



SEQUENCE OF OPERATIONS

SUMP PUMP (SP-X)

General Description

There are two (2) separate sump pumps. One sump pump lifts fluid out of the elevator pit during a leak and discharges to an oil water separator. The other lifts storm water from the foundation and discharges on grade.

POINTS LIST - SUMP PUMP											
POINT NAME	HARDWARE POINTS				SOFTWARE POINTS						SHOWN ON GRAPHIC
	AI	AO	BI	BO	AV	BV	LOOP	SCHED	TREND	ALARM	
PUMPS											
SP-1	UNITARY CONTROLS										
SP-2	UNITARY CONTROLS										
ALARMS		DESCRIPTION								ALARM	ALARM DELAY
FAILURE		COMMANDED ON, BUT THE STATUS IS OFF								X	10 MIN.
IN HAND		COMMANDED OFF, BUT THE STATUS IS ON								X	10 MIN.
START		PUMP HAS BEEN COMMANDED ON								X	10 MIN.
NOTES:											
1 SEE STANDARD TRENDING POINTS LIST SCHEDULE ON SHEET M-701 FOR APPLICABLE TREND INTERVALS.											

SEQUENCE OF OPERATIONS

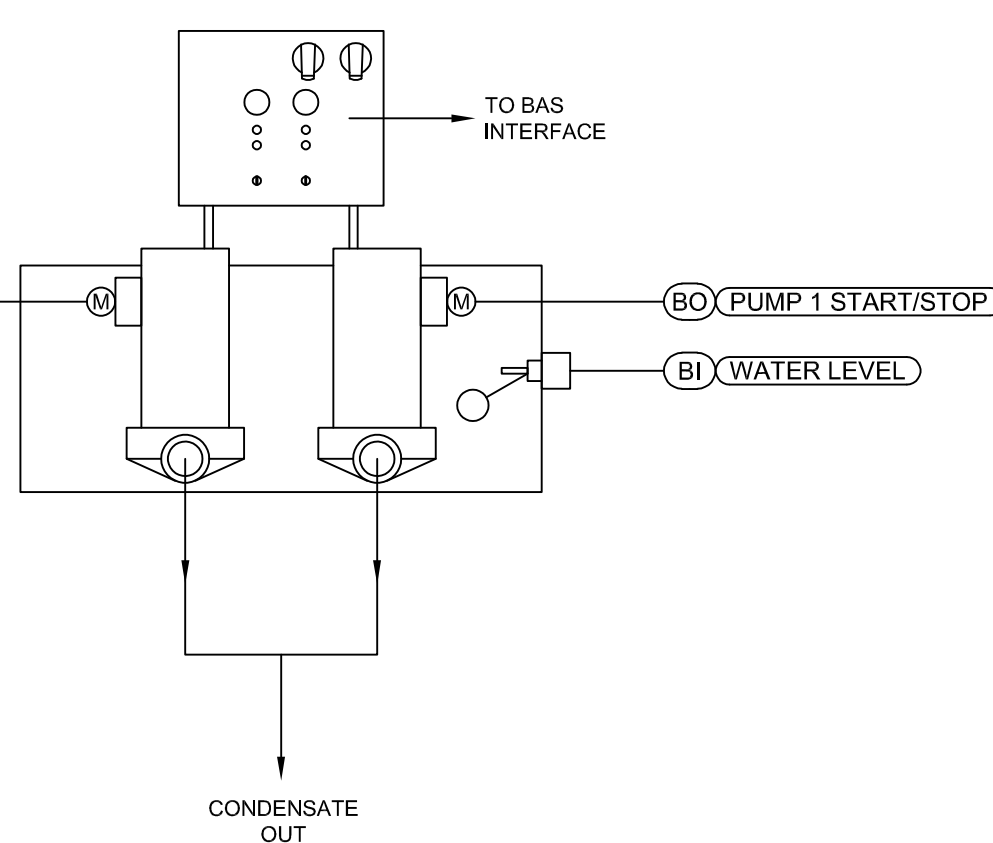
OIL WATER SEPARATOR (OWS)

General Description

The oil water separator receives fluid from the elevator sump pump and discharges to the sanitary main.

POINTS LIST - OIL WATER SEPARATOR											
POINT NAME		HARDWARE POINTS				SOFTWARE POINTS				SHOWN ON GRAPHIC	
		AI	AO	BI	BO	AV	BV	LOOP	SCHED	TREND	
PUMPS		OWS				UNITARY CONTROLS					
ALARMS		DESCRIPTION								ALARM	ALARM DELAY
HIGH LEVEL		FLUID LEVEL IS ABOVE MANUFACTURER'S LIMIT.								X	10 MIN.

NOTES:
 1 SEE STANDARD TRENDING POINTS LIST SCHEDULE ON SHEET M-701 FOR APPLICABLE TREND INTERVALS.



SEQUENCE OF OPERATIONS
STEAM CONDENSATE PUMP (CP-X)
REPLACEMENT WAREHOUSE
GENERAL DESCRIPTION

The duplex steam condensate pump with condensate storage tank and manufacturer provided control panel provides steam condensate removal from the steam supply system as shown on the drawings.

COMPONENT CONTROLS

PUMP 1

The pump shall be activated (subject to the unit manufacturer's standard unitary safeties and controls) upon receiving a water level status.

PUMP 2

Upon failure of Pump 1, Pump 2 shall be activated (subject to the unit manufacturer's standard safeties and controls) upon receiving a water level status.

STEAM CONDENSATE PUMP (CP-X)



POINTS LIST SCHEDULE (CP-X)											
POINT NAME	HARDWARE POINTS				SOFTWARE POINTS						SHOWN ON GRAPHIC
	AI	AO	BI	BO	AV	BV	LOOP	SCHED	TREND	ALARM	
PUMPS											
PUMP 1 START/STOP				X					X		X
PUMP 2 START/STOP				X					X		X
RECEIVER											
WATER LEVEL				X					X		X
ALARMS											
COMMON ALARM										ALARM	ALARM DELAY
HIGH WATER LEVEL ALARM										X	10 MIN.
CONDENSATE PUMP START/STOP										X	10 MIN.

NOTES:

1 SEE STANDARD TRENDING POINTS LIST SCHEDULE ON SHEET M-701 FOR APPLICABLE TREND INTERVALS.

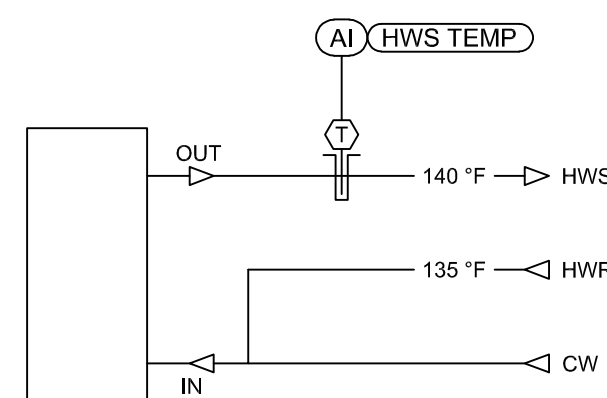
SEQUENCE OF OPERATIONS DOMESTIC ELECTRIC WATER HEATER (WH-1)

GENERAL DESCRIPTION

The domestic hot water system consists of an electric water heater and recirculating pumps. Point-of-use mixing valves will provide anti-scald protection at their respective fixtures. A hot water recirculation pumps will serve the hot water heater. The water heaters are used to heat water for Building 165 domestic hot water system as shown on the drawings.

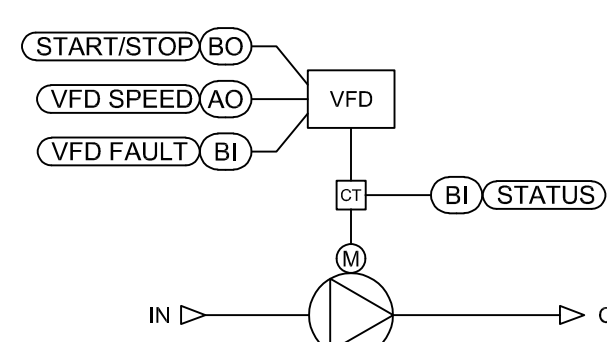
Run Conditions

The domestic electric water heater shall operate continuously.



POINTS LIST - DOMESTIC STEAM TO WATER HEATER (WH-1)

POINT NAME	HARDWARE POINTS				SOFTWARE POINTS							SHOWN ON GRAPHIC
	AI	AO	BI	BO	SETPOINT	AV	BV	LOOP	SCHED	TREND	ALARM	
WATER SIDE												
WH-1 HWS TEMPERATURE	X									X	X	X
SETPOINTS												
WH-1 HWS TEMPERATURE SETPOINT					140°F	X					X	X
ALARMS					DESCRIPTION						ALARM	ALARM DELAY
WH-1 HIGH HWS TEMPERATURE					IF THE HWS TEMPERATURE IS GREATER THAN 145 °F (ADJ.) FOR GREATER THAN 5 MINUTES						X	10 MIN.
WH-1 LOW HWS TEMPERATURE					IF THE HWS TEMPERATURE IS LESS THAN 135 °F (ADJ.) FOR GREATER THAN 5 MINUTES						X	10 MIN.



SEQUENCE OF OPERATIONS

HOT/COLD WATER

RECIRCULATION PUMPS (RP-X)

General Description


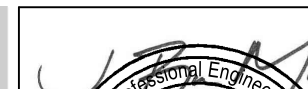
The inline recirculating pumps are used to recirculate the associated hot or cold water back to the domestic water heater and the service entrance as shown on the drawings.

Run Conditions

The hot/cold water recirculation pumps shall operate continuously

[illegible]

SHEET REVISED
AND REISSUED.

CONSULTANT INFORMATION			ARCHITECT		SHEET TITLE MECHANICAL CONTROLS VI		PROJECT PHASE BID DOCUMENTS		PROJECT TITLE CONSTRUCT REPLACEMENT WAREHOUSE			VA PROJECT NUMBER 649-414	
STRUCTURAL / CIVIL ENGINEER H2B, INC. 1225 N. LOOP WEST, SUITE 800 HOUSTON, TX 77008 (713) 864-2900			COMMISSIONING GLHN ARCHITECTS & ENGINEERS, INC. 2925 N. BROADWAY BLVD TUCSON, AZ 85716 (520) 881-4546		MECH. / ELEC. / PLUMB. / TECH. ENGINEER SPUR DESIGN 11020 KING STREET, SUITE 350 OVERLAND PARK, KS 66210 (405) 842-6100		APPROVED: PROJECT DIRECTOR		FULLY SPRINKLERED			BUILDING NUMBER 165	
FIRE PROTECTION ENGINEER POOLE FIRE PROTECTION, INC. 19910 W. 161ST STREET OLATHE, KS 66062 (913) 829-8650			LANDSCAPE ARCHITECT ARC STUDIOS INC. 3117 E. FLOWER STREET TUCSON, AZ 85716 (520) 882-9655		DRAWING NUMBER 165-M-706								
Revision # Date			 312 SW 25th Street Ocala, FL 32609 spur-design.com		 11020 King Street, Suite 350 Overland Park, KS 66210 spur-design.com		DATE 04/23/2019		CHECKED BY JES		DRAWN BY JAD		Dwg. 116 OF 145
ASH #1			VA		U.S. Department of Veteran Affairs								