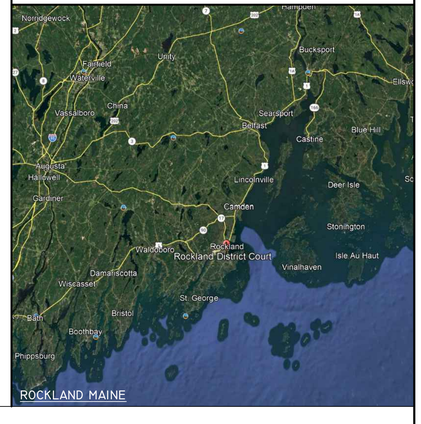
ROCKLAND DISTRICT COURT

BOILER RENOVATION PROJECT

-ROCKLAND MAINE-

Photo Credit: Armstrong Engineering

LOCATION MAP:



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DESIGNED BY:

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ENGINEER OF RECORD:

STATE OF MAINE
JEFFREY M. ARMSTRONG
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LICENSED
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For Project Bidding

DATE: 08/01/2026

A.E. PROJECT # 2026.06.16

SYMBOLS & ABBREVIATIONS

- UP / DN — SUPPLY DUCT (UP & DOWN)
- UP / DN — RETURN OR EXHAUST DUCT (UP & DOWN)
- CEILING DIFFUSERS
- SUPPLY TOP REGISTER OR GRILL (WALL TYPE)
- RETURN OR EXHAUST CEILING REGISTER OR GRILL
- EXHAUST BOTTOM REGISTER OR GRILL (WALL TYPE)
- EXHAUST OR RETURN TOP OF REGISTER GRILL (WALL TYPE)
- VANE TURN ELBOW & AIR SPLIT TYPE DUCT TAKE OFF
- CONNECT NEW DUCT TO EXISTING DUCT
- R — INCLINED RISE. IN DIRECTION OF AIR FLOW
- D — INCLINED DROP IN DIRECTION OF AIR FLOW
- FC — FLEXIBLE CONNECTION
- VANED ELBOW (PROVIDE ALL SQUARE RECTANGULAR ELBOWS WITH VANES EVEN IF SYMBOL IS MISSING)
- VAINED ELBOW (SHORT RADIUS)
- STANDARD RADIUS ELBOW
- 10x8 — NEW DUCT - WIDTH X DEPTH
- EXISTING DUCT TO REMAIN
- EXISTING DUCT TO BE REMOVED
- LOUVER
- ACOUSTICAL DUCT LINING
- VD — MANUAL VOLUME DAMPER
- FD — FIRE DAMPER
- SD — SMOKE DAMPER

ABBREVIATION	SYMBOL	NOMENCLATURE
	T	THERMOSTAT (DIGITAL TYPE)
	T	THERMOSTAT W/ GUARD (DIGITAL TYPE)
	Ts OR Ts	THERMOSTAT SENSOR
		Y-STRAINER W/DRAIN VALVE & CAP
		GATE VALVE
		PRESSURE GAUGE W/SHUT COCK
		TEMPERATURE GAUGE
		BALL VALVE
BV		BALANCING VALVE
CV		3-WAY CONTROL VALVE
CV		2-WAY CONTROL VALVE
		DRAIN VALVE
		AIR SCOOP W/ AIR VENT
BFP		BACK FLOW PREVENTER
		PRESSURE REGULATOR
		AUTO AIR VENT W/ SHUT COCK
		CHECK VALVE
		WAFER BUTTERFLY VALVE
		SUCTION DIFFUSER
		PIPE FLANGE CONNECTION
MPV		MULTI-PURPOSE VALVE
		FLOAT & THERMOSTATIC STEAM TRAP
FS	FS	FLOW SWITCH
	P	PRESSURE SWITCH
BMS	BMS	BIULDING MANAGEMENT SYSTEM
		TIE-IN LOCATION

ABBREVIATION	NOMENCLATURE
FD	FIRE DAMPER
MOD	MOTOR OPERATED DAMPER
EF	EXHAUST FAN
EA	EXHAUST AIR
EG	EXHAUST GRILL
ACU	AIR CONDENSING UNIT
AHU	AIR HANDLING UNIT
HRU	HEAT RECOVERY UNIT
RTU	ROOF TOP UNIT
CUH	CABINET UNIT HEATER
(E)	EXISTING
(N)	NEW
VAV	VARIABLE AIR VOLUME BOX
SG	SUPPLY GRILL
SA	SUPPLY AIR
RA	RETURN AIR
RG	RETURN GRILL
RF	RETURN FAN
FD	FLOOR DRAIN
SW	SANITARY WASTE
V	VENT
LAV	LAVATORY
UR	URINAL
WC	WATER CLOSET
EWC	ELECTRIC WATER COOLER
UCWH	UNDER COUNTER WATER HEATER
SK	SINK
HB	HOSE BIB
CO	CLEAN OUT
DHW	DOMESTIC HOT WATER
DCW	DOMESTIC COLD WATER
HUM	HUMIDIFIER
WDB	WATER DRAIN BASIN
DCW	DOMESTIC COLD WATER

ABBREVIATION	NOMENCLATURE
DHWR	DOMESTIC HOT WATER RETURN
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
NO	NORMALLY OPEN
NC	NORMALLY CLOSED
RT	RETENTION TANK
CWG	CHILLED WATER GENERATOR
CP	CIRCULATOR PUMP
ET	EXPANSION TANK
BLR	BOILER
A.F.F.	ABOVE FINISHED FLOOR
USWJ	UNDER STEEL WEB JOIST
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
TYP	TYPICAL
GPM	GALLONS PER MINUTE
CFM	CUBIC FEET PER MINUTE
CWS	CHILLED WATER SUPPLY
CWR	CHILLED WATER RETURN
VD	VOLUME DAMPER
UH	UNIT HEATER
COND	CONDENSATE
INV	INVERT
AD	ACCESS DOOR
CW-CP	CHILLED WATER CIRCULATING PUMP
EEP	EMERGENCY POWER PANEL
MDP	MAIN DISTRIBUTION PANEL
VFD	VARIABLE FREQUENCY DRIVE
ATC	AUTOMATIC TEMPERATURE CONTROL
A.L.	ACOUSTICAL DUCT LINER
O.W.S.J.	OPEN WEB STEEL JOIST
AC	AIR CONDITIONING EVAPORATOR
CU	AIR CONDENSING UNIT

MECHANICAL INDEX OF DRAWINGS

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M-2.0 Mechanical Site Plan & U.G. LP Gas Tanks & Piping.
M-3.0 Mechanical Schedules
M-3.1 Mechanical Details
P-1.0 Plumbing Plans
E-1.0 Electrical Plans & Panel Schedules

MECHANICAL GENERAL NOTES

A.QUALITY ASSURANCE

01.) ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE LATEST APPLICABLE BUILDING CODES AND INDUSTRY STANDARDS.

02.) INSTALL ALL WORK TO COMPLY WITH ALL LAWS, REGULATIONS, CODES AND STANDARDS (FEDERAL, STATE, AND LOCAL), AS ADOPTED BY THE AGENCIES HAVING JURISDICTION, INCLUDING REASONABLY ANTICIPATED REVISIONS BASED ON EMERGING TRENDS IN BUILDING REGULATIONS. WHERE ANY OF THESE DIFFER, THE MOST STRINGENT SHALL APPLY.

03.) PROVIDE ALL MATERIALS AND EQUIPMENT AND PERFORM ALL LABOR REQUIRED TO INSTALL COMPLETE AND OPERABLE SYSTEMS AS INDICATED ON THE DRAWINGS AND SPECIFICATIONS. INCLUDE ALL NECESSARY AND APPLICABLE APPURTENANCES, WHETHER INDICATED OR NOT.

04.) ALL MECHANICAL COMPONENTS WILL MEET INDUSTRY SAFETY STANDARDS,REQUIREMENTS AND BE UL LISTED WHERE APPLICABLE.

05.) LAYOUT AND INSTALLATION OF HVAC PIPING, EQUIPMENT AND APPURTENANCES INDICATED ON PLAN IS SCHEMATIC IN NATURE. EXACT LOCATION, ROUTING AND INSTALLATION TO BE COORDINATED WITH BUILDING STRUCTURES AND ALL OTHER TRADES.

06.) THESE DRAWINGS ARE SCHEMATIC IN NATURE AND ARE NOT INTENDED TO SHOW ALL POSSIBLE CONDITIONS. CONTRACTOR SHALL VERITY EQUIPMENT LOCATIONS). IT IS INTENDED THAT COMPLETE MECHANICAL & ELECTRICAL SYSTEMS BE PROVIDED WITH ALL NECESSARY EQUIPMENT, APPURTENANCES AND CONTROLS. THE CONTRACTOR SHALL CAREFULLY REVIEW ALL THE CONTRACT DOCUMENTS AND COORDINATE BETWEEN ALL TRADES PRIOR TO SUBMITTING SHOP DRAWINGS. THE CONTRACTOR SHALL VERIFY ALL SIZES, MATERIALS, TEMPERATURE AND PRESSURE RATINGS BEFORE ORDERING OR INSTALLING ANY MATERIALS OR EQUIPMENT. ALL PROPOSED PROVIDED EQUIPMENT SHALL SUBMIT SPECIFICATION CUT SHEETS FOR APPROVAL/COMMENTS PRIOR TO ORDER RELEASE.

B.COORDINATION

01.) UNLESS INDICATED OTHERWISE BY THE ARCHITECTURAL DOCUMENTATION (WHICH SHALL TAKE PRECEDENCE), MECHANICAL DEVICES AND EQUIPMENT MOUNTING HEIGHTS SHALL BE AS INDICATED AS SCHEDULED OR COORDINATED WITH OWNER OR ENGINEER.

02.) HVAC PIPING IS NOT PERMITTED TO RUN ABOVE ANY ELECTRICAL SWITCH GEAR, MOTOR CONTROL CENTERS OR PANELS (INCLUDING ACCESS/CLEARANCE SPACE. LOCATION OF ITEMS TO BE DETERMINED AND CONFIRMED FROM INDICATION BY THE PROJECT ELECTRICAL DOCUMENTATION, AND ACTUAL INSTALLATION CONFIRMED WITH THE ELECTRICAL CONTRACTOR PRIOR TO START OF WORK.

03.) COORDINATE WITH LOCATION OF ALL UTILITY CONNECTION POINTS,FOR EQUIPMENT WITH OTHER TRADES.

04.) ENSURE THAT WORK WILL NOT INTERFERE OR INTERRUPT SERVICES TO AREAS OUTSIDE OF THE DESIGNATED CONTRACT AREAS. AS ANY OTHER INTERRUPTIONS OF EXISTING SERVICES BECOMES NECESSARY, SCHEDULE SUCH INTERRUPTIONS WITH THE OWNER PRIOR TO THEIR COMMENCEMENT. GIVE THE OWNER NO LESS THAN ONE WEEK NOTICE AS TO WHEN SUCH INTERRUPTIONS. WORK SHALL BE PERFORMED AT SUCH TIMES AS DIRECTED BY THE OWNER.

05.) COORDINATE EXACT REQUIREMENTS AND LOCATION OF WORK WITH THE WORK OF OTHER TRADES PRIOR TO FABRICATION. PROVIDE ADDITIONAL OFF SETS AND SECTIONS OF PIPING AS MAY BE REQUIRED TO MEET THE APPLICABLE JOB CONDITION REQUIREMENTS. VERIFY JOB-SITE ELEVATIONS, DIMENSIONS, AND CONDITIONS, PRIOR TO FABRICATION OR INSTALLATION OF THE WORK. COORDINATE EXACT ROUTING OF PIPING WITH OTHER TRADES SO THAT NO CONFLICTS OCCUR WITH DUCTWORK, PIPING, LIGHTS, STRUCTURE, ETC..

06.) ALL PIPING & DUCTWORK PENETRATIONS THRU WALL AND FLOORS SHALL BE SEALED WITH AN APPROVED SEALANT AND/OR STOP. FIRE RATED WALL AND FLOORS USE OF SEALANTS THAT ARE UL 3M APPROVED.

07.) WHERE APPLICABLE, COORDINATE WITH SITE UTILITY PLAN FOR THE CONNECTION AND CONTINUATION OF HVAC PIPING.

TRADE PRACTICES

01.) CONTRACTOR TO PROVIDE MISCELLANEOUS STEEL AS REQUIRED TO SUPPORT EQUIPMENT AND ASSOCIATED COMPONENTS SUCH AS CONTROL PANELS, TANKS, VALVES, PIPING, VARIABLE SPEED DRIVES, ETC.. MISCELLANEOUSLY STEEL TO CONSIST OF GALVANIZED STRUT, ANGLE IRON, CHANNELS OR OTHER STANDARD GALVANIZED STEEL ELEMENTS. ALL WELDED CONNECTIONS TO BE GROUND AND COLD GALVANIZED IN THE FIELD.

02.) PROVIDE BACK FLOW PREVENTER OR VACUUM BREAKER IN DOMESTIC WATER LINES, WHERE BACK FLOW OR BACK PRESSURE MAY OCCUR, AS REQUIRED BY THE STATE OR LOCAL JURISDICTION. EQUIPMENT SUCH AS COFFEE MAKERS, CARBONATED VENDING MACHINES, WATER COOLED ICE MAKERS, HOSE BIBS AND WALL HYDRANTS ARE TO INCLUDE BACK FLOW PREVENTION DEVICES IN THE WATER LINES THAT SERVE THEM.

03.) PROVIDE SHUT-OFF BALL VALVES IN HW & CW TERMINATION DISTRIBUTION UNITS, BALANCING VALVES AND WATER HAMMER ARRESTORS.
INSTALL WHERE ACCESSIBLE FOR SERVICE AND PROVIDE ISOLATION VALVE AND ACCESS DOOR IF REQUIRED.

04.) PROVIDE LINE SIZED SHUT-OFF VALVE IN ALL HW & CW WATER MAINS & BRANCHES MAINS SERVING HYDRONIC EQUIPMENT.

05.) THE CONTRACTOR SHALL INSTALL A TEST TEE IN THE HW & CW PIPING IN ORDER TO TEST THE SYSTEM,

06.) PROVIDE INSULATION FOR ALL CWS, CWR, HWS, HWR, AND DUCTWORK PER SPECIFICATIONS.

07.) UNLESS INDICATED OTHERWISE, ALL HVAC PIPING AND EQUIPMENT PROVIDED WITH HVAC SUPPLY & RETURN PIPING TO BE FURNISHED WITH APPROVED/LISTED STOPS IN ACCESSIBLE LOCATIONS.

08.) ALL ITEMS THAT REQUIRE MAINTENANCE OR ADJUSTMENT SHALL BE INSTALLED IN ACCESSIBLE LOCATIONS. PROVIDE APPROPRIATELY SIZED ACCESS PANEL/ DOOR AS REQUIRED.

09.) PROVIDE APPROPRIATELY DUST CONTROL DURING ALL CONSTRUCTION PHASES. ALL OPEN ENDED DUCTWORK SHALL BE ADEQUATELY SEALED OFF TO ELIMINATE ANY ACCUMULATION OF ANY CONSTRUCTION DUST. ALL DUCTWORK SHALL BE CLEAN PRIOR TO COMMISSIONING OF ANY AIR HANDLING EQUIPMENT.

FIRE BUILDING SAFETY

01.) THE CONTRACTOR IS RESPONSIBLE FOR FIRE STOPPING AT ALL FLOOR & WALL RELATED PENETRATIONS OF FIRE, SMOKE AND OTHER RATED STRUCTURES, INCLUDING FLOORS, WALLS, PARTITIONS, ETC.. REFER TO ARCHITECTURAL DOCUMENTATION FOR LOCATIONS OF ALL RATED STRUCTURES, AND SPECIFIC INFORMATION AND REQUIREMENTS PERTAINING TO SAME.

02.) ALL FLOOR PENETRATIONS TO BE SEALED WATER TIGHT AND COMPLETELY PACKED WITH SEALANT OR FIRE STOP MATERIAL WHERE APPLICABLE BY TRADE CONTRACTORS.

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☐ FOR PRELIMINARY REVIEW
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☐ FOR PROJECT CONSTRUCTION
☐ RECORD DRAWINGS

STATE OF MAINE · JEFFREY M. ARMSTRONG · No. 5372 · LICENSED · PROFESSIONAL ENGINEER

ROCKLAND DISTRICT COURT
62 UNION STREET
ROCKLAND MAINE

BOILER RENOVATION PROJECT

REV	DATE	DESCRIPTION

SHEET TITLE:

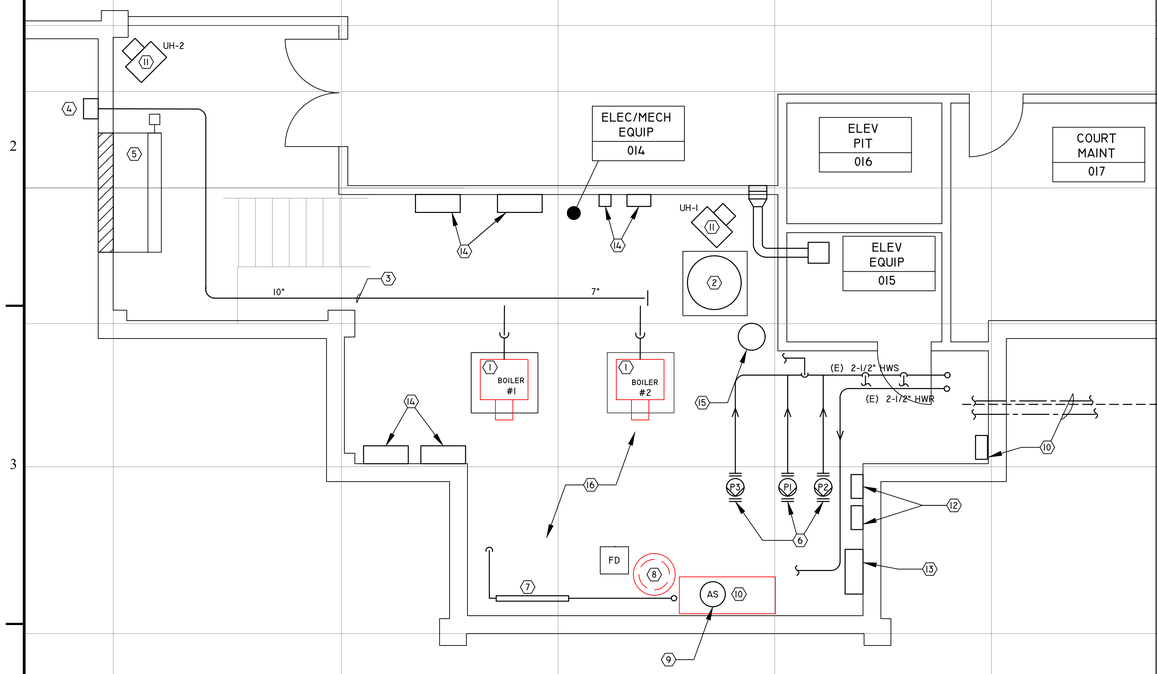
MECHANICAL LEGEND

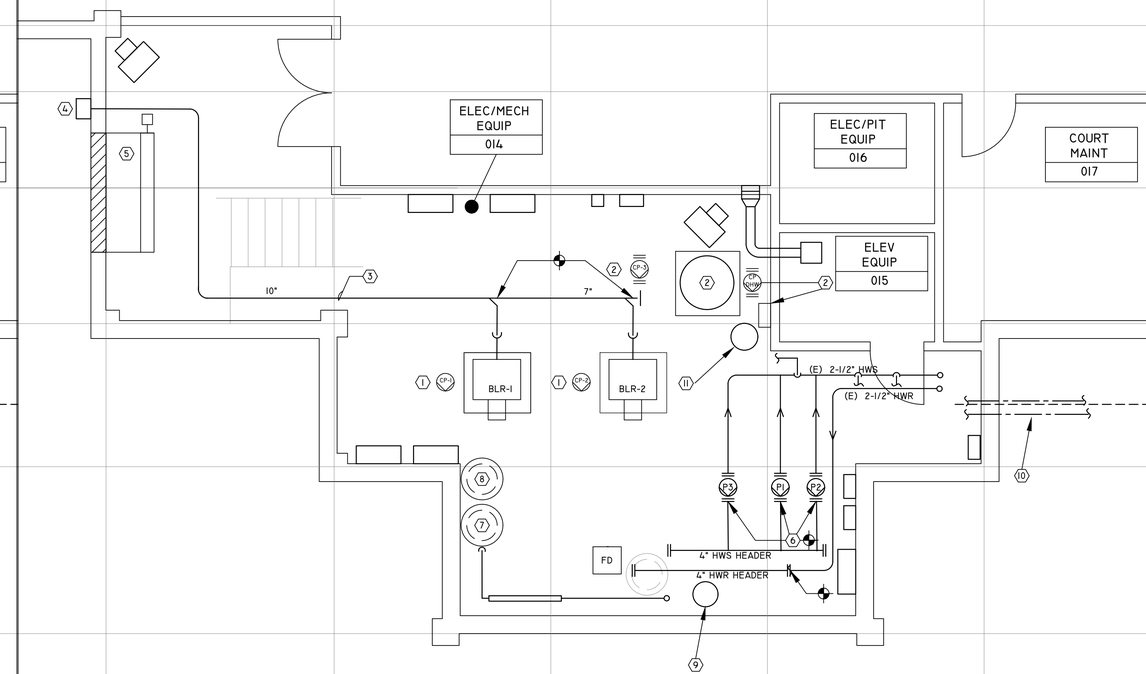
08/01/2026

M-0.0

FOR PROJECT BIDDING

PROJECT#202606.01





GENERAL NOTES:

1. ALL ASSOCIATED H.W. BOILER PIPING & SUNDRIES LESS EXISTING A.T.C. MONITORING OR CONTROL DEVICES, SHALL BE SCHEDULED FOR DEMOLITION. DEMOLITION SHALL START AT THE DISCHARGE SIDE OF EACH H.W. PUMP FOR THE INSTALLATION OF NEW H.W. SUPPLY HEADER.
2. BOILER ROOM TRANE CONTROLS SHALL REMAIN & REUSED & INTEGRATED INTO BOILER ROOM BOILERS & EQUIPMENT CONTROLS.

PLAN NOTES:

1. EXISTING H.W. CAST IRON BOILERS/BURNERS SCHEDULED FOR DEMOLITON WITH ASSOCIATED PUMPS & PIPING.
2. EXISTING EDHW HEATER SCHEDULED FOR DEMOLITION & ASSOCIATED MIXING VALVE & PIPING.
3. EXISTING 10"Ø FLUE VENT PIPE TO REMAIN & BE REUSED.
4. EXISTING FLUE INDUCTION FAN TO BE REMOVED.
5. COMBUSTION/VENTILATION AIR & DAMPER TO REMAIN.
6. H.W. PUMPS PI, P2 & P3 TO REMAIN IN SERVICE
7. EXIST. D.C.W. BACK FLOW PREVENTER & SERVICE TO REMAIN.
8. EXIST. EXPANSION TANK SHALL BE REUSED & RELOCATED TACO #CBX-130-125
9. EXIST. AIR SEPARATOR & H.W. MIXING VALVE TO BE REMOVED.
10. EXISTING #2 FUEL OIL PUMP SET & ASSOCIATED PIPING SHALL BE REMOVED, INCLUDING U.G. F.O.S. & F.O.R. PIPING & CONTROL PANEL, & VEEROT OIL MONITOR SYSTEM.
11. EXISTING H.W. UNIT HEATERS TO REMAIN SERVICE.
12. H.W. PI & P2 P3 PUMPS SHALL REMAIN IN SERVICE ALONG WITH POWER DISCONNECTS TO BE REUSED.
13. EXISTING A.T.C. PANEL BY TRANE SHALL REMAIN WITH SOFTWARE UPDATED FOR REVISED SEQUENCES.
14. ELECTRICAL PANEL BOARDS AND DISCONNECTS TO REMAIN IN SERVICE.
15. EXISTING DHW EXPANSION TANK TO BE REPLACED.
16. EXISTING HWS & HWR PIPING ALONG WITH SUNDRIES ARE SCHEDULED FOR DEMOLITION.

PLAN NOTES:

1. NEW H.W. BOILERS 1&2 WITH INDIVIDUAL CIRCULATOR PUMPS CP-1 & CP-2.
2. NEW DHW HEATER W/MIXING VALVE STATION & CP-DHW & CP-3 PUMPS.
3. EXISTING 10"Ø FLUE VENT COMMON.
4. NEW 10"Ø DIA WALL FLUE VENT DISCHARGE CAP.
5. EXISTING COMBUSTION/VENTILATION DAMPER CONTROL TO BE SEQUENCED WITH NEW BOILER OPERATION.
6. H.W. PUMP(S) TIE IN LOCATION AT NEW 3" HWS HEADER.
7. EXIST. EXPANSION TANK LOCATION.
8. NEW H.W. EXPANSION TANK LOCATION.
9. NEW CHEMICAL MIXING TANK WITH CONTROL PANEL.
10. NEW NEW 2" UNDERGROUND LP GAS SERVICE MAIN WITH SHUT OFF.
8. NEW D.H.W. EXPANSION TANK LOCATION.

MECHANICAL DEMO
SCALE 1/4"=1'
0' 10' 20'

MECHANICAL
SCALE 1/4"=1'
0' 10' 20'

FOR PROJECT BIDDING

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STATE OF MAINE JEFFREY A. ARMSTRONG No. 5372 LICENSED PROFESSIONAL ENGINEER

ROCKLAND DISTRICT COURT
62 UNION STREET
ROCKLAND MAINE

BOILER RENOVATION PROJECT

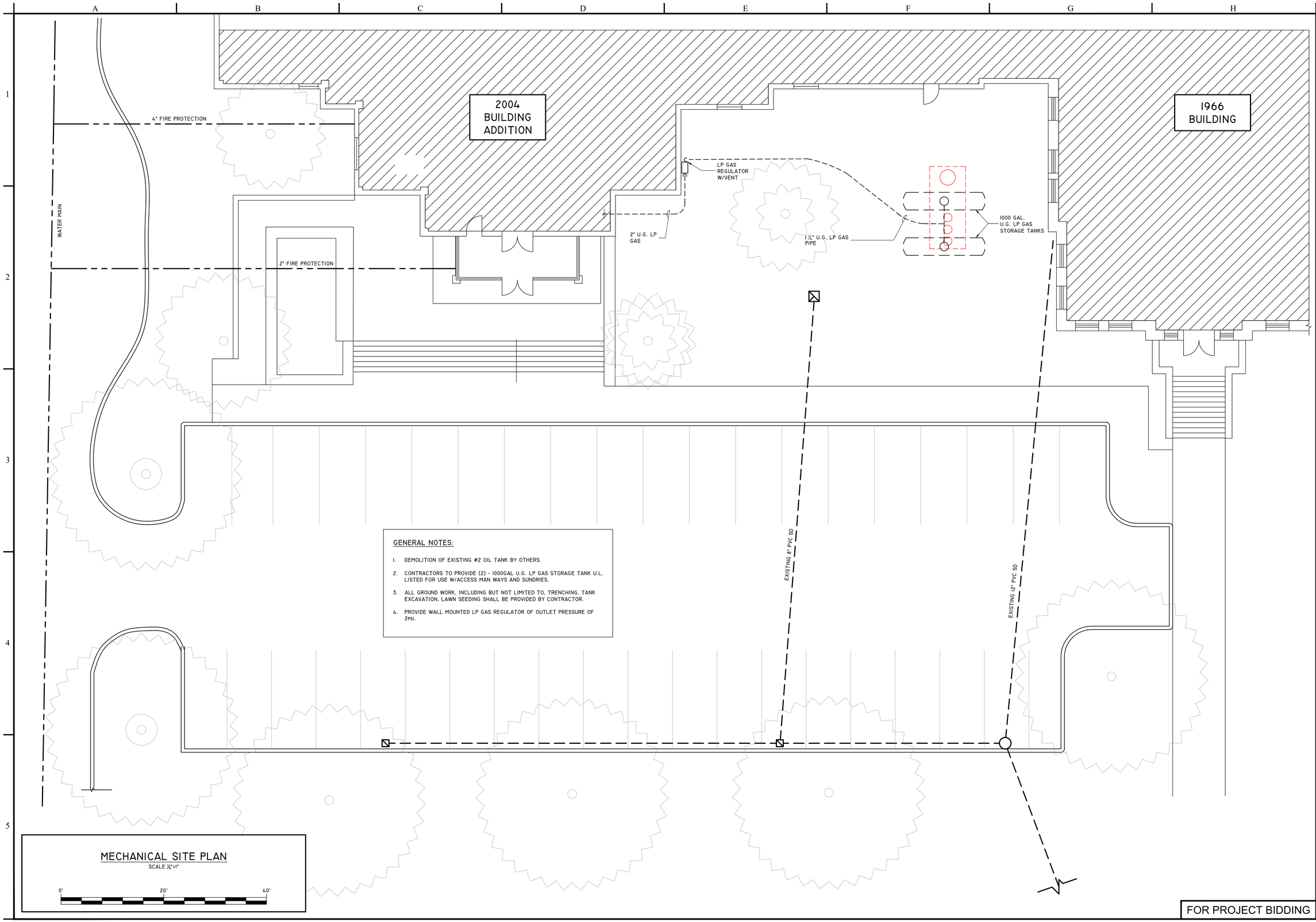
REV	DATE	DESCRIPTION

SHEET TITLE:
Mechanical Plans

08/01/2026

M-1.0

PROJECT#202606.01



GENERAL NOTES:

1. DEMOLITION OF EXISTING #2 OIL TANK BY OTHERS.
2. CONTRACTORS TO PROVIDE (2) - 1000GAL U.G. LP GAS STORAGE TANK U.L. LISTED FOR USE W/ACCESS MAN WAYS AND SUNDRIES.
3. ALL GROUND WORK, INCLUDING BUT NOT LIMITED TO, TRENCHING, TANK EXCAVATION, LAWN SEEDING SHALL BE PROVIDED BY CONTRACTOR.
4. PROVIDE WALL MOUNTED LP GAS REGULATOR OF OUTLET PRESSURE OF 2PSI.

MECHANICAL SITE PLAN

SCALE ⅛"=1'

0' 20' 40'

FOR PROJECT BIDDING

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STATE OF MAINE JEFFREY M. ARMSTRONG No. 5372 LICENSED PROFESSIONAL ENGINEER

ROCKLAND DISTRICT COURT
62 UNION STREET
ROCKLAND MAINE

BOILER RENOVATION PROJECT

REV	DATE	DESCRIPTION

SHEET TITLE:

Mechanical Site Plan

08/01/2026

M-2.0

PROJECT#202606.01

SYMBOLS & ABBREVIATIONS

- UP / DN — SUPPLY DUCT (UP & DOWN)
- UP / DN — RETURN OR EXHAUST DUCT (UP & DOWN)
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	Ts OR Ts	THERMOSTAT SENSOR	EF	EXHAUST FAN	HWR	HOT WATER RETURN
		Y-STRAINER W/DRAIN VALVE & CAP	EA	EXHAUST AIR	NO	NORMALLY OPEN
		GATE VALVE	EG	EXHAUST GRILL	NC	NORMALLY CLOSED
		PRESSURE GAUGE W/SHUT COCK	ACU	AIR CONDENSING UNIT	RT	RETENTION TANK
		TEMPERATURE GAUGE	AHU	AIR HANDLING UNIT	CWG	CHILLED WATER GENERATOR
		BALL VALVE	HRU	HEAT RECOVERY UNIT	CP	CIRCULATOR PUMP
BV		BALANCING VALVE	RTU	ROOF TOP UNIT	ET	EXPANSION TANK
CV		3-WAY CONTROL VALVE	CUH	CABINET UNIT HEATER	BLR	BOILER
CV		2-WAY CONTROL VALVE	(E)	EXISTING	A.F.F.	ABOVE FINISHED FLOOR
		DRAIN VALVE	(N)	NEW	USWJ	UNDER STEEL WEB JOIST
		AIR SCOOP W/ AIR VENT	VAV	VARIABLE AIR VOLUME BOX	FOR	FUEL OIL RETURN
BFP		BACK FLOW PREVENTER	SG	SUPPLY GRILL	FOS	FUEL OIL SUPPLY
		PRESSURE REGULATOR	SA	SUPPLY AIR	TYP	TYPICAL
		AUTO AIR VENT W/ SHUT COCK	RA	RETURN AIR	GPM	GALLONS PER MINUTE
		CHECK VALVE	RG	RETURN GRILL	CFM	CUBIC FEET PER MINUTE
		WAFER BUTTERFLY VALVE	RF	RETURN FAN	CWS	CHILLED WATER SUPPLY
		SUCTION DIFFUSER	FD	FLOOR DRAIN	CWR	CHILLED WATER RETURN
		PIPE FLANGE CONNECTION	SW	SANITARY WASTE	VD	VOLUME DAMPER
MPV		MULTI-PURPOSE VALVE	V	VENT	UH	UNIT HEATER
		FLOAT & THERMOSTATIC STEAM TRAP	LAV	LAVATORY	COND	CONDENSATE
FS	FS	FLOW SWITCH	UR	URINAL	INV	INVERT
	P	PRESSURE SWITCH	WC	WATER CLOSET	AD	ACCESS DOOR
BMS	BMS	BUILDING MANAGEMENT SYSTEM	EWC	ELECTRIC WATER COOLER	CW-CP	CHILLED WATER CIRCULATING pump
		TIE-IN LOCATION	UCWH	UNDER COUNTER WATER HEATER	EEP	EMERGENCY POWER PANEL
			SK	SINK	MDP	MAIN DISTRIBUTION PANEL
			HB	HOSE BIB	VFD	VARIABLE FREQUENCY DRIVE
			CO	CLEAN OUT	ATC	AUTOMATIC TEMPERATURE CONTROL
			DHW	DOMESTIC HOT WATER	A.L.	ACOUSTICAL DUCT LINER
			DCW	DOMESTIC COLD WATER	O.W.S.J.	OPEN WEB STEEL JOIST
			HUM	HUMIDIFIER	AC	AIR CONDITIONING EVAPORATOR
			WDB	WATER DRAIN BASIN	CU	
			DCW	DOMESTIC COLD WATER		
						AIR CONDENSING UNIT

DHW TANK SCHEDULE

TAG NO.	SERVICE	MODEL VIESSMANN	STORAGE CAPACITY	FLANGE SIZE	DIA	HEIGHT	WEIGHT	RECOVERY RATE	MBH	TEMP RISE	FLOW RATE	REMARKS
DHWH-1	DHW SYSTEM	VITOCELL-V 300	119	1-1/4" NPT	36	72	278 LBS	6.1 GPM 1ST	276	90° F	28.6GPM @ 194°F	DIGITAL CONTROL
								1ST HOUR RECOVERY		90° F	28.6GPM @ 194°F	DIGITAL CONTROL

GENERAL NOTE: BMS TO INTERFACE WITH TACO PUMP SOFTWARE

BOILER SCHEDULE

UNIT NO.	MANUFACTURER	MODEL	LOCATION	GROSS INPUT MBH	NET I-B-R/MBH	MAX GAS PRESSURE	DESIGN PRESSURE	COMBUSTION EFFICIENCY (%)	POWER	AMPS	FLUE SIZE	FUEL TYPE	REMARKS
BLR-1	VIESSMANN	VITOCROSSAL 200 C12-500	MECH RM	500 LP GAS	490LP GAS	14" W.C.	80 psig	97.9	120/1/60	20 A	4"	LP GAS	PROVIDE INDIVIDUAL AIR FILTER BOXES W/FILTERS. PROVIDE FACTORY START-UP.
BLR-2	VIESSMANN	VITOCROSSAL 200 C12-500	MECH RM	500 LP GAS	490LP GAS	14" W.C.	80 psig	97.9	120/1/60	20 A	4"	LP GAS	

GENERAL NOTE: BMS TO INTERFACE WITH TACO PUMP SOFTWARE

HW HEATING PUMP SCHEDULE

UNIT NO.	LOCATION	SYSTEM SERVED	GPM	TDH (FT)	DESIGN PRESSURE	TEMP °F MIN	TEMP °F MAX	RPM	H.P.	TYPE	MODEL TACO	VOLTS	PHASE	DRIVE	REMARKS	NOTES
CP-1	MECH ROOM	HW	48	15	125	-	-	1760	0.7	INLINE	00E VR 15-L	240	1 PH	Var. Speed	xx" IMPELLER	HI EFF MOTORS
CP-2	MECH ROOM	HW	48	15	125	-	-	1760	0.7	INLINE	00E VR 15-L	240	3PH	Var. Speed	xx" IMPELLER	HI EFF MOTORS
CP-3	MECH ROOM	HW	28	12	125			3250	.16	INLINE	VDTF3-0013	120	1PH			

GENERAL NOTE: BMS TO INTERFACE WITH TACO PUMP SOFTWARE

EXPANSION TANK SCHEDULE

TAG NO.	SERVICE	MODEL TACO	TANK VOLUME	TANK DIA.	TANK HEIGHT	ACCEPTANCE VOLUME	REMARKS
ET-2	HW HEATING	CBX - 130	34	20	38	19.0 GAL	VERTICAL TYPICAL

AIR SEPARATOR SCHEDULE

TAG NO.	SERVICE	MODEL TACO	GPM MAX	SIZE INCHES	DIA INCHES	HEIGHT INCHES	WEIGHT (LBS)	REMARKS
AS-1	H.W. SYSTEM	4903A-125	225	3.0	12"	15"	65	706 AUTO VENT

LP GAS REGULATOR

UNIT NO.	MANUFACTURER	SIZE & MODEL	LOCATION	OUTLET PRESSURE SET POINT	OPERATING INLET PRESSURE 14" W.C.	OPERATING INLET PRESSURE 1 PSIG	OPERATING INLET PRESSURE 2 PSIG	VENT	MAX INLET PSIG
R-1	PIETRO-GOVERNOR	1" - 31053	BOILER RM	11" WC	-	-	1270 CFH	NA	7.25

CHEMICAL BY-PASS FEEDER

TAG NO.	LOCATION	MODEL	CAPACITY	HEIGHT	DIA INCHES	MAX PRESSURE	WEIGHT (LBS)	REMARKS
CBF-1	BOILER ROOM	DBF-5HP	5 GALLONS	29.75"	10"	300psi	38	

CHEMICAL / GLYCOL MIXING SYSTEM

TAG NO.	SERVICE	MODEL JL WINGERT	LENGTH INCHES	WIDTH INCHES	HEIGHT INCHES	WEIGHT (LBS)	REMARKS
CGMS-1	H.W. SYSTEM	GL50-E1	31.2"	18.1"	19.3"	148	

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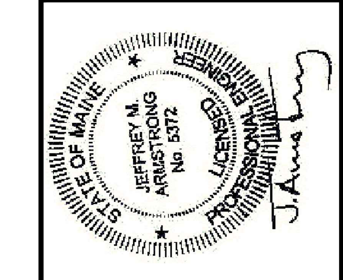
- [ ] RECORD DRAWINGS



ROCKLAND DISTRICT COURT
62 UNION STREET
ROCKLAND MAINE

BOILER RENOVATION PROJECT

REV	DATE	DESCRIPTION

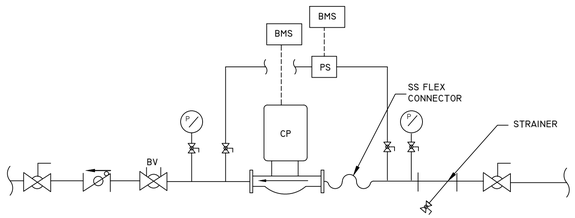
SHEET TITLE:
Mechanical Plans

08/01/2026

M-3.0

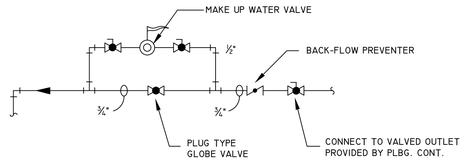
FOR PROJECT BIDDING

PROJECT#202606.01



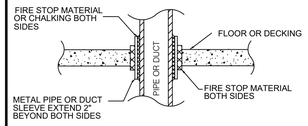
CP-3 & CP-DHWR TYPICAL INLINE CIRULATOR PUMP PIPING DETAIL

N.T.S.



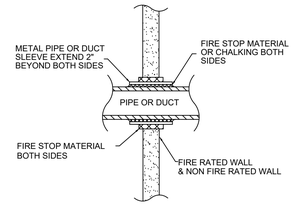
MAKEUP WATER PIPING SCHEMATIC

N.T.S.



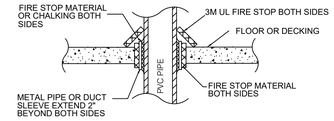
Floor or Deck Penetration Detail

NOT TO SCALE



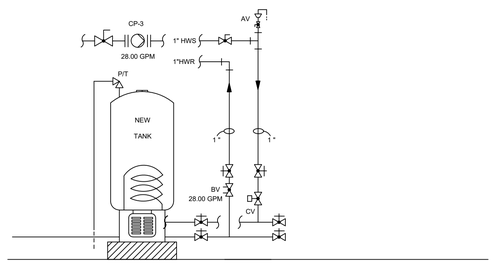
Wall Penetration Detail

NOT TO SCALE



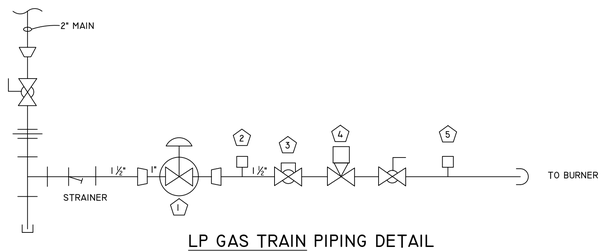
PVC Vertical Pipe Floor or Deck Penetration Detail

NOT TO SCALE



TYPICAL D.H.W. SYSTEM HWS&R

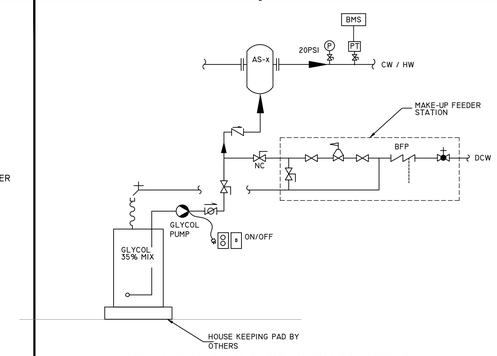
SCALE: 1/2"=1'
(TYPICAL FOR 1)



LP GAS TRAIN PIPING DETAIL (TYPICAL FOR 2)

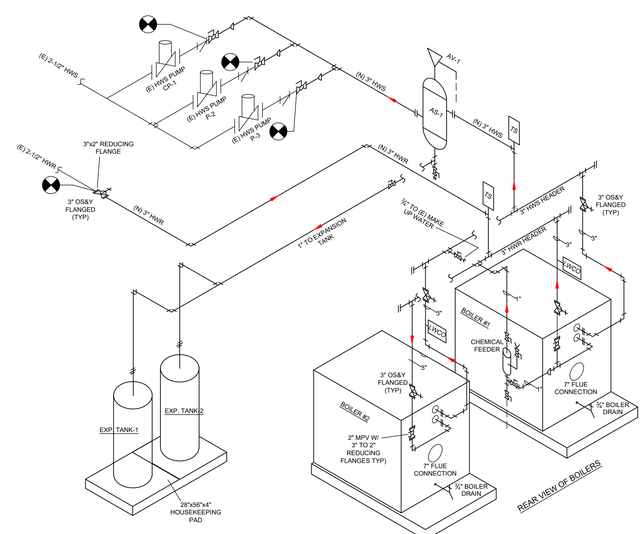
N.T.S.

1. GAS REGULATOR WITHOUT VENT
2. GAS PRESSURE PROOF SWITCHES.
3. AUTO GAS VALVE BY MANUFACTURER.
4. MODULATING VALVE BY MANUFACTURER.
5. GAS PRESSURE PROOF SWITCH.



MECHANICAL ROOM CHEMICAL GLYCOL MIXING STATION PUMP/PIPING SCHEMATIC

NOT TO SCALE (TYP FOR BOTH HW. & CW. SYSTEMS)



TYPICAL BOILER PIPING SCHEMATIC

NOT TO SCALE

(BOILER HWS&R PIPING SHALL BE PROVIDED W/ SWING JOINTS @ BOILER CONNECTIONS)
BOILERS TO BE INSTALLED PER MANUFACTURES RECOMMENDATIONS.

FOR PROJECT BIDDING

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STATE OF MAINE — JEFFREY A. ARMSTRONG No. 5372 — LICENSED PROFESSIONAL ENGINEER

ROCKLAND DISTRICT COURT
62 UNION STREET
ROCKLAND MAINE

BOILER RENOVATION PROJECT

REV	DATE	DESCRIPTION

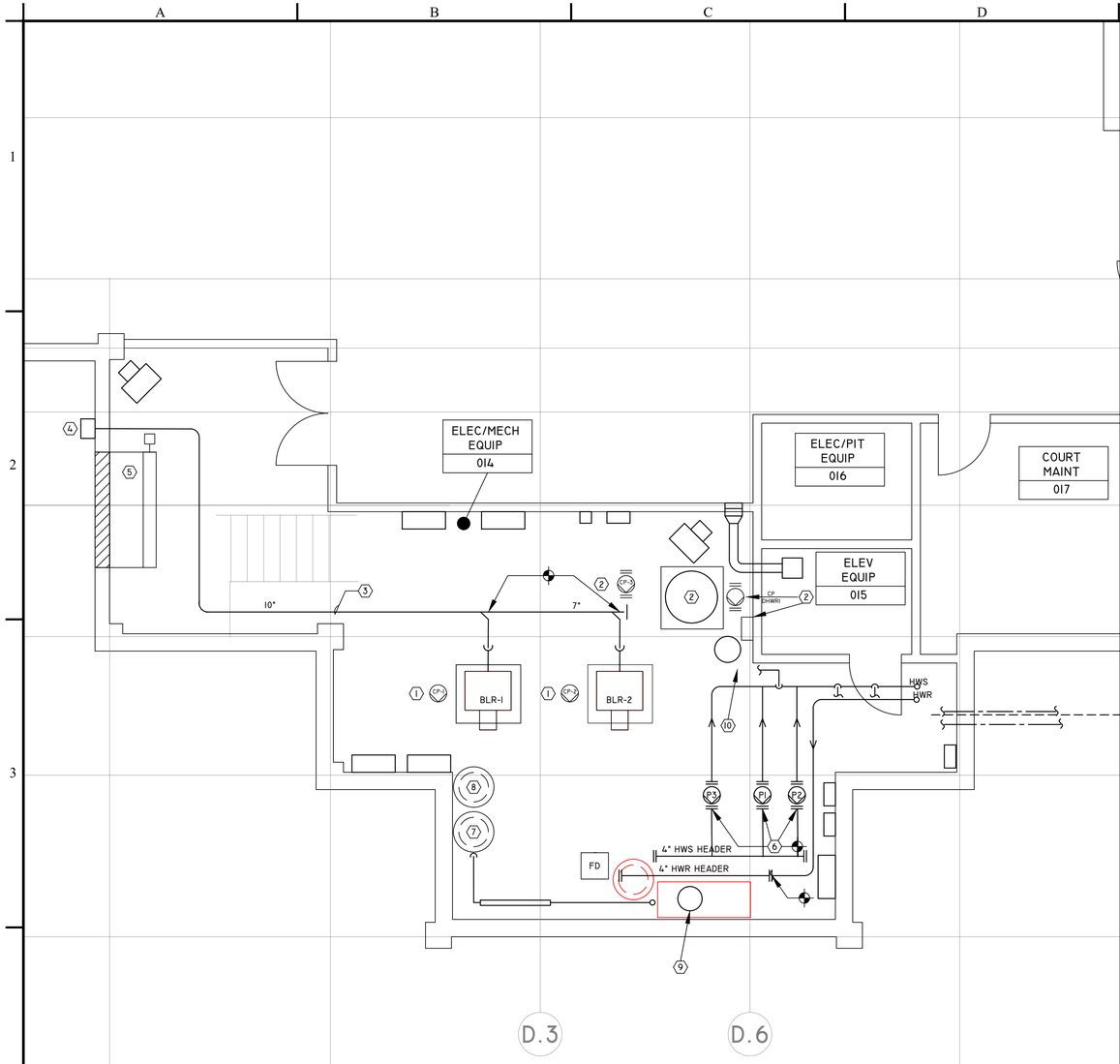
SHEET TITLE:

Mechanical Plans

08/01/2026

M-3.1

PROJECT#202606.01



PLAN NOTES:

1. NEW H.W. BOILERS 1&2 WITH INDIVIDUAL CIRCULATOR PUMPS CP-1 & CP-2.
2. NEW DHW HEATER W/MIXING VALVE STATION & CP-DHWRI PUMP.
3. EXISTING 10"Ø FLUE VENT COMMON.
4. NEW 10"Ø DIA WALL FLUE VENT DISCHARGE CAP.
5. EXISTING COMBUSTION/VENTILATION DAMPER CONTROL TO BE SEQUENCED WITH NEW BOILER OPERATION.
6. H.W. PUMP TIE IN LOCATION AT NEW 4" HWS HEADER.
7. EXIST. EXPANSION TANK LOCATION.
8. NEW EXPANSION TANK LOCATION.
9. NEW CHEMICAL MIXING TANK WITH CONTROL PANEL.
10. NEW DHW EXPANSION TANK LOCATION.

PLUMBING
SCALE ¼"=1'

0' 10' 20'

Plumbing Fixture Connection Schedule

FIXTURE DESCRIPTION	FIXTURE NOTE	DCW	DHW	OUTLET	VENT	NOTE
DHW MIX STATION	DHW MIX STATION	1"	1"	1 ¼"		MIXED DHW TEMP. SENSOR-BMS

GENERAL NOTE: MODEL # SYMONS 7-700-T-400-BV-NI-W

EXPANSION TANK SCHEDULE

TAG NO.	SERVICE	MODEL TACO	TANK VOLUME	TANK DIA.	TANK HEIGHT	ACCEPTANCE VOLUME	REMARKS
ET-1	DOMESTIC HW	PAX - 42 150	11	12	30	5.0 GAL	VERTICAL TYPICAL

DHW PUMP SCHEDULE

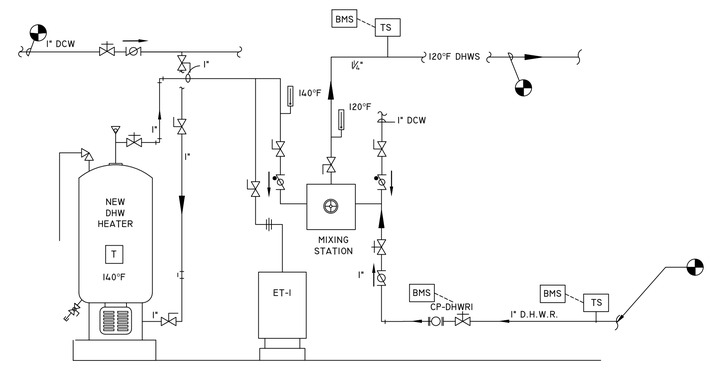
UNIT NO.	LOCATION	SYSTEM SERVED	GPM	TDH (FT)	DESIGN PRESSURE	TEMP °F MIN	TEMP °F MAX	RPM	Watts	TYPE	MODEL TACO	VOLTS	PHASE	DRIVE	REMARKS
CP-DHWR-1	MECH ROOM	DHW	5.0	15'	125	-	-	4830	44	INLINE	0015-e3-1	120	1	DIRECT	ECM 3 SPEED, STAINLESS STEEL BODY

GENERAL NOTE: BMS TO INTERFACE WITH TACO PUMP SOFTWARE

DHW TANK SCHEDULE

TAG NO.	SERVICE	MODEL VIESSMANN	STORAGE CAPACITY	FLANGE SIZE	DIA	HEIGHT	WEIGHT	RECOVERY RATE	MBH	TEMP RISE	FLOW RATE	REMARKS
DHWH-1	DHW SYSTEM	VITOCELL-V 300	119	1-1/4" NPT	36	72	278 LBS	6.1 GPM 1ST	276	90° F	28.6GPM @ 194°F	DIGITAL CONTROL
								1ST HOUR RECOVERY		90° F	28.6GPM @ 194°F	DIGITAL CONTROL

GENERAL NOTE: BMS TO INTERFACE WITH TACO PUMP SOFTWARE



DOMESTIC HOT WATER
PIPING SCHEMATIC
N.T.S

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STATE OF MAINE
JEFFREY A. ARMSTRONG
No. 13172
LICENSED
PROFESSIONAL ENGINEER

ROCKLAND DISTRICT COURT
62 UNION STREET
ROCKLAND MAINE
BOILER RENOVATION PROJECT

REV	DATE	DESCRIPTION

SHEET TITLE:
Plumbing Plans

08/01/2026

P-1.0

PROJECT#202606.01

PANEL# PPG EXISTING	PANEL RATING: 225	PHASE: 1
	MAIN RATING: 200	WIRE: 3
LOCATION: BOILER ROOM	VOLTAGE: 240V/120V	PANEL MOUNTING:SURFACE
	NUMBER OF POLES: 42	PANEL MIN. A.I.C. RATING: 22K

DESCRIPTION	CONNECTED LOAD KVA A∅	B∅	C∅	TRIP AMPS	WIRE #	CKT #	CKT #	WIRE #	TRIP AMPS	CONNECTED LOAD KVA A∅	B∅	C∅	DESCRIPTION
				25	-	1	2	-	20				
				25	-	3	4	-	20				
				30	-	5	6	-	20				
				30	-	7	8	-	20				
				70	-	9	10	-	20				
				70	-	11	12	-	20				
				20	-	13	14	-	20				
				20	-	15	16	-	20				CHEMICAL MIXING TANK
				20	-	17	18	-	20				
				20	-	19	20	-	20				
				20	-	21	22	-	20				
				20	-	23	24	-	20				
				20		25	26	-	30				
				20		27	28	-	20				
				60	-	29	30	-	70				
				60	-	31	32	-	70				
				15	-	33	34	-	100				
				15	-	35	36	-	100				
				20	-	37	38	-	90				
				15	-	39	40	-	90				
				20	-	41	42	-	20				

POWER CIRCUITS ARE NOT SHOWN. REUSE EXISTING OIL PUMP SET POWER CIRCUIT FOR CHEMICAL PUMP STATION.

PANEL# PPG-A EXISTING	PANEL RATING: 225	PHASE: 3
	MAIN RATING: MLO	WIRE: 4
LOCATION: BOILER ROOM	VOLTAGE: 240V/120V	PANEL MOUNTING:SURFACE
	NUMBER OF POLES: 36	PANEL MIN. A.I.C. RATING: 22K

DESCRIPTION	CONNECTED LOAD KVA A∅	B∅	C∅	TRIP AMPS	WIRE #	CKT #	CKT #	WIRE #	TRIP AMPS	CONNECTED LOAD KVA A∅	B∅	C∅	DESCRIPTION
				25	-	1	2	-	20				
				-	-	3	4	-	20				
				30	-	5	6	-	20				
				-	-	7	8	-	20				(E) ELEC. DHW HEATER
				70	-	9	10	-	20				SCHEDULED FOR
				-	-	11	12	-	20				DEMOLITION
				20	-	13	14	-	20				
				-	-	15	16	-	20				
				20	-	17	18	-	20				
				60	-	19	20	-	20				
				60	-	21	22	-	30				
				40	-	23	24	-	30				
				40	-	25	26	-	20				
				20	-	27	28	-	20				
				20	-	29	30	-	20				
				20	-	31	32	-	20				
				20	-	33	34	-	20				
				20	-	35	36	-	20				

EXISTING POWER CIRCUITS ARE NOT SHOWN. DEMO POWER CIRCUIT FOR EXISTING EHW HEATER BACK TO PANEL.

PANEL# EP EMERGENCY EXISTING	PANEL RATING: 225	PHASE: 1
	MAIN RATING: 200	WIRE: 3
LOCATION: BOILER ROOM	VOLTAGE: 240V/120V	PANEL MOUNTING:SURFACE
	NUMBER OF POLES: 36	PANEL MIN. A.I.C. RATING: 22K

DESCRIPTION	CONNECTED LOAD KVA A∅	B∅	C∅	TRIP AMPS	WIRE #	CKT #	CKT #	WIRE #	TRIP AMPS	CONNECTED LOAD KVA A∅	B∅	C∅	DESCRIPTION
						1	2						
						3	4						
						5	6						
						7	8						
						9	10						
						11	12						
EXISTING BOILER #1						13	14						
NEW CP-3 DHW PUMP						15	16						
						17	18						EXISTING BOILER #2
						19	20						
						21	22						
						23	24						
						25	26						
						27	28						
						29	30						
						31	32						
						33	34						
						35	36						

EXISTING POWER CIRCUITS ARE NOT SHOWN. PROVIDE 20A POWER CIRCUIT FOR NEW CP-3 DHW PUMP. REUSE EXISTING POWER CIRCUITS FOR BOILERS 1 & 2.

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ROCKLAND DISTRICT COURT
62 UNION STREET
ROCKLAND MAINE
BOILER RENOVATION PROJECT

REV	DATE	DESCRIPTION

SHEET TITLE:
ELECTRICAL SCHEDULE

08/01/2026

E-1.0

PROJECT#202606.01