



# City of Muscatine

ITEM NUMBER 2023-0043

## AGENDA ITEM SUMMARY

DATE: 2/2/2023

---

### STAFF

Jon Koch

---

### SUBJECT

Request to approve the Issuance of a Purchase Order to IAS Engineering, in the amount of \$44,455.56, for the purchase and installation of three variable frequency drives at the Water Pollution Control Plant.

---

### EXECUTIVE SUMMARY

1. Request to approve the issuance of a purchase order to IAS Engineering, in the amount of \$44,455.56, for the purchase and installation of three variable frequency drives for the return activated sludge pump motors. There is \$39,000.00 budgeted in the Maintenance and Operations budget for this purchase.

---

### STAFF RECOMMENDATION

Staff recommends approval to issue the purchase order to IAS Engineering.

---

### BACKGROUND/DISCUSSION

The WRRF staff have received two quotes for the purchase of three variable frequency drives (VFD's) for the return activated sludge (RAS) pump motors with the low quote coming from IAS Engineering. These have all been repaired since a large power issue that started in 2017 damaged all three VFD's. Electricians and Muscatine Power and Water have all been involved in resolving the power issues but the VFD's continue to fail and have needed repairs of other major components on a regular basis at great cost and can no longer be relied upon for continuous operation. Quotes received in 2021 to replace these in 2022 were nearly \$37,000.00. \$39,000.00 was budgeted to account for any inflation or cost increases. Inflation and electrical component cost increases have been much more than expected. This cost includes the removal, installation and programming of the new units. There is money in the Maintenance and Operations Repair and Maintenance budget to cover the additional cost of this purchase.

---

### CITY FINANCIAL IMPACT

There is \$39,000.00 budgeted for these items with the additional cost being covered from the Repair and Maintenance budget in the Maintenance and Operations budget.

#### **ATTACHMENTS**

---

1. IAS RAS VFD Quote.230126

# **IAS**

## **ENGINEERING**

"SUPERIOR ENGINEERING & INTEGRATION SERVICES"  
A WHOLLY OWNED SUBSIDIARY OF SHAW ELECTRIC INC.

### **City of Muscatine Waste & Resource Recovery Facility Muscatine, IA**

### **(3) 100HP RAS VFD retro A/B MCC with Schneider Drives Proposal**

Quote #22-1051A

**INDUSTRIAL AUTOMATED SYSTEMS**

930 East River Drive • Davenport, IA 52803 • Phone 563/326-5717 • FAX 563/323-3830

Estimated Downtime

The downtime is expected to be for one RAS pump at a time and to be scheduled by the plant at convenient times for them.

IAS plans for (1) 4hr day for removal and bracket measuring of one of the VFD's so all necessary components can be manufactured prior to all 3 installs. IAS is estimating each removal and install will take (1) 10hr day with two technicians per drive swap for install and control testing.

Implementation Cost

**Retro fitting Standard Duty Schneider VFD's into (3) RAS pump Buckets**

<b>Per RAS Retro est. cost</b>	<b>(\$12,386.43)</b>
<b>Total Labor</b>	<b>\$ 7,470.00</b>
<b>Total Material</b>	<b>\$29,689.29</b>
<b>Total</b>	<b>\$37,159.29</b>
<b>Plus tax and shipping</b>	

**OR**

**Retro fitting Heavy Duty Schneider VFD's into (3) RAS pump Buckets**

<b>Per RAS Retro est. cost</b>	<b>(\$14,818.52)</b>
<b>Total Labor</b>	<b>\$ 7,470.00</b>
<b>Total Material</b>	<b>\$36,985.56</b>
<b>Total</b>	<b>\$44,455.56</b>
<b>Plus tax and shipping</b>	

Warranty

**IAS** issues a standard (1) one-year warranty from the date of installation on workmanship of **IAS** installed components. Customer-caused malfunctions, misuse or modifications, are not covered under this warranty. Equipment manufacturer warranties apply to supplied equipment; **IAS** does not extend or modify equipment manufacturers' warranties. Customer is responsible for labor charges on equipment issues covered under manufacturer's warranties.