CONTROLS AIR COMPRESSORS (PROVIDE NEW)

UNIT NO.	SERVICE	LOCATION	TANK SIZE	SCFM	PRESSURE (PSIG)	MOTOR HP	ELECTRICAL DATA VOLTS	PH.	START.	NOTES
AC–1	PLANT & INSTRUMENT AIR	BOILER FEED PUMP ROOM	240 GAL	35.2 ea.	100	10 ea.	208	3	DIV. 16	CONNECT IN PARALLEL; INGERSOL RAND OR APPROVED EQUAL DUPLEX UNITS MOUNTED ON TANK, INCLUDE START UP KIT; ALL DRAIN TRAPS AND ACCESSORIES

REFRIGERATED AIR DRYERS (PROVIDE NEW)

UNIT NO.	SERVICE	LOCATION	SCFM	COOLING	HP	ELECTRICAL DATA VOLTS	PH.	START.	NOTES
RAD–1	AIR COMPRESSOR 1	BOILER FEED PUMP ROOM	50	35° – 40° @ 100 PSIG	½	120	1	DIV. 16	PROVIDE AUTOMATIC DRAIN TRAPS
RAD–2	AIR COMPRESSOR 2	BOILER FEED PUMP ROOM	50	35° – 40° @ 100 PSIG	½	120	1	DIV. 16	PROVIDE AUTOMATIC DRAIN TRAPS

BOILER ECONOMIZERS (PROVIDE NEW)

UNIT NO.	SERVICE	LOCATION	FLUE GAS MAX. FLOW (LBS/HR.) EA.	FLUE GAS TEMP (°F) MAX. IN	MIN. OUT	MIN. Δ	FLUE GAS MAX.Δ (IN W.C.)	FEEDWATER MAX. FLOW (LB/HR)	FEEDWATER TEMP (°F) MAX. IN	MIN. OUT	FEEDWATER MAX.Δ P (PSI)	NOTES
BE–1	BOILER B–1	EXHAUST STACK	32,000	525	347	178°F	0.4	28,000	228	281	3	ETEC OR APPROVED EQUAL
BE–2	BOILER B–2	EXHAUST STACK	32,000	525	347	178°F	0.4	28,000	228	281	3	
BE–3	BOILER B–3	EXHAUST STACK	32,000	525	347	178°F	0.4	28,000	228	281	3	

FLUID METERS — GAS (PROVIDE NEW)

UNIT NO.	SERVICE	LOCATION	FLUID TYPE (GAS – SG)	LINE PRESSURE (PSIG)	FLOW RANGE	ACCURACY	MAX.Δ	BASE PRESSURE (PSIA)	NOTES
GM–1	BOILER B–1	MAIN LEVEL @ BOILER	GAS	10	0 – 40,000 CFH	+/– 0.5%	3" WATER	11.4	
GM–2	BOILER B–2	MAIN LEVEL @ BOILER	GAS	10	0 – 40,000 CFH	+/– 0.5%	3" WATER	11.4	
GM–3	BOILER B–3	MAIN LEVEL @ BOILER	GAS	10	0 – 40,000 CFH	+/– 0.5%	3" WATER	11.4	

CONDENSATE FILTERS (PROVIDE NEW)

UNIT NO.	SERVICE	LOCATION	FLUID TYPE	MAX. FLOW RATE	MAX.Δ	PIPE SIZE	NOTES
CF–1	CONDENSATE DA TANK LEVEL		CONDENSATE	125 GPM	1" PSIG	6"	CARBON STEEL BODY; 304 SS STRAINER (DUPLEX)

HEAT EXCHANGERS (PROVIDE NEW)

UNIT NO.	SERVICE	LOCATION	TYPE	CAPACITY BTUH	LB / HR	ENT. WATER	LEAV. WATER	MIN. TUBE SURFACE	COND. TANK TEMP.	NOTES
HE–1	CONT. BLOWDOWN	MEZZ. (SURGE TANK)	WATER TO WATER	5,200	560	350°F	180°F	10.4 SQ. FT.	135°F	BOILER WATER IN TUBES, 250 PSIG DESIGN
HE–2	CONT. BLOWDOWN	MEZZ. (SURGE TANK)	WATER TO WATER	5,200	560	350°F	180°F	10.4 SQ. FT.	135°F	BOILER WATER IN TUBES, 250 PSIG DESIGN
HE–3	CONT. BLOWDOWN	MEZZ. (SURGE TANK)	WATER TO WATER	5,200	560	350°F	180°F	10.4 SQ. FT.	135°F	BOILER WATER IN TUBES, 250 PSIG DESIGN

WATER FLOW CONTROL VALVES (PROVIDE NEW)

UNIT NO.	SERVICE	LOCATION	PRESSURE DROP	SIZE	CV	GPM	NOTES
WCV–1	BOILER B–1	AT BOILERS	25 PSIG	1 ½"	11.5	60	FW REGULATOR
WCV–2	BOILER B–2	AT BOILERS	25 PSIG	1 ½"	11.5	60	FW REGULATOR
WCV–3	BOILER B–3	AT BOILERS	25 PSIG	1 ½"	11.5	60	FW REGULATOR
WCV–4	SURGE TK, MAKEUP	MEZZANINE	12 PSIG	2"	30	125	FISCHER OR ALL FLOW MAKE–UP CONTROL VALVES
WCV–5	DEAERATOR SUPPLY	DEAERATOR LEVEL	5 PSIG	2 ½"	54	125	–

SURGE TANK (NOW: NEW)

UNIT NO.	SERVICE	LOCATION	CAPACITY	SIZE	NOTES
ST–1	CONDENSATE STORAGE	MEZZANINE	2,600 GAL.	–	ALL STAINLESS STEEL (304) 3 HEAT EXCHANGERS (SEE ABOVE)

DEAERATOR (NEW: LEVEL CONTROLS & PIPING ON EXISTING DEAERATOR)

UNIT NO.	CAPACITY	ENT. WATER	LEAV. WATER	STEAM	STORAGE	NOTES
D–1	60,000 PPH	110°F	228°F	8 PSIG	350 CF	~~OVERFLOW CAPACITY 250 GPM (COCHRAN T 36)~~

WATER PUMPS (NOW: NEW)

UNIT NO.	SERVICE	LOCATION	CAPACITY (GPM)	TOTAL HEAD	WATER TEMP. (°F)	NPSH AVAILABLE (FT.)	RPM	MOTOR HP	ELECTRICAL DATA VOLTS	PH.	START.	MIN. EFF.	NOTES
P–1	BOILER FEEDWATER	BOILER FEED PUMP ROOM	125	470 ft.	228°	13	3,500	40	208	3	DIV. 16	54	HORIZONTAL SPLIT CASE, WORTHINGTON OR EQUAL
P–2	BOILER FEEDWATER	BOILER FEED PUMP ROOM	125	470 ft.	228°	13	3,500	40	208	3	DIV. 16	54	
P–3	BOILER FEEDWATER	BOILER FEED PUMP ROOM	125	470 ft.	228°	13	3,500	40	208	3	DIV. 16	61	

LEGEND:

AFF – ABOVE FINISHED FLOOR
AUTO – AUTOMATIC
BF – BOILER FEEDWATER
BFS – BOILER FEED PUMP SUCTION
BGS – BREAK GLASS STATION
BL – BLIND
BLDG – BUILDING
BM – BEAM
BO – BLOW OFF
BWS – BOILER WATER SAMPLE
CA – COMPRESSED AIR
CBD – CONTINUOUS BLOWDOWN
CMU – CONCRETE MASONRY UNIT
COL – COLUMN
CONC – CONCRETE
COND – CONDENSATE
CONN – CONNECTION
CONT – CONTINUATION
CR – CONDENSATE RETURN
CT – CONDENSATE TRANSFER
CTE – CONNECT TO EXISTING
CTR – CONDENSATE TRANSFER PUMP SUCTION
CTS – CONDENSTATE TRANSFER SUPPLY
CW – DOMESTIC WATER
D – DRAIN
DIA – DIAMETER
DIFF – DIFFERENTIAL
DISCH – DISCHARGE
DN – DOWN
DTL – DETAIL
DWG – DRAWING
EA – EACH
EMERG – EMERGENCY
EQUIP – EQUIPMENT
ES – EACH SIDE
EXIST – EXISTING
FD – FLOOR DRAIN
FF – FINISHED FLOOR
FDT – FORCED DRAFT
FLEX – FLEXIBLE
FT – FOOT, FEET
FWH – FEEDWATER HEATER
FWS – BOILER FEED WATER
HDR – HEADER
HI – HIGH
HM – HOLLOW METAL
HP – HORSEPOWER
HIP – HIGH PRESSURE
HPD – HIGH PRESSURE DRIP
HPS – HIGH PRESSURE STEAM
HW – HARDWARE
ID – INDUCED DRAFT
JT – JOINT
LO – LOW
LP – LOW PRESSURE
LPD – LOW PRESSURE DRIP
LPG – LOW PRESSURE GAS
LPS – LOW PRESSURE STEAM
MAX – MAXIMUM
MECH – MECHANICAL
MFG – MANUFACTURER
MH – MANHOLE
MIN – MINIMUM
MISC – MISCELLANEOUS
MP – MEDIUM PRESSURE
MPD – MEDIUM PRESSURE DRIP
MPS – MEDIUM PRESSURE STEAM
MVD – MANUAL VOLUME DAMPER
NC – NORMALLY CLOSED
OC – ON CENTER
OPP HD – OPPOSITE HAND
P – PILOT
P (LPG) – EMERGENCY PILOT (LOW PRESSURE GAS)
PART – PARTIAL
PL – PLATE
PRESS – PRESSURE
PSI – POUNDS PER SQUARE INCH
PSIG – POUNDS PER SQUARE INCH GUAGE
R – RECIRCULATION
RAD – REFRIGERATED AIR DRYER
REQ'D – REQUIRED
RL – REFRIGERANT LIQUID
RM – ROOM
RS – REFRIGERANT SUCTION
SHT – SHEET
SW – SWITCH
SWR – SERVICE WATER
THRU – THROUGH
TSTAT – THERMOSTAT
TYP – TYPICAL
V – VENT
VTR – VENT THRU ROOF
W/ – WITH

GENERAL SYMBOLS

- DIRECTION OF PIPE PITCH (DOWN)
- DIRECTION OF FLOW
- ANCHOR
- REDUCER OR INCREASER
- ECCENTRIC REDUCER
- TOP CONNECTION, 45° OR 90°
- BOTTOM CONNECTION, 45° OR 90°
- SIDE CONNECTION
- CAPPED OUTLET
- RISE OR DROP IN PIPE
- UNION
- ORIFICE UNION
- POINT OF CONNECTION BETWEEN NEW AND EXISTING WORK
- LIMIT OF DEMOLITION
- BLAST THERMOSTATIC TRAP
- INVERTED BUCKET TRAP SET INCLUDING PIPING ACCESSORIES
- FLOAT & THERMOSTATIC TRAP SET INCLUDING PIPING ACCESSORIES
- THERMOSTATIC TRAP
- STRAINER
- THERMOMETER
- PRESSURE GAUGE
- WATER FLOW MEASURING DEVICE
- GATE VALVE (2" AND SMALLER)
- GATE VALVE (2 ½" AND LARGER)
- THREE WAY CONTROL VALVE
- TWO WAY CONTROL VALVE
- GLOBE VALVE
- EXISTING PIPING OR EQUIPMENT TO BE REMOVED
- EXISTING PIPING OR EQUIPMENT
- NEW PIPING OR EQUIPMENT
- GATE VALVE IN VERTICAL
- LEVEL CONTROL VALVE
- SAFETY RELIEF VALVE (SRV)
- FLEXIBLE CONNECTOR
- ø DIAMETER
- INLINE PUMP

Revision	Date
ISSUED FOR AS BUILTS	04–11–05

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RECOMMEND APPROVAL

REQUESTOR	Date	CHIEF OF STAFF	Date
CHIEF OF SERVICE	Date	ASST. DIR. FOR OPERATIONS	Date
APPROVAL BY: MEDICAL CENTER DIRECTOR			Date

Drawing Title: SCHEDULES AND LEGEND
BOILER UPGRADE
BUILDING #18

Approved: Safety Manager/M&O Supervisor

Approved: Chief Facilities Management Service Line

Project Title: BOILER UPGRADE
VETERANS' AFFAIRS MEDICAL CENTER
SALISBURY, NORTH CAROLINA

Building Number: 18 | Checked: WCN | Drawn: LSH

Location: Dept. of Veterans Affairs, 1601 Brenner Ave., Salisbury NC 28144

Date: 01–06–03
Project No.: 659–03–101
DRAWING NO.: H–1
DWG. 3 OF 14

Office of Facilities
Department of Veterans Affairs