

## ADDENDUM NO. 1

TO: ALL BIDDERS

- PROJECT: ITB WS 66-20 BROWN PLACE PUMP STATION & CONTROLS UPGRADE (EQUIPMENT ONLY)
- OWNER: OKALOOSA COUNTY

DATE: August 4, 2020

The following items are hereby incorporated into the project contract documents and specifications. The bid date and time remained unchanged.

## ITEM NO. 1 – Alternate Pumps Reviews

Section 11145 Item 2.1.A.2.a states that "The duplex submersible pumps shall be as manufactured by WILO, Flygt, Grundfos, KSB, or an approved equal by the Okaloosa County Water & Sewer Engineering Department." The following pumps were submitted for review as an approved equal and their review results are noted.

- CAPRARI MODEL KSM100NG+022042N1/FS Not approved (did not meet size specifications)
- WEIL MODEL 6111CL Not approved (did not meet size specifications)
- ESSCO MODEL 4X12 Approved as equal

## ITEM NO. 2 - REVISED DRAWING SHEETS

• Please find enclosed a revised set of all drawings with DRAFT removed. Minor changes were made to the drawings to show the max of 40 horsepower pumps. RECEIPT OF THIS ADDENDUM SHALL BE ACKNOWLEDGED BY WRITING THIS ADDENDUM NO. AND DATE IN THE SPACE PROVIDED ON <u>FORM H</u> OF THE BID PROPOSAL.

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Michael C. Evans, P.E. – Poly, Inc.

ENGINEERING PLANS FOR

# **BROWN PLACE PUMP STATION AND** CONTROLS UPGRADE (EQUIPMENT ONLY)

**OKALOOSA COUNTY WATER & SEWER SYSTEM** OKALOOSA COUNTY, FLORIDA THE BOARD OF COUNTY COMMISSIONERS

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## **OKALOOSA COUNTY** WATER AND SEWER

JEFF LITTRELL, DIRECTOR MARK WISE, P.E., DEPUTY DIRECTOR



ITB WS 66-20

**JUNE 2020** POLY Job No. 41-378



INDEX OF SHEETS COVER



SPECIFICATIONS

PUMP DATA						STARTER	MOTOR SERVICE DATA				
PUMP	STATION	CAP. G.P.M.	T.D.H.	MAX H.P.	R.P.M.	STARTER	BREAKER	BRANCH CKT. CONDUCTORS	CONDUIT	EQUIPMENT GROUND	VOLTAGE
BROWN PLACE	P.S. #302	550	111	40	1750	SEE ELECTRICAL	SEE ELECTRICAL				





### ELECTRICAL SYMBOL LEGEND:

Lighting System Symbols

- A01 RECESSED CEILING MOUNTED LIGHT FIXTURE - FIXTURE MARK "A", CIRCUIT "1" INDICATED.
- ю WALL MOUNTED LIGHT FIXTURE.
- HO- SURFACE MOUNTED STRIP FLUORESCENT FIXTURE, 4' LONG.
- \$\* SWITCH, SINGLE POLE, 20A, 120/277V. "k" INDICATES KEY OPERATED SWITCH.
- POLE MOUNTED LIGHTING FIXTURE, SINGLE HEAD. FIXTURE TYPE "P" INDICATED. CIRCUIT "4" INDICATED. ÷-

#### Miscellaneous Symbols

(J) JUNCTION BOX. SIZE AS REQUIRED.

#### Power System Symbols

- DUPLEX WALL OUTLET, CIRCUIT "1" INDICATED. "G" INDICATES GFCI TYPE. "WP" INDICATES -0 WEATHERPROOF OUT FT
- (#) SINGLE PHASE MOTOR. # INDICATES MOTOR HORSEPOWER.
- SP SINGLE PHASE MOTOR. # INDICATES MOTOR HORSEPOWER.

#### Raceway Symbols

- CONDUIT CONCEALED IN WALL OR ABOVE CEILING, DOUBLE ARROWS INDICATE HOME RUN. CONDUCT CONDITION OF A DUPER CONDUCTOR IN OUR AND A DUPER CONDUCTORS ON A DUPER CONDUCTOR SUBJECT OF ALTHOUGH IT IS REQUIRED TO BE INSTALLED.
- CONDUIT CONCEALED IN FLOOR OR BELOW GRADE
- EXPOSED CONDUIT FLEXIBLE CONDUIT CONNECTION. LENGTH AS REQUIRED AND ALLOWED BY SPECIFICATIONS m

CONDUIT CONTAINING UNSWITCHED CIRCUIT (FOR EMERGENCY LIGHTING)

- AND NEC. CONDUIT SHALL BE LIQUID-TIGHT IN ALL OUTDOOR LOCATIONS, MECHANICAL ROOMS AND OTHER LOCATIONS WHERE FALLING OR SPRAYING WATER IS POSSIBLE. Controls:

- TIMED CONTACTS - COIL 'TD1', CONTACT '1' INDICATED. NORMALLY CLOSED, TIMED OPENING. TD1-1 TIMED CONTACTS - COIL 'TD1', CONTACT '1' INDICATED. NORMALLY OPEN, TIMED CLOSING. \*-O-PILOT LIGHT - PUSH-TO-TEST TYPE, OIL TIGHT. LETTER INDICATES LENS COLOR: R=RED, G=GREEN, A=AMBER. OFF HAND AUTO HAND-OFF-AUTO, THREE POSITION ROTARY SELECTOR SWITCH, OIL-TIGHT. SEE SWITCHING STOP OTHERWISE. ES1 FLOAT SWITCH, NORMALLY OPEN, CLOSES ON RISING LIQUID LEVEL. SWITCH FS1 INDICATED.  $\bigcirc$ TEMPERATURE SWITCH, NORMALLY CLOSED. SWITCH TS1 INDICATED. ETM ELAPSED TIME METER. 0.L - MOTOR STARTER OVERLOAD RELAY CONTACTS. CONTROL FUSE. 3A OVERCURRENT RATING INDICATED. 120 V CONTROL POWER TRANSFORMER. 2 KVA POWER RATING INDICATED. 120V PRIMARY VOLTAGE, Lun 2 kVA 24V SECONDARY VOLTAGE INDICATED. m 6 24 V FIFLD WIRING POINT OR TERMINAL BLOCK 0 DISCRETE (DIGITAL) OR ANALOG INPUT TO PLC OR RTU
  - 0 DISCRETE (DIGITAL) OR ANALOG OUTPUT TO PLC OR RTU

## GENERAL ELECTRICAL NOTES:

- 1. SERVICE TO EACH SITE SHALL BE AS INDICATED ON THE SCHEDULE ON THIS SHEET.
- 2. A GREEN EQUIPMENT GROUNDING CONDUCTOR (SIZED PER NEC) SHALL BE INSTALLED IN EACH CONDUIT.
- 3. REQUIREMENT HAS BEEN MET.
- 4
- 6. FURNISH AND INSTALL FUSES IN FUSIBLE DISCONNECTS PER EQUIPMENT MANUFACTURER'S RECOMMENDATIONS.

## ABBREVIATIONS:

- ABV ABOVE
- AFG ABOVE FINISHED GRADE.
- BFG BELOW FINISHED GRADE.
- CKT CIRCUIT
- EQUIPMENT GROUNDING CONDUCTOR ECG
- EP EXPLOSION-PROOF
- FVNR FULL-VOLTAGE NON-REVERSING (FOR STARTERS)
- GEC GROUNDING ELECTRODE CONDUCTOR



## PUMP STATION SCHEDULE

SITE	SERVICE CHARACTERISTICS	# OF PUMPS	MAX PUMP HP	PUMP BREAKER	PUMP FEEDER	PUMP STARTER	REMARKS
BROWN PLACE PUMP STATION	480Y277 3ø 4W	2	40	100/3	3#4,1#8G-1"C.	RVAT SIZE 3*	-

Controls:

\* RVAT TO BE SIZED IN ACCORDANCE WITH CHARACTERISTICS OF SUPPLIED PUMPS



ALL FLOAT SWITCHES SHALL BE WIRED AS INTRINSICALLY SAFE CIRCUITS AS REQUIRED BY NEC. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS WHICH DEMONSTRATE THAT THIS

CONTRACTOR IS REQUIRED TO SUBMIT AS-BUILT CONTROL DIAGRAMS FOR EACH SITE WHICH REPRESENTS THE INSTALLED CONTROL SYSTEM. SEE SPECIFICATIONS FOR REQUIREMENTS.

- GROUND FAULT CIRCUIT GFCI INTERRUPTING
- MTD MOUNTED
- NATIONAL ELECTRICAL CODE (NFPA 70). NEC
- RVAT REDUCED-VOLTAGE AUTOTRANSFORMER (FOR STARTERS)
- RVSS REDUCED-VOLTAGE SOLID-STATE (FOR STARTERS)
- SURGE PROTECTIVE DEVICE (IEEE SPD DESIGNATION)
- TVSS TRANSIENT VOLTAGE SURGE SUPPRESSOR (NEC DESIGNATION). SEE ALSO SPD.
- WP WEATHER PROOF







BACKBOARD DETAILS

SCALE: 1/2"=1'-0"

BACKBOARD ELEVATION - SERVICE SIDE

BACKBOARD ELEVATION - CONTROLS SIDE

	ELECTRICAL EQUI	PMENT SCHED	ULE	
MARK	DESCRIPTION	MINIMUM VOLTAGE RATING	MINIMUM CURRENT RATING	NOTES
	SERVICE METER. CONTRACTOR SHALL INSTALL METER BASE PER REQUIREMENTS OF THE LOCAL UTILITY COMPANY.	277/480V	200A	EXISTING
2	MAIN DISCONNECT SWITCH "MD". 3-POLE, 4-WIRE SWITCH . FUSED DISCONNECT SWITCH, FUSED WITH CLASS RK1 CURRENT LIMITING FUSES. NEMA 3R STAINLESS STEEL ENCLOSURE.	277/480V	200A	200A FUSES
3	CONTROL PANEL. NEMA 4X STAINLESS STEEL ENCLOSURE. SEE SPECIFICATIONS.	277/480V	N/A	BY SUPPLIER
4	AUTOMATIC TRANSFER SWITCH "ATS".	277/480V	200A	EXISTING
5	SCADA RTU ENCLOSURE BY OWNER			EXISTING
6	TVSS WITH INTEGRAL DISCONNECT PER SPECS	277/480V	N/A	
$\langle 7 \rangle$	FLOW METER TRANSMITTER BY OWNER	N/A	N/A	N/A

	CO	NDUIT & WIRE CA	BLE SCH	HEDULE	
MARK	ORIGINATION	DESTINATION	TYPE	CONDUIT & WIRE/CABLE SIZES	NOTES
A	SERVICE RISER POLE	SERVICE METER	SERVICE	4#3/0 - 2"C.	REMAIN
В	SERVICE METER	MAIN DISCONNECT	SERVICE	4#3/0 - 2"C.	1
С	MAIN DISCONNECT	AUTOMATIC TRANSFER SWITCH	FEEDER	4#3/0 & 1#6G - 2"C.	1
D	MAIN DISCONNECT	GROUNDING ELECTRODE SYSTEM	GEC	#2 - 3/4"C. (PVC)	1
E	AUTOMATIC TRANSFER SWITCH	CONTROL PANEL	FEEDER	4#3/0 & 1#6G - 2"C.	1
F	STANDBY GENERATOR	AUTOMATIC TRANSFER SWITCH	FEEDER	4#3/0 & 1#6G - 2"C.	1
G	AUTOMATIC TRANSFER SWITCH	STANDBY GENERATOR	CONTROLS	CONTROL & SIGNAL WIRE IN 1"C.	1
Н	CONTROL PANEL	FLOATS VIA JUNCTION BOX	CONTROLS	FLOAT SWITCH CABLES IN CONDUIT	2
2	CONTROL PANEL	PUMPS VIA JUNCTION BOX	FEEDER	3#2 & 1#6G - 2"C.	3
J	CONTROL PANEL	AREA LIGHT FIXTURE	BRANCH CKT	2#12 & 1#12G - 3/4"C.	×:
К	CONTROL PANEL	TELEPHONE SERVICE PEDESTAL	TELEPHONE	2"C. WITH PULL STRING	
L	CONTROL PANEL	FLOW METER XMTR	BRANCH CKT	2#12 & 1#12G - 3/4"C.	
М	FLOW METER XMTR	FLOW METER	INSTRUMENT	4-20mA CABLE - 1"C.	
Ν	SCADA RTU	FIBER OPTIC PULL BOX	SCADA	2"C. WITH PULL STRING	EXISTING
0	CONTROL PANEL	SCADA RTU	BRANCH CKT	2#12 & 1#12G - 3/4"C.	
Р	CONTROL PANEL	SCADA RTU	SCADA	CONTROL CABLE - 2"C.	
Q	FLOW METER XMTR	FLOW METER	N/A	N/A	N/A_
R	SCADA RTU	LEVEL TRANSDUCER VIA JCT. BOX	INSTRUMENT	4-20mA CABLE - 1"C.	
S	SCADA RTU	FLOW METER TRANSMITTER	INSTRUMENT	4-20mA CABLE - 1"C.	
T	CONTROL PANEL	BLOCK HEATER/BATTERY CHARGER	FEEDER	3#12 & 1#12G - 3/4°C	
U	GENERATOR	SCADA RTU	INSTRUMENT	CONTROL & SIGNAL WIRE IN 1"C	
۷	AUTOMATIC TRANSFER SWITCH	SCADA RTU	INSTRUMENT	CONTROL & SIGNAL WIRE IN 1"C	
W	CONTROL PANEL	PUMPS VIA JUNCTION BOX	SPARE	SPARE 2" CONDUIT	а.

#### CONDUIT & WIRE CABLE SCHEDULE NOTES:

WIRING FROM METER TO CONTROL PANEL TO BE UPGRADED BY OWNER 1.

PUMP POWER AND CONTROL CABLE(S) PROVIDED BY PUMP MANUFACTURER AND INSTALLED BY OWNER.
FLOAT SWITCH CABLES PROVIDED BY FLOAT SWITCH MANUFACTURER.









- 1. ALL CONTROLS ARE SHOWN DE-ENGERGIZED.
- FUNCTIONS ONLY WHERE REQUIRED, SLAVE
- 3. CONTROL DIAGRAM IS DIAGRAMMATIC TO SHOW INTENT OF CONTROLS. ADJUST CONFIGURATIONS FOR A COMPLETE AND FUNCTIONING SYSTEM MEETING ALL LOCAL, STATE AND NATIONAL

