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BOILER REPLACEMENT
 FOR THE
NESHAMINY HIGH SCHOOL
 NESHAMINY SCHOOL DISTRICT
 LANGHORNE, PA

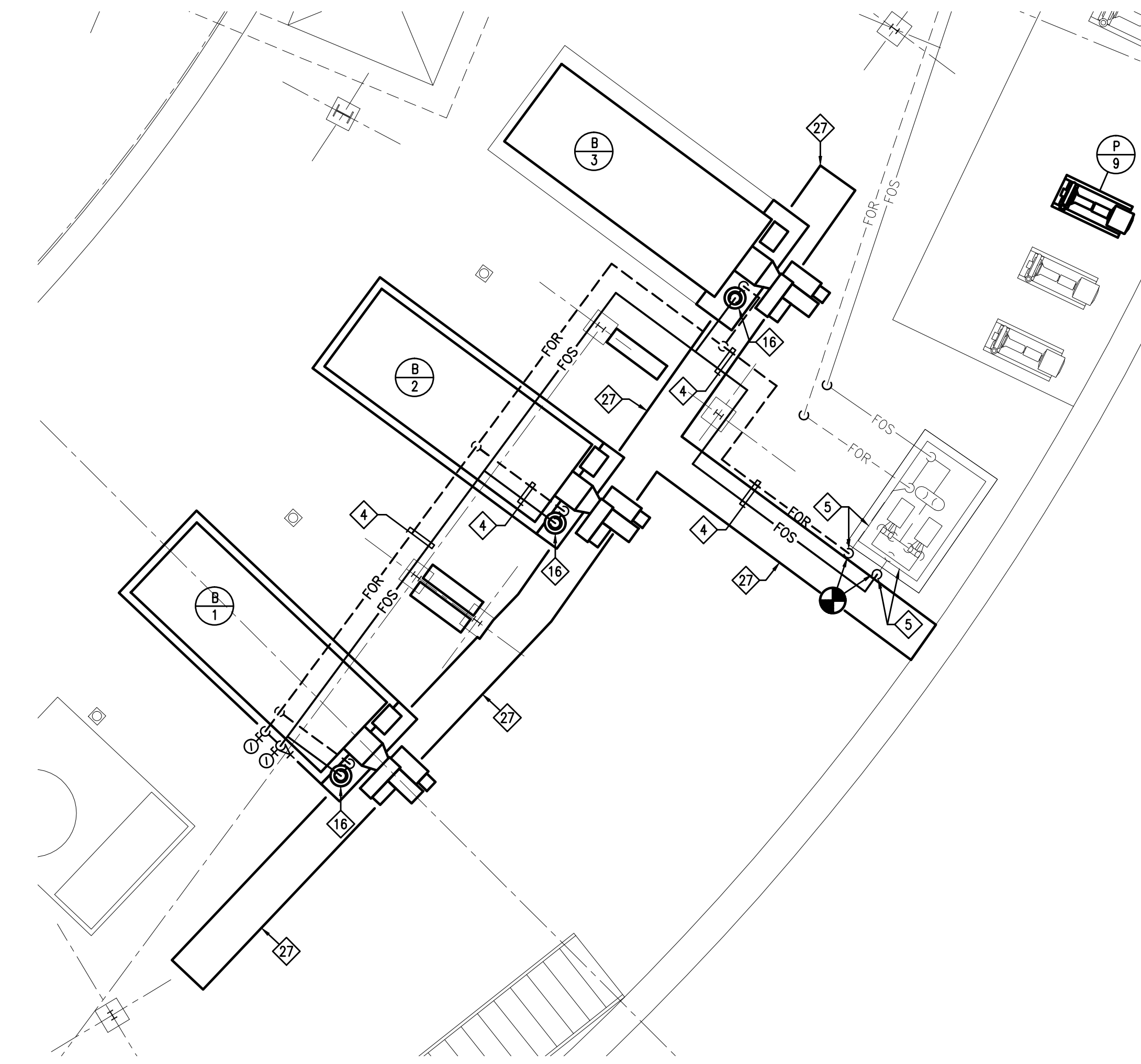
BOILER ROOM PLAN
 MECHANICAL - NEW WORK

DRAWN	RLC
CHECKED	FB
DATE	11-22-11
SCALE	AS NOTED
JOB NO.	11-2051-1
SHEET	

M-2



BOILER ROOM PLAN - NEW WORK
 SCALE: 1/4" = 1'-0"



PARTIAL BOILER ROOM PLAN - NEW WORK
 SCALE: 1/4" = 1'-0"

KEYED DRAWING NOTES:

- 1 EXTEND NEW 3/4" GAS PIPING FROM EXISTING MAIN TO BURNER PILOT CONNECTION, PROVIDE GAS SHUTOFF COCK AND DIRT LEG.
- 2 EXTEND NEW GAS PIPING FROM EXISTING MAIN TO GAS TRAIN, PROVIDE GAS SHUTOFF COCK AND DIRT LEG, PIPE VENT VALVE SEPARATELY TO ATMOSPHERE. REFER TO NOTE 9.
- 3 DUAL FUEL BURNER, INSTALL GAS TRAIN. RUN NEW GAS LINE OVERHEAD FOR PILOT, COMPLETE THE INSTALLATION OF THE OIL PIPING. REFER TO DETAIL ON DWG. M-3. PROVIDE AN INTERLOCK TO OPEN (1) NEW 3/2" x 36" MOTOR OPERATED DAMPER INSTALLED ON THE EXISTING COMBUSTION AIR INTAKE LOUVER LOCATED ON THE EXTERIOR BOILER ROOM WALL. WHEN THE BOILER IS ENERGIZED, THE MOTOR OPERATED DAMPER SHALL FULLY OPEN, WHEN THE BOILER IS SHUT-DOWN THE MOTOR OPERATED DAMPER SHALL FULLY CLOSE.
- 4 NEW FUEL OIL PIPING, SEE SCHEMATIC ON DWG. M-3. RUN FUEL OIL PIPING OVERHEAD 7'-6" ABOVE FINISHED FLOOR. PROVIDE NEW TRAPEZE HANGERS AS REQUIRED.
- 5 CONNECT NEW FUEL OIL PIPING TO EXISTING DUPLEX FUEL OIL PUMP SET WHERE INDICATED. THOROUGHLY CLEAN AND DEGREASE EXISTING FUEL OIL PUMP SET, ASSOCIATED PIPING AND CONTAINMENT BASIN, COMPLETELY PAINT EXISTING FUEL OIL PUMP SET, PIPING AND BASIN WITH (1) COAT OF PRIMER AND (2) COATS OF MEDIUM GLOSS BLUE ENAMEL.
- 6 CONNECT NEW DOMESTIC COLD WATER MAKE-UP LINE TO EXISTING DOMESTIC WATER MAIN LOCATED ABOVE MEZZANINE PLATFORM NEAR THE HEATING SYSTEM AIR SEPARATOR, PROVIDE NEW 1/2" REDUCED PRINCIPLE BACKFLOW PREVENTER, PRESSURE REGULATOR, ISOLATION VALVES AND BYPASS. REFER TO MAKE-UP WATER PIPING DETAIL SHOWN ON DWG. M-3. PROVIDE FUNNEL DRAIN AND PIPE BACKFLOW PREVENTOR DISCHARGE TO NEAREST FLOOR DRAIN BELOW, TERMINATE WITH 2" AIR GAP.
- 7 RELOCATED BOILER, REFER TO PIPING SCHEMATIC ON DWG. M-3 FOR REQUIRED PIPING ARRANGEMENT AND COMPONENTS. PROVIDE 4" THICK REINFORCED CONCRETE PAD UNDER BOILER WITH 4" OVERHANG ON SIDES AND REAR, EXTEND LENGTH OF PAD 16" BEYOND FRONT OF BOILER FOR FUEL OIL PUMP AND FUEL OIL STAND PIPE.
- 8 PROVIDE NEW TRAPEZE HANGERS UNDER THE GAS AND GAS VENT PIPING AS REQUIRED.
- 9 NORMALLY OPEN GAS VENT OFF THE BOILER GAS TRAIN SHALL BE PIPED SEPARATELY, ALL OTHER RELIEF GAS VENTS CAN BE MANIFOLDED TOGETHER, EACH GAS TRAIN ASSEMBLY SHALL BE VENTED INDIVIDUALLY.
- 10 NEW BASE MOUNTED HEATING PUMP, INSTALL PIPING AS INDICATED ON BASE MOUNTED PUMP DETAIL LOCATED ON DWG. M-3.
- 11 REMOTE MOUNTED BOILER CONTROL PANEL, PROVIDE STEEL ANGLE SUPPORT AS REQUIRED.
- 12 REMOTE MOUNTED FUEL OIL BURNER PUMP, BASE MOUNT TO EXTENDED EQUIPMENT PAD.
- 13 EXPANSION TANK, REFER TO EXPANSION TANK DETAIL SHOWN ON DWG. M-3 FOR REQUIRED PIPING ARRANGEMENT AND COMPONENTS. PROVIDE 4" HIGH CONCRETE EQUIPMENT PAD UNDER EXPANSION TANKS, PAD SHALL MEASURE 4" LARGER THAN THE PROVIDED TANKS AS MEASURED ON ALL SIDES.
- 14 FURNISH AND INSTALL NEW EMERGENCY BOILER SHUTOFF SWITCH AS INDICATED.
- 15 PROVIDE AN INTERLOCK TO OPEN (1) NEW 8" x 36" MOTOR OPERATED DAMPER INSTALLED ON THE EXISTING COMBUSTION AIR INTAKE LOUVER LOCATED ON THE EXTERIOR BOILER ROOM WALL. WHEN THE WATER HEATER BURNER IS ENERGIZED, THE MOTOR OPERATED DAMPER SHALL FULLY OPEN, WHEN THE WATER HEATER IS SHUT-DOWN THE MOTOR OPERATED DAMPER SHALL FULLY CLOSE.
- 16 RELOCATED FUEL OIL STAND PIPE, REFER TO DIAGRAM SHOWN ON DWG. M-3.
- 17 PROVIDE AN 104" WIDE x 36" HIGH x 12" LONG DUCT COLLAR AND (1) 8" WIDE x 36" HIGH AND (3) 32" WIDE x 36" HIGH MOTOR OPERATED DAMPERS, INSTALL ALL (4) DAMPERS WITHIN NEW DUCT COLLAR AND ATTACH NEW DUCT COLLAR TO REAR OF EXISTING COMBUSTION INTAKE LOUVER. INTERLOCK ALL DAMPER MOTOR OPERATORS TO APPLIANCE BURNERS AS DESCRIBED ABOVE.
- 18 INSTALL BOTTOM OF GAS FIRED UNIT HEATER 12'-0" ABOVE FINISHED FLOOR, PROVIDE GAS COCK AND VENTLESS GAS REGULATOR SIZED FOR 1.34 P.S.I. INLET, 14" W.C. @ 250 MBH OUTLET.
- 19 PROVIDE GAS COCK AND VENTED GAS REGULATOR SIZED FOR 10 P.S.I. INLET, 14" W.C. @ 6000 MBH OUTLET. VENT GAS REGULATOR TO ATMOSPHERE AS INDICATED.
- 20 PROVIDE NEW 22" SINGLE WALL CHIMNEY LINER TYPE 304 STAINLESS STEEL, APPROX. 52' HIGH. PROVIDE WATER TIGHT FLASHING AT TOP OF CHIMNEY AND RAIN CAP ON BREACHING OUTLET. CONTRACTOR TO VERIFY CHIMNEY HEIGHT AND ADJUST VERTICAL DIMENSION AS REQUIRED TO COMPLETE THE INSTALLATION.
- 21 PROVIDE NEW HIGH CAPACITY AIR VENT ON TOP OF EXISTING AIR SEPARATOR.
- 22 REINSTALL TEMPORARILY REMOVED COPPER AIR HANDLER CONDENSATE DRAIN LINE.
- 23 CONCENTRIC VERTICAL VENT/COMBUSTION AIR SYSTEM, HVAC CONTRACTOR SHALL PROVIDE ALL REQUIRED VENT AND COMBUSTION AIR BREACHING. INSTALL BREACHING IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS. BOTTOM OF COMBUSTION AIR INLET MUST BE INSTALLED 3'-0" ABOVE FINISHED FLOOR, BOTTOM OF EXHAUST OUTLET MUST BE INSTALLED 5'-0" ABOVE FINISHED FLOOR.
- 24 OFFSET GAS VENT PIPING AS REQUIRED TO PASS THROUGH THE EXISTING EXTERIOR BOILER ROOM WALL PENETRATIONS. EXTERIOR VENT PIPING SHALL RISE TIGHT TO EXTERIOR WALL AND BE TERMINATED AT ROOF ELEVATION WITH AN 180° TURNED DOWN ELBOW. SECURELY ANCHOR EXTERIOR VENT PIPING TO EXTERIOR WALL, PAINT ALL INTERIOR AND EXTERIOR GAS VENT PIPE AS INDICATED ON DWG. M-3.
- 25 DOUBLE WALL POSITIVE PRESSURE FLUE, REFER TO SPECIFICATIONS FOR REQUIREMENTS.
- 26 EXTEND LENGTH OF EXISTING CONCRETE EQUIPMENT PAD 16" BEYOND FRONT OF BOILER FOR FUEL OIL PUMP AND FUEL OIL STAND PIPE, PAD EXTENSION SHALL MATCH THE HEIGHT AND WIDTH OF THE EXISTING PAD.
- 27 FILL EXISTING FUEL OIL PIPE TRENCH WITH CONCRETE, HEIGHT OF NEW CONCRETE SHALL MATCH HEIGHT OF EXISTING FINISHED FLOOR.
- 28 EXISTING EMERGENCY GENERATOR TO REMAIN.
- 29 PROVIDE A FULL SIZE BREACHING CLEANOUT.
- 30 PROVIDE A 12" TEE WITH CAP, REMOVE CAP AND INSTALL 12" BAROMETRIC DAMPER IF NEEDED DURING BURNER SETUP.