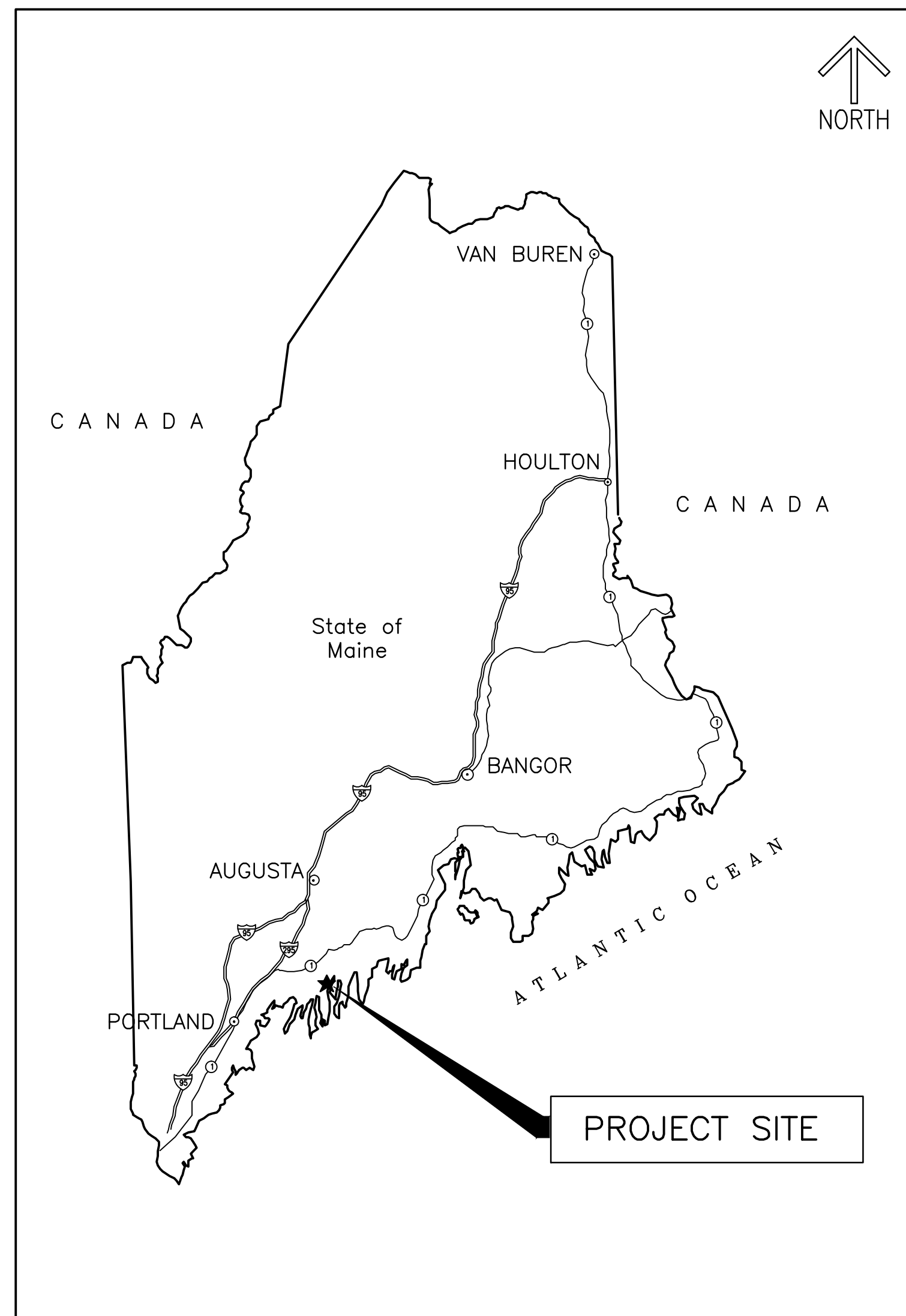


PORTLAND HOUSING AUTHORITY

Portland, Maine

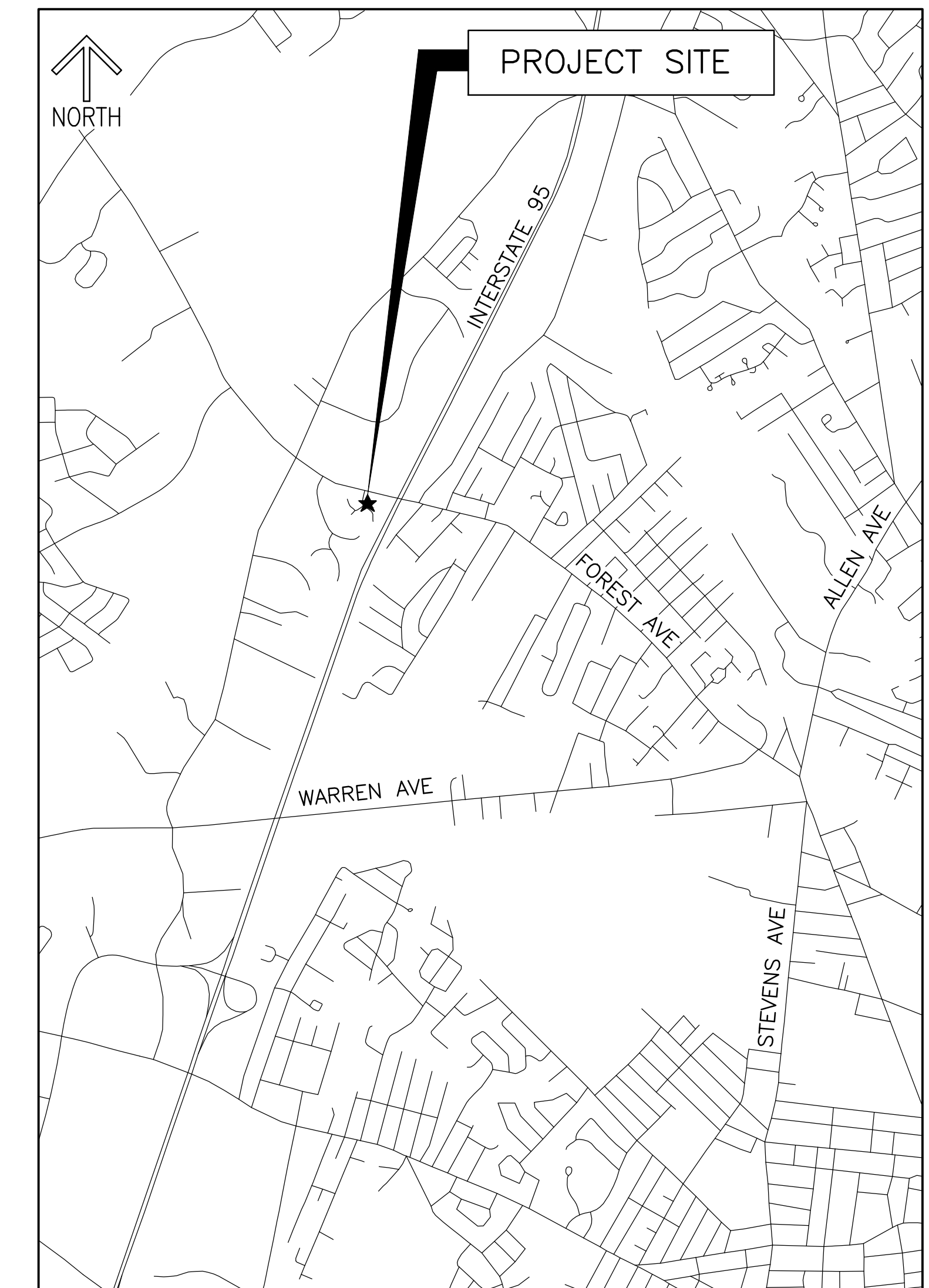
ISSUED FOR REVIEW

RIVERTON PARK BOILER REPLACEMENTS: BUILDING NOS 21,22,23



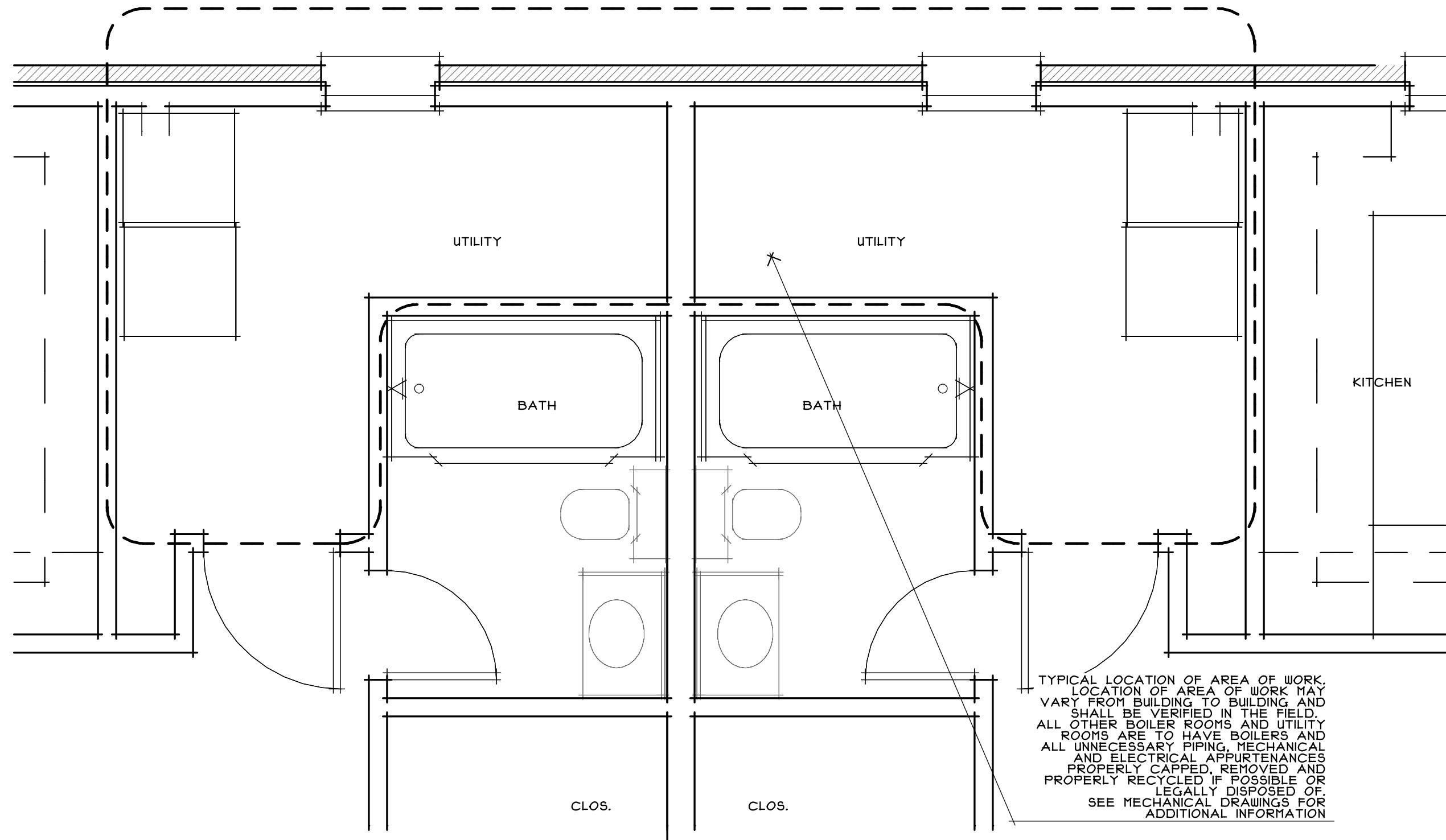
VICINITY MAP
SCALE: N.T.S.

DRAWING INDEX		
DRAWING	TITLE	SHEET NUMBER
G-001	COVER SHEET	1 OF 16
A-2	BUILDING PLAN, DEMOLITION PLANS, ELEVATION, FLOOR PLAN	2 OF 16
A-4	SECTIONS, DETAILS, SCHEDULES	3 OF 16
M-001	MECHANICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES	4 OF 16
MD-101	MECHANICAL DEMOLITION PLAN	5 OF 16
MD-401	MECHANICAL DEMOLITION PART PLANS	6 OF 16
M-101	MECHANICAL FIRST FLOOR PLAN - HEATING HOT WATER	7 OF 16
M-102	MECHANICAL FIRST FLOOR PLAN - PLUMBING	8 OF 16
M-401	MECHANICAL PART PLANS	9 OF 16
M-501	MECHANICAL DETAILS	10 OF 16
M-502	MECHANICAL SCHEMATICS	11 OF 16
M-601	MECHANICAL SCHEDULES	12 OF 16
E-001	ELECTRICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES	13 OF 16
ED-101	ELECTRICAL DEMOLITION PLAN	14 OF 16
E-101	ELECTRICAL PLAN	15 OF 16
E-601	ELECTRICAL SCHEDULES	16 OF 16

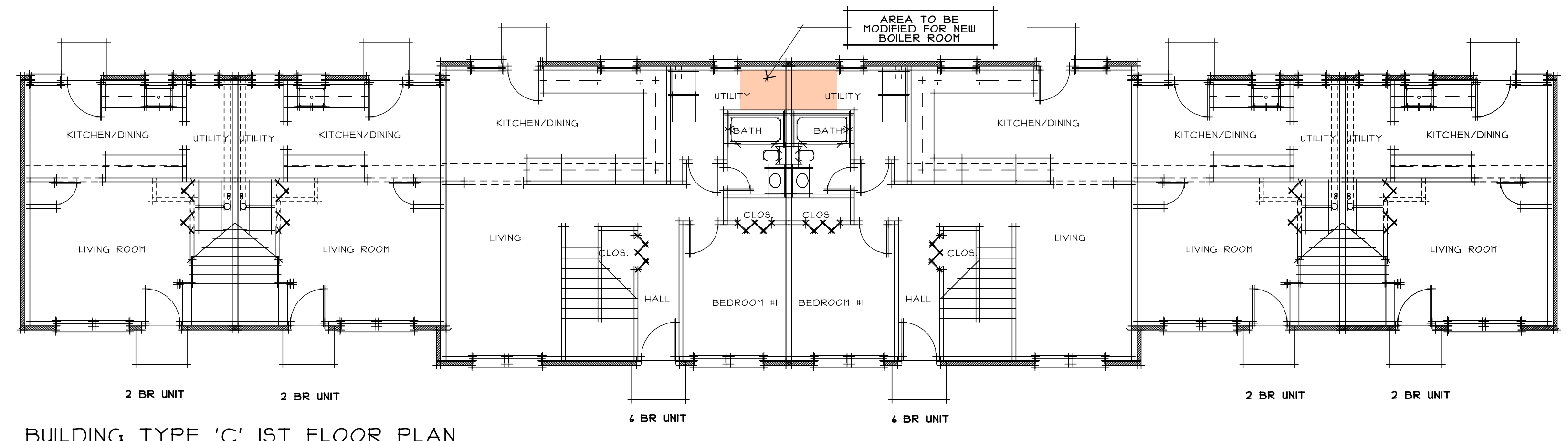


LOCATION MAP
SCALE: N.T.S.

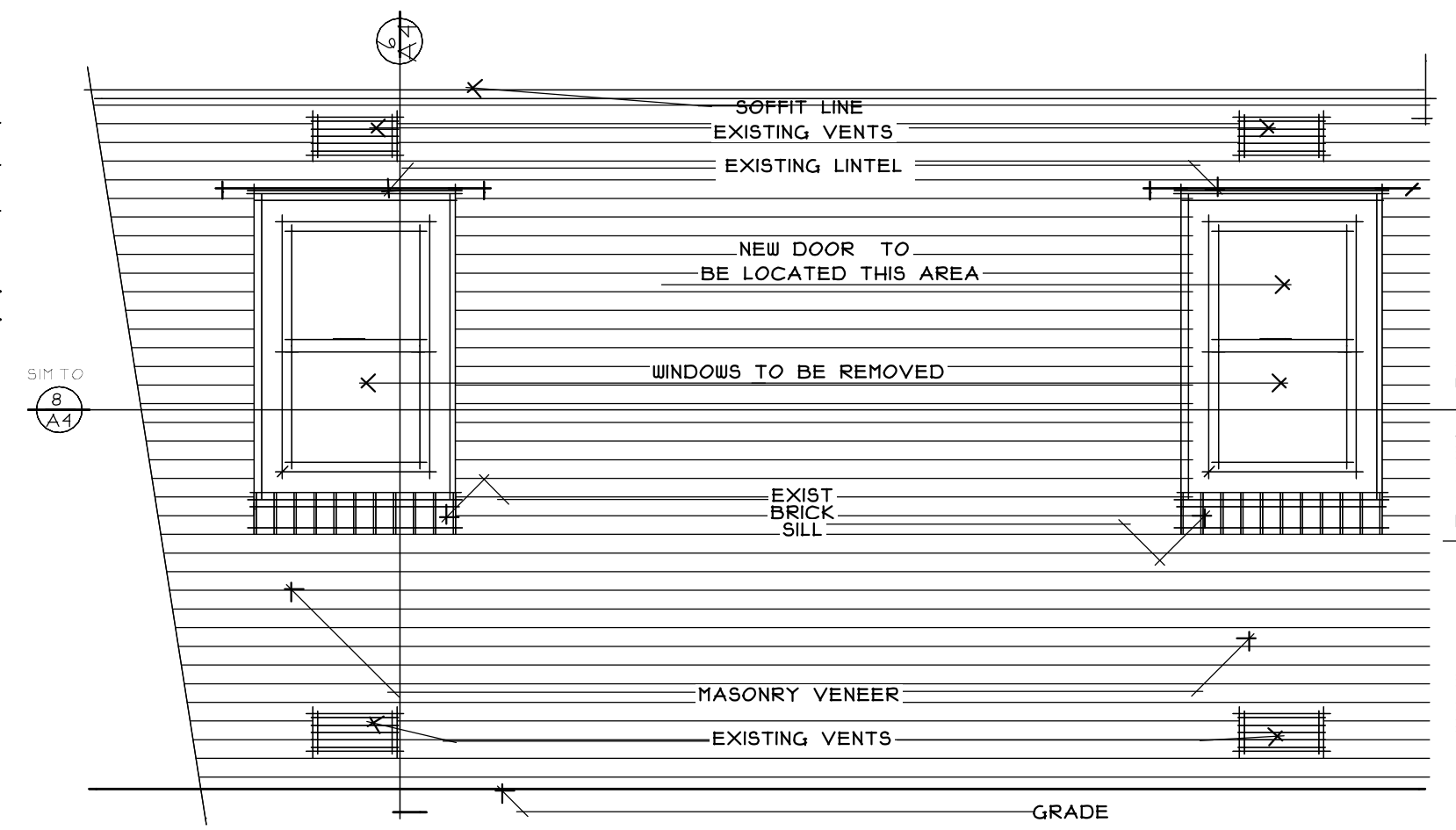
				PORTLAND HOUSING AUTHORITY PORTLAND, MAINE			
				RIVERTON BOILER REPLACEMENTS BUILDING NOS 21,22,23			
				COVER SHEET			
0	ISSUED FOR CONSTRUCTION	CSS	ERP	9-8-15			
REV	DESCRIPTION	DWN	APP	DATE			
PLEASE NOTE: THIS DOCUMENT MAY NOT ACCURATELY REPRESENT THE FINAL DOCUMENT. ONLY AN ENGINEER, ARCHITECT OR SURVEYOR SIGNED, SEALED AND DATED PAPER COPY, PROVIDED BY THIS OFFICE, MAY BE UTILIZED FOR BIDDING OR CONSTRUCTION PURPOSES.				SIZE: ANSI D DATE: 9-8-15 DES BY: ERP DWN BY: CSS CKD BY: MIF		PROJECT NO. 218.011.001 SHEET 1 OF 16	
				G-001			



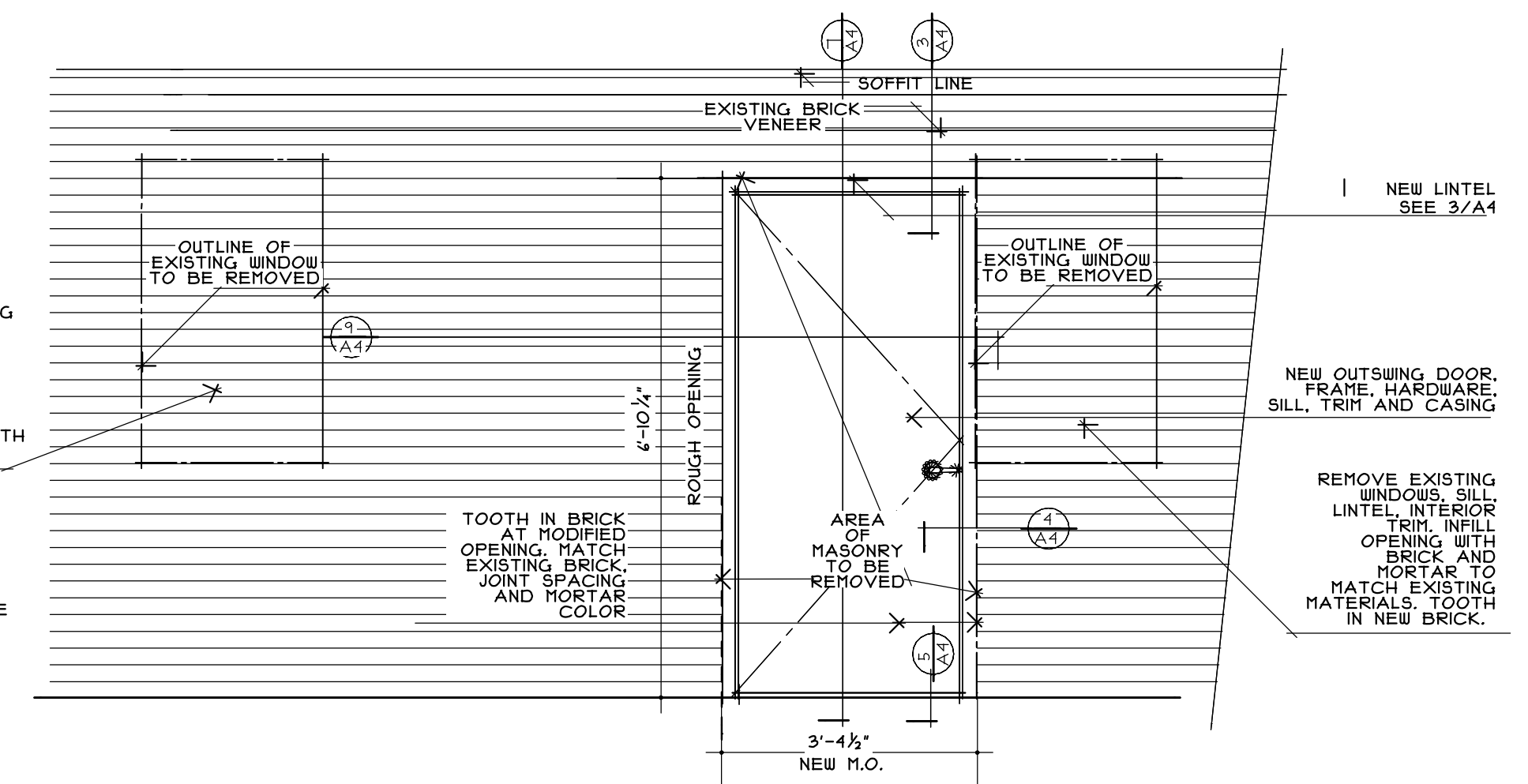
EXISTING CONDITIONS
BLDG TYPE C
 SCALE: 1/2"=1'-0"



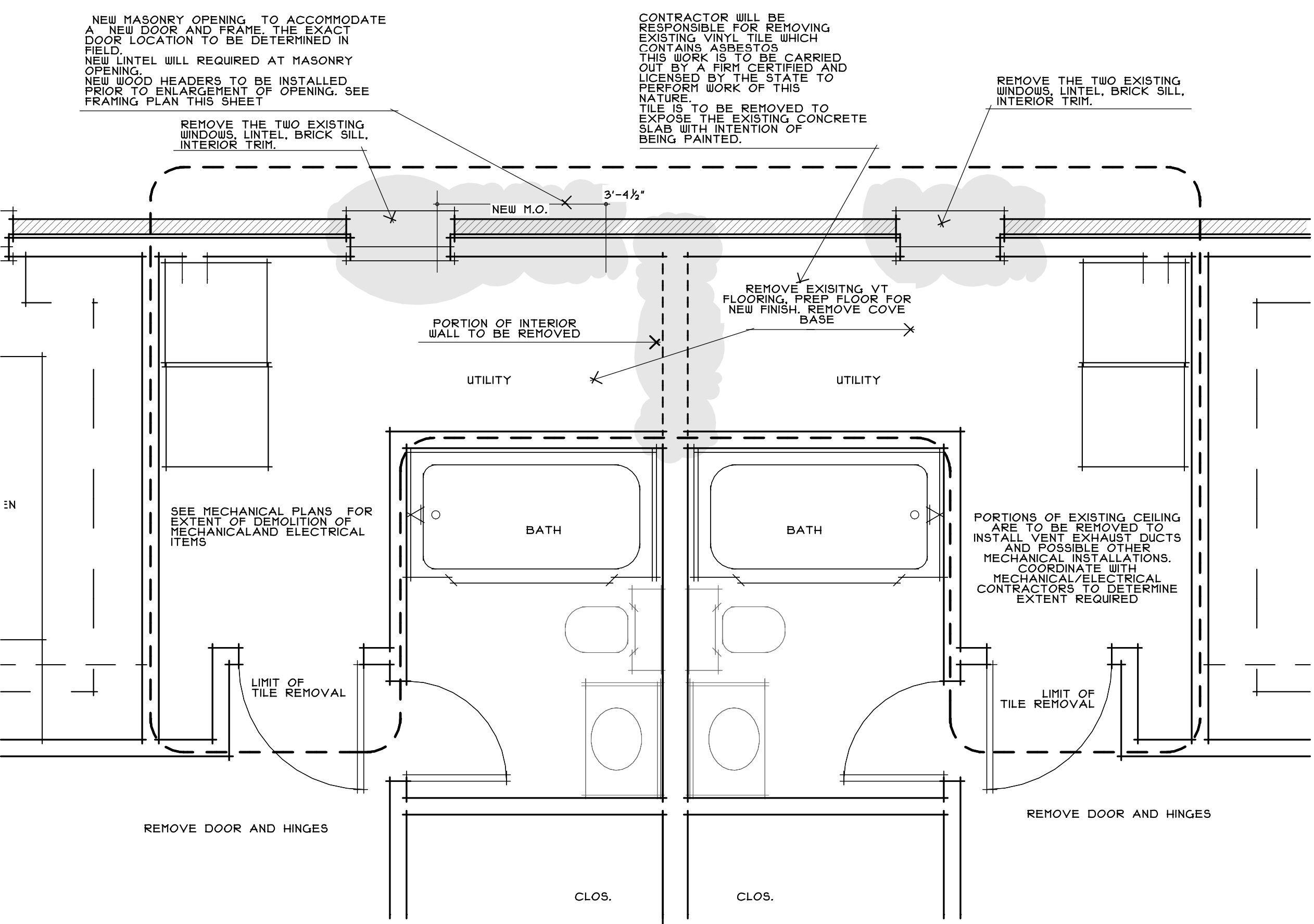
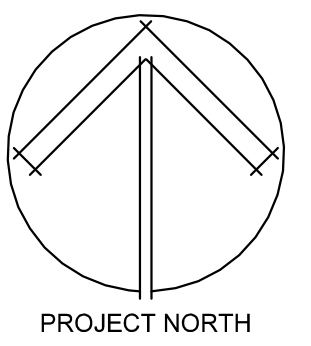
BUILDING TYPE 'C' 1ST FLOOR PLAN
 SCALE: 1/8"=1'-0"
BUILDINGS 21, 22, 23



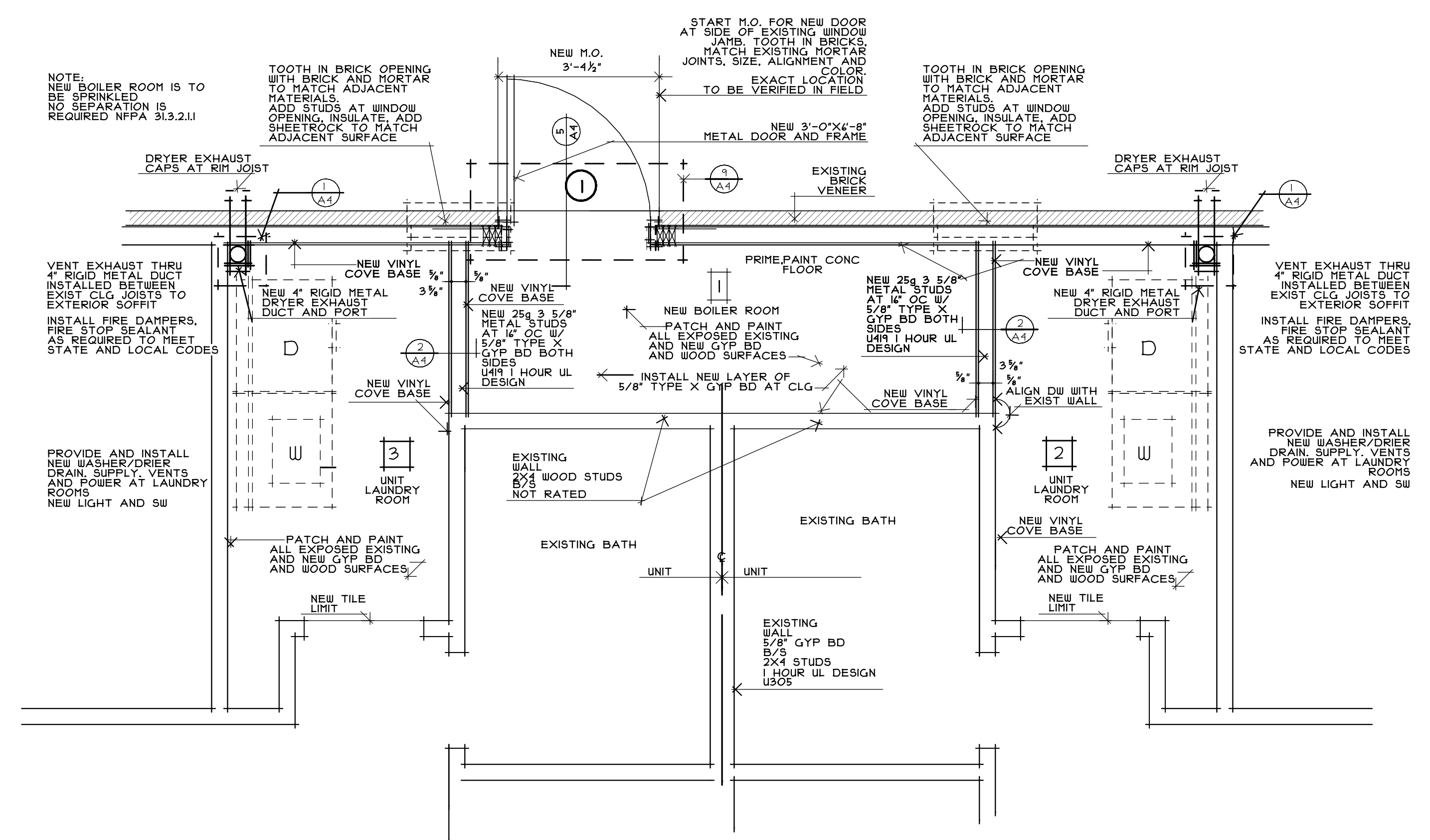
1 **EXISTING REAR ELEVATION BUILDINGS 21, 22, 23**
 SCALE: 1/2" = 1'-0"



2 **ELEVATION AT NEW REAR DOOR BUILDINGS 21, 22, 23**
 SCALE: 1/2"=1'-0"



DEMOLITION PLAN
BLDG TYPE C
 SCALE: 1/2"=1'-0"



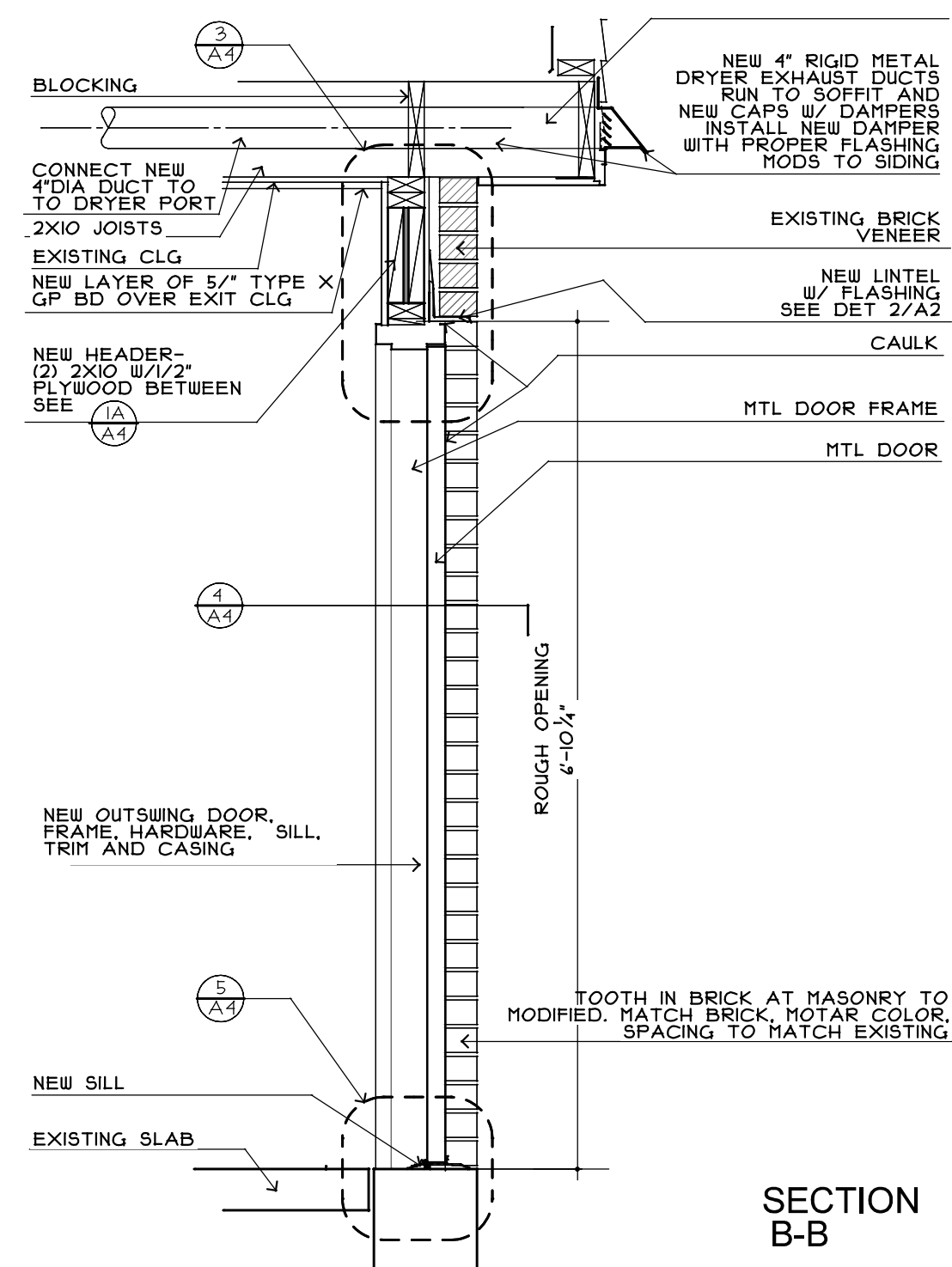
PLAN MODIFICATIONS BLDG TYPE C
 SCALE: 1/2"=1'-0"

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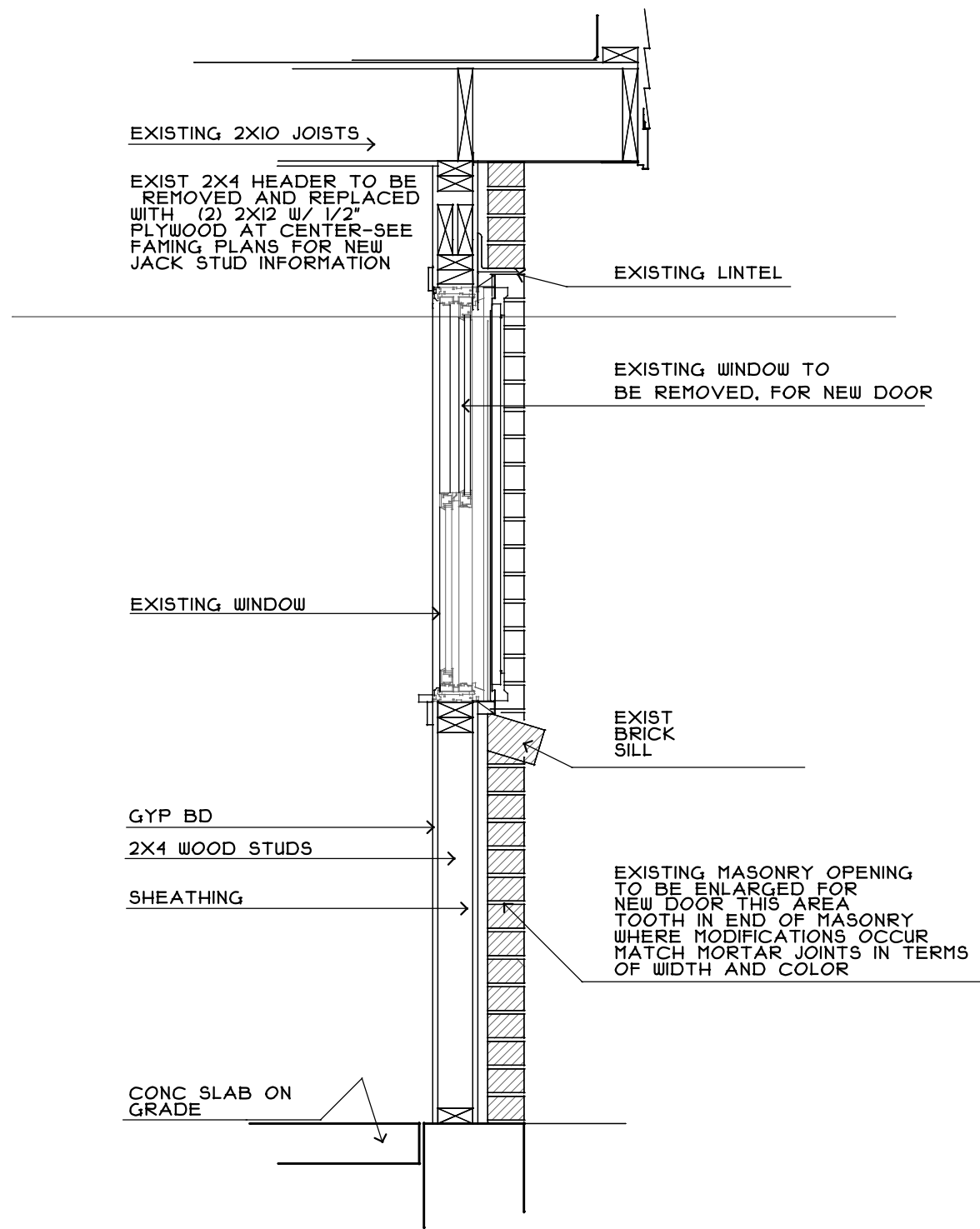
ISSUED
 revisions
 date
 SEPTEMBER, 2015
 sheet title
BUILDING PLAN
DEMOLITION PLANS
ELEVATION
FLOOR PLAN

scale
 AS NOTED
 drawn by
 SMT
 project number
 1615

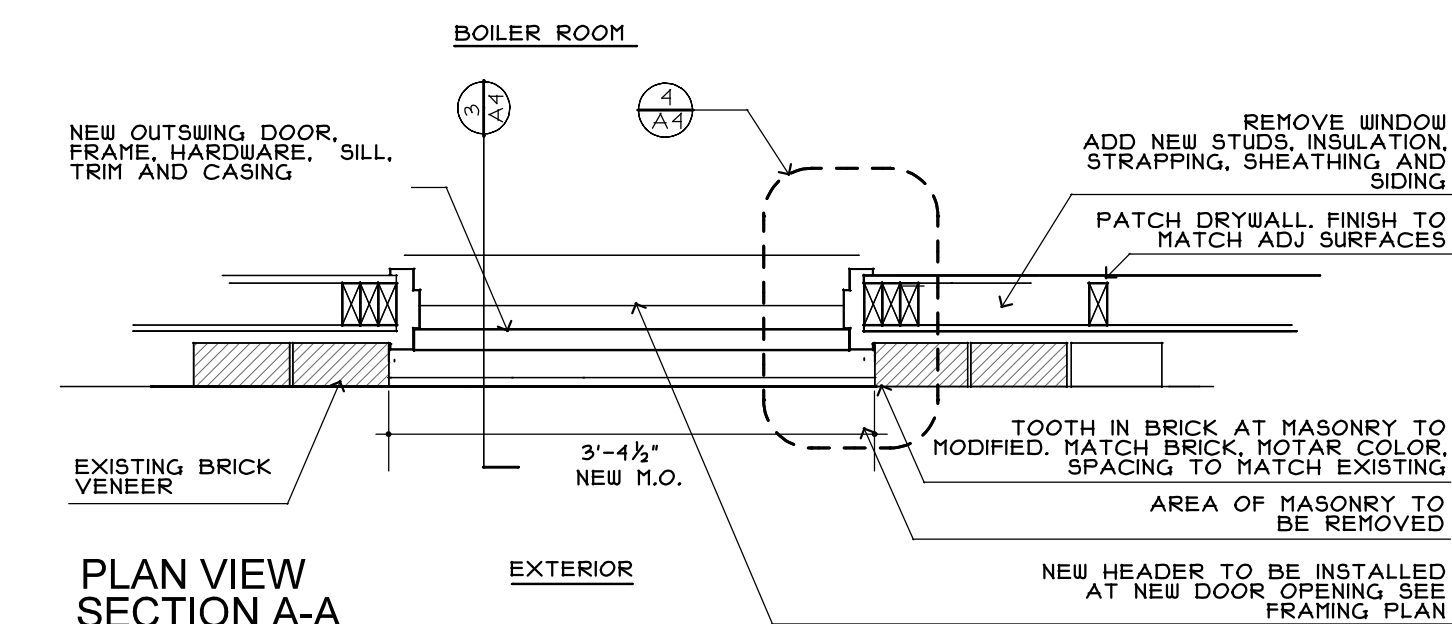
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A-2



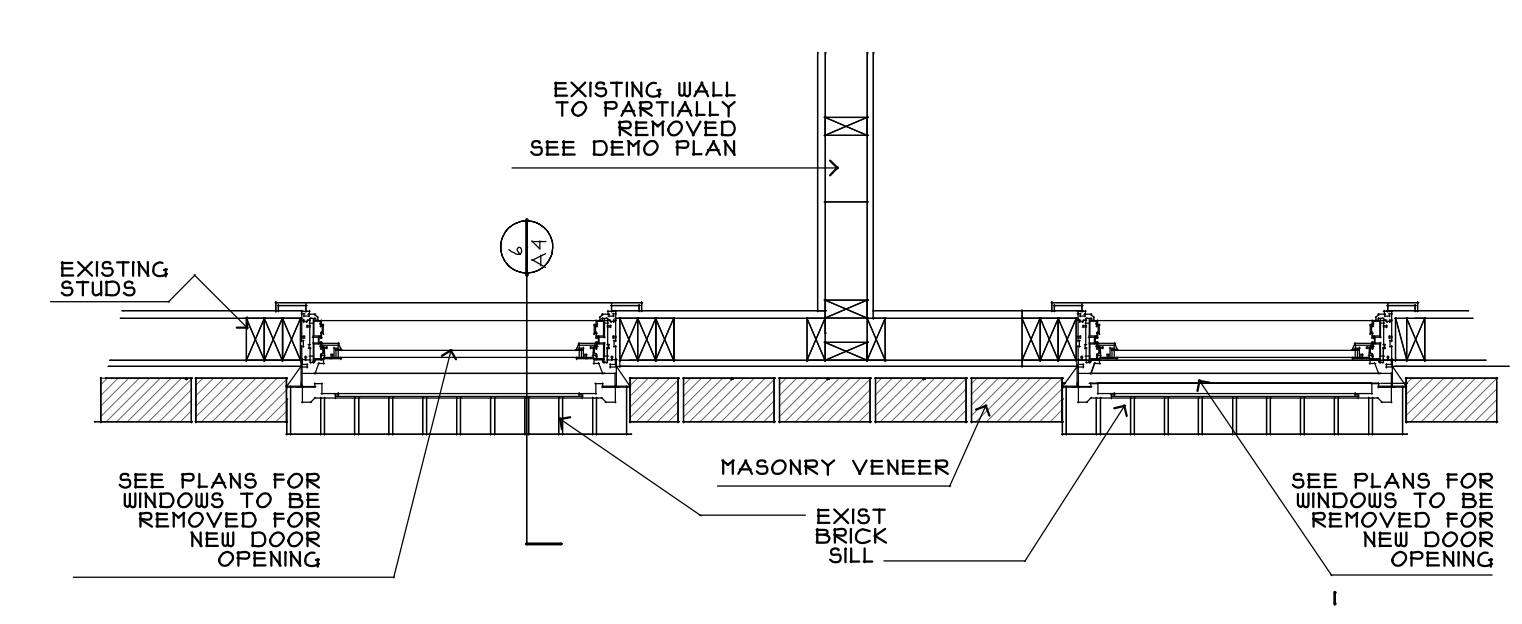
7 SECTION THRU WALL AT NEW DOOR
 SCALE: 3/4"=1'-0"



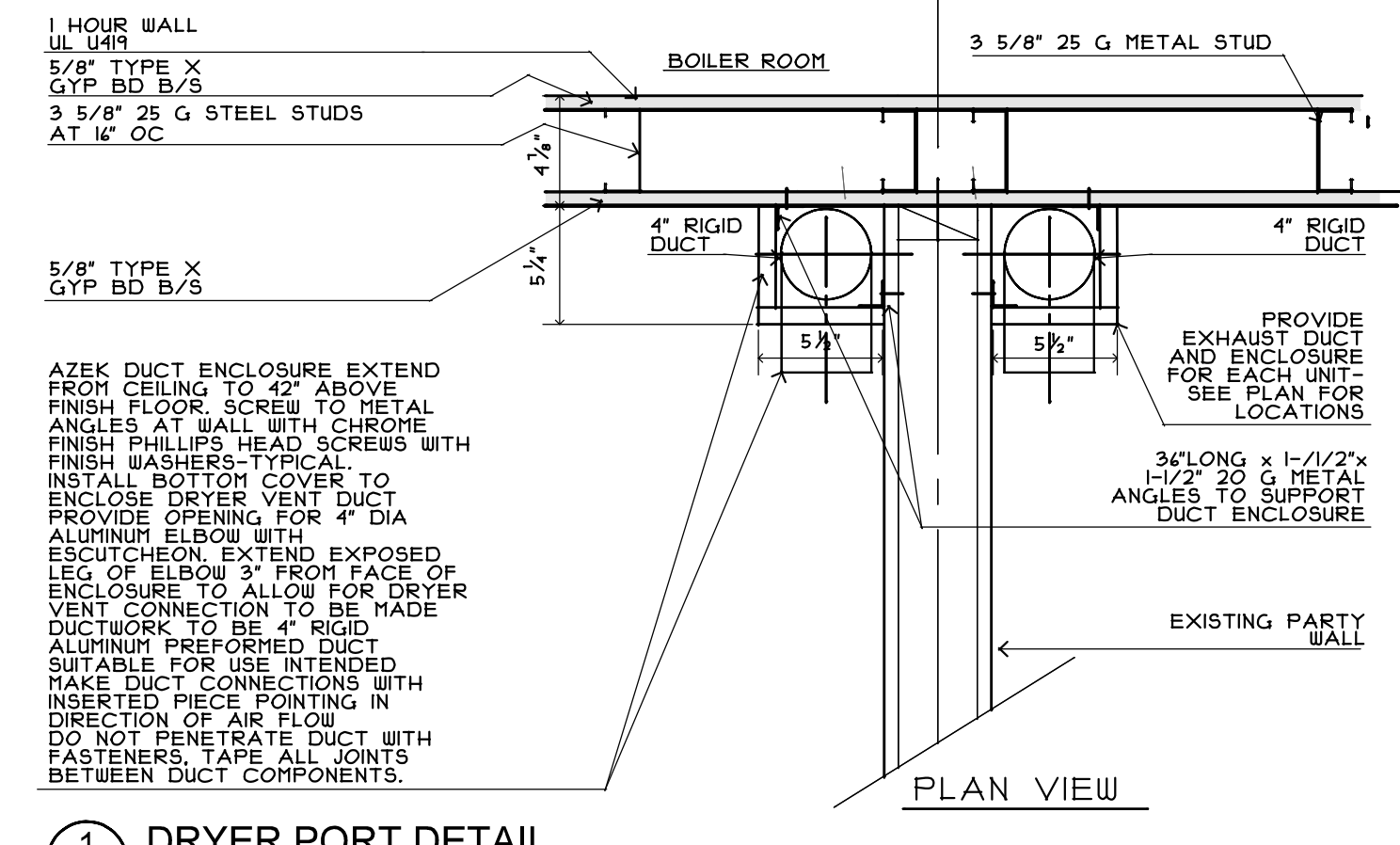
6 SECTION THRU EXISTING WINDOW
 SCALE: 3/4" =1'-0"



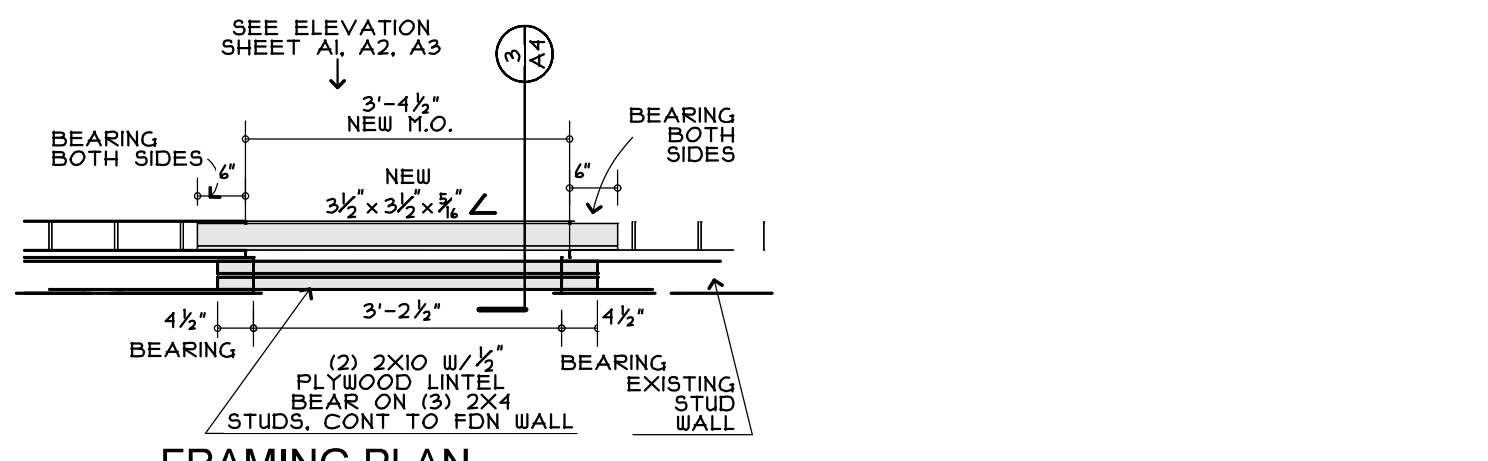
9 SECTION THRU WALL AT NEW DOOR
 SCALE: 3/4"=1'-0"



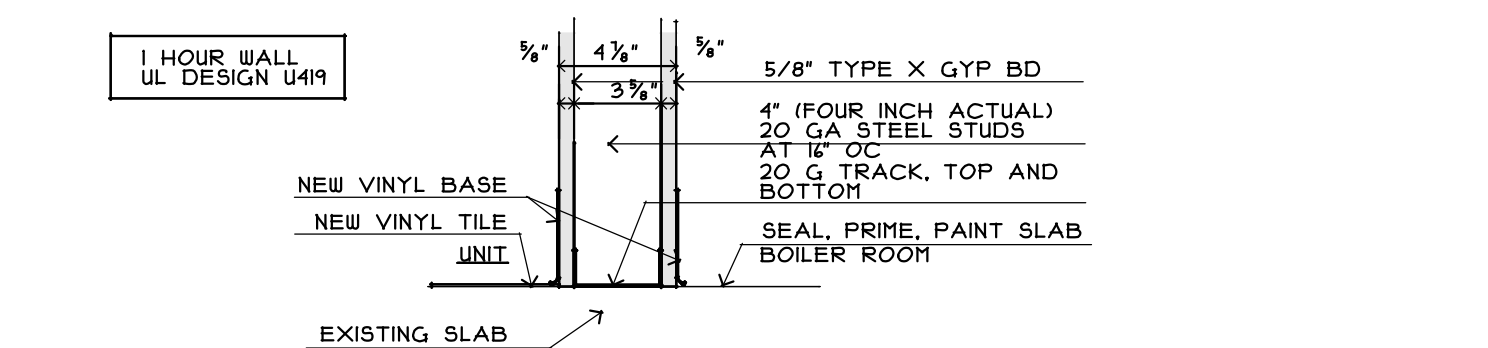
8 EXISTING PLAN SHOWING WINDOWS
 SCALE: 3/4"=1'-0"



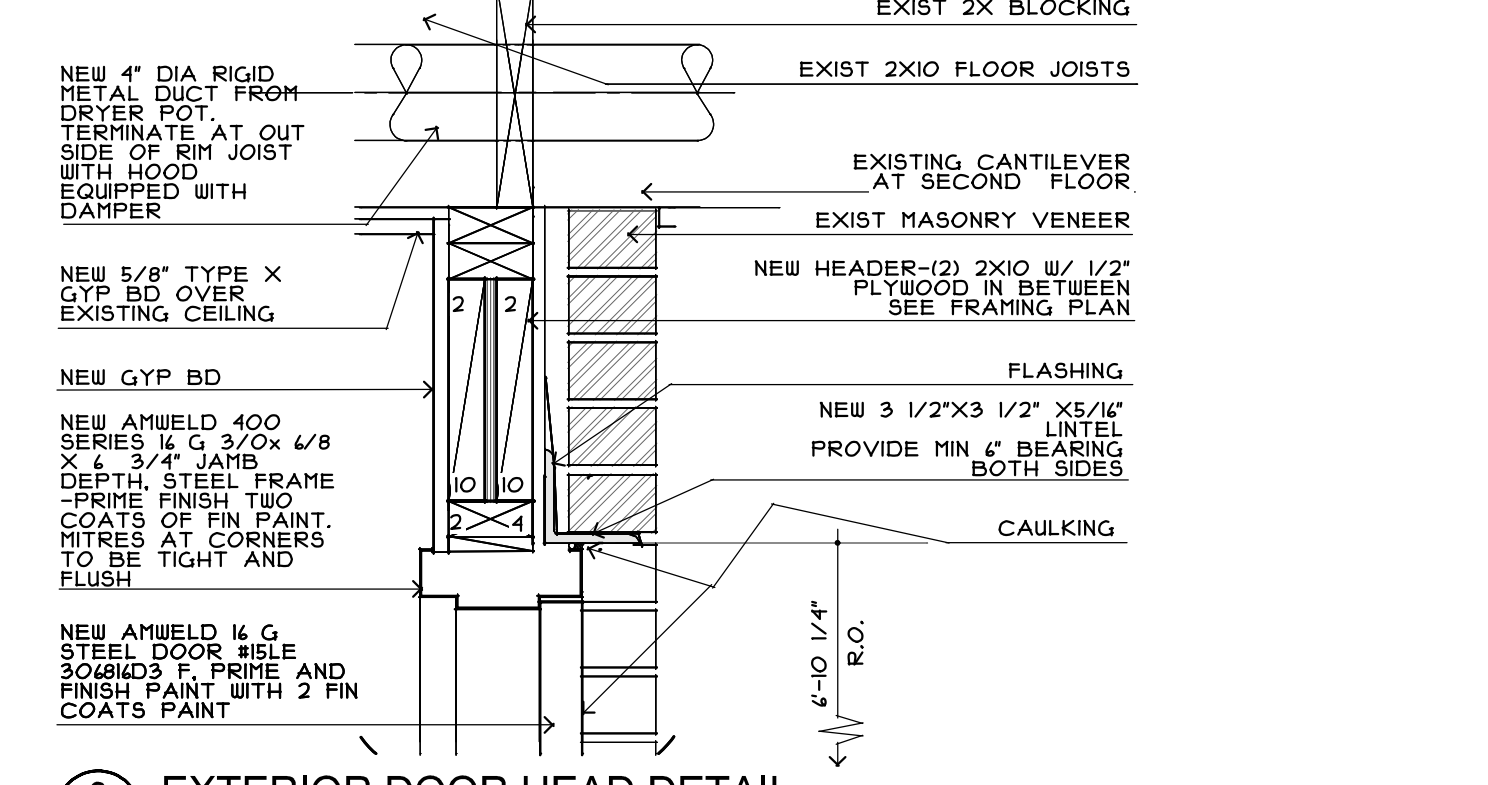
1 DRYER PORT DETAIL
 SCALE: 1 1/2"=1'-0"



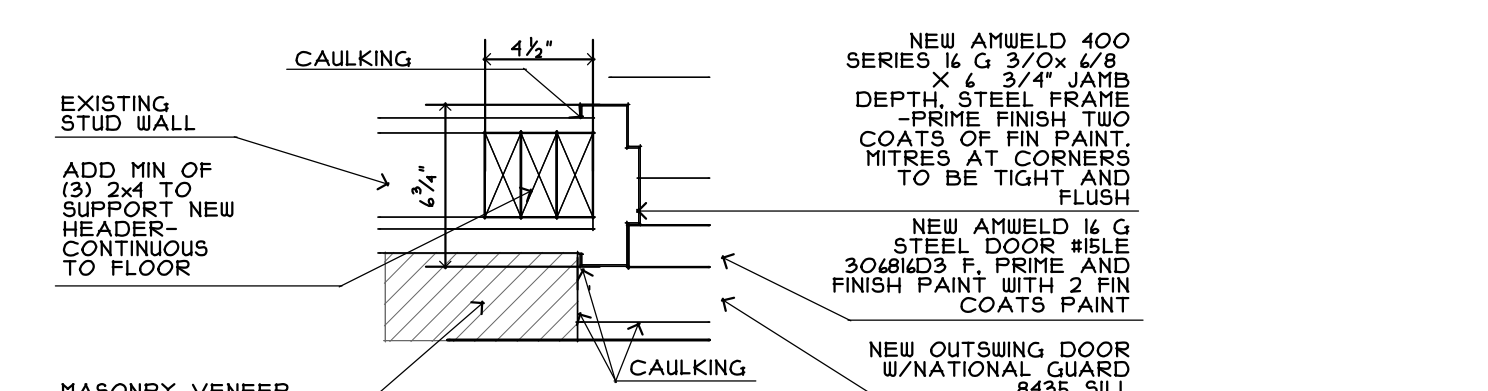
1A FRAMING PLAN AT NEW OPENING
 SCALE: 1/2"=1'-0"



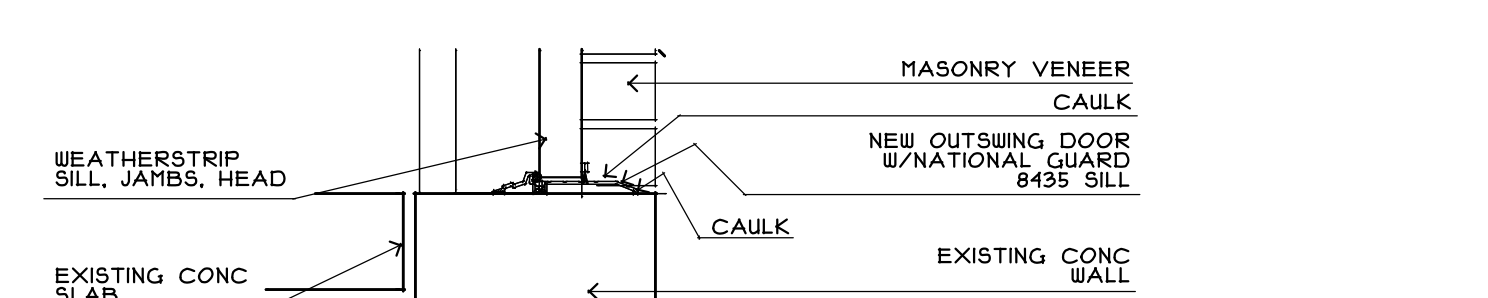
2 NEW WALL SECTION
 SCALE: 1 1/2"=1'-0"



3 EXTERIOR DOOR HEAD DETAIL
 SCALE: 1 1/2"=1'-0"

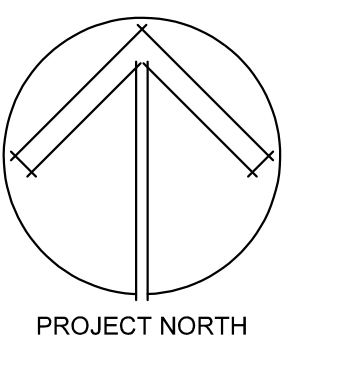


4 EXTERIOR DOOR JAMB DETAIL
 SCALE: 1 1/2"=1'-0"



5 EXTERIOR DOOR SILL DETAIL
 SCALE: 1 1/2"=1'-0"

GENERAL NOTES:
 CONTRACTOR TO FIELD VERIFY ALL MEASUREMENTS AND EXISTING CONDITIONS.
 CONTRACTOR SHALL PAY FOR ALL FEES AND OBTAIN ALL NECESSARY PERMITS.
 THE TERMS "SUPPLY," "FURNISH," "PROVIDE," ARE TO MEAN, SUPPLY AND INSTALL.
 THE BIDDER FIND ANY DISCREPANCIES IN OR OMISSIONS FROM THE DRAWINGS OR SHOULD THERE BE ANY DOUBT AS TO THEIR MEANING, BIDDER IS TO NOTIFY THE ARCHITECT IN WRITING A MINIMUM OF 10 DAYS BEFORE SUBMITTING BID. CLARIFICATION AND DRAWINGS SHALL BE ADJUSTED AS THE SITUATION REQUIRES.
 FIGURE DIMENSIONS SHALL SUPERSEDE SCALE MEASUREMENTS. LARGE SCALE DETAILS SHALL TAKE PRECEDENCE OVER SMALL AND MEASUREMENTS MUST BE VERIFIED AT THE SITE. THE MORE SPECIFIC DESCRIPTION OF THE WORK TAKES PRECEDENCE OVER THE MORE GENERAL. THE MOST RECENT DRAWING, ADDENDA, OR AGREEMENTS TAKE PRIORITY. NO ALTERATIONS SHALL BE MADE IN THE DRAWINGS EXCEPT BY THE ARCHITECT.
 IN CASE OF ANY CONFLICT OR INCONSISTENCY BETWEEN THE DRAWINGS AND OTHER DOCUMENTS, THE ARCHITECT'S INTERPRETATION SHALL GOVERN.
 ANY DISCREPANCY BETWEEN FIGURES AND DRAWING SHALL BE SUBMITTED BY THE CONTRACTOR TO THE ARCHITECT WHOSE DECISION SHALL BE CONCLUSIVE. IT IS THE UNDERSTANDING THAT THE WORK SHOWN ON THE DRAWINGS AND CALLED OUT ELSEWHERE WILL RESULT IN A COMPLETE THOROUGH, AND FINISHED PROJECT FOR THE USE INTENDED.
 WORK SHALL BE CARRIED OUT BY INDIVIDUALS EXPERIENCED IN THE VARIOUS AREAS OF WORK THAT THEY WILL BE PERFORMING.
 WORK SHALL BE PERFORMED IN A MANNER THAT IS EQUAL TO INDUSTRY STANDARD.
 CONTRACTORS ARE TO STORE, USE AND INSTALL ALL PRODUCTS, MATERIALS AND ITEMS IN SUCH A WAY THAT FOLLOWS THE VARIOUS MANUFACTURER'S SPECIFICATIONS AND INSTALLATION REQUIREMENTS.
 CONTRACTOR TO FURNISH AND INSTALL ALL LABOR MATERIALS, EQUIPMENT, LEGAL DISPOSAL OF ALL DEBRIS, AND ALL RELATED SERVICES INCIDENTAL TO THE RENOVATIONS AND ADDITION DEFINED ON THE PLANS.
 REMOVE WORK AS SHOWN ON PLANS PROVIDE ADEQUATE BRACING WHEN WORK INVOLVES STRUCTURAL MODIFICATIONS.
 REMOVE WALLS, FRAMING, ETC. TO COMPLETE FINAL LAYOUT AS NOTED ON DRAWINGS.
 REMOVE EXCESS MATERIALS FROM SITE AND DISPOSE PROPERLY.
 HAZARDOUS MATERIALS TO BE REMOVED BY CONTRACTORS LICENSED TO PERFORM THIS TYPE OF WORK. MATERIAL TO BE DISPOSED OF IN A LEGAL AND SAFE MANNER.
 WORK TO INCLUDE, BUT IS NOT LIMITED TO, THE FOLLOWING: DEMOLITION, EXCAVATION, CONCRETE WORK, LANDSCAPING AND GRADING, CARPENTRY, SIDING, ROOFING, INSULATION, DRYWALL, PAINTING, FLOORING, CABINETRY, ELECTRICAL, PLUMBING INCLUDING DESIGN AND MODIFICATION OF THE EXISTING HEATING SYSTEM TO SERVICE THE RENOVATED SPACE.



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ISSUED

revisions
 date
 SEPTEMBER, 2015
 sheet title
SECTIONS
DETAILS
SCHEDULES

scale
 AS NOTED
 drawn by
 SMT
 project number
 1615
 sheet number

ROOM FINISH SCHEDULE

ROOM NO.	ROOM NAME	WALLS				BASE				FLOOR				CEILING				REMARKS				
		NORTH	EAST	SOUTH	WEST	VINYL	WOOD	EXISTING	PAINT	SHEET VINYL	CARPET	VINYL TILE	PATCH CONC	PAINT	CLEAN	PAINT	5/8" GYP BD		MR GYP BD	1/2" GYP BD	PATCH-REPAIR	PAINT
1ST FLOOR																						
BLDG TYPE B																						
1	BOILER ROOM	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	GENERAL NOTES: METAL DOOR AND FRAME TO BE PRIMED AND PAINTED. PROVIDE PRIMER PLUS TWO COATS OF RUSTOLEUM GLOSS ALKYD PAINT AT METAL DOOR AND FRAME. REPAIR ALL DAMAGED DRYWALL SURFACES TO MATCH ADJACENT SURFACES IN TERMS OF MATERIALS AND FINISH- TYPICAL SEE PLAN FOR LOCATION OF 1/2" AND 5/8" GB. ALL WALLS, CLGS, WOOD TRIM TO BE PAINTED ONE PRIMER, 2 FIN COATS TYP USE PRIMER PLUS TWO COATS OF SHERWIN WILLIAMS HIGH PERFORMANCE ACRYLIC PAINT AT ALL DRYWALL SURFACES. PROPERLY PREPARE FLOORS AS REQUIRED TO ACCEPT NEW SURFACE FINISH AS INDICATED.
2	UNIT X LAUNDRY	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	PROPERLY PREPARE FLOORS AS REQUIRED TO ACCEPT NEW SURFACE FINISH AS INDICATED.
3	UNIT Y LAUNDRY	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	PROPERLY PREPARE FLOORS AS REQUIRED TO ACCEPT NEW SURFACE FINISH AS INDICATED.
BLDG TYPE C																						
1	BOILER ROOM	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	PROPERLY PREPARE FLOORS AS REQUIRED TO ACCEPT NEW SURFACE FINISH AS INDICATED.
2	UNIT X LAUNDRY	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	PROPERLY PREPARE FLOORS AS REQUIRED TO ACCEPT NEW SURFACE FINISH AS INDICATED.
3	UNIT Y LAUNDRY	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	PROPERLY PREPARE FLOORS AS REQUIRED TO ACCEPT NEW SURFACE FINISH AS INDICATED.
BLDG TYPE D																						
1	BOILER ROOM	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	PROPERLY PREPARE FLOORS AS REQUIRED TO ACCEPT NEW SURFACE FINISH AS INDICATED.
2	UNIT X STORAGE	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	PROPERLY PREPARE FLOORS AS REQUIRED TO ACCEPT NEW SURFACE FINISH AS INDICATED.
3	UNIT Y STORAGE	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	PROPERLY PREPARE FLOORS AS REQUIRED TO ACCEPT NEW SURFACE FINISH AS INDICATED.
BLDG TYPE E																						
1	BOILER ROOM	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	PROPERLY PREPARE FLOORS AS REQUIRED TO ACCEPT NEW SURFACE FINISH AS INDICATED.
2	UNIT X LAUNDRY	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	PROPERLY PREPARE FLOORS AS REQUIRED TO ACCEPT NEW SURFACE FINISH AS INDICATED.
3	UNIT Y LAUNDRY	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	5/8" GYP BD	MR GYP BD	1/2" GYP BD	PATCH-REPAIR	PROPERLY PREPARE FLOORS AS REQUIRED TO ACCEPT NEW SURFACE FINISH AS INDICATED.

DOOR SCHEDULE

MARK	LOCATION	TYPE	SIZE	THICKNESS	MATERIAL	MANUFACTURER	FRAME	SILL	TRIM	HARDWARE	FINISH	MFR	MODEL NO.	NOTES
1	FIRST FLOOR BOILER ROOM	SMOOTH FLUSH	3'-0" x 4'-8"	1 3/4"	STEEL	AMHIELD 1/4 GA BLE 3048 D3 F B-LABEL	STEEL-AMHIELD 400 SERIES 1/4 GA 3/2x4 1/2x 3/4x4x1/2 20 MIN	NATIONAL GUARD-THERMAL BARRIER THRESHOLD BURSEAL MODEL 858	INTERIOR WOODS PAINTED METAL FRAME	CLASSROOM LOCKSET 15 PR 45x45 HINGES	424 U524D	SCHLAGE STANLEY	D-SERIES RHODES 424 FBB114	OUTSWING DOOR DOOR SILL AND WEATHERSTRIP, PAINT COORDINATE W/OOWNER REGARDING KEYS COORDINABILITY REGARDING KEYS REGS DOOR STOP F434 24D FIN OUTSWING THRESHOLD DUR-O-MATIC SCRO ALUM FIN CLOSER. USED DOOR STOP F454 24D FIN B-LABEL

X:\218 Portland Housing Authority\218.011.001 - Riverton Boiler Replacements\Drawings\Phase 3\Sheets\M-001.dwg - 9/9/2015 9:00 AM - CRAIG SMITH

ABBREVIATIONS			MECHANICAL SYMBOLS			PIPING SYMBOLS			GENERAL NOTES		
<p>⊙ AT A AMP, COMPRESSED AIR ABV ABOVE AC AIR-CONDITIONING ACH AIR CHANGES PER HOUR AD ACCESS DOOR ADA AMERICANS WITH DISABILITIES ACT AF AIR FILTER, AIR FLOW AFF ABOVE FINISHED FLOOR AFM AIR FLOW MEASURING STATION AHU AIR-HANDLING UNIT AL ACOUSTICAL LINER AMB AMBIENT AP ACCESS PANEL APD AIR PRESSURE DROP APPROX APPROXIMATELY AS AIR SEPARATOR ASME AMERICAN SOCIETY OF MECHANICAL ENGINEERS ATC AUTOMATIC TEMPERATURE CONTROL ATT ACOUSTICAL ATTENUATOR AV AUTOMATIC VENT B BOILER BA BREATHING AIR BDD BACKDRAFT DAMPER BHP BRAKE HORSEPOWER BLDG BUILDING BOT BOTTOM BTUH BTU PER HOUR C CENTERLINE, CONVECTOR, CELSIUS CA COMPRESSED AIR CAP CAPACITY CD CONDENSATE DRAIN CF CIRCULATING FAN CFM CUBIC FEET PER MINUTE CH CHILLER CHWP CHILLED WATER PUMP CHWR CHILLED WATER RETURN CHWS CHILLED WATER SUPPLY CLG CEILING CO CLEAN OUT/CARBON MONOXIDE COL COLUMN CONC CONCRETE COND CONDENSATE CONN CONNECTION CONT CONTINUATION CONV CONVECTOR CP CONTROL PANEL, CONDENSATE PUMP CR CONDENSATE RETURN CSEA CU CONFINED SPACE EXHAUST AIR CU CONDENSING UNIT CUH CABINET UNIT HEATER CW COLD WATER CWR COLD WATER RETURN CWS COLD WATER SUPPLY CV CONTROL VALVE D DRAIN dB DECIBLES DB DRY BULB DDC DIRECT DIGITAL CONTROL DEG DEGREE ∅ DIA DIAMETER DIFF DIFFERENTIAL DHW DOMESTIC HW HEATER DISCH DISCHARGE DN DOWN DOM DOMESTIC DP,DPS DIFFERENTIAL-PRESSURE SENSOR DTWR DUAL TEMPERATURE WATER RETURN DTWS DUAL TEMPERATURE WATER SUPPLY DWG DRAWING EA EACH, EXHAUST AIR EAT ENTERING AIR TEMPERATURE EC ELECTRICAL CONTRACTOR EDR EQUIVALENT DIRECT RADIATION EF EXHAUST FAN EFF EFFICIENCY EGT ENTERING GLYCOL TEMPERATURE ELEC ELECTRIC ELEV ELEVATION ENT ENTERING EPDM ETHYLENE PROPYLENE DIENE MEMBRANE EQUIP EQUIPMENT ERV ENERGY RECOVERY VENTILATOR ESP EXTERNAL STATIC PRESSURE ET EXPANSION TANK EVAP EVAPORATOR EWC ELECTRIC WATER COOLER EWT ENTERING WATER TEMPERATURE EXH, E EXHAUST EXIST EXISTING EXP EXPANSION</p>	<p>EXT EXPANSION TANK F FAN, DEGREES FAHRENHEIT FA FRESH AIR FAI FRESH AIR INTAKE FC FLEX CONNECTOR FCU FORWARD CURVED FLOOR CLEANOUT FD FIRE DAMPER, FLOOR DRAIN FF FINISH FLOOR FIX FIXTURE FLA FULL LOAD AMPS FLR FLOOR FOB FLAT ON BOTTOM FOR FUEL OIL RETURN FOS FUEL OIL SUPPLY FOT FLAT ON TOP FS FLOW SWITCH FSD FIRE/SMOKE DAMPER FTR,FR FIN TUBE RADIATION GA GAUGE GAL GALLONS GALV GALVANIZED GMU GLYCOL MAKE-UP UNIT GC GENERAL CONTRACTOR GP GLYCOL PUMP GPH GALLONS PER HOUR GPM GALLONS PER MINUTE GR GLYCOL RETURN GRH GRAVITY RELIEF HOOD GS GLYCOL SUPPLY GSM GALVANIZED SHEET METAL GYP GYPSUM WALLBOARD HC HEATING COIL HG MERCURY HHWR HEATING HOT WATER RETURN HHWS HEATING HOT WATER SUPPLY HP HORSEPOWER, HIGH PRESSURE HR HOUR HT HEIGHT HV HEATING AND VENTILATING UNIT HVAC HEATING, VENTILATING AND AIR CONDITIONING (UNIT) HWC HOT WATER HWR HOT WATER COIL HWS HOT WATER RETURN HX HEAT EXCHANGER HZ HERTZ IBR HYDRONICS INSTITUTE ICU INTENSIVE CARE UNIT ID INSIDE DIAMETER IN INCHES INDIR INDIRECT WASTE IU INDOOR UNIT KW KILOWATT L LENGTH, LOUVER LAT LEAVING AIR TEMPERATURE LB POUND LD LINEAR DIFFUSER LDB LEAVING DRY BULB LF LINEAR FEET LG LONG LGT LEAVING GLYCOL TEMPERATURE LOC LOCATION/ LOCATED LPS LOW PRESSURE STEAM LRA LOCKED ROTOR AMPS L/S LITERS PER SECOND LVG LEAVING LWB LEAVING WET BULB LWT LEAVING WATER TEMPERATURE MANUF MANUFACTURER MAX MAXIMUM MAX PD MAXIMUM PRESSURE DROP MBH 1000 BTU PER HOUR MBU 1000 BTU MC MECHANICAL CONTRACTOR MCA MAXIMUM CIRCUIT AMPS MCC MOTOR CONTROL CENTER MD MOTORIZED DAMPER MECH MECHANICAL MEZZ MEZZANINE MFG MANUFACTURER MIN MINIMUM, MINUTES m METER m2 METER SQUARED mm MILLIMETER MNTD MOUNTED MUA MAKE-UP-AIR MUW MAKE-UP-WATER</p>	<p>N/A NOT APPLICABLE NC NORMALLY CLOSED, NOISE CRITERIA NFPA NATIONAL FIRE PROTECTION ASSOCIATION NIC NOT IN CONTRACT NIS NOT IN SCOPE NO NORMALLY OPEN, NUMBER NO2 NITROGEN DIOXIDE NTS NOT TO SCALE OA OUTSIDE AIR OAI OUTSIDE AIR INTAKE OAT OUTSIDE AIR TEMPERATURE OBD OPPOSED BLADE DAMPER OC ON CENTER OD OUTSIDE DIAMETER OED OPEN ENDED DUCT OEV OIL SAFETY VALVE OSV OUTSIDE AIR TEMPERATURE PUMP, PITCH OUT OUT P PASCAL PA PLUMBING CONTRACTOR PC PRESSURE DROP PD PRESSURE DROP PH PHASE PLMB PLUMBING PRESS PRESSURE PRV PRESSURE REDUCING VALVE PSI POUNDS PER SQUARE INCH PSIG POUNDS PER SQUARE INCH GAUGE PT PRESSURE TREATED PTS COMBINATION PRECIPITATION OA TEMPERATURE SENSOR PVC POLY VINYL CHLORIDE QTY QUANTITY R RADIUS, RETURN RA RETURN AIR RAD RADIATOR RAF, RF RETURN AIR FAN RAT RETURN AIR TEMPERATURE RELIEF REL REQUIRED REQ'D RETURN RET, R RELATIVE HUMIDITY RH REFRIGERANT LIQUID RL ROOM RPM REVOLUTIONS PER MINUTE RS REFRIGERANT SUCTION RTU ROOFTOP UNIT SA SUPPLY DIFFUSER S SUPPLY AIR SCR SCREEN SD SMOKE DAMPER SF SQUARE FOOT SIM SIMILAR SHEET METAL AND AIR CONDITIONING CONTRACTORS' NATIONAL ASSOCIATION SOV SHUT OFF VALVE SP STATIC PRESSURE SPH STATIC PRESSURE HIGH LIMIT SPL STATIC PRESSURE LOW LIMIT SPS STATIC PRESSURE SENSOR SQ SQUARE SRV SAFETY RELIEF VALVE SS STAINLESS STEEL STL STEEL STM STEAM SUP, S SUPPLY T TEMPERATURE SENSOR, THERMOSTAT TC TOTAL COOLING TEMP TEMPERATURE TG TRANSFER GRILLE TSP TOTAL STATIC PRESSURE TYP TYPICAL UH UNIT HEATER UL UNDERWRITERS LABORATORY V VENT VAV VARIABLE AIR VOLUME VD VOLUME DAMPER VELOCITY VFD VARIABLE FREQUENCY DRIVE VIF VERIFY IN FIELD VTR VENT THRU ROOF W WIDTH, WATT W/ WITH WB WET-BULB WC WATER COLUMN WCO WALL CLEAN OUT WEA WELDING EXHAUST AIR WF WALL FAN WG WATER GAUGE WH WATER HEATER WMS WIRE MESH SCREEN WPD WATER PRESSURE DROP WT WEIGHT</p>	<p>SECTION NUMBER DRAWING WHERE SECTION IS REFERENCED DRAWING WHERE SECTION IS DRAWN DETAIL NUMBER DRAWING WHERE DETAIL IS REFERENCED DRAWING WHERE DETAIL IS DRAWN SYMBOL PER ABBREVIATION LIST EQUIPMENT SEQUENCE NUMBER DIFFUSER, REGISTER OR GRILLE SEQUENCE NUMBER CFM GPM SETTING FOR BALANCING VALVE DEMOLITION KEYED NOTE (NUMBER) KEYED NOTE (NUMBER) REVISION (LETTER OR NUMBER) RETURN OR EXHAUST GRILLE, REGISTER SUPPLY DIFFUSER, REGISTER, GRILLE ACCESS DOOR UNIT HEATER PROPELLER FAN CIRCULATING FAN ROOFTOP EXHAUST FAN DIRECTION OF AIR FLOW DIRECTION OF AIR FLOW EXHAUST DOOR LOUVER VOLUME DAMPER FIRE DAMPER MOTORIZED DAMPER, PARALLEL BLADE MOTORIZED DAMPER, OPPOSED BLADE FIRE DAMPER SMOKE DAMPER THERMOSTAT HUMIDITY SENSOR CO & NO2 GAS SENSOR FAN OVERRIDE SWITCH SQUARE ELBOW WITH TURNING VANES FLEXIBLE DUCT FLEXIBLE CONNECTOR DISCONNECT STARTER/DISCONNECT PUMP DIFFERENTIAL PRESSURE CONTROLLER PRESSURE SENSOR TEMPERATURE SENSOR CEILING SUPPLY DIFFUSER W/ DIRECTION SHOWN BY ARROWS DUCT TRANSITION FROM RECTANGULAR TO ROUND CONNECT TO EXISTING INLINE CENTRIFUGAL FAN</p>	<p>BALANCING VALVE COMBINATION FLOW MEASURING/ BALANCING VALVE (CIRCUIT SETTER) BUTTERFLY VALVE GATE VALVE LUBRICATED PLUG VALVE BALL VALVE BALL VALVE IN VERTICAL PLUG VALVE CHECK VALVE PRESSURE REDUCING VALVE TWO-WAY AUTOMATIC CONTROL VALVE SAFETY RELIEF VALVE THREE-WAY AUTOMATIC CONTROL VALVE STRAINER W/BALL DRAIN VALVE, HOSE BIB AND CAP UNION OR FLANGE AS DICTATED BY PIPE SIZE PIPE TEE FROM TOP PIPE TEE FROM BOTTOM PIPE RISE PIPE DROP END CAP PRESSURE GAUGE W/BALL VALVE (GATE VALVE AND SIPHON FOR STEAM) THERMOMETER TEMPERATURE/PRESSURE WELL "PETE'S PLUG" AUTOMATIC AIR VENT WITH ISOLATION VALVE MANUAL AIR VENT REDUCER (ECCENTRIC-FOB OR FOT) REDUCER (CONCENTRIC) FLEXIBLE PIPE CONNECTION VIBRATION ISOLATOR DIRT LEG DIRECTION OF FLOW OF PIPE PIPE PITCH UP IN DIRECTION OF FLOW PIPE PITCH DOWN IN DIRECTION OF FLOW FUSOMATIC VALVE FLOW MEASURING STATION</p>	<ol style="list-style-type: none"> PERFORM ALL WORK IN ACCORDANCE WITH LATEST VERSIONS OF APPLICABLE FEDERAL, STATE, AND LOCAL CODES, REGULATIONS, AND ORDINANCES AS WELL AS BUILDING OWNER REQUIREMENTS AND MANUFACTURER RECOMMENDATIONS. CODES AND STANDARDS INCLUDE, INTERNATIONAL MECHANICAL CODE, MAINE UNIFORM ENERGY & BUILDING CODE, MAINE STATE PLUMBING CODE AND NFPA. CONTRACTOR SHALL MAKE ARRANGEMENTS TO VISIT THE SITE PRIOR TO BIDDING TO DETERMINE PRE-EXISTING CONDITIONS AND ALL WORK NECESSARY FOR THE PROJECT. DRAWINGS ARE DIAGRAMMATIC; OFFSETS, OBSTRUCTIONS, AND EXISTING CONFIGURATIONS AND CONSTRAINTS MUST BE FIELD VERIFIED. IT IS THE INTENT OF THESE CONTRACT DOCUMENTS TO PROVIDE SYSTEMS THAT ARE FULLY TESTED AND OPERATIONAL. ANY COMPONENTS OR LABOR NOT MENTIONED IN THE CONTRACT DOCUMENTS BUT REQUIRED FOR FUNCTIONING SYSTEMS SHALL BE PROVIDED. THE CONTRACTOR SHALL REFER TO THE ENGINEER FOR RESOLUTION BEFORE START OF ANY WORK THAT APPEARS TO HAVE DISCREPANCIES OR IF THERE IS ANY QUESTION OF INTENT. CONTRACTOR SHALL NOTIFY THE OWNER OF ANY UTILITY OUTAGES AT LEAST TWO WEEKS PRIOR TO THE PROPOSED OUTAGE. CONTRACTOR SHALL ENSURE THAT A BUILDING DOMESTIC HOT WATER SYSTEM IS NOT INOPERABLE FOR LONGER THAN A 24-HOUR PERIOD. TEMPORARY HEAT SHALL BE SUPPLIED AS NEEDED TO MAINTAIN THE BUILDINGS ABOVE 68 DEG F AT ALL TIMES DURING CONSTRUCTION. THE CONTRACTOR SHALL HOLD A LICENSE TO PERFORM THE WORK AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION. APPLY FOR AND OBTAIN ALL REQUIRED PERMITS AND INSPECTIONS AND PAY FEES AND CHARGES, INCLUDING SERVICE CHARGES. REFER TO ARCHITECTURAL DRAWINGS FOR LOCATIONS OF NEW 1-HR FIRE-RATED BARRIERS. PROVIDE FIRE CAULKING RATED FOR 1-HR FIRE RESISTANCE AT ALL PENETRATIONS. THE CONTRACTOR SHALL KEEP ALL CONSTRUCTION AREAS CLEAN AND FREE OF ACCUMULATION OF WASTE MATERIAL OR DEBRIS RELATED TO THIS PROJECT. OCCUPIED AREAS MUST MAINTAIN A CLEAN ENVIRONMENT AND THE CONTRACTOR MUST ADHERE TO THE OWNER'S REGULATIONS REGARDING PROCEDURES ON THE PREMISES. ITEMS AND MATERIALS INDICATED FOR REMOVAL OR DEMOLITION SHALL BE DISPOSED OF OFF-SITE IN A LEGAL MANNER. WORK SHALL BE COORDINATED WITH TRADES INVOLVED. VERIFY EQUIPMENT CONNECTIONS WITH MANUFACTURER'S CERTIFIED DRAWINGS. FIELD VERIFY AND COORDINATE ALL DIMENSIONS BEFORE FABRICATION. INSTALL WORK SO THAT ALL NEW ITEMS ARE OPERABLE AND SERVICEABLE. DO NOT OBSTRUCT EXISTING EQUIPMENT OR COMPONENTS THAT REQUIRE SERVICE. MAINTAIN ALL MANUFACTURER RECOMMENDED CLEARANCES. INSTALL EQUIPMENT AND PIPING TO FACILITATE EQUIPMENT ACCESS AS REQUIRED BY EQUIPMENT MANUFACTURER. COORDINATE ELECTRICAL POWER REQUIREMENTS FOR ALL MOTORS. PROVIDE REQUIRED SUPPORTS, ANGLES, HANGERS, RODS, BASES, BRACES, AND ALL OTHER ITEMS AS NEEDED TO PROPERLY SUPPORT THE CONTRACT WORK. ALL WORK SHALL BE PERFORMED IN A MANNER THAT IS EQUAL TO INDUSTRY STANDARDS. INSTRUCT DESIGNATED MAINTENANCE PERSONNEL ON PROPER OPERATION AND CARE OF THE NEW SYSTEMS AND EQUIPMENT. CONTRACTOR SHALL WARRANTY WORKMANSHIP AND MATERIALS FOR A PERIOD OF NOT LESS THAN ONE YEAR FROM THE DATE OF PROJECT COMPLETION. 						

DUCTWORK SYMBOLS				MECHANICAL LINETYPE LEGEND			
						<p>NOTE: GENERAL NOTES, ABBREVIATIONS AND SYMBOLS APPLY TO MECHANICAL DRAWINGS MARKED M#. HOWEVER, ALL ABBREVIATIONS AND SYMBOLS MAY NOT BE APPLICABLE TO THIS PARTICULAR PROJECT. THEY ARE PROVIDED FOR GENERAL REFERENCE ONLY.</p>	

PORTLAND HOUSING AUTHORITY PORTLAND, MAINE			
RIVERTON BOILER REPLACEMENTS BUILDING NOS 21,22,23			
MECHANICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES			
0 ISSUED FOR CONSTRUCTION	CSS	ERP	9-8-15
REV	DESCRIPTION	DWN	APP DATE

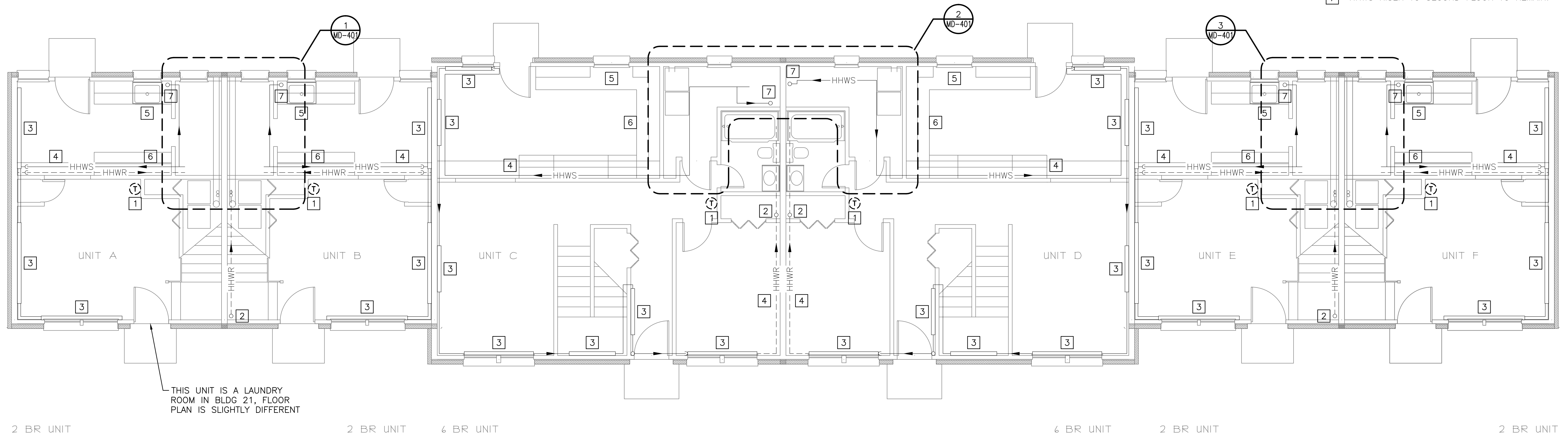
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NOTES:

1. SEE SHEET M-001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.
2. SCOPE OF WORK REPRESENTED IS TYPICAL FOR BUILDINGS 21,22,23.
3. EXISTING HHWS&R MAINS SHOWN OUTSIDE OF UTILITY ROOMS ARE IN AN EXISTING SOFFIT AT THE CEILING.

DEMOLITION KEYED NOTES:

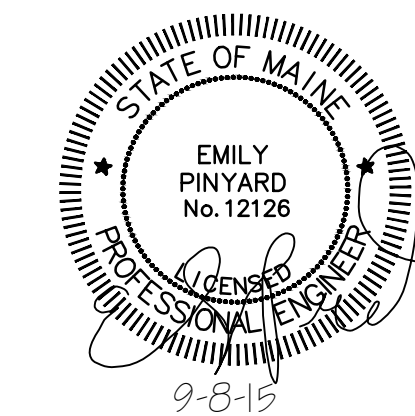
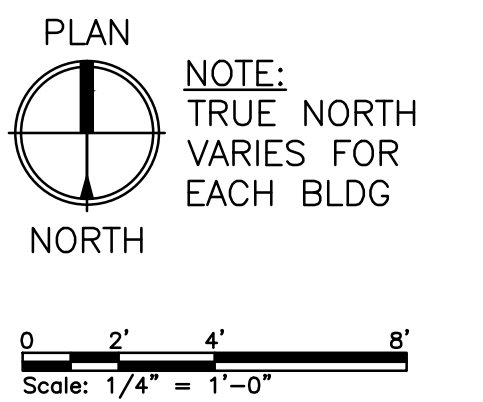
- 1 REMOVE THERMOSTAT AND LEAVE WIRING IN PLACE, IF COMPATIBLE WITH NEW CONTROLLER.
- 2 HHWR RISER FROM SECOND FLOOR TO REMAIN.
- 3 HOT WATER BASEBOARD RADIATOR TO REMAIN.
- 4 HHWS&R PIPES TO REMAIN WITHIN SOFFIT.
- 5 KITCHEN SINK TO REMAIN.
- 6 GAS STOVE TO REMAIN.
- 7 HHWS RISER TO SECOND FLOOR TO REMAIN.



MECHANICAL DEMOLITION PLAN

SCALE: 1/4" = 1'-0"

PLANS REPRESENT A TYPICAL BUILDING CONFIGURATION. NOT ALL BUILDINGS ARE COMPLETELY IDENTICAL. FIELD VERIFY ALL CONDITIONS PRIOR TO PERFORMING ANY WORK.

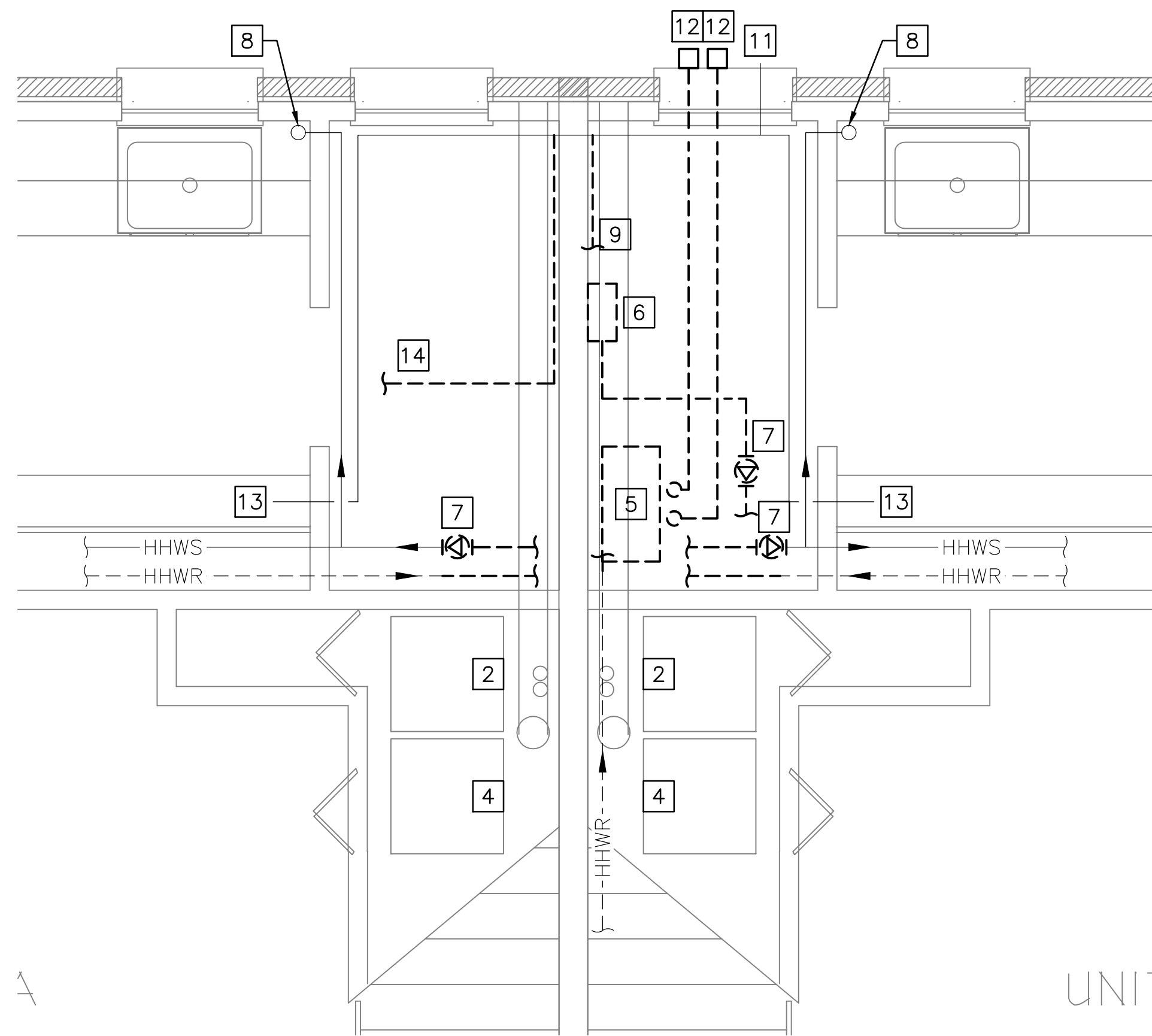


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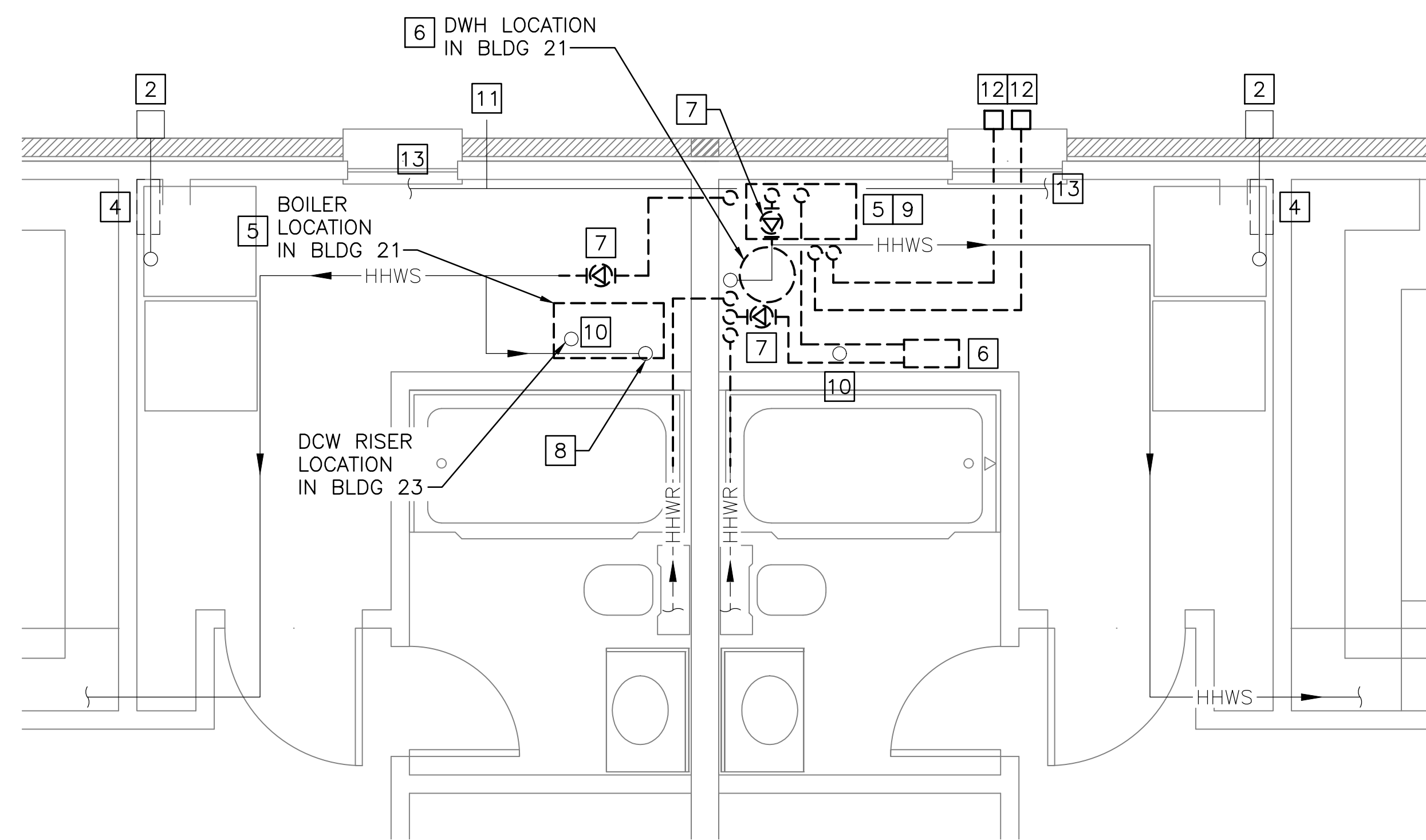
PORTLAND HOUSING AUTHORITY
 PORTLAND, MAINE
RIVERTON BOILER REPLACEMENTS
 BUILDING NOS 21,22,23
MECHANICAL DEMOLITION PLAN

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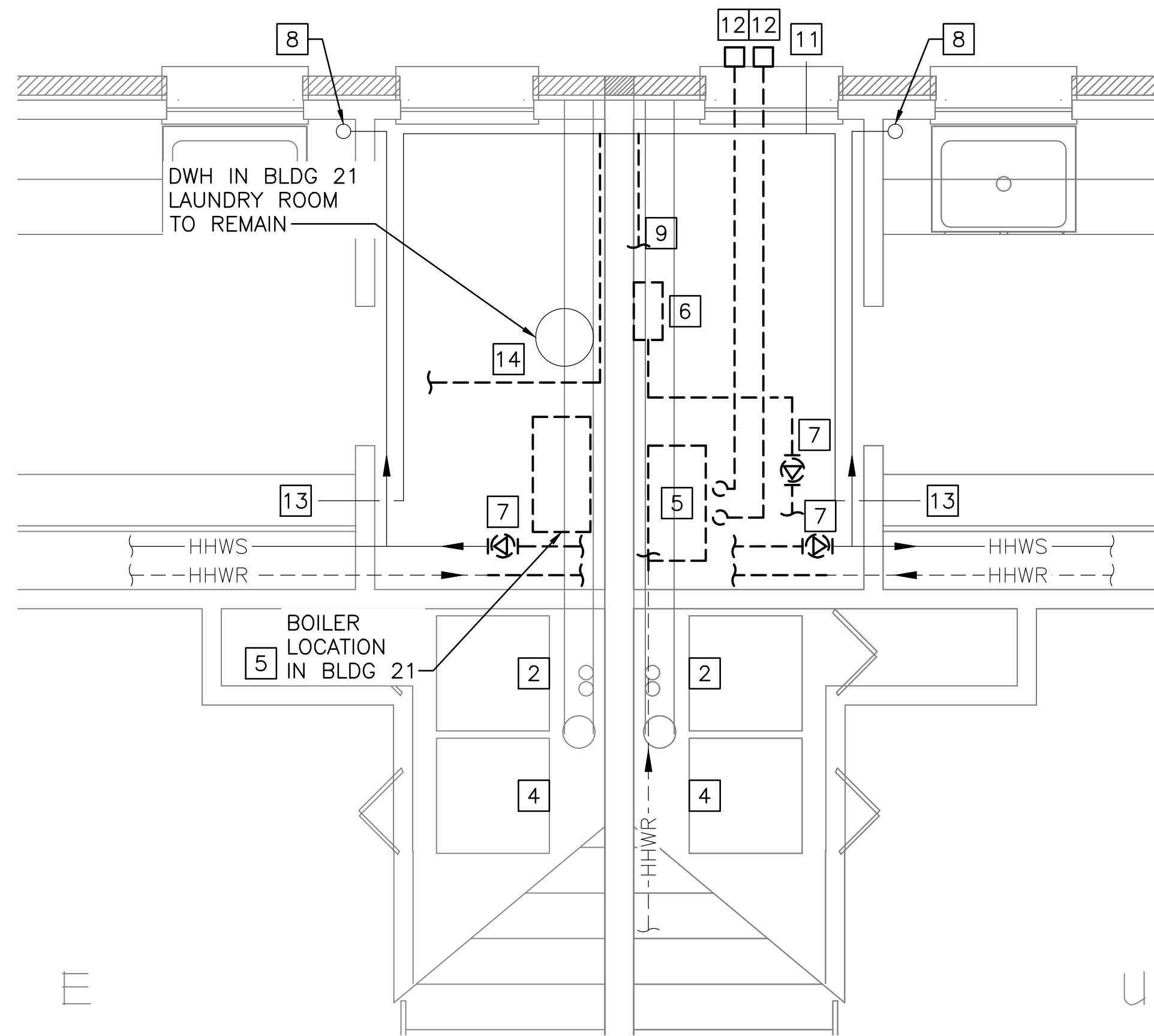
X:\218 Portland Housing Authority\218.011.001 - Riverton Boiler Replacements\Drawings\Phase 3\Sheets\MD-101.dwg - 9/8/2015 9:00 AM - CRAIG SMITH



1 PART PLAN
 MD-401 SCALE: 1/2" = 1'-0" REF. DWG. = MD-101



2 PART PLAN
 MD-401 SCALE: 1/2" = 1'-0" REF. DWG. = MD-101



3 PART PLAN
 MD-401 SCALE: 1/2" = 1'-0" REF. DWG. = MD-101

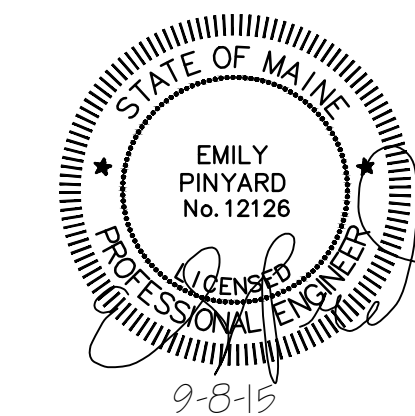
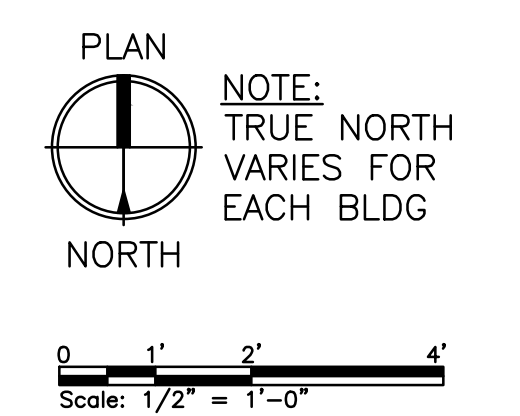
NOTES:

- SEE SHEET M-001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- SCOPE OF WORK REPRESENTED IS TYPICAL FOR BUILDINGS 21,22,23.
- INSPECT AND PRESSURE TEST ALL EXISTING TO REMAIN LOW PRESSURE NATURAL GAS PIPING. REPAIR ANY LEAKS AND REPLACE ANY DAMAGED OR CORRODED OR NFPA 54 NONCOMPLIANT SECTIONS OF PIPING. PAINT ALL NEW AND EXISTING TO REMAIN PIPING FOR CORROSION RESISTANCE.
- FOR BIDDING PURPOSES, ASSUME COMPLETE REPLACEMENT OF INTERIOR NATURAL GAS PIPING AND PROVIDE OWNER CREDITS FOR ANY GAS PIPING THAT IS FOUND TO BE SUFFICIENT FOR RE-USE.

DEMOLITION KEYED NOTES:

- NOT USED.
- DRYER VENT AND WALL CAP TO REMAIN.
- NOT USED
- CLOTHES WASHER HOOKUPS TO REMAIN.
- REMOVE BOILER AND ASSOCIATED BRANCH PIPING & CONTROLS. BOILER CONDENSATE DRAIN PIPE PENETRATES FLOOR SLAB. PATCH DRAIN PIPE OPENING WITH CONCRETE AFTER REMOVAL (APPROX 1"Ø X 6" DEEP)
- REMOVE TANKLESS DOMESTIC WATER HEATER AND ASSOCIATED BRANCH PIPING & CONTROLS.
- REMOVE PUMP AND CONTROLS.
- HHWS RISER UP TO SECOND FLOOR HW BASEBOARD TO REMAIN.
- 3/4" NATURAL GAS SUPPLY PIPING TO BOILER TO BE REMOVED.
- 2" DCW SERVICE AND BACKFLOW PREVENTER TO REMAIN. LOCATION VARIES BASED ON BLDG, FIELD VERIFY.
- 1" NATURAL GAS ENTRANCE TO REMAIN. ACTUAL LOCATION VARIES - CONFIRM IN FIELD. IN ENTRANCE INTERFERES WITH NEW DOOR, RELOCATE.
- REMOVE BOILER FLUE AND COMBUSTION AIR INTAKE & WALL CAPS.
- 3/4" GAS SUPPLY PIPING TO STOVE TO REMAIN.
- NATURAL GAS PIPING IN BLDG 22 RUNS THROUGH MIDDLE OF ROOM. REMOVE SECTION AND RE-ROUTE RUN TIGHT TO WALLS.

PLANS REPRESENT A TYPICAL BUILDING CONFIGURATION. NOT ALL BUILDINGS ARE COMPLETELY IDENTICAL. FIELD VERIFY ALL CONDITIONS PRIOR TO PERFORMING ANY WORK.



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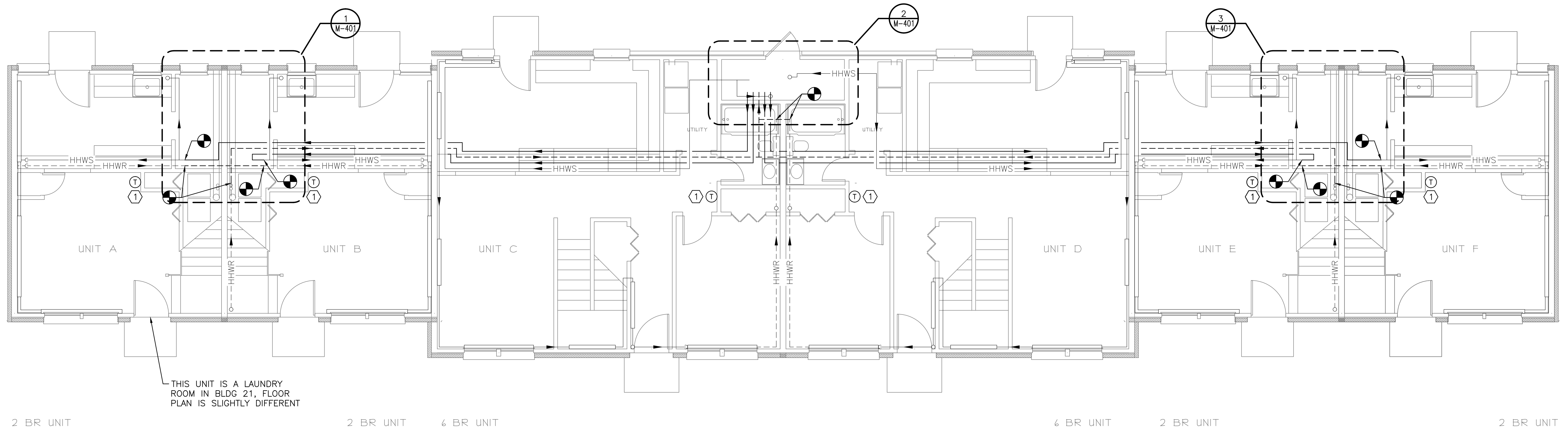
PORTLAND HOUSING AUTHORITY PORTLAND, MAINE			
RIVERTON BOILER REPLACEMENTS BUILDING NOS 21,22,23			
MECHANICAL DEMOLITION PART PLANS			
0 ISSUED FOR CONSTRUCTION	CSS	ERP	9-8-15
REV	DESCRIPTION	DWN	APP DATE
SIZE: ANSI D	DATE: 9-8-15	DES BY: ERP	PROJECT NO. 218.011.001
DWN BY: CSS	CKD BY: MIF	SHEET 6 OF 16	DRAWING NO. MD-401

NOTES:

1. SEE SHEET M-001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.
2. SCOPE OF WORK REPRESENTED IS TYPICAL FOR BUILDINGS 21,22,23.
3. CONSTRUCT NEW SOFFIT TO CONTAIN NEW HOT WATER PIPING OUTSIDE OF UTILITY SPACES OR ROUTE NEW PIPING THROUGH EXISTING SOFFIT IF FEASIBLE.

KEYED NOTES:

- ① PROVIDE NEW THERMOSTAT TIED TO NEW ZONE CONTROLLER.

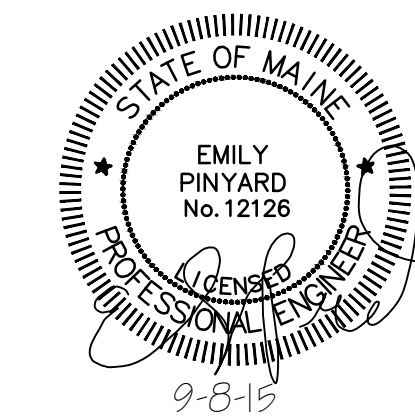
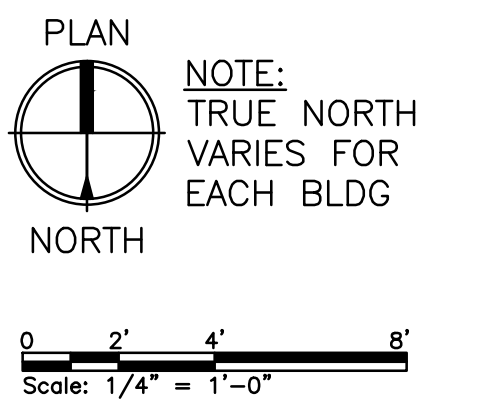


THIS UNIT IS A LAUNDRY ROOM IN BLDG 21, FLOOR PLAN IS SLIGHTLY DIFFERENT

MECHANICAL FIRST FLOOR PLAN – HEATING HOT WATER

SCALE: 1/4" = 1'-0"

PLANS REPRESENT A TYPICAL BUILDING CONFIGURATION. NOT ALL BUILDINGS ARE COMPLETELY IDENTICAL. FIELD VERIFY ALL CONDITIONS PRIOR TO PERFORMING ANY WORK.



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				RIVERTON BOILER REPLACEMENTS BUILDING NOS 21,22,23			
				MECHANICAL FIRST FLOOR PLAN - HEATING HOT WATER			
0	ISSUED FOR CONSTRUCTION	CSS	ERP	9-8-15	PROJECT NO. 218.011.001		DRAWING NO. M-101
REV	DESCRIPTION	DWN	APP	DATE	SHEET 7 OF 16		

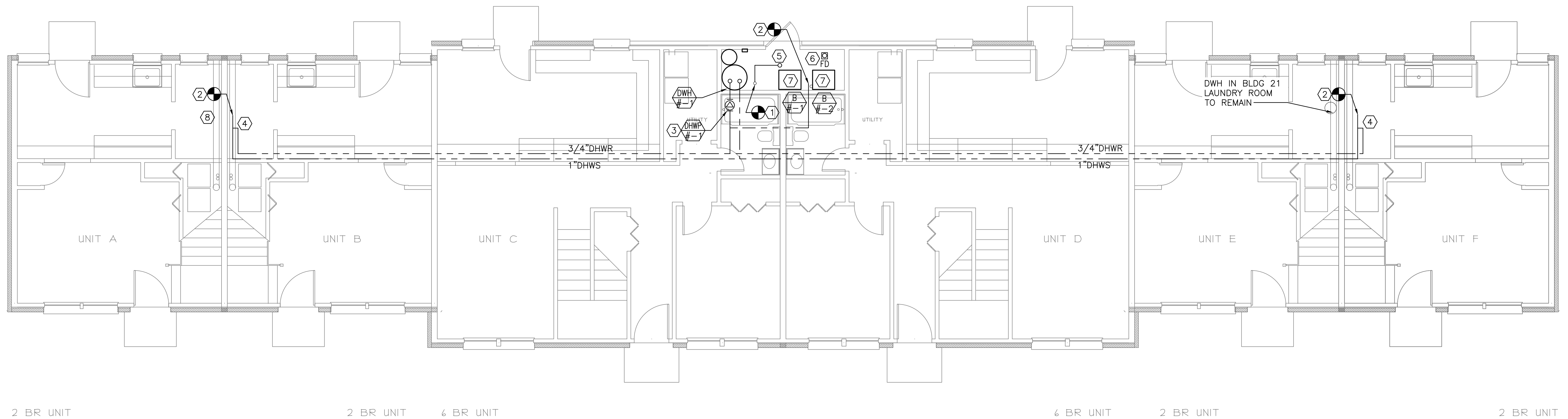
Colby Company
engineering
47A York Street
Portland, Maine 04101
207.533.7753
colbycoengineering.com

NOTES:

- SEE SHEET M-001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- SCOPE OF WORK REPRESENTED IS TYPICAL FOR BUILDINGS 21,22,23.

KEYED NOTES:

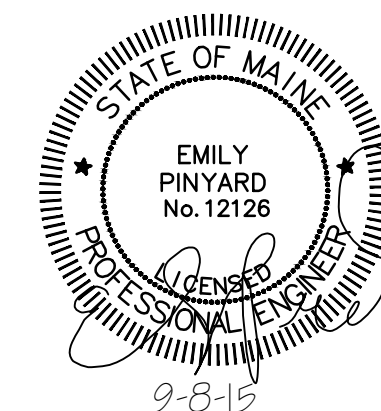
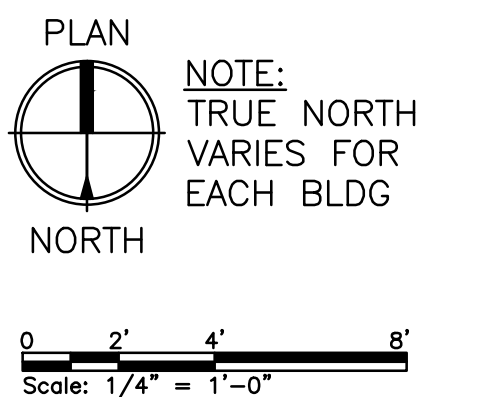
- EXISTING 2" DCW ENTRANCE WITH VERTICAL BACKFLOW PREVENTER TO REMAIN.
- CONNECT NEW DHWS MAINS TO EXISTING-TO-REMAIN DHWS MAINS.
- DHWR PUMP SHOWN OUTSIDE OF BOILER ROOM FOR CLARITY BUT WILL BE INSTALLED INSIDE BOILER ROOM.
- PROVIDE BALANCING VALVE AT END OF DHWR LINE.
- NEW BOILER ROOM SPRINKLER HEAD, K-5.6 ORIFICE, 200 DEG F TEMPERATURE RATED. PROVIDE ALARM BELL ON OUTSIDE OF BOILER ROOM.
- NEW BOILER ROOM FLOOR DRAIN SHALL TIE INTO EXISTING SANITARY MAIN BELOW SLAB. CUT AND PATCH CONCRETE SLAB.
- INSTALL BOILER CONDENSATE NEUTRALIZER AND PIPE DISCHARGE TO FLOOR DRAIN. PROVIDE PIPE RAMP OVER DRAIN PIPE.
- EXISTING DWH IN BUILDING 21 (LAUNDRY ROOM) TO REMAIN. DO NOT CONNECT NEW DOMESTIC HOT WATER SUPPLY TO LAUNDRY ROOM.



MECHANICAL FIRST FLOOR PLAN – PLUMBING

SCALE: 1/4" = 1'-0"

PLANS REPRESENT A TYPICAL BUILDING CONFIGURATION. NOT ALL BUILDINGS ARE COMPLETELY IDENTICAL. FIELD VERIFY ALL CONDITIONS PRIOR TO PERFORMING ANY WORK.



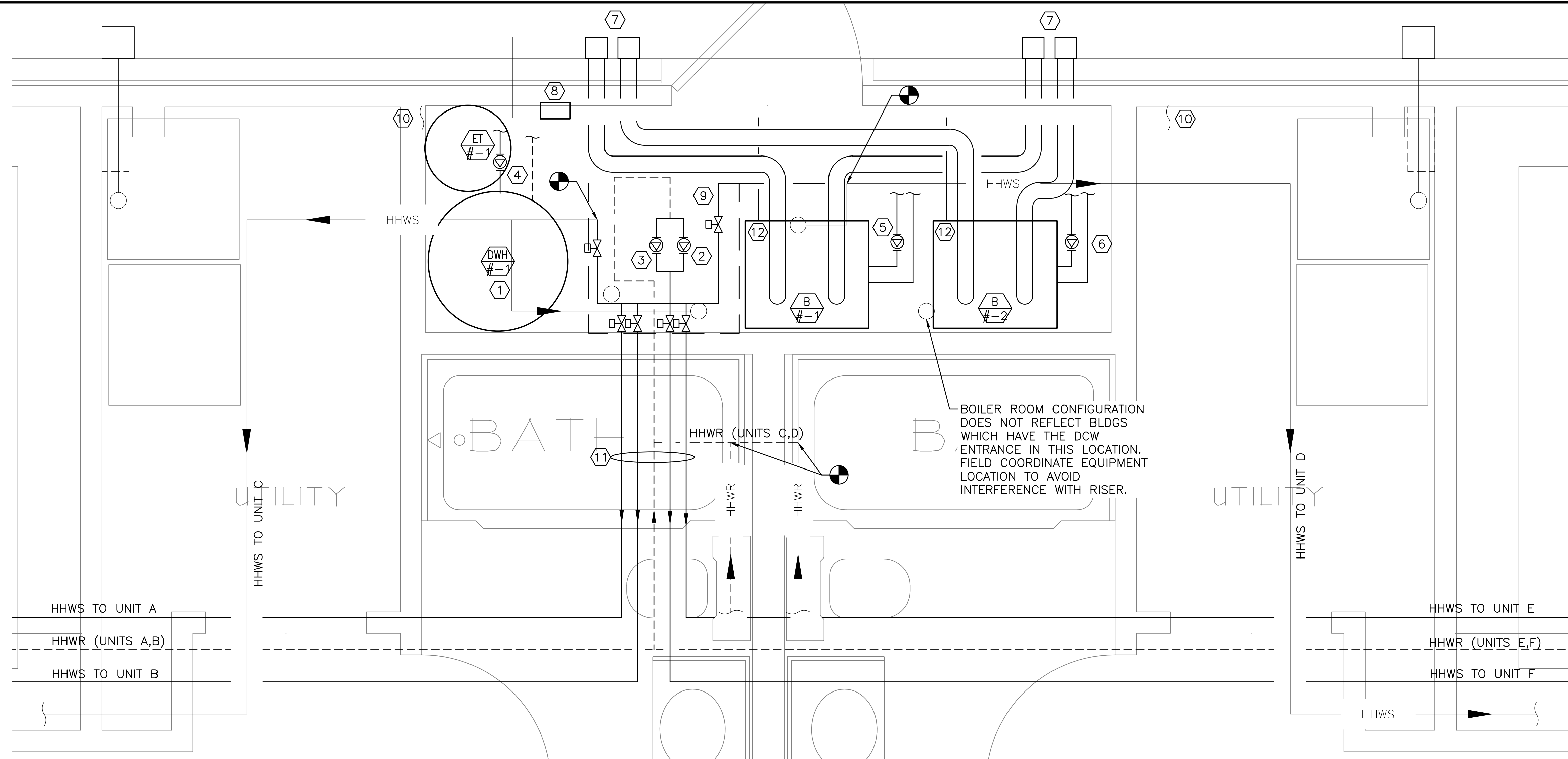
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DATE: 9-8-15
DES BY: ERP
DWN BY: CSS
CKD BY: MIF

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RIVERTON BOILER REPLACEMENTS BUILDING NOS 21,22,23			
MECHANICAL FIRST FLOOR PLAN - PLUMBING			
PROJECT NO. 218.011.001	DRAWING NO. M-102	SHEET 8 OF 16	

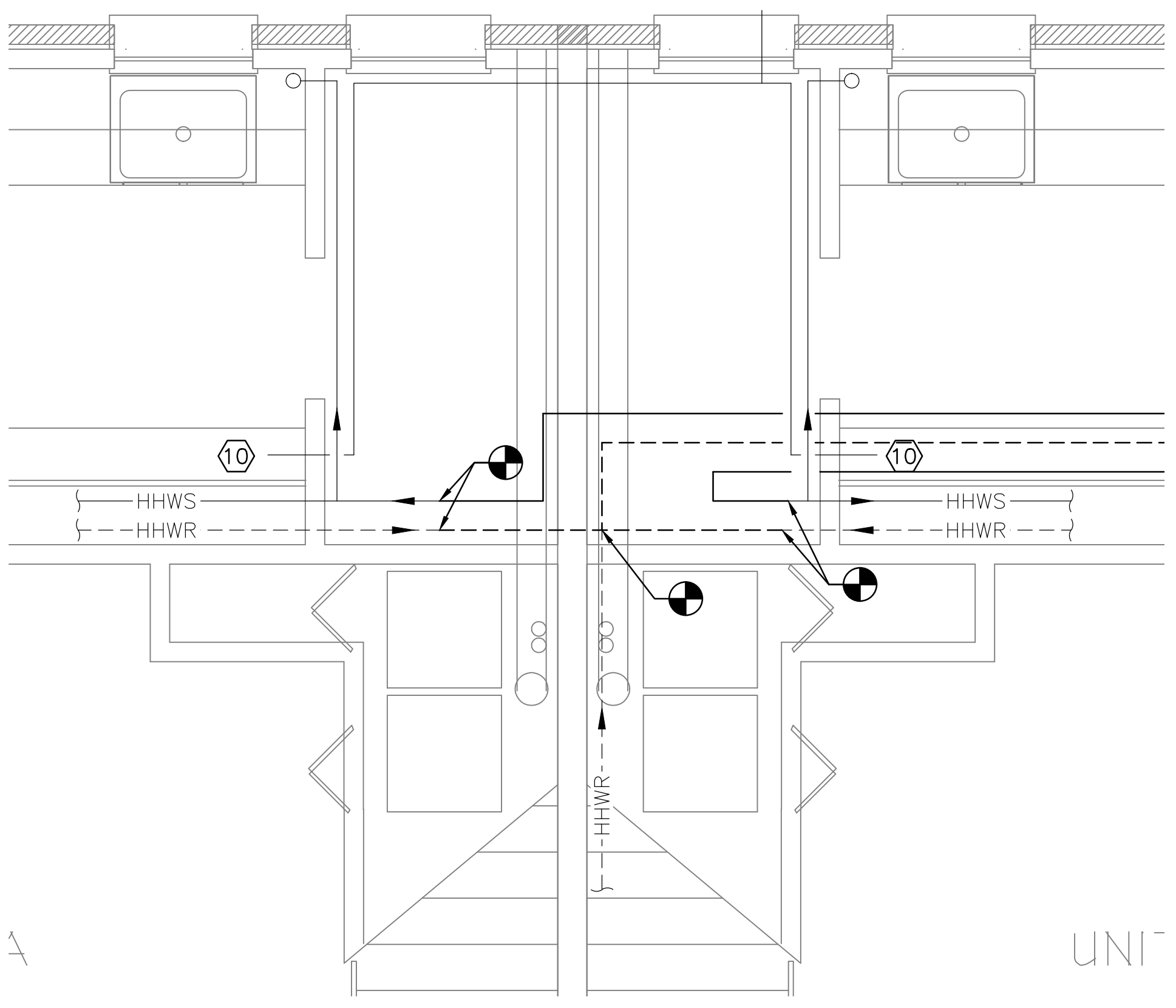
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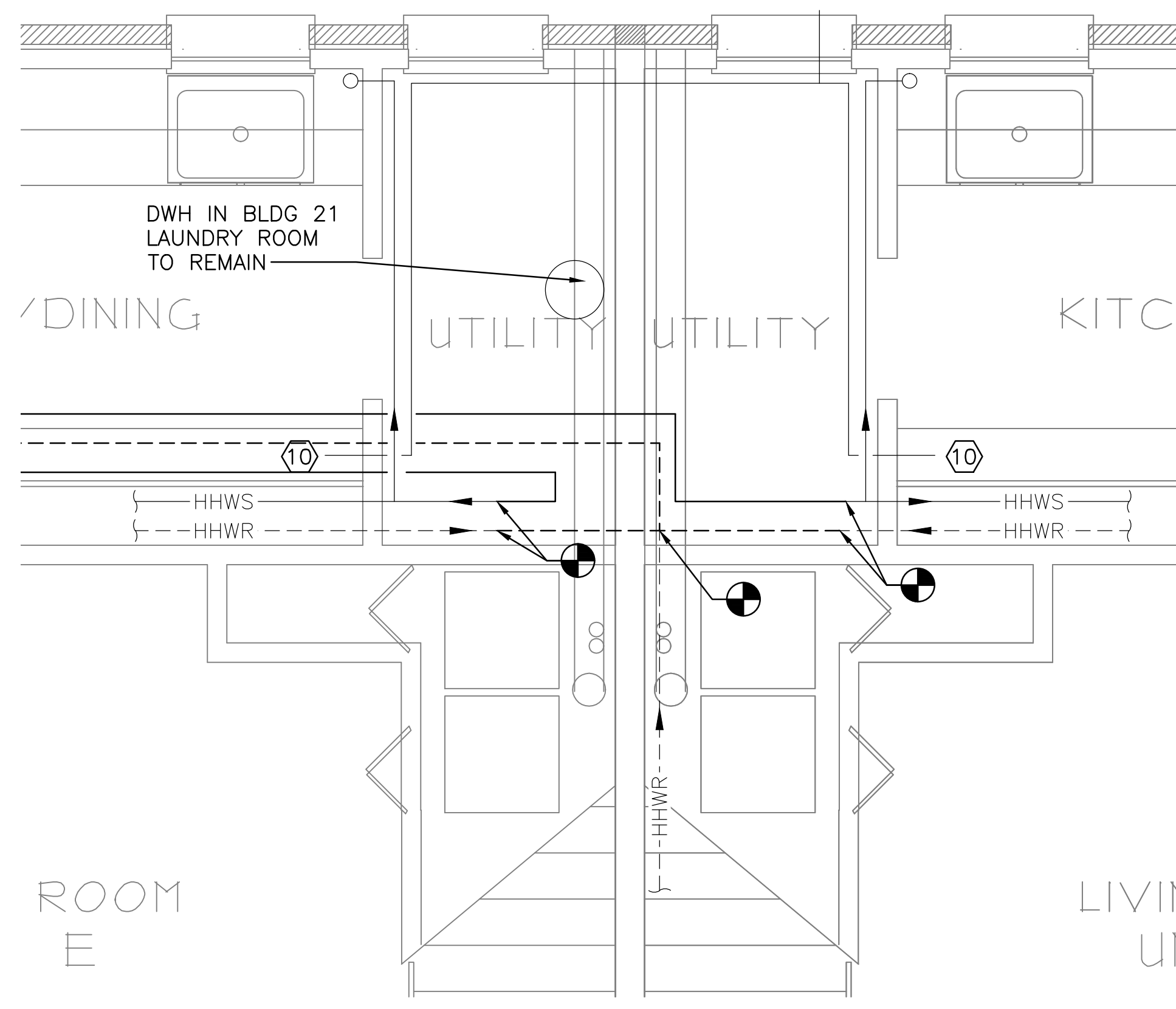
- NOTES:**
- SEE SHEET M-001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.
 - SCOPE OF WORK REPRESENTED IS TYPICAL FOR BUILDINGS 21,22,23.
 - PLUMBING WORK IS SHOWN ON M-102.
 - REFER TO ARCHITECTURAL DRAWINGS FOR NEW CEILING DETAILS.
 - COMPLETE HYDRONIC PIPING IS NOT SHOWN FOR CLARITY. SEE M-502 FOR PIPE SCHEMATIC.
 - INSTALL NEW GAS PIPING AS NEEDED FOR A COMPLETE INSTALLATION. REFER TO MD-401.

- KEYED NOTES:**
- INSTALL THERMOSTATIC MIXING VALVE AND EXPANSION TANK FOR DHW (ET-#-2). DEVICES NOT SHOWN FOR CLARITY, TO BE LOCATED BY CONTRACTOR IN FIELD.
 - NEW HHW CIRCULATING PUMP, HWP-#-1.
 - NEW HHW CIRCULATING PUMP, HWP-#-2.
 - NEW DHW CIRCULATING PUMP, HWP-#-3.
 - NEW BOILER CIRCULATING PUMP, BP-#-1.
 - NEW BOILER CIRCULATING PUMP, BP-#-2.
 - INSTALL SEPARATE 3-INCH BOILER COMBUSTION AIR INTAKES AND VENTS OR A BOILER MANUFACTURER-SUPPLIED CONCENTRIC VENT. TERMINATE AT WALL WITH CAP.
 - PROVIDE (2) TEKMAR ZONE CONTROL PANELS, 4 ZONES EACH. TEKMAR 313 CONTROLLER OR EQUIVALENT.
 - MAINTAIN ADEQUATE CLEARANCE TO DCW SERVICE ENTRANCE, BFP AND VALVES. 28"x28" SHOWN.
 - GAS PIPING TO EXISTING GAS RANGES.
 - HYDRONIC PIPING, ZONE VALVES, AND PUMPS TO BE SUSPENDED FROM CEILING.
 - GAS CONNECTION TO NEW BOILER.

2 PART PLAN
 M-401 SCALE: 1" = 1'-0" REF. DWG. = M-101

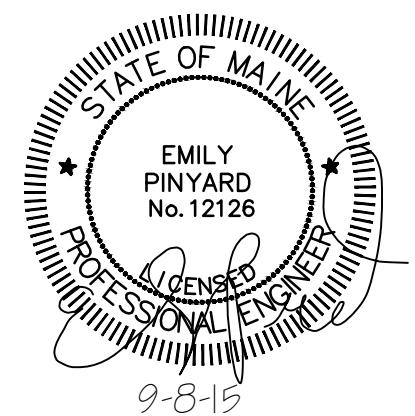
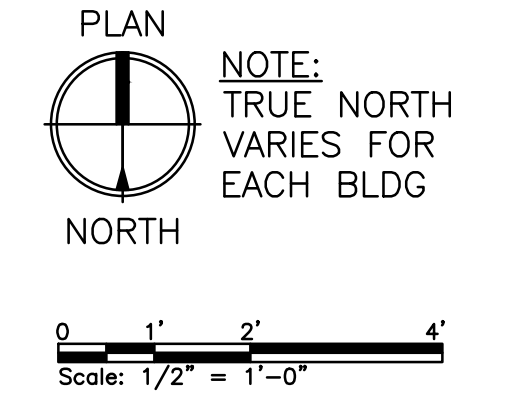


1 PART PLAN
 M-401 SCALE: 1/2" = 1'-0" REF. DWG. = MD-101



3 PART PLAN
 M-401 SCALE: 1/2" = 1'-0" REF. DWG. = M-101

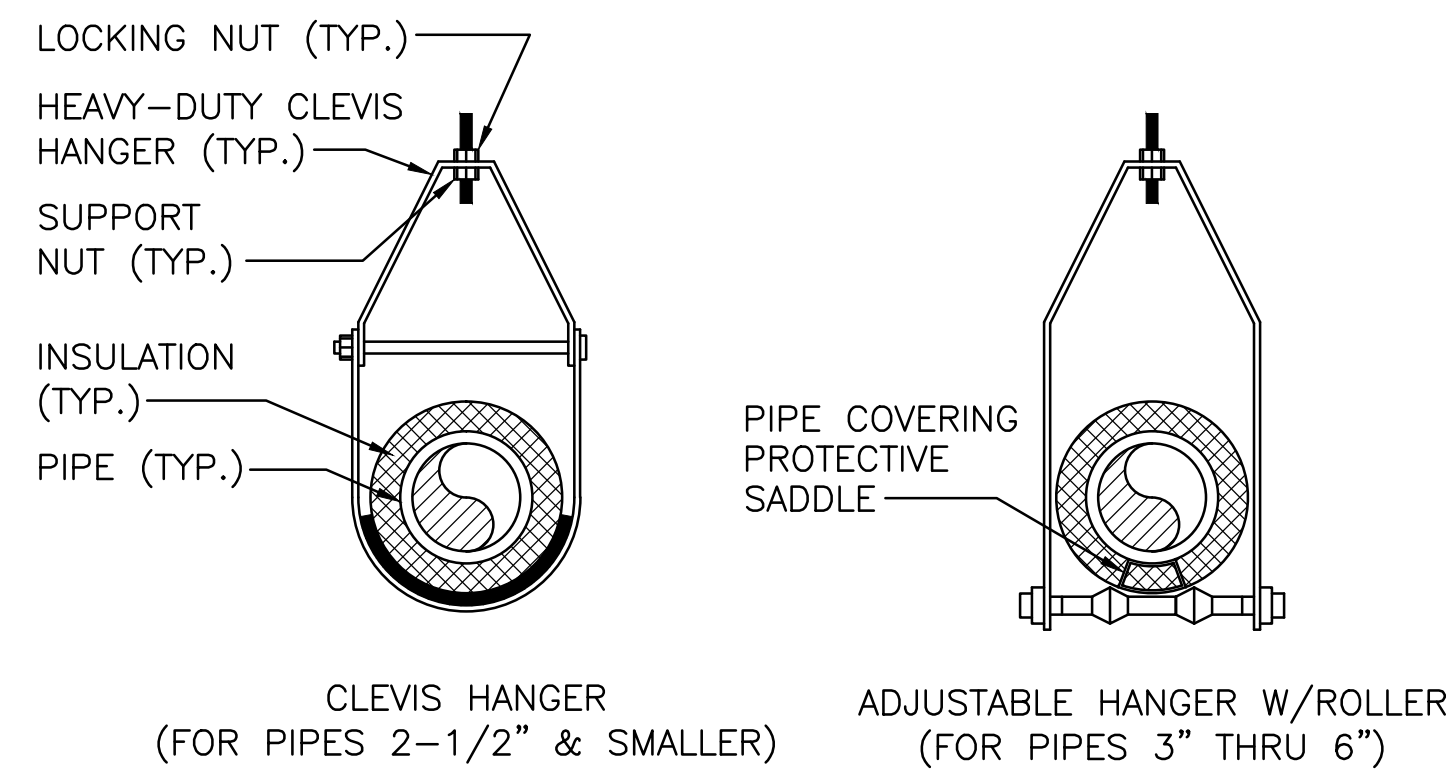
PLANS REPRESENT A TYPICAL BUILDING CONFIGURATION. NOT ALL BUILDINGS ARE COMPLETELY IDENTICAL. FIELD VERIFY ALL CONDITIONS PRIOR TO PERFORMING ANY WORK.



PORTLAND HOUSING AUTHORITY PORTLAND, MAINE			
RIVERTON BOILER REPLACEMENTS BUILDING NOS 21,22,23			
MECHANICAL PART PLANS			
0 ISSUED FOR CONSTRUCTION	CSS	ERP	9-8-15
REV	DESCRIPTION	DWN	APP DATE
SIZE: ANSI D		PROJECT NO. 218.011.001	
DATE: 9-8-15		DRAWING NO. M-401	
DES BY: ERP		SHEET 9 OF 16	
DWN BY: CSS			
CKD BY: MIF			

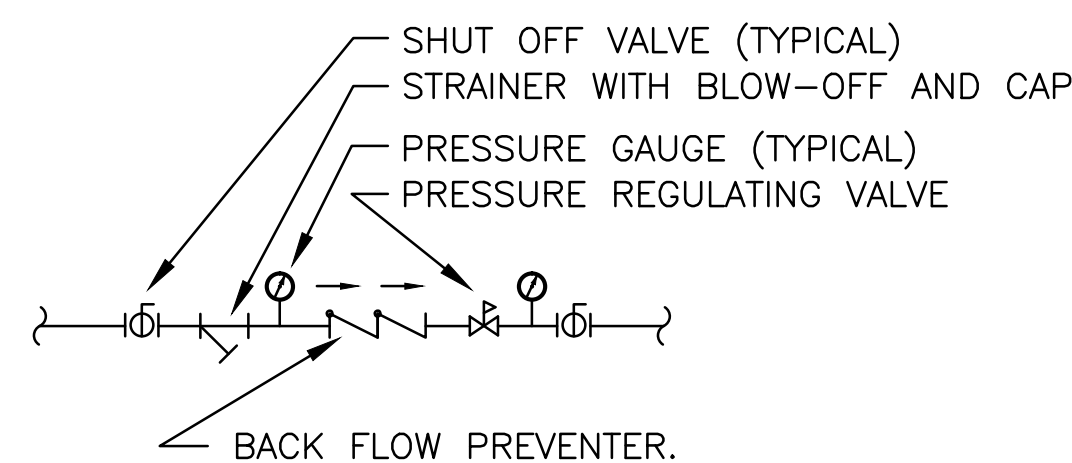
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PIPE HANGER ATTACHMENTS DETAIL

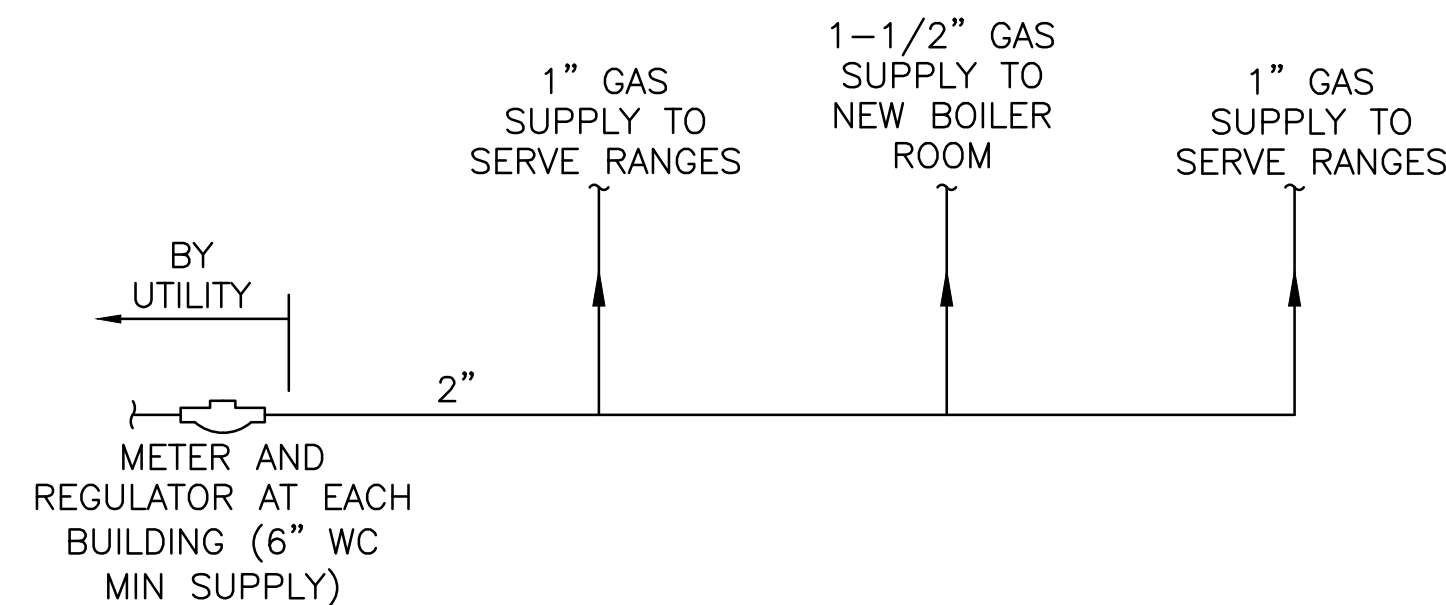
SCALE: NTS



- USE INTERMEDIATE VENT (ASSE 1012) ON NON HAZARDOUS SYSTEMS WITH 1/2" AND 3/4" FILL PIPING
- USE DOUBLE CHECK (ASSE 1015) ON NON HAZARDOUS SYSTEMS WITH 1" AND LARGER FILL PIPING

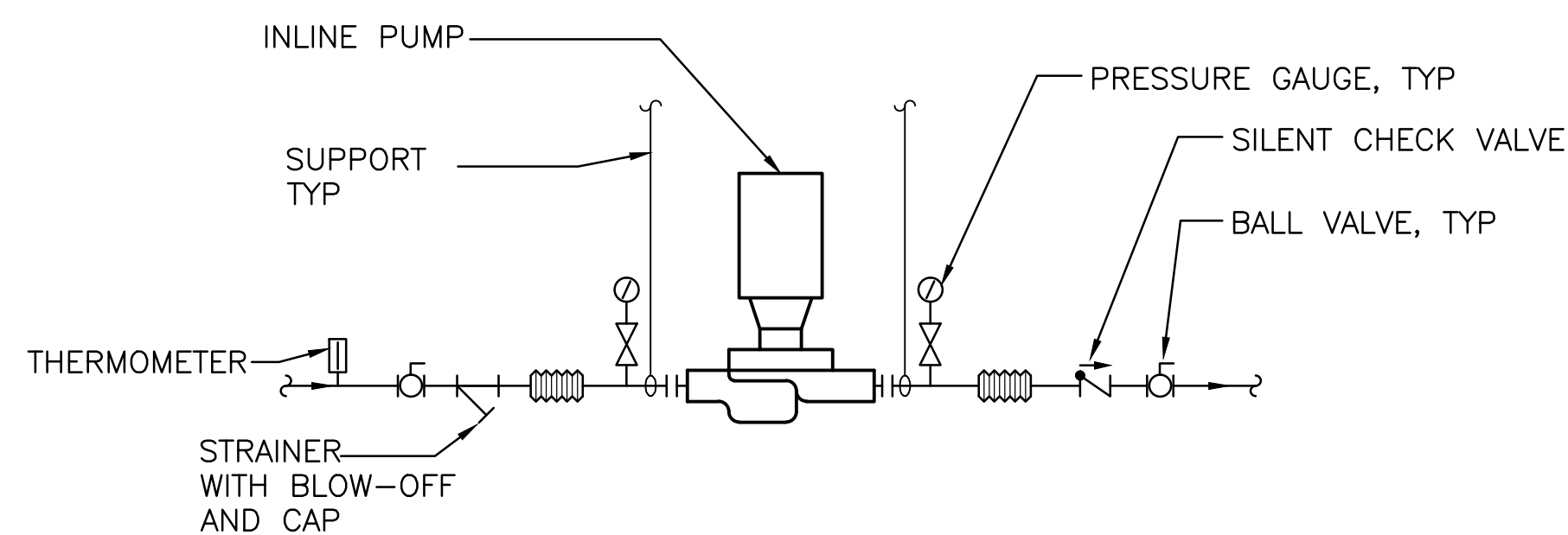
TYPICAL MAKE-UP WATER CONNECTION DETAIL

NOT TO SCALE



TYPICAL BUILDING GAS DIAGRAM

NOT TO SCALE

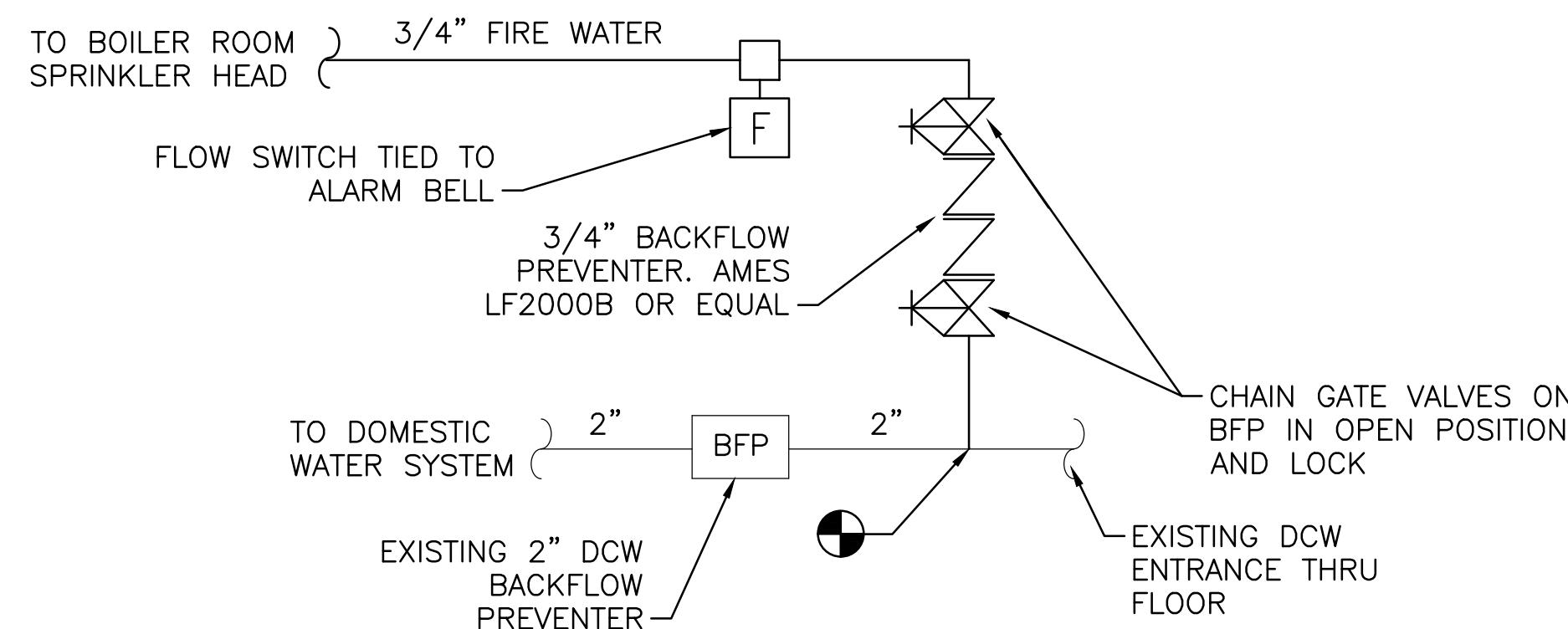


NOTES:

1. VALVES SHALL BE SAME SIZE AS PIPE.
2. PROVIDE SPRING VIBRATION ISOLATORS FOR PUMP & PIPE WITHIN 20 FT. OF PUMP.

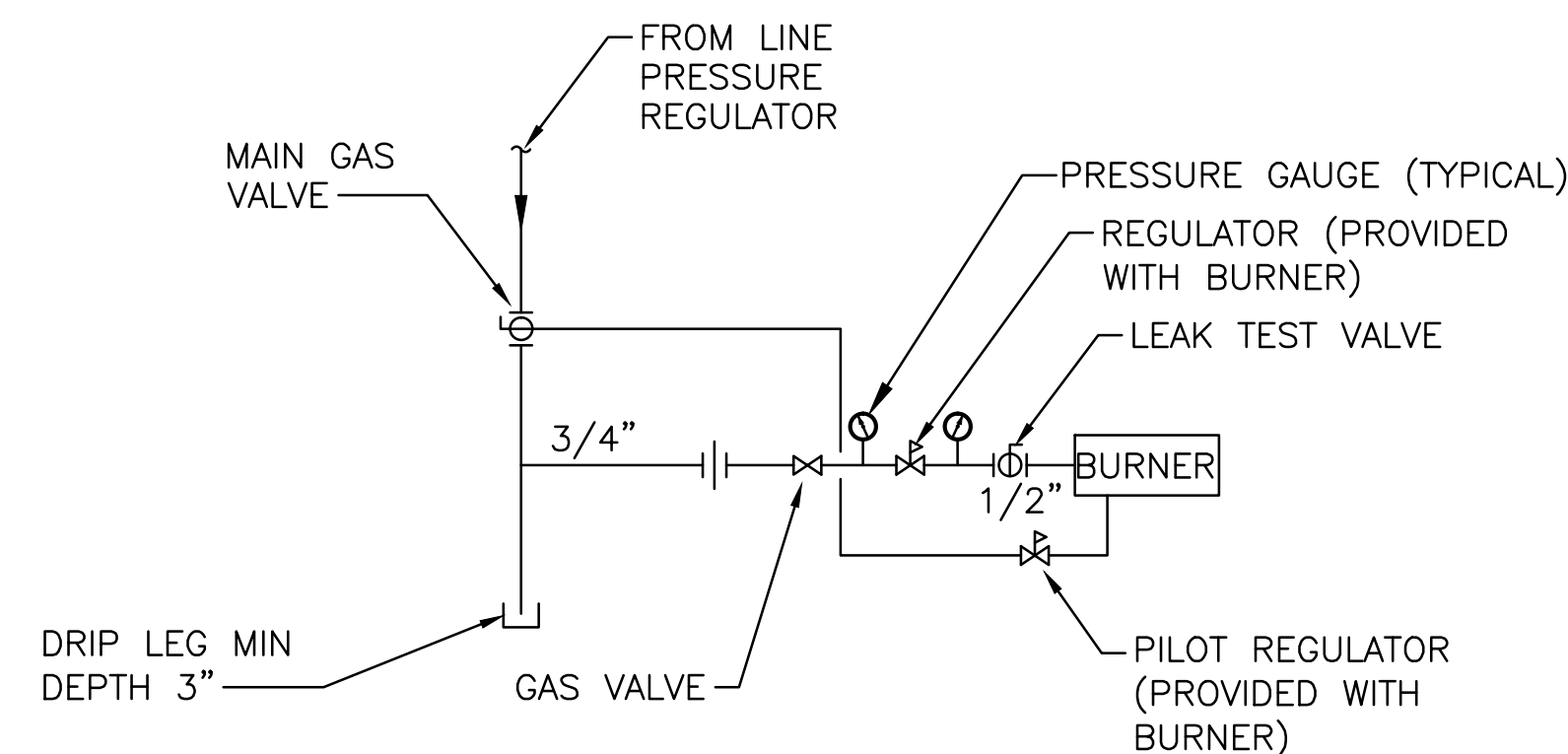
INLINE PUMP PIPING SCHEMATIC

SCALE: NTS



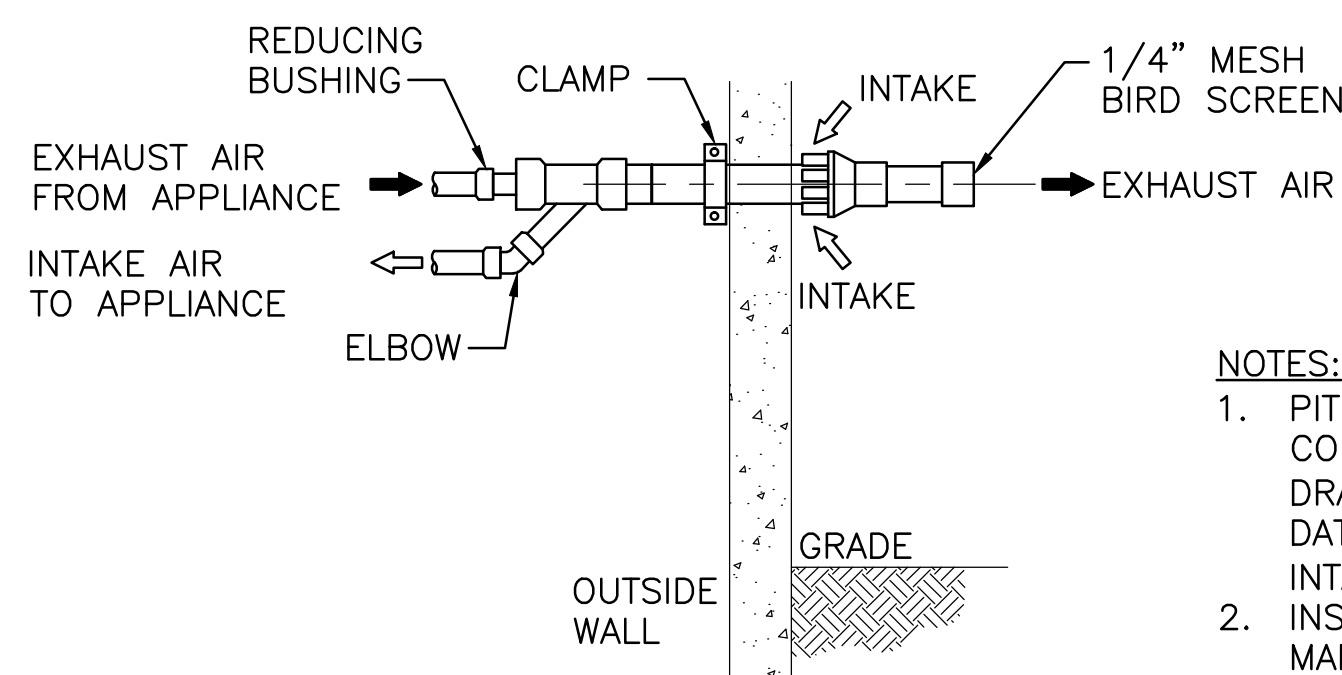
FIRE/DOMESTIC WATER RISER DIAGRAM - LIMITED AREA

SCALE: NTS



TYPICAL GAS TRAIN ARRANGEMENT

NOT TO SCALE

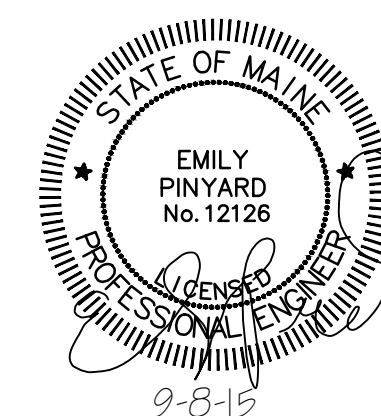


NOTES:

1. PITCH 1/4" PER FOOT TOWARDS BOILER. CONNECT TO INTEGRAL CONDENSATE DRAIN. CONFIRM WITH MANUFACTURER'S DATA FOR EXACT DETAILS ON APPLIANCE INTAKE/EXHAUST VENTING REQUIREMENTS.
2. INSTALL BOILER VENTING PER NFPA 54. MAINTAIN MINIMUM NFPA 54 CLEARANCES BETWEEN VENT TERMINATION AND BUILDING OPENINGS.

CONCENTRIC WALL TERMINATION DETAIL

NOT TO SCALE



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				MECHANICAL DETAILS			
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DWN BY:	CSS
CKD BY:	MIF

PROJECT NO.	218.011.001
DRAWING NO.	M-501
SHEET	10 OF 16

NOTES:

- SEE SHEET M-001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- SCOPE OF WORK REPRESENTED IS TYPICAL FOR BUILDINGS 21,22,23.
- CONTRACTOR SHALL FLUSH ALL EXISTING HYDRONIC PIPING AND PROVIDE WATER TREATMENT PER BOILER MANUFACTURER'S INSTRUCTIONS.

BUILDING MANAGEMENT SYSTEM:

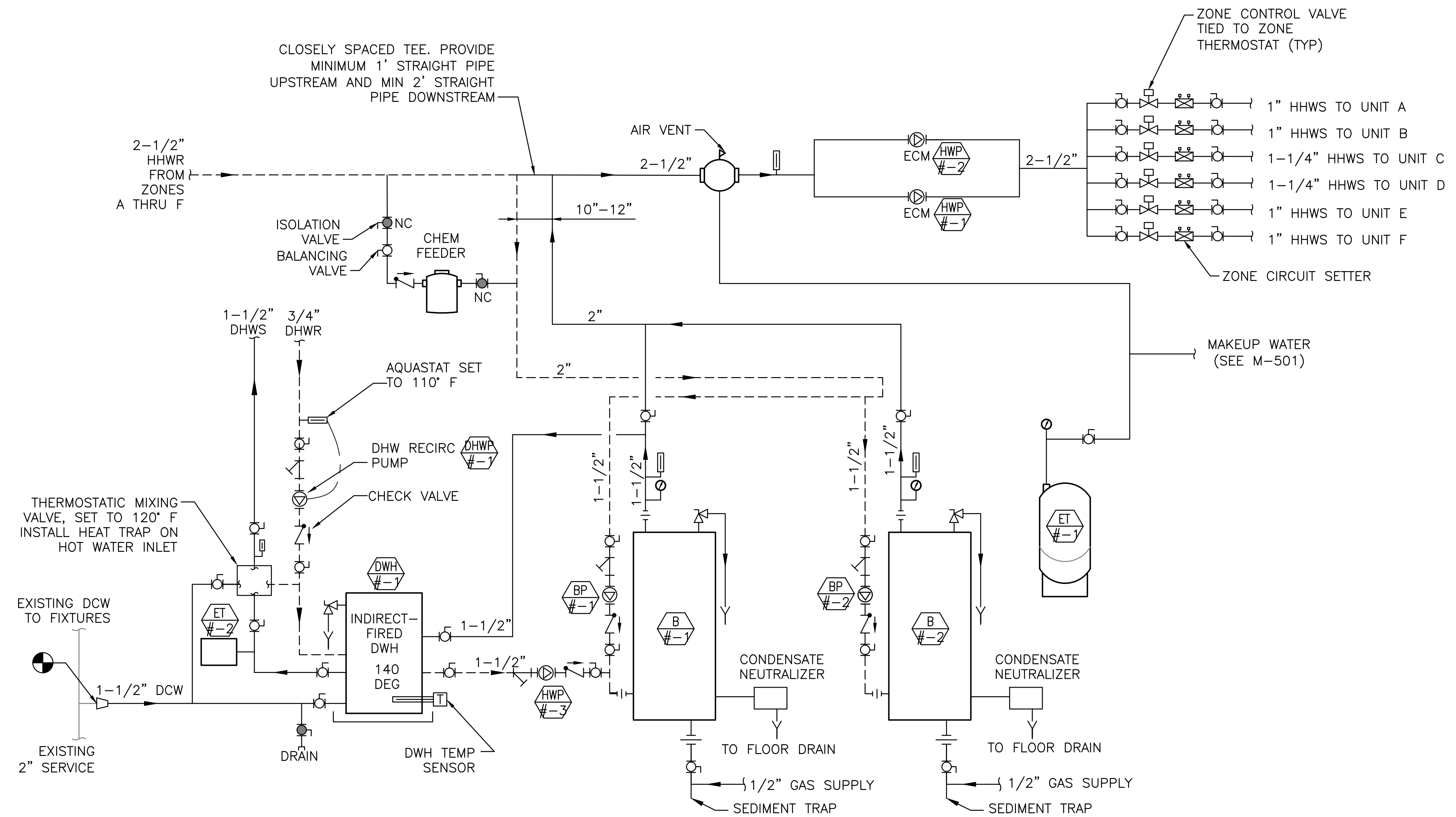
- CONTROLLERS SHALL BE STAND-ALONE AND INSTALLED IN THE BOILER ROOMS.
- ALARMS SHALL BE LOCAL.

HEATING HOT WATER SYSTEM SEQUENCE OF OPERATIONS

- WHEN OA TEMPERATURE IS BELOW 68 DEG F AND THERE IS A CALL FOR HEATING AT ONE OR MORE ZONE THERMOSTATS, THE LEAD SPACE HEATING PUMP SHALL BE ENERGIZED AND THE ZONE THERMOSTAT(S) CALLING FOR HEAT SHALL BE OPENED. BOILERS SHALL CASCADE ON AND OFF IN ORDER TO MAINTAIN SUPPLY WATER SETPOINT. BOILER SUPPLY WATER SETPOINT SHALL VARY BASED ON AN OA TEMPERATURE RESET SCHEDULE PROGRAMMED INTO THE BOILER CONTROLLERS. SEE BOILER SPECIFICATION 235216 FOR DETAILS.
- WHEN THE SPACE TEMPERATURE IS SATISFIED IN A UNIT, THE ASSOCIATED ZONE VALVE SHALL CLOSE.

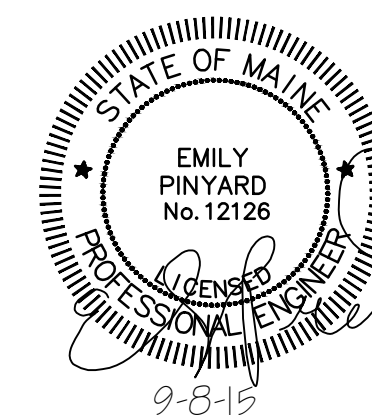
DOMESTIC HOT WATER SYSTEM SEQUENCE OF OPERATIONS

- A DIRECT ACTING AQUASTAT SET AT 140 DEGREES F AT THE INDIRECT WATER HEATER STARTS THE BOILER WATER CIRCULATING PUMP SERVING THE INDIRECT HEATER (HWP-#-3) ON A CALL FOR HEATING. THE BOILER TEMPERATURE GOES INTO DOMESTIC PRIORITY WHEN THE AQUASTAT IS CALLING FOR HEATING.
- THE DOMESTIC HOT WATER CIRCULATION PUMP (DHWP-#-1) SHALL BE ENERGIZED WHEN THE DOMESTIC WATER RETURN PIPE TEMPERATURE REACHES 110 DEG F (ADJUSTABLE) AND SHALL DE-ENERGIZE WHEN THE DHWR TEMPERATURE REACHES 115 DEG F (ADJUSTABLE).



HEATING & DOMESTIC HOT WATER SCHEMATIC

SCALE: NTS



				PORTLAND HOUSING AUTHORITY PORTLAND, MAINE	
				RIVERTON BOILER REPLACEMENTS BUILDING NOS 21,22,23	
				MECHANICAL SCHEMATICS	
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PROJECT NO. 218.011.001	DRAWING NO. M-502
SHEET 11 OF 16	

NOTES:

- SEE SHEET M-001 FOR LEGEND, ABBREVIATIONS AND GENERAL NOTES.
- SCOPE OF WORK REPRESENTED IS TYPICAL FOR BUILDINGS 21,22,23.

WALL-MOUNTED CONDENSING BOILER SCHEDULE

UNIT NO	BLDG NOs (#)	SERVICE	FUEL	INPUT (MBH)	HEATING CAPACITY (MBH)	LWT (°F)	DELTA T (°F)	AFUE (%)	VENT CONNECTION (IN/OUT)	SUPP/RET CONN	GAS CONNECTION	MANUFACTURER AND MODEL (1)	NOTES
B-#-1	21,22,23	HHW/DHW	NAT GAS	199	185	160	20	95	3"	1 1/2"	1/2"	LOCHINVAR KNIGHT WHN199	1,2
B-#-2	21,22,23	HHW/DHW	NAT GAS	199	185	160	20	95	3"	1 1/2"	1/2"	LOCHINVAR KNIGHT WHN199	1,2

- NOTES:
- PROVIDE MANUFACTURER'S CONDENSATE NEUTRALIZER.
 - PROVIDE MANUFACTURER'S BACNET COMPATIBLE CONTROLLER.

EXPANSION TANK SCHEDULE

UNIT NO	BLDG NOs (#)	SERVICE	TYPE	MIN PRESS (PSIG)	MAX OPER PRESS (PSIG)	TANK VOL (GALS)	TANK ACCEPT VOL (GALS)	DIA (IN)	HEIGHT (IN)	SHIP WEIGHT (LBS)	MANUFACTURER AND MODEL (1)	NOTES
ET-#-1	21,22,23	HHW	BLADDER	40	150	15	10	16	24	64	WATTS DETA-30	1
ET-#-2	21,22,23	DHW	BLADDER	40	150	3.5	2.1	10	14	22	WATTS DETA-5	

- NOTES:
- PROVIDE 4-INCH HOUSEKEEPING PAD FOR EXPANSION TANK.

INDIRECT-FIRED DOMESTIC WATER HEATER SCHEDULE

UNIT NO	BLDG NOs (#)	TYPE	TOTAL STORAGE (GAL)	1ST HR RECOVERY (GPH)	BOILER WATER FLOW RATE (GPM)	BOILER FLUID	BOILER EWT (°F)	HEAT EX PD (FT)	STORAGE TEMP (°F)	MANUFACTURER AND MODEL (1)	NOTES
DWH-#-1	21,22,23	STAINLESS STEEL	80	330	12	WATER	180	9.1	140	HTP SUPERSTOR ULTRA SSU-80	1

- NOTES:
- PROVIDE 4-INCH HOUSEKEEPING PAD FOR WATER HEATER.

CIRCULATOR PUMP SCHEDULE

UNIT NO	BLDG NOs (#)	SERVICE	TYPE	FLUID	GPM	HEAD (FT)	MOTOR SIZE	V/PH/HZ	MANUFACTURER AND MODEL (1)	NOTES
HWP-#-1	21,22,23	HHW	INLINE CIRCULATOR	WATER	30	25	1/2 HP	230/1/60	B&G ECOCIRC XL 55-45	1
HWP-#-2	21,22,23	HHW	INLINE CIRCULATOR	WATER	30	25	1/2 HP	230/1/60	B&G ECOCIRC XL 55-45	1
HWP-#-3	21,22,23	DHW	INLINE CIRCULATOR	WATER	12	15	270 WATTS	120/1/60	B&G NRF-45 #103404	2
DHWP-#-1	21,22,23	DHWR	INLINE CIRCULATOR	WATER	6	8	125 WATTS	120/1/60	B&G NBF-33 #103351LF	3
BP-#-1	21,22,23	B-1	INLINE CIRCULATOR	WATER	20	50		120/1/60	GRUNDFOS UPS-26-99FC	4
BP-#-2	21,22,23	B-2	INLINE CIRCULATOR	WATER	20	50		120/1/60	GRUNDFOS UPS-26-99FC	4

- NOTES:
- PUMP SHALL HAVE ECM DRIVE.
 - PUMP SHALL HAVE A 3-SPEED MOTOR.
 - PUMP SHALL BE BRONZE AND LISTED FOR POTABLE WATER.
 - PUMP SHALL BE SUPPLIED BY BOILER MANUFACTURER.

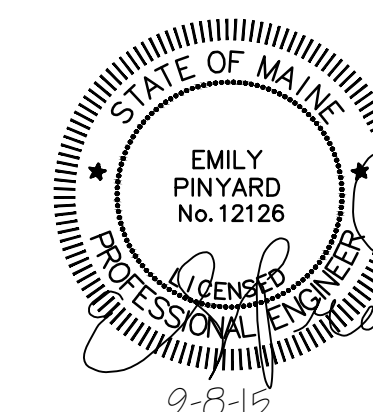
AIR SEPARATOR SCHEDULE

UNIT NO	BLDG NOs (#)	SERVICE	SIZE (IN)	FLOW (GPM)	MANUFACTURER AND MODEL (1)	NOTES
AS-#-1	21,22,23	HHW	2-1/2	30	B&G IAS-2-1/2	-

- NOTES:
-

KEYED NOTE:

(1) MANUFACTURERS NAME AND MODEL NUMBER ARE USED FOR DESCRIPTIVE PURPOSES ONLY AND ARE INTENDED TO INDICATE THE STANDARD OF MATERIAL OR ARTICLES REQUIRED. DESIGN IS PREDICATED AROUND LISTED MANUFACTURERS AS NOTED ON SCHEDULES AND IS NOT INTENDED TO LIMIT THE CONTRACTOR TO ONE MANUFACTURER.



				PORTLAND HOUSING AUTHORITY PORTLAND, MAINE			
				RIVERTON BOILER REPLACEMENTS BUILDING NOs 21,22,23			
				MECHANICAL SCHEDULES			
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REV	DESCRIPTION	DWN	APP	DATE			
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SIZE:	ANSI D	DATE:	9-8-15	DES BY:	ERP	SHEET	12 OF 16
DWN BY:	CSS	CKD BY:	MIF				

LEGEND

- 60 □ (4) NON-FUSED SAFETY SWITCH
NEMA ENCLOSURE
AMPERE RATING
- (4) F 60AS
40AF FUSED SAFETY SWITCH, TOP NUMBER INDICATES
SWITCH AMPERE RATING, LOWER NUMBER INDICATES
FUSE RATING
NEMA ENCLOSURE
- ⊕E DUPLEX RECEPTACLE, NEMA 5-20R
E - INSTALLED ON EMERGENCY CIRCUIT
IG - ISOLATED GROUND
S - SWITCHED RECEPTACLE
- WP GFCI DUPLEX RECEPTACLE, NEMA 5-20R
WEATHER PROOF
- ⊕ POWER RECEPTACLE, 240 VOLT NEMA
CONFIGURATION AS NOTED
- PANELBOARD, NORMAL POWER
- JUNCTION BOX
- Mol MANUAL MOTOR STARTER, TOGGLE OPERATED,
SINGLE PHASE, 1,2 OR 3 POLE AS REQUIRED
OVERLOAD PROTECTION
- ⊕ DOWN LIGHT
- HOME RUN
- Sg SINGLE POLE TOGGLE SWITCH
INDICATES CONTROLLED FIXTURE
- S3 3-WAY TOGGLE SWITCH
- TEL TELEPHONE SERVICE ENTRANCE CABINET
- ⊕P SMOKE DETECTOR, CEILING MOUNTED
A - AUXILIARY CONTACT
AS - AIR SAMPLING
P - PHOTOELECTRIC SMOKE
E - WIRED FOR ELEVATOR RECALL
BT - BEAM TRANSMITTER
BR - BEAM RECEIVER
- ⊕CO GAS DETECTOR
CO - CARBON MONOXIDE
CO2 - CARBON DIOXIDE
NO2 - NITROGEN DIOXIDE

LINE TYPES

- EXISTING
- NEW
- - - - - DEMOLITION
- MATCHLINE
- . - . - . - PART PLAN OUTLINE

ABBREVIATIONS

- AMP AMPERE
- AFF ABOVE FINISHED FLOOR
- AFG ABOVE FINISHED GRADE
- AHJ AUTHORITY HAVING JURISDICTION
- AIC AMPERE INTERRUPTING CAPACITY
- AWG AMERICAN WIRE GAUGE
- BFG BELOW FINISHED GRADE
- BLDG BUILDING
- BOS BOTTOM OF STEEL
- C CONDUIT
- CATV CABLE TELEVISION
- CB CIRCUIT BREAKER
- CCTV CLOSED CIRCUIT TELEVISION
- CPT CONTROL POWER TRANSFORMER
- CT CURRENT TRANSFORMER
- CU COPPER
- DACT DIGITAL ALARM COMMUNICATOR TRANSMITTER
- DB DIRECT BURIED
- DISC DISCONNECT
- DN DOWN
- EMT ELECTRICAL METALLIC TUBING
- EWC ELECTRIC WATER COOLER
- EWH ELECTRIC WATER HEATER
- EQP EQUIPMENT
- EXIST EXISTING
- FAA FIRE ALARM ANNUNCIATOR
- FACP FIRE ALARM CONTROL PANEL
- FBO FURNISHED BY OTHERS
- FLR FLOOR
- FWE FURNISHED WITH EQUIPMENT
- FU FUSE
- G GROUND
- GEN GENERATOR
- GFCI GROUND FAULT CIRCUIT INTERRUPT
- CLG CEILING
- GND GROUND
- HP HORSEPOWER
- HTR HEATER
- IG ISOLATED GROUND
- IMC INTERMEDIATE METAL CONDUIT
- K KILO
- KCMIL THOUSAND CIRCULAR MILS
- KV KILOVOLT
- KVA KILOVOLT-AMPERE
- KVAR KILOVOLT-AMPERE REACTIVE
- KW KILOWATT
- KWH KILOWATT-HOUR
- LA LIGHTNING ARRESTER
- LTC LIGHTING
- MC METAL CLAD
- MCB MAIN CIRCUIT BREAKER
- MFR MANUFACTURER
- MI MINERAL INSULATED
- MLO MAIN LUG ONLY
- MNS MASS NOTIFICATION SYSTEM
- MTD MOUNTED
- MV MEDIUM VOLTAGE
- NC NORMALLY CLOSED
- NEC NATIONAL ELECTRICAL CODE
- NEG NEGATIVE
- NEUT NEUTRAL
- NIC NOT IN CONTRACT
- NO NORMALLY OPEN
- NTS NOT TO SCALE
- PF POWER FACTOR
- PH PHASE
- PVC POLYVINYL CHLORIDE
- RM ROOM
- RSC RIGID STEEL CONDUIT
- RTD RESISTANCE TEMPERATURE DETECTOR
- SN SOLID NEUTRAL
- SPD SURGE PROTECTIVE DEVICE
- STP SHIELDED TWISTED PAIR
- STT SHIELDED TWISTED TRIPLET
- SWBD SWITCHBOARD
- SWGR SWITCHGEAR
- TOS TOP OF STEEL
- TANSF TRANSFORMER
- V VOLT
- VA VOLT-AMPERE
- VAR VOLT-AMPERE REACTIVE
- WM WATT METER
- WP WEATHER PROOF
- XFMR TRANSFORMER
- XP EXPLOSION PROOF

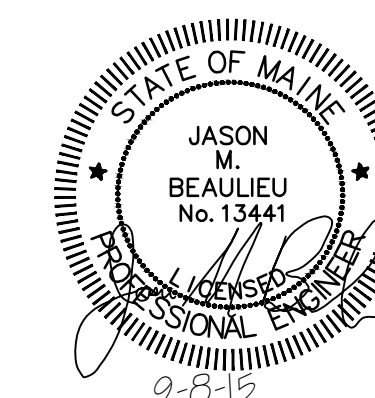
GENERAL NOTES

1. ALL GENERAL NOTES, SYMBOL LISTS AND DETAILS ARE TO BE CONSIDERED AS APPLICABLE TO ALL ELECTRICAL DRAWINGS FOR THIS PROJECT. SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET ARE FOR REFERENCE ONLY AND DO NOT INDICATE THEIR INCORPORATION IN THE DESIGN.
2. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH NFPA-70, NATIONAL ELECTRICAL CODE (NEC) 2014.
3. REMOVE ALL ELECTRICAL EQUIPMENT COMPLETELY WHERE INDICATED. REMOVE ALL CIRCUIT CONDUCTORS, SWITCHES, LIGHTING FIXTURES AND MISCELLANEOUS APPLIANCES BACK TO ENERGIZING SOURCE OR JUNCTION BOX WHERE MULTIPLE EQUIPMENT IS POWERED.
4. ALL CONDUCTOR MATERIAL, INCLUDING WIRING, PANELBOARD BUSES, TRANSFORMER WINDINGS, AND GROUNDING SHALL BE COPPER. ALUMINUM CONDUCTORS SHALL NOT BE ALLOWED.
5. UNLESS OTHERWISE NOTED, WIRING SHALL BE 2#12 AWG CONDUCTORS AND #12 GND. HOME RUNS FED FROM 20A-1P CIRCUITS IN EXCESS OF 100 FEET SHALL BE #10 AWG.
6. LIGHTING TOGGLE SWITCHES SHALL BE COMMERCIAL SPECIFICATION GRADE 277/120 VOLT, SIDE WIRED AND PROVIDED WITH GROUNDING SCREW. LEVITON, PASS AND SEYMOUR OR APPROVED EQUAL. COORDINATE COLOR WITH OWNER.
7. CONVENIENCE RECEPTACLES SHALL BE COMMERCIAL SPECIFICATION GRADE GROUNDING TYPE NEMA 5-20R, SIDE WIRED. LEVITON, PASS AND SEYMOUR OR APPROVED EQUAL.
8. ALL EQUIPMENT DISCONNECTS AND MANUAL MOTOR STARTERS ARE PROVIDED BY ELECTRICAL CONTRACTOR UNLESS NOTED AS FURNISHED WITH EQUIPMENT (FWE). MOUNT ALL DISCONNECTS AND MOTOR STARTERS IN AN ACCESSIBLE LOCATION WITHIN SIGHT OF THE LOAD SERVED.
9. UNLESS OTHERWISE NOTED CONVENIENCE RECEPTACLES SHALL BE MOUNTED 18-INCHES AFF AND LIGHTING TOGGLE SWITCHES 48-INCHES AFF.
10. ALL PENETRATIONS THROUGH FLOORS, RATED WALLS AND PARTITIONS SHALL BE SEALED WITH UL APPROVED FIRE SEALANT MATERIAL TO MAINTAIN THE RATING OF SEPARATION.
11. EQUIPMENT CONNECTIONS ARE SHOWN FOR BASIS-OF-DESIGN PRODUCTS. CONTRACTOR SHALL COORDINATE ALL EQUIPMENT CONNECTIONS - INCLUDING DISCONNECTING MEANS, OVERCURRENT PROTECTION, AND WIRE SIZING - WITH SELECTED MANUFACTURER'S RECOMMENDED INSTRUCTIONS.
12. CONTRACTOR SHALL PROVIDE ALL MOUNTING HARDWARE NECESSARY FOR A COMPLETE INSTALLATION. MOUNT EQUIPMENT AND ROUTE CONDUIT SO AS NOT TO INTERFERE WITH OPERATIONS SUCH AS OVERHEAD DOORS, DOOR SWINGS, ETC.
13. MANUFACTURERS NAME AND MODEL NUMBERS ARE USED THROUGHOUT THE PROJECT FOR DESCRIPTIVE PURPOSES ONLY AND ARE INTENDED TO INDICATE THE STANDARD OF MATERIAL OR ARTICLES REQUIRED. DESIGN IS PREDICATED AROUND LISTED MANUFACTURERS AS NOTED ON SCHEDULES AND NOTES AND IS NOT INTENDED TO LIMIT THE CONTRACTOR TO ONE MANUFACTURER.

LOADCENTER REPLACEMENT SCOPE

1. ALL EXISTING FEDERAL PACIFIC LOADCENTERS ARE TO BE REPLACED. EXISTING FEDERAL PACIFIC LOADCENTERS ARE MODEL NUMBER LX108-16.
2. NEW LOADCENTERS SHALL BE HOMELINE HOM12L125GC OR APPROVED EQUAL.
3. ALL APARTMENTS UNLESS OTHERWISE NOTED BELOW HAVE A FEDERAL PACIFIC LOADCENTER THAT SHALL BE REPLACED. THE FOLLOWING APARTMENTS DO NOT REQUIRE A REPLACEMENT LOADCENTER:
 - BUILDING 21 - UNIT A
 - BUILDING 22 - UNIT D
 - BUILDING 23 - UNIT E

X:\218 Portland Housing Authority\218.011.001 - Riverton Boiler Replacements\Drawings\Phase 3\Sheets\E-001.dwg - 9/8/2015 9:01 AM - CRAIG SMITH



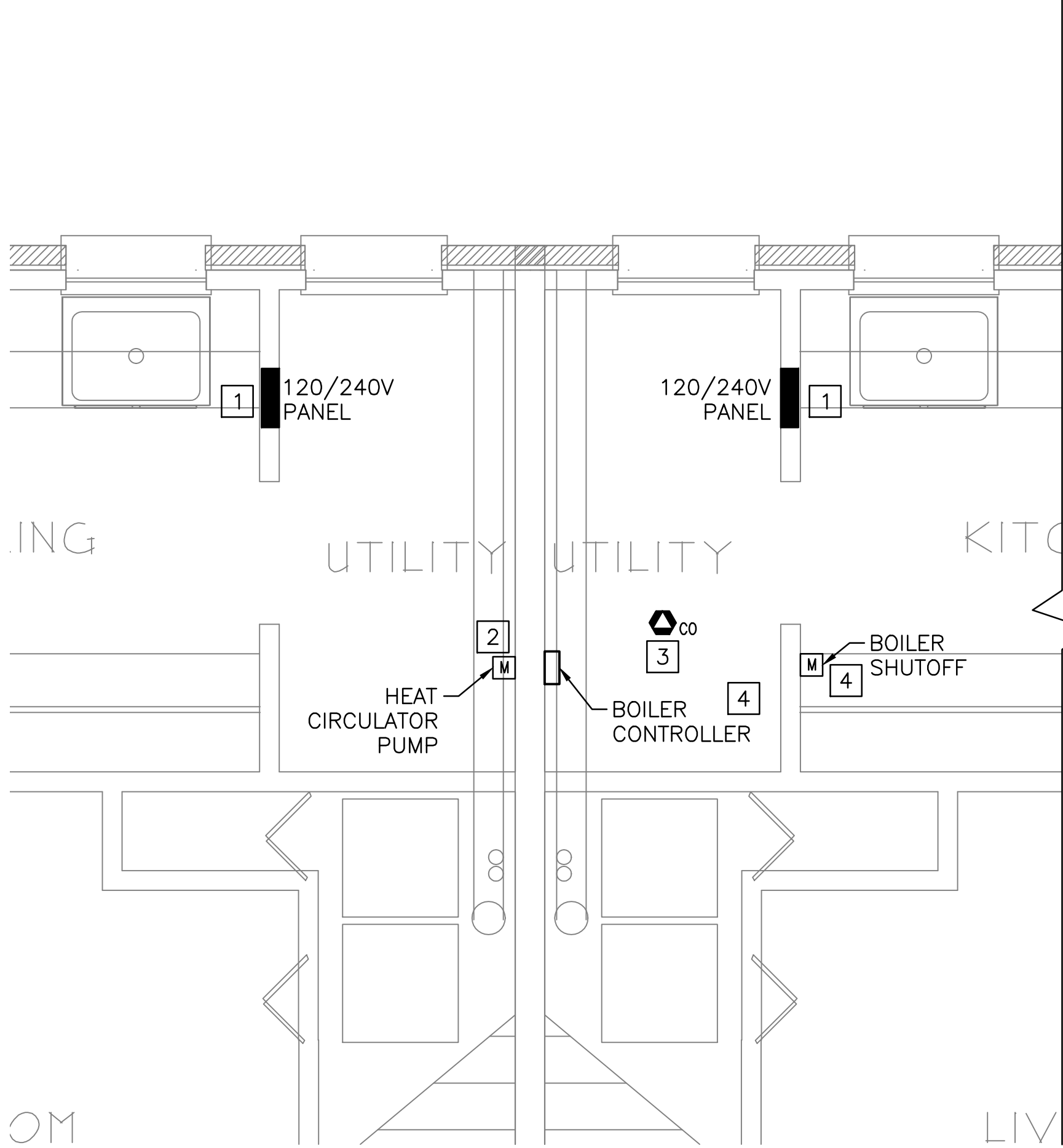
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				RIVERTON BOILER REPLACEMENTS BUILDING NOS 21,22,23			
				ELECTRICAL LEGEND, ABBREVIATIONS AND GENERAL NOTES			
0	ISSUED FOR CONSTRUCTION	JMB	MRL	9-8-15			
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		DATE: 9-8-15		SHEET		13 OF 16	
		DES BY: JMB					
		DWN BY: JMB					
		CKD BY: BCT					

NOTES:

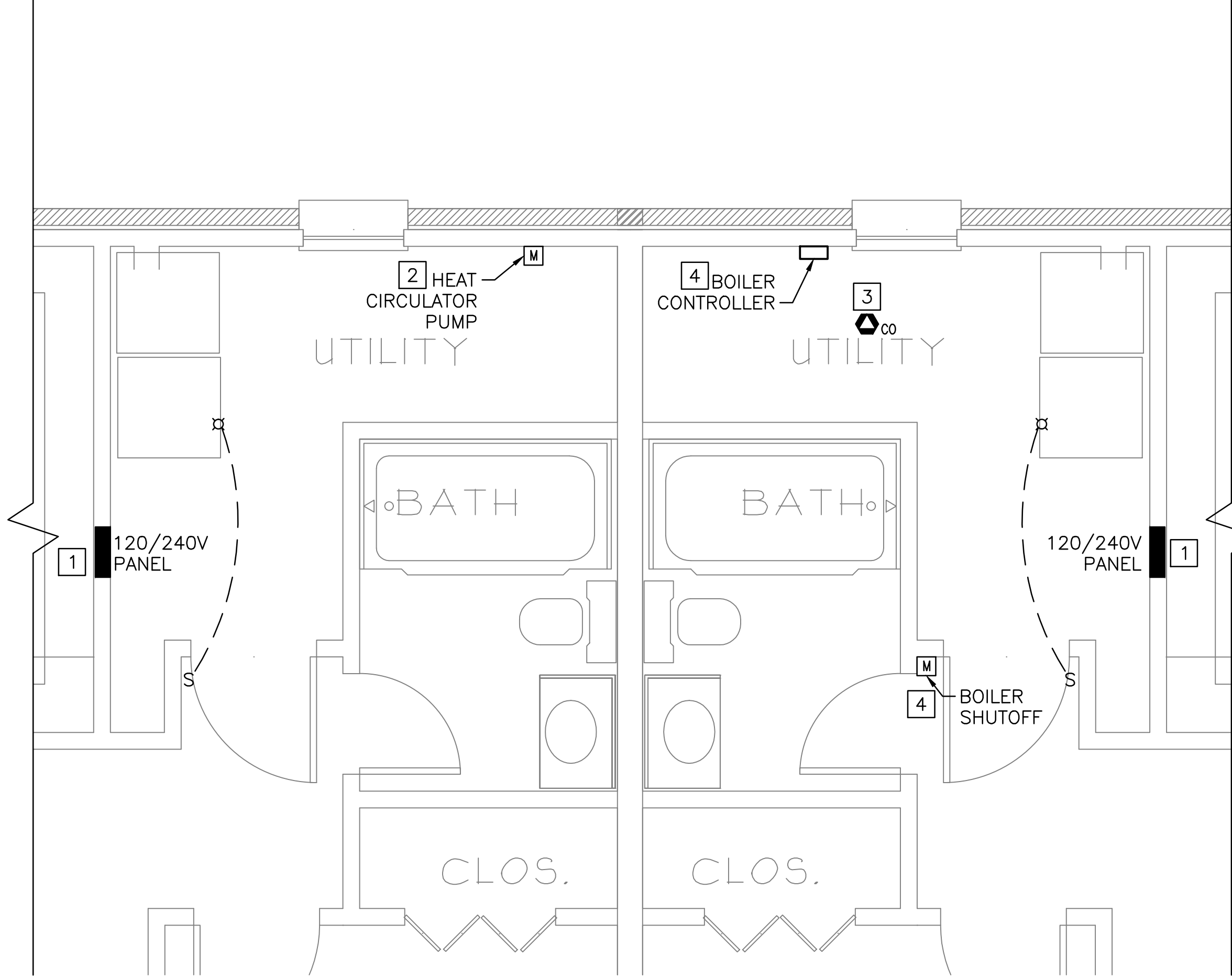
1. SEE SHEET E-001 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES.
2. SCOPE OF WORK REPRESENTED IS TYPICAL FOR BUILDINGS 21,22,23.
3. HEATING SYSTEM CIRCUITS ARE FED FROM "HOUSE" PANEL, LOCATED ON EXTERIOR OF BUILDING NEAR METER BANK. METER BANK LOCATION VARIES FROM BUILDING TO BUILDING. GENERALLY, METER BANK IS LOCATED AT NORTH WEST OR NORTH EAST CORNER OF BUILDING.

DEMOLITION KEYED NOTES:

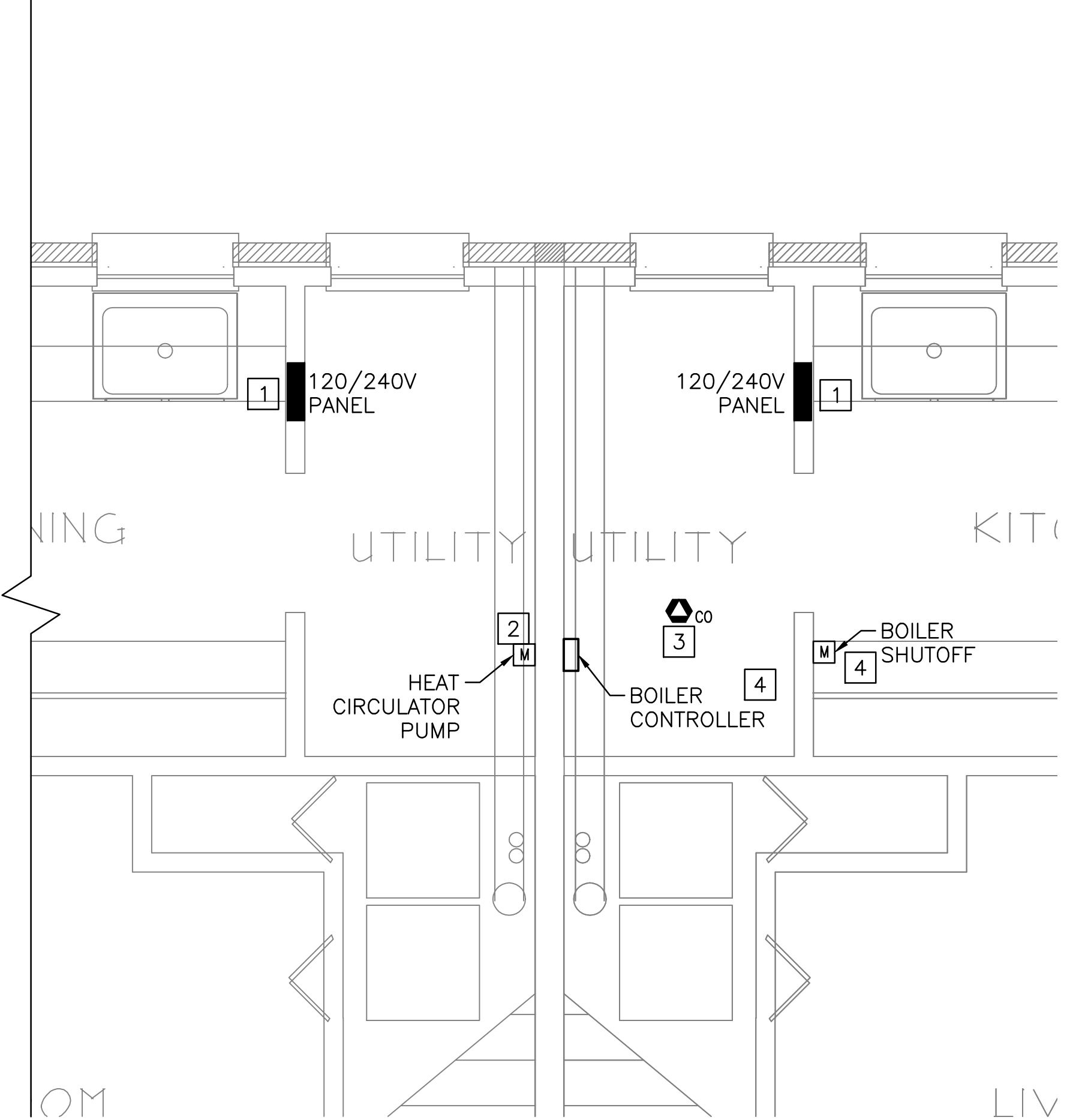
1. REPLACE ALL FEDERAL PACIFIC PANELBOARDS. REFER TO SHEET E-601 FOR PANELBOARD REPLACEMENT SCHEDULE.
2. REMOVE CIRCULATION PUMP MANUAL MOTOR STARTER AND CIRCULATION PUMP CIRCUIT COMPLETELY BACK TO ENERGIZING SOURCE.
3. REMOVE CARBON MONOXIDE DETECTOR.
4. REMOVE BOILER CIRCUIT AND ALL ASSOCIATED EQUIPMENT COMPLETELY BACK TO ENERGIZING SOURCE.



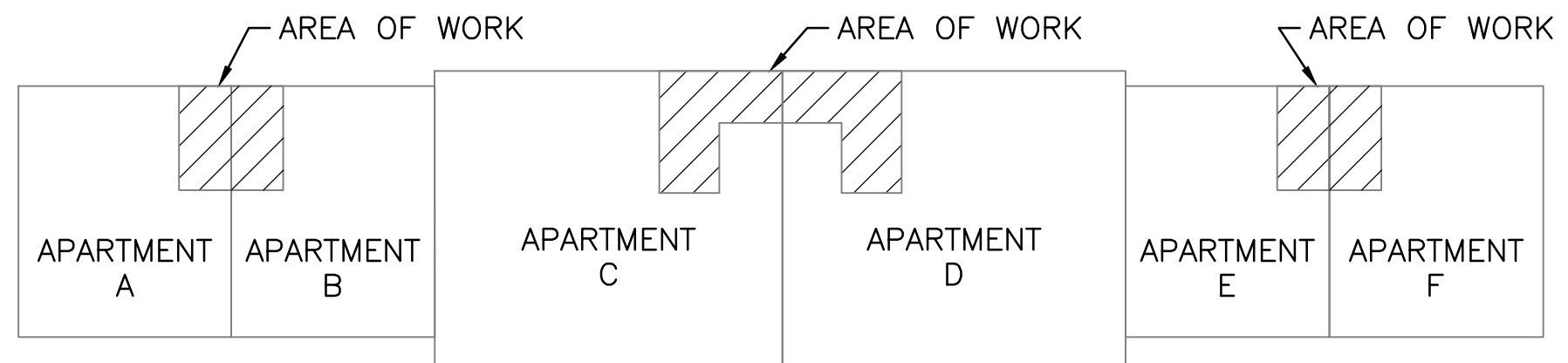
A UNIT A & B PART PLAN
 ED-101 SCALE: 1/2" = 1'-0" REF. DWG. = MD-101



B UNIT C & D PART PLAN
 ED-101 SCALE: 1/2" = 1'-0" REF. DWG. = MD-101

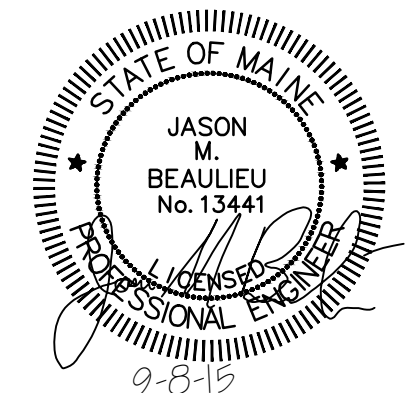
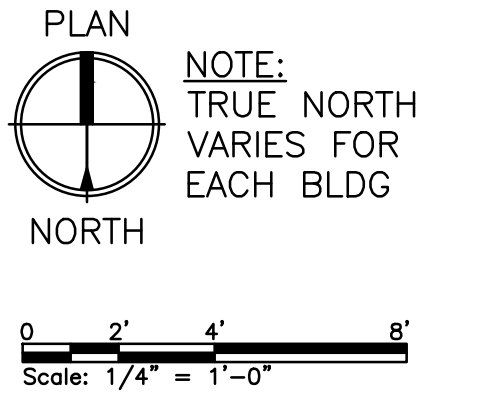


C UNIT E & F PART PLAN
 ED-101 SCALE: 1/2" = 1'-0" REF. DWG. = MD-101



KEY PLAN
 SCALE: NTS

PLANS REPRESENT A TYPICAL BUILDING CONFIGURATION. NOT ALL BUILDINGS ARE COMPLETELY IDENTICAL. FIELD VERIFY ALL CONDITIONS PRIOR TO PERFORMING ANY WORK.



PORTLAND HOUSING AUTHORITY PORTLAND, MAINE			
RIVERTON BOILER REPLACEMENTS BUILDING NOS 21,22,23			
ELECTRICAL DEMOLITION PLAN			
0	ISSUED FOR CONSTRUCTION	JMB	MRL 9-8-15
REV	DESCRIPTION	DWN	APP DATE
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74 York Street Portland, Maine 04101 207.533.7753 colbycoengineering.com		PROJECT NO. 218.011.001	DRAWING NO. ED-101
Colby Company engineering		SHEET 14 OF 16	

X:\218 Portland Housing Authority\218.011.001 - Riverton Boiler Replacements\Drawings\Phase 3\Sheets\ED-101.dwg - 9/8/2015 9:01 AM - CRAIG SMITH

NOTES:

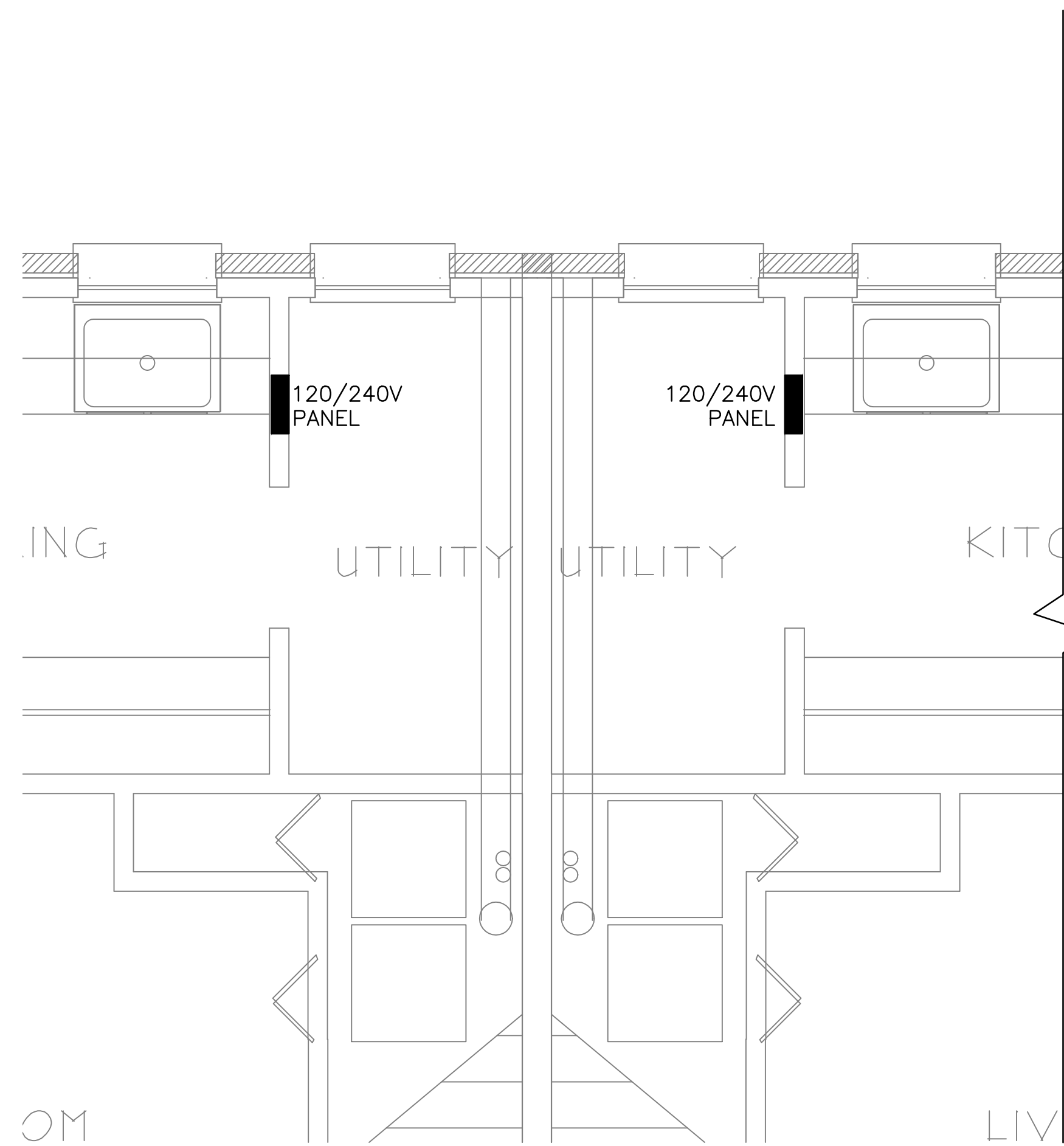
- SEE SHEET E-001 FOR LEGEND, ABBREVIATIONS, AND GENERAL NOTES.
- SCOPE OF WORK REPRESENTED IS TYPICAL FOR BUILDINGS 21,22,23.
- HOUSE PANELBOARD LOCATED ON EXTERIOR OF BUILDING NEAR METER BANK. METER BANK LOCATION VARIES FROM BUILDING TO BUILDING. GENERALLY, METER BANK IS LOCATED AT NORTH WEST OR NORTH EAST CORNER OF BUILDING. ROUTE NEW CONDUIT ON EXTERIOR OF BUILDING.

KEYED NOTES:

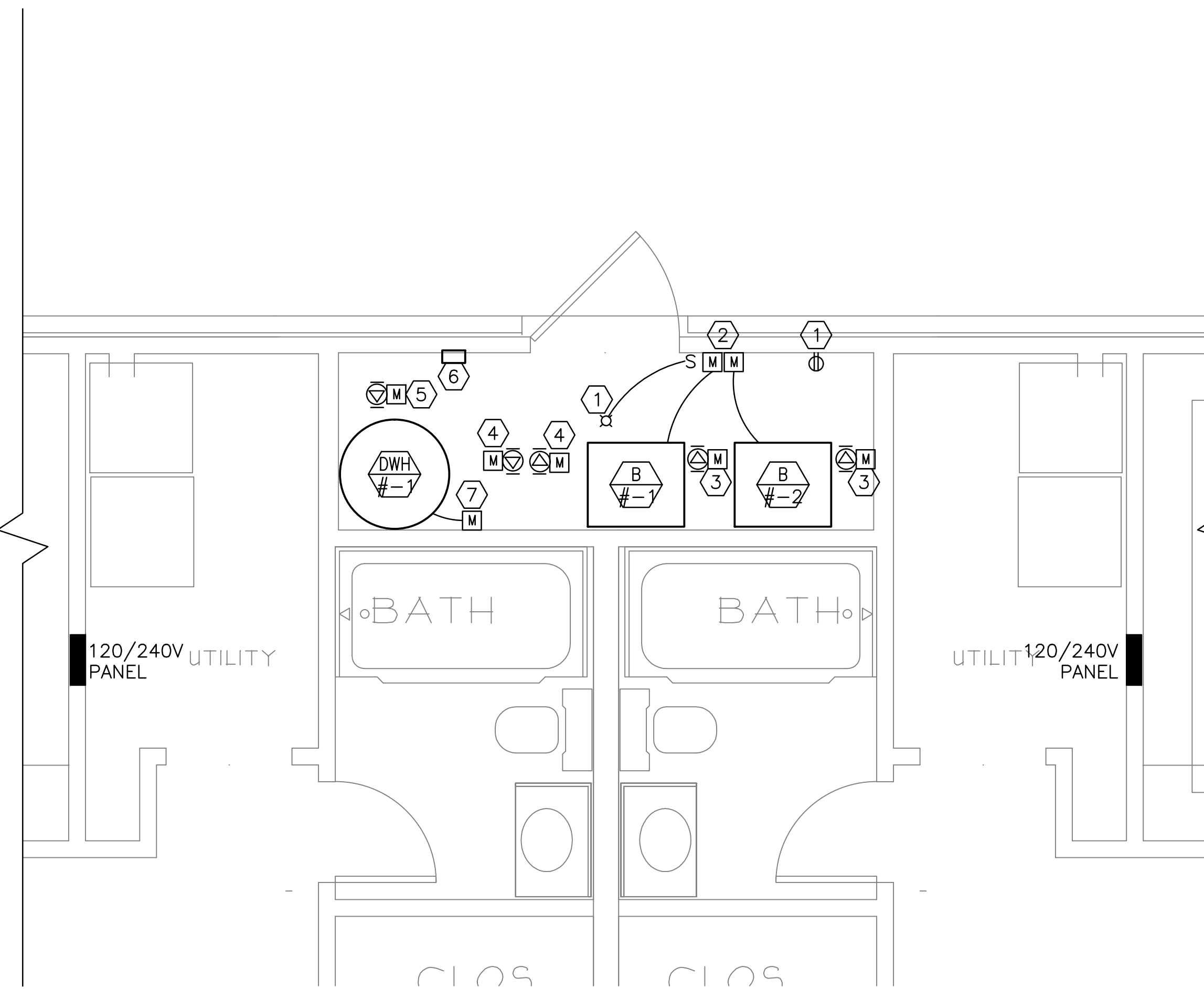
- PROVIDE NEW UTILITY LIGHT FIXTURE AND CONVENIENCE RECEPTACLE. PROVIDE 120V 20A-1P CIRCUIT FROM SPACE IN HOUSE PANELBOARD FOR LIGHT AND RECEPTACLE.
- PROVIDE 120V 20A-1P CIRCUIT FROM A SPARE IN HOUSE PANELBOARD FOR EACH BOILER AND BOILER PUMP PAIR. PROVIDE BOILER SHUT OFF SWITCH FOR EACH BOILER ON WALL NEAR EXIT. PROVIDE TOGGLE SWITCH DISCONNECT FOR BOILER PUMP.
- PROVIDE POWER TO BOILER PUMPS THROUGH BOILER INTEGRATED CONTROL PANEL.

KEYED NOTES CONTINUED:

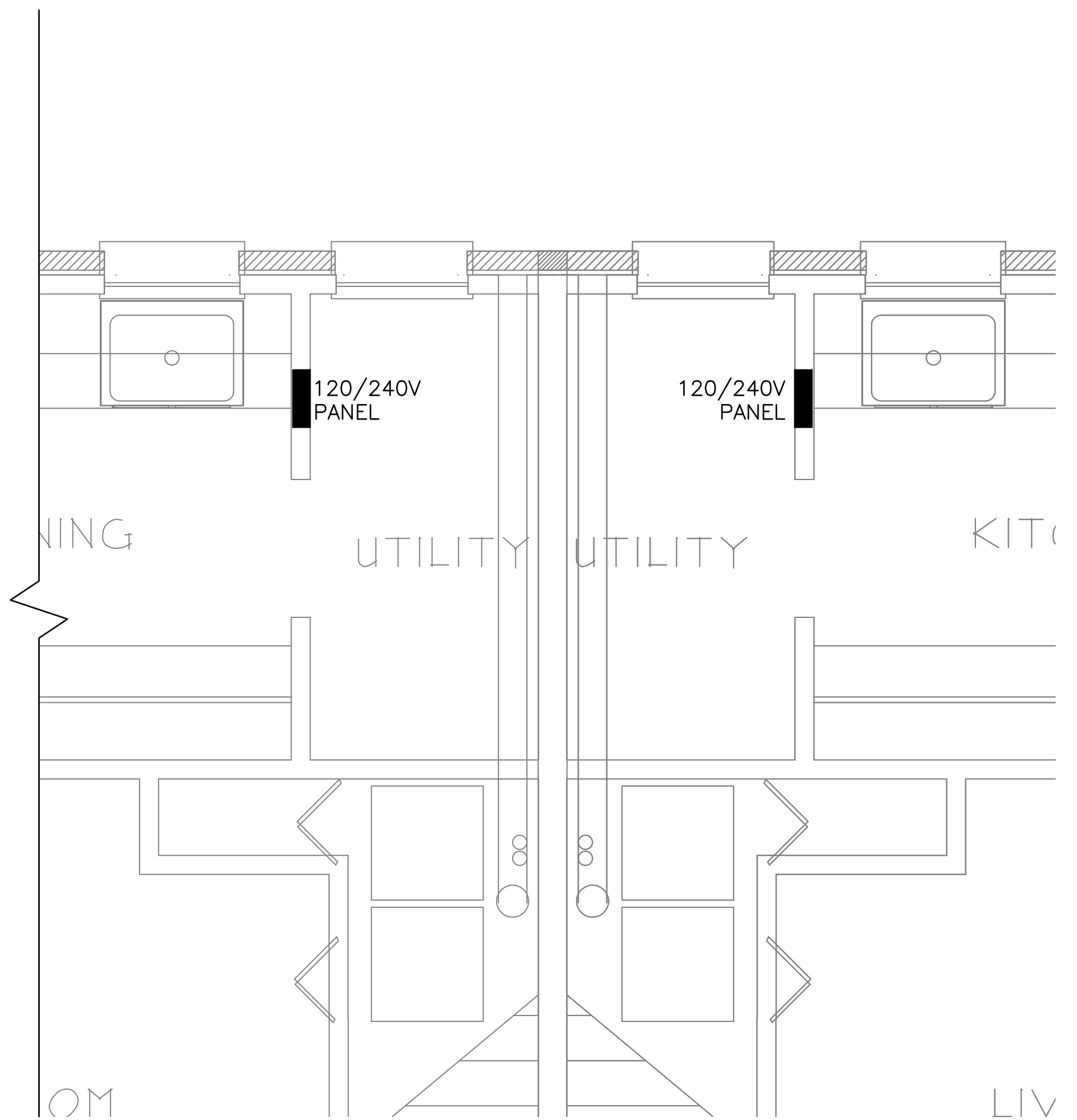
- PROVIDE 240V 20A-2P CIRCUIT FROM SPACE IN HOUSE PANELBOARD FOR HEATING HOT WATER CIRCULATOR PUMPS. PROVIDE TOGGLE SWITCH DISCONNECT FOR EACH PUMP.
- PROVIDE 120V 20A-1P CIRCUIT FROM SPACE IN HOUSE PANELBOARD FOR DOMESTIC HOT WATER CIRCULATOR PUMP. PROVIDE TOGGLE SWITCH DISCONNECT.
- PROVIDE 120V 20A-1P CIRCUIT FROM SPACE IN HOUSE PANELBOARD FOR ZONE CONTROLLERS.
- PROVIDE 120V 20A-1P CIRCUIT FROM A SPARE IN HOUSE PANELBOARD FOR DOMESTIC WATER HEATER.



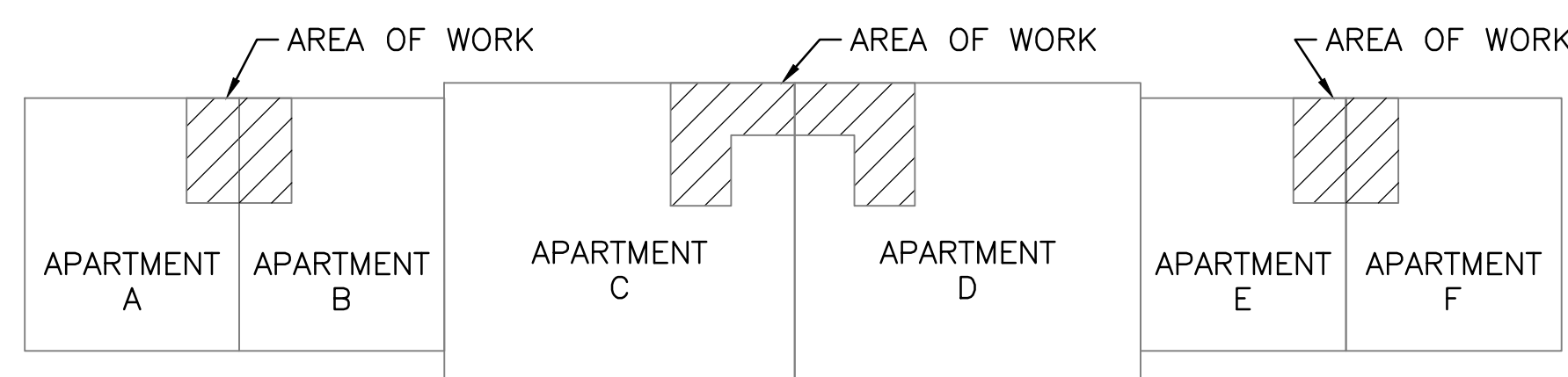
A UNIT A & B PART PLAN
E-101 SCALE: 1/2" = 1'-0" REF. DWG. = MD-101



B UNIT C & D PART PLAN
E-101 SCALE: 1/2" = 1'-0" REF. DWG. = MD-101

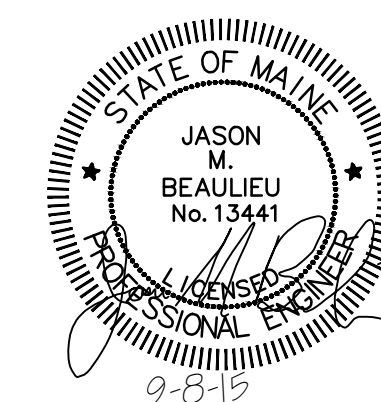
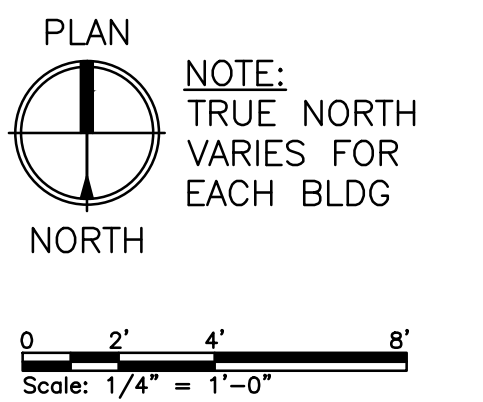


C UNIT E & F PART PLAN
E-101 SCALE: 1/2" = 1'-0" REF. DWG. = MD-101



KEY PLAN
SCALE: NTS

PLANS REPRESENT A TYPICAL BUILDING CONFIGURATION. NOT ALL BUILDINGS ARE COMPLETELY IDENTICAL. FIELD VERIFY ALL CONDITIONS PRIOR TO PERFORMING ANY WORK.



REV	DESCRIPTION	DWN	APP	DATE
0	ISSUED FOR CONSTRUCTION	JMB	MRL	9-8-15

PORTLAND HOUSING AUTHORITY
PORTLAND, MAINE
RIVERTON BOILER REPLACEMENTS
BUILDING NOS 21,22,23
ELECTRICAL PLAN

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colbycoengineering.com

SIZE: ANSI D
DATE: 9-8-15
DES BY: JMB
DWN BY: JMB
CKD BY: MRL

PROJECT NO.
218.011.001
SHEET
15 OF 16

DRAWING NO.
E-101

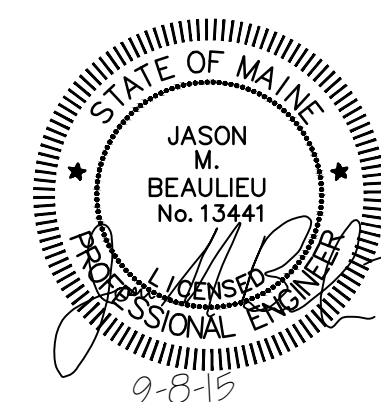
PANELBOARD NO:	TYPICAL PANEL	SC RATING:	10 KAIC	125 AMP MAIN LUGS
PANELBOARD TYPE:	HOMELINE LOAD CENTER HOM12L125GC	MOUNTING:	FLUSH	125 AMP BUS
PANEL LOCATION:	SEE PLANS	VOLTAGE:	120/240V, SINGLE PHASE	

CKT NO.	TRIP AMPS	NO. POLES	WIRE / CONDUIT	GND. WIRE	LOAD SERVED	LOAD VA	φ	LOAD VA	LOAD SERVED	WIRE / CONDUIT	GND. WIRE	NO. POLES	TRIP AMPS	CKT NO.
1	20	1	-	-	KITCHEN COUNTER OUTLETS (NOTE 1)		A		LIGHTS (NOTE 1)	-	-	1	15	2
3	20	1	-	-	KITCHEN COUNTER OUTLETS (NOTE 1)		B		KITCHEN LIGHTS (NOTE 1)	-	-	1	15	4
5	20	1	-	-	LIVING ROOM OUTLETS (NOTE 1)		A		CLOTHES WASHER (NOTE 1)	-	-	1	20	6
7	20	1	-	-	LAUNDRY OUTLETS (NOTE 1)		B		DRYER	-	-	2	30	8
9	15	1	-	-	UPSTAIRS BEDROOM AND BATH (NOTE 1)		A	10						
11							B							12

- NOTES:
1. PROVIDE ARC-FAULT CIRCUIT-INTERRUPTER CIRCUIT BREAKER.
 2. ALL LOADS SHOWN ARE EXISTING LOADS TO BE RECONNECTED.

TYPICAL PANEL SCHEDULE

SCALE: NTS



				PORTLAND HOUSING AUTHORITY PORTLAND, MAINE	
				RIVERTON BOILER REPLACEMENTS BUILDING NOS 21,22,23	
				ELECTRICAL SCHEDULES	
0	ISSUED FOR CONSTRUCTION	JMB	MRL	9-8-15	
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					E-601