$5,050,120. The City was awarded the 2005 COPS Interoperability Grant in the amount of \$3,000,000 with a 25% match for a total of \$4,158,868. The COPS Technology grant award will fund infrastructure equipment and technology that had to be scaled back.

The Des Moines Metropolitan Statistical Area (MSA) is comprised of the cities of Adel, Alleman, Altoona, Ankeny, Bondurant, Clive, Des Moines, Elkhart, Grimes, Indianola, Johnston, Mitchellville, Norwalk, Pleasant Hill, Polk City, Runnells, Sheldahl, Urbandale, Waukee, West Des Moines and Windsor Heights, which encompasses the counties of Polk, Dallas and Warren in central Iowa. Des Moines, the state capitol, is the largest in population with 198,682. The Des Moines MSA has a combined population of more than 463,000.

The problematic issues our public safety agencies experience are that of interagency connectivity of the numerous disparate systems and multiple points of failure.

Public safety agencies in the Des Moines MSA currently have interoperability capability facilitated via a linker system. Some of the equipment that makes up the linker system dates to 1995. The system provides single channel availability for all users. The system as designed was made locally from a variety of equipment not in use at the time. While the single channel is functional, it lacks current technological qualities and capabilities for the support of multiple users in times of critical incidents. This channel, the Local Intergovernmental Channel (LINC) was established between the public safety agencies in 2001. For the first time, a permanent radio patch was established between UHF, VHF and 800 MHz in public safety systems, which

## 2008 COPS TECHNOLOGY GRANT

City of Des Moines, Iowa Police Department

### PROGRAM NARRATIVE

improved voice radio communications. The LINC channel made available a system that for the first time provided a shared radio channel for all Polk County metropolitan law enforcement and the Iowa State Patrol.

While the single channel is functional, it lacks current technological qualities and capacities for the support of multiple users in times of critical incidents. Another significant problem with the current LINC channel design is the limited coverage. If a user is outside their agency coverage zone, they will not be able to access the LINC channel. The system takes time to connect the frequencies. This delay in voice transmissions is oftentimes incomplete, interrupted or not heard at all, causing retransmissions. The frequency is, in effect, community property. If one agency is using the channel for one incident, another agency cannot use it or would have to share the channel during multiple critical incidents. In addition, the coverage is insufficient and there are dead zones in which coverage is sporadic or non-existent. Critical incidents oftentimes require multiple entities from numerous jurisdictions in an emergency. A very recent example of this is the flooding in the City of Des Moines where the National Guard, Corp of Engineers, fire, EMS, city law enforcement, county law enforcement and federal agencies such as the Drug Enforcement Agency were working in unison to assist in traffic control, sandbag operations and evacuation of a large area of the city.

#### **Project Goals and Objectives**

The deployment of the interoperable communications equipment outlined in the 2005 COPS Interoperability grant will ensure emergency preparedness through communication, coordination, and the sharing of vital information among our public safety agencies. The project will provide interoperability among state and local public safety communities and promote multi-jurisdictional and interoperable partnerships with neighboring localities.

The proposal will utilize four UHF and four VHF interoperability channels in conjunction with four talk groups in two 800 MHz systems to establish four interagency channels for public safety use in the greater Polk County area. Two of these channels will be established as fixed point systems to provide mobile service to the larger area. One of these will be used as a call or hailer channel.

The other two channels will be incorporated into eight portable repeaters that will be installed in various police and fire command vehicles as well as at the Des Moines International Airport for use at location specific events where multiple agencies and disciplines are involved but coverage requirements are limited.

Many of the legacy radios in public safety service will not operate on the 12.5 KHz bandwidth of the four UHF and VHF interoperability channels. These radios will have to be replaced.

The City of Des Moines has four radio systems that are adjacent to the four UHF interoperability channels. These systems will have to be relocated and equipment replaced.

## **2008 COPS TECHNOLOGY GRANT**

City of Des Moines, Iowa Police Department

### **PROGRAM NARRATIVE**

The backbone of the project will be the infrastructure to support the new network. Radio base stations or transmitters and receivers for each frequency are the meat and potatoes of the project. It is our goal to establish multiple transmitter sites throughout the county to provide optimum communications capabilities. Radio receivers allow for the communications connectivity between officers on the street and the communications center. Once the design propagation analysis is completed by the consultant to determine coverage areas, we will have a better idea of the optimum number of transmitters and receivers required to reach our goal of improved interoperability.

This project will greatly increase the voice radio interoperability of police, fire and emergency medical services in the Des Moines MSA and improve public safety service to the community.

#### **Community Policing Strategies/Crime Prevention Activities**

The 2008 COPS Technology grant will provide the ability of public safety agencies to talk across disciplines and jurisdictions by way of radio voice communication with one another on demand, in real time, when needed, dramatically improving emergency preparedness and response capabilities. Partnerships with agencies throughout the Des Moines/Polk County Metropolitan area have consistently demonstrated a strong commitment to public safety. These government entities, understanding the importance of cooperation have formed coalitions and consolidated in an effort to increase productivity and deliver better cost-effective services to the public. One of the most important coalitions is the Metropolitan Advisory Council.

The Metropolitan Advisory Council (MAC) is comprised of a representative from each governmental entity mentioned above. The MAC searches for new and innovative methodologies for a variety of cooperative endeavors and has a history of thorough and rigorous planning. This coalition encourages acceptance of new technologies and operating methods.

Successful joint public safety initiatives include the Ankeny Police Department and Polk county Sheriff's Office Dispatch consolidation; the WestCom consolidation combining the Dispatch Centers of the Clive, Urbandale and West Des Moines Police Departments; the Mid-Iowa Narcotics Enforcement (MINE) Task force consolidation; and the county wide Fire Channel interoperability upgrade and the installation of mobile data computers. These partnerships have a demonstrated history of working together on issues of mutual interest, especially in the area of emergency preparedness and public safety.

#### **Implementation Plans**

RCC Consultants, Inc. (RCC), an international telecommunications consulting, integration, and outsourcing firm located in Woodbridge, New Jersey, was selected through competitive bid to provide professional engineering and consulting services for this project. A project kickoff and orientation meeting with representatives from the various affected public safety agencies had been scheduled for June 16, 2008. The meeting had to be cancelled due to the focus of law enforcement agencies in Polk County to the disastrous flooding.

## **2008 COPS TECHNOLOGY GRANT**

City of Des Moines, Iowa Police Department

### **PROGRAM NARRATIVE**

RCC will be reviewing the City of Des Moines' interoperability project as well as the State of Iowa interoperability project and County of Polk communications recommendation. Interviews will be conducted by RCC personnel to collect information regarding location of dispatch facilities in the MSA, radio frequencies used, location of various base stations and antenna heights, areas of existing radio coverage, FCC call signs, quantities of mobile and portable radio units in use now and forecasted in the future, system problems currently experienced and anticipated future needs and requirements. Coverage maps depicting expected system performance will be provided.

Currently, it is anticipated the initiation of the design work will commence in July, 2008. Design completion and equipment identification will follow in late September to early October. The Request for Proposals for this equipment will be developed for distribution to the City's purchasing officials. At this time, we will be able to determine funding shortfalls in the COPS Interoperability grant and focus the COPS Technology grant towards the necessary, but unfunded, equipment. We project the completion of the purchasing process to conclude in February, 2009. Equipment installation will commence in March, 2009. The entire project is slated to be completed in September, 2009.

#### **Evaluation Plan/Effectiveness of Program**

Successful implementation of this interoperability project will improve the communication capabilities across multiple disciplines and jurisdictions by law enforcement, fire, Emergency Medical Services (EMS) and public works agencies in the Des Moines Metropolitan Statistical Area to enhance emergency preparedness and response capabilities. The ability to inter-operate by way of radio voice communication with one another on demand, in real time across UHF, VHF and 800 MHz public safety modes will improve public service and enhance public safety to the community.

**2008 COPS TECHNOLOGY GRANT**  
City of Des Moines, Iowa Police Department  
**EXECUTIVE SUMMARY**

Date \_\_\_\_\_

Agenda Item 24.2

Roll Call # \_\_\_\_\_

The City of Des Moines received a 2005 COPS Interoperability Grant to assist in the expansion of our overall efforts for emergency preparedness and enhance the functionality of day-to-day operations in the Des Moines Metropolitan Statistical Area. The proposal plans for the expansion of our current single channel system that is overtaxed and unable to support the twenty-five law enforcement agencies and eighteen fire departments by increasing our current level of interoperability to a multi-channel system. The \$140,295 available by the 2008 COPS Technology grant will provide additional funds towards this crucial interoperable project.

Initial cost estimates of this project were \$5,050,120. The City was awarded the 2005 COPS Interoperability Grant in the amount of \$3,000,000 with a 25% match for a total of \$4,158,868. The 2008 COPS Technology grant award will fund infrastructure equipment and technology that had to be scaled back.

The Des Moines MSA is a three county area (Polk, Warren and Dallas) in central Iowa with a population of 463,000. The proposal being submitted will primarily serve police, fire and EMS agencies in Polk County. However, the jurisdictions of several cities in Polk County extend into Warren or Dallas County. In addition, the improved interoperability service being proposed will be available to adjacent jurisdictions.

Public Safety agencies in the Des Moines area operate on VHF, UHF frequencies and one privately owned SmartNet 800 MHz trunking system and one commercial 800 MHz EDACS system. Our plan is to create an interoperability network by linking together the interoperable frequencies in the VHF, UHF and 800 MHz bands. This will allow each agency to retain their investment in their current communications infrastructure.

The backbone of the project will be the infrastructure to support the new network. Radio base stations or transmitters and receivers for each frequency are the meat and potatoes of the project. It is our goal to establish multiple transmitter sites throughout the county to provide optimum communications capabilities. Radio receivers allow for the communications connectivity between officers on the street and the communications center. Once the design propagation analysis is completed by RCC Consultants, Inc. to determine coverage areas, we will have a better idea of the optimum number of transmitters and receivers required to reach our goal of improved interoperability. The 2008 COPS Technology Grant award of \$140,295 will be used to purchase transmitters and receivers to achieve optimum communications performance in the Des Moines Metropolitan Statistical Area.

2008 COPS TECHNOLOGY GRANT  
City of Des Moines, Iowa Police Department  
BUDGET NARRATIVE

Date \_\_\_\_\_

Agenda Item 24-3

Roll Call # \_\_\_\_\_

**C. EQUIPMENT/TECHNOLOGY**

*Receivers*

Development of the infrastructure to support the interoperability network will require the purchase of base stations or transmitters and receivers to establish multiple receiver sites throughout Polk County for improved communications capabilities. The RCC Propagation Study will determine the total number required in order to provide optimum coverage. We anticipate requiring thirteen additional receivers. **Total for Receivers: \$65,000.**

*VHF Base Station*

VHF base station will provide improved communication capabilities for agencies using this band width. The RCC Propagation Study will determine the total number required in order to provide optimum coverage. We anticipate requiring one additional VHF base station. **Total for VHF Base Station: \$12,000**

*UHF Base Station*

UHF Base station will provide improved communication capabilities for agencies using this band width. The RCC Propagation Study will determine the total number required in order to provide optimum coverage. We anticipate requiring one additional UHF base station. **Total for UHF Base Station: \$18,000**

*800 MHz Base Station*

800 MHz base station will provide improved communication capabilities for agencies using this band width. The coverage area of this band width is not as extensive as with UHF and VHF. The RCC Propagation Study will determine the total number required in order to provide optimum coverage. We anticipate requiring two additional 800 MHz base stations. **Total for 800 MHz Base Station: \$45,295**

**GRAND TOTAL REQUESTED: \$140,295**