

# **Utility Committee Meeting**

# AGENDA

May 2, 2017

# I. CALL TO ORDER

# II. MATTERS BEFORE COMMITTEE

- 1. <u>Purchase Programmable Logic Controller for Water Treatment Plant</u>
- 2. <u>Purchase Remote Terminal Unit for Water Treatment Plant</u>
- 3. Purchase Monitoring System Control and Sensing Module for Wastewater Treatment Plant
- 4. <u>Purchase Mini-Excavator for Electric Department</u>

# III. <u>ADJOURN</u>



# **Utility Committee Meeting**

# AGENDA

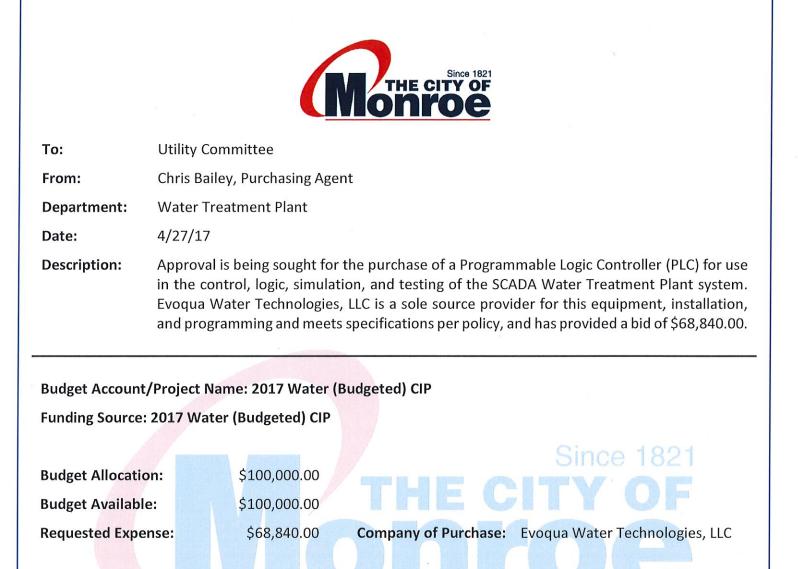
# May 2, 2017

| 10 |  |
|----|--|
|    |  |
|    | Item:  |
|    | Purchase - Programmable Logic Controller for Water Treatment Plant <b>Department</b> : |
|    | Additional Information:  |
|    | Financial Impact:  |
|    | Budgeted Item:   |
|    | Recommendation / Request:  |

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Attachments / click to download

D PLC Info



#### **Recommendation:**

Staff recommends the APPROVAL of this request based on the information provided for the purchase of a Programmable Logic Controller (PLC) for use in the control, logic, simulation, and testing of the SCADA Water Treatment Plant system from Evoqua Water Technologies. The purchase comes in under budget and follows policy bidding guidelines for sole source purchases.

#### Background:

It is the practice of the City of Monroe to continually upgrade and update computer operating systems within the Water Treatment Plant.

#### Attachment(s):

Quote – 3 pages Sole Source Letter – 1 page



Evoqua Water Technologies LLC 558 Clark Road TEWKSBURY MA 01876 USA Sold-to address: MONROE UTILITIES NETWORK 215 N BRD ST MONROE GA 30655

# Quotation

Order Date:01/23/2017Sales Order No.:10140693Customer No.:1060077Customer PO No.:QUOTE:Incoterms (part 1):FOB FreeIncoterms (part 2):Free on boPayment Terms:within 30 dSales Rep:HEYWARDContact Person:Gene CerilPhone Number:774-Lugo

01/23/2017 10140693 1060077 QUOTE: GC-170123-1 FOB Free on board Free on board within 30 days Due net HEYWARD INC Gene Cerilli 724-640-5933

PLC UPGRADE

Parts and Labor

Convert PLC5 to Control Logix, Simulate & Test w/SCADA

Install, Set Up Graphic Cleanup, Tag Reassignment

Remote Srvc

On-site Srvc

Estimated Travel Expenses.

| Valid from date: | 01/23/2017                |
|------------------|---------------------------|
| Valid to date:   | 02/23/2017                |
| Requested        | Shipping date: 01/23/2017 |

| Line Item | Material Old Part Number<br>Description   | Origin | Qty./UOM | Unit Price | Total Price<br>Currency USD |
|-----------|---|--------|----------|------------|-----------------------------|
| 001000    | W2T274758 ,03/31686-02<br>PLC MOD;CNTRL LGIX CHASSIS;AB;1756-A7<br>ECCN: EAR99<br>HTS: 8537109170<br>Est. Shipping Date: 01/24/2017 | US     | 1 EA     | 590.00     | 590.00                      |
| 002000    | W2T288545 ,03/32247-01<br>PWR SUPPY;PLC;O/P 120/240 VAC;O/P 2.8 A<br>ECCN: EAR99<br>Est. Shipping Date: 01/24/2017                  | US     | 1 EA     | 1,010.00   | 1,010.00                    |
| 003000    | W2T546143 ,03/31685<br>PLC MOD;CPU;I/P 0;O/P 0;24 VDC;0.8 A<br>ECCN: EAR99<br>HTS: 8537109170<br>Est. Shipping Date: 01/24/2017     | 2 EA   |          | 5,900.00   | 11,800.00                   |
| 004000    | W2T290583 ,03/MEMCOR<br>PLC,MOD DH+ RMT I/O SCNR<br>ECCN: EAR99<br>HTS: 8537109170<br>Est. Shipping Date: 01/24/2017                | US     | 2 EA     | 1,390.00   | 2,780.00                    |



Evoqua Water Technologies LLC 558 Clark Road **TEWKSBURY MA 01876** 

Sold-to address: MONROE UTILITIES NETWORK 215 N BRD ST MONROE GA 30655

5 days on-site service 2 days travel

ECCN: EAR99

## Quotation

Order Date: Sales Order No.:

01/23/2017 10140693

Qty./UOM Unit Price **Total Price Old Part Number** Origin Line Item Material **Currency USD** Description 3,200.00 US 005000 W2T422055 ,03/ 1 EA 3,200.00 PLC MOD;COMM ECCN: EAR99 HTS: 8537109170 Est. Shipping Date: 01/24/2017 US 006000 W2T277698 ,03/ 1 EA 4,995.00 4,995.00 SOFTWARE, PCL ECCN: EAR99 Est. Shipping Date: 01/24/2017 007000 W2T839271 ,03/ 1 EA 2,600.00 2,600.00 COMPUTER, MINI TWR, OPTIPLEX 7040; ECCN: EAR99 Est. Shipping Date: 01/24/2017 008000 W2T839272 ,03/ 1 EA 5,475.00 5,475.00 SOFTWARE INTOUCH 60K TAG WITH I/O; ECCN: EAR99 Est. Shipping Date: 01/24/2017 009000 W3T6313 US 1 EA 17,000.00 17,000.00 **Convert PLC5 to Control Logix** ECCN: EAR99 Est. Shipping Date: 01/24/2017 010000 W3T6313 US 1 EA 580.00 580.00 Network Diagram ECCN: EAR99 Est. Shipping Date: 01/24/2017 011000 W3T6313 US 1 EA 4,450.00 4,450.00 Re-work Wonderware graphics/Tag reassign ECCN: EAR99 Est. Shipping Date: 01/24/2017 012000 W3T6313 US 1 EA 1,410.00 1,410.00 **Remote Service Support** ECCN: EAR99 Est. Shipping Date: 01/24/2017 013000 W3T6313 UŞ 1 EA 10,480.00 10,480.00



Evoqua Water Technologies LLC 558 Clark Road TEWKSBURY MA 01876

Sold-to address: MONROE UTILITIES NETWORK 215 N BRD ST MONROE GA 30655

# Quotation

Order Date: ( Sales Order No.:

01/23/2017 No.: 10140693

Material Old Part Number Qty./UOM Unit Price Line Item Origin **Total Price** Description **Currency USD** Est. Shipping Date: 01/24/2017 014000 W3T6313 US 1 EA 2,470.00 2,470.00 Estimated Expenses ECCN: EAR99 Est. Shipping Date: 01/24/2017

For domestic shipments the following applies:

These commodities are sold for domestic consumption. Any export of these commodities must be made in accordance with applicable US laws. For export shipments from the US the following applies:

These commodities, technology or software (items) were exported from the United States in accordance with the Export Administration Regulations Diversion contrary to US law is prohibited. These items are not to be used directly or indirectly in prohibited nuclear chemical/biological or missile weapons activities.

Applicable shipping, handling, and taxes to be added at time of invoicing.

Ship-to address MONROE UTILITIES NETWORK 205 E MARBLE ST MONROE GA 30655 Net Total 68,840.00 USD Shipping & Handling to be Added

Bill-to address MONROE UTILITIES NETWORK PO Box 1249 MONROE GA 30655



April 27, 2017

To Whom It May Concern:

This letter is to advise that Evoqua Water Technologies LLC is the exclusive supplier for all Memcor Products and services and the sale of all equipment, instruments, spare parts, and products manufactured by Memcor. Evoqua reserves the right to contract certain non-proprietary services through trained and certified contractors to assist in the installation and servicing of Evoqua Water Technologies (Memcor) equipment.

The proposed PLC upgrade at the Monroe Utilities Network includes proprietary instrumentation and control Processes and programming which must be performed by Evoqua to ensure proper operation.

Evoqua Water Technologies LLC utilizes exclusive Distributors and Representatives to promote and support our equipment on a regional basis. This letter is valid until April 27, 2018.

Sincerely,

Matthew Dee

Matthew Dee Customer Care Manager – Memcor Office: 978-863-4602 Mobile: 508-558-1628 <u>Matthew.dee@Evoqua.com</u> <u>www.evoqua.com</u>

Item # 1 gua.com



# **Utility Committee Meeting**

# AGENDA

# May 2, 2017

| Item:  |
|--|
| Purchase - Remote Terminal Unit for Water Treatment Plant<br>Department: |
| Additional Information:  |
| Financial Impact:  |
| Budgeted Item:   |
| Recommendation / Request:  |

Viewing Attachments Requires Adobe Acrobat. Click here to download.

Attachments / click to download

RTU Info

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To: Utility Committee

From: Chris Bailey, Purchasing Agent

Department: Water Treatment Plant

**Date:** 4/27/17

**Description:** Approval is being sought for the purchase of a Remote Terminal Unit (RTU) for the newly installed High Service Pump (HSP) at the Water Treatment Plant. J.K. Duren Company, Inc. is a sole source provider for this equipment, installation, and programming and meets specifications per policy, and has provided a bid of \$121,500.00.

#### Budget Account/Project Name: 2017 Water (Budgeted) CIP

Funding Source: 2017 Water (Budgeted) CIP

|                    |              | Since 1821                                    |
|--------------------|--------------|---|
| Budget Allocation: | \$135,000.00 |   |
| Budget Available:  | \$135,000.00 | THE CITY OF                                   |
| Requested Expense: | \$121,500.00 | Company of Purchase: J.K. Duren Company, Inc. |
|                    |              |   |

#### **Recommendation:**

Staff recommends the APPROVAL of this request based on the information provided for the purchase of the Remote Terminal Unit (RTU) for the newly installed High Service Pump (HSP) at the Water Treatment Plant from J.K. Duren Company, Inc. The purchase comes in under budget and follows policy bidding guidelines for sole source purchases.

#### Background:

It is the practice of the City of Monroe to continually upgrade and update computer operating systems at the Water Treatment Plant for the most efficient operation of the facility.

#### Attachment(s):

Quote – 2 pages Sole Source Letter – 1 page

# .

# J. K. DUREN COMPANY, INC.

Box 1124 Roswell, Georgia 30077 Tel: 770-992-5405 Fax: 770-993-0127

April 26, 2107

City of Monroe Utilities Network P.O .Box 1249 Monroe, GA 30655

Attn: Doug Samples

RE: Quote 12186

Dear Doug:

The J.K. Duren company, Inc. is the Sole Source Provider for the equipment, programming and installation services listed on Quote 12186 dated April 26, 2017.

Please call if you have any questions or need additional information.

Sincerely,

J.K. Duren Company, Inc. Ken Duren

KD:nw



# J.K. Duren Company, Inc.

P.O. Box 1124 Roswell, GA 30077-1124 770-992-5405 Fax 770-993-0127

| City of Monroe         |  |  |
|------------------------|--|--|
| Attn: Accounts Payable |  |  |
| P.O. Box 1249          |  |  |
| Monroe, GA 30655       |  |  |

| QL        | lote    |
|-----------|---------|
| Date      | Quote # |
| 4/26/2017 | Q12186  |

| Description  | Qty  | Cost | Total |
|--|------|------|-------|
| Attn: Cathy Halgut   |      |      | 5     |
| We offer to furnish and install the following to upgrade your SCADA System:  |      |      |       |
| Polling Master<br>1 - New Polling Master Control Panel<br>1 - Renew FCC License  |      |      |       |
| SCADA Computer Upgrade (upgrade computer and combine Hach data and SCADA data to one<br>application)<br>Windows 7 Pro 64 bit Computer with Microsoft Office, 8GB RAM, 1TB hard drive, 2 - serial<br>port, 2 - 24" monitors<br>Upgrade Wonderware license so that it is compatible with Windows 7<br>Upgrade topserver licenses<br>Report Software License<br>USB to RS 485 converter for Turbidimeters<br>USB to RS 485 converter for Particle Counters<br>Item of Computer set up and software installation<br>Item of converting Wonderware data to Windows 7 format and reformat Wonderware for wide<br>screen views<br>Connect and configure Hach Particle Counter Network |      |      |       |
| Tank RTUs<br>3 - New Tank RTU including new controller, radio, antenna, transducer   |      |      |       |
| River RTU<br>1 - New RTU including new controller with touchscreen, radio<br>1 - Item of rework serial communications to the VFDs  |      |      |       |
| Reservoir RTU<br>New RTU including new touchscreen and radio   | 2    |      |       |
| Booster Pump Station RTU<br>1 - New RTU including controller with touch screen and radio   |      |      |       |
| This quote is good for 90 days.  | otal |      |       |





J.K. Duren Company, Inc.

P.O. Box 1124 Roswell, GA 30077-1124 770-992-5405 Fax 770-993-0127

#### Name / Address

City of Monroe Attn: Accounts Payable P.O. Box 1249 Monroe, GA 30655

# Quote

| Date      | Quote # |
|-----------|---------|
| 4/26/2017 | Q12186  |

| Description  | Qty  | Cost      | Total        |
|--|------|-----------|--------------|
| n-Plant - New HSP control panel<br>- New RTU for the New High Service Pump installed in plant.   |      |           |              |
| Modification of existing in-plant fiber network to utilize existing spare fibers to provide Ethernet connectivity to New HSP control panel and old operator office control panel (polling master) Note: If the City chooses to do their own fiber termination work for this RTU, you may deduct \$2,500.00 |      |           |              |
| Price  |      | 121500.00 | 121,500.00   |
|  |      |           |              |
|  |      |           |              |
|  |      | k.        |              |
|  |      |           |              |
|  |      |           | 5<br>2       |
|  |      |           |              |
|  |      |           |              |
|  |      |           |              |
|  |      |           |              |
|  |      |           |              |
| his quote is good for 90 days.   | otal |           | \$121,500.00 |





# **Utility Committee Meeting**

# AGENDA

# May 2, 2017

| Item:  |
|--|
| Purchase - Monitoring System Control and Sensing Module for Wastewater Treatment Plant <b>Department</b> : |
| Additional Information:  |
| Financial Impact:  |
| Budgeted Item:   |
| Recommendation / Request:  |

Viewing Attachments Requires Adobe Acrobat. Click here to download.

#### Attachments / click to download

Monitoring System Info



| То:  | Utility Committee   |  |  |  |
|--|---|--|--|--|
| From:  | Chris Bailey, Purchasing Agent  |  |  |  |
| Department:                                    | Wastewater Treatment Plant  |  |  |  |
| Date:  | 4/27/17   |  |  |  |
| Description:                                   | Pation: Approval is being sought for the purchase of a Monitoring System Control and Sensing Module for nine (9) wastewater lift stations. Templeton and Associates is a sole source provider for this equipment, installation, and programming and meets specifications per policy, and has provided a bid of \$49,126.00. This purchase also eliminates the need for the additional purchase of monitoring devices in FY18 as proposed in the CIP budget. <b>t Account/Project Name: 2017 Wastewater (Budgeted) CIP</b> |  |  |  |
| Funding Source: 2017 Wastewater (Budgeted) CIP |   |  |  |  |
|  | Since 1821  |  |  |  |
| Budget Allocatio                               | on: \$50,000.00 THE CITY OF   |  |  |  |
| Budget Availabl                                | e: \$50,000.00  |  |  |  |
| Requested Expe                                 | ense: \$49,126.00 Company of Purchase: Templeton & Associates   |  |  |  |
|  |   |  |  |  |
|  |   |  |  |  |

#### **Recommendation:**

Staff recommends the APPROVAL of this request based on the information provided for the purchase of a Monitoring System Control and Sensing Module for nine (9) wastewater lift stations from Templeton and Associates. The purchase comes in under budget and follows policy bidding guidelines for sole source purchases.

#### **Background:**

It is the practice of the City of Monroe to continually upgrade and update computer operating and sensor systems within the Wastewater System.

#### Attachment(s):

Quote – 15 pages Sole Source Letter – 1 page 

# QUOTATION

For

Monroe Utilities Offered by; W C Equipment Sales 4324 Brogdon Exchange Suite 100 Suwanee, GA 30024

SmartCover® and SmartFLOE™ Monitoring Systems



Quotation Date: April 25, 2017

# **Section I: Pricing**

**Smart Covers** is pleased to provide the following Proposal with Pricing (Section 1), System Description (Sections 2-%) and Warranty (Section 6).

|  | Pricing Summary | L |
|--|-----------------|---|
|--|-----------------|---|

| Pricing Si<br>Part<br>Number | Description   | Unit<br>Qty. | Unit<br>Price<br>(Each) | Extended     |
|------------------------------|---|--------------|-------------------------|--------------|
| SF-Q-S-<br>15/25             | SmartCover® system components:<br>E-Box System Control with onboard computer, modem;<br>fully potted and IP-68 rated.<br>Distance Sensing Module (DSM) with 3" to 81" sensor<br>range, with 15' cable.<br>Mounting bracket kit with brackets and mounting hardware<br>PowerPack®- lithium thionyl chloride battery with high power<br>density.<br>E-Square™ antenna, installation kit.<br>Installation kit for antenna  | 9            | \$4,895                 | \$44,050.00  |
| Warranty                     | One (1) year, parts-only limited warranty on all system<br>SmartCover <sup>®</sup> hardware.<br>See Warranty Statement for complete details.  | 9            | Included                | Included     |
| AMS-SC1                      | Active Site Monitoring, One-Year includes::<br>Software subscription with <i>unlimited users</i> .<br>Unlimited data storage<br>Provides regular updates and upgrades including the all new<br><i>SmartTrend</i> <sup>™</sup> .<br>Satellite connectivity service to the Iridium Satellite System<br>Ongoing technical support via phone or online.   | 9            | \$364                   | \$\$3,276.00 |
| IST-1                        | <ul> <li>Initial Set-up &amp; Training: first-time customers only, one-<br/>time charge.</li> <li>Dedicated, secure Customer Website Set-up.</li> <li>Browser-based website with map of all installation sites,<br/>individual site data and graphs; Alarm set-up per site with<br/>User alarm receipt protocols.</li> <li>Onsite maintenance and software training<br/>Note: this is a one-time charge and does not apply to follow-<br/>on orders.</li> </ul> | 1            | \$300                   | \$300.00     |
|                              | OPTIONS- SmartCover®  |              |                         |              |
| EW-SC2                       | <ul> <li>Extended Parts Warranty covering 2<sup>nd</sup> &amp; 3<sup>rd</sup> Year:</li> <li>E-Box System Control</li> <li>Distance Sensing Module (DSM)</li> <li>Antenna</li> <li>Mounting bracket.</li> <li>PARTS ONLY Warranty</li> <li>NOTE: Discounted herein only if ordered at the time of the initial order</li> <li>Does not include PowerPack Warranty, see below.</li> </ul>   | 1            | \$742                   |              |
| PW-LTC1                      | PowerPack Warranty- extends warranty covering the 3rd<br>Year<br>NOTE: Discounted herein only if ordered at the time of the<br>initial order  | TBD          | \$199                   | NA           |

| ASM-SC1        | Active Site Monitoring, 1 year (for the 2 <sup>nd</sup> Year of service).<br>NOTE: Discounted herein only if ordered at the time of the initial order.  |     | \$364   | NA          |
|----------------|---|-----|---------|-------------|
| Part<br>Number | Part Description  |     |         | Extended    |
|                | OPTIONS- SmartFLOE™   |     |         |             |
|                |   |     |         |             |
| SP-24-A        | Stabilizer platform adjustable to 24" wide shelf for ultra-sonic head. Consult with Hadronex Applications Engineers to determine if required  | TBD | \$1,195 | NA          |
| SW-SR-2460     | Stilling well for standard-range sensor.<br>Length of stilling well is customized per application from 3' to<br>6' in one foot increments<br>Provides a dynamic measurement range of 81".<br>NOTE: upon survey of the site, length is determined. | TBD | \$287   | NA          |
| SW-LR-2460     | Stilling well for long-range sensor.<br>Length is customized per application from 3' to 6' in one foot<br>increments<br>Provides a dynamic measurement range of 20' (240").<br>NOTE: upon survey of the site, length is determined.               | TBD | \$287   | NA          |
| ASM-RD1        | Smart Rain, One Year Subscription (No. of Locations)  |     | \$96    |             |
| Shipping       | Shipping  | 1   |         | Included    |
| Start Up       | Start Up & Installation Days  | 1.5 | \$1000  | \$1,500.00  |
| Taxes          | Sales Tax (General Contractor @ 7%)   |     |         | N/A         |
|                |   |     | Total   | \$49,126.00 |

#### **Delivery**

Four (4) weeks: upon receipt of a Purchase Order and receipt of complete engineering and site information as requested. Every reasonable effort will be made to provide earlier delivery if requested.

### **Ongoing Annual Costs**

After the first year of operation, the following fees will provide *continued software support, satellite connectivity and power*. These are annual charges paid prior to the start of the year.

#### Active Site Monitoring

ASM-SC1\$364One-Year software subscription, satellite connectivity, online maintenance, online S/C monitoring per unit<br/>per year.\$679ASM-SC2\$679Two-Year software subscription, satellite connectivity, online maintenance, online S/C monitoring per unit<br/>per year for two years.\$595ASM-SF1\$595

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#### Hadronex Inc. 2067 Wineridge Place, Suite E, Escondido, CA, 92029 760-291-1980 www.hadronex.com

One-Year software subscription, satellite connectivity, online maintenance, online S/F monitoring per unit per year. \$1107

#### ASM-SF2

Two-Year software subscription, satellite connectivity, online maintenance, online S/F monitoring per unit per year for two years.

#### **Options:**

**PowerPack Warranty** \$199 **Power Pack Warranty (PW-LTC1):** One-Year PowerPack Warranty for each installation site, part-only warranty on the PowerPack offering unlimited replacements during the Warranty term

#### **Power Pack Warranty (PW-LTC2):**

Two-Year PowerPack Warranty for each installation site, part-only warranty on the PowerPack offering unlimited replacements during the Warranty term.

#### **Optional after First Year**

Extended Warranty- parts-only warranty extension after the first year. This warranty covers: E-Box System Control, Distance Sensing Module (DSM), antenna, and mounting bracket. This is a PARTS ONLY warranty. 1 Year Extension (EW-SC1) per unit: \$ 399

2-Year Extension (EW-SC2) per unit

**Terms and Conditions** 

Payment: Net 30 days

• Late charges: A service charge of 1.5% per month will be added to all balances unpaid 30 days after invoice date. Failure to pay in accordance with these terms may void all warranties.

• Quote Validity: This proposal is valid for 90 days.

- Cancellations: for all orders of less than \$10,000, cancellation is accepted prior to shipment. For orders equal to or greater than \$10,000, a 15% restocking charge is applied for cancellation.
- Returns: returns are accepted with a valid Return Material Authorization (RMA) number only.

End Section 1, proceed to Section 2, next page.

4

\$358

\$ 742

#### **SECTION2: PRODUCT DESCRIPTION**

#### Overview

Each SmartCover<sup>®</sup> System includes the following components which comprise the hardware delivered with each system:

- One (1) E-Box system control
  - One (1) Ultrasonic Distance Sensing Module (DSM) with connecting cable.
  - One (1) communications antenna for direct connection to the Iridium Satellite System.
  - One (1) PowerPack<sup>™</sup>, a proprietary high power density lithium thionyl chloride battery
  - One (1) bracket kit for either mounting flat to the underside of the manhole cover or for mounting to the manhole cover vein.
  - One installation kit containing all hardware and accessories necessary to mount a single system

#### Item Descriptions:

#### <u>E-Box</u>

The E-Box is the system control containing the digital satellite radio, computer and signal processing components. It is fully potted and can be completely submerged in water (IP-68 rated) It is housed in an, ABS enclosure and shock tested to 10 G's.



SmartCover<sup>®</sup> E Box Control

#### PowerPack<sup>™</sup>

The PowerPack<sup>™</sup> is a high power-density battery system designed for reliable, consistent delivery of power in the harsh wastewater environment. It housed in a urethane coated pack containing Lithium Thionyl Chloride primary batteries. Typically the PowerPack provides at least one year of life and generally longer under normal operating conditions. PowerPacks have a 10 year shelf life prior to use.



SmartCover<sup>®</sup> PowerPack<sup>™</sup>

Hadronex Inc. 2067 Wineridge Place, Suite E, Escondido, CA, 92029 760-291-1980 www.hadronex.com 5

**Distance Sensing Module (DSM)** 

The ultrasonic distance sensor is encased and sealed in an ABS housing. It is fully potted and completely water-proof, meeting IP-68 standards. The crystal controlled oscillator sensor is self-calibrating.

There are two ranges available. The standard range senses between 3" and 81" while the long-range sensor's range is 11" to 240".

The DSM has two standard cable lengths of 15' and 25'. Custom lengths are available, application dependent, up to 300'.

Hadronex Application Engineers are available to assist users to determine the correct DSM range and cable lengths.



SmartCover® DSM

#### E-Series<sup>™</sup> Antennae

The E-Series<sup>™</sup> antennae include the "E-Square" and the "E-Dot" types. Both are traffic rated and designed to mount directly to the manhole cover or vault lid. They communicate directly to the Iridium Satellite System and do not require any intermediary devices for boosting signals. The antennae are secured to the top of the manhole cover using a high strength, two-part acrylic adhesive specifically designed for high stress applications.

The E-Square antenna is a road-reflector type used in areas where there is no opportunity for dislocation from such hazards as snow plows.

The E-Dot antenna is for cold-weather climates where snow plow operation occurs and are designed to be mounted below the manhole profile.

#### E-Square<sup>™</sup> Antenna





E-Dot<sup>™</sup> Antenna

#### Mounting Bracket Kit

The mounting bracket is a ruggedized, corrosion resistant assembly designed to protect and secure system components. The bracket is secured with two stainless steel bolts whereby the installer drills two ¼" holes into the cover. The bracket is designed in such a manner such that **NO CONFINED SPACE ENRTY IS REQUIRED FOR INSTALLATION**. Its hard-anodized aluminum housing encloses the PowerPack and the E-Box control. The DSM (distance sensing module) is connected to the E-Box and suspended via a cable, typically over the invert.

The bracket is supplied as a three-piece kit for mounting directly to the underside "flat" of the manhole or, alternately, to the manhole cover vein.



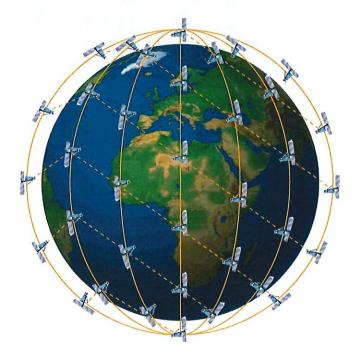
Bracket with E-Box and PowerPack on underside of manhole cover.

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#### SECTION 3. DESCRIPTION OF THE SATELLITE COMMUNICATION SYSTEM

The SmartCover<sup>®</sup> system uses the high reliability *Iridium Satellite System* as its communications backbone. Iridium is a state-of-the-art system consisting of 66 Low Earth Orbiting (LEO) satellites. It provides highly superior connectivity to that of terrestrial systems such as GSM, GPRS and other cell phone based systems. With the distribution of satellites across the globe, connectivity can be achieved with a small fraction of the horizon available. SmartCover<sup>®</sup> communication is established in challenging locations with such impediments as tree canopies or overpasses. Iridium has a very strong record of performance and reliability.

SmartCover<sup>®</sup> data is highly secure with servers using 2048 bit encryption. These are redundant servers located in a climate controlled, secure facility with emergency power to prevent any interruptions. Servers store Historical Communication, Data, and Data Access information. Being a web or "cloud" based system; data is available at all times through a browser from a computer, tablet or phone. Users can access data through any web browser to the server via encrypted data and send notifications directly to the user.



Iridium Satellite Constellation

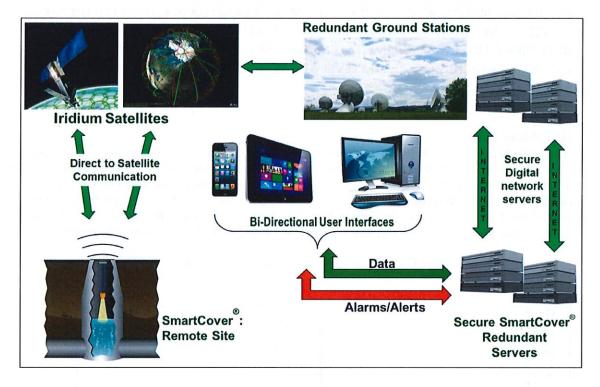
#### **The Communication Process**

As per the diagram below, the SmartCover<sup>®</sup> system communicates directly to an orbiting satellite. The communication signal is then sent to Iridium earth link stations and then to Hadronex secure servers.

For alarm signals, they are subsequently sent to the Customer via cell phone, Smart Phone, digital pager and/or to computers via the internet. It is possible to have alarms sent to a central control room as well.

SmartCover<sup>®</sup> communication is bi-directional. The user, for example, may change the alarm distance setting or turn the system "on" or "off". These are accomplished through a web browser where the user logs onto the secure, dedicated Customer Web Page. The user then accesses Customer Management Page to change a given setting. The setting change is communicated from the Hadronex servers through the Iridium system and to the SmartCover<sup>®</sup> system at the designated site.

A major benefit of the Hadronex system is that data acquisition, alarms and system setting changes are enabled *remote from the installation* site saving time and resources.



#### SmartCover<sup>®</sup> communications system

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#### SmartCover<sup>®</sup> System Operation

The SmartCover<sup>®</sup> system functions by the distance sensing module (DSM) taking a measurement every 6 minutes. Monitoring occurs 24 hours per day, seven (7) days per week.

#### Data Measurement Frequency

If the water being monitored is below the alarm level, the SmartCover<sup>®</sup> logs alternate readings, (every 12 minutes, five times per hour). These readings are "batched" and sent once per hour via satellite to the server and stored for user access such as trending and analysis.

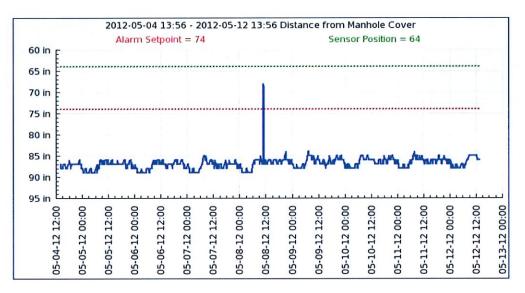
#### Alarming

If the SmartCover<sup>®</sup> system measures and senses that the water it is *above* the alarm level, an alarm notification is sent to the users by a pre-established communication protocol i.e., text message to a mobile device or an email message to a computer. Alarms through cell phones or pagers are via Short Message Service (SMS), or Smart Phones and emails via email messaging. A dedicated direct-from-satellite handheld system is available option for highly critical communications. Contact Hadronex for more information.

A LEVEL MEASUREMENT IS TAKEN EVERY 6 MINUTES AND DATA IS UPDATED ON THE SERVER EVERY HOUR. IN THE EVENT OF A HIGH WATER EVENT, THE ALARM IS SENT THE NEXT TIME A LEVEL MEASUREMENT IS MADE. THE LONGEST TIME BETWEEN THE TIME THE WATER REACHES THE ALARM LEVEL AND WHEN THE ALARM SOUNDS IS 5 MINUTES AND 59 SECONDS.

#### **Graphical Data**

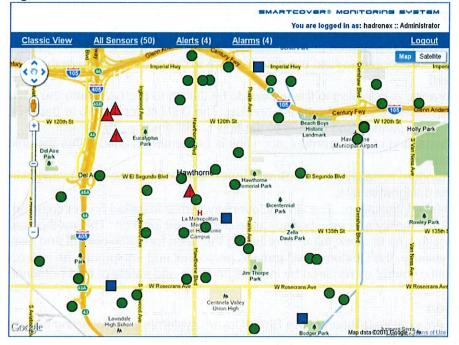
A typical graph (below) illustrates what can be viewed on the secure Customer Web Page. This graph shows that flow levels are below the alarm level for several days with one surcharge occurring thereafter. This event exceeds user-determined alarm level and enables an alarm. Note that the alarm is set well below the level where a spill may occur and allows for sufficient time to respond. In this case the bottom of the sensor is 64 inches from the manhole cover and the alarm is set for 74 inches below the manhole cover.



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#### System Map

When the user opens their secure web page they are able to view the location of every SmartCover<sup>®</sup> system. The map function has three, colored-coded symbols for ease of viewing and management.



#### **Color Coded Symbols**

**GREEN** (circle) – Indicates that the SmartCover<sup>®</sup> system is functioning properly and that the site does not have any alarms.

**BLUE (square)** – Indicates an "alert" and that a SmartCover<sup>®</sup> maintenance action is required. For example, it could mean the battery has low voltage and needs to be replaced or that a unit has not communicated within the expected interval.

**RED (triangle)** – Indicates that an "alarm" condition exists at this location. It could be high water event or an intrusion. Action is required.

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#### SECTION 4. INSTALLATION AND ACTIVATION

#### Installation

Installation consists of physically attaching of the SmartCover<sup>®</sup> system. The antenna is mounted to the top of the cover or lid and the mouthing bracket, housing the PowerPack and E-Box with the DSM connected to the E-Box, to the bottom.

The antenna is mounted and secured with a high strength, MIL-Spec grade adhesive and a hole is drilled to feed the antenna wire to the underside where the E-Box control is located.

The bracket is mounted to the underside by drilling to two holes into the cover or lid. Two stainless steel screws secure the bracket. The DSM is connected to the E-Box control and it is suspended and aligned to the flow target area i.e., the invert. On-site testing of the communication link is performed to ensure that the unit is

On-site testing of the communication link is performed to ensure that the unit is operational.

- <u>Standard Installation</u>: The SmartCover<sup>®</sup> system (hardware) is installed in the field at the designated site.
- <u>Offsite Installation</u>: The SmartCover<sup>®</sup> system is installed on the selected cover at an offsite facility and transported to the designated location. This method can minimize onsite time to a few minutes reducing the need for traffic control and disruption.
- Typically, the Customer will provide personnel and equipment, as appropriate for traffic control as required by local regulations and safety of field personnel.

#### Activation

After the physical installation of the SmartCover<sup>®</sup> system(s), the following actions are taken to bring full functionality to the SmartCover<sup>®</sup> system.

- SmartCover<sup>®</sup> Activation: Customer Actions
  - Upon receipt of a Purchase Order, Hadronex the user will receive a questionnaire to obtain the information necessary to perform the SmartCover<sup>®</sup> service Set-Up. Proper system operation is dependent upon receipt of required information.
  - This information is used as part of installation where communication will be tested to verify functionality.

SmartCover<sup>®</sup> Activation: Hadronex Actions

- At the Hadronex technical Support offices, the secure Customer Web Site is set up including a private account and database on the Hadronex secure server.
- Web site is configured for the Customer Web Site with SmartCover<sup>®</sup> system locations and users.
- o Initial population of the Customer SmartCover<sup>®</sup> database.
- Registration of the SmartCover<sup>®</sup> system wireless radios with the network and setting the Customer default system operational parameters.

The installation and activation process typically takes one hour per unit to perform under normal conditions.

Training

Training is provided after completion of the installation process. Once on-site personnel are trained, Hadronex will be available to provide additional web site training remotely after the SmartCover<sup>®</sup> system has been installed and operational.

#### **SECTION 5. ACTIVE SITE MONITORING**

Active Site Monitoring (ASM) is a *compressive support service* for the SmartCover<sup>®</sup> system. It includes software support, satellite connectivity and ongoing technical support with these three elements described below.

It is an annual, per site service provided by Hadronex. ASM includes but is not limited to:

- **Website hosting-** initial set-up and ongoing hosting of all software and customer data. Note that all data is owned by the customer.
- Website / Software Upgrades- from time to time Hadronex provides new features and tools at no charge including such features supporting improved analytical tools, improved graphical tools and new reports.
- Website maintenance maintaining the secure servers on which your web site resides, and providing <u>free</u> upgrades to the web sites as they become available.
- Standard Reports Hadronex will support Customer in the preparation of these reports for management or regulators Technical Telephone Support - This service is offered by the Hadronex Technical Services team from 7am to 5 pm Pacific time and with additional support from local representatives.
- Management Oversight
  - Hadronex Technical Services team monitors the proper operation of all installed systems including battery voltage, the radio signal strength and the communication to/from the systems.
  - Hadronex coordinates the appropriate service to repair any components in the field with you or the local dealer
- Alarm Processing maintaining the infrastructure of the alarm contact system.
- After Hours Support on an as-needed basis. Contact Hadronex for details
- Wireless Communications Connectivity Access to the two-way, wireless satellite network.

#### Product Improvements

The SmartCover<sup>®</sup> is continuously improving, adding new features and functions. Hadronex often uses customer input to add new features. Product improvements are backwards compatible to existing satellite systems with 0.10" resolution. There is no charge for these improvements as they are part of the annual ASM.

#### SECTION 6. ADDITIONAL TERMS & CONDITIONS, LIMNITED WARRANTY

**Mutual Hold Harmless.** Hadronex hereby holds Customer harmless from any and all claims that may arise, or damages that may result, to Hadronex or Hadronex staff during the performance of this contract. Customer hereby holds harmless Hadronex, its founders, owners and staff, from any and all claims that may arise, of any kind or from any cause whatsoever, due to or as a result of the installation, operation, or use of the SmartCover<sup>®</sup> system.

**Loss of Communications.** Customer acknowledges that Hadronex is not responsible for the loss of wireless communication or internet communications or any communications used in the operation of this system.

**Advisory Only.** The SmartCover<sup>®</sup> System is an advisory service only. As such, Hadronex and its founders, owners, or staff are not responsible for any damage of any kind or from any cause whatsoever that may result from, in relation to, in connection with, due to, or as a result of the installation or operation of the system, including without limitation, equipment failure, or any consequential damages caused by, or resulting from, the use or installation of the SmartCover<sup>®</sup> system.

#### Limited Warranty

The equipment components of the SmartCover<sup>®</sup> system are warranted free from material defects of material and workmanship for a period of one year from the date of installation. Unless otherwise stated, the Hadronex warranty herein is a parts-only warranty.

Should the Customer discover any condition that might invoke a warranty claim, they are to expeditiously and without delay notify the Hadronex Technical Services group.

Upon notification, Hadronex will assess and instruct the user on follow-on actions.

Should a component fail as a result of a defect in material or workmanship, Hadronex will replace the component or repair it at the Hadronex location.

For all valid warranty claims, as determined by Hadronex, reasonable freight charges to and from Customer shall be paid by Hadronex. In all cases, Hadronex shall determine the shipping method and/or carrier unless otherwise agreed to in writing by Customer and Hadronex.

Upon approval of a warranty failure by Hadronex, Hadronex will either repair or replace the defective component at Hadronex' sole discretion.

THE FOREGOING WARRANTY IS EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES OR CONDITIONS, EXPRESS OR IMPLIED (INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE). REPAIR OR REPLACEMENT IN THE MANNER PROVIDED ABOVE SHALL BE THE SOLE AND EXCLUSIVE REMEDY FOR BREACH OF WARRANTY AND SHALL CONSTITUTE FULFILLMENT OF ALL LIABILITIES OF HADRONEX WITH RESPECT TO THE QUALITY AND PERFORMANCE OF THE PRODUCTS.

THIS WARRANTY DOES NOT COVER DAMAGE OR REPAIRS OR REPLACEMENTS BY ANY CAUSE BEYOND THE CONTROL OF HADRONEX, INCLUDING ACTS OF NATURE, IMPROPER USE, LACK OF PROPER MAINTENANCE OR UNAUTHORIZED REPAIR.

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REPLACEMENT AS PROVIDED UNDER THIS WARRANTY IS THE EXCLUSIVE REMEDY. HADRONEX SHALL NOT BE LIABLE FOR ANY ACTUAL, EXEMPLARY, INDIRECT OR CONSEQUENTIAL DAMAGES, INCLUDING DAMAGES FOR LOSS OF GOODWILL OR PROFITS AND/OR LOSSES FROM ANY CAUSE WHATSOEVER, EVEN IF HADRONEX HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

In no event shall HADRONEX's liability, whether in contract or in tort (including negligence and strict liability), exceed the price of the Product from which such liability arises.

#### Signatures

**Hadronex** 

City of

Signature

Signature

Date

Date

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Date: August 13, 2015

# **Sole Source Letter**

This letter confirms that *Templeton and Associates / WC Equipment Sales with corporate offices located at 4324 Brogdon Exchange, Suite 100, Suwanee, GA 30024,* is the authorized and exclusive distributor of all SmartCover<sup>®</sup> Systems<sup>™</sup> products, including the award winning SmartCover<sup>®</sup> and SmartFLOE<sup>®</sup> in the *State of Georgia*.

The SmartCover<sup>®</sup> and SmartFLOE<sup>™</sup> systems are patented and proprietary systems designed and manufactured by SmartCover<sup>®</sup> Systems<sup>™</sup>. They provide users with unique qualities and functions to acquire water level data below the manhole cover or lift station lid, or other structures with open channel flows, using ultrasonic technology. The system acquires and transmits data and provides 24/7 user access via a secure web browser through a dedicated, secure user website.

These systems uniquely provide real-time, continuous monitoring capability operated by a long-life, lithium thionyl chloride battery which communicates by digital radio through the Iridium satellite system. They provide users with trend data, alarms for surcharges and intrusions, and alerts for maintenance of the monitoring system, all of which provide intelligence to users for corrective action. These systems are protected by the following US Patents 7,292,143, 7,948,215, 7,944,352, 7,598,858 and 7,589,630. The product is also protected by registered trademarks and international patents.

Sincerely,

Jay Boyd Vice President of Sales & Marketing (760) 291-1980 jboyd@hadronex.com

SmartCover⊚ Systems<sup>™</sup> 2067 Wineridge Place Suite E Escondido, CA 92029 760-291-1980 www.smartcocersystems.com Hadronex, Inc. dba SmartCover⊚ Systems<sup>™</sup>



# **Utility Committee Meeting**

# AGENDA

# May 2, 2017

| Item:  |
|--|
| Purchase - Mini-Excavator for Electric Department<br>Department: |
| Additional Information:  |
| Financial Impact:  |
| Budgeted Item:   |
| Recommendation / Request:  |

Viewing Attachments Requires Adobe Acrobat. Click here to download.

Attachments / click to download

Mini-Excavator Info

In



To:Utility CommitteeFrom:Chris Bailey, Purchasing AgentDepartment:ElectricDate:4/24/17Description:Approval is being sought for the purchase of a mini-excavator for the Electric Department.<br/>Bids were sought per policy, and the low bid of \$59,347.27 from Mason Tractor Company is<br/>the low bid.

#### Budget Account/Project Name: 2017 Electric (Budgeted) CIP

Funding Source: 2017 Electric (Budgeted) CIP

| Budget Allocation: | \$75,000.00 |                      |                       |
|--------------------|-------------|----------------------|-----------------------|
| Budget Available:  | \$75,000.00 |                      |                       |
| Requested Expense: | \$59,347.27 | Company of Purchase: | Mason Tractor Company |

#### **Recommendation:**

Staff recommends the APPROVAL of this request based on the information provided for the purchase of the Kubota KX057-4R3AP mini excavator from Mason Tractor Company. The purchase comes in well under budget and follows policy bidding guidelines.

#### Background:

It is the practice of the City of Monroe to continually purchase equipment as needed to provide a more efficient operational standard.

#### Attachment(s):

Quotes – 3 pages

#### **Chris Bailey**

| From:    | Randy Rawlins <randy@masontractorco.com></randy@masontractorco.com>     |
|----------|---|
| Sent:    | Tuesday, April 11, 2017 9:37 PM   |
| То:      | Chris Bailey  |
| Subject: | Kubota KX057-4R3AP Excavator Bid Equivalent to Takeuchi TB260 Excavator |

Chris,

Below you will find a Government Bid Pricing on a Kubota KX057-4R3AP Equivalent to Takeuchi TB260 Excavator.

New Kubota KX057-4R3AP, Rubber Track, Enclosed ROPS/OPG Cab with A/C and Heat. Engine; V2607 Kubota DI CRS Tier 4 Final Diesel Engine, 4 Cylinder, 47.6 Gross HP @ 2200rpm's,

Includes ECO Plus System, Auto Idler, Suspension Seat, Hydraulic Pilot Controls, Two Operating Patterns,

Digital Control Panel, Service Alerts, Attachment Flow Presets, Key Switch Stop System, Five Second Quick Preheat System, Auto-Downshift Two Speed Travel System, Self Bleed Fuel System.

Kubota 3-Hydraulic Pump Load Sensing System, 19.8 gpm Adjustable Auxiliary Hydraulics Port 1,

Auxiliary Hydraulics Diverter Valve, 9.8 gpm Adjustable Auxiliary Hydraulics Port 2. Digging Depth @ 12' 8.2", Digging Radius at Ground Level @ 20' 0.5", Dumping Height @ 13' 8.6"

Front Float Angle Dozer Blade

Hydraulic Thumb Kit Installed

Quick-Attach Coupler Installed

QA 24 » Trenching Bucket Installed

Weight as equiped, 12,842 lbs.

Machine PDI and Delivered with Manuals, \$ 59, 347.27

Please call with any questions that you may have, Thanks



Randy Rawlins Mason Tractor Co. Inc. Goverenment Sales Forrestry Division GM 5038 Buford Hwy. Norcross, GA. 30071 #770-851-6871 randy@masontractorco.com

Attachment number 1 \nPage 3

| BRA<br>50<br>BOG<br>706<br>706 | <b>DUnited Rentals</b><br>NCH L72<br>TRADE STREET<br>NRT GA 306222<br>-5354-0101<br>-548-7842 FAX<br>MAINTENANCE SHOP  |  | EQUIPMENT SALE<br>QUOTE<br># 145758668<br>Customer # : 793027<br>Quote Date : 04/13/17   |
|--------------------------------|--|--|--|
| Job Site                       | 213 CHERRY HILL RD<br>MONROE GA 30656-2906<br>Office: 770-267-7536   | <b>Cell:</b> 678-478-9403                        | UR Job Loc : 213 CHERRY HILL RD,<br>UR Job # : 2<br>Customer Job ID: 2<br>P.O. # : QUOTE<br>Ordered By : CHRIS CROY<br>Written By : JAMES PYLE |
|                                | CITY OF MONROE<br>PO BOX 1249<br>MONROE GA 30655-1249  |  | Balesperson       : SARAH COCHRAN         This is not an invoice         Please do not pay from this document                                  |
| 0                              | cy Equipment #   | Price  | Amount   |
| ×                              | 1 9070100 CC: 907-010<br>MINI EXCAVATOR 10000-14000<br>Pricing for TB260C with Ca<br>Quick Connect coupler, 24"<br>thumb, and ANGLE BLADE.<br>Freight is included in pri | 00 63764.79<br>D#<br>ub, AC & Heat,<br>Bucket, a | 63764.79   |
|                                | ricigne ib moradoa in Pra  |  | Sub-total: 63764.79<br>Estimated Total: 63764.79   |
|                                |  |  |  |
|                                |  |  |  |

#### **Chris Bailey**

From: Sent: To: Subject: Jimi Martin <takeuchijimi@yahoo.com> Thursday, April 13, 2017 8:51 AM Chris Bailey Re: Price Quote!

Yes, it would add \$2,350.00 to the total (\$68,750.00).

From: Chris Bailey <CBailey@MonroeGA.gov> To: "takeuchijimi@yahoo.com" <takeuchijimi@yahoo.com> Sent: Thursday, April 13, 2017 8:37 AM Subject: RE: Price Quote!

Can we also add a 3way articulating front blade?

From: takeuchijimi@yahoo.com [mailto:takeuchijimi@yahoo.com] Sent: Tuesday, April 11, 2017 10:32 AM To: Chris Bailey <CBailey@MonroeGA.gov> Subject: Re: Price Quote!

Good morning! Please find below the requested information.

2017 Takeuchi TB260 rubber track excavator, equipped with cab,heat,air, quick coupler, 24" bucket and a hydraulic thumb. 2 year/2000 hour warranty. \$66,400.00

Thank you, Jimi Martin Perimeter Takeuchi 3022 Peachtree Ind. Blvd. Buford, Ga. 30518 Cell 770-231-5236 Office 770-614-5730

Sent from my iPad

On Apr 11, 2017, at 10:06 AM, Chris Bailey <<u>CBailey@MonroeGA.gov</u>> wrote:

Good morning, hope all is going well! We need another excavator...it'll be the same as you just quoted for Rodney last year. Can you provide me a bid for the following, or equivalent...

Takeuchi TB260 rubber track excavator, enclosed cab with heat/air, quick coupler, 24" bucket with hydraulic thumb.

Thank you!