DIVISION 18

SUPERVISORY CONTROL AND DATA ACQUISITION (SCADA)

SECTION 18000 - SCADA INTEGRATION

PART 1 – GENERAL

1.01 SCOPE OF WORK

A. Provide SCADA software development, testing, commissioning, debugging, and maintenance services as specified herein. The services specified in this section shall be provided by ControlTouch Systems of Louisville, KY under a bid allowance. See the Form of Proposal for bid allowance.

B. Integrate each I/O point indicated on the Contract drawings and associated vendor submittals for into the existing SCADA software.

C. Provide software operation training services.

D. Coordinate with the Instrumentation/Control contractor who is awarded the West Hickman Wet Weather Storage (WHWWS) control system contract, as specified herein.

E. Provide additional license and operator workstation at new headworks control room.

F. Integrate 15 Pelco cameras into Citect system, refer to plans for CCTV layout and configuration. Configure Avaya Series 4000 switch for optimum video communications.

F. Attend Owner and Contractor coordination meetings to insure proper coordination with all trades.

1.02 RELATED WORK

A. General requirements are located in Division 1.

B. Division 17 – Instrumentation & Control

1.03 SUBMITTALS

A. Software Submittals: Provide software submittal in hardcopy form. Provide initial graphic display and report format layouts as described later in this specification. List and briefly describe all operator interface functions provided at the SCADA PC, including: alarm annunciation and acknowledgment, status displays, report generation, event logging, trending, etc.

B. Operation & Maintenance: O&M manual shall consist of system description and as-built-screen shots with description of features and operator interface. Reports and report access shall be described. An alarm list and alarm description shall be included. Also it shall describe backup procedures and how to check backup functionality and how to restore if an outage occurs.

1.04 QUALITY ASSURANCE

A. The project manager assigned by the integrator shall have at least five years' experience within the last five years in the design, manufacture, installation, calibration, and commissioning of instrumentation/Scada systems of similar size and complexity to this project.

B. The project manager assigned by the integrator shall have a minimum of a Bachelor's degree in Engineering or similar from an ABET accredited university.

C. Software Progress Meetings: Allow in Bid for (6) meetings at Engineer's office in Lexington, KY, for review of graphic operator screens. Meetings to commence at time of initial software development kickoff and continue up to final completion. These meetings shall be for specific purpose of assuring that software development work is in accord with Contract requirements and are in addition to project progress meetings that may otherwise be required. If the software can be hosted on a website such that the Engineer can access the logic and graphics, then the software progress meetings can be implemented via telephone or web conference.

1.05 WARRANTY & SERVICE

A. The Contractor shall guarantee all work including equipment, materials, and workmanship. This guarantee shall be against all defects of the electrical system or improper equipment operation. It shall last for the period of time specified in the General Conditions of the Contract, but not less than one year from the date of system acceptance (i.e. – when the Engineer accepts that the punchlist is complete.)

B. Return visits – the Contractor shall provide a minimum of one 16-hr return visit after final completion to implement additional software items as requested by the Owner. The costs for this return visit shall be included in the bid price.

1.06 TRAINING

A. The required training shall include instruction on how the software works, its relationship to site equipment and operation, detailed review of O & M instructions, troubleshooting and record-keeping recommendations.

B. Onsite software training shall be provided, a minimum of two (2) days with (8) person hours of training each day for total of sixteen (16) person-hours of training.

1.07 GENERAL SCADA SOFTWARE REQUIREMENTS

A. The existing Citect SCADA software shall be utilized. If additional software tag or other licensing is needed to implement the requirements of this Contract, then that licensing shall be provided. If a SCADA software version upgrade is necessary to implement the requirements of this Contract, then that version upgrade shall be provided.

1.08 COORDINATION WITH CONTROL CONTRACTOR

A. SCADA contractor shall be required to coordinate with the control contractor awarded the development and installation of the WHWWS control system. This will involve assignment of IP addresses and other network parameters, and sharing of tag/address databases to ensure each contractor is able to successfully implement their portion of the scope for overall project success. It will also involve matching (as closely as possible) the process visualization graphics on the local HMI screen at WRWWS to prevent operator confusion. The control contractor shall be required to develop and submit for approval on their graphics first, and then the SCADA contractor shall prepare his remote SCADA HMI screens closely following the layout of the local HMI.

PART 2 – PRODUCTS

Not Applicable

PART 3 - EXECUTION

3.01 SOFTWARE SERVICES

A. General: Software services shall include full integration into the existing control console, program development, testing, documentation, and work necessary to implement a complete and fully operating system as shown on Drawings and as specified. Work requires coordination with programmable controllers (PLCs), implementation of Operator Interface and reports, alarm handling, and data collection. Include PLC error detection logic for communications failures, data highway faults, internal faults, and time outs. Communicate PLC error conditions to Operator Interface for logging and reporting. Employ a "watchdog" timer for each remote PLC and generate an alarm if the communications fail. Accept Operator Interface directives for set point changes and hand switches.

B. SCADA Interface Screens: Provide and overall site screen to allow selection of subsections such as the wet weather storage system or waste treatment plant. Provide graphic representation of Wet Weather Storage System processes and control over machinery. Also provide data collection activities to provide historical trend analysis and process data readings for use in management reporting. Provide the following screens as a bare minimum. Some of these screens (such as Network Status) may already exist and the Wet Weather site and modifications to the WWTP site will need to be integrated into the existing screen:

1. West Hickman Wet Weather Storage Overview, including Active Alarms
2. West Hickman Weather Storage Process Flow Diagram
3. Alarm & Event History
4. Network Status
5 Trending
6. Elapsed Run Time Reports
7. Flow Total Reports
8. Wet Weather Electrical Power System Diagram
9. Junction Chamber Diagram
10. Recycle Pump Station Diagram and Parshall Flume
11. Power company feeder status, preferred and secondary (When on secondary, WHWWS shall operate on generator backup)

C. SCADA software required application features:

1. Screens shall be fully windowed and shall use a mouse for control. Use colors, function keys, and navigational controls consistently.

2. Alarm Management: For each process or system event classed as an alarm provide facilities for displaying and logging in database, acknowledgment, and purging of stale messages. Alarm events are derived from discrete inputs, analog

trip values, logic combinations and computations as needed. Log and display both alarm events and returns to normal. Provide date/time stamps for events, descriptive message, and event type code. Use color combinations to distinguish following alarm states: Alarm-Unacknowledged, Alarm-Acknowledged, Normal-Unacknowledged, and Normal-Acknowledged. Each alarm point indicated in the I/O Table is required to be integrated into SCADA. In addition to this, the following alarms must also be collected from the local WHWWS controller and integrated into SCADA:

a. Alarms for each level sensor
b. Equipment fail-to-start alarms
c. Instrument failure alarms
d. Generator fail-to-start alarm
e. Generator general alarms
f. Fuel system alarms

3. Graphic Displays:

a. Provide process-oriented displays showing current process status.
b. Setpoint manipulation or control of equipment from SCADA is NOT required.
c. For each display, show process elements such as pumps, valves, tanks, pipe lines, etc., with their current operational status. Emphasis shall be placed on depicting the system in a “P&ID” format that allows easy conceptualization of process flow and tank levels rather than depicting equipment in actual physical location or scale. Three-dimensional graphics are not required.
d. Not running state: graphic shall be natural color with no motion.
e. Running state: Graphic shall be green color and shall rotate or show other type of motion as appropriate. Both color and motion shall be depicted.
f. Red color shall be reserved for alarm graphics.
g. Wells shall include both analog and digital indication of current fill/level status. Also, static text must be added to indicate level at bottom of wet well and top (or overflow) of wet well.
h. Indicators shall use an appropriate number of significant digits and dead band to produce steady values.

4. Print Screen function shall direct an image of the currently displayed screen to any system printer as the user directs. When directed to a color printer, a color screen image shall be produced.

5. Trending: Provide on-screen trending displays that are user definable that operate from either previously collected historical trend groups (named file) or from a group of real-time variables. Provide facilities for user selection of colors, time (horizontal), and measurement (vertical) scales. Accommodate real-time sampling intervals as short as 1 second. Real-time trends shall show alarm setpoints. Historical trend displays shall have time-scale panning controls. All trends must have an adjustable cursor that indicates both Y and X axis values at the user-selected location.

6. Security: Not required since SCADA will not have control over equipment or setpoints.

7. Data Storage:

a. Data shall be stored to the Historian’s database. Text, binary, or otherwise “flat” file storage is not acceptable.

b. All tags, both analog and digital, shall be stored via “Delta” storage method. That is, a new value shall be stored only when the tag has changed an appropriate amount. Normally the delta storage should be triggered at 0.1% change against the tag’s maximum value, although this level may need to be adjusted if the tag has an abnormally wide range of operation.

c. Establish automatic backup of historical data on a daily basis. The data shall be stored on an external hard-drive unless other procedures have been approved by LFUCG.

8. Trending

a. For each tag selected to be trended in the I/O table, provide a pre-configured trend that shows both real-time and historical values. Certain tags may be added to the same trend where appropriate as long as they are uniquely identified via color and label.

b. Provide a custom trend screen whereby the operator has the ability to trend any tag in the database for WHWWS.

9. Reports:

a. Reporting requirements shall consist of both live HMI screens and published historical reports. The live HMI screens shall dynamically update the values for “today” or “this month” and shall display the values for “yesterday” or “last month”. The published reports shall be accessible such that LFUCG can select which date or month they would like to view. In lieu of published reports, it is acceptable to store the data in a database with a report template as long as query date selection tools are provided to allow LFUCG to query a specific date range to obtain the desired report.

b. Daily totals and monthly totals (both run-times and flow totals) shall be captured from the WHWWS controller and logged to the database.

c. The following parameters shall be reported:

i. Motor & Equipment Run times: For each motor or piece of equipment that is monitored, report “Run Time Today” and “Run Time Yesterday” on the HMI screen and log each runtime to the database daily.

ii. Flow Totals: For both Wet Well Influent and Effluent flows, report “Flow Total Today”, “Flow Total Yesterday”, “Flow Total This Month”, and “Flow Total Last Month.” The flow totals shall be calculated locally at the WHWWS controller and transmitted to SCADA for display on the HMI screen and each flow total shall be logged to the database daily or monthly as applicable.

e. Data Export: Establish a simple method of data export to Excel for each run time and flow total value.

3.02 PERFORMANCE TEST

A. Following installation, checkout, and final adjustment of software, the Contractor shall schedule a performance test in the presence of the Engineer and the Owner.

B. Demonstrate to the Engineer and Owner that each I/O point scheduled on the Contract Drawings has been integrated and is functioning properly.

C. Demonstrate trending, reporting, and alarm messaging has been configured properly and is operational.

D. Software development shall not be accepted until the SCADA system functions for at least one week with zero nuisance alarms. Nuisance alarms shall be as defined by the Engineer.

END OF SECTION

Sheet #	Description	Tag	Drawing Tag	Type	Signal	Range / Off Status	Units / On Status	Field Wiring Data						
								Field ISA Signal Source / Destination	Local Control / Indication	CP Control / Indication	HMI Control / Indication	Equipment Panel Location	Field FTC	SCADA Panel
	Bar Screen Room Room High Temperature Alarm	TAHR-BSCP-0001		DI	HW	Normal	Alarm		N	N	Y			
	Bar Screen and Compactor CP #1 (BSCP1)													
I-0701	Bar Screen #1 In-Auto	YIR-BSCP-0100		DI	ETH	Normal	Auto	HS-0100	Y	N	Y	Electrical Room		CP-100
	Bar Screen #1 Running	YIR-BSCP-0101		DI	ETH	Normal	Running	YI-0101	Y	Y	Y	Electrical Room		CP-100
	Bar Screen #1 Emergency Stop	YAIR-BSCP-0102		DI	ETH	Normal	Alarm	HS-0102	Y	N	Y	Electrical Room		CP-100
	Bar Screen #1 Fault	YAIR-BSCP-0103		DI	ETH	Normal	Alarm	YAI-0103	Y	Y	Y	Electrical Room		CP-100
	Bar Screen #1 Start Cmd	YCR-BSCP-0104		DO	ETH	Normal	Start	YC-0104	N	N	Y	Electrical Room		CP-100
	Bar Screen #1 Stop Cmd	YCR-BSCP-0105		DO	ETH	Normal	Stop	YC-0105	N	N	Y	Electrical Room		CP-100
	Bar Screen #1 Low Speed Cmd	YCR-BSCP-0106		DO	ETH	Normal	Low Speed	YC-0106	N	N	Y	Electrical Room		CP-100
	Bar Screen #1 High Speed Cmd	YCR-BSCP-0107		DO	ETH	Normal	High Speed	YC-0107	N	N	Y	Electrical Room		
	Compactor #1 In-Auto	YIR-BSCP-0110		DI	ETH	Normal	Auto	HS-0110	Y	N	Y	Electrical Room		CP-100
	Compactor #1 Running	YIR-BSCP-0111		DI	ETH	Normal	Running	YI-0111	Y	Y	Y	Electrical Room		CP-100
	Compactor #1 Emergency Stop	YAIR-BSCP-0112		DI	ETH	Normal	Alarm	HS-0112	Y	N	Y	Electrical Room		CP-100
	Compactor #1 Fault	YAIR-BSCP-0113		DI	ETH	Normal	Alarm	YI-0113	Y	Y	Y	Electrical Room		CP-100
	Compactor #1 Start	ZCR-BSCP-0114		DO	ETH	Normal	Start	HS-0114	Y	N	Y	Electrical Room		CP-100
	Compactor #1 Stop	ZCR-BSCP-0115		DO	ETH	Normal	Stop	HS-0115	Y	N	Y	Electrical Room		CP-100
E-1101	Channel #1 Influent Level	LIR-IC1-0100		AI	HW	0-10	feet	LIT-0100	N	N	Y		FTC #1	CP-100
E-1101	Channel #1 Effluent Level	LIR-IC1-0101		AI	HW	0-10	feet	LIT-0101	N	N	Y		FTC #1	CP-100
E-1101	Channel #1 Influent High Level Float Switch	LAHR-IC1-0100		DI	HW	Normal	High	LSH-0100	N	Y	Y		FTC #1	CP-100
	Water Level Differential			OIC					N	N	Y			
	Bar Screen #1 Wash Water Open / Close			OIC					N	N	Y			
	Bar Screen #1 Flush Water Auto			OIC					N	N	Y			
	Bar Screen #1 Flush Water Open / Close			OIC					N	N	Y			
	Bar Screen #1 System Reset			OIC					N	N	Y			
	Bar Screen #1 Low Speed Differential Level Setpoint			OIC					N	N	Y			
	Bar Screen #1 High Speed Differential Level Setpoint			OIC					N	N	Y			
	Bar Screen #1 High High Water Level Setpoint			OIC					N	N	Y			
	Bar Screen #1 Elapsed Runtime Meter			OIC					N	N	Y			
	Compactor #1 On Delay Timer			OIC					N	N	Y			
	Compactor #1 Off Delay Timer			OIC					N	N	Y			
	Compactor #1 Wash Water On Time			OIC					N	N	Y			
	Compactor #1 Flush Water On Time			OIC					N	N	Y			
	Compactor #1 Fault			OIC					N	N	Y			
	Compactor #1 System Reset			OIC					N	N	Y			
I-0701	Bar Screen #2 In-Auto	YIR-BSCP-0200		DI	ETH	Normal	Auto	HS-0200	Y	N	Y	Electrical Room		CP-100
	Bar Screen #2 Running	YIR-BSCP-0201		DI	ETH	Normal	Running	YI-0201	Y	Y	Y	Electrical Room		CP-100
	Bar Screen #2 Emergency Stop	YAIR-BSCP-0202		DI	ETH	Normal	Alarm	HS-0202	Y	N	Y	Electrical Room		CP-100
	Bar Screen #2 Fault	YAIR-BSCP-0203		DI	ETH	Normal	Alarm	YAI-0203	Y	Y	Y	Electrical Room		CP-100
	Bar Screen #2 Start Cmd	YCR-BSCP-0204		DO	ETH	Normal	Start	YC-0204	N	N	Y	Electrical Room		CP-100
	Bar Screen #2 Stop Cmd	YCR-BSCP-0205		DO	ETH	Normal	Stop	YC-0205	N	N	Y	Electrical Room		CP-100
	Bar Screen #2 Low Speed Cmd	YCR-BSCP-0206		DO	ETH	Normal	Low Speed	YC-0206	N	N	Y	Electrical Room		CP-100
	Bar Screen #2 High Speed Cmd	YCR-BSCP-0207		DO	ETH	Normal	High Speed	YC-0207	N	N	Y	Electrical Room		CP-100
	Compactor #2 In-Auto	YIR-BSCP-0210		DI	ETH	Normal	Auto	HS-0210	Y	N	Y	Electrical Room		CP-100
	Compactor #2 Running	YIR-BSCP-0211		DI	ETH	Normal	Running	YI-0211	Y	Y	Y	Electrical Room		CP-100
	Compactor #2 Emergency Stop	YAIR-BSCP-0212		DI	ETH	Normal	Alarm	HS-0212	Y	N	Y	Electrical Room		CP-100
	Compactor #2 Fault	YAIR-BSCP-0213		DI	ETH	Normal	Alarm	YI-0213	Y	Y	Y	Electrical Room		CP-100
	Compactor #2 Start	ZCR-BSCP-0214		DO	ETH	Normal	Start	HS-0214	Y	N	Y	Electrical Room		CP-100
	Compactor #2 Stop	ZCR-BSCP-0215		DO	ETH	Normal	Stop	HS-0215	Y	N	Y	Electrical Room		CP-100
E-1101	Channel #2 Influent Level	LIR-IC2-0200		AI	HW	0-10	feet	LIT-0200	N	N	Y		FTC #1	CP-100
E-1101	Channel #2 Effluent Level	LIR-IC2-0201		AI	HW	0-10	feet	LIT-0201	N	N	Y		FTC #1	CP-100
E-1101	Channel #2 Influent High Level Float Switch	LAHR-IC2-0200		DI	HW	Normal	High	LSH-0200	N	Y	Y		FTC #1	CP-100
	Water Level Differential			OIC					N	N	Y			
	Bar Screen #2 Wash Water Open / Close			OIC					N	N	Y			
	Bar Screen #2 Flush Water Auto			OIC					N	N	Y			
	Bar Screen #2 Flush Water Open / Close			OIC					N	N	Y			
	Bar Screen #2 System Reset			OIC					N	N	Y			
	Bar Screen #2 Low Speed Differential Level Setpoint			OIC					N	N	Y			
	Bar Screen #2 High Speed Differential Level Setpoint			OIC					N	N	Y			
	Bar Screen #2 High High Water Level Setpoint			OIC					N	N	Y			
	Bar Screen #2 Elapsed Runtime Meter			OIC					N	N	Y			
	Compactor #2 On Delay Timer			OIC					N	N	Y			
	Compactor #2 Off Delay Timer			OIC					N	N	Y			
	Compactor #2 Wash Water On Time			OIC					N	N	Y			
	Compactor #2 Flush Water On Time			OIC					N	N	Y			

Sheet #	Description	Tag	Drawing Tag	Type	Signal	Range / Off Status	Units / On Status	Field Wiring Data						
								Field ISA Signal Source / Destination	Local Control / Indication	CP Control / Indication	HMI Control / Indication	Equipment Panel Location	Field FTC	SCADA Panel
	Compactor #2 Fault			OIC					N	N	Y			
	Compactor #2 System Reset			OIC					N	N	Y			
	Bar Screen and Compactor CP #2 (BSCP2)													
I-0701	Bar Screen #3 In-Auto	YIR-BSCP-0300		DI	ETH	Normal	Auto	HS-0300	Y	N	Y	Electrical Room		CP-100
	Bar Screen #3 Running	YIR-BSCP-0301		DI	ETH	Normal	Running	YI-0301	Y	Y	Y	Electrical Room		CP-100
	Bar Screen #3 Emergency Stop	YAIR-BSCP-0302		DI	ETH	Normal	Alarm	HS-0302	Y	N	Y	Electrical Room		CP-100
	Bar Screen #3 Fault	YAIR-BSCP-0303		DI	ETH	Normal	Alarm	YAI-0303	Y	Y	Y	Electrical Room		CP-100
	Bar Screen #3 Start Cmd	YCR-BSCP-0304		DO	ETH	Normal	Start	YC-0304	N	N	Y	Electrical Room		CP-100
	Bar Screen #3 Stop Cmd	YCR-BSCP-0305		DO	ETH	Normal	Stop	YC-0305	N	N	Y	Electrical Room		CP-100
	Bar Screen #3 Low Speed Cmd	YCR-BSCP-0306		DO	ETH	Normal	Low Speed	YC-0306	N	N	Y	Electrical Room		CP-100
	Bar Screen #3 High Speed Cmd	YCR-BSCP-0307		DO	ETH	Normal	High Speed	YC-0307	N	N	Y	Electrical Room		CP-100
	Compactor #3 In-Auto	YIR-BSCP-0310		DI	ETH	Normal	Auto	HS-0310	Y	N	Y	Electrical Room		CP-100
	Compactor #3 Running	YIR-BSCP-0311		DI	ETH	Normal	Running	YI-0311	Y	Y	Y	Electrical Room		CP-100
	Compactor #3 Emergency Stop	YAIR-BSCP-0312		DI	ETH	Normal	Alarm	HS-0312	Y	N	Y	Electrical Room		CP-100
	Compactor #3 Fault	YAIR-BSCP-0313		DI	ETH	Normal	Alarm	YI-0313	Y	Y	Y	Electrical Room		CP-100
	Compactor #3 Start	ZCR-BSCP-0314		DO	ETH	Normal	Start	HS-0314	Y	N	Y	Electrical Room		CP-100
	Compactor #3 Stop	ZCR-BSCP-0315		DO	ETH	Normal	Stop	HS-0315	Y	N	Y	Electrical Room		CP-100
E-1101	Channel #3 Influent Level	LIR-IC3-0300		AI	HW	0-10	feet	LIT-0300	N	N	Y		FTC #2	CP-100
E-1101	Channel #3 Effluent Level	LIR-IC3-0301		AI	HW	0-10	feet	LIT-0301	N	N	Y		FTC #2	CP-100
E-1101	Channel #3 Influent High Level Float Switch	LAHR-IC3-0300		DI	HW	Normal	Alarm	LSH-0300	N	Y	Y		FTC #2	CP-100
	Water Level Differential			OIC					N	N	Y			
	Bar Screen #3 Wash Water Open / Close			OIC					N	N	Y			
	Bar Screen #3 Flush Water Auto			OIC					N	N	Y			
	Bar Screen #3 Flush Water Open / Close			OIC					N	N	Y			
	Bar Screen #3 System Reset			OIC					N	N	Y			
	Bar Screen #3 Low Speed Differential Level Setpoint			OIC					N	N	Y			
	Bar Screen #3 High Speed Differential Level Setpoint			OIC					N	N	Y			
	Bar Screen #3 High High Water Level Setpoint			OIC					N	N	Y			
	Bar Screen #3 Elapsed Runtime Meter			OIC					N	N	Y			
	Compactor #3 On Delay Timer			OIC					N	N	Y			
	Compactor #3 Off Delay Timer			OIC					N	N	Y			
	Compactor #3 Wash Water On Time			OIC					N	N	Y			
	Compactor #3 Flush Water On Time			OIC					N	N	Y			
	Compactor #3 Fault			OIC					N	N	Y			
	Compactor #3 System Reset			OIC					N	N	Y			
I-0701	Bar Screen #4 In-Auto	YIR-BSCP-0400		DI	ETH		Auto	HS-0400	Y	N	Y	Electrical Room		CP-100
	Bar Screen #4 Running	YIR-BSCP-0401		DI	ETH		Running	YI-0401	Y	Y	Y	Electrical Room		CP-100
	Bar Screen #4 Emergency Stop	YAIR-BSCP-0402		DI	ETH		Alarm	HS-0402	Y	N	Y	Electrical Room		CP-100
	Bar Screen #4 Fault	YAIR-BSCP-0403		DI	ETH		Alarm	YAI-0403	Y	Y	Y	Electrical Room		CP-100
	Bar Screen #4 Start Cmd	YCR-BSCP-0404		DO	ETH		Start	YC-0404	N	N	Y	Electrical Room		CP-100
	Bar Screen #4 Stop Cmd	YCR-BSCP-0405		DO	ETH		Stop	YC-0405	N	N	Y	Electrical Room		CP-100
	Bar Screen #4 Low Speed Cmd	YCR-BSCP-0406		DO	ETH		Low Speed	YC-0406	N	N	Y	Electrical Room		CP-100
	Bar Screen #4High Speed Cmd	YCR-BSCP-0407		DO	ETH		High Speed	YC-0407	N	N	Y	Electrical Room		CP-100
	Compactor #4 In-Auto	YIR-BSCP-0410		DI	ETH		Auto	HS-0410	Y	N	Y	Electrical Room		CP-100
	Compactor #4 Running	YIR-BSCP-0411		DI	ETH		Running	YI-0411	Y	Y	Y	Electrical Room		CP-100
	Compactor #4 Emergency Stop	YAIR-BSCP-0412		DI	ETH		Alarm	HS-0412	Y	N	Y	Electrical Room		CP-100
	Compactor #4 Fault	YAIR-BSCP-0413		DI	ETH		Alarm	YI-0413	Y	Y	Y	Electrical Room		CP-100
	Compactor #4 Start	ZCR-BSCP-0414		DO	ETH		Start	HS-0414	Y	N	Y	Electrical Room		CP-100
	Compactor #4 Stop	ZCR-BSCP-0415		DO	ETH		Stop	HS-0415	Y	N	Y	Electrical Room		CP-100
E-1101	Channel #4 Influent Level	LIR-IC4-0400		AI	HW	0-10	feet	LIT-0400	N	N	Y		FTC #2	CP-100
E-1101	Channel #4 Effluent Level	LIR-IC4-0401		AI	HW	0-10	feet	LIT-0401	N	N	Y		FTC #2	CP-100
E-1101	Channel #4 Influent High Level Float Switch	LAHR-IC4-0400		DI	HW	Normal	High	LSH-0400	N	Y	Y		FTC #2	CP-100
	Water Level Differential			OIC					N	N	Y			
	Bar Screen #4 Wash Water Open / Close			OIC					N	N	Y			
	Bar Screen #4 Flush Water Auto			OIC					N	N	Y			
	Bar Screen #4 Flush Water Open / Close			OIC					N	N	Y			
	Bar Screen #4 System Reset			OIC					N	N	Y			
	Bar Screen #4 Low Speed Differential Level Setpoint			OIC					N	N	Y			
	Bar Screen #4 High Speed Differential Level Setpoint			OIC					N	N	Y			
	Bar Screen #4 High High Water Level Setpoint			OIC					N	N	Y			
	Bar Screen #4 Elapsed Runtime Meter			OIC					N	N	Y			
	Compactor #4 On Delay Timer			OIC					N	N	Y			
	Compactor #4 Off Delay Timer			OIC					N	N	Y			
	Compactor #4 Wash Water On Time			OIC					N	N	Y			
	Compactor #4 Flush Water On Time			OIC					N	N	Y			

Sheet #	Description	Tag	Drawing Tag	Type	Signal	Range / Off Status	Units / On Status	Field Wiring Data						
								Field ISA Signal Source / Destination	Local Control / Indication	CP Control / Indication	HMI Control / Indication	Equipment Panel Location	Field FTC	SCADA Panel
	Compactor #4 Fault			OIC					N	N	Y			
	Compactor #4 System Reset			OIC					N	N	Y			
	Influent Channel #1 Channel Gates													
	Channel #1 Influent Gate In-Remote	YIR-IC1-0150	CG2.1	DI	DEVN	Normal	Remote	HS-0150	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #1 Influent Gate Opened Feedback	ZIOR-IC1-0151	CG2.1	DI	DEVN	Normal	Opened	YI-0151	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #1 Influent Gate Closed Feedback	ZICR-IC1-0152	CG2.1	DI	DEVN	Normal	Closed	YI-0152	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #1 Influent Gate Open Command	ZOR-IC1-0153	CG2.1	DO	DEVN	Normal	Open	YC-0153	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #1 Influent Gate Close Command	ZCR-IC1-0154	CG2.1	DO	DEVN	Normal	Close	YC-0154	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #1 Influent Gate Position Feedback	ZIR-IC1-0155	CG2.1	AI	DEVN	0-100	%	ZI-0155	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #1 Effluent Gate In-Remote	YIR-IC1-0160	CG3.1	DI	DEVN	Normal	Remote	HS-0160	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #1 Effluent Gate Open Feedback	ZIOR-IC1-0161	CG3.1	DI	DEVN	Normal	Opened	YI-0161	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #1 Effluent Gate Closed Feedback	ZICR-IC1-0162	CG3.1	DI	DEVN	Normal	Closed	YI-0162	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #1 Influent Gate Open Command	ZOR-IC1-0163	CG3.1	DO	DEVN	Normal	Open	YC-0163	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #1 Effluent Gate Close Command	ZCR-IC1-0164	CG3.1	DO	DEVN	Normal	Close	YC-0164	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #1 Effluent Gate Position Feedback	ZIR-IC1-0165	CG3.1	AI	DEVN	0-100	%	ZI-0165	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Influent Channel #2 Channel Gates													
	Channel #2 Influent Gate In-Remote	YIR-IC2-0250	CG2.2	DI	DEVN	Normal	Remote	HS-0250	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #2 Influent Gate Opened Feedback	ZIOR-IC2-0251	CG2.2	DI	DEVN	Normal	Opened	YI-0251	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #2 Influent Gate Closed Feedback	ZICR-IC2-0252	CG2.2	DI	DEVN	Normal	Closed	YI-0252	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #2 Influent Gate Open Command	ZOR-IC2-0253	CG2.2	DO	DEVN	Normal	Open	YC-0253	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #2 Influent Gate Close Command	ZCR-IC2-0254	CG2.2	DO	DEVN	Normal	Close	YC-0254	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #2 Influent Gate Position Feedback	ZIR-IC2-0255	CG2.2	AI	DEVN	0-100	%	ZI-0255	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #2 Effluent Gate In-Remote	YIR-IC2-0260	CG3.2	DI	DEVN	Normal	Remote	HS-0260	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #2 Effluent Gate Open Feedback	ZIOR-IC2-0261	CG3.2	DI	DEVN	Normal	Opened	YI-0261	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #2 Effluent Gate Closed Feedback	ZICR-IC2-0262	CG3.2	DI	DEVN	Normal	Closed	YI-0262	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #2 Influent Gate Open Command	ZOR-IC2-0263	CG3.2	DO	DEVN	Normal	Open	YC-0263	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #2 Effluent Gate Close Command	ZCR-IC2-0264	CG3.2	DO	DEVN	Normal	Close	YC-0264	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Channel #2 Effluent Gate Position Feedback	ZIR-IC2-0265	CG3.2	AI	DEVN	0-100	%	ZI-0265	N	N	Y	Screen & Grit Handling	FTC#1	CP-100
	Influent Channel #3 Channel Gates													
	Channel #3 Influent Gate In-Remote	YIR-IC3-0350	CG2.3	DI	DEVN	Normal	Remote	HS-0350	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #3 Influent Gate Open Feedback	ZIOR-IC3-0351	CG2.3	DI	DEVN	Normal	Opened	YI-0351	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #3 Influent Gate Closed Feedback	ZICR-IC3-0352	CG2.3	DI	DEVN	Normal	Closed	YI-0352	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #3 Influent Gate Open Command	ZOR-IC3-0353	CG2.3	DO	DEVN	Normal	Open	YC-0353	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #3 Influent Gate Close Command	ZCR-IC3-0354	CG2.3	DO	DEVN	Normal	Close	YC-0354	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #3 Influent Gate Position Feedback	ZIR-IC3-0355	CG2.3	AI	DEVN	0-100	%	ZI-0355	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #3 Effluent Gate In-Remote	YIR-IC3-0360	CG3.3	DI	DEVN	Normal	Remote	HS-0360	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #3 Effluent Gate Open Feedback	ZIOR-IC3-0361	CG3.3	DI	DEVN	Normal	Opened	YI-0361	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #3 Effluent Gate Closed Feedback	ZICR-IC3-0362	CG3.3	DI	DEVN	Normal	Closed	YI-0362	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #3 Influent Gate Open Command	ZOR-IC3-0363	CG3.3	DO	DEVN	Normal	Open	YC-0363	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #3 Effluent Gate Close Command	ZCR-IC3-0364	CG3.3	DO	DEVN	Normal	Close	YC-0364	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #3 Effluent Gate Position Feedback	ZIR-IC3-0365	CG3.3	AI	DEVN	0-100	%	ZI-0365	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Influent Channel #4 Channel Gates													
	Channel #4 Influent Gate In-Remote	YIR-IC4-0450	CG2.4	DI	DEVN	Normal	Remote	HS-0450	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #4 Influent Gate Open Feedback	ZIOR-IC4-0451	CG2.4	DI	DEVN	Normal	Opened	YI-0451	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #4 Influent Gate Closed Feedback	ZICR-IC4-0452	CG2.4	DI	DEVN	Normal	Closed	YI-0452	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #4 Influent Gate Open Command	ZOR-IC4-0453	CG2.4	DO	DEVN	Normal	Close	YC-0453	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #4 Influent Gate Close Command	ZCR-IC4-0454	CG2.4	DO	DEVN	Normal	Close	YC-0454	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #4 Influent Gate Position Feedback	ZIR-IC4-0455	CG2.4	AI	DEVN	0-100	%	ZI-0455	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #4 Effluent Gate In-Remote	YIR-IC4-0460	CG3.4	DI	DEVN	Normal	Remote	HS-0460	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #4 Effluent Gate Open Feedback	ZIOR-IC4-0461	CG3.4	DI	DEVN	Normal	Opened	YI-0461	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #4 Effluent Gate Closed Feedback	ZICR-IC4-0462	CG3.4	DI	DEVN	Normal	Closed	YI-0462	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #4 Influent Gate Open Command	ZOR-IC4-0463	CG3.4	DO	DEVN	Normal	Close	YC-0463	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #4 Effluent Gate Close Command	ZCR-IC4-0463	CG3.4	DO	DEVN	Normal	Close	YC-0464	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Channel #4 Effluent Gate Position Feedback	ZIR-IC4-0464	CG3.4	AI	DEVN	0-100	%	ZI-0465	N	N	Y	Screen & Grit Handling	FTC#2	CP-100
	Grit System Control Panel (GSCP)													
	Grit System Enable	YIR-GSCP-4509		DO	ETH	Normal	Permissive		N	Y	Y	Electrical Room		CP-100
I-0701	Grit System #1 In-Auto	YIR-GSCP-4500		DI	ETH	Normal	Auto		N	Y (IND)	Y	Electrical Room	FTC #1	CP-100
	Grit System #1 Running	YIR-GSCP-4501		DI	ETH	Normal	Running		N	Y	Y	Electrical Room	FTC #1	CP-100
	Grit System #1 Emergency Stop	YAIR-GSCP-4502		DI	ETH	Normal	Alarm		Y	N	Y	Electrical Room	FTC #1	CP-100
	Grit System #1 Fault	YAIR-GSCP-4503		DI	ETH	Normal	Alarm		N	Y	Y	Electrical Room	FTC #1	CP-100
	Grit System #1 Backwash In-Progress	YIR-GSCP-4504		DI	ETH	Normal	Backwash		N	N	Y	Electrical Room	FTC #1	CP-100
	Grit System #1 Blowdown In-Progress	YIR-GSCP-4505		DI	ETH	Normal	Blowdown		N	N	Y	Electrical Room	FTC #1	CP-100
	Grit System #1 Start Cmd	YCR-GSCP-4506		DO	ETH	Normal	Start		N	Y	Y	Electrical Room	FTC #1	CP-100
	Grit System #1 Stop Cmd	YCR-GSCP-4507		DO	ETH	Normal	Stop		N	Y	Y	Electrical Room	FTC #1	CP-100
	Grit System #1 Snail Speed FB	SIR-GSCP-1506		AI	ETH	0-100	%		Y	Y	Y	Electrical Room		CP-100
	Grit System #1 Snail Speed CMD	SIR-GSCP-1507		AI	ETH	0-100	%		Y	Y	Y	Electrical Room		CP-100
	Grit System #1 Wet Weather Select	YCR-GSCP-4508		DO	ETH	Normal	Forward		N	N	Y	Electrical Room	FTC #1	CP-100
I-0701	Grit System #2 In-Auto	YIR-GSCP-4600		DI	ETH	Normal	Auto		N	Y (IND)	Y	Electrical Room	FTC #2	CP-100

Sheet #	Description	Tag	Drawing Tag	Type	Signal	Range / Off Status	Units / On Status	Field Wiring Data						
								Field ISA Signal Source / Destination	Local Control / Indication	CP Control / Indication	HMI Control / Indication	Equipment Panel Location	Field FTC	SCADA Panel
	Grit System #2 Running	YIR-GSCP-4601		DI	ETH	Normal	Running		N	Y	Y	Electrical Room	FTC #2	CP-100
	Grit System #2 Emergency Stop	YAIR-GSCP-4602		DI	ETH	Normal	Alarm		Y	N	Y	Electrical Room	FTC #2	CP-100
	Grit System #2 Fault	YAIR-GSCP-4603		DI	ETH	Normal	Alarm		N	Y	Y	Electrical Room	FTC #2	CP-100
	Grit System #2 Backwash In-Progress	YIR-GSCP-4604		DI	ETH	Normal	Backwash							
	Grit System #2 Blowdown In-Progress	YIR-GSCP-4605		DI	ETH	Normal	Blowdown							
	Grit System #2 Start Cmd	YCR-GSCP-4606		DO	ETH	Normal	Start		N	Y	Y	Electrical Room	FTC #2	CP-100
	Grit System #2 Stop Cmd	YCR-GSCP-4607		DO	ETH	Normal	Stop		N	Y	Y	Electrical Room	FTC #2	CP-100
	Grit System #2 Snail Speed FB	SIR-GSCP-1516		AI	ETH	0-100	%		Y	Y	Y	Electrical Room		CP-100
	Grit System #2 Snail Speed CMD	SIR-GSCP-1517		AI	ETH	0-100	%		Y	Y	Y	Electrical Room		CP-100
	Grit System #2 Wet Weather Select	YCR-GSCP-4608		DO	ETH	Normal	Forward		N	N	Y	Electrical Room	FTC #2	CP-100
	Grit System Truck Loading - Start Pause	YCR-GSCP-4509		DO	ETH	Normal	Pause		Y	N	Y	Truck Bay		
	Grit System Truck Loading - Move Truck Indication (System Paused)	YIR-GSCP-4510		DI	ETH	Normal	Paused		Y	N	Y	Truck Bay		
	Grit System Truck Loading - Pause Timer Expired	YIR-GSCP-4511		DI	ETH	Normal	Expired		Y	N	Y	Truck Bay		
	Grit System Truck Loading - Truck In-Place (System Resume)	YCR-GSCP-4512		DO	ETH	Normal	Resume		Y	N	Y	Truck Bay		
	Grit System Truck Loading - Start Pause		OIC											
	Grit System Truck Loading - Move Truck Indication (System Paused)		OIC											
	Grit System Truck Loading - Pause Timer Expired		OIC											
	Grit System Truck Loading - Truck In-Place (System Resume)		OIC											
	Grit System #1 Pump Select Slurry Cup 1	YIR-GSCP-4000		DO	ETH	Normal	Select		Y	Y	Y	Electrical Room		
	Grit System #1 Pump Select Slurry Cup 2	YIR-GSCP-4001		DO	ETH	Normal	Select		Y	Y	Y	Electrical Room		
	Grit System #2 Pump Select Slurry Cup 1	YIR-GSCP-4002		DO	ETH	Normal	Select		Y	Y	Y	Electrical Room		
	Grit System #2 Pump Select Slurry Cup 2	YIR-GSCP-4003		DO	ETH	Normal	Select		Y	Y	Y	Electrical Room		
	Grit System #3 Pump Select Slurry Cup 1	YIR-GSCP-4004		DO	ETH	Normal	Select		Y	Y	Y	Electrical Room		
	Grit System #3 Pump Select Slurry Cup 2	YIR-GSCP-4005		DO	ETH	Normal	Select		Y	Y	Y	Electrical Room		
	Grit Pump #1 In-Auto	YIR-GSCP-4100		DI	ETH	Normal	Auto		Y	Y (IND)	Y	Electrical Room		
	Grit Pump #1 Running	YIR-GSCP-4101		DI	ETH	Normal	Running		Y	Y	Y	Electrical Room		
	Grit Pump #1 Emergency Stop	YAIR-GSCP-4102		DI	ETH	Normal	Alarm		Y	N	Y	Electrical Room		
	Grit Pump #1 Fault	YAIR-GSCP-4103		DI	ETH	Normal	Alarm		Y	Y	Y	Electrical Room		
	Grit Pump #1 Start	YCR-GSCP-4104		DO	ETH	Normal	Start		Y	N	Y	Electrical Room		
	Grit Pump #1 Stop	YCR-GSCP-4105		DO	ETH	Normal	Stop		Y	N	Y	Electrical Room		
	Grit Pump #1 Seal Water Solenoid	YCR-GSCP-4106		DO	ETH	Normal	Open		Y	N	Y	Electrical Room		
	Grit Pump #1 Moisture Sensor 1	YAIR-GSCP-4107		DI	ETH	Normal	Alarm		Y	N	Y	Electrical Room		
	Grit Pump #1 Moisture Sensor 2	YAIR-GSCP-4108		DI	ETH	Normal	Alarm		Y	N	Y	Electrical Room		
	Grit Pump #2 In-Auto	YIR-GSCP-4200		DI	ETH	Normal	Auto		Y	Y (IND)	Y	Electrical Room		
	Grit Pump #2 Running	YIR-GSCP-4201		DI	ETH	Normal	Runnning		Y	Y	Y	Electrical Room		
	Grit Pump #2 Emergency Stop	YAIR-GSCP-4202		DI	ETH	Normal	Alarm		Y	N	Y	Electrical Room		
	Grit Pump #2 Fault	YAIR-GSCP-4203		DI	ETH	Normal	Alarm		Y	Y	Y	Electrical Room		
	Grit Pump #2 Start	YCR-GSCP-4204		DO	ETH	Normal	Start		Y	N	Y	Electrical Room		
	Grit Pump #2 Stop	YCR-GSCP-4205		DO	ETH	Normal	Stop		Y	N	Y	Electrical Room		
	Grit Pump #2 Seal Water Solenoid	YCR-GSCP-4206		DO	ETH	Normal	Open		Y	N	Y	Electrical Room		
	Grit Pump #2 Moisture Sensor 1	YAIR-GSCP-4207		DI	ETH	Normal	Alarm		Y	N	Y	Electrical Room		
	Grit Pump #2 Moisture Sensor 2	YAIR-GSCP-4208		DI	ETH	Normal	Alarm		Y	N	Y	Electrical Room		
	Grit Pump #3 In-Auto	YIR-GSCP-4300		DI	ETH	Normal	Auto		Y	Y (IND)	Y	Electrical Room		
	Grit Pump #3 Running	YIR-GSCP-4301		DI	ETH	Normal	Running		Y	Y	Y	Electrical Room		
	Grit Pump #3 Emergency Stop	YAIR-GSCP-4302		DI	ETH	Normal	Alarm		Y	N	Y	Electrical Room		
	Grit Pump #3 Fault	YAIR-GSCP-4303		DI	ETH	Normal	Alarm		Y	Y	Y	Electrical Room		
	Grit Pump #3 Start	YCR-GSCP-4304		DO	ETH	Normal	Start		Y	N	Y	Electrical Room		
	Grit Pump #3 Stop	YCR-GSCP-4305		DO	ETH	Normal	Stop		Y	N	Y	Electrical Room		
	Grit Pump #3 Seal Water Solenoid	YCR-GSCP-4306		DO	ETH	Normal	Open		Y	N	Y	Electrical Room		
	Grit Pump #3 Moisture Sensor 1	YAIR-GSCP-4307		DI	ETH	Normal	Alarm		Y	N	Y	Electrical Room		
	Grit Pump #3 Moisture Sensor 2	YAIR-GSCP-4308		DI	ETH	Normal	Alarm		Y	N	Y	Electrical Room		
	Grit System #1 Escalator On Delay Timer			OIC										
	Grit System #1 Escalator Off Delay Timer			OIC										
	Grit System #1 Wash Water On Time			OIC										
	Grit System #1 Flush Water On Time			OIC										
	Grit System #1 Fault			OIC										
	Grit System #1 System Reset			OIC										
	Screw Conveyor Control Panel A-C (SCCP1)													
	Screw Conveyor #1 In-Auto	YIR-SCCP1-1600		DI	HW	Normal	Auto		Y	Y (IND)	Y	Electrical Room		CP-100
	Screw Conveyor #1 Running	YIR-SCCP1-1601		DI	HW	Normal	Running		Y	Y	Y	Electrical Room		CP-100
	Screw Conveyor #1 Emergency Stop	YAIR-SCCP1-1602		DI	HW	Normal	Alarm		Y	N	Y	Electrical Room		CP-100
	Screw Conveyor #1 Fault	YAIR-SCCP1-1603		DI	HW	Normal	Alarm		Y	Y	Y	Electrical Room		CP-100
	Screw Conveyor #1 Start	YCR-SCCP1-1604		DO	HW	Normal	Start		Y	N	Y	Electrical Room		CP-100
	Screw Conveyor #1 Stop	YCR-SCCP1-1605		DO	HW	Normal	Stop		Y	N	Y	Electrical Room		CP-100
	Screw Conveyor Control Panel B-D (SCCP2)													
	Screw Conveyor #2 In-Auto	YIR-SCCP2-1610		DI	HW	Normal	Auto		Y	Y (IND)	Y	Electrical Room		CP-100
	Screw Conveyor #2 Running	YIR-SCCP2-1611		DI	HW	Normal	Running		Y	Y	Y	Electrical Room		CP-100
	Screw Conveyor #2 Emergency Stop	YAIR-SCCP2-1612		DI	HW	Normal	Alarm		Y	N	Y	Electrical Room		CP-100
	Screw Conveyor #2 Fault	YAIR-SCCP2-1613		DI	HW	Normal	Alarm		Y	Y	Y	Electrical Room		CP-100
	Screw Conveyor #2 Start	YCR-SCCP2-1614		DO	HW	Normal	Start		Y	N	Y	Electrical Room		CP-100

Sheet #	Description	Tag	Drawing Tag	Type	Signal	Range / Off Status	Units / On Status	Field Wiring Data						
								Field ISA Signal Source / Destination	Local Control / Indication	CP Control / Indication	HMI Control / Indication	Equipment Panel Location	Field FTC	SCADA Panel
	Screw Conveyor #2 Stop	YCR-SCCP2-1616		DO	HW	Normal	Stop		Y	N	Y	Electrical Room		CP-100
	Truck Loading Control Panel (TLCP)													
	Truck Change Out Request Selector Switch	YIR-TLCP-1700		DI	HW	Normal	Pause		N	Y	Y	Truck Bay		CP-100
	Truck In-Place PB (System Resume)	YIR-TLCP-1701		DI	HW	Normal	Resume		N	Y	Y	Truck Bay		CP-100
	Move Truck Indicator	YIR-TLCP-1702		DO	HW	Normal	Truck in Place		N	Y	Y	Truck Bay		CP-100
	Conveyor A Running	YIR-TLCP-1703		DO	HW	Normal	Running		Y	Y	Y	Truck Bay		CP-100
	Conveyor B Running	YIR-TLCP-1704		DO	HW	Normal	Running		Y	Y	Y	Truck Bay		CP-100
	Conveyor C Running	YIR-TLCP-1705		DO	HW	Normal	Running		Y	Y	Y	Truck Bay		CP-100
	Conveyor D Running	YIR-TLCP-1706		DO	HW	Normal	Running		Y	Y	Y	Truck Bay		CP-100
	North Gas Monitoring Sensors													
	North Bar Screen Area Lower Floor Gas Warning	YAIR-GMCP-0060		DI	HW	Normal	Alarm		Y	N	Y	Headworks Bldg (North)		CP-100
	North Bar Screen Area Lower Floor Gas Alarm	YAIR-GMCP-0061		DI	HW	Normal	Alarm		Y	N	Y	Headworks Bldg (North)		CP-100
	North Bar Screen Area Lower Floor Gas Fault	YAIR-GMCP-0062		DI	HW	Normal	Alarm		Y	N	Y	Headworks Bldg (North)		CP-100
	North Screen Area Lower Floor Oxygen	YAIR-GMCP-0063		AI	HW		%		Y	N	Y	Headworks Bldg (North)		CP-100
	North Screen Area Lower Floor Methane	YAIR-GMCP-0064		AI	HW		%		Y	N	Y	Headworks Bldg (North)		CP-100
	North Screen Area Lower Floor H2S	YAIR-GMCP-0065		AI	HW		%		Y	N	Y	Headworks Bldg (North)		CP-100
	North Screening & Grit Handling Gas Warning	YAIR-GMCP-0160		DI	HW	Normal	Alarm		Y	N	Y	Headworks Bldg (North)		CP-100
	North Screening & Grit Handling Floor Gas Alarm	YAIR-GMCP-0161		DI	HW	Normal	Alarm		Y	N	Y	Headworks Bldg (North)		CP-100
	North Screening & Grit Handling Floor Gas Fault	YAIR-GMCP-0162		DI	HW	Normal	Alarm		Y	N	Y	Headworks Bldg (North)		CP-100
	North Screening & Grit Handling Oxygen	YAIR-GMCP-0163		AI	HW		%		Y	N	Y	Headworks Bldg (North)		CP-100
	North Screening & Grit Handling Methane	YAIR-GMCP-0164		AI	HW		%		Y	N	Y	Headworks Bldg (North)		CP-100
	North Screening & Grit Handling H2S	YAIR-GMCP-0165		AI	HW		%		Y	N	Y	Headworks Bldg (North)		CP-100
	South Gas Monitoring Sensors													
	South Bar Screen Area Primary Floor Gas Warning	YAIR-GMCP-0050		DI	HW	Normal	Alarm		Y	N	Y	Headworks Bldg (South)		CP-100
	South Bar Screen Area Primary Floor Gas Alarm	YAIR-GMCP-0051		DI	HW	Normal	Alarm		Y	N	Y	Headworks Bldg (South)		CP-100
	South Bar Screen Area Primary Floor Gas Fault	YAIR-GMCP-0052		DI	HW	Normal	Alarm		Y	N	Y	Headworks Bldg (South)		CP-100
	South Bar Screen Area Lower Floor Oxygen	YAIR-GMCP-0053		AI	HW				Y	N	Y	Headworks Bldg (South)		CP-100
	South Bar Screen Area Lower Floor Methane	YAIR-GMCP-0054		AI	HW				Y	N	Y	Headworks Bldg (South)		CP-100
	South Bar Screen Area Lower Floor H2S	YAIR-GMCP-0055		AI	HW				Y	N	Y	Headworks Bldg (South)		CP-100
	South Screening & Grit Handling Gas Warning	YAIR-GMCP-0150		DI	HW	Normal	Alarm		Y	N	Y	Headworks Bldg (South)		CP-100
	South Screening & Grit Handling Floor Gas Alarm	YAIR-GMCP-0151		DI	HW	Normal	Alarm		Y	N	Y	Headworks Bldg (South)		CP-100
	South Screening & Grit Handling Floor Gas Fault	YAIR-GMCP-0152		DI	HW	Normal	Alarm		Y	N	Y	Headworks Bldg (South)		CP-100
	South Screening & Grit Handling Oxygen	YAIR-GMCP-0153		AI	HW				Y	N	Y	Headworks Bldg (South)		CP-100
	South Screening & Grit Handling Methane	YAIR-GMCP-0154		AI	HW				Y	N	Y	Headworks Bldg (South)		CP-100
	South Screening & Grit Handling H2S	YAIR-GMCP-0155		AI	HW				Y	N	Y	Headworks Bldg (South)		CP-100
	Wet Well Gas Monitoring Sensors													
	Wet Well Gas Warning	YAIR-GMCP-0080		DI	HW	Normal	Alarm		Y	N	Y	Headworks Bldg (North)		CP-100
	Wet Well Gas Alarm	YAIR-GMCP-0081		DI	HW	Normal	Alarm		Y	N	Y	Headworks Bldg (North)		CP-100
	Wet Well Gas Fault	YAIR-GMCP-0082		DI	HW	Normal	Alarm		Y	N	Y	Headworks Bldg (North)		CP-100
	Wet Well Oxygen	YAIR-GMCP-0083		AI	HW				Y	N	Y	Headworks Bldg (North)		CP-100
	Wet Well Methane	YAIR-GMCP-0084		AI	HW				Y	N	Y	Headworks Bldg (North)		CP-100
	Wet Well H2S	YAIR-GMCP-0088		AI	HW				Y	N	Y	Headworks Bldg (North)		CP-100
	Truck Loading Gas Monitoring Sensors													
	Truck Loading Gas Warning	YAIR-GMCP-0180		DI	HW	Normal	Alarm		Y	N	Y	Truck Loading Area		CP-100
	Truck Loading Gas Alarm	YAIR-GMCP-0181		DI	HW	Normal	Alarm		Y	N	Y	Truck Loading Area		CP-100
	Truck Loading Gas Fault	YAIR-GMCP-0182		DI	HW	Normal	Alarm		Y	N	Y	Truck Loading Area		CP-100
	Truck Loading Oxygen	YAIR-GMCP-0183		AI	HW				Y	N	Y	Truck Loading Area		CP-100
	Truck Loading Methane	YAIR-GMCP-0184		AI	HW				Y	N	Y	Truck Loading Area		CP-100
	Truck Loading H2S	YAIR-GMCP-0185		AI	HW				Y	N	Y	Truck Loading Area		CP-100
	Grit Pump / Pipe Gallery Gas Monitorig Sensors													
	Pipe Gallery Gas Warning	YAIR-GMCP-0070		DI	HW	Normal	Alarm		Y	N	Y	Pipe Gallery North Entrance		CP-100
	Pipe Gallery Gas Alarm	YAIR-GMCP-0071		DI	HW	Normal	Alarm		Y	N	Y	Pipe Gallery North Entrance		CP-100
	Pipe Gallery Gas Fault	YAIR-GMCP-0072		DI	HW	Normal	Alarm		Y	N	Y	Pipe Gallery North Entrance		CP-100
	Pipe Gallery Oxygen	YAIR-GMCP-0073		AI	HW				Y	N	Y	Pipe Gallery North Entrance		CP-100
	Pipe Gallery Methane	YAIR-GMCP-0074		AI	HW				Y	N	Y	Pipe Gallery North Entrance		CP-100
	Pipe Gallery Gas H2S	YAIR-GMCP-0075		AI	HW				Y	N	Y	Pipe Gallery North Entrance		CP-100
	Grit Pump Room Gas Warning	YAIR-GMCP-0170		DI	HW	Normal	Alarm		Y	N	Y	Grit Room Entrance		CP-100
	Grit Pump Room Gas Alarm	YAIR-GMCP-0171		DI	HW	Normal	Alarm		Y	N	Y	Grit Room Entrance		CP-100
	Grit Pump Room Gas Fault	YAIR-GMCP-0172		DI	HW	Normal	Alarm		Y	N	Y	Grit Room Entrance		CP-100
	Grit Pump Room Oxygen	YAIR-GMCP-0173		AI	HW				Y	N	Y	Grit Room Entrance		CP-100
	Grit Pump Room Methane	YAIR-GMCP-0174		AI	HW				Y	N	Y	Grit Room Entrance		CP-100
	Grit Pump Room Gas H2S	YAIR-GMCP-0175		AI	HW				Y	N	Y	Grit Room Entrance		CP-100
	Odor Control Panel (OCP-1)													
	Odor Control #1 Running	YIR-OCP-0020		DI	HW	Normal	Running		Y	Y	Y	Odor Control Area		CP-100
	Odor Control #1 Fault	YAIR-OCP-0021		DI	HW	Normal	Alarm		Y	Y	Y	Odor Control Area		CP-100
	Odor Control #1 Start	YCR-OCP-0022		DO	HW	Normal	Start		Y	Y	Y	Odor Control Area		CP-100

Sheet #	Description	Tag	Drawing Tag	Type	Signal	Range / Off Status	Units / On Status	Field Wiring Data						
								Field ISA Signal Source / Destination	Local Control / Indication	CP Control / Indication	HMI Control / Indication	Equipment Panel Location	Field FTC	SCADA Panel
	Odor Control #1 Stop	YCR-OCP-0023		DO	HW	Normal	Stop		Y	Y	Y	Odor Control Area		CP-100
	Odor Control Panel (OCP-2)													
	Odor Control #2 Running	YIR-OCP-0030		DI	HW	Normal	Running		Y	Y	Y	Odor Control Area		CP-100
	Odor Control #2 Fault	YAIR-OCP-0031		DI	HW	Normal	Alarm		Y	Y	Y	Odor Control Area		CP-100
	Odor Control #2 Start	YCR-OCP-0032		DO	HW	Normal	Start		Y	Y	Y	Odor Control Area		CP-100
	Odor Control #2 Stop	YCR-OCP-0033		DO	HW	Normal	Stop		Y	Y	Y	Odor Control Area		CP-100
	Odor Control Panel (OCP-3)													
	Odor Control #3 Running	YIR-OCP-0040		DI	HW	Normal	Running		Y	Y	Y	WWS / IPS Pipe Gallery		CP-100
	Odor Control #3 Fault	YAIR-OCP-0041		DI	HW	Normal	Alarm		Y	Y	Y	WWS / IPS Pipe Gallery		CP-100
	Odor Control #3 Start	YCR-OCP-0042		DO	HW	Normal	Start		Y	Y	Y	WWS / IPS Pipe Gallery		CP-100
	Odor Control #3 Stop	YCR-OCP-0043		DO	HW	Normal	Stop		Y	Y	Y	WWS / IPS Pipe Gallery		CP-100
	WWS Pump Station													
D-0002	WWS Pump Station Wetwell Level	LIR-WWS-3000		AI	HW	0-XXX	feet	LIT-3000	Y	N	Y			CP-100
	WWS Pump Station Wetwell High Level Float Switch	LAHR-WWS-3001		DI	HW	Normal	High	LSH-3001	N	N	Y			CP-100
	WWS Pump Station Wetwell Low Level Float Switch	LALR-WWS-3002		DI	HW	Normal	Low	LSL-3002	N	N	Y			CP-100
	Pipe Gallery Sump High Level Float Switch	LAHR-WWS-3001		DI	HW	Normal	Alarm	LSH-3003	N	N	Y			CP-100
	WWS Pump Wetwell Gate #1 In-Remote	YIR-WWS-3010	CW7.1	DI	DEVN	Normal	Remote		Y	N	Y			CP-100
	WWS Pump Wetwell Gate #1 Open Feedback	ZIOR-WWS-3011	CW7.1	DI	DEVN	Normal	Opened		N	N	Y			CP-100
	WWS Pump Wetwell Gate #1 Closed Feedback	ZICR-WWS-3012	CW7.1	DI	DEVN	Normal	Closed		N	N	Y			CP-100
	WWS Pump Wetwell Gate #1 Position Command	ZCR-WWS-3013	CW7.1	AO	DEVN	0-100	%		Y	N	Y			CP-100
	WWS Pump Wetwell Gate #1 Position Feedback	ZCR-WWS-3014	CW7.1	AI	DEVN	0-100	%		Y	N	Y			CP-100
D-0002	WWS Pump Wetwell Gate #2 In-Remote	YIR-WWS-3020	CW7.2	DI	DEVN	Normal	Remote		Y	N	Y			CP-100
	WWS Pump Wetwell Gate #2 Open Feedback	ZICR-WWS-3021	CW7.2	DI	DEVN	Normal	Opened		N	N	Y			CP-100
	WWS Pump Wetwell Gate #2 Closed Feedback	ZIOR-WWS-3022	CW7.2	DI	DEVN	Normal	Closed		N	N	Y			CP-100
	WWS Pump Wetwell Gate #2 Position Command	ZCR-WWS-3023	CW7.2	AO	DEVN	0-100	%		Y	N	Y			CP-100
	WWS Pump Wetwell Gate #2 Position Feedback	ZCR-WWS-3024	CW7.2	AI	DEVN	0-100	%		Y	N	Y			CP-100
	WWS Pump #1 VFD In-Auto	YIR-WWS-3100	WWS #1	DI	ETH	Normal	Auto		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #1 VFD Running	YIR-WWS-3101	WWS #1	DI	ETH	Normal	Running		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #1 VFD Fault	YAIR-WWS-3102	WWS #1	DI	ETH	Normal	Alarm		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #1 VFD E-Stop	YAIR-WWS-3103	WWS #1	DI	ETH	Normal	Alarm		Y	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #1 VFD Speed Feedback	SIR-WWS-3104	WWS #1	AI	ETH	0-100	%		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #1 VFD Start	YCR-WWS-3105	WWS #1	DO	ETH	Normal	Start		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #1 VFD Stop	YCR-WWS-3106	WWS #1	DO	ETH	Normal	Stop		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #1 VFD Speed Cmd	SCR-WWS-3107	WWS #1	AO	ETH	0-100	%		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #1 Check Valve Closed	YICR-WWS-3110	WWS #1	DI	HW	Normal	Closed		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #1 Leak Detection	YAIR-WWS-3111	WWS #1	DI	HW	Normal	Alarm		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #1 Thermal Overload	TAHR-WWS-3112	WWS #1	DI	HW	Normal	Alarm		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #1 Upper Bearing Temperature	TIR-WWS-3113	WWS #1	AI	HW	0-XXX	F		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #1 Lower Bearing Temperature	TIR-WWS-3114	WWS #1	AI	HW	0-XXX	F		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #1 Amps Phase A	IRC-WWS- 3115	WWS#1	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #1 Amps Phase B	IRC-WWS-3116	WWS#1	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #1 Amps Phase C	IRC-WWS-3117	WWS#1	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #2 VFD In-Auto	YIR-WWS-3200	WWS #2	DI	ETH	Normal	Auto		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #2 VFD Running	YIR-WWS-3201	WWS #2	DI	ETH	Normal	Running		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #2 VFD Fault	YAIR-WWS-3202	WWS #2	DI	ETH	Normal	Alarm		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #2 VFD E-Stop	YAIR-WWS-3203	WWS #2	DI	ETH	Normal	Alarm		Y	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #2 VFD Speed Feedback	SIR-WWS-3204	WWS #2	AI	ETH	0-100	%		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #2 VFD Start	YCR-WWS-3205	WWS #2	DO	ETH	Normal	Start		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #2 VFD Stop	YCR-WWS-3206	WWS #2	DO	ETH	Normal	Stop		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #2 VFD Speed Cmd	SCR-WWS-3207	WWS #2	AO	ETH	0-100	%		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #2 Check Valve Closed	YICR-WWS-3210	WWS #2	DI	HW	Normal	Closed		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #2 Leak Detection	YAIR-WWS-3211	WWS #2	DI	HW	Normal	Alarm		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #2 Thermal Overload	TAHR-WWS-3212	WWS #2	DI	HW	Normal	Alarm		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #2 Upper Bearing Temperature	TIR-WWS-3213	WWS #2	AI	HW	0-XXX	F		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #2 Lower Bearing Temperature	TIR-WWS-3214	WWS #2	AI	HW	0-XXX	F		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #2 Amps Phase A	IRC-WWS- 3215	WWS#2	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #2 Amps Phase B	IRC-WWS-3216	WWS#2	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #2 Amps Phase C	IRC-WWS-3217	WWS#2	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #3 VFD In-Auto	YIR-WWS-3300	WWS #3	DI	ETH	Normal	Auto		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #3 VFD Running	YIR-WWS-3301	WWS #3	DI	ETH	Normal	Running		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #3 VFD Fault	YAIR-WWS-3302	WWS #3	DI	ETH	Normal	Alarm		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #3 VFD E-Stop	YAIR-WWS-3303	WWS #3	DI	ETH	Normal	Alarm		Y	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #3 VFD Speed Feedback	SIR-WWS-3304	WWS #3	AI	ETH	0-100	%		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #3 VFD Start	YCR-WWS-3305	WWS #3	DO	ETH	Normal	Start		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #3 VFD Stop	YCR-WWS-3306	WWS #3	DO	ETH	Normal	Stop		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #3 VFD Speed Cmd	SCR-WWS-3307	WWS #3	AO	ETH	0-100	%		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #3 Check Valve Closed	YICR-WWS-3310	WWS #3	DI	HW	Normal	Closed		N	N	Y	VFD - WWS Electrical Room		CP-100

Sheet #	Description	Tag	Drawing Tag	Type	Signal	Range / Off Status	Units / On Status	Field Wiring Data						
								Field ISA Signal Source / Destination	Local Control / Indication	CP Control / Indication	HMI Control / Indication	Equipment Panel Location	Field FTC	SCADA Panel
	WWS Pump #3 Leak Detection	YAIR-WWS-3311	WWS #3	DI	HW	Normal	Alarm		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #3 Thermal Overload	TAHR-WWS-3312	WWS #3	DI	HW	Normal	Alarm		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #3 Upper Bearing Temperature	TIR-WWS-3313	WWS #3	AI	HW	0-XXX	F		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #3 Lower Bearing Temperature	TIR-WWS-3314	WWS #3	AI	HW	0-XXX	F		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #3 Amps Phase A	IRC-WWS- 3315	WWS#3	AI	ETH	0-XXX			N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #3 Amps Phase B	IRC-WWS-3316	WWS#3	AI	ETH	0-XXX			N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #3 Amps Phase C	IRC-WWS-3317	WWS#3	AI	ETH	0-XXX			N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #4 VFD In-Auto	YIR-WWS-3400	WWS #4	DI	ETH	Normal	Auto		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #4 VFD Running	YIR-WWS-3401	WWS #4	DI	ETH	Normal	Running		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #4 VFD Fault	YAIR-WWS-3402	WWS #4	DI	ETH	Normal	Alarm		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #4 VFD E-Stop	YAIR-WWS-3403	WWS #4	DI	ETH	Normal	Alarm		Y	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #4 VFD Speed Feedback	SIR-WWS-3404	WWS #4	AI	ETH	0-100	%		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #4 VFD Start	YCR-WWS-3405	WWS #4	DO	ETH	Normal	Start		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #4 VFD Stop	YCR-WWS-3406	WWS #4	DO	ETH	Normal	Stop		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #4 VFD Speed Cmd	SCR-WWS-3407	WWS #4	AO	ETH	0-100	%		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #4 Check Valve Closed	YICR-WWS-3410	WWS #4	DI	HW	Normal	Closed		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #4 Leak Detection	YAIR-WWS-3411	WWS #4	DI	HW	Normal	Alarm		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #4 Thermal Overload	TAHR-WWS-3412	WWS #4	DI	HW	Normal	Alarm		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #4 Upper Bearing Temperature	TIR-WWS-3413	WWS #4	AI	HW	0-XXX	F		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #4 Lower Bearing Temperature	TIR-WWS-3414	WWS #4	AI	HW	0-XXX	F		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #4 Amps Phase A	IRC-WWS- 3415	WWS#4	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #4 Amps Phase B	IRC-WWS-3416	WWS#4	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #4 Amps Phase C	IRC-WWS-3417	WWS#4	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #5 VFD In-Auto	YIR-WWS-3500	WWS #5	DI	ETH	Normal	Auto		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #5 VFD Running	YIR-WWS-3501	WWS #5	DI	ETH	Normal	Running		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #5 VFD Fault	YAIR-WWS-3502	WWS #5	DI	ETH	Normal	Alarm		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #5 VFD E-Stop	YAIR-WWS-3503	WWS #5	DI	ETH	Normal	Alarm		Y	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #5 VFD Speed Feedback	SIR-WWS-3504	WWS #5	AI	ETH	0-100	%		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #5 VFD Start	YCR-WWS-3505	WWS #5	DO	ETH	Normal	Start		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #5 VFD Stop	YCR-WWS-3506	WWS #5	DO	ETH	Normal	Stop		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #5 VFD Speed Cmd	SCR-WWS-3507	WWS #5	AO	ETH	0-100	%		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #5 Check Valve Closed	YICR-WWS-3510	WWS #5	DI	HW	Normal	Closed		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #5 Leak Detection	YAIR-WWS-3511	WWS #5	DI	HW	Normal	Alarm		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #5 Thermal Overload	TAHR-WWS-3512	WWS #5	DI	HW	Normal	Alarm		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #5 Upper Bearing Temperature	TIR-WWS-3513	WWS #5	AI	HW	0-XXX	F		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #5 Lower Bearing Temperature	TIR-WWS-3514	WWS #5	AI	HW	0-XXX	F		N	N	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #5 Amps Phase A	IRC-WWS- 3515	WWS#5	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #5 Amps Phase B	IRC-WWS-3516	WWS#5	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - WWS Electrical Room		CP-100
	WWS Pump #5 Amps Phase C	IRC-WWS-3517	WWS#5	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - WWS Electrical Room		CP-100
D-0002	WWS Force Main Drain Valve #1 In-Remote	YIR-WWS-3030	P18.1	DI	DEVN	Normal	Remote		Y	N	Y			CP-100
	WWS Force Main Drain Valve #1 Open Feedback	ZIOR-WWS-3031	P18.1	DI	DEVN	Normal	Opened		N	N	Y			CP-100
	WWS Force Main Drain Valve #1 Closed Feedback	ZICR-WWS-3032	P18.1	DI	DEVN	Normal	Closed		N	N	Y			CP-100
	WWS Force Main Drain Valve #1 Position Command	ZCR-WWS-3033	P18.1	AO	DEVN	0-100	%		Y	N	Y			CP-100
	WWS Force Main Drain Valve #1 Position Feedback	ZCR-WWS-3034	P18.1	AI	DEVN	0-100	%		Y	N	Y			CP-100
D-0002	WWS Force Main Drain Valve #2 In-Remote	YIR-WWS-3040	P18.2	DI	DEVN	Normal	Remote		Y	N	Y			CP-100
	WWS Force Main Drain Valve #2 Open Feedback	ZICR-WWS-3041	P18.2	DI	DEVN	Normal	Opened		N	N	Y			CP-100
	WWS Force Main Drain Valve #2 Closed Feedback	ZIOR-WWS-3042	P18.2	DI	DEVN	Normal	Closed		N	N	Y			CP-100
	WWS Force Main Drain Valve #2 Position Command	ZCR-WWS-3043	P18.2	AO	DEVN	0-100	%		Y	N	Y			CP-100
	WWS Force Main Drain Valve #2 Position Feedback	ZCR-WWS-3044	P18.2	AI	DEVN	0-100	%		Y	N	Y			CP-100
	IPS Pump Station #1													
D-0002	IPS #1 Pump Station Wetwell Level	LIR-IPS1-2000		AI	HW	0-XXX	feet	LIT-2000	Y	N	Y			CP-100
E-1101	IPS #1 Pump Station Wetwell High Level Float Switch	LAHR-IPS1-2001		DI	HW	Normal	High	LSH-2001	N	N	Y			CP-100
E-1101	IPS #1 Pump Station Wetwell Low Level Float Switch	LALR-IPS1-2002		DI	HW	Normal	Low	LSL-2002	N	N	Y			CP-100
	IPS #1 Pump Station Low Flow Meter	FIR-IPS1-2003		AI	HW	0-XXX	gpm	FIT-2003	Y	N	Y			CP-100
	IPS #1 Pump Wetwell Gate #1 In-Remote	YIR-IPS1-2010	CW6.1	DI	DEVN	Normal	Remote		Y	N	Y			CP-100
	IPS #1 Pump Wetwell Gate #1 Open Feedback	ZIOR-IPS1-2011	CW6.1	DI	DEVN	Normal	Opened		N	N	Y			CP-100
	IPS #1 Pump Wetwell Gate #1 Closed Feedback	ZICR-IPS1-2012	CW6.1	DI	DEVN	Normal	Closed		N	N	Y			CP-100
	IPS #1 Pump Wetwell Gate #1 Position Command	ZCR-IPS1-2013	CW6.1	AO	DEVN	0-100	%		Y	N	Y			CP-100
	IPS #1 Pump Wetwell Gate #1 Position Feedback	ZCR-IPS1-2014	CW6.1	AI	DEVN	0-100	%		Y	N	Y			CP-100
	IPS1 Pump 1A VFD In-Auto	YIR-IPS1-2100	1A	DI	ETH	Normal	Auto		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1A VFD Running	YIR-IPS1-2101	1A	DI	ETH	Normal	Running		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1A VFD Fault	YAIR-IPS1-2102	1A	DI	ETH	Normal	Alarm		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1A VFD E-Stop	YAIR-IPS1-2103	1A	DI	ETH	Normal	Alarm		Y	N	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1A VFD Speed Feedback	SIR-IPS1-2104	1A	AI	ETH	0-100	%		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1A VFD Start	YCR-IPS1-2105	1A	DO	ETH	Normal	Start		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1A VFD Stop	YCR-IPS1-2106	1A	DO	ETH	Normal	Stop		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1A VFD Speed Cmd	SCR-IPS1-2107	1A	AO	ETH	0-100	%		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1A Check Valve Closed	YICR-IPS1-2110	1A	DI	HW	Normal	Closed		N	N	Y	VFD - IPS Electrical Room		CP-100

Sheet #	Description	Tag	Drawing Tag	Type	Signal	Range / Off Status	Units / On Status	Field Wiring Data						
								Field ISA Signal Source / Destination	Local Control / Indication	CP Control / Indication	HMI Control / Indication	Equipment Panel Location	Field FTC	SCADA Panel
	IPS1 Pump 1A Leak Detection	YAIR-IPS1-2111	1A	DI	HW	Normal	Alarm		N	N	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1A Thermal Overload	TAHR-IPS1-2112	1A	DI	HW	Normal	Alarm		N	N	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1A Upper Bearing Temperature	TIR-IPS1-2113	1A	AI	HW	0-XXX	F		N	N	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1A Lower Bearing Temperature	TIR-IPS1-2114	1A	AI	HW	0-XXX	F		N	N	Y	VFD - IPS Electrical Room		CP-100
	IPS Pump 1A Amps Phase A	IRC-IPS- 2115	1A	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS Pump 1A Amps Phase B	IRC-IPS-2116	1A	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS Pump 1A Amps Phase C	IRC-IPS-2117	1A	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1B VFD In-Auto	YIR-IPS1-2120	1B	DI	ETH	Normal	Auto		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1B VFD Running	YIR-IPS1-2121	1B	DI	ETH	Normal	Running		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1B VFD Fault	YAIR-IPS1-2122	1B	DI	ETH	Normal	Alarm		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1B VFD E-Stop	YAIR-IPS1-2123	1B	DI	ETH	Normal	Alarm		Y	N	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1B VFD Speed Feedback	SIR-IPS1-2124	1B	AI	ETH	0-100	%		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1B VFD Start	YCR-IPS1-2125	1B	DO	ETH	Normal	Start		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1B VFD Stop	YCR-IPS1-2126	1B	DO	ETH	Normal	Stop		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1B VFD Speed Cmd	SCR-IPS1-2127	1B	AO	ETH	0-100	%		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1B Check Valve Closed	YICR-IPS1-2128	1B	DI	HW	Normal	Closed		N	N	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1B Leak Detection	YAIR-IPS1-2129	1B	DI	HW	Normal	Alarm		N	N	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1B Thermal Overload	TAHR-IPS1-2130	1B	DI	HW	Normal	Alarm		N	N	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1B Upper Bearing Temperature	TIR-IPS1-2131	1B	AI	HW	0-XXX	F		N	N	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1B Lower Bearing Temperature	TIR-IPS1-2132	1B	AI	HW	0-XXX	F		N	N	Y	VFD - IPS Electrical Room		CP-100
	IPS Pump 1B Amps Phase A	IRC-IPS- 2133	1B	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS Pump 1B Amps Phase B	IRC-IPS-2134	1B	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS Pump 1B Amps Phase C	IRC-IPS-2135	1B	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS1 Pump 1C In-Auto	YIR-IPS1-2140	1C	DI	DEVN	Normal	Auto		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS1 Pump 1C Running	YIR-IPS1-2141	1C	DI	DEVN	Normal	Running		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS1 Pump 1C Fault	YAIR-IPS1-2142	1C	DI	DEVN	Normal	Alarm		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS1 Pump 1C E-Stop	YAIR-IPS1-2143	1C	DI	DEVN	Normal	Alarm		Y	N	Y	MCC - IPS Electrical Room		CP-100
	IPS1 Pump 1C Start	YCR-IPS1-2145	1C	DO	DEVN	Normal	Start		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS1 Pump 1C Stop	YCR-IPS1-2146	1C	DO	DEVN	Normal	Stop		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS1 Pump 1C Check Valve Closed	YICR-IPS1-2148	1C	DI	HW	Normal	Closed		N	N	Y	MCC - IPS Electrical Room		CP-100
	IPS1 Pump 1C Leak Detection	YAIR-IPS1-2149	1C	DI	HW	Normal	Alarm		N	N	Y	MCC - IPS Electrical Room		CP-100
	IPS1 Pump 1C Thermal Overload	TAHR-IPS1-2150	1C	DI	HW	Normal	Alarm		N	N	Y	MCC - IPS Electrical Room		CP-100
	IPS Pump 1C Amps Phase A	IRC-IPS- 2151	1C	AI	DEVN	0-XXX	Amps		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS Pump 1C Amps Phase B	IRC-IPS-2152	1C	AI	DEVN	0-XXX	Amps		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS Pump 1C Amps Phase C	IRC-IPS-2153	1C	AI	DEVN	0-XXX	Amps		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS1 Pump 1D VFD In-Auto	YIR-IPS1-2160	1D	DI	DEVN	Normal	Auto		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS1 Pump 1D VFD Running	YIR-IPS1-2161	1D	DI	DEVN	Normal	Running		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS1 Pump 1D VFD Fault	YAIR-IPS1-2162	1D	DI	DEVN	Normal	Alarm		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS1 Pump 1D VFD E-Stop	YAIR-IPS1-2163	1D	DI	DEVN	Normal	Alarm		Y	N	Y	MCC - IPS Electrical Room		CP-100
	IPS1 Pump 1D VFD Start	YCR-IPS1-2165	1D	DO	DEVN	Normal	Start		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS1 Pump 1D VFD Stop	YCR-IPS1-2166	1D	DO	DEVN	Normal	Stop		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS1 Pump 1D Check Valve Closed	YICR-IPS1-2168	1D	DI	HW	Normal	Closed		N	N	Y	MCC - IPS Electrical Room		CP-100
	IPS1 Pump 1D Leak Detection	YAIR-IPS1-2169	1D	DI	HW	Normal	Alarm		N	N	Y	MCC - IPS Electrical Room		CP-100
	IPS1 Pump 1D Thermal Overload	TAHR-IPS1-2170	1D	DI	HW	Normal	Alarm		N	N	Y	MCC - IPS Electrical Room		CP-100
	IPS Pump 1C Amps Phase A	IRC-IPS- 2171	1D	AI	DEVN	0-XXX	Amps		N	N	Y	MCC - IPS Electrical Room		CP-100
	IPS Pump 1C Amps Phase B	IRC-IPS-2172	1D	AI	DEVN	0-XXX	Amps		N	N	Y	MCC - IPS Electrical Room		CP-100
	IPS Pump 1C Amps Phase C	IRC-IPS- 2173	1D	AI	DEVN	0-XXX	Amps		N	N	Y	MCC - IPS Electrical Room		CP-100
	IPS Pump Station #2													
D-0002	IPS #2 Pump Station Wetwell Level	LIR-IPS2-2005		AI	HW	0-XXX	feet	LIT-2005	Y	N	Y			CP-100
E-1101	IPS #2 Pump Station Wetwell High Level Float Switch	LAHR-IPS2-2006		DI	HW	Normal	High	LSH-2006	N	N	Y			CP-100
E-1101	IPS #2 Pump Station Wetwell Low Level Float Switch	LALR-IPS2-2007		DI	HW	Normal	Low	LSL-2007	N	N	Y			CP-100
	IPS #2 Pump Station Low Flow Meter	FIR-IPS2-2008		AI	HW	0-XXX	gpm	FIT-2008	Y	N	Y			CP-100
	IPS #2 Pump Wetwell Gate #1 In-Remote	YIR-IPS2-2020	CW6.2	DI	DEVN	Normal	Remote		Y	N	Y			CP-100
	IPS #2 Pump Wetwell Gate #1 Open Feedback	ZIOR-IPS2-2021	CW6.2	DI	DEVN	Normal	Opened		N	N	Y			CP-100
	IPS #2 Pump Wetwell Gate #1 Closed Feedback	ZICR-IPS2-2022	CW6.2	DI	DEVN	Normal	Closed		N	N	Y			CP-100
	IPS #2 Pump Wetwell Gate #1 Position Command	ZCR-IPS2-2023	CW6.2	AO	DEVN	0-100	%		Y	N	Y			CP-100
	IPS #2 Pump Wetwell Gate #1 Position Feedback	ZCR-IPS2-2024	CW6.2	AI	DEVN	0-100	%		Y	N	Y			CP-100
	IPS2 Pump 2A VFD In-Auto	YIR-IPS2-2200	2A	DI	ETH	Normal	Auto		N	Y	Y			CP-100
	IPS2 Pump 2A VFD Running	YIR-IPS2-2201	2A	DI	ETH	Normal	Running		N	Y	Y			CP-100
	IPS2 Pump 2A VFD Fault	YAIR-IPS2-2202	2A	DI	ETH	Normal	Alarm		N	Y	Y			CP-100
	IPS2 Pump 2A VFD E-Stop	YAIR-IPS2-2203	2A	DI	ETH	Normal	Alarm		Y	N	Y			CP-100
	IPS2 Pump 2A VFD Speed Feedback	SIR-IPS2-2204	2A	AI	ETH	0-100	%		N	Y	Y			CP-100
	IPS2 Pump 2A VFD Start	YCR-IPS2-2205	2A	DO	ETH	Normal	Start		N	Y	Y			CP-100
	IPS2 Pump 2A VFD Stop	YCR-IPS2-2206	2A	DO	ETH	Normal	Stop		N	Y	Y			CP-100
	IPS2 Pump 2A VFD Speed Cmd	SCR-IPS2-2207	2A	AO	ETH	0-100	%		N	Y	Y			CP-100
	IPS2 Pump 2A Check Valve Closed	YICR-IPS2-2210	2A	DI	HW	Normal	Closed		N	N	Y			CP-100
	IPS2 Pump 2A Leak Detection	YAIR-IPS2-2211	2A	DI	HW	Normal	Alarm		N	N	Y			CP-100
	IPS2 Pump 2A Thermal Overload	TAHR-IPS2-2212	2A	DI	HW	Normal	Alarm		N	N	Y			CP-100
	IPS2 Pump 2A Upper Bearing Temperature	TIR-IPS2-2213	2A	AI	HW	0-XXX	F		N	N	Y			CP-100

Sheet #	Description	Tag	Drawing Tag	Type	Signal	Range / Off Status	Units / On Status	Field Wiring Data						
								Field ISA Signal Source / Destination	Local Control / Indication	CP Control / Indication	HMI Control / Indication	Equipment Panel Location	Field FTC	SCADA Panel
	IPS2 Pump 2A Lower Bearing Temperature	TIR-IPS2-2214	2A	AI	HW	0-XXX	F		N	N	Y			CP-100
	IPS Pump 2A Amps Phase A	IRC-IPS- 2215	2A	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS Pump 2A Amps Phase B	IRC-IPS-2216	2A	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS Pump 2A Amps Phase C	IRC-IPS-2217	2A	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS2 Pump 2B VFD In-Auto	YIR-IPS2-2220	2B	DI	ETH	Normal	Auto		N	Y	Y			CP-100
	IPS2 Pump 2B VFD Running	YIR-IPS2-2221	2B	DI	ETH	Normal	Running		N	Y	Y			CP-100
	IPS2 Pump 2B VFD Fault	YAIR-IPS2-2222	2B	DI	ETH	Normal	Alarm		N	Y	Y			CP-100
	IPS2 Pump 2B VFD E-Stop	YAIR-IPS2-2223	2B	DI	ETH	Normal	Alarm		Y	N	Y			CP-100
	IPS2 Pump 2B VFD Speed Feedback	SIR-IPS2-2224	2B	AI	ETH	0-100	%		N	Y	Y			CP-100
	IPS2 Pump 2B VFD Start	YCR-IPS2-2225	2B	DO	ETH	Normal	Start		N	Y	Y			CP-100
	IPS2 Pump 2B VFD Stop	YCR-IPS2-2226	2B	DO	ETH	Normal	Stop		N	Y	Y			CP-100
	IPS2 Pump 2B VFD Speed Cmd	SCR-IPS2-2227	2B	AO	ETH	0-100	%		N	Y	Y			CP-100
	IPS2 Pump 2B Check Valve Closed	YICR-IPS2-2228	2B	DI	HW	Normal	Closed		N	N	Y			CP-100
	IPS2 Pump 2B Leak Detection	YAIR-IPS2-2229	2B	DI	HW	Normal	Alarm		N	N	Y			CP-100
	IPS2 Pump 2B Thermal Overload	TAHR-IPS2-2230	2B	DI	HW	Normal	Alarm		N	N	Y			CP-100
	IPS2 Pump 2B Upper Bearing Temperature	TIR-IPS2-2231	2B	AI	HW	0-XXX	F		N	N	Y			CP-100
	IPS2 Pump 2B Lower Bearing Temperature	TIR-IPS2-2232	2B	AI	HW	0-XXX	F		N	N	Y			CP-100
	IPS Pump 2B Amps Phase A	IRC-IPS- 2233	2B	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS Pump 2B Amps Phase B	IRC-IPS-2234	2B	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS Pump 2B Amps Phase C	IRC-IPS-2235	2B	AI	ETH	0-XXX	Amps		N	Y	Y	VFD - IPS Electrical Room		CP-100
	IPS2 Pump 2C In-Auto	YIR-IPS2-2240	2C	DI	DEVN	Normal	Auto		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS2 Pump 2C Running	YIR-IPS2-2241	2C	DI	DEVN	Normal	Running		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS2 Pump 2C Fault	YAIR-IPS2-2242	2C	DI	DEVN	Normal	Alarm		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS2 Pump 2C E-Stop	YAIR-IPS2-2243	2C	DI	DEVN	Normal	Alarm		Y	N	Y	MCC - IPS Electrical Room		CP-100
	IPS2 Pump 2C Start	YCR-IPS2-2245	2C	DO	DEVN	Normal	Start		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS2 Pump 2C Stop	YCR-IPS2-2246	2C	DO	DEVN	Normal	Stop		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS2 Pump 2C Check Valve Closed	YICR-IPS2-2248	2C	DI	HW	Normal	Closed		N	N	Y	MCC - IPS Electrical Room		CP-100
	IPS2 Pump 2C Leak Detection	YAIR-IPS2-2249	2C	DI	HW	Normal	Alarm		N	N	Y	MCC - IPS Electrical Room		CP-100
	IPS2 Pump 2C Thermal Overload	TAHR-IPS2-2250	2C	DI	HW	Normal	Alarm		N	N	Y	MCC - IPS Electrical Room		CP-100
	IPS Pump 2C Amps Phase A	IRC-IPS- 2251	2C	AI	DEVN	0-XXX	Amps		N	N	Y	MCC - IPS Electrical Room		CP-100
	IPS Pump 2C Amps Phase B	IRC-IPS-2252	2C	AI	DEVN	0-XXX	Amps		N	N	Y	MCC - IPS Electrical Room		CP-100
	IPS Pump 2C Amps Phase C	IRC-IPS- 2253	2C	AI	DEVN	0-XXX	Amps		N	N	Y	MCC - IPS Electrical Room		CP-100
	IPS2 Pump 2D In-Auto	YIR-IPS2-2260	2D	DI	DEVN	Normal	Auto		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS2 Pump 2D Running	YIR-IPS2-2261	2D	DI	DEVN	Normal	Running		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS2 Pump 2D Fault	YAIR-IPS2-2262	2D	DI	DEVN	Normal	Alarm		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS2 Pump 2D E-Stop	YAIR-IPS2-2263	2D	DI	DEVN	Normal	Alarm		Y	N	Y	MCC - IPS Electrical Room		CP-100
	IPS2 Pump 2D Start	YCR-IPS2-2265	2D	DO	DEVN	Normal	Modulate		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS2 Pump 2D Stop	YCR-IPS2-2266	2D	DO	DEVN	Normal	Modulate		N	Y	Y	MCC - IPS Electrical Room		CP-100
	IPS2 Pump 2D Check Valve Closed	YICR-IPS2-2268	2D	DI	HW	Normal	Closed		N	N	Y	MCC - IPS Electrical Room		CP-100
	IPS2 Pump 2D Leak Detection	YAIR-IPS2-2269	2D	DI	HW	Normal	Alarm		N	N	Y	MCC - IPS Electrical Room		CP-100
	IPS2 Pump 2D Thermal Overload	TAHR-IPS2-2270	2D	DI	HW	Normal	Alarm		N	N	Y	MCC - IPS Electrical Room		CP-100
	IPS Pump 2D Amps Phase A	IRC-IPS- 2171	2D	AI	DEVN	0-XXX	Amps		N	N	Y	MCC - IPS Electrical Room		CP-100
	IPS Pump 2D Amps Phase B	IRC-IPS-2172	2D	AI	DEVN	0-XXX	Amps		N	N	Y	MCC - IPS Electrical Room		CP-100
	IPS Pump 2D Amps Phase C	IRC-IPS- 2173	2D	AI	DEVN	0-XXX	Amps		N	N	Y	MCC - IPS Electrical Room		CP-100
	Grit Pump Motor Operated Valves & Flow Meters													
I-0703	Grit Feed Flow Meter #1	FIR-GP-4002		AI	HW	0-XXX	gpm	FIT-4002	Y	N	Y			CP-100
	Grit Feed Flow Meter #2	FIR-GP-4003		AI	HW	0-XXX	gpm	FIT-4003	Y	N	Y			
	Grit Pump MOV #1 In-Remote	YIR-GP-4010	P5.1	DI	DEVN	Normal	Remote		N	N	Y			CP-100
	Grit Pump MOV #1 Open Feedback	ZIOR-GP-4011	P5.1	DI	DEVN	Normal	Opened		N	N	Y			CP-100
	Grit Pump MOV #1 Closed Feedback	ZICR-GP-4012	P5.1	DI	DEVN	Normal	Closed		N	N	Y			CP-100
	Grit Pump MOV #1 Open Command	ZCOR-GP-4013	P5.1	DI	DEVN	Normal	Open		N	N	Y			CP-100
	Grit Pump MOV #1 Close Command	ZCCR-GP-4014	P5.1	DO	DEVN	Normal	Close		N	N	Y			CP-100
	Grit Pump MOV #1 Position Feedback	ZCCR-GP-4015	P5.1	AI	DEVN	0-100	%		N	N	Y			CP-100
	Grit Pump MOV #2 In-Remote	YIR-GP-4020	P5.2	DI	DEVN	Normal	Remote		N	N	Y			CP-100
	Grit Pump MOV #2 Open Feedback	ZIOR-GP-4021	P5.2	DI	DEVN	Normal	Opened		N	N	Y			CP-100
	Grit Pump MOV #2 Closed Feedback	ZICR-GP-4022	P5.2	DI	DEVN	Normal	Closed		N	N	Y			CP-100
	Grit Pump MOV #2 Open Command	ZCOR-GP-4023	P5.2	DI	DEVN	Normal	Open		N	N	Y			CP-100
	Grit Pump MOV #2 Close Command	ZCCR-GP-4024	P5.2	DO	DEVN	Normal	Close		N	N	Y			CP-100
	Grit Pump MOV #2 Position Feedback	ZCCR-GP-4025	P5.2	AI	DEVN	0-100	%		N	N	Y			CP-100
	Grit Pump MOV #3 In-Remote	YIR-GP-4030	P7.1	DI	DEVN	Normal	Remote		N	N	Y			CP-100
	Grit Pump MOV #3 Open Feedback	ZIOR-GP-4031	P7.1	DI	DEVN	Normal	Opened		N	N	Y			CP-100
	Grit Pump MOV #3 Closed Feedback	ZICR-GP-4032	P7.1	DI	DEVN	Normal	Closed		N	N	Y			CP-100
	Grit Pump MOV #3 Open Command	ZCOR-GP-4033	P7.1	DI	DEVN	Normal	Open		N	N	Y			CP-100
	Grit Pump MOV #3 Close Command	ZCCR-GP-4034	P7.1	DO	DEVN	Normal	Close		N	N	Y			CP-100
	Grit Pump MOV #3 Position Feedback	ZCCR-GP-4035	P7.1	AI	DEVN	0-100	%		N	N	Y			CP-100
	Grit Pump MOV #4 In-Remote	YIR-GP-4040	P7.2	DI	DEVN	Normal	Remote		N	N	Y			CP-100
	Grit Pump MOV #4 Open Feedback	ZIOR-GP-4041	P7.2	DI	DEVN	Normal	Opened		N	N	Y			CP-100

Sheet #	Description	Tag	Drawing Tag	Type	Signal	Range / Off Status	Units / On Status	Field Wiring Data						
								Field ISA Signal Source / Destination	Local Control / Indication	CP Control / Indication	HMI Control / Indication	Equipment Panel Location	Field FTC	SCADA Panel
	Grit Pump MOV #4 Closed Feedback	ZICR-GP-4042	P7.2	DI	DEVN	Normal	Closed		N	N	Y			CP-100
	Grit Pump MOV #4 Open Command	ZCOR-GP-4043	P7.2	DI	DEVN	Normal	Open		N	N	Y			CP-100
	Grit Pump MOV #4 Close Command	ZCCR-GP-4044	P7.2	DO	DEVN	Normal	Close		N	N	Y			CP-100
	Grit Pump MOV #4 Position Feedback	ZCCR-GP-4045	P7.2	AI	DEVN	0-100	%		N	N	Y			CP-100
	Grit Pump MOV #5 In-Remote	YIR-GP-4050	P7.3	DI	DEVN	Normal	Remote		N	N	Y			CP-100
	Grit Pump MOV #5 Open Feedback	ZIOR-GP-4051	P7.3	DI	DEVN	Normal	Opened		N	N	Y			CP-100
	Grit Pump MOV #5 Closed Feedback	ZICR-GP-4052	P7.3	DI	DEVN	Normal	Closed		N	N	Y			CP-100
	Grit Pump MOV #1 Open Command	ZICR-GP-4053	P7.3	DI	DEVN	Normal	Open		N	N	Y			CP-100
	Grit Pump MOV #5 Close Command	ZCCR-GP-4054	P7.3	DO	DEVN	Normal	Close		N	N	Y			CP-100
	Grit Pump MOV #5 Position Feedback	ZCCR-GP-4055	P7.3	AI	DEVN	0-100	%		N	N	Y			CP-100
	Grit Pump MOV #6 In-Remote	YIR-GP-4060	P7.4	DI	DEVN	Normal	Remote		N	N	Y			CP-100
	Grit Pump MOV #6 Open Feedback	ZIOR-GP-4061	P7.4	DI	DEVN	Normal	Opened		N	N	Y			CP-100
	Grit Pump MOV #6 Closed Feedback	ZICR-GP-4062	P7.4	DI	DEVN	Normal	Closed		N	N	Y			CP-100
	Grit Pump MOV #1 Open Command	ZICR-GP-4063	P7.4	DI	DEVN	Normal	Open		N	N	Y			CP-100
	Grit Pump MOV #6 Close Command	ZCCR-GP-4064	P7.4	DO	DEVN	Normal	Close		N	N	Y			CP-100
	Grit Pump MOV #6 Position Feedback	ZCCR-GP-4065	P7.4	AI	DEVN	0-100	%		N	N	Y			CP-100
	Grit Tray Non-Potable Water Valve #1 In-Remote	YIR-WWS-4070		DI	DEVN	Normal	Remote		Y	N	Y			CP-100
	Grit Tray Non-Potable Water Valve #1 Open Feedback	ZIOR-WWS-4071		DI	DEVN	Normal	Opened		N	N	Y			CP-100
	Grit Tray Non-Potable Water Valve #1 Closed Feedback	ZICR-WWS-4072		DI	DEVN	Normal	Closed		N	N	Y			CP-100
	Grit Tray Non-Potable Water Valve #1 Position Command	ZCR-WWS-4073		AO	DEVN	0-100	%		Y	N	Y			CP-100
	Grit Tray Non-Potable Water Valve #1 Position Feedback	ZCR-WWS-4074		AI	DEVN	0-100	%		Y	N	Y			CP-100
D-0002	Grit Tray Non-Potable Water Valve #2 In-Remote	YIR-WWS-4080		DI	DEVN	Normal	Remote		Y	N	Y			CP-100
	Grit Tray Non-Potable Water #2 Open Feedback	ZICR-WWS-4081		DI	DEVN	Normal	Opened		N	N	Y			CP-100
	Grit Tray Non-Potable Water #2 Closed Feedback	ZIOR-WWS-4082		DI	DEVN	Normal	Closed		N	N	Y			CP-100
	Grit Tray Non-Potable Water #2 Position Command	ZCR-WWS-4083		AO	DEVN	0-100	%		Y	N	Y			CP-100
	Grit Tray Non-Potable Water #2 Position Feedback	ZCR-WWS-4084		AI	DEVN	0-100	%		Y	N	Y			CP-100
	Recycle Valves and Grit Effluent													
D-0002	Flume Channel #1 Flow	FIR-FC-5000		AI	HW	0-XXX	MGD	FIT-5000	Y	N	Y			CP-100
	Flume Channel #2 Flow	FIR-FC-5001		AI	HW	0-XXX	MGD	FIT-5001	Y	N	Y			CP-100
	Flume Channel Wier #1 In-Remote	YIR-FC-5100	CW 11.1	DI	DEVN	Normal	Remote		Y	N	Y			CP-100
	Flume Channel Wier #1 Open Feedback	ZIOR-FC-5101	CW 11.1	DI	DEVN	Normal	Opened		Y	N	Y			CP-100
	Flume Channel Wier #1 Closed Feedback	ZICR-FC-5102	CW 11.1	DI	DEVN	Normal	Closed		Y	N	Y			CP-100
	Flume Channel Wier #1 Open Command	ZCOR-FC-5103	CW 11.1	DO	DEVN	Normal	Open		Y	N	Y			CP-100
	Flume Channel Wier #1 Close Command	ZCCR-FC-5104	CW 11.1	DO	DEVN	Normal	Close		Y	N	Y			CP-100
	Flume Channel Wier #1 Position Feedback	ZCCR-FC-5105	CW 11.1	AI	DEVN	0-100	%		Y	N	Y			CP-100
	Flume Channel Sluice Gate #1 In-Remote	YIR-FC-5110	S 2.1	DI	DEVN	Normal	Remote							CP-100
	Flume Channel Sluice Gate #1 Open Feedback	ZIOR-FC-5111	S 2.1	DI	DEVN	Normal	Opened		Y	N	Y			CP-100
	Flume Channel Sluice Gate #1 Closed Feedback	ZICR-FC-5112	S 2.1	DI	DEVN	Normal	Closed		Y	N	Y			CP-100
	Flume Channel Sluice Gate #1 Position Command	ZCR-FC-5113	S 2.1	AO	DEVN	0-100	%		Y	N	Y			CP-100
	Flume Channel Sluice Gate #1 Position Feedback	ZIR-FC-5114	S 2.1	AI	DEVN	0-100	%		Y	N	Y			CP-100
	Flume Channel Wier #2 In-Remote	YIR-FC-5200	CW 11.2	DI	DEVN	Normal	Remote		Y	N	Y			CP-100
	Flume Channel Wier #2 Open Feedback	ZIOR-FC-5201	CW 11.2	DI	DEVN	Normal	Opened		Y	N	Y			CP-100
	Flume Channel Wier #2 Closed Feedback	ZICR-FC-5202	CW 11.2	DI	DEVN	Normal	Closed		Y	N	Y			CP-100
	Flume Channel Wier #1 Open Command	ZCOR-FC-5203	CW 11.2	DO	DEVN	Normal	Open		Y	N	Y			CP-100
	Flume Channel Wier #2 Close Command	ZCCR-FC-5204	CW 11.2	DO	DEVN	Normal	Close		Y	N	Y			CP-100
	Flume Channel Wier #2 Position Feedback	ZCCR-FC-5205	CW 11.2	AI	DEVN	0-100	%		Y	N	Y			CP-100
	Flume Channel Sluice Gate #2 In-Remote	YIR-FC-5210	S 2.2	DI	DEVN	Normal	Remote		Y	N	Y			CP-100
	Flume Channel Sluice Gate #2 Open Feedback	ZIOR-FC-5211	S 2.2	DI	DEVN	Normal	Opened		Y	N	Y			CP-100
	Flume Channel Sluice Gate #2 Closed Feedback	ZICR-FC-5212	S 2.2	DI	DEVN	Normal	Closed		Y	N	Y			CP-100
	Flume Channel Sluice Gate #2 Position Command	ZCR-FC-5213	S 2.2	AO	DEVN	0-100	%		Y	N	Y			CP-100
	Flume Channel Sluice Gate #2 Position Feedback	ZIR-FC-5214	S 2.2	AI	DEVN	0-100	%		Y	N	Y			CP-100
	Junction Chamber													
	Junction Chamber Gate #1 (A-B) In-Remote	YIR-JC-7100		DI	DEVN	Normal	Remote		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #1 (A-B) Open Feedback	ZIOR-JC-7101		DI	DEVN	Normal	Opened		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #1 (A-B) Closed Feedback	ZICR-JC-7102		DI	DEVN	Normal	Closed		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #1 (A-B) Open Command	ZCOR-JC-7103		DO	DEVN	Normal	Close		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #1 (A-B) Close Command	ZCCR-JC-7104		DO	DEVN	Normal	Close		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #1 (A-B) Position Feedback	ZCCR-JC-7105		AI	DEVN	0-100	%		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #2 (A-C) In-Remote	YIR-JC-7200		DI	DEVN	Normal	Remote		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #2 (A-C) Open Feedback	ZIOR-JC-7201		DI	DEVN	Normal	Opened		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #2 (A-C) Closed Feedback	ZICR-JC-7202		DI	DEVN	Normal	Closed		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #1 (A-C) Open Command	ZCOR-JC-7203		DO	DEVN	Normal	Close		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #2 (A-C) Close Command	ZCCR-JC-7204		DO	DEVN	Normal	Close		Y	N	Y			PLC-1 (WWTP)

Sheet #	Description	Tag	Drawing Tag	Type	Signal	Range / Off Status	Units / On Status	Field Wiring Data						
								Field ISA Signal Source / Destination	Local Control / Indication	CP Control / Indication	HMI Control / Indication	Equipment Panel Location	Field FTC	SCADA Panel
	Junction Chamber Gate #1 (A-C) Position Feedback	ZCCR-JC-7205		AI	DEVN	0-100	%		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #3 (B-C) In-Remote	YIR-JC-7300		DI	DEVN	Normal	Remote		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #3 (B-C) Open Feedback	ZIOR-JC-7301		DI	DEVN	Normal	Opened		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #3 (B-C) Closed Feedback	ZICR-JC-7302		DI	DEVN	Normal	Closed		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #1 (B-C) Open Command	ZCOR-JC-7403		DO	DEVN	Normal	Close		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #3 (B-C) Close Command	ZCCR-JC-7304		DO	DEVN	Normal	Close		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #3 (B-C) Position Feedback	ZCCR-JC-7305		DO	DEVN	0-100	%		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #4 (B-BPR) In-Remote	YIR-JC-7400		DI	DEVN	Normal	Remote		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #4 (B-BPR) Open Feedback	ZIOR-JC-7401		DI	DEVN	Normal	Opened		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #4 (B-BPR) Closed Feedback	ZICR-JC-7402		DI	DEVN	Normal	Closed		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #1 (B-BPR) Open Command	ZCOR-JC-7403		DO	DEVN	Normal	Close		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #4 (B-BPR) Close Command	ZCCR-JC-7404		DO	DEVN	Normal	Close		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #4 (B-BPR) Position Feedback	ZCCR-JC-7405		AI	DEVN	0-100	%		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #5 (C-E) In-Remote (FUTURE)	YIR-JC-7500		DI	DEVN	Normal	Remote		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #5 (C-E) Open Feedback (FUTURE)	ZIOR-JC-7501		DI	DEVN	Normal	Opened		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #5 (C-E) Closed Feedback (FUTURE)	ZICR-JC-7502		DI	DEVN	Normal	Closed		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #5 (C-E) Position Command (FUTURE)	ZCR-JC-7503		AO	DEVN	0-100	%		Y	N	Y			PLC-1 (WWTP)
	Junction Chamber Gate #5 (C-E) Position Feedback (FUTURE)	ZIR-JC-7504		AI	DEVN	0-100	%		Y	N	Y			PLC-1 (WWTP)
	WWS Tanks													
	WWS South Tank Level	LIR-WWST-3800		AI	HW	0-XX	feet	LIT-3800	Y	N	Y	Storage Tanks		STCP (FTC #4)
	WWS North Tank Level (FUTURE)	LIR-WWST-3802		AI	HW	0-XX	feet	LIT-3802	Y	N	Y	Storage Tanks		STCP (FTC #4)
	WWS South Tank Intrusion Switch	YAI-WWST-3803		DI	HW	Normal	ALARM	XC-3803	N	N	Y	Storage Tanks		STCP (FTC #4)
	FTC-4 Control Panel Intrusion Switch	YAI-WWST-3804		DI	HW	Normal	ALARM	XC-3804	N	N	Y	Storage Tanks FTC#3		STCP (FTC #4)
	NPW Booster Pump Station Flood Switch	YAI-BPS-3800		DI	HW	Normal	ALARM	XC-3800	N	N	Y	Storage Tanks Booster NPW Vault		
	South Tank Discharge Vault Leak Detection	YAI-WWST-3805		DI	HW	Normal	ALARM	XC-3805	N	N	Y	South Tank Discharge Vault		
	CFO Vault Leak Detection	YAI-WWST-3806		DI	HW	Normal	ALARM	XC-3806	N	N	Y	Storage Tanks CFO Vault		
	Inlet Vault Leak Detection	YAI-WWST-3807		DI	HW	Normal	ALARM	XC-3807	N	N	Y	Storage Tansk Inlet Vault		
	WWS South Tank Inlet MOV In-Remote	YIR-WWST-3810	P10.1	DI	DEVN	Normal	Remote		Y	N	Y			STCP (FTC #4)
	WWS South Tank Inlet MOV Open Feedback	ZIOR-WWST-3811	P10.1	DI	DEVN	Normal	Opened		Y	N	Y			STCP (FTC #4)
	WWS South Tank Inlet MOV Closed Feedback	ZICR-WWST-3812	P10.1	DI	DEVN	Normal	Closed		Y	N	Y			STCP (FTC #4)
	WWS South Tank Inlet MOV Close Command	ZCCR-WWST-3813	P10.1	DO	DEVN	Normal	Close		Y	N	Y			STCP (FTC #4)
	WWS South Tank Inlet MOV Position Feedback	ZIR-WWST-3814	P10.1	DO	DEVN	0-100	%		Y	N	Y			STCP (FTC #4)
	WWS South Tank Outlet MOV In-Remote	YIR-WWST-3820	P11.1	DI	DEVN	Normal	Remote		Y	N	Y			STCP (FTC #4)
	WWS South Tank Outlet MOV Open Feedback	ZIOR-WWST-3821	P11.1	DI	DEVN	Normal	Opened		Y	N	Y			STCP (FTC #4)
	WWS South Tank Outlet MOV Closed Feedback	ZICR-WWST-3822	P11.1	DI	DEVN	Normal	Closed		Y	N	Y			STCP (FTC #4)
	WWS South Tank Outlet MOV Position Command	ZCR-WWST-3824	P11.1	AO	DEVN	0-100	%		Y	N	Y			STCP (FTC #4)
	WWS South Tank Outlet MOV Position Feedback	ZIR-WWST-3825	P11.1	AI	DEVN	0-100	%		Y	N	Y			STCP (FTC #4)
														STCP (FTC #4)
	WWS South Tank Drain MOV In-Remote	YIR-WWST-3830	P12.1	DI	DEVN	Normal	Remote		Y	N	Y			STCP (FTC #4)
	WWS South Tank Drain MOV Open Feedback	ZIOR-WWST-3831	P12.1	DI	DEVN	Normal	Opened		Y	N	Y			STCP (FTC #4)
	WWS South Tank Drain MOV Closed Feedback	ZICR-WWST-3832	P12.1	DI	DEVN	Normal	Closed		Y	N	Y			STCP (FTC #4)
	WWS South Tank Drain MOV Open Command	ZCOR-WWST-3833	P12.1	DO	DEVN	Normal	Open		Y	N	Y			STCP (FTC #4)
	WWS South Tank Drain MOV Position Feedback	ZIR-WWST-3834	P12.1	AI	DEVN	0-100	%		Y	N	Y			STCP (FTC #4)
	WWS Tank Drain Interconnect MOV In-Remote	YIR-WWST-3840	P13.1	DI	DEVN	Normal	Remote		Y	N	Y			STCP (FTC #4)
	WWS Tank Drain Interconnect MOV Open Feedback	ZIOR-WWST-3841	P13.1	DI	DEVN	Normal	Opened		Y	N	Y			STCP (FTC #4)
	WWS Tank Drain Interconnect MOV Closed Feedback	ZICR-WWST-3842	P13.1	DI	DEVN	Normal	Closed		Y	N	Y			STCP (FTC #4)
	WWS Tank Drain Interconnect MOV Open Command	ZCOR-WWST-3843	P13.1	DO	DEVN	Normal	Open		Y	N	Y			STCP (FTC #4)
	WWS Tank Drain Interconnect MOV Position Feedback	ZIR-WWST-3844	P13.1	AI	DEVN	0-100	%		Y	N	Y			STCP (FTC #4)
														STCP (FTC #4)
	WWS North Tank Inlet MOV In-Remote	YIR-WWST-3850	P10.2	DI	DEVN	Normal	Remote		Y	N	Y			STCP (FTC #4)
	WWS North Tank Inlet MOV Open Feedback	ZIOR-WWST-3851	P10.2	DI	DEVN	Normal	Opened		Y	N	Y			STCP (FTC #4)
	WWS North Tank Inlet MOV Closed Feedback	ZICR-WWST-3852	P10.2	DI	DEVN	Normal	Closed		Y	N	Y			STCP (FTC #4)
	WWS North Tank Inlet MOV Close Command	ZCCR-WWST-3853	P10.2	DO	DEVN	Normal	Close		Y	N	Y			STCP (FTC #4)
	WWS North Tank Inlet MOV Position Feedback	ZIR-WWST-3854	P10.2	AI	DEVN	0-100	%		Y	N	Y			STCP (FTC #4)
	WWS North Tank Outlet MOV In-Remote	YIR-WWST-3860	P11.2	DI	DEVN	Normal	Remote		Y	N	Y			STCP (FTC #4)
	WWS North Tank Outlet MOV Open Feedback	ZIOR-WWST-3861	P11.2	DI	DEVN	Normal	Opened		Y	N	Y			STCP (FTC #4)
	WWS North Tank Outlet MOV Closed Feedback	ZICR-WWST-3862	P11.2	DI	DEVN	Normal	Closed		Y	N	Y			STCP (FTC #4)
	WWS North Tank Outlet MOV Position Command	ZCR-WWST-3863	P11.2	AO	DEVN	0-100	%		Y	N	Y			STCP (FTC #4)
	WWS North Tank Outlet MOV Position Feedback	ZIR-WWST-3864	P11.2	AI	DEVN	0-100	%		Y	N	Y			STCP (FTC #4)
														STCP (FTC #4)
	WWS North Tank Drain MOV In-Remote	YIR-WWST-3870	P12.2	DI	DEVN	Normal	Remote		Y	N	Y			STCP (FTC #4)
	WWS North Tank Drain MOV Open Feedback	ZIOR-WWST-3871	P12.2	DI	DEVN	Normal	Opened		Y	N	Y			STCP (FTC #4)
	WWS North Tank Drain MOV Closed Feedback	ZICR-WWST-3872	P12.2	DI	DEVN	Normal	Closed		Y	N	Y			STCP (FTC #4)
	WWS North Tank Drain MOV Open Command	ZCOR-WWST-3873	P12.2	DO	DEVN	Normal	Open		Y	N	Y			STCP (FTC #4)
	WWS North Tank Drain MOV Position Feedback	ZIR-WWST-3874	P12.2	AI	DEVN	0-100	%		Y	N	Y			STCP (FTC #4)
	Non Potable Water CP (NPWCP)													

Sheet #	Description	Tag	Drawing Tag	Type	Signal	Range / Off Status	Units / On Status	Field Wiring Data						
								Field ISA Signal Source / Destination	Local Control / Indication	CP Control / Indication	HMI Control / Indication	Equipment Panel Location	Field FTC	SCADA Panel
	NPW Pump 1 VFD In-Auto	YIR-NPW-9100		DI	DEVN	Normal	Auto		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 1 VFD Running	YIR-NPW-9101		DI	DEVN	Normal	Running		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 1 VFD Fault	YAIR-NPW-9102		DI	DEVN	Normal	Alarm		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 1 VFD E-Stop	YAIR-NPW-9103		DI	DEVN	Normal	Alarm		Y	N	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 1 VFD Speed Feedback	SIR-NPW-9104		AI	DEVN	0-100	%		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 1 VFD Start	YCR-NPW-9105		DO	DEVN	Normal	Modulate		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 1 VFD Stop	YCR-NPW-9106		DO	DEVN	Normal	Modulate		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 1 VFD Speed Cmd	SCR-NPW-9107		AO	DEVN	0-100	%		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 1 Check Valve Closed	YICR-NPW-9110		DI	DEVN	Normal	Closed		N	N	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 1 Thermal Overload	TAHR-NPW-9111		DI	DEVN	Normal	Alarm		N	N	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 1 Amps Phase A	IRC-IPS- 2171		AI	DEVN	0-XXX	Amps		N	N	Y	MCC-NG-A/B		NEW MCC
	NPW Pump 1 Amps Phase B	IRC-IPS-2172		AI	DEVN	0-XXX	Amps		N	N	Y	MCC-NG-A/B		NEW MCC
	NPW Pump 1 Amps Phase C	IRC-IPS- 2173		AI	DEVN	0-XXX	Amps		N	N	Y	MCC-NG-A/B		NEW MCC
	NPW Pump 2 VFD In-Auto	YIR-NPW-9120		DI	DEVN	Normal	Auto		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 2 VFD Running	YIR-NPW-9191		DI	DEVN	Normal	Running		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 2 VFD Fault	YAIR-NPW-9122		DI	DEVN	Normal	Alarm		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 2 VFD E-Stop	YAIR-NPW-9123		DI	DEVN	Normal	Alarm		Y	N	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 2 VFD Speed Feedback	SIR-NPW-9124		AI	DEVN	0-100	%		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 2 VFD Start	YCR-NPW-9125		DO	DEVN	Normal	Modulate		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 2 VFD Stop	YCR-NPW-9126		DO	DEVN	Normal	Modulate		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 2 VFD Speed Cmd	SCR-NPW-9127		AO	DEVN	0-100	%		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 2 Check Valve Closed	YICR-NPW-9128		DI	DEVN	Normal	Closed		N	N	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 2 Thermal Overload	TAHR-NPW-9129		DI	DEVN	Normal	Alarm		N	N	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 2 Amps Phase A	IRC-NPW-9130		AI	DEVN	0-XXX	Amps		N	N	Y	MCC-NG-A/B		NEW MCC
	NPW Pump 2 Amps Phase B	IRC-NPW-9131		AI	DEVN	0-XXX	Amps		N	N	Y	MCC-NG-A/B		NEW MCC
	NPW Pump 2 Amps Phase C	IRC-NPW-9132		AI	DEVN	0-XXX	Amps		N	N	Y	MCC-NG-A/B		NEW MCC
	NPW Pump 3 VFD In-Auto	YIR-NPW-9140		DI	DEVN	Normal	Auto		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 3 VFD Running	YIR-NPW-9141		DI	DEVN	Normal	Running		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 3 VFD Fault	YAIR-NPW-9142		DI	DEVN	Normal	Alarm		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 3 VFD E-Stop	YAIR-NPW-9143		DI	DEVN	Normal	Alarm		Y	N	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 3 VFD Speed Feedback	SIR-NPW-9144		AI	DEVN	0-100	%		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 3 VFD Start	YCR-NPW-9145		DO	DEVN	Normal	Modulate		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 3 VFD Stop	YCR-NPW-9146		DO	DEVN	Normal	Modulate		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 3 VFD Speed Cmd	SCR-NPW-9147		AO	DEVN	0-100	%		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 3 Check Valve Closed	YICR-NPW-9148		DI	DEVN	Normal	Closed		N	N	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 3 Thermal Overload	TAHR-NPW-9149		DI	DEVN	Normal	Alarm		N	N	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 3 Amps Phase A	IRC-NPW-9150		AI	DEVN	0-XXX	Amps		N	N	Y	MCC-NG-A/B		NEW MCC
	NPW Pump 3 Amps Phase B	IRC-NPW-9151		AI	DEVN	0-XXX	Amps		N	N	Y	MCC-NG-A/B		NEW MCC
	NPW Pump3 Amps Phase C	IRC-NPW-9152		AI	DEVN	0-XXX	Amps		N	N	Y	MCC-NG-A/B		NEW MCC
	NPW Pump 4 VFD In-Auto	YIR-NPW-9200		DI	DEVN	Normal	Auto		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 4 VFD Running	YIR-NPW-9201		DI	DEVN	Normal	Running		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 4 VFD Fault	YAIR-NPW-9202		DI	DEVN	Normal	Alarm		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 4 VFD E-Stop	YAIR-NPW-9203		DI	DEVN	Normal	Alarm		Y	N	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 4 VFD Speed Feedback	SIR-NPW-9204		AI	DEVN	0-100	%		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 4 VFD Start	YCR-NPW-9205		DO	DEVN	Normal	Modulate		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 4 VFD Stop	YCR-NPW-9206		DO	DEVN	Normal	Modulate		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 4 VFD Speed Cmd	SCR-NPW-9207		AO	DEVN	0-100	%		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 4 Check Valve Closed	YICR-NPW-9210		DI	DEVN	Normal	Closed		N	N	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 4 Thermal Overload	TAHR-NPW-9211		DI	DEVN	Normal	Alarm		N	N	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 4 Amps Phase A	IRC-NPW-9212		AI	DEVN	0-XXX	Amps		N	N	Y	MCC-NG-A/B		NEW MCC
	NPW Pump 4 Amps Phase B	IRC-NPW-9213		AI	DEVN	0-XXX	Amps		N	N	Y	MCC-NG-A/B		NEW MCC
	NPW Pump 4 Amps Phase C	IRC-NPW-9214		AI	DEVN	0-XXX	Amps		N	N	Y	MCC-NG-A/B		NEW MCC
	NPW Pump 5 VFD In-Auto	YIR-NPW-9220		DI	DEVN	Normal	Auto		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 5 VFD Running	YIR-NPW-9292		DI	DEVN	Normal	Running		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 5 VFD Fault	YAIR-NPW-9222		DI	DEVN	Normal	Alarm		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 5 VFD E-Stop	YAIR-NPW-9223		DI	DEVN	Normal	Alarm		Y	N	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 5 VFD Speed Feedback	SIR-NPW-9224		AI	DEVN	0-100	%		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 5 VFD Start	YCR-NPW-9225		DO	DEVN	Normal	Modulate		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 5 VFD Stop	YCR-NPW-9226		DO	DEVN	Normal	Modulate		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 5 VFD Speed Cmd	SCR-NPW-9227		AO	DEVN	0-100	%		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 5 Check Valve Closed	YICR-NPW-9228		DI	DEVN	Normal	Closed		N	N	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 5 Thermal Overload	TAHR-NPW-9229		DI	DEVN	Normal	Alarm		N	N	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 5 Amps Phase A	IRC-NPW-9230		AI	DEVN	0-XXX	Amps		N	N	Y	MCC-NG-A/B		NEW MCC
	NPW Pump 5 Amps Phase B	IRC-NPW-9231		AI	DEVN	0-XXX	Amps		N	N	Y	MCC-NG-A/B		NEW MCC
	NPW Pump 5 Amps Phase C	IRC-NPW-9232		AI	DEVN	0-XXX	Amps		N	N	Y	MCC-NG-A/B		NEW MCC
	NPW Pump 6 VFD Running	YIR-NPW-9241		DI	DEVN	Normal	Running		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 6 VFD Fault	YAIR-NPW-9242		DI	DEVN	Normal	Alarm		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 6 VFD E-Stop	YAIR-NPW-9243		DI	DEVN	Normal	Alarm		Y	N	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 6 VFD Speed Feedback	SIR-NPW-9244		AI	DEVN	0-100	%		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 6 VFD Start	YCR-NPW-9245		DO	DEVN	Normal	Modulate		N	Y	Y	MCC-NG-A/B		NPW MCC

Sheet #	Description	Tag	Drawing Tag	Type	Signal	Range / Off Status	Units / On Status	Field Wiring Data						
								Field ISA Signal Source / Destination	Local Control / Indication	CP Control / Indication	HMI Control / Indication	Equipment Panel Location	Field FTC	SCADA Panel
	NPW Pump 6 VFD Stop	YCR-NPW-9246		DO	DEVN	Normal	Modulate		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 6 VFD Speed Cmd	SCR-NPW-9247		AO	DEVN	0-100	%		N	Y	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 6 Check Valve Closed	YICR-NPW-9248		DI	DEVN	Normal	Closed		N	N	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 6 Thermal Overload	TAHR-NPW-9249		DI	DEVN	Normal	Alarm		N	N	Y	MCC-NG-A/B		NPW MCC
	NPW Pump 6 Amps Phase A	IRC-NPW- 9250		AI	DEVN	0-XXX	Amps		N	N	Y	MCC-NG-A/B		NEW MCC
	NPW Pump 6 Amps Phase B	IRC-NPW-9251		AI	DEVN	0-XXX	Amps		N	N	Y	MCC-NG-A/B		NEW MCC
	NPW Pump 6 Amps Phase C	IRC-NPW- 9252		AI	DEVN	0-XXX	Amps		N	N	Y	MCC-NG-A/B		NEW MCC
	EFW FCV In-Remote	YIR-NPW-9300		DI	DEVN	Normal	Remote		Y	N	Y			NPWCP
	EFW FCV Open Feedback	ZIOR-NPW-9301		DI	DEVN	Normal	Opened		Y	N	Y			NPWCP
	EFW FCV Closed Feedback	ZICR-NPW-9302		DI	DEVN	Normal	Closed		Y	N	Y			NPWCP
	EFW FCV Position Command	ZCR-NPW-9303		AO	DEVN	0-100	%		Y	N	Y			NPWCP
	EFW FCV Position Feedback	ZIR-NPW-9304		AI	DEVN	0-100	%		Y	N	Y			NPWCP
	EFW Flow (Effluent Flushing Water)	FIR-NPW-9305		AI	HW	0-XXX	MGD	FIT-XXXX	Y	N	Y	NPW Electrical Building		NPWCP
	EFW Flow (Effluent Flushing Water)	FIR-NPW-9306		AI	HW	0-XXX	MGD	FIT-XXXX	Y	N	Y	NPW Electrical Building		NPWCP
	EFW Flow (Effluent Flushing Water)	FIR-NPW-9307		AI	HW	0-XXX	MGD	FIT-XXXX	Y	N	Y	NPW Electrical Building		NPWCP
	EFW Flow (Effluent Flushing Water)	FIR-NPW-9308		AI	HW	0-XXX	MGD	FIT-XXXX	Y	N	Y	NPW Electrical Building		NPWCP
	CLDW FCV In-Remote	YIR-NPW-9310		DI	DEVN	Normal	Remote		Y	N	Y			NPWCP
	CLDW FCV Open Feedback	ZIOR-NPW-9311		DI	DEVN	Normal	Opened		Y	N	Y			NPWCP
	CLDW FCV Closed Feedback	ZICR-NPW-9312		DI	DEVN	Normal	Closed		Y	N	Y			NPWCP
	CLDW FCV Position Command	ZCR-NPW-9313		AO	DEVN	0-100	%		Y	N	Y			NPWCP
	CLDW FCV Position Feedback	ZIR-NPW-9314		AI	DEVN	0-100	%		Y	N	Y			NPWCP
	CLDW Flow (Chlorine Dilution Water)	FIR-NPW-9315		AI	HW	0-XXX	MGD	FIT-XXXX	Y	N	Y	NPW Electrical Building		NPWCP
	FSW FCV In-Remote	YIR-NPW-9320		DI	DEVN	Normal	Remote		Y	N	Y			NPWCP
	FSW FCV Open Feedback	ZIOR-NPW-9321		DI	DEVN	Normal	Opened		Y	N	Y			NPWCP
	FSW FCV Closed Feedback	ZICR-NPW-9322		DI	DEVN	Normal	Closed		Y	N	Y			NPWCP
	FSW FCV Position Command	ZCR-NPW-9323		AO	DEVN	0-100	%		Y	N	Y			NPWCP
	FSW FCV Position Feedback	ZIR-NPW-9324		AI	DEVN	0-100	%		Y	N	Y			NPWCP
	FSW Flow (Foam Spray Water)	FIR-NPW-9325		AI	HW	0-XXX	MGD	FIT-XXXX	Y	N	Y	NPW Electrical Building		NPWCP
	TDW FCV In-Remote	YIR-NPW-9330		DI	DEVN	Normal	Remote		Y	N	Y			NPWCP
	TDW FCV Open Feedback	ZIOR-NPW-9331		DI	DEVN	Normal	Opened		Y	N	Y			NPWCP
	TDW FCV Closed Feedback	ZICR-NPW-9332		DI	DEVN	Normal	Closed		Y	N	Y			NPWCP
	TDW FCV Position Command	ZCR-NPW-9333		AO	DEVN	0-100	%		Y	N	Y			NPWCP
	TDW FCV Position Feedback	ZIR-NPW-9334		AI	DEVN	0-100	%		Y	N	Y			NPWCP
	TDW Flow (Thickener Dilution Water)	FIR-NPW-9335		AI	HW	0-XXX	MGD	FIT-XXXX	Y	N	Y	NPW Electrical Building		NPWCP
	SPW FCV In-Remote	YIR-NPW-9340		DI	DEVN	Normal	Remote		Y	N	Y			NPWCP
	SPW FCV Open Feedback	ZIOR-NPW-9341		DI	DEVN	Normal	Opened		Y	N	Y			NPWCP
	SPW FCV Closed Feedback	ZICR-NPW-9342		DI	DEVN	Normal	Closed		Y	N	Y			NPWCP
	SPW FCV Position Command	ZCR-NPW-9343		AO	DEVN	0-100	%		Y	N	Y			NPWCP
	SPW FCV Position Feedback	ZIR-NPW-9344		AI	DEVN	0-100	%		Y	N	Y			NPWCP
	SPW Flow (Solids Processing Water)	FIR-NPW-9345		AI	HW	0-XXX	MGD	FIT-XXXX	Y	N	Y	NPW Electrical Building		NPWCP
	SPW Flow (Solids Processing Water)	FIR-NPW-9346		AI	HW	0-XXX	MGD	FIT-XXXX	Y	N	Y	NPW Electrical Building		NPWCP
	Electrical													
	MV-XFRMR-M1 Low Oil Level	YAIR-XFRMR-8010		DI	Modbus Ethernet	Normal	Alarm		N	N	Y		CP-100	
	MV-XFRMR-M1 Tank Pressure	YAIR-XFRMR-8011		DI	Modbus Ethernet	Normal	Alarm		N	N	Y		CP-100	
	MV-XFRMR-M1 High Heat Alarm	YAIR-XFRMR-0812		DI	Modbus Ethernet	Normal	Alarm		N	N	Y		CP-100	
	MV-XFRMR-M2 Low Oil Level	YAIR-XFRMR-8010		DI	Modbus Ethernet	Normal	Alarm		N	N	Y		CP-100	
	MV-XFRMR-M2 Tank Pressure	YAIR-XFRMR-8011		DI	Modbus Ethernet	Normal	Alarm		N	N	Y		CP-100	
	MV-XFRMR-M2 High Heat Alarm	YAIR-XFRMR-0812		DI	Modbus Ethernet	Normal	Alarm		N	N	Y		CP-100	
	Generator Room High Temperature Alarm	TAHR-GEN-8207		AI	HW	25-110	F	TSH-8200	N	N	Y			SWITCHGEAR
	Generator Electric Room High Temperature Alarm	TAHR-GEN-8208		AI	HW	25-110	F	TSH-8201	N	N	Y			SWITCHGEAR
	Operate On Generator Cmd	YCR-GEN-8209		DO	Modbus Ethernet	Normal	Start		N	Y	Y			SWITCHGEAR
	Loss of Preferred Power	YIR-GEN-8210		DO	Modbus Ethernet	Normal	Start		N	N	Y			SWITCHGEAR
	Generator #1 Running	YIR-GEN-8200		DI	Modbus Ethernet	Normal	Running		Y	N	Y			SWITCHGEAR
	Generator #1 Alarm	YAIR-GEN-8201		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			SWITCHGEAR
	Generator #1 Low Fuel Level	LSLR-GEN-8202		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			SWITCHGEAR
	Generator #1 Low Oil Pressure	YAIR-GEN-8203		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			SWITCHGEAR
	Generator #1 Ready	YIR-GEN-8204		DI	Modbus Ethernet	Normal	Ready		Y	N	Y			SWITCHGEAR
	Generator #1 Start Command	YCR-GEN-8205		DO	Modbus Ethernet	Normal	Start		Y	N	Y			SWITCHGEAR
	Generator #1 Shutdown Command	YCR-GEN-8206		DO	Modbus Ethernet	Normal	Stop		Y	N	Y			SWITCHGEAR
	Generator #1 Breaker Opened	ZIOR-ELEC-8250		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			SWITCHGEAR
	Generator #1 Breaker Closed	ZICR-ELEC-8251		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			SWITCHGEAR
	Generator #1 Breaker Tripped	YAIR-ELEC-8252		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			SWITCHGEAR
	Generator #1 Breaker Racked	ZICR-ELEC-8253		DI	Modbus Ethernet	Normal	Racked		N	N	Y			SWITCHGEAR
	Generator 1A Breaker Opened	ZIOR-ELEC-8260		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			SWITCHGEAR
	Generator 1A Breaker Closed	ZICR-ELEC-8261		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			SWITCHGEAR
	Generator 1A Breaker Tripped	YAIR-ELEC-8262		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			SWITCHGEAR
	Generator 1A Breaker Racked	ZICR-ELEC-8263		DI	Modbus Ethernet	Normal	Racked		N	N	Y			SWITCHGEAR

Sheet #	Description	Tag	Drawing Tag	Type	Signal	Range / Off Status	Units / On Status	Field Wiring Data						
								Field ISA Signal Source / Destination	Local Control / Indication	CP Control / Indication	HMI Control / Indication	Equipment Panel Location	Field FTC	SCADA Panel
	Loss of Preferred Power	YIR-GEN-8710		DO	Modbus Ethernet	Normal	Start		N	N	Y			SWITCHGEAR
	Generator #2 Running	YIR-GEN-8700		DI	Modbus Ethernet	Normal	Running		Y	N	Y			SWITCHGEAR
	Generator #2 Alarm	YAIR-GEN-8701		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			SWITCHGEAR
	Generator #2 Low Fuel Level	LSLR-GEN-8702		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			SWITCHGEAR
	Generator #2 Low Oil Pressure	YAIR-GEN-8703		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			SWITCHGEAR
	Generator #2 Ready	YIR-GEN-8704		DI	Modbus Ethernet	Normal	Ready		Y	N	Y			SWITCHGEAR
	Generator #2 Start Command	YCR-GEN-8705		DO	Modbus Ethernet	Normal	Start		Y	N	Y			SWITCHGEAR
	Generator #2 Shutdown Command	YCR-GEN-8706		DO	Modbus Ethernet	Normal	Stop		Y	N	Y			SWITCHGEAR
	Generator #2 Breaker Opened	ZIOR-ELEC-8750		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			SWITCHGEAR
	Generator #2 Breaker Closed	ZICR-ELEC-8751		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			SWITCHGEAR
	Generator #2 Breaker Tripped	YAIR-ELEC-8752		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			SWITCHGEAR
	Generator #2 Breaker Racked	ZICR-ELEC-8753		DI	Modbus Ethernet	Normal	Racked		N	N	Y			
	Generator 2A Breaker Opened	ZIOR-ELEC-8760		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			SWITCHGEAR
	Generator 2A Breaker Closed	ZICR-ELEC-8761		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			SWITCHGEAR
	Generator 2A Breaker Tripped	YAIR-ELEC-8762		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			SWITCHGEAR
	Generator 2A Breaker Racked	ZICR-ELEC-8763		DI	Modbus Ethernet	Normal	Racked		N	N	Y			SWITCHGEAR
	MVSG-EM 52-1A Breaker Opened	ZIOR-ELEC-8770		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			SWITCHGEAR
	MVSG-EM 52-1A Breaker Closed	ZICR-ELEC-8771		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			SWITCHGEAR
	MVSG-EM 52-1A Breaker Tripped	YAIR-ELEC-8772		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			SWITCHGEAR
	MVSG-EM 52-1A Breaker Racked	ZICR-ELEC-8773		DI	Modbus Ethernet	Normal	Racked		N	N	Y			SWITCHGEAR
	MVSG-EM 52-1B Breaker Opened	ZIOR-ELEC-8780		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			SWITCHGEAR
	MVSG-EM 52-1B Breaker Closed	ZICR-ELEC-8781		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			SWITCHGEAR
	MVSG-EM 52-1B Breaker Tripped	YAIR-ELEC-8782		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			SWITCHGEAR
	MVSG-EM 52-1B Breaker Racked	ZICR-ELEC-8783		DI	Modbus Ethernet	Normal	Racked		N	N	Y			SWITCHGEAR
	Main Electrical Room High Temperature Alarm	TAHR-ELEC-8005		AI	HW	25-110	F	TSH-8005	N	N	Y			CP-100
	Main Electrical Room Air Handler #1 Common Alarm	YAIR-ELEC-8006	CRAC 1-1	DI	HW	Normal	Alarm	CRAC 1-1	N	N	Y			CP-100
	Main Electrical Room Air Handler #2 Common Alarm	YAIR-ELEC-8007	CRAC 1-2	DI	HW	Normal	Alarm	CRAC 1-2	N	N	Y			CP-100
	MV-SWGR Tie Breaker Opened	ZIOR-ELEC-8070		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MV-SWGR Tie Breaker Closed	ZICR-ELEC-8071		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MV-SWGR Tie Breaker Tripped	YAIR-ELEC-8072		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MV-SWGR Tie Breaker Racked	ZICR-ELEC-8073		DI	Modbus Ethernet	Normal	Racked		N	N	Y			
	MV-SWGR Phase A-B Voltage (RMS)	EIR-ELEC-8080		AI	Modbus Ethernet		Volts		Y	N	Y			CP-100
	MV-SWGR Phase B-C Voltage (RMS)	EIR-ELEC-8081		AI	Modbus Ethernet		Volts		Y	N	Y			CP-100
	MV-SWGR Phase C-A Voltage (RMS)	EIR-ELEC-8082		AI	Modbus Ethernet		Volts		Y	N	Y			CP-100
	MV-SWGR Phase A-N Voltage (RMS)	EIR-ELEC-8083		AI	Modbus Ethernet		Volts		Y	N	Y			CP-100
	MV-SWGR Phase B-N Voltage (RMS)	EIR-ELEC-8084		AI	Modbus Ethernet		Volts		Y	N	Y			CP-100
	MV-SWGR Phase C-N Voltage (RMS)	EIR-ELEC-8085		AI	Modbus Ethernet		Volts		Y	N	Y			CP-100
	MV-SWGR Phase A Amps (RMS)	IIR-ELEC-8086		AI	Modbus Ethernet		Amps		Y	N	Y			CP-100
	MV-SWGR Phase B Amps (RMS)	IIR-ELEC-8087		AI	Modbus Ethernet		Amps		Y	N	Y			CP-100
	MV-SWGR Phase C Amps (RMS)	IIR-ELEC-8088		AI	Modbus Ethernet		Amps		Y	N	Y			CP-100
	MV-SWGR Power Factor	JIR-ELEC-8089		AI	Modbus Ethernet	0-1	kW / kVA		Y	N	Y			CP-100
	MV-SWGR Power Kilowatt	JIR-ELEC-8090		AI	Modbus Ethernet		kW		Y	N	Y			CP-100
	MV-SWGR Total Harmonic Distortion	XIR-ELEC-8091		AI	Modbus Ethernet				Y	N	Y			CP-100
	SWGR Substation No.1 Sub Breaker Open	ZIOR-ELEC-8000		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			PLC-8
	SWGR Substation No.1 Sub Breaker Closed	ZICR-ELEC-8001		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			PLC-8
	SWGR Substation No. 1 Sub Breaker Tripped	YAIR-ELEC-8002		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			PLC-8
	SWGR Substation No.1 Sub Breaker Racked	ZICR-ELEC-8001		DI	Modbus Ethernet	Normal	Racked		N	N	Y			PLC-8
	MV-SWGR-1A Main Breaker Opened	ZIOR-ELEC-8010		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MV-SWGR-1A Main Breaker Closed	ZICR-ELEC-8011		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MV-SWGR-1A Main Breaker Tripped	YAIR-ELEC-8012		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MV-SWGR-1A Main Breaker Racked	ZICR-ELEC-8013		DI	Modbus Ethernet	Normal	Racked		N	N	Y			
	MV-SWGR-1A Phase A Voltage (RMS)	EIR-ELEC-8020		AI	Modbus Ethernet		Volts		Y	N	Y			CP-100
	MV-SWGR-1A Phase B Voltage (RMS)	EIR-ELEC-8021		AI	Modbus Ethernet		Volts		Y	N	Y			CP-100
	MV-SWGR-1A Phase C Voltage (RMS)	EIR-ELEC-8022		AI	Modbus Ethernet		Volts		Y	N	Y			CP-100
	MV-SWGR-1A Phase A-N Voltage (RMS)	EIR-ELEC-8023		AI	Modbus Ethernet		Volts		Y	N	Y			CP-100
	MV-SWGR-1A Phase B-N Voltage (RMS)	EIR-ELEC-8024		AI	Modbus Ethernet		Volts		Y	N	Y			CP-100
	MV-SWGR-1A Phase C-N Voltage (RMS)	EIR-ELEC-8025		AI	Modbus Ethernet		Volts		Y	N	Y			CP-100
	MV-SWGR-1A Phase A Amps (RMS)	IIR-ELEC-8026		AI	Modbus Ethernet		Amps		Y	N	Y			CP-100
	MV-SWGR-1A Phase B Amps (RMS)	IIR-ELEC-8027		AI	Modbus Ethernet		Amps		Y	N	Y			CP-100
	MV-SWGR-1A Phase C Amps (RMS)	IIR-ELEC-8028		AI	Modbus Ethernet		Amps		Y	N	Y			CP-100
	MV-SWGR-1A Power Factor	JIR-ELEC-8029		AI	Modbus Ethernet	0-1	kW / kVA		Y	N	Y			CP-100
	MV-SWGR-1A Power Kilowatt	JIR-ELEC-8030		AI	Modbus Ethernet		kW		Y	N	Y			CP-100
	MV-SWGR-1A Total Harmonic Distortion	XIR-ELEC-8031		AI	Modbus Ethernet				Y	N	Y			CP-100
	MV-SWGR-1A Neutral Monitor Fault	YAIR-ELEC-8032		DI	Modbus Ethernet		Alarm		Y	Y	Y			
	MV-SWGR-1A Neutral Monitor Current	IIR-ELEC-8033		AI	Modbus Ethernet		Amps		Y	Y	Y			
	MV-SWGR SWBD-1A Breaker Opened	ZIOR-ELEC-8040		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MV-SWGR SWBD-1A Breaker Closed	ZICR-ELEC-8041		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MV-SWGR SWBD-1A Breaker Tripped	YAIR-ELEC-8042		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MV-SWGR SWBD-1A Breaker Racked	ZICR-ELEC-8043		DI	Modbus Ethernet	Normal	Racked		N	N	Y			
	MV-SWGR SWBD-2A Breaker Opened	ZIOR-ELEC-8050		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100

Sheet #	Description	Tag	Drawing Tag	Type	Signal	Range / Off Status	Units / On Status	Field Wiring Data						
								Field ISA Signal Source / Destination	Local Control / Indication	CP Control / Indication	HMI Control / Indication	Equipment Panel Location	Field FTC	SCADA Panel
	MV-SWGR SWBD-2A Breaker Closed	ZICR-ELEC-8051		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MV-SWGR SWBD-2A Breaker Tripped	YAIR-ELEC-8052		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MV-SWGR SWBD-2A Breaker Racked	ZICR-ELEC-8053		DI	Modbus Ethernet	Normal	Racked		N	N	Y			
	MV-SWGR 1A SPARE Breaker Opened	ZIOR-ELEC-8060		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MV-SWGR 1A SPARE Breaker Closed	ZICR-ELEC-8061		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MV-SWGR 1A SPARE Breaker Tripped	YAIR-ELEC-8062		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	SWGR Substation No.1 Sub Breaker Open	ZIOR-ELEC-8500		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			PLC-8
	SWGR Substation No. 1 Sub Breaker Closed	ZICR-ELEC-8501		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			PLC-8
	SWGR Substation No. 1 Sub Breaker Tripped	YAIR-ELEC-8502		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			PLC-8
	SWGR Substation No. 1 Sub Breaker Racked	ZICR-ELEC-8503		DI	Modbus Ethernet	Normal	Racked		N	N	Y			PLC-8
	MV-SWGR-1B Main Breaker Opened	ZIOR-ELEC-8510		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MV-SWGR-1B Main Breaker Closed	ZICR-ELEC-8511		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MV-SWGR-1B Main Breaker Tripped	YAIR-ELEC-8512		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MV-SWGR-1B Main Breaker Racked	ZICR-ELEC-8513		DI	Modbus Ethernet	Normal	Racked		N	N	Y			
	MV-SWGR-1B Phase A Voltage (RMS)	EIR-ELEC-8520		AI	Modbus Ethernet		Volts		Y	N	Y			CP-100
	MV-SWGR-1B Phase B Voltage (RMS)	EIR-ELEC-8521		AI	Modbus Ethernet		Volts		Y	N	Y			CP-100
	MV-SWGR-1B Phase C Voltage (RMS)	EIR-ELEC-8522		AI	Modbus Ethernet		Volts		Y	N	Y			CP-100
	MV-SWGR-1B Phase A-N Voltage (RMS)	EIR-ELEC-8523		AI	Modbus Ethernet		Volts		Y	N	Y			CP-100
	MV-SWGR-1B Phase B-N Voltage (RMS)	EIR-ELEC-8524		AI	Modbus Ethernet		Volts		Y	N	Y			CP-100
	MV-SWGR-1B Phase C-N Voltage (RMS)	EIR-ELEC-8525		AI	Modbus Ethernet		Volts		Y	N	Y			CP-100
	MV-SWGR-1B Phase A Amps (RMS)	IIR-ELEC-8526		AI	Modbus Ethernet		Amps		Y	N	Y			CP-100
	MV-SWGR-1B Phase B Amps (RMS)	IIR-ELEC-8527		AI	Modbus Ethernet		Amps		Y	N	Y			CP-100
	MV-SWGR-1B Phase C Amps (RMS)	IIR-ELEC-8528		AI	Modbus Ethernet		Amps		Y	N	Y			CP-100
	MV-SWGR-1B Power Factor	JIR-ELEC-8526		AI	Modbus Ethernet		kW / kVA		Y	N	Y			CP-100
	MV-SWGR-1B Power Kilowatt	JIR-ELEC-8527		AI	Modbus Ethernet		kW		Y	N	Y			CP-100
	MV-SWGR-1B Total Harmonic Distortion	XIR-ELEC-8528		AI	Modbus Ethernet				Y	N	Y			CP-100
	MV-SWGR-1B Neutral Monitor Fault	YAIR-ELEC-8032		DI	Modbus Ethernet		Alarm		Y	Y	Y			
	MV-SWGR-1B Neutral Monitor Current	IIR-ELEC-8033		AI	Modbus Ethernet		Amps		Y	Y	Y			
	MV-SWGR SWBD-1B Breaker Open	ZIOR-ELEC-8540		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MV-SWGR SWBD-1B Breaker Closed	ZICR-ELEC-8541		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MV-SWGR SWBD-1B Breaker Tripped	YAIR-ELEC-8542		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MV-SWGR SWBD-1B Main Breaker Racked	ZICR-ELEC-8543		DI	Modbus Ethernet	Normal	Racked		N	N	Y			
	MV-SWGR SWBD-2B Breaker Open	ZIOR-ELEC-8550		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MV-SWGR SWBD-2B Breaker Closed	ZICR-ELEC-8551		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MV-SWGR SWBD-2B Breaker Tripped	YAIR-ELEC-8552		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MV-SWGR SWBD-2B Main Breaker Racked	ZICR-ELEC-8553		DI	Modbus Ethernet	Normal	Racked		N	N	Y			
	MV-SWGR 1B SPARE Breaker Open	ZIOR-ELEC-8560		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MV-SWGR 1B SPARE Breaker Closed	ZICR-ELEC-8561		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MV-SWGR 1B SPARE Breaker Tripped	YAIR-ELEC-8562		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MV-SWGR 1B SPARE Breaker Racked	ZICR-ELEC-8563		DI	Modbus Ethernet	Normal	Racked		Y	N	Y			CP-100
	MCC-1A Influent PS Sump Pump #1 Amps	IIR-ELEC-8570		AI	Modbus Ethernet		Amps		N	N	Y			
	MCC-1B Influent PS Sump Pump #2 Amps	IIR-ELEC-8571		AI	Modbus Ethernet		Amps		N	N	Y			
	MCC-1A WWS PS #1 Sump Amps	IIR-ELEC-8572		AI	Modbus Ethernet		Amps		N	N	Y			
	MCC-1B WWS PS #2 Sump Amps	IIR-ELEC-8573		AI	Modbus Ethernet		Amps		N	N	Y			
	MCC-1A Conveyor A Amps	IIR-ELEC-6574		AI	Modbus Ethernet		Amps		N	N	Y			
	MCC-1B Conveyor B Amps	IIR-ELEC-6575		AI	Modbus Ethernet		Amps		N	N	Y			
	MCC-1A Conveyor C Amps	IIR-ELEC-6576		AI	Modbus Ethernet		Amps		N	N	Y			
	MCC-1B Conveyor D Amps	IIR-ELEC-6576		AI	Modbus Ethernet		Amps		N	N	Y			
	MCC-1A Main Breaker Opened	ZIOR-ELEC-8032		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1A Main Breaker Closed	ZICR-ELEC-8033		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1A Main Breaker Tripped	YAIR-ELEC-8034		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1A/1B Tie Breaker Opened	ZIOR-ELEC-8032		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1A/1B Tie Breaker Closed	ZICR-ELEC-8033		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1A/1B Tie Breaker Tripped	YAIR-ELEC-8034		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1A Breaker 1A Opened	ZIOR-ELEC-8033		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1A Breaker 1A Closed	ZICR-ELEC-8034		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1A Breaker 1A Tripped	YAIR-ELEC-8035		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1A Breaker 1F Opened	ZIOR-ELEC-8036		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1A Breaker 1F Closed	ZICR-ELEC-8037		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1A Breaker 1F Tripped	YAIR-ELEC-8038		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1A Breaker 1K Opened	ZIOR-ELEC-8039		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1A Breaker 1K Closed	ZICR-ELEC-8040		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1A Breaker 1K Tripped	YAIR-ELEC-8041		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1A Breaker 1P Opened	ZIOR-ELEC-8042		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1A Breaker 1P Closed	ZICR-ELEC-8043		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1A Breaker 1P Tripped	YAIR-ELEC-8044		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1A Breaker 2A Opened	ZIOR-ELEC-8045		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1A Breaker 2A Closed	ZICR-ELEC-8046		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1A Breaker 2A Tripped	YAIR-ELEC-8047		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100

Sheet #	Description	Tag	Drawing Tag	Type	Signal	Range / Off Status	Units / On Status	Field Wiring Data						
								Field ISA Signal Source / Destination	Local Control / Indication	CP Control / Indication	HMI Control / Indication	Equipment Panel Location	Field FTC	SCADA Panel
	MCC-1A Breaker 2F Opened	ZIOR-ELEC-8048		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1A Breaker 2F Closed	ZICR-ELEC-8049		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1A Breaker 2F Tripped	YAIR-ELEC-8050		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1A Breaker 2K Opened	ZIOR-ELEC-8051		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1A Breaker 2K Closed	ZICR-ELEC-8052		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1A Breaker 2K Tripped	YAIR-ELEC-8053		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1A Breaker 2T Opened	ZIOR-ELEC-8054		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1A Breaker 2T Closed	ZICR-ELEC-8055		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1A Breaker 2T Tripped	YAIR-ELEC-8056		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1A Breaker 3A Opened	ZIOR-ELEC-8057		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1A Breaker 3A Closed	ZICR-ELEC-8058		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1A Breaker 3A Tripped	YAIR-ELEC-8059		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1A Breaker 4A Opened	ZIOR-ELEC-8060		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1A Breaker 4A Closed	ZICR-ELEC-8061		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1A Breaker 4A Tripped	YAIR-ELEC-8062		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1A Breaker 4F Opened	ZIOR-ELEC-8063		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1A Breaker 4F Closed	ZICR-ELEC-8064		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1A Breaker 4F Tripped	YAIR-ELEC-8065		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1A Breaker 5A Opened	ZIOR-ELEC-8066		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1A Breaker 5A Closed	ZICR-ELEC-8067		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1A Breaker 5A Tripped	YAIR-ELEC-8068		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1A Breaker 5C Opened	ZIOR-ELEC-8069		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1A Breaker5C Closed	ZICR-ELEC-8070		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1A Breaker 5C Tripped	YAIR-ELEC-8071		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1A Breaker 5E Opened	ZIOR-ELEC-8072		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1A Breaker5E Closed	ZICR-ELEC-8073		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1A Breaker 5E Tripped	YAIR-ELEC-8074		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1A Breaker 5G Opened	ZIOR-ELEC-8075		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1A Breaker 5G Closed	ZICR-ELEC-8076		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1A Breaker 5G Tripped	YAIR-ELEC-8077		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1A Breaker 5I Opened	ZIOR-ELEC-8078		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1A Breaker5I Closed	ZICR-ELEC-8079		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1A Breaker 5I Tripped	YAIR-ELEC-8080		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1B Main Breaker Open	ZIOR-ELEC-8530		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1B Main Breaker Closed	ZICR-ELEC-8531		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1B Main Breaker Tripped	YAIR-ELEC-8532		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1B Main Breaker Racked	ZICR-ELEC-8533		DI	Modbus Ethernet	Normal	Racked		N	N	Y			
	MCC-1B Breaker 1A Opened	ZIOR-ELEC-8534		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1B Breaker 1A Closed	ZICR-ELEC-8535		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1B Breaker 1A Tripped	YAIR-ELEC-8536		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1B Breaker 1C Opened	ZIOR-ELEC-8537		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1B Breaker 1C Closed	ZICR-ELEC-8538		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1B Breaker 1C Tripped	YAIR-ELEC-8539		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1B Breaker 1E Opened	ZIOR-ELEC-8540		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1B Breaker 1E Closed	ZICR-ELEC-8541		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1B Breaker 1E Tripped	YAIR-ELEC-8542		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1B Breaker 1G Opened	ZIOR-ELEC-8543		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1B Breaker 1G Closed	ZICR-ELEC-8544		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1B Breaker 1G Tripped	YAIR-ELEC-8546		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1B Breaker 1I Opened	ZIOR-ELEC-8547		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1B Breaker 1I Closed	ZICR-ELEC-8548		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1B Breaker 1I Tripped	YAIR-ELEC-8549		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1B Breaker 2A Opened	ZIOR-ELEC-8550		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1B Breaker 2A Closed	ZICR-ELEC-8551		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1B Breaker 2A Tripped	YAIR-ELEC-8552		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1B Breaker 2J Opened	ZIOR-ELEC-8553		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1B Breaker 2J Closed	ZICR-ELEC-8554		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1B Breaker 2J Tripped	YAIR-ELEC-8555		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1B Breaker 3A Opened	ZIOR-ELEC-8556		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1B Breaker 3A Closed	ZICR-ELEC-8557		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1B Breaker 3A Tripped	YAIR-ELEC-8558		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1B Breaker 4A Opened	ZIOR-ELEC-8559		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1B Breaker 4A Closed	ZICR-ELEC-8560		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1B Breaker 4A Tripped	YAIR-ELEC-8561		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1B Breaker 4F Opened	ZIOR-ELEC-8562		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1B Breaker 4F Closed	ZICR-ELEC-8563		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1B Breaker 4F Tripped	YAIR-ELEC-8564		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1B Breaker 4K Opened	ZIOR-ELEC-8565		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1B Breaker 4K Closed	ZICR-ELEC-8566		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1B Breaker 4K Tripped	YAIR-ELEC-8567		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1B Breaker 4T Opened	ZIOR-ELEC-8568		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1B Breaker 4T Closed	ZICR-ELEC-8569		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1B Breaker 4T Tripped	YAIR-ELEC-8570		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1B Breaker 5A Opened	ZIOR-ELEC-8571		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100

Sheet #	Description	Tag	Drawing Tag	Type	Signal	Range / Off Status	Units / On Status	Field Wiring Data						
								Field ISA Signal Source / Destination	Local Control / Indication	CP Control / Indication	HMI Control / Indication	Equipment Panel Location	Field FTC	SCADA Panel
	MCC-1B Breaker 5A Closed	ZICR-ELEC-8572		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1B Breaker 5A Tripped	YAIR-ELEC-8573		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1B Breaker 5F Opened	ZIOR-ELEC-8574		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1B Breaker 5F Closed	ZICR-ELEC-8575		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1B Breaker 5F Tripped	YAIR-ELEC-8576		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	MCC-1B Breaker 5K Opened	ZIOR-ELEC-8577		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	MCC-1B Breaker 5K Closed	ZICR-ELEC-8578		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	MCC-1B Breaker 5K Tripped	YAIR-ELEC-8579		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	SWBD 1A / 1B Transfer Switch Opened	ZIR-ELEC-8800		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	SWBD 1A / 1B Transfer Switch Position 1	ZIR-ELEC-8801		DI	Modbus Ethernet	Normal			Y	N	Y			CP-100
	SWBD 1A / 1B Transfer Switch Position 2	ZIR-ELEC-8802		DI	Modbus Ethernet	Normal			Y	N	Y			CP-100
	SWBD 1A / 1B Transfer Switch Position 1 CMD	ZIR-ELEC-8803		DO	Modbus Ethernet	Normal			Y	N	Y			CP-100
	SWBD 1A / 1B Transfer Switch Position 2 CMD	ZIR-ELEC-8804		DO	Modbus Ethernet	Normal			Y	N	Y			CP-100
	SWBD 2A / 2B Transfer Switch Opened	ZIR-ELEC-8810		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	SWBD 2A / 2B Transfer Switch Position 1	ZIR-ELEC-8811		DI	Modbus Ethernet	Normal			Y	N	Y			CP-100
	SWBD 2A / 2B Transfer Switch Position 2	ZIR-ELEC-8812		DI	Modbus Ethernet	Normal			Y	N	Y			CP-100
	SWBD 2A / 2B Transfer Switch Position 1 CMD	ZIR-ELEC-8813		DO	Modbus Ethernet	Normal			Y	N	Y			CP-100
	SWBD 2A / 2B Transfer Switch Position 2 CMD	ZIR-ELEC-8814		DO	Modbus Ethernet	Normal			Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1A Opened	ZIOR-ELEC-8815		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1A Closed	ZICR-ELEC-8816		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1A Tripped	YAIR-ELEC-8817		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1A Racked	ZICR-ELEC-8818		DI	Modbus Ethernet	Normal	Racked		N	N	Y			
	SWBD 1A/1B Breaker 1B Opened	ZIOR-ELEC-8819		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1B Closed	ZICR-ELEC-8820		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1B Tripped	YAIR-ELEC-8821		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1B Racked	ZICR-ELEC-8822		DI	Modbus Ethernet	Normal	Racked		N	N	Y			
	SWBD 1A/1B Breaker 1C Opened	ZIOR-ELEC-8823		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1C Closed	ZICR-ELEC-8824		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1C Tripped	YAIR-ELEC-8825		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1C Racked	ZICR-ELEC-8826		DI	Modbus Ethernet	Normal	Racked		N	N	Y			
	SWBD 1A/1B Breaker 1D Opened	ZIOR-ELEC-8827		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1D Closed	ZICR-ELEC-8828		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1D Tripped	YAIR-ELEC-8829		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1D Racked	ZICR-ELEC-8830		DI	Modbus Ethernet	Normal	Racked		N	N	Y			
	SWBD 1A/1B Breaker 1E Opened	ZIOR-ELEC-8831		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1E Closed	ZICR-ELEC-8832		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1E Tripped	YAIR-ELEC-8833		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1E Racked	ZICR-ELEC-8834		DI	Modbus Ethernet	Normal	Racked		N	N	Y			
	SWBD 1A/1B Breaker 1F Opened	ZIOR-ELEC-8835		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1F Closed	ZICR-ELEC-8836		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1F Tripped	YAIR-ELEC-8837		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1F Racked	ZICR-ELEC-8838		DI	Modbus Ethernet	Normal	Racked		N	N	Y			
	SWBD 1A/1B Breaker 1G Opened	ZIOR-ELEC-8839		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1G Closed	ZICR-ELEC-8840		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1G Tripped	YAIR-ELEC-8841		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	SWBD 1A/1B Breaker 1G Racked	ZICR-ELEC-8842		DI	Modbus Ethernet	Normal	Racked		N	N	Y			
	SWBD 2A/2B Breaker 1A Opened	ZIOR-ELEC-8815		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	SWBD 2A/2B Breaker 1A Closed	ZICR-ELEC-8816		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	SWBD 2A/2B Breaker 1A Tripped	YAIR-ELEC-8817		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	SWBD 2A/2B Breaker 1A Racked	ZICR-ELEC-8818		DI	Modbus Ethernet	Normal	Racked		N	N	Y			
	SWBD 2A/2B Breaker 1B Opened	ZIOR-ELEC-8819		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	SWBD 2A/2B Breaker 1B Closed	ZICR-ELEC-8820		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	SWBD 2A/2B Breaker 1B Tripped	YAIR-ELEC-8821		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	SWBD 2A/2B Breaker 1B Racked	ZICR-ELEC-8822		DI	Modbus Ethernet	Normal	Racked		N	N	Y			
	SWBD 2A/2B Breaker 1C Opened	ZIOR-ELEC-8823		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	SWBD 2A/2B Breaker 1C Closed	ZICR-ELEC-8824		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	SWBD 2A/2B Breaker 1C Tripped	YAIR-ELEC-8825		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	SWBD 2A/2B Breaker 1C Racked	ZICR-ELEC-8826		DI	Modbus Ethernet	Normal	Racked		N	N	Y			
	SWBD 2A/2B Breaker 1D Opened	ZIOR-ELEC-8827		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	SWBD 2A/2B Breaker 1D Closed	ZICR-ELEC-8828		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	SWBD 2A/2B Breaker 1D Tripped	YAIR-ELEC-8829		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	SWBD 2A/2B Breaker 1D Racked	ZICR-ELEC-8830		DI	Modbus Ethernet	Normal	Racked		N	N	Y			
	SWBD 2A/2B Breaker 1E Opened	ZIOR-ELEC-8831		DI	Modbus Ethernet	Normal	Opened		Y	N	Y			CP-100
	SWBD 2A/2B Breaker 1E Closed	ZICR-ELEC-8832		DI	Modbus Ethernet	Normal	Closed		Y	N	Y			CP-100
	SWBD 2A/2B Breaker 1E Tripped	YAIR-ELEC-8833		DI	Modbus Ethernet	Normal	Alarm		Y	N	Y			CP-100
	SWBD 2A/2B Breaker 1E Racked	ZICR-ELEC-8834		DI	Modbus Ethernet	Normal	Racked		N	N	Y			
	WWTP Utility Feed													
	Transfer Switch Position Limit Switch #1	ZIR-ELEC-8600		DI	HW				Y		Y (IND)			PLC-8 (WWTP)
	Transfer Switch Position Limit Switch #2	ZIR-ELEC-8601		DI	HW				Y		Y (IND)			PLC-8 (WWTP)
	Power Monitor Primary Source	ZIR-ELEC-8610			ETH									PLC-8 (WWTP)
	Primary Source A-B Voltage (RMS)	EIR-ELEC-8080		AI	Modbus Ethernet		Volts		Y	N	Y			PLC-8 (WWTP)
	Primary Source B-C Voltage (RMS)	EIR-ELEC-8081		AI	Modbus Ethernet		Volts		Y	N	Y			PLC-8 (WWTP)

Sheet #	Description	Tag	Drawing Tag	Type	Signal	Range / Off Status	Units / On Status	Field Wiring Data						
								Field ISA Signal Source / Destination	Local Control / Indication	CP Control / Indication	HMI Control / Indication	Equipment Panel Location	Field FTC	SCADA Panel
	Primary Source C-A Voltage (RMS)	EIR-ELEC-8082		AI	Modbus Ethernet		Volts		Y	N	Y			PLC-8 (WWTP)
	Primary Source A-N Voltage (RMS)	EIR-ELEC-8083		AI	Modbus Ethernet		Volts		Y	N	Y			PLC-8 (WWTP)
	Primary Source B-N Voltage (RMS)	EIR-ELEC-8084		AI	Modbus Ethernet		Volts		Y	N	Y			PLC-8 (WWTP)
	Primary Source C-N Voltage (RMS)	EIR-ELEC-8085		AI	Modbus Ethernet		Volts		Y	N	Y			PLC-8 (WWTP)
	Primary Source A Amps (RMS)	IIR-ELEC-8086		AI	Modbus Ethernet		Amps		Y	N	Y			PLC-8 (WWTP)
	Primary Source B Amps (RMS)	IIR-ELEC-8087		AI	Modbus Ethernet		Amps		Y	N	Y			PLC-8 (WWTP)
	Primary Source C Amps (RMS)	IIR-ELEC-8088		AI	Modbus Ethernet		Amps		Y	N	Y			PLC-8 (WWTP)
	Primary Source Power Factor	JIR-ELEC-8089		AI	Modbus Ethernet		kW / kVA		Y	N	Y			PLC-8 (WWTP)
	Primary Source Power Kilowatt	JIR-ELEC-8090		AI	Modbus Ethernet		kW		Y	N	Y			PLC-8 (WWTP)
	Primary Source Total Harmonic Distortion	XIR-ELEC-8091		AI	Modbus Ethernet				Y	N	Y			PLC-8 (WWTP)
	Power Monitor Secondary Source	ZIR-ELEC-8611			ETH									PLC-8 (WWTP)
	Secondary Source A-B Voltage (RMS)	EIR-ELEC-8080		AI	Modbus Ethernet		Volts		Y	N	Y			PLC-8 (WWTP)
	Secondary Source B-C Voltage (RMS)	EIR-ELEC-8081		AI	Modbus Ethernet		Volts		Y	N	Y			PLC-8 (WWTP)
	Secondary Source C-A Voltage (RMS)	EIR-ELEC-8082		AI	Modbus Ethernet		Volts		Y	N	Y			PLC-8 (WWTP)
	Secondary Source A-N Voltage (RMS)	EIR-ELEC-8083		AI	Modbus Ethernet		Volts		Y	N	Y			PLC-8 (WWTP)
	Secondary Source B-N Voltage (RMS)	EIR-ELEC-8084		AI	Modbus Ethernet		Volts		Y	N	Y			PLC-8 (WWTP)
	Secondary Source C-N Voltage (RMS)	EIR-ELEC-8085		AI	Modbus Ethernet		Volts		Y	N	Y			PLC-8 (WWTP)
	Secondary Source A Amps (RMS)	IIR-ELEC-8086		AI	Modbus Ethernet		Amps		Y	N	Y			PLC-8 (WWTP)
	Secondary Source B Amps (RMS)	IIR-ELEC-8087		AI	Modbus Ethernet		Amps		Y	N	Y			PLC-8 (WWTP)
	Secondary Source C Amps (RMS)	IIR-ELEC-8088		AI	Modbus Ethernet		Amps		Y	N	Y			PLC-8 (WWTP)
	Secondary Source Power Factor	JIR-ELEC-8089		AI	Modbus Ethernet		kW / kVA		Y	N	Y			PLC-8 (WWTP)
	Secondary Source Power Kilowatt	JIR-ELEC-8090		AI	Modbus Ethernet		kW		Y	N	Y			PLC-8 (WWTP)
	Secondary Source Total Harmonic Distortion	XIR-ELEC-8091		AI	Modbus Ethernet				Y	N	Y			PLC-8 (WWTP)
	Recycle Pump Station													
	Recycle Pump Station Flume Channel #1 Flow	FIR-REC-6000		AI	HW	0-XXX	MGD	FIT-6000	Y	N	Y			RPS-PLC
	Recycle Pump Station Wetwell Low Level Float Switch	LALR-REC-6001		DI	HW	Normal	Low	LSL-6001	N	N	Y			RPS-PLC
	Recycle Pump Station Wetwell Level #1	LIR-REC-6002		AI	HW	0-XXX	feet	LIT-6002	Y	N	Y			RPS-PLC
	Recycle Pump Station Wetwell Level #2	LIR-REC-6003		AI	HW	0-XXX	feet	LIT-6003	Y	N	Y			RPS-PLC
	Recycle Pump Station Wetwell High Level Float Switch	LAHR-REC-6004		DI	HW	Normal	High	LSH-6004	N	N	Y			RPS-PLC
	Recycle Pump #1 In-Auto	YIR-REC-6100		DI	HW	Normal	Auto		N	Y	Y			RPS-PLC
	Recycle Pump #1 Running	YIR-REC-6101		DI	HW	Normal	Running		N	Y	Y			RPS-PLC
	Recycle Pump #1 Fault	YAIR-REC-6102		DI	HW	Normal	Alarm		N	Y	Y			RPS-PLC
	Recycle Pump #1 E-Stop	YAIR-REC-6103		DI	HW	Normal	Alarm		Y	N	Y			RPS-PLC
	Recycle Pump #1 Start	YCR-REC-6105		DO	HW	Normal	Start		N	Y	Y			RPS-PLC
	Recycle Pump #1 Stop	YCR-REC-6106		DO	HW	Normal	Stop		N	Y	Y			RPS-PLC
	Recycle Pump #1 Check Valve Closed	YIR-REC-6110		DI	HW	Normal	Closed		N	N	Y			RPS-PLC
	Recycle Pump #1 Leak Detection	YAIR-REC-6111		DI	HW	Normal	Alarm		N	N	Y			RPS-PLC
	Recycle Pump #1 Thermal Overload	TAHR-REC-6112		DI	HW	Normal	Alarm		N	N	Y			RPS-PLC
	Recycle Pump VFD #2 In-Auto	YIR-REC-6200		DI	ETH	Normal	Auto		N	Y	Y			RPS-PLC
	Recycle Pump VFD #2 Running	YIR-REC-6201		DI	ETH	Normal	Running		N	Y	Y			RPS-PLC
	Recycle Pump VFD #2 Fault	YAIR-REC-6202		DI	ETH	Normal	Alarm		N	Y	Y			RPS-PLC
	Recycle Pump VFD #2 E-Stop	YAIR-REC-6203		DI	ETH	Normal	Alarm		Y	N	Y			RPS-PLC
	Recycle Pump VFD #2 Speed Feedback	SIR-REC-6204		AI	ETH	0-100	%		N	Y	Y			RPS-PLC
	Recycle Pump VFD #2 Start	YCR-REC-6205		DO	ETH	Normal	Modulate		N	Y	Y			RPS-PLC
	Recycle Pump VFD #2 Stop	YCR-REC-6206		DO	ETH	Normal	Modulate		N	Y	Y			RPS-PLC
	Recycle Pump VFD #2 Speed Cmd	SCR-REC-6207		AO	ETH	0-100	%		N	Y	Y			RPS-PLC
	Recycle Pump #2 Check Valve Closed	YIR-REC-6210		DI	HW	Normal	Closed		N	N	Y			RPS-PLC
	Recycle Pump #2 Leak Detection	YAIR-REC-6211		DI	HW	Normal	Alarm		N	N	Y			RPS-PLC
	Recycle Pump #2 Thermal Overload	TAHR-REC-6212		DI	HW	Normal	Alarm		N	N	Y			RPS-PLC
	Recycle Pump VFD #3 In-Auto	YIR-REC-6300		DI	ETH	Normal	Auto		N	Y	Y			RPS-PLC
	Recycle Pump VFD #3 Running	YIR-REC-6301		DI	ETH	Normal	Running		N	Y	Y			RPS-PLC
	Recycle Pump VFD #3 Fault	YAIR-REC-6302		DI	ETH	Normal	Alarm		N	Y	Y			RPS-PLC
	Recycle Pump VFD #3 E-Stop	YAIR-REC-6303		DI	ETH	Normal	Alarm		Y	N	Y			RPS-PLC
	Recycle Pump VFD #3 Speed Feedback	SIR-REC-6304		AI	ETH	0-100	%		N	Y	Y			RPS-PLC
	Recycle Pump VFD #3 Start	YCR-REC-6305		DO	ETH	Normal	Modulate		N	Y	Y			RPS-PLC
	Recycle Pump VFD #3 Stop	YCR-REC-6306		DO	ETH	Normal	Modulate		N	Y	Y			RPS-PLC
	Recycle Pump VFD #3 Speed Cmd	SCR-REC-6307		AO	ETH	0-100	%		N	Y	Y			RPS-PLC
	Recycle Pump #3 Check Valve Closed	YIR-REC-6310		DI	HW	Normal	Closed		N	N	Y			RPS-PLC
	Recycle Pump #3 Leak Detection	YAIR-REC-6311		DI	HW	Normal	Alarm		N	N	Y			RPS-PLC
	Recycle Pump #3 Thermal Overload	TAHR-REC-6312		DI	HW	Normal	Alarm		N	N	Y			RPS-PLC
	Recycle Pump VFD #4 In-Auto	YIR-REC-6400		DI	ETH	Normal	Auto		N	Y	Y			RPS-PLC
	Recycle Pump VFD #4 Running	YIR-REC-6401		DI	ETH	Normal	Running		N	Y	Y			RPS-PLC
	Recycle Pump VFD #4 Fault	YAIR-REC-6402		DI	ETH	Normal	Alarm		N	Y	Y			RPS-PLC
	Recycle Pump VFD #4 E-Stop	YAIR-REC-6403		DI	ETH	Normal	Alarm		Y	N	Y			RPS-PLC
	Recycle Pump VFD #4 Speed Feedback	SIR-REC-6404		AI	ETH	0-100	%		N	Y	Y			RPS-PLC
	Recycle Pump VFD #4 Start	YCR-REC-6405		DO	ETH	Normal	Modulate		N	Y	Y			RPS-PLC
	Recycle Pump VFD #4 Stop	YCR-REC-6406		DO	ETH	Normal	Modulate		N	Y	Y			RPS-PLC

Sheet #	Description	Tag	Drawing Tag	Type	Signal	Range / Off Status	Units / On Status	Field Wiring Data						
								Field ISA Signal Source / Destination	Local Control / Indication	CP Control / Indication	HMI Control / Indication	Equipment Panel Location	Field FTC	SCADA Panel
	Recycle Pump VFD #4 Speed Cmd	SCR-REC-6407		AO	ETH	0-100	%		N	Y	Y			RPS-PLC
	Recycle Pump #4 Check Valve Closed	YIR-REC-6410		DI	HW	Normal	Closed		N	N	Y			RPS-PLC
	Recycle Pump #4 Leak Detection	YAIR-REC-6411		DI	HW	Normal	Alarm		N	N	Y			RPS-PLC
	Recycle Pump #4 Thermal Overload	TAHR-REC-6412		DI	HW	Normal	Alarm		N	N	Y			RPS-PLC
	Processor Diagnostics													
	Primary Processor Active / Standby													
	Primary Processor Memory Failure													
	Primary Processor Memory Battery Low													
	Primary Processor General Fault													
	Primary Processor Communications Failure													
	Primary Processor Scan Time Overrun													
	Primary Processor IO Failure													
	Primary Processor Module Failure													
	Secondary Processor Active / Standby													
	Secondary Processor Memory Failure													
	Secondary Processor Memory Battery Low													
	Secondary Processor General Fault													
	Secondary Processor Communications Failure													
	Secondary Processor Scan Time Overrun													
	Secondary Processor IO Failure													
	Secondary Processor Module Failure													
	UPS Failure	YAIR-PLC-0010		DI	HW	Normal	Alarm		N	N	Y			CP-100
	Battery Failure	YAIR-PLC-0011		DI	HW	Normal	Alarm		N	N	Y			CP-100
	CP-100 Control Panel Intrusion Switch	YAIR-PLC-0012		DI	HW	Normal	Alarm		N	N	Y			CP-100
	Building Door 1 Switch	YAIR-BLDG-0013		DI	HW	Normal	Alarm		N	N	Y			CP-100

Notes:

1. Verify wiring connections with the Electrical Contractor before submitting shop drawings
2. All Spare I/O to include graphical and historical database programming
3. ISA tags determined using ANSI / ISA 5.1 Instrumentation and Signals Identification Standards (See Typical Letter Combinations below).

* All Discrete Input Contacts shall be powered from input location

DI	Discrete Input
DO	Discrete Output
AI	Analog Input
AO	Analog Output
DEVN	DeviceNet Communications
ETH	Ethernet / IP
HW	Copper
Modbust Ethernet	Modbus Ethernet TCP/IP Communications

Abbreviations:

Tags

AIR	Analysis Indicating Record
FIR	Flow Indicating Record
JAIR	Power Alarm Indicating Record
LALR	Level Alarm Low Record
LIR	Level Indicating Record
LAHR	Level Alarm High Record
PALR	Pressure Alarm Low Record
PIR	Pressure Indicating Record
SCR	Speed Command Record
TAHR	Temperature Alarm High Record
WAHR	Force Alarm High Record
YAIR	Event / State Alarm Indicating Record
YCIR	Event / State Command Indicating Record
YIR	Event / State Indicating Record
ZCR	Position Command Record
ZCCR	Position Command Close Record
ZCOR	Position Command Open Record
ZIO	Position Indicating Open
ZIOR	Position Indicating Open Record

System Designations

xxx-BSCP-xxxx	Bar Screen Control Panel
xxx-BPS-xxxx	Booster Pump Station
xxx-FC-xxxx	Flume Channel
xxx-ELEC-xxxx	Electrical Systems
xxx-GEN-xxxx	Generators
xxx-GMCP-xxxx	Gas Monitoring Control Panel
xxx-GP-xxxx	Grit Pump System
xxx-GSCP-xxxx	Grit System Control Panel
xxx-IC1-xxxx	Influent Channel 1
xxx-IC2-xxxx	Influent Channel 2
xxx-IC3-xxxx	Influent Channel 3
xxx-IC4-xxxx	Influent Channel 4
xxx-IPS1-xxxx	IPS Pump Well 1
xxx-IPS2-xxxx	IPS Pump Well 2
xxx-JC-xxxx	Junction Chamber
xxx-NPW-xxxx	Non Potable Water
xxx-OCP1-xxxx	Odor Control Panel 1
xxx-OCP2-xxxx	Odor Control Panel 2
xxx-OCP3-xxxx	Odor Control Panel 3
xxx-PLC-xxxx	Programmable Controller
xxx-REC-xxxx	Recycle Pump Station
xxx-SCCP1-xxxx	Screw Conveyor Control Panel 1
xxx-SCCP2-xxxx	Screw Conveyor Control Panel 2
xxx-TLCP-xxxx	Truck Loading Control Panel
xxx-WWS-xxxx	WWS Pump Well / Equipment
xxx-WWST-xxxx	Waste Water Storage Tanks
xxx-XFMR-xxxx	Transformer

Table 2 — Typical Letter Combinations

First-Letters	Initiating or Measured Vaiable	Controllers				Readout Devices		Switches and Alarm Devices*			Transmitters			Solenoids, Relays, Computing Devices	Primary Element	Test Point	Well or Probe	Viewing Device, Glass	Safety Device	Final Element
		Recording	Indicating	Blind	Self-Actuated Control Valves	Recording	Indicating	High**	Low	Comb	Recording	Indicating	Blind							
A	Analysis	ARC	AIC	AC		AR	AI	ASH	ASL	ASHL	ART	AIT	AT	AY	AE	AP	AW			AV
B	Burner/Combustion	BRC	BIC	BC		BR	BI	BSH	BSL	BSHL	BRT	BIT	BT	BY	BE		BW	BG		BZ
C	User's Choice																			
D	User's Choice																			
E	Voltage	ERC	EIC	EC		ER	EI	ESH	ESL	ESHL	ERT	EIT	ET	EY	EE					EZ
F	Flow Rate	FRC	FIC	FC	FCV, FICV	FR	FI	FSH	FSL	FSHL	FRT	FIT	FT	FY	FE	FP		FG		FV
FQ	Flow Quantity	FQRC	FQIC			FQR	FQI	FQSH	FQSL			FQIT	FQT	FQY	FQE					FQV
FF	Flow Ratio	FFRC	FFIC	FFC		FFR	FFI	FFSH	FFSL						FE					FFV
G	User's Choice																			
H	Hand		HIC	HC						HS										HV
I	Current	IRC	IIC			IR	II	ISH	ISL	ISHL	IRT	IIT	IT	IY	IE					IZ
J	Power	JRC	JIC			JR	JI	JSH	JSL	JSHL	JRT	JIT	JT	JY	JE					JV
K	Time	KRC	KIC	KC	KCV	KR	KI	KSH	KSL	KSHL	KRT	KIT	KT	KY	KE					KV
L	Level	LRC	LIC	LC	LCV	LR	LI	LSH	LSL	LSHL	LRT	LIT	LT	LY	LE		LW	LG		LV
M	User's Choice																			
N	User's Choice																			
O	User's Choice																			
P	Pressure/ Vacuum	PRC	PIC	PC	PCV	PR	PI	PSH	PSL	PSHL	PRT	PIT	PT	PY	PE	PP			PSV, PSE	PV
PD	Pressure, Differential	PDRC	PDIC	PDC	PDCV	PDR	PDI	PDSH	PDSL		PDRT	PDIT	PDT	PDY	PE	PP				PDV
Q	Quantity	QRC	QIC			QR	QI	QSH	QSL	QSHL	QRT	QIT	QT	QY	QE					QZ
R	Radiation	RRC	RIC	RC		RR	RI	RSH	RSL	RSHL	RRT	RIT	RT	RY	RE		RW			RZ
S	Speed/Frequency	SRC	SIC	SC	SCV	SR	SI	SSH	SSL	SSHL	SRT	SIT	ST	SY	SE					SV
T	Temperature	TRC	TIC	TC	TCV	TR	TI	TSH	TSL	TSHL	TRT	TIT	TT	TY	TE	TP	TW		TSE	TV
TD	Temperature, Differential	TDRC	TDIC	TDC	TDCV	TDR	TDI	TDSH	TDSL		TDRT	TDIT	TDT	TDY	TE	TP	TW			TDV
U	Multivariable					UR	UI							UY						UV
V	Vibration/Machinery Analysis					VR	VI	VSH	VSL	VSHL	VRT	VIT	VT	VY	VE					VZ
W	Weight/Force	WRC	WIC	WC	WCV	WR	WI	WSH	WSL	WSHL	WRT	WIT	WT	WY	WE					WZ
WD	Weight/Force, Differential	WDRC	WDIC	WDC	WDCV	WDR	WDI	WDSH	WDSL		WDRT	WDIT	WDT	WDY	WE					WDZ
X	Unclassified																			
Y	Event/State/Presence		YIC	YC		YR	YI	YSH	YSL				YT	YY	YE					YZ
Z	Position/Dimension	ZRC	ZIC	ZC	ZCV	ZR	ZI	ZSH	ZSL	ZSHL	ZRT	ZIT	ZT	ZY	ZE					ZV
ZD	Gauging/Deviation	ZDRC	ZDIC	ZDC	ZDCV	ZDR	ZDI	ZDSH	ZDSL		ZDRT	ZDIT	ZDT	ZDY	ZDE					ZDV

Note: This table is not all-inclusive.
*A, alarm, the annunciating device, may be used in the same fashion as S, switch, the actuating device.

**The letters H and L may be omitted in the undefined case.

Other Possible Combinations:

FO	(Restriction Orifice)	PFR	(Ratio)
FRK, HIK	(Control Stations)	KQI	(Running Time Indicator)
FX	(Accessories)	QQI	(Indicating Counter)
TJR	(Scanning Recorder)	WKIC	(Rate-of-Weight-Loss Controller)
LLH	(Pilot Light)	HMS	(Hand Momentary Switch)

END OF SECTION