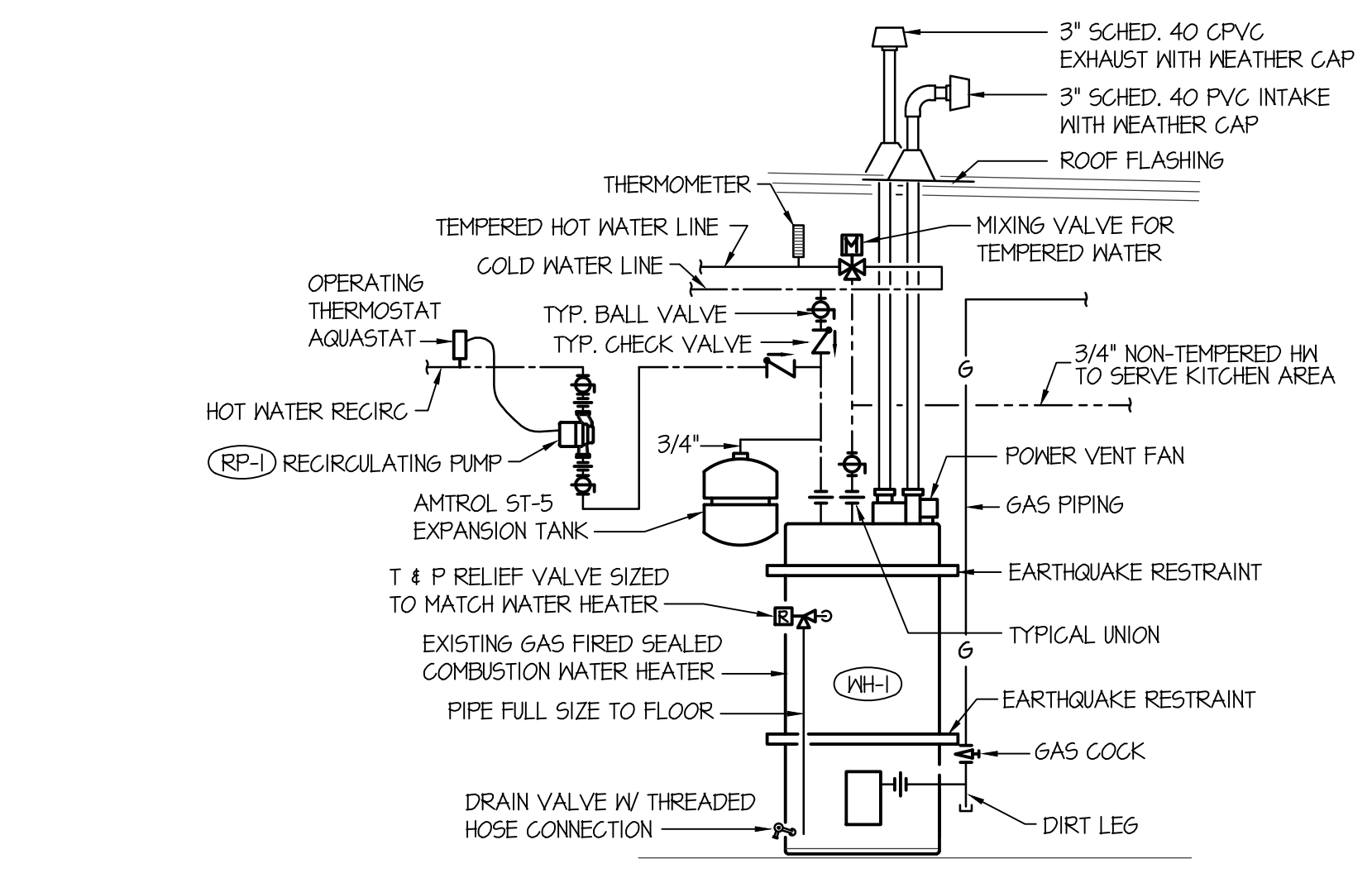
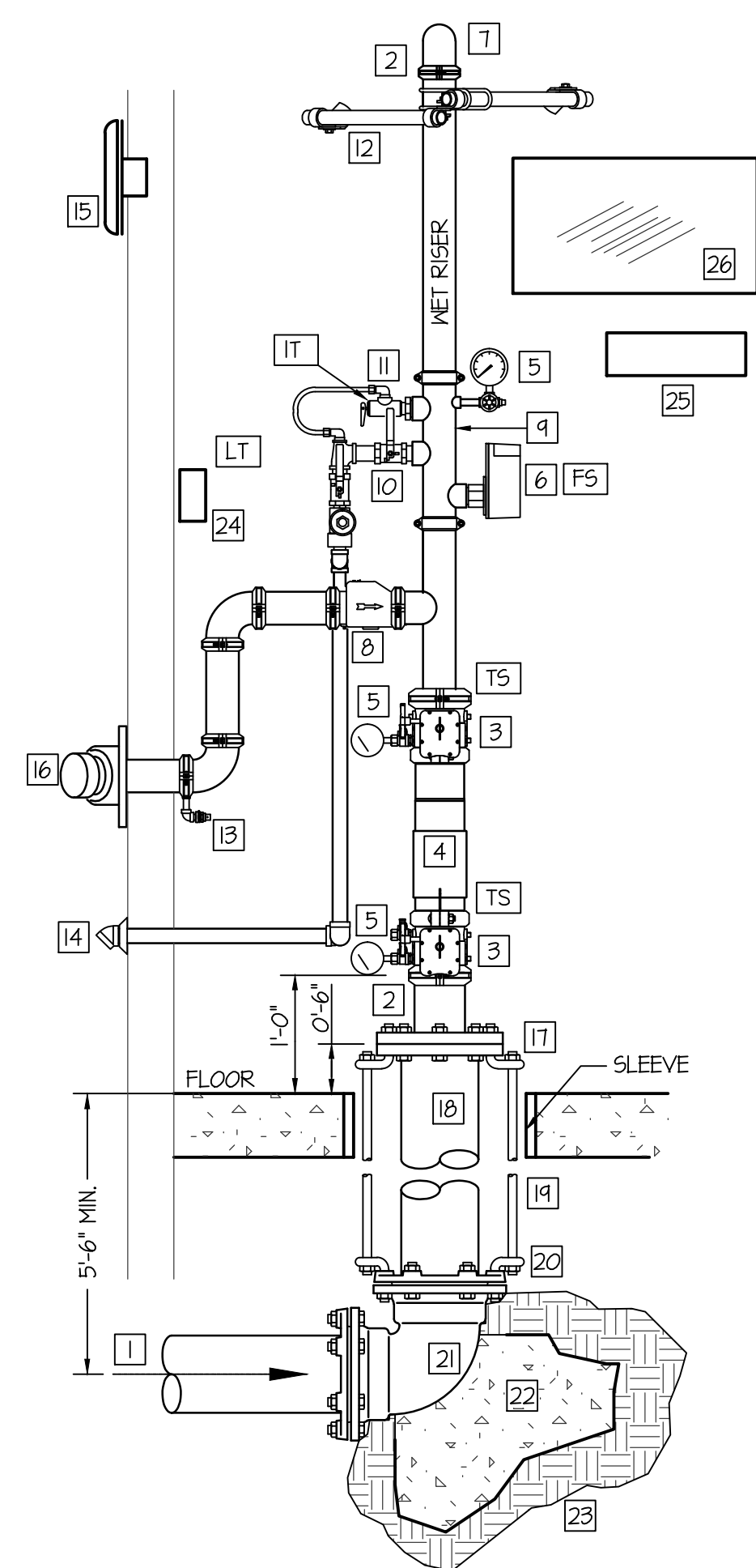


WATER PRESSURE REDUCING STATION DETAIL
NO SCALE



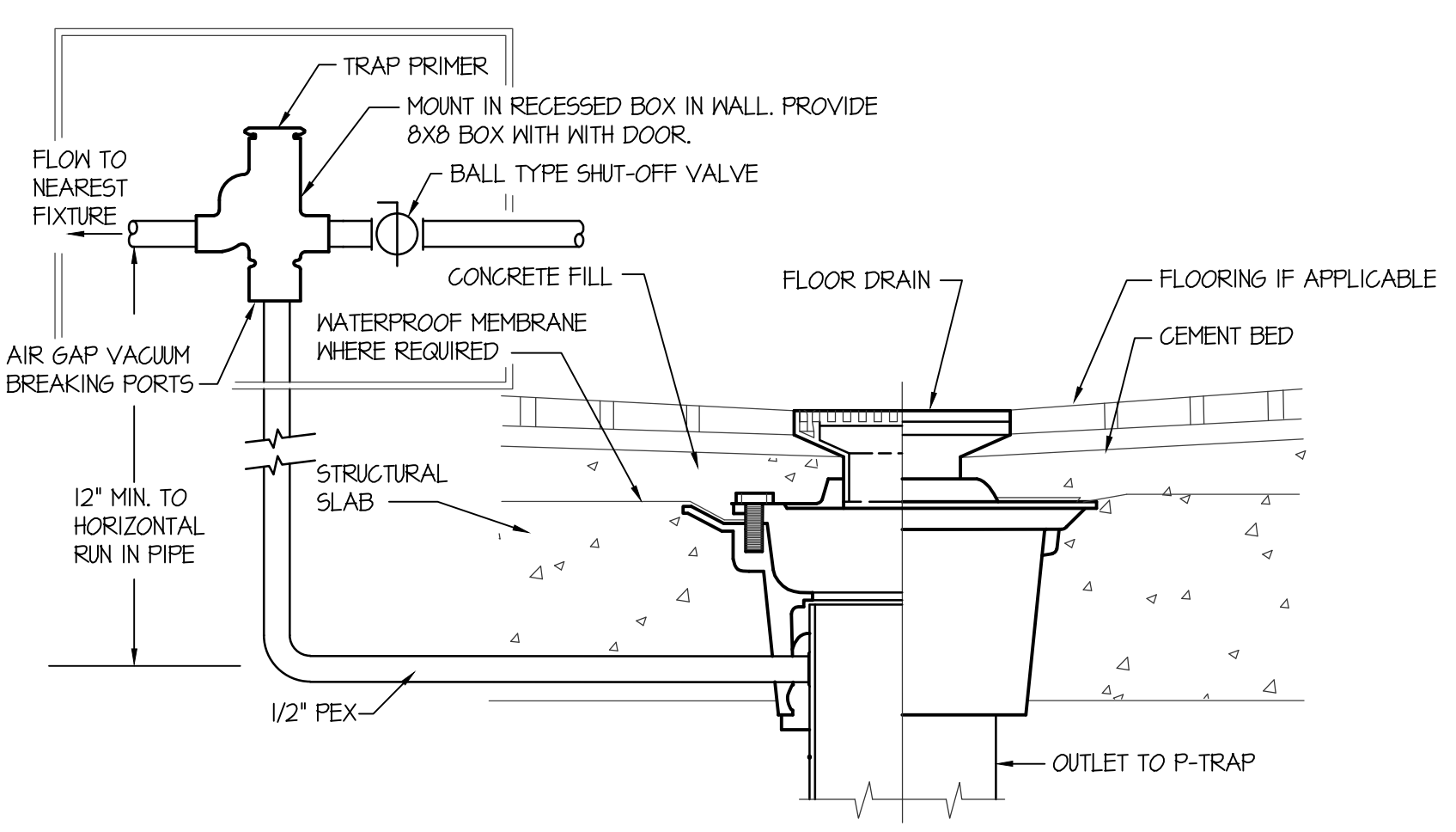
GAS FIRED WATER HEATER PIPING DIAGRAM
NO SCALE



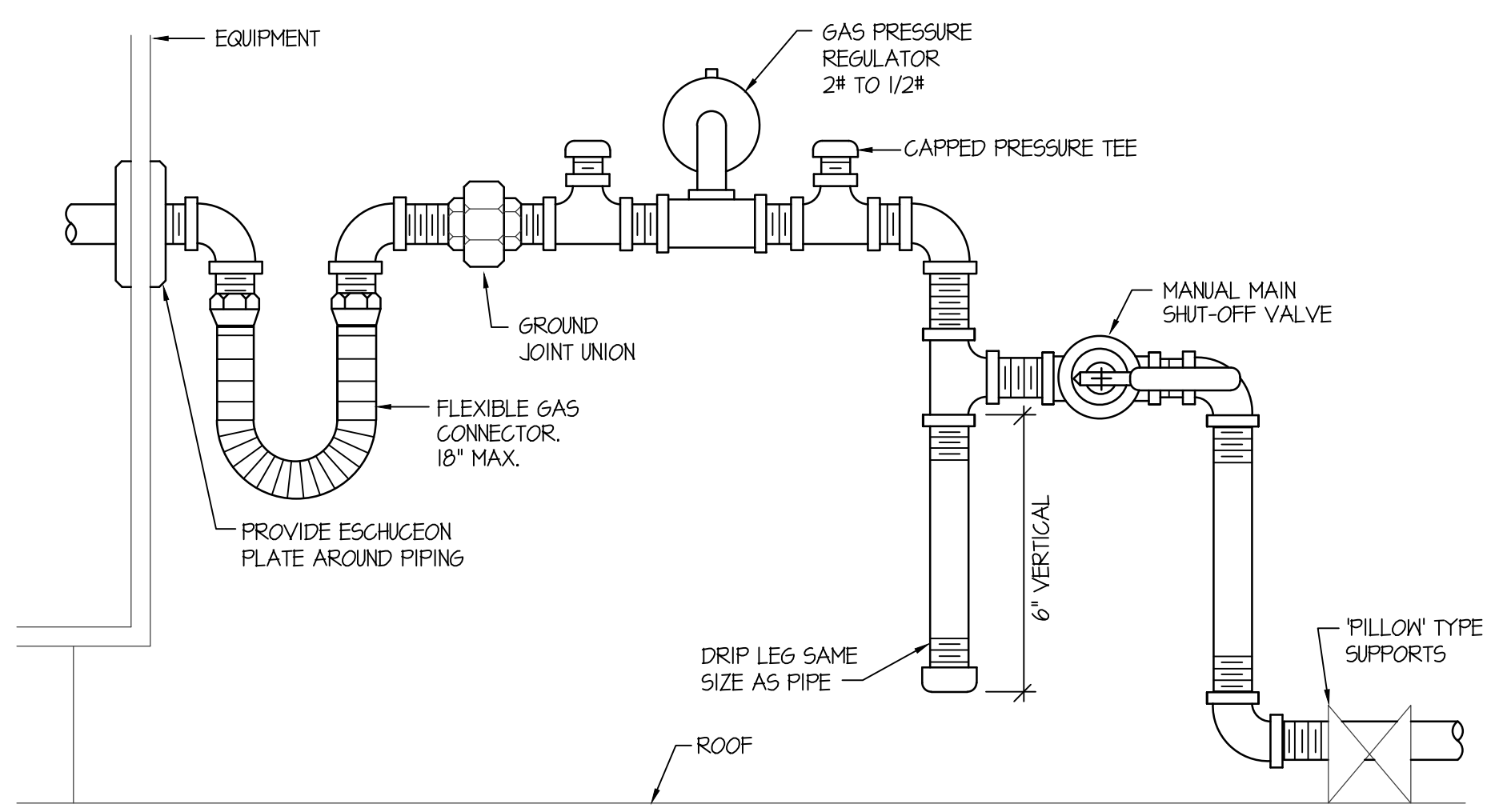
- WET RISER DETAIL NOTES**
- 1 WATER SUPPLY FROM CITY WATER MAIN. USE CLASS 53 DUCTILE IRON WHEN CROSSING UNDER BLDG FOUNDATION.
 - 2 USE FLEXIBLE GROOVED PIPE COUPLING ONLY IF SEISMIC BRACING IS REQUIRED. SEE NOTE #12.
 - 3 GROOVED BUTTERFLY VALVE WITH INTEGRAL SUPERVISORY SWITCH.
 - 4 DOUBLE CHECK BACKFLOW PREVENTER WITH RELATED TRIM AND GAUGES.
 - 5 3-1/2" DIAMETER WATER GAUGE WITH 1/4" TEST AND ISOLATION VALVE.
 - 6 VANE TYPE WATER FLOW SWITCH.
 - 7 SUPPLY TO WET PIPE FIRE SPRINKLER SYSTEM.
 - 8 SWING CHECK VALVE.
 - 9 RISER MANIFOLD - INCLUDES PRESSURE GAUGE, FLOW SWITCH, PRESSURE RELIEF VALVE, AND TEST AND MAIN DRAIN DEVICE.
 - 10 INSPECTOR'S TEST & MAIN DRAIN DEVICE. (17) - PIPE TO OUTSIDE.
 - 11 PRESSURE RELIEF VALVE SHALL BE REQUIRED SET AT 175 PSI-PIPED TO DISCHARGE OUTSIDE.
 - 12 SEISMIC BRACING REQUIRED IN SEISMIC DESIGN CATEGORY C, D, E, F.
 - 13 1/2" AUTOMATIC BALL DRIP VALVE.
 - 14 PIPE TO DRAIN OUTSIDE.
 - 15 WEATHERPROOF ELECTRIC BELL OR HORN AND STROBE (OUTSIDE).
 - 16 OUT TO FIRE DEPARTMENT CONNECTION WITH GALVANIZED SCH 40 PIPING- PROVIDE BALL DRIP WHEN TRAPPING PIPE. SIZE CONNECTION AS REQUIRED. NOTE: PIPE FDG TO REMOTE LOCATION ON STAKE BUILDINGS AND WHEN REQUIRED BY FIRE MARSHAL.
 - 17 GALVANIZED FLANGE AND SPOOL PIECE
 - 18 CLASS 53 D.I. FLANGED SPIGOT
 - 19 3/4" A.T.R.
 - 20 3/4" BENT EYE BOLT
 - 21 MECHANICAL JOINT 90° ELL
 - 22 CONCRETE THRUST BLOCK WITH 5 SQ. FEET BEARING AREA
 - 23 UNDISTURBED EARTH
 - 24 LOW TEMPERATURE SENSOR - MOUNTED ON WALL - THIS SWITCH IS PROVIDED UNDER DIVISION 28 OF THE SPECIFICATIONS.
 - 25 SPARE HEAD CABINET WITH SPARE SPRINKLER HEADS AND WRENCHES.
 - 26 LAMINATED SYSTEM MAP WITH SYSTEM START-UP AND SHUT-DOWN INSTRUCTIONS.

NOTE:
PROVIDE SLEEVES WHERE PIPING PENETRATES BUILDING AT FLOOR AND WALLS. SEAL AROUND PENETRATION WITH FLEXIBLE MASTIC AT FLOOR. PROVIDE 2" ANNUAL SPACE AROUND AND RESTRAIN FLANGE SPIGOT.

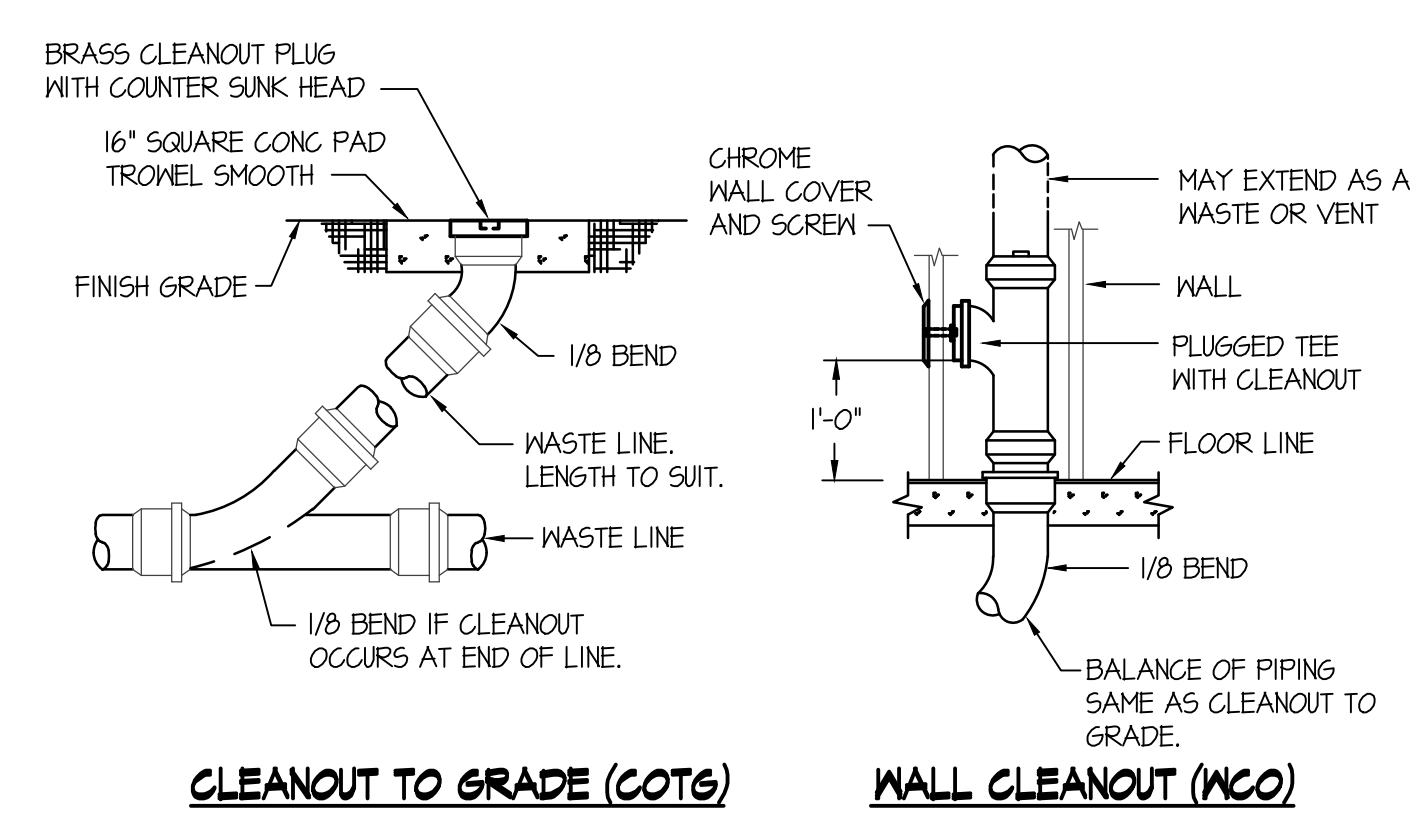
VERTICAL FIRE RISER DETAIL
NO SCALE



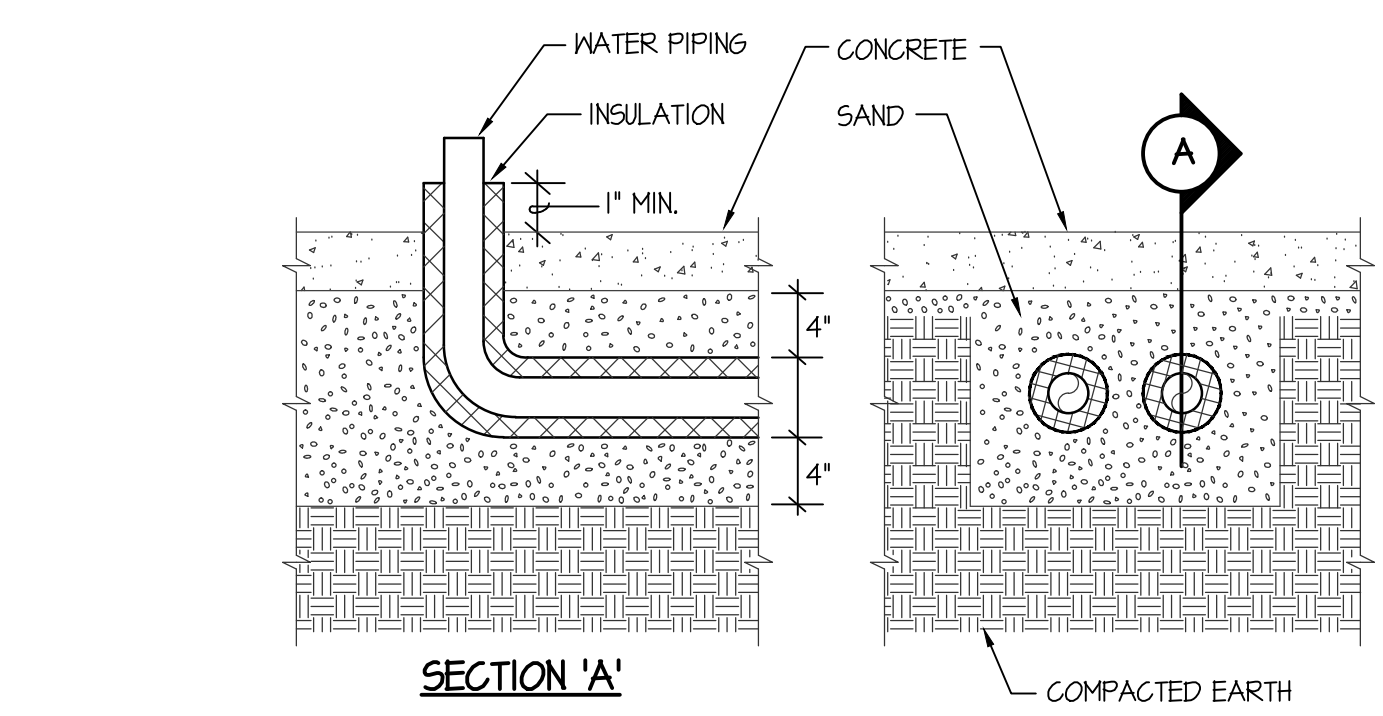
TRAP PRIMER DETAIL
NO SCALE



ROOF TOP GAS PRESSURE REGULATOR DETAIL
NO SCALE

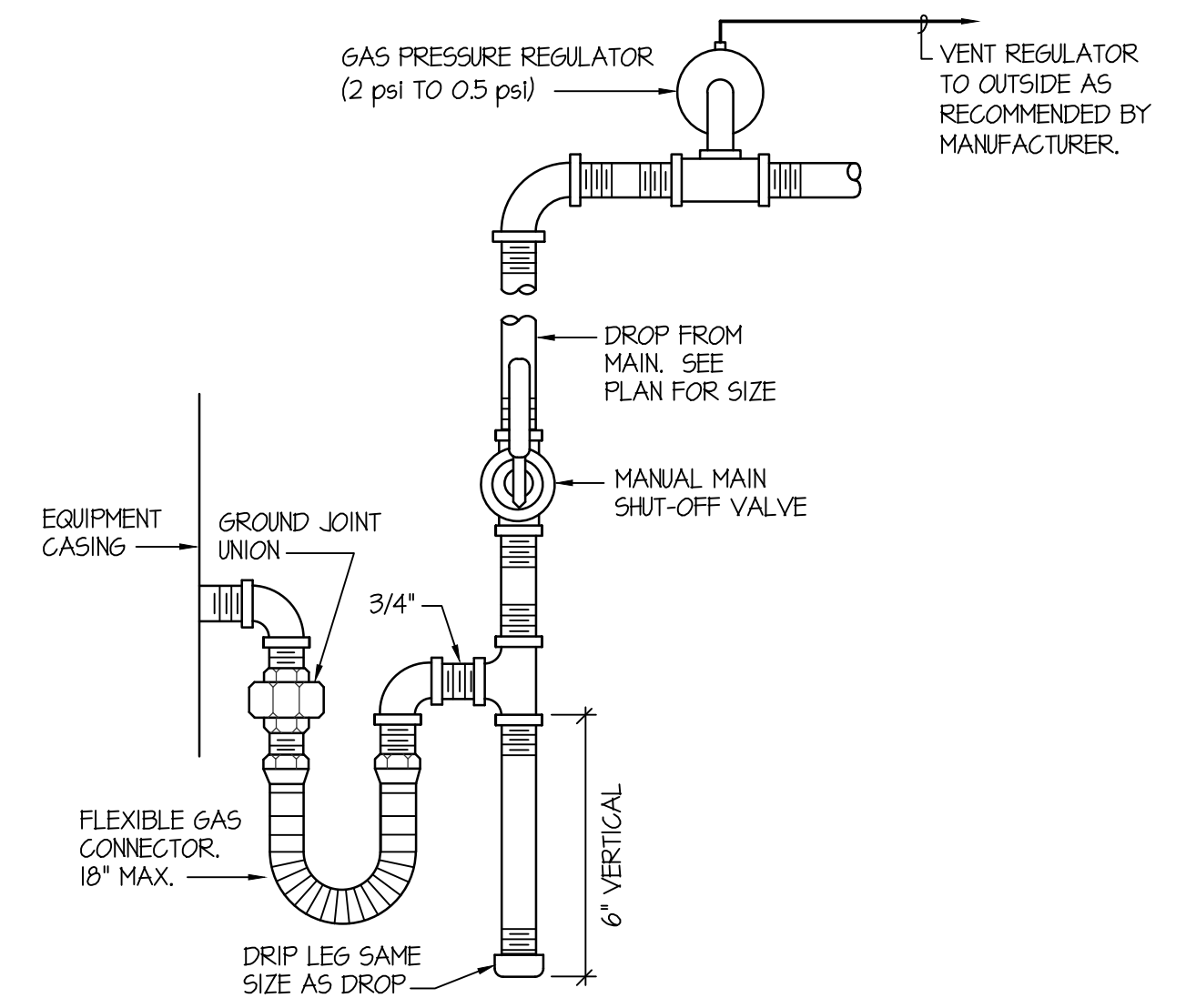


CLEAN OUT DETAILS
NO SCALE



- NOTES:**
- 1 - ALL WATER PIPING INSTALLED UNDERFLOOR SHALL BE TYPE "K" COPPER
 - 2 - WATER PIPE INSULATION ON UNDERFLOOR PIPING SHALL BE ARMAFLEX 3/4" THICK RUBBER PIPE INSULATION. TAPE INSULATION AT ALL SEAMS.
 - 3 - MINIMUM PIPE SIZE UNDERFLOOR SHALL BE 3/4"
 - 4 - SAND FILL AROUND PIPING SHALL BE A MINIMUM OF 4" THICK. MATERIAL SHALL BE HAND TAMPED, RODDED OR LIGHTLY COMPACTED DURING INSTALLATION. CARE SHOULD BE TAKEN NOT TO DEFORM OR OTHERWISE DAMAGE PIPING OR INSULATION.

UNDER SLAB PIPE INSTALLATION DETAIL
NO SCALE



WATER HEATER GAS LINE CONNECTION DETAIL
NO SCALE

REGISTERED PROFESSIONAL ENGINEER

No. 322307
DAVID R. SUDWEEKS
DEC. 13, 2019
STATE OF UTAH

Engineered Systems Associates

1355 EAST CENTER
POCATELLO, IDAHO 83201

PHONE: (208) 233-0501
FAX: (208) 233-0529
EMAIL: esa@engsystems.com

ESA JOB NUMBER: 19014