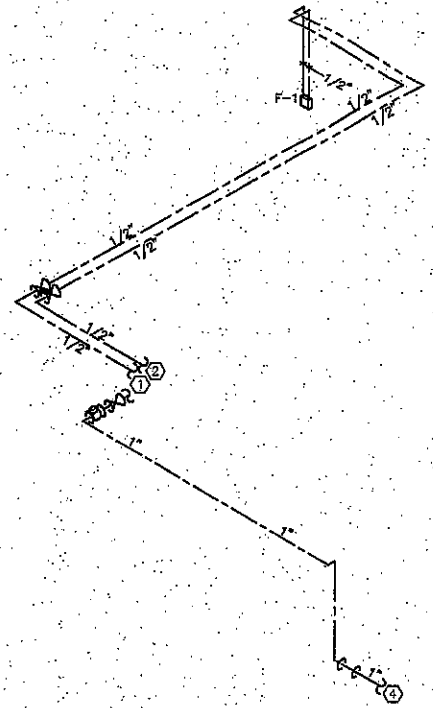


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- PLUMBING GENERAL NOTES**
- SEE SPECIFICATION FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
  - COORDINATE HVAC EQUIPMENT AND DUCT LOCATION WITH HVAC CONTRACTOR. SEE MECH DWG# FOR ADDITIONAL INFORMATION.
  - DO NOT INSTALL PIPING ABOVE ELECTRICAL PANELS OR EQUIPMENT. COORDINATE ELECTRICAL PANEL AND EQUIPMENT LOCATION WITH ELECTRICAL CONTRACTOR.
  - RUN ALL HORIZONTAL COLD & HOT WATER PIPING ABOVE CEILINGS UNLESS OTHERWISE NOTED.
  - INSTALL ALL WORK IN A NEAT AND WORKMANLIKE MANNER, USING ONLY WORKMEN THOROUGHLY QUALIFIED IN THE TRADE OR DUTIES THEY ARE TO PERFORM. BOUGH WORK WILL BE REJECTED.
  - MAINTAIN A MINIMUM 10" CLEARANCE BETWEEN HVAC EQUIPMENT FRESH AIR INTAKES AND SANITARY VENTS.
  - FIELD VERIFY ALL EXISTING PIPING AND PIPING CONNECTION SIZES AND LOCATIONS. EXCEPT OTHERWISE NOTED ON THE DRAWING, EXISTING CONCEALED PIPING NOT CONNECTED TO NEW PLUMBING SYSTEM OR FIXTURES SHALL BE CAPPED BEHIND FINISHED WALL OR BELOW FLOOR AND ABANDONED IN PLACE.
  - PROPERLY CONNECT NEW PLUMBING SYSTEM AND FIXTURES TO EXISTING SYSTEM. PROVIDE NEW FITTINGS AS REQUIRED FOR PROPER CONNECTION.
  - FIELD VERIFY EXISTING BUILDING STRUCTURAL. NOTIFY GENERAL CONTRACTOR FOR RESOLUTION IF EXISTING BUILDING STRUCTURE IMPEDS PLUMBING INSTALLATION. SEE STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION AND INSTRUCTION.
  - DOMESTIC WATER SHUT-OFF VALVES LOCATED ABOVE DRY WALL CEILINGS SHALL BE GROUPED TOGETHER TO PROVIDE ACCESS FROM SINGLE ACCESS PANELS IF POSSIBLE. PROVIDE WITH IDENTIFICATION TAG INDICATING AREAS THE VALVE CONTROLS.
  - PLUMBING CONTRACTOR TO PROVIDE 1" AS-BUILT DRAWING ON A CLEAN SHEET, SUITABLE FOR REPRODUCTION. (NOT DIRT FROM FIELD HANDLING AND NOT TORN). THIS DRAWING IS TO REFLECT AS-BUILT ROUTING AND DIMENSIONED LOCATIONS. ALL PIPE SIZES INCLUDING EXISTING CONNECTIONS. THIS DRAWING WILL BE APPROVED BY THE GENERAL CONTRACTOR PRIOR TO FINAL PAYMENT.
  - PLUMBING CONTRACTOR SHALL PROVIDE EXACT SPECIFIED FIXTURES, VALVES AND ASSEMBLIES AS SHOWN. NO SUBSTITUTIONS WITHOUT PRIOR WRITTEN APPROVAL FROM THE ARCHITECT.
  - THERE SHALL NOT BE EXPOSED PVC PIPING BEYOND THE FACE OF FINISHED WALLS.

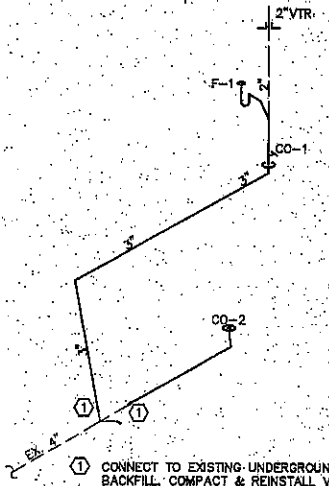
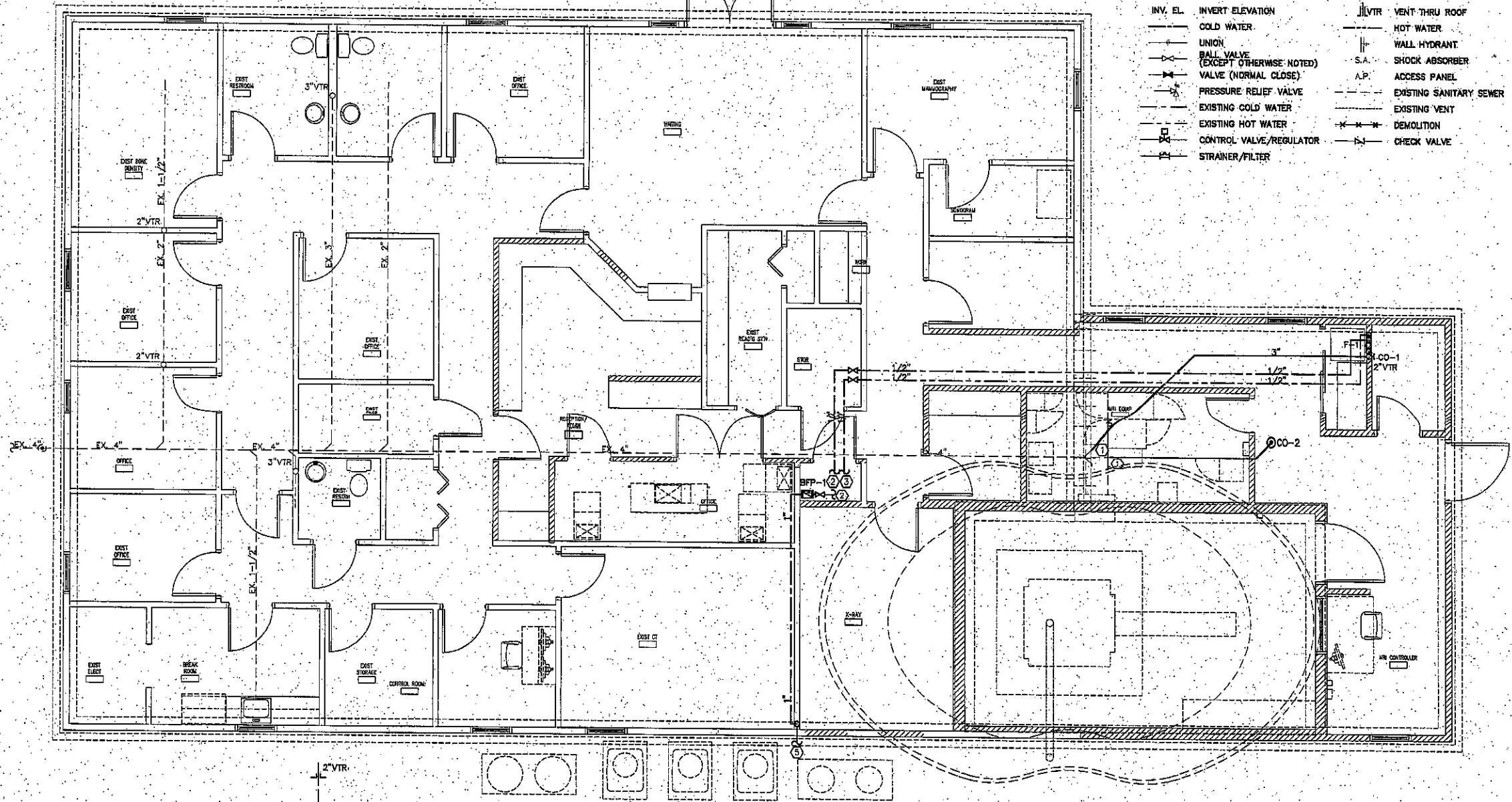
SEE ARCHITECTURAL DEMOLITION DRAWINGS FOR ADDITIONAL INSTRUCTION. REMOVE EXISTING FIXTURES AND ABOVE GROUND PIPING AND INSULATION RELATED TO PLUMBING WORK WHERE SHOWN ON ARCHITECTURAL DEMOLITION DRAWINGS. CAP ALL UNDERGROUND PIPING LOCATED UNDER CONCRETE FLOOR SLABS AND ABANDONED. REMOVE ALL UNDERGROUND PIPING IN EXCAVATED AREAS.

- LEGEND**
- ⊖ FLOOR DRAIN
  - ⊖ FLOOR CLEANOUT
  - ⊖ WALL CLEANOUT
  - ⊖ TRAPPED DRAIN
  - ⊖ TRAP
  - INV. EL. INVERT ELEVATION
  - COLD WATER
  - UNION
  - BALL VALVE (EXCEPT OTHERWISE NOTED)
  - VALVE (NORMAL CLOSE)
  - PRESSURE RELIEF VALVE
  - EXISTING COLD WATER
  - EXISTING HOT WATER
  - CONTROL VALVE/REGULATOR
  - STRAINER/FILTER
  - PIPE RISERS (DROP)
  - PIPE RISERS (UP)
  - PIPE END (CAPPED)
  - S SANITARY SEWER LINE
  - V VENT LINE
  - VTR VENT THRU ROOF
  - HOT WATER
  - WALL HYDRANT
  - S.A. SHOCK ABSORBER
  - A.P. ACCESS PANEL
  - EXISTING SANITARY SEWER
  - EXISTING VENT
  - DEMOLITION
  - CHECK VALVE



- CONNECT TO EXISTING CW SUPPLY LOCATED IN WATER HEATER CLOSET. FIELD VERIFY SIZE AND LOCATION.
- CONNECT TO EXISTING HW SUPPLY LOCATED IN WATER HEATER CLOSET. FIELD VERIFY SIZE AND LOCATION.
- 1/2" TRAP PRIMER LINE.
- CONNECT TO MR CHILLER MAKE-UP WATER. COORDINATE WITH CHILLER MANUFACTURER CONNECTION SIZE AND CONNECTION REQUIREMENTS. CONTRACTOR TO PROVIDE AND INSTALL ALL ACCESSORIES REQUIRED FOR A COMPLETE CONNECTION. PROVIDE DOMESTIC WATER AND DRAIN PIPING SUBJECT TO FREEZING WITH SELF-REGULATING HEAT TRACING. THERMON MODEL 5-FLX-1 SELF-REGULATING HEATING CABLE RATED FOR A START-UP TEMPERATURE OF 50 DEG. F., 120V, 15 AMP SERVICE WITH 5 WATTS/FT POWER OUTPUT AND A MAXIMUM CIRCUIT LENGTH OF 25'. PROVIDE WITH THERMON MODEL N4X-40 LINE SENSING THERMOSTAT. PRE-SET AT 40 DEG. F. THERMOSTAT IS RATED FOR 120V WITH SWITCH RATING OF 22AMPS AND HOUSED IN NEMA 4X ENCLOSURE. CAPILLARY SHALL BE MOUNTED TO PIPEWALL UNDER INSULATION.

**PARTIAL DOMESTIC WATER RISER DIAGRAM**  
NOT TO SCALE



- CONNECT TO EXISTING UNDERGROUND SANITARY. BACKFILL, COMPACT & REINSTALL VAPOR BARRIER. FIELD VERIFY SIZE, LOCATION AND INVERT ELEVATION. IF EXISTING INVERT ELEVATION DEPTH IS NOT ADEQUATE FOR CONNECTION, IMMEDIATELY CONTACT ARCHITECT.
- 1/2" TRAP PRIMER LINE.

**PARTIAL SANITARY RISER DIAGRAM**  
NOT TO SCALE

- CONNECT TO EXISTING UNDERGROUND SANITARY. BACKFILL, COMPACT & REINSTALL VAPOR BARRIER. FIELD VERIFY SIZE, LOCATION AND INVERT ELEVATION. IF EXISTING INVERT ELEVATION DEPTH IS NOT ADEQUATE FOR CONNECTION, IMMEDIATELY CONTACT ARCHITECT.
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**PARTIAL PLUMBING FLOOR PLAN**  
SCALE: 1/4" = 1'-0"

**PLUMBING EQUIPMENT SCHEDULE**

F-1	RECESS WALL MOUNTED LAUNDRY MACHINE FIXTURE WITH INTEGRAL WATER HAMMER ARRESTORS. PRECISION PLUMBING PRODUCTS MODEL MM-500-PLB. PROVIDE UNIT WITH INTEGRAL STOPS AND 2" DRAIN CONNECTION.
CO-1	WALL CLEAN OUT, J. R. SMITH 4472-U WITH VANDAL PROOF SCREW AND STAINLESS STEEL COVER.
CO-2	FLOOR CLEAN OUT, J. R. SMITH 4031-U WITH VANDAL PROOF TOP.
BFP-1	BACKFLOW PREVENTER OF REDUCED PRESSURE TYPE. PROVIDE UNIT WITH BRONZE STRAINER, SHUT-OFF VALVES AND AIR GAP. WATTS SERIES 909-S-Q-U.

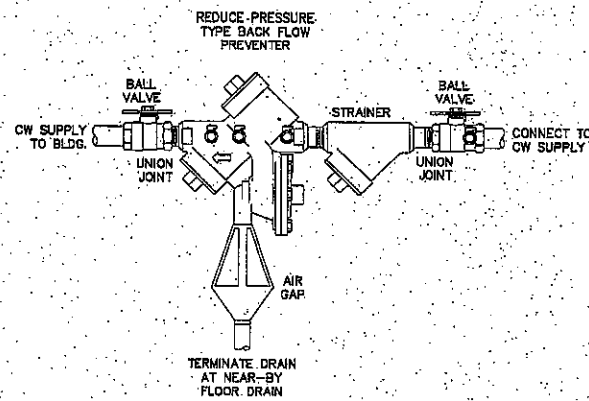
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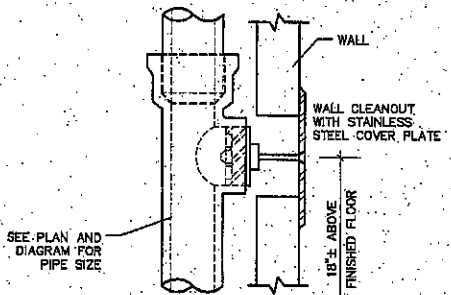
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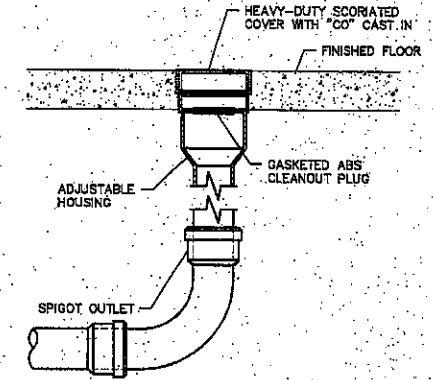
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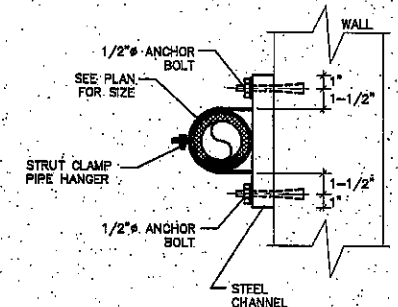
**DETAIL - BACK FLOW PREVENTER**  
NOT TO SCALE



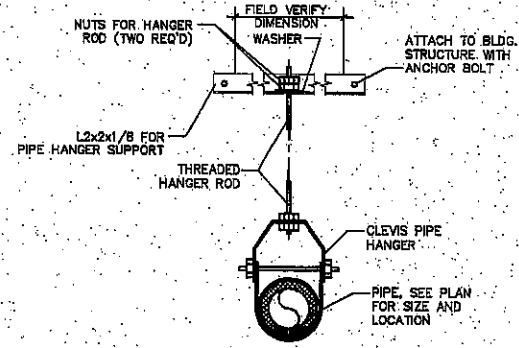
**DETAIL - WALL CLEANOUT**  
NOT TO SCALE



**DETAIL - ONE-WAY FLOOR CLEANOUT**  
NOT TO SCALE



**DETAIL - PIPE SUPPORT**  
NOT TO SCALE



**DETAIL - PIPE HANGER SUPPORT**  
NOT TO SCALE

**PLUMBING SPECIFICATIONS**

1. SCOPE: PROVIDE A COMPLETE PLUMBING SYSTEM AS SHOWN ON DRAWINGS AND MEETING REQUIREMENTS OF APPLICABLE STATE AND LOCAL CODES. OBTAIN ALL REQUIRED PERMITS AND CERTIFICATES.
2. GUARANTEE: PROVIDE ALL NEW MATERIALS AND EQUIPMENT, AND GUARANTEE SAME AGAINST DEFECTS FOR A PERIOD OF ONE YEAR FROM DATE OF ACCEPTANCE. SIMILAR PRODUCTS SHALL BE BY ONE MFG.
3. CUTTING & PATCHING: ASSUME LIABILITY FOR CUTTING AND PATCHING. PROVIDE REQUIRED CHASES, SLOTS AND OPENINGS FOR REQUIRED PIPE SLEEVES THROUGH WALLS. CUT CONCRETE FLOOR SLAB WHERE REQUIRED FOR LOCATION OF UNDER FLOOR SANITARY PIPING. COMPLETE ALL BACKFILL OF EXCAVATIONS AND PROVIDE SOIL COMPACTION TO 95% - 97%??. COMPLETE ALL CONCRETE FLOOR SLAB WORK, INCLUDING AREAS LEFT OPEN FOR FUTURE SERVICE CONNECTIONS, TO MATCH SURROUNDING FLOOR LEVEL AND FINISH.
4. FIXTURES: SHALL BE AS SCHEDULED ON THE DRAWINGS. FIXTURE TRIM AND FITTINGS SHALL BE C.P. BRASS INCLUDING PIPING SERVING FIXTURES EXPOSED BEYOND FACE OF FINISHED WALL. PROVIDE McGUIRE LOOSE TEE KEY-STOPS IN WATER SUPPLIES TO EACH AND EVERY FIXTURE. FIXTURE MOUNTING HEIGHT SHALL BE AS SHOWN ON THE ARCH. DRAWINGS.
5. SANITARY PIPING: SOIL, WASTE AND VENT PIPING SHALL BE POLYVINYL CHLORIDE (PVC) SCHEDULE 40, SOLVENT WELD JOINTS. EXPOSED SANITARY PIPING UNDER LAVATORIES SHALL BE CHROME PLATED COPPER/BRASS. (NOTE: ANY NEW OR EXISTING PVC PIPING LOCATED IN SHELVE OR RETURN AIR PLenums SHALL BE INSULATED WITH 1/2" THICK ARMAFLEX.) SUPPORT ALL SOIL AND VENT STACKS AT BASE. FLASH ALL VENTS PASSING THROUGH ROOF WITH SHEET LEAD EXTENDING AT LEAST 6" OUT AROUND BASE AND AT LEAST 6" UP STACK INTO FLASHING COLLAR. PROVIDE CLEANOUTS AS SHOWN ON DRAWINGS AND REQUIRED BY CODE. USE SCREW TYPE CLEANOUTS FOR PIPING CONCEALED IN WALL WITH CHROMIUM PLATED BRONZE COVER PLATES.
6. WATER SUPPLY PIPING: DOMESTIC HOT AND COLD WATER SUPPLY PIPING SHALL BE CHLORINATED POLYVINYL CHLORIDE (CPVC), SOLVENT WELD JOINTS, SUITABLE FOR USE AT MINIMUM WORKING PRESSURE OF 180 PSI AT 73 DEG. F. AND 100 PSI AT 180 DEG. F. PIPES 1/2" THRU 2" SHALL BE CPVC-CI (COPPER PIPE SIZE) MEETING TEST REQUIREMENTS OF SDR 11. PIPES LARGER THAN 2" SHALL BE CPVC SCHEDULE 80 WITH SCHEDULE 80 FITTINGS. BELOW GRADE COLD WATER SUPPLY PIPING SHALL BE CHLORINATED POLYVINYL CHLORIDE (CPVC) AS PREVIOUSLY SPECIFIED. WATER HAMMER ARRESTORS SHALL BE SIOUX CHIEF PISTON TYPE SIZED PER MFG. RECOMMENDATIONS. VALVES SHALL BE LINE SIZE UNLESS SPECIFICALLY SHOWN OTHERWISE. ALL EQUIPMENT SERVICE VALVES AND ALL SHUT-OFF VALVES 1" AND SMALLER SHALL BE APOLLO BRONZE BODY FULL PORT BALL VALVES WITH STAINLESS STEEL BALL AND NYLON SEAT. INSTALL BALL VALVES AT TAKE-OFF FROM MAIN, UPSTREAM OF ALL EQUIPMENT CONNECTIONS, AND WHERE SHOWN ON DRAWINGS. PROVIDE UNIONS AT EACH THREADED VALVE, FIXTURE OR APPARATUS TO FACILITATE REMOVAL. TRAP PRIMERS SHALL BE PRIME-RITE AS MANUFACTURED BY PRECISION PLUMBING PRODUCTS, INC. OR SCHEDULED ON DRAWINGS.
7. INSULATION: INSULATE HOT WATER PIPING WITH 1" THICK ARMAFLEX AND COLD WATER PIPING WITH 1/2" THICK ARMAFLEX PIPE INSULATION PER MANUFACTURERS' RECOMMENDATIONS. INSULATE ALL OTHER PVC PIPING LOCATED IN SUPPLY OR RETURN AIR PLenums WITH MINIMUM 1/2" THICK ARMAFLEX INSULATION. AT ALL EXPOSED PIPING UNDER HANDICAPPED LAVATORIES AND/OR SINKS, PROVIDE PRE MOLDED VINYL INSULATION. INSULATION SHALL BE "HANDI LAY-GUARD" INSULATION KITS AS MANUFACTURED BY TRUEBRO INC. TRUEBRO INC. PHONE NO. IS (203) 875-2888. ALL INSULATION MATERIALS SHALL MEET FLAME SPREAD AND SMOKE DEVELOPED RATINGS PER NFPA BULLETIN 90-A WHEN TESTED IN ACCORDANCE WITH ASTM STANDARD E 84. SMOKE DEVELOPED LESS THAN OR EQUAL TO 50, AND FLAME SPREAD LESS THAN OR EQUAL TO 25.
8. PIPE HANGERS: PIPE HANGERS SHALL BE GALVANIZED STEEL CLEVIS HANGERS SELECTED WITHIN THE MANUFACTURER'S PUBLISHED LOAD RATINGS AND SHALL BE AUTO-GRIP, FEE AND MASON, OR GRINNEL. HANGERS FOR COPPER PIPE SHALL BE EITHER COPPER-PLATED TYPE OR THERE SHALL BE A SHIELD OF 4 POUNDS SHEET LEAD TO COMPLETELY SURROUND THE PIPE TO PREVENT DIRECT CONTACT WITH THE HANGER. SUPPORTS FOR PIPES WITH VAPOR BARRIER TYPE COVERING SHALL NOT CONTACT THE PIPE BUT SHALL SURROUND THE UNBROKEN COVERING. PROVIDE GALVANIZED STEEL SHIELDS WITH MITERED CORNERS PROPERLY FORMED TO THE JACKET OUTSIDE DIAMETER BETWEEN HANGER CLEVISES AND THE LOWER 1/3 OF THE CIRCUMFERENCE.
9. PIPE SLEEVES: PROVIDE PIPE SLEEVES OR CORE BORE FOR ALL PIPES PASSING THROUGH CONCRETE OR MASONRY WALLS. SLEEVES THROUGH FLOOR SLABS OR FIRE WALLS SHALL BE GALVANIZED STEEL PIPE OF PROPER SIZE. FILL ALL SPACES BETWEEN PIPING AND SLEEVES PASSING THROUGH FIRE-RATED WALLS, FLOORS, OR CEILINGS WITH MATERIAL CAPABLE OF MAINTAINING THE FIRE-RESISTANCE RATING OF THE WALL, FLOOR OR CEILING. USE METACALK 880GW-1 CAULKING MATERIAL FOR PVC AND CPVC PIPING.
10. ESCUTCHEONS: PROVIDE McGUIRE CHROME ESCUTCHEONS ON ALL FINISHED SURFACES WHERE PIPING PENETRATE. FASTEN SECURELY TO PIPE OR PIPE COVERING.
11. TESTING: TEST ALL DRAINAGE AND VENT PIPING BEFORE FIXTURE INSTALLATION BY PLUGGING OPENINGS, FILLING ENTIRE SYSTEM WITH WATER, AND HOLD FOR AT LEAST 3 HOURS. IF SYSTEM IS TESTED IN SECTIONS PROVIDE AT LEAST AN 8 FT. HIGH STAND-PIPE TO PROVIDE ADEQUATE PRESSURE. TEST ALL WATER SUPPLY PIPING USING THE SAME METHOD EXCEPT HOLD AT 125 PSIG PRESSURE FOR AT LEAST 2 HOURS. RELEASE ALL LEAKING JOINTS AND RETEST UNTIL SYSTEMS PROVE TIGHT. THESE TESTS ARE MINIMUM AND ARE NOT INTENDED TO BE LIMITING WHERE ADDITIONAL TESTING METHODS ARE REQUIRED BY GOVERNING AUTHORITY. TEST EACH FIXTURE FOR SOUNENESS, STABILITY OF SUPPORT, AND SATISFACTORY OPERATION OF ALL ITS PARTS.
12. STERILIZATION: AFTER TESTS ARE COMPLETE, FILL ALL WATER SUPPLY SYSTEMS WITH 100 PPM AVAILABLE CHLORINE SOLUTION, ALLOW TO STAND FOR AT LEAST 8 HOURS AND FLUSH WITH CLEAN WATER.

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PLUMBING SPECIFICATION P2