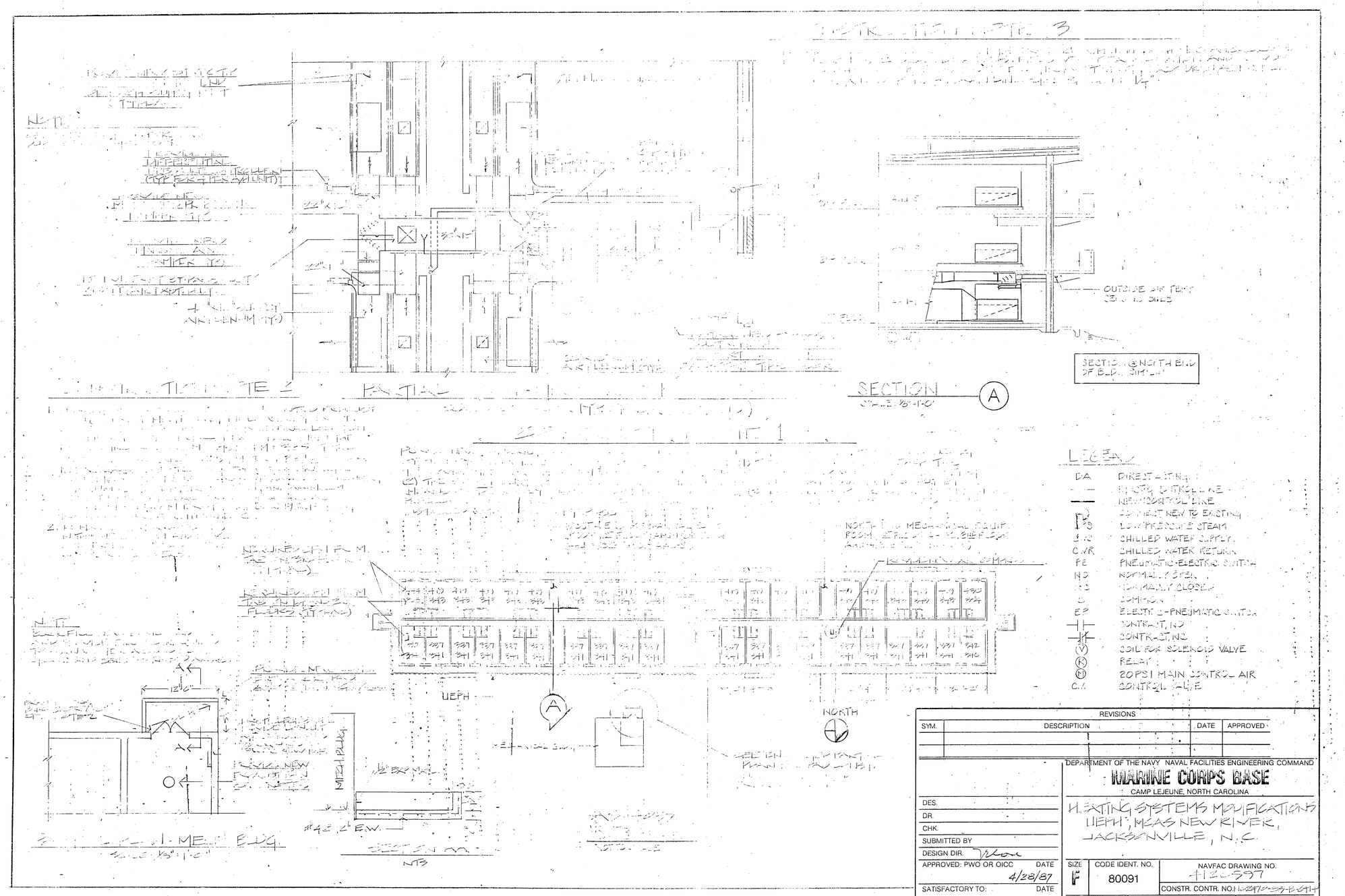
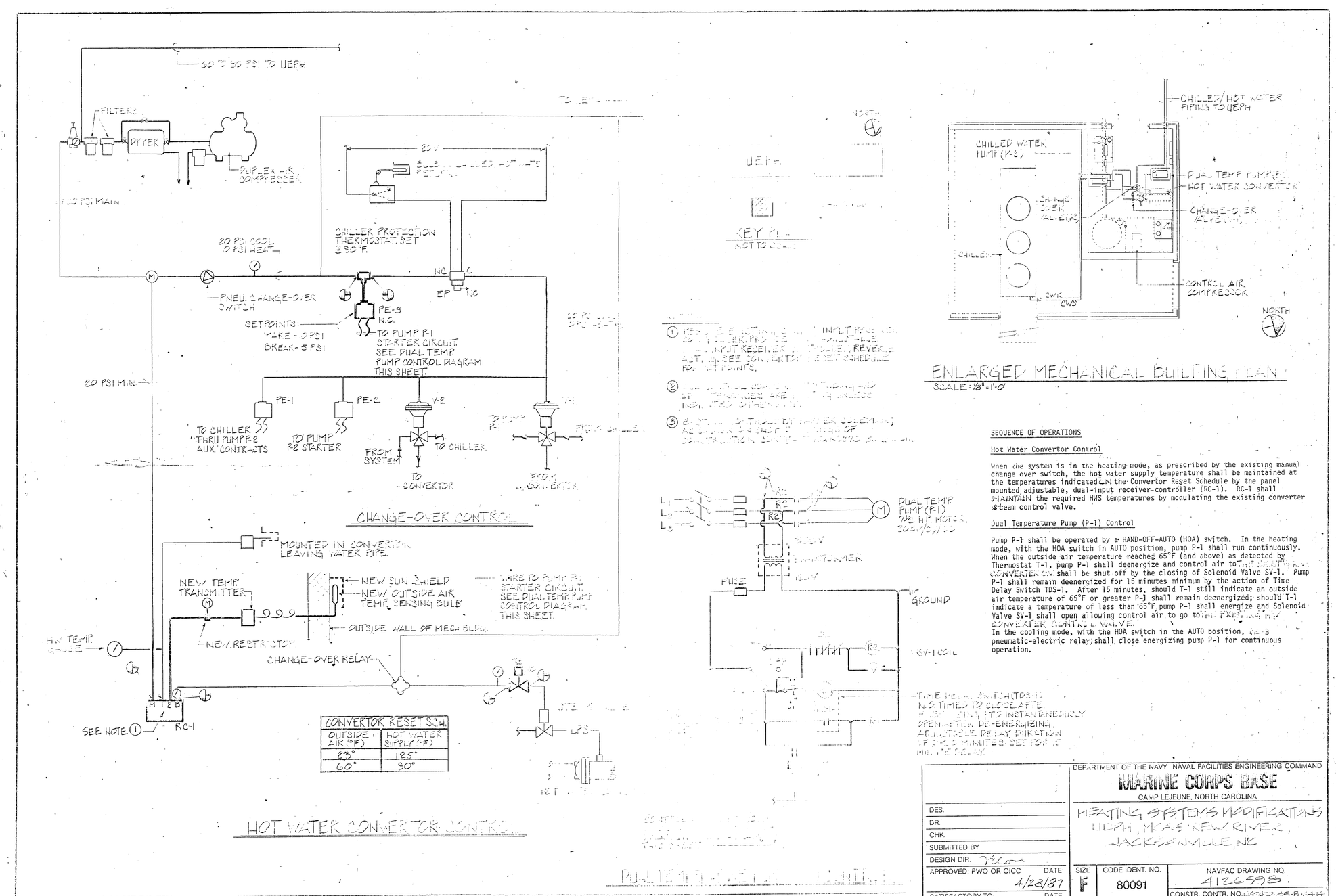

SECTION
SCALE: 1/8"=1'-0"
A
OUTSIDE AIR TEMP SENSING BULB
SECTION @ NORTH END OF BLDG. SIMILAR
UEPH
NORTH
LEGEND
DA DIRECT EXISTING
NEW CONTROL LINE
LPS LOW PRESSURE STEAM
CHW CHILLED WATER SUPPLY
CWR CHILLED WATER RETURN
PE PNEUMATIC-ELECTRIC SWITCH
NO NORMALLY OPEN
NC NORMALLY CLOSED
C COMMON
EP ELECTRIC-PNEUMATIC SWITCH
CONTACT, NO
CONTACT, NC
COIL FOR SOLENOID VALVE
RELAY
20 PSI MAIN CONTROL AIR
CV CONTROL VALVE
REVISIONS
SYM. DESCRIPTION DATE APPROVED
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA
HEATING SYSTEMS MODIFICATIONS
UEPH, MCAS NEW RIVER,
JACKSONVILLE, N.C.
DES.
DR.
CHK.
SUBMITTED BY
DESIGN DIR.
APPROVED: PWO OR OICC DATE 4/28/87
SATISFACTORY TO: DATE
SIZE F
CODE IDENT. NO. 80091
NAVFAC DRAWING NO. 4126598
CONSTR. CONTR. NO.
SCALE: NOTED
SPEC. 85-85-414
SHEET 1 OF 2


FILTERS
DRYER
DUPLEX AIR COMPRESSOR
20 PSI MAIN
20 PSI COOL
9 PSI HEAT
CHILLER PROTECTION THERMOSTAT SET @ 50°F.
PNEU. CHANGE-OVER SWITCH
SETPOINTS:
MAKE - 9 PSI
BREAK - 5 PSI
PE-3 N.C.
TO PUMP P-1 STARTER CIRCUIT SEE DUAL TEMP PUMP CONTROL DIAGRAM THIS SHEET.
20 PSI MIN.
PE-1
PE-2
V-2
TO CHILLER THRU PUMP P-2 AUX. CONTACTS
TO PUMP P-2 STARTER
FROM SYSTEM
TO CHILLER
TO CONVERTOR
CHANGE-OVER CONTROL
MOUNTED IN CONVERTOR LEAVING WATER PIPE.
NEW TEMP TRANSMITTER
NEW SUN SHIELD
NEW OUTSIDE AIR TEMP. SENSING BULB
WIRE TO PUMP P-1 STARTER CIRCUIT SEE DUAL TEMP PUMP CONTROL DIAGRAM THIS SHEET.
OUTSIDE WALL OF MECH BLDG.
HW TEMP. GAUGE
NEW RESTRICTOR
CHANGE-OVER RELAY
SEE NOTE 1
RC-1
LPS
CONVERTOR RESET SCH.
OUTSIDE AIR (°F) | HOT WATER SUPPLY (°F)
65° | 125°
60° | 90°
HOT WATER CONVERTOR CONTROL
UEPH
KEY PLAN
NOT TO SCALE
CHILLED/HOT WATER PIPING TO UEPH
CHILLED WATER PUMP (P-2)
DUAL TEMP PUMP (P-1)
HOT WATER CONVERTOR
CHANGE-OVER VALVE (V-2)
CHILLER
CONTROL AIR COMPRESSOR
CWS
NORTH
ENLARGED MECHANICAL BUILDING PLAN
SCALE: 1/8"=1'-0"
SEQUENCE OF OPERATIONS
Hot Water Convertor Control
When the system is in the heating mode, as prescribed by the existing manual change over switch, the hot water supply temperature shall be maintained at the temperatures indicated on the Convertor Reset Schedule by the panel mounted adjustable, dual-input receiver-controller (RC-1). RC-1 shall MAINTAIN the required HWS temperatures by modulating the existing converter steam control valve.
Dual Temperature Pump (P-1) Control
Pump P-1 shall be operated by a HAND-OFF-AUTO (HOA) switch. In the heating mode, with the HOA switch in AUTO position, pump P-1 shall run continuously. When the outside air temperature reaches 65°F (and above) as detected by Thermostat T-1, pump P-1 shall deenergize and control air to the HOT WATER CONVERTER CV shall be shut off by the closing of Solenoid Valve SV-1. Pump P-1 shall remain deenergized for 15 minutes minimum by the action of Time Delay Switch TDS-1. After 15 minutes, should T-1 still indicate an outside air temperature of 65°F or greater P-1 shall remain deenergized; should T-1 indicate a temperature of less than 65°F pump P-1 shall energize and Solenoid Valve SV-1 shall open allowing control air to go to the HOT WATER CONVERTER CONTROL VALVE.
In the cooling mode, with the HOA switch in the AUTO position, the pneumatic-electric relay shall close energizing pump P-1 for continuous operation.
DUAL TEMP PUMP (P-1) 7½ HP MOTOR
TRANSFORMER
FUSE
GROUND
SV-1 COIL
TIME DELAY SWITCH (TDS-1)
DEPARTMENT OF THE NAVY NAVAL FACILITIES ENGINEERING COMMAND
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA
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UEPH, MCAS NEW RIVER,
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SHEET 2 OF 2