

MISCELLANEOUS SYSTEMS - DEVICE SCHEDULE

VA Nomenclature	Device Label	Device Type	System	Function	Mounting / Location	Line Size	Range / Setpoint	Point Type	Signal	Signal To/From	Annunciation Location	Annunciation Type	Remarks	Notes
-	FE - 1 5 0 2	Flow Element, Turbine	Domestic Water	Flow	Supply to System	4"	26 - 240 GPM	AI	4 - 20 mA DC	FMCP	BAS	Status - Flow	Contractor Furnished / Contractor Installed	
-	PSL - 1 5 0 3	Pressure Switch	Soft Water	Low Pressure	Softener Skid Discharge	4"	Field Set	DI	120 V	FMCP	BAS	Low Pressure Alarm	Contractor Furnished / Contractor Installed	
-	PT - 1 5 0 4	Pressure Transmitter	Non-Potable Water	Pressure	Supply to Softener Skid	4"	0 - 100 PSIG	AI	4 - 20 mA DC	FMCP	BAS	Status - Pressure	Contractor Furnished / Contractor Installed	
-	PT - 1 5 0 5	Pressure Transmitter	Soft Water	Pressure	Softener Skid Discharge	4"	0 - 100 PSIG	AI	4 - 20 mA DC	FMCP	BAS	Status - Pressure	Contractor Furnished / Contractor Installed	
-	PT - 1 5 0 6	Pressure Transmitter	Soft Water	Pressure	Supply to Condensate Surge Tank	3"	0 - 100 PSIG	AI	4 - 20 mA DC	FMCP	BAS	Status - Pressure	Contractor Furnished / Contractor Installed	
-	FSV - 4 7 0 1	Safety Valve	Liquefied Petroleum Gas	Flow, Emergency Shut-Off	Building Supply Main	1"	Open / Closed	DI	120 V	FMCP	---	---	Contractor Furnished / Contractor Installed	
-	RVV - 4 7 0 3	Regulating Valve	Liquefied Petroleum Gas	Pressure	Building Supply Main	---	10 PSIG / 350 SCFH	---	---	---	---	---	Contractor Furnished / Contractor Installed	
-	PSH - 4 7 0 4	Pressure Switch	Liquefied Petroleum Gas	High Pressure	Building Supply Main	1"	Field Set	DI	120 V	FMCP	BAS	High Pressure Alarm	Contractor Furnished / Contractor Installed	
-	PSL - 4 7 0 5	Pressure Switch	Liquefied Petroleum Gas	Low Pressure	Building Supply Main	1"	Field Set	DI	120 V	FMCP	BAS	Low Pressure Alarm	Contractor Furnished / Contractor Installed	
-	ZSC - 4 7 0 1	Position Switch	Liquefied Petroleum Gas	Position Verification	FSV-4701	---	Closed	DI	120 V	FMCP	BAS	Position Verification - Fully Closed	Manufacturer Furnished / Contractor Installed	
-	ZSO - 4 7 0 1	Position Switch	Liquefied Petroleum Gas	Position Verification	FSV-4701	---	Open	DI	120 V	FMCP	BAS	Position Verification - Fully Open	Manufacturer Furnished / Contractor Installed	
-	FE - 4 8 0 1	Flow Element, Pur Gas Supplier	Natural Gas	Flow, Totalizing	Building Supply Main	6"	2,400 - 76,000 SCFH	---	---	---	---	---	Gas Supply Company Furnished / Contractor Installed	
-	FSV - 4 8 0 2	Safety Valve	Natural Gas	Flow, Emergency Shut-Off	Building Supply Main	6"	Open / Closed	DI	120 V	FMCP	---	---	Contractor Furnished / Contractor Installed	
-	PSH - 4 8 0 5	Pressure Switch	Natural Gas	High Pressure Alarm	Building Supply Main	6"	Field Set	DI	120 V	FMCP	BAS	High Pressure Alarm	Contractor Furnished / Contractor Installed	
-	PSL - 4 8 0 6	Pressure Switch	Natural Gas	Low Pressure Alarm	Building Supply Main	6"	Field Set	DI	120 V	FMCP	BAS	Low Pressure Alarm	Contractor Furnished / Contractor Installed	
-	PT - 4 8 0 7	Pressure Transmitter	Natural Gas	Pressure	Building Supply Main	6"	0 - 30 PSIG	AI	4 - 20 mA DC	FMCP	BAS	Status - Pressure	Contractor Furnished / Contractor Installed	
-	ZSC - 4 8 0 2	Position Switch	Natural Gas	Position Verification	FSV-4802	---	Closed	DI	120 V	FMCP	BAS	Position Verification - Fully Closed	Manufacturer Furnished / Contractor Installed	
-	ZSO - 4 8 0 2	Position Switch	Natural Gas	Position Verification	FSV-4802	---	Open	DI	120 V	FMCP	BAS	Position Verification - Fully Open	Manufacturer Furnished / Contractor Installed	
-	PSL - 6 6 1 1	Pressure Switch	Steam	Low Pressure	Steam Header	10"	Field Set	DI	120 V	CHP-1	BAS	Low Pressure Alarm	Contractor Furnished / Contractor Installed	
-	PSV - 6 6 1 2	Safety Valve, 1" 4" Class 150	Steam	Pressure	100 - 40 PSIG, Pressure Reducing Station	6"	70 PSIG, 8 210 FPH	---	---	---	---	---	Contractor Furnished / Contractor Installed	Consolidated 1900 Series
-	PT - 6 6 1 4	Pressure Transmitter	Steam	Pressure	Steam Header	10"	0 - 250 PSIG	AI	4 - 20 mA DC	CHP-1	BAS	Status - Pressure	Contractor Furnished / Contractor Installed	
-	TT - 9 9 0 9	Temperature Transmitter	Outside Air	Temperature	Exterior Wall	---	-20 - 120 F	AI	4 - 20 mA DC	CHP-1	BAS	Status - Temperature	Contractor Furnished / Contractor Installed	Provide w/ TE - 9 9 0 9

ABBREVIATIONS:  
 BAS - Building Automation System  
 BBC - Boiler Blowdown Controller  
 BMS - Burner Management System - (Flame Safeguard Control)  
 CCS - Combustion Control System  
 CGP - Combustible Gas Detection Panel  
 CHP-1 - CHP-1 Field Panel Miscellaneous Process Points  
 CST-PLC - Condensate Surge Tank PLC  
 LCP - Local Control Panel  
 FMCP - Plant Master Control Panel  
 WSF-PLC - Water Softener PLC

CONDENSATE SURGE TANK - DEVICE SCHEDULE

VA Nomenclature	Device Label	Device Type	System	Function	Mounting / Location	Line Size	Range / Setpoint	Point Type	Signal	Signal To/From	Annunciation Location	Annunciation Type	Remarks	Notes
-	FE - 1 7 0 1	Flow Element	Non-Potable Water	Flow, Totalizing	Supply to Condensate Surge Tank CST-1	3"	0 - 150 GPM	AI	4 - 20 mA DC	CST-PLC	BAS	Status - Flow	Contractor Furnished / Contractor Installed	Provide w/ FT - 1 7 0 1
-	FE - 1 7 0 2	Flow Element	Soft Water	Flow, Totalizing	Supply to Condensate Surge Tank CST-1	3"	0 - 150 GPM	AI	4 - 20 mA DC	CST-PLC	BAS	Status - Flow	Contractor Furnished / Contractor Installed	Provide w/ FT - 1 7 0 2
-	LCV - 1 7 0 3	Control Valve	Non-Potable Water	Level	Supply to Condensate Surge Tank CST-1	3"	0 - 150 GPM	---	ZT-1703	---	---	---	Contractor Furnished / Contractor Installed	
-	LCV - 1 7 0 4	Control Valve	Soft Water	Level	Supply to Condensate Surge Tank CST-1	3"	0 - 150 GPM	---	ZT-1704	---	---	---	Contractor Furnished / Contractor Installed	
-	ZT - 1 7 0 3	Position Transmitter	Non-Potable Water	Position Feedback	LCV-1703	---	0 - 100 %	AI	4 - 20 mA DC	CST-PLC / LC-4907	BAS	Position Indication %	Contractor Furnished / Contractor Installed	Fail Open
-	ZT - 1 7 0 4	Position Transmitter	Soft Water	Position Feedback	LCV-1704	---	0 - 100 %	AI	4 - 20 mA DC	CST-PLC / LC-4907	BAS	Position Indication %	Contractor Furnished / Contractor Installed	Fail Open
-	DPS - 6 7 0 1	Pressure Switch	Steam Condensate	Differential Pressure	Condensate Transfer Pump CTP-1	---	Field Set	DI	120 V	CST-PLC	BAS	Pump Status - Low Pressure Alarm	Contractor Furnished / Contractor Installed	
-	DPS - 6 7 0 2	Pressure Switch	Steam Condensate	Differential Pressure	Condensate Transfer Pump CTP-2	---	Field Set	DI	120 V	CST-PLC	BAS	Pump Status - Low Pressure Alarm	Contractor Furnished / Contractor Installed	
-	DPT - 6 7 0 4	Pressure Transmitter	Condensate Surge Tank	Level	Condensate Surge Tank CST-1	---	Field Set	AI	4 - 20 mA DC	CST-PLC	BAS	Status - Level	Manufacturer Furnished / Contractor Installed	
-	FE - 6 7 0 5	Flow Element	Condensate Surge Tank	Flow, Totalizing	Pumped Return from Campus	4"	110 GPM	AI	4 - 20 mA DC	CST-PLC	BAS	Status - Flow	Contractor Furnished / Contractor Installed	Provide w/ FT - 6 7 0 5
-	LC - 6 7 0 7	Level Controller	Condensate Surge Tank	Level	Condensate Surge Tank CST-1	---	Field Set	AI/DO	4 - 20 mA DC	CST-PLC / FT-170x	---	---	Manufacturer Furnished / Contractor Installed	
-	LSH - 6 7 0 8	Level Switch	Condensate Surge Tank	High Level Alarm	Condensate Surge Tank CST-1	---	Field Set	DI	120 V	CST-PLC	BAS	High Level Alarm	Manufacturer Furnished / Contractor Installed	
-	LWACT - 6 7 0 9	Level Switch	Condensate Surge Tank	Low Level Alarm	Condensate Surge Tank CST-1	---	Field Set	DI	120 V	CST-PLC	BAS	Low Level Alarm	Manufacturer Furnished / Contractor Installed	
-	LSLL - 6 7 1 0	Level Switch	Condensate Surge Tank	Low-Low Level Alarm, Shutdown	Condensate Surge Tank CST-1	---	Field Set	DI	120 V	CST-PLC	BAS	Low-Low Level Alarm, Pump Shutdown	Manufacturer Furnished / Contractor Installed	
-	PSL - 6 7 1 1	Pressure Switch	Condensate Surge Tank	Low Pressure	Condensate Transfer Pump CTP-1	---	Field Set	DI	120 V	CST-PLC	BAS	Low Pressure	Contractor Furnished / Contractor Installed	
-	PSL - 6 7 1 2	Pressure Switch	Condensate Surge Tank	Low Pressure	Condensate Transfer Pump CTP-2	---	Field Set	DI	120 V	CST-PLC	BAS	Low Pressure	Contractor Furnished / Contractor Installed	
-	TT - 6 7 1 4	Temperature Transmitter	Steam Condensate	Temperature	Condensate Surge Tank CST-1	---	32 - 212 F	AI	4 - 20 mA DC	CST-PLC	BAS	Status - Temperature	Manufacturer Furnished / Contractor Installed	Provide w/ TE - 6 7 1 4

NOTES:  
 ① Set below 2/3 of tank height and at least 4" below overflow.  
 ② Set above 1/3 of tank height.  
 ③ Setpoint at least 4" below top of tank.

BLOWDOWN SYSTEMS - DEVICE SCHEDULE

Device Label	Device Type	System	Function	Mounting / Location	Line Size	Range / Setpoint	Point Type	Signal	Signal To/From	Annunciation Location	Annunciation Type	Remarks	Notes
TCV - 1 6 0 1	Control Valve	Soft Water	Temperature	Supply to Blowdown Separator BDS-1	2"	Open / Closed	DI	120 V	CHP-1 / TT-3605	---	---	Manufacturer Furnished / Contractor Installed	Fail Open
TT - 3 6 0 5	Temperature Transmitter	Blowdown	Temperature	Drain from Blowdown Separator BDS-1	5"	32 - 212 F	AI	4 - 20 mA DC	CHP-1	BAS	Status - Temperature	Manufacturer Furnished / Contractor Installed	Provide w/ TE - 3 6 0 5

ABBREVIATIONS:  
 BBC - Boiler Blowdown Controller  
 BMS - Burner Management System - (Flame Safeguard Control)  
 CCS - Combustion Control System  
 CCS-PLC - Condensate Surge Tank PLC  
 CGP - Combustible Gas Detection Panel  
 CHP-1 - CHP-1 Field Panel Miscellaneous Process Points  
 FO-PLC - Fuel Oil System PLC  
 LCP - Local Control Panel  
 FMCP - Plant Master Control Panel  
 WSF-PLC - Water Softener PLC

100% DESIGN  
 APPROVED FOR CONSTRUCTION

<b>CONSULTANTS:</b>  Affiliated Engineers, Inc. Tioiga Town Center 12921 SW 1st Road Ste 205 Gainesville, Florida 32669 Tel 352.376.5500 Fax 352.375.3479 CA-5140		ENGINEER-OF-RECORD JACK S. NEALE FL. P.E. NO. 42878		<b>ARCHITECT/ENGINEERS:</b>  3603 NW 98th Street, Suite B Gainesville, FL 32606 Phone: (352) 474-6124 Fax: (352) 533-4437 COA: FL #29578 AKEA Project No. 128-16		Drawing Title <b>MECHANICAL SCHEDULES</b>		Project Title <b>DESIGN TO REPLACE BOILERS, BLDG 100 ENERGY CENTER</b>		Project Number <b>516-15-107</b> Building Number <b>100</b>		Office of Construction and Facilities Management	
1 - Addendum 1 05/24/18						Approved: Project Director		Location <b>BAY PINES, FLORIDA</b>		Drawing Number <b>MP602</b>		Date MAY 15, 2017 Checked JSN Drawn RWD	

one quarter inch = one foot  
one eighth inch = one foot  
one half inch = one foot  
three quarters inch = one foot  
one inch = one foot  
one and one half inches = one foot  
two inches = one foot  
three inches = one foot

BOILER - DEVICE SCHEDULE

Table with columns: VA Nomenclature, Boiler No 1 Device Label, Boiler No 2 Device Label, Boiler No 3 Device Label, Device Type, System, Function, Mounting / Location, Line Size, Range / Setpoint, Point Type, Signal, Annunciation Location, Annunciation Type, Remarks, Notes. Contains detailed schedule for various boiler devices like shunt switches, pressure transmitters, and safety valves.

NOTES:  
1. Wiring for POC - AFGSOV shall be easily accessible. Wiring is accessed during switch testing.  
2. FGR damper switch as required by manufacturer. If manufacturer states in writing to the facility that the position of the damper does not matter to achieve proper purge, then no switch is required.  
3. Ensure all valves are mounted in such a way that there is easy access to the proof of closure switch wiring.

ABBREVIATIONS:  
BAS - Building Automation System  
BBC - Boiler Blowdown Controller  
BMS - Burner Management System - (Flame Safeguard Control)  
CCS - Combustion Control System  
GCP - Combustible Gas Detection Panel  
CHP-1 - CHP-1 Field Panel Miscellaneous Process Points  
DA-PLC - Deaerator and Condensate Surge Tank PLC  
LCP - Local Control Panel  
PMCP - Plant Master Control Panel  
WSF-PLC - Water Softener PLC

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Table with 2 columns: Item, Date. Row 1: 1 - Addendum 1, 05/24/18

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ENGINEER-OF-RECORD  
JACK S. NEALE  
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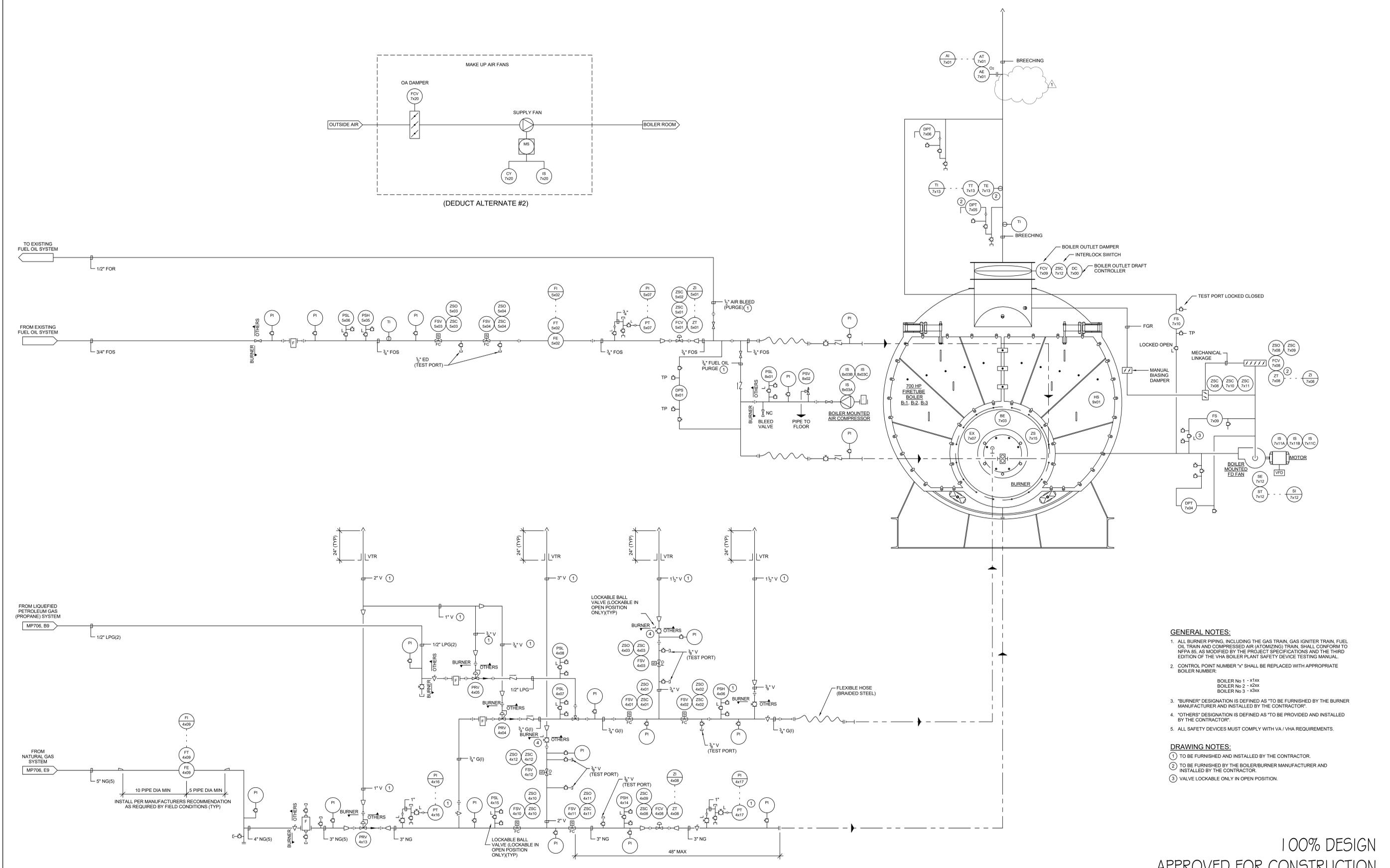
ARCHITECT/ENGINEERS:  
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Phone: (352) 474-6124  
Fax: (352) 533-4437  
COA: FL #29578  
AKEA Project No. 128-16

Drawing Title  
MECHANICAL SCHEDULES  
Approved: Project Director

Project Title  
DESIGN TO REPLACE BOILERS,  
BLDG 100 ENERGY CENTER  
Location  
BAY PINES, FLORIDA  
Date  
MAY 15, 2017  
Checked  
JSN  
Drawn  
RWD  
Project Number  
516-15-107  
Building Number  
100  
Drawing Number  
MP603

Office of Construction and Facilities Management  
Department of Veterans Affairs

three inches = one foot  
 one and one half inches = one foot  
 one inch = one foot  
 three quarters inch = one foot  
 one half inch = one foot  
 three eighths inch = one foot  
 one quarter inch = one foot  
 one eighth inch = one foot

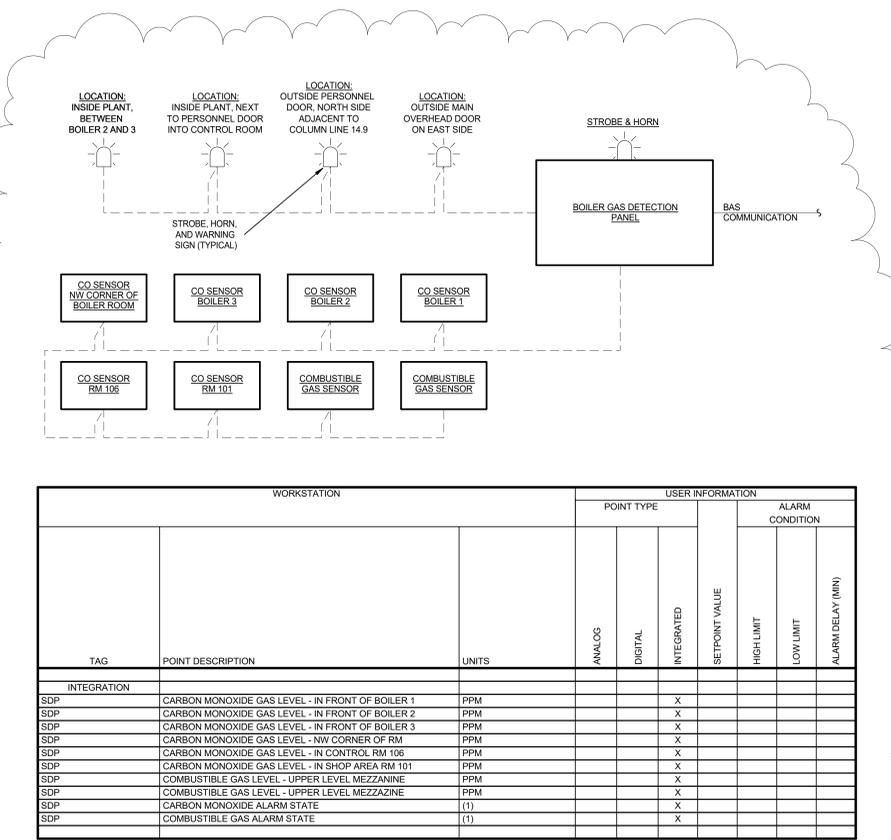


- GENERAL NOTES:**
- ALL BURNER PIPING, INCLUDING THE GAS TRAIN, GAS IGNITER TRAIN, FUEL OIL TRAIN AND COMPRESSED AIR (ATOMIZING) TRAIN, SHALL CONFORM TO NFPA 85, AS MODIFIED BY THE PROJECT SPECIFICATIONS AND THE THIRD EDITION OF THE VHA BOILER PLANT SAFETY DEVICE TESTING MANUAL.
  - CONTROL POINT NUMBER "X" SHALL BE REPLACED WITH APPROPRIATE BOILER NUMBER.  
 BOILER No 1 - X1xx  
 BOILER No 2 - X2xx  
 BOILER No 3 - X3xx
  - "BURNER" DESIGNATION IS DEFINED AS "TO BE FURNISHED BY THE BURNER MANUFACTURER AND INSTALLED BY THE CONTRACTOR".
  - "OTHERS" DESIGNATION IS DEFINED AS "TO BE PROVIDED AND INSTALLED BY THE CONTRACTOR".
  - ALL SAFETY DEVICES MUST COMPLY WITH VA/VHA REQUIREMENTS.
- DRAWING NOTES:**
- TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
  - TO BE FURNISHED BY THE BOILER/BURNER MANUFACTURER AND INSTALLED BY THE CONTRACTOR.
  - VALVE LOCKABLE ONLY IN OPEN POSITION.

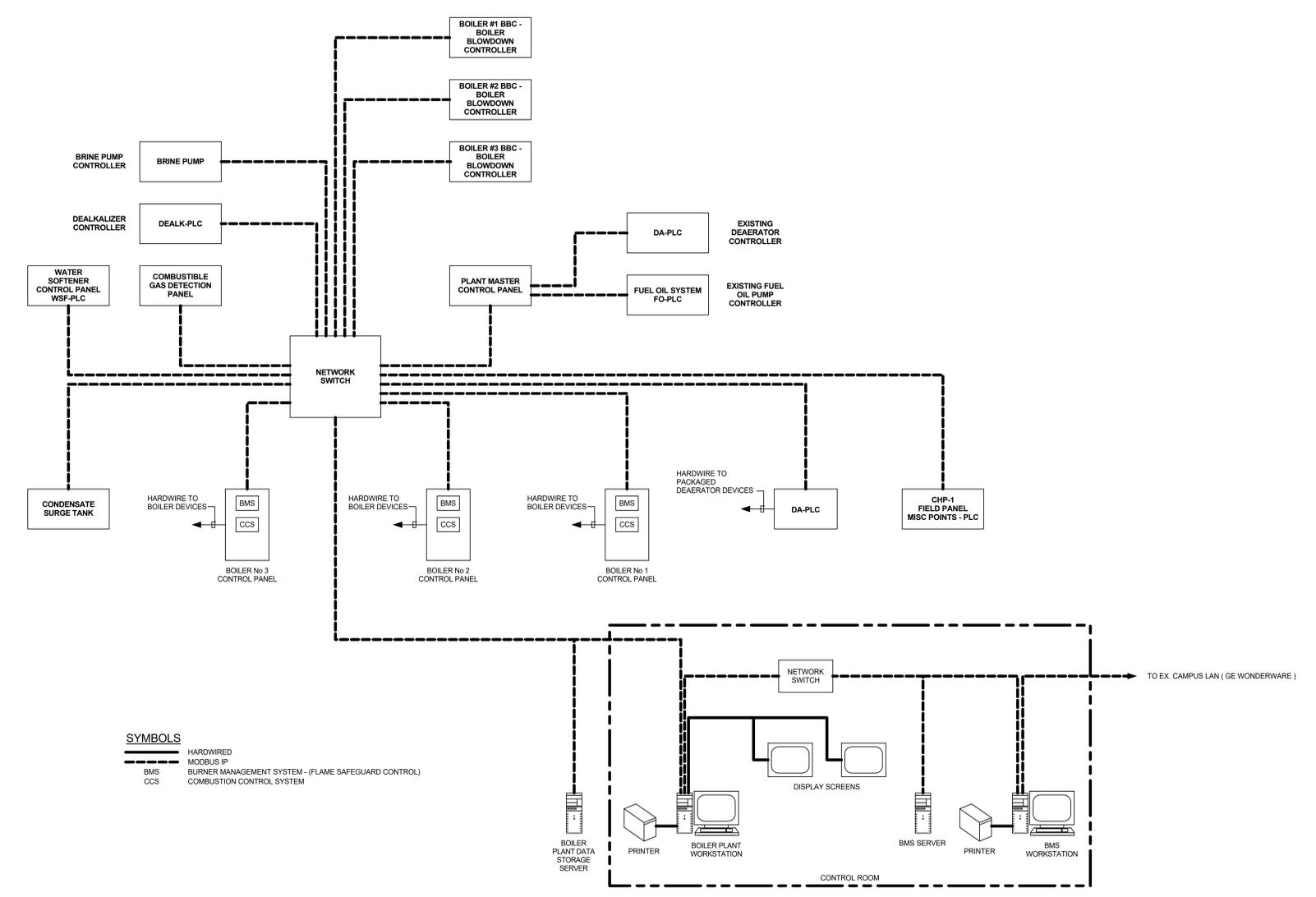
100% DESIGN  
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1 - Addendum 1 05/24/18						Approved: Project Director		Location <b>BAY PINES, FLORIDA</b>		Drawing Number <b>MP709</b>		Date MAY 15, 2017		Checked JSN		Drawn RWD		Department of Veterans Affairs	

three inches = one foot  
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 one inch = one foot  
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 one half inch = one foot  
 three eighths inch = one foot  
 one quarter inch = one foot  
 one eighth inch = one foot



**2 BOILER GAS DETECTION SYSTEM CONTROL DIAGRAM**  
SCALE: NONE



**1 CONTROL SYSTEM ARCHITECTURE**  
SCALE: NONE

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<b>CONSULTANTS:</b> <b>Affiliated Engineers SE, Inc.</b> 12921 SW 1st Road Ste 205 Gainesville, Florida 32669 Tel 352.376.5500 Fax 352.375.3479 CA-5140		ENGINEER-OF-RECORD JACK S. NEALE FL. P.E. NO. 42678	<b>ARCHITECT/ENGINEERS:</b> <b>Design, Inc.</b> 3603 NW 98th Street, Suite B Gainesville, FL 32606 Phone: (352) 474-6124 Fax: (352) 533-4437 COA: FL #29578 AKEA Project No. 128-16	Drawing Title <b>CONTROL SYSTEM ARCHITECTURE</b>	Project Title <b>DESIGN TO REPLACE BOILERS, BLDG 100 ENERGY CENTER</b>	Project Number <b>516-15-107</b> Building Number <b>100</b> Drawing Number <b>MP710</b>	Office of Construction and Facilities Management Department of Veterans Affairs
1 - Addendum 1 05/24/18				Approved: Project Director	Location <b>BAY PINES, FLORIDA</b>	Date MAY 15, 2017 Checked JSN Drawn RWD	