

 <p style="text-align: center;"><b>Council Communication</b> Office of the City Manager</p>	<b>Date:</b> May 24, 2010
	<b>Agenda Item No.</b> 39 <b>Roll Call No.</b> <u>10-828</u> <b>Communication No.</b> <u>10-273</u> <b>Submitted by:</b> John Tekippe, Fire Chief

**AGENDA HEADING:**

Approving the purchase of three (3) Bullard thermal imaging cameras.

**SYNOPSIS:**

Recommend Council approval to purchase three (3) Bullard thermal imaging cameras from Heiman Fire Equipment (2320 Northwest Blvd., Ashton, IA 51232, Jim Heiman, Owner/President). Two of these cameras are for the Hazardous Materials Team and will be funded by Polk County. The third is for operations and is needed to replace a thermal imager that is no longer serviceable.

**FISCAL IMPACT:**

Amount: \$26,992

Funding Source: \$18,638 GE001 FIR040100 - FY2011 Recommended Operating Budget, page 124  
\$ 8,300 GE001 FIR040700 - FY2011 Recommended Operating Budget, page 127

**ADDITIONAL INFORMATION:**

The Bullard T320TT & T4MAX thermal imaging cameras (TIC) meet the needs of the Fire Department better than any other available TIC. They function similarly to 4 Bullard thermal imagers already in use on suppression apparatus. Their high resolution picture along with the thermal throttle feature and yellow-orange-red colorization scheme above 500 degrees Fahrenheit make it both easy to interpret and extremely useful in a number of applications. The T4Max model provides a zoom lens and a larger viewing screen, necessary for Hazmat operations in addition to all of the other features of the T320TT. The durability of Bullard TIC's is well-documented from a historical perspective, and a turnaround time of 48 hours is guaranteed for any repairs that may be necessary. Finally, the training opportunity offered along with the purchase of Bullard cameras is unmatched.

The Fire Department is requesting to purchase three replacement Bullard thermal imaging cameras. Thermal imaging cameras (TIC) are used for numerous operations including search and rescue, fire suppression, search of hidden fire, Hazardous Materials, and other operations. Two of the cameras to be purchased, Model T4MAX, are for the Hazardous Materials Team and will be funded by Polk County. The third, Model T320TT, is for suppression services and is needed to replace a thermal imager that is no longer serviceable. We have also budgeted in the CIP for the purchase of several additional replacement T320TT cameras in FY2011. Following extensive research, Bullard does not provide the least expensive

cameras; however, the higher price for these particular thermal imaging cameras can be justified in the following ways:

### HIGH RESOLUTION

The Bullard model is a high resolution camera; its high quality picture takes advantage of improved technology and directly and positively impacts operations. When tested under high heat conditions such as those found in structure fires, the Bullard camera provided a crisp, clear representation of scene details, other firefighters, and fire victims in the field of view. In the event someone, whether another firefighter or a citizen, is unable to exit the structure of a fire event, the ability to locate that victim quickly and remove them from the hazardous atmosphere is critical. In this scenario, time is of the essence, and we believe the Bullard TIC will allow us to locate and remove victims more quickly than any other camera currently available.

### THERMAL THROTTLE

The T320TT Bullard TIC has a feature known as an Electronic Thermal Throttle (ETT). This option utilizes a gradient blue color and operates between 0-500 degrees Fahrenheit. The blue color is markedly different than any other color that will be presented on the screen and therefore cannot be confused with the logical color progression typically seen during a structure fire. The entire temperature spectrum has colorization capabilities, including gradient yellow, orange, and red at temperatures greater than 500 degrees Fahrenheit. The ETT will lock on to the hottest item in the field of view. None of the competitor's models have this unique ability. The ETT feature is very helpful during overhaul when looking for hidden fires, or when looking for a malfunctioning light ballast. The ETT offered by Bullard is an extremely useful application because it allows firefighters to locate the hottest object relative to all others in any given area.

### Hazmat Model T4MAX

The Hazardous Material team requires the Model T4MAX, versus the T320TT, because of the following additional features. The camera has all the features of the T320TT plus a zoom lens and a larger viewing screen. The larger screen and zoom feature will make it both safer and easier for our personnel dressed in a Level A Hazmat suit to view the targeted item. The T4MAX will allow us to look at a vessel leaking a hazardous substance from a greater distance thereby making it safer for hazmat personnel. Because of the dangers involved in high pressure rail and tank cars, the farther we can get from the vessel, the safer our personnel will be when making an assessment. This camera will also allow us to view our personnel operating down range at night during a hazardous materials emergency.

### 48-HR GUARANTEE

Bullard has been making thermal imaging cameras since 1998, and their entire line of thermal imagers is known for being the most durable on the market. Their TIC's come with a 2-year warranty and Bullard guarantees a 48-hour turnaround for repairs. This is an important assurance for the fire department because this valuable piece of suppression equipment should not be out of service for long periods of time. Also, it is cost prohibitive to keep one or more spare thermal imagers.

### STANDARDIZATION

The Fire Department already has 4 Bullard thermal imaging cameras purchased in late 2003. These cameras have significantly outperformed the Scott TIC's that we have been concurrently using. The Scott cameras are over 10 years old now and are relatively obsolete when compared to the technology used today. Repairs, if possible to make, are very expensive. The Bullard cameras are very simple to operate. There is only one switch to activate the unit, while other brands often have 2-3 switches that

serve different purposes. Pressing the on/off button once is all that is necessary. There are no additional color palettes for the operator to scroll through that can create confusion.

The safety of our firefighters and the citizens we serve is an immediate and ongoing priority at *every* incident. From a safety standpoint, all Bullard TIC's function similarly, and all of our firefighters are already familiar with their use. By standardizing equipment, particularly in the use of TIC, we provide our members with an additional layer of safety. It is common for firefighters to be moved to different stations throughout the City on a day-to-day basis to cover staffing needs. If our cameras are all the same and function in the same manner, firefighters are not susceptible to becoming confused by any given TIC's operation while under stress in very dangerous environments.

#### VALUE ADDED TRAINING

With the purchase of these thermal imaging cameras, Bullard has offered to train all Des Moines Fire Department personnel on their proper use. This training will be offered free of charge utilizing Bullard's own trainer. It is difficult to place a dollar value on this specific training; however, similar training programs have historically minimally cost several thousand dollars. Bullard also offers online support and training programs for continuing education.

**PREVIOUS COUNCIL ACTION(S): NONE**

**BOARD/COMMISSION ACTION(S): NONE**

#### **ANTICIPATED ACTIONS AND FUTURE COMMITMENTS:**

In FY2011, CIP funds are available to purchase up to 8 additional Bullard T320TT cameras to replace those that are currently in-service and at end of useful life.

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