

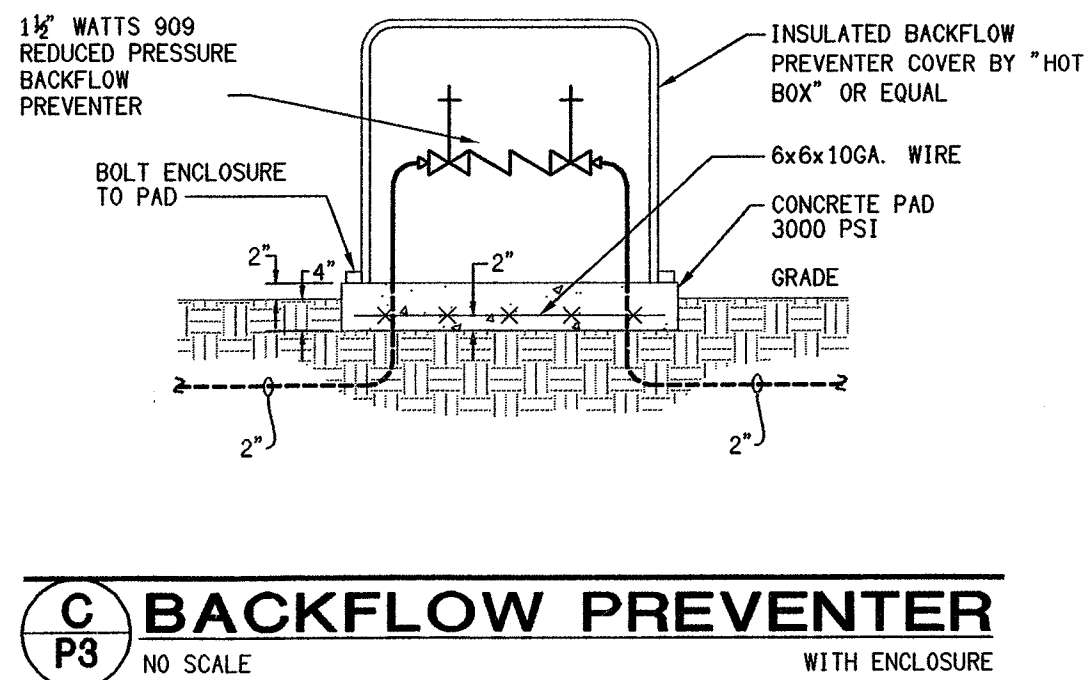
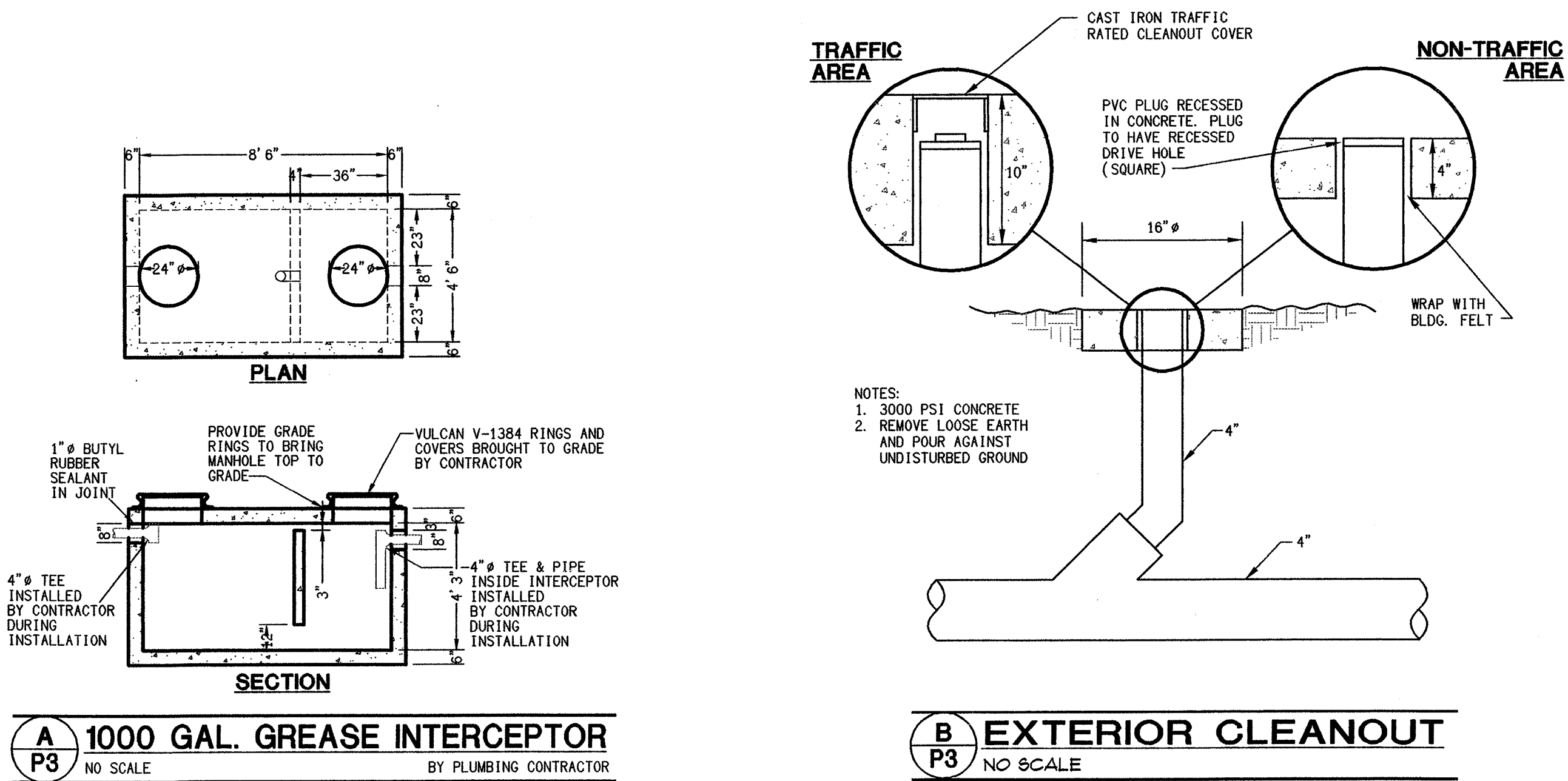
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PLUMBING SPECIFICATIONS

- 1501 GENERAL
- A. CODES, REGULATIONS AND STANDARD INSTALLATIONS ARE TO COMPLY WITH THE LATEST EDITION OF THE NORTH CAROLINA BUILDING AND PLUMBING CODES, NFPA-54, AND ALL OTHER APPLICABLE LOCAL AND NATIONAL CODES AND ORDINANCES. IN CASE OF CONFLICT BETWEEN THE CODE AND THE DRAWINGS AND SPECIFICATIONS OR BETWEEN VARIOUS CODES, THEN THE MOST RESTRICTIVE SHALL TAKE PRECEDENT.
- B. FEES AND PERMITS: PROVIDE ALL LICENSES, FEES, PERMITS, HEALTH DEPARTMENT FEES, INSURANCE, ETC., REQUIRED FOR EXECUTION OF THIS WORK.
- C. THE CONTRACT DRAWINGS ARE SCHEMATIC ONLY AND ARE NOT INTENDED TO SHOW ALL FITTINGS, BOLTS, CONNECTIONS, OFFSETS, ETC., UNLESS SPECIFICALLY DIMENSIONED. THE PLUMBING CONTRACTOR SHALL FOLLOW THE DRAWING AS CLOSELY AS POSSIBLE; HOWEVER, NECESSARY ADJUSTMENTS SHALL BE MADE AS REQUIRED TO CONFORM WITH STRUCTURAL CONDITIONS. WORK OF OTHER CONTRACTORS AND THE INTENT OF THE DRAWINGS WITHOUT ADDITIONAL COST TO THE OWNER. THE DRAWINGS SHALL NOT BE SCALED. SECURE DIMENSIONS FROM ARCHITECTURAL DRAWINGS FOR FIXTURE LOCATIONS.
- D. THE PLUMBING CONTRACTOR SHALL PROVIDE ALL MATERIALS, PERFORM ALL WORK AND TEST AND PAY ALL FEES NECESSARY TO MAKE THE PLUMBING SYSTEM OPERABLE AND READY FOR USE BY THE OWNER.
- E. GUARANTEE: ALL NEW EQUIPMENT, NEW MATERIALS AND INSTALLATION SHALL BE GUARANTEED TO BE FREE OF DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE OF WORK OR IN ACCORDANCE WITH THE MANUFACTURER'S STANDARD GUARANTEE, IF LONGER.
- F. PLUMBING CONTRACTORS SHALL BE RESPONSIBLE FOR HIS OWN CLEAN UP AND REMOVAL OF SCRAP FROM JOB SITE. PLUMBING CONTRACTOR SHALL MAINTAIN A CLEAN AND SAFE WORK AREA.
- G. IN CASE OF ANY CONFLICT BETWEEN INFORMATION FOUND IN THE PLANS, OR IN THE SPECIFICATIONS, THE MOST RESTRICTIVE INTERPRETATION SHALL TAKE PRECEDENT.
- H. THE PLUMBING DRAWINGS AND SPECIFICATIONS DO NOT INCLUDE THE DESIGN FOR ROOF GUTTER SYSTEMS OR ROOF DRAIN SYSTEMS.
- 1502 SCOPE
- WORK SHALL INCLUDE BUT IS NOT LIMITED TO:
- A. PROVIDE FIXTURES AND INSTALL AND CONNECT WASTE AND WATER PIPE AS SHOWN ON DRAWINGS.
- B. ROUTE WASTE AND WATER TO AREA TIE-INS.
- C. CHLORINATE WATER SYSTEM.
- D. COORDINATE WITH LOCAL AUTHORITIES ON PURCHASE AND INSTALLATION OF WATER METER AND BACKFLOW PREVENTER.
- E. PROVIDE AND INSTALL PROPANE GAS PIPING SYSTEM FROM REGULATOR TO CONNECTION OF ALL GAS USERS.
- 1503 MATERIALS
- A. SITE WATER PIPING SHALL BE SCH 40 PVC PIPE WITH SOLVENT WELD JOINTS. USE INDUSTRIAL GRADE GLUE ONLY. ALL NSF APPROVED. PIPING FROM TAP TO METER AND PIPING INSIDE ROAD RIGHT OF WAYS SHALL BE AS PER THE REQUIREMENTS OF THE LOCAL WATER AUTHORITY AND THE DEPARTMENT OF TRANSPORTATION.
- B. HOT AND COLD WATER PIPES BEGINNING 6" FROM BUILDING WALL:
1. PIPE SHALL BE TYPE L COPPER, TUBING ABOVE GRADE AND TYPE K BELOW GRADE.
2. FITTINGS SHALL BE MADE USING SOLDER AS PER THE N.C. PLUMBING CODE FOR POTABLE WATER.
- C. VENT AND WASTE PIPE - WASTE AND VENT PIPE SHALL BE SCH 40 PVC-DW WITH SOLVENT WELD JOINTS EXCEPT AS NOTED BELOW. PVC SHALL NOT BE USED IN A RETURN AIR PLENUM. FOR RETURN AIR PLENUMS CAST IRON SHALL BE USED. TRANSITION FROM PVC TO CAST IRON SHALL BE MADE WITH CODE APPROVED TRANSITION FITTINGS DESIGNED EXPRESSLY FOR THAT PURPOSE. ALL FITTINGS SHALL BE SANITARY DRAINAGE PATTERN.
- D. VALVES:
1. GATE VALVES SHALL BE OF BRASS CONSTRUCTION WITH SOLDER JOINT FITTINGS.
2. GAS VALVES SHALL BE GAS COCKS RATED FOR GAS SERVICE.
- E. VENTS SHALL PENETRATE ROOF WITH FLEXIBLE BOOTS WITH FLASHING FLANGE.
- 1504 EXECUTION
- A. ALL HOLES THROUGH WALLS, FLOORS AND CEILINGS ARE TO BE DRILLED, NOT BROKEN. ROUND ALL SHARP EDGES TO DRILLED HOLES.
- B. LINES ARE NOT TO BE COVERED UNTIL INSPECTED BY THE ARCHITECT.
- C. WRAP COPPER PIPE WITH DUCT TAPE WHERE IT PENETRATES THE FLOOR.
- D. DO NOT MAKE A WATER TIE JOINT UNDER THE SLAB.
- E. AIR CHAMBERS SHALL BE INSTALLED IN EACH NEW WATER BRANCH LINE SUPPLYING EACH PLUMBING FIXTURE. PIPE AIR CHAMBERS SHALL NOT BE LESS THAN 12" LONG AND BE OF A SIZE NOT LESS THAN PIPE IT SERVES.
- F. WASTE PIPES PASSING UNDER OR THROUGH FOUNDATIONS OR THROUGH LOAD BEARING SECTIONS OF A WALL SHALL BE ROUTED THROUGH D.I. SLEEVES AT LEAST TWO PIPE SIZES LARGER THAN THE WASTE PIPE.
- G. PROVIDE SUFFICIENT HANGERS, SUPPORTS, CLAMPS, CLIPS, INSERTS AND MAINTAINING DEVICES TO SUPPORT ALL PIPING AS PER GOOD PIPING PRACTICE AND TO MAINTAIN PROPER DRAINAGE.
- H. INSTALL ALL EQUIPMENT AS PER MANUFACTURER'S INSTRUCTIONS AND PERTINENT RECOMMENDATIONS.
- I. INSTALL UNDERGROUND PIPE AS PER MANUFACTURER'S RECOMMENDATIONS. TRENCH SHALL BE CLEAR OF ALL ROCKS AND OTHER ABRASIVE MATERIALS. TRENCH BOTTOM SHALL BE COMPACTED AND FULLY SUPPORT PIPE. FILL DIRT TO 6" ABOVE TOP OF PIPE TO BE CLEAN AND FREE OF ABRASIVE MATERIALS. FOLLOW ALL MANUFACTURER'S RECOMMENDATIONS FOR PIPE BEDDING GIVEN SOIL CONDITIONS.
- J. PLUMBING CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR TO ASSURE THAT ALL PIPE INTERFERENCES (FOUNDATIONS, CABLES, OTHER PIPING, ETC.) ARE AVOIDED BY UNDERGROUND PLUMBING.
- K. CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING THAT PLUMBING WALLS ARE CONSTRUCTED TO ALLOW INSTALLATION OF FIXTURE CARRIERS. PLUMBING CONTRACTOR SHALL COORDINATE WITH GENERAL CONTRACTOR PRIOR TO WALL CONSTRUCTION.
- L. CONTRACTOR SHALL SUPPLY AND INSTALL FIXTURE HANGER AS REQUIRED FOR PROPER INSTALLATION.
- M. WATER PIPE ROUTING THROUGH STUDS SHALL BE PROTECTED BY METAL STUD GUARDS.
- N. PROVIDE CARBON STEEL DIRT LEG IN SUPPLY LINE TO EACH GAS USER.
- O. NATURAL GAS PIPE SUPPORT SPACING SHALL BE AS PER N.C. STATE CODE, VOLUME VI.
- P. UNDERGROUND GAS PIPING PENETRATING ASPHALT OR A CONCRETE PAD, SHALL DO SO THROUGH A CARBON STEEL SLEEVE.
- Q. ALL GAS PIPING SHALL BE ELECTRICALLY GROUNDING AS PER NFPA-70.
- R. IF GAS BURNING EQUIPMENT IS ON THIS PROJECT, THE UNITS SHALL NOT BE FIRED OFF UNTIL THE CONTRACTOR HAS VERIFIED THAT THE FUEL AVAILABLE ON SITE IS THE FUEL THE UNITS ARE DESIGNED TO BURN.
- 1505 ELECTRICAL CONNECTIONS
- A. ELECTRICAL CONTRACTOR SHALL DIRECT WIRE ALL EQUIPMENT REQUIRING POWER.
- B. CONTROL WIRING SHALL BE INSTALLED BY THE PLUMBER.
- 1506 TESTS
- A. THE HOT AND COLD WATER PIPING SHALL HOLD A HYDROSTATIC TEST PRESSURE OF 100 PSI FOR A PERIOD OF AT LEAST 1-1/2 HOURS. ANY JOINT TO LEAK UNDER TEST SHALL BE BROKEN, REMADE AND RETESTED.
- B. ALL WASTE PIPING SHALL BE TESTED BY FILLING THE LINES TO OVERFLOWING. ANY JOINT FOUND TO LEAK UNDER TEST SHALL BE BROKEN, REMADE AND RETESTED.
- C. GAS PIPE SHALL HOLD A 25 PSIG AIR TEST FOR 1-1/2 HOURS. ANY JOINT FOUND TO LEAK SHALL BE BROKE, REMADE AND RETESTED.
- 1507 CHLORINATION
- WATER PIPE SHALL BE CHLORINATED TO 50 PPM RESIDUAL CHLORINE AFTER TWENTY-FOUR HOURS AND TO THE SATISFACTION OF THE LOCAL HEALTH DEPARTMENT OR BUILDING INSPECTION DEPARTMENT.
- 1508 SUBSTITUTION
- ALL MATERIALS AND EQUIPMENT SHALL BE NEW UNLESS OTHERWISE SHOWN OR SPECIFIED AND SHALL BE OF THE VERY BEST QUALITY AS SPECIFIED.
- REQUESTS TO SUBSTITUTE OTHER MATERIALS OR PRODUCTS FOR THOSE SPECIFIED SHALL BE SENT IN WRITING TO THE OWNER. REQUESTS SHALL BE ACCOMPANIED BY ENGINEERING DATA, SPECIFICATION SHEETS, ETC., AS NECESSARY TO FULLY IDENTIFY AND APPRAISE THE PRODUCTS.
- APPROVAL OF EQUIPMENT WILL NOT RELIEVE THE CONTRACTOR OF NONCOMPLIANCE WITH THE SPECIFICATIONS EVEN IF SUCH APPROVAL IS MADE IN WRITING, UNLESS THE ENGINEER IS CALLED TO THE NONCONFORMING FEATURES BY LETTER ACCOMPANYING THE SUBMITTAL DATA.
- 1509 PLACING IN SERVICE
- UPON COMPLETION OF THE ENTIRE SYSTEM, THE PLUMBING CONTRACTOR SHALL FLUSH ALL LINES TO INSURE PROPER FLOWS. ALL FIXTURES SHALL BE LEFT CLEAN.
- THE PLUMBING CONTRACTOR SHALL DEMONSTRATE THE PROPER FUNCTION OF THE ENTIRE SYSTEM. THE PLUMBING CONTRACTOR SHALL ACQUAINT THE OWNER'S REPRESENTATIVE WITH THE PROPER OPERATION OF THE PLUMBING SYSTEM.
- 1510 VISIT TO THE SITE
- ALL BIDDERS ON THIS WORK SHALL VISIT THE SITE AND THOROUGHLY FAMILIARIZE THEMSELVES WITH EXISTING CONDITIONS PRIOR TO SUBMITTING THEIR BIDS. NO ALLOWANCE WILL BE MADE FOR LACK OF KNOWLEDGE OF EXISTING CONDITIONS.
- 1511 SHOP DRAWINGS
- AS SOON AS POSSIBLE (AND NOT MORE THAN 30 DAYS) AFTER THE CONTRACT IS SIGNED, THE CONTRACTOR SHALL SUBMIT FIVE (5) COPIES OF THE SHOP DRAWINGS COVERING FIXTURES, AND ANY SPECIAL EQUIPMENT WHICH HE INTENDS TO USE. FOUR (4) COPIES OF THIS DATA WILL BE RETURNED BY THE ENGINEER WHO WILL INDICATE APPROVAL OR OTHERWISE.
- 1512 FIRE RATED WALLS, FLOORS & CEILINGS
- CONTRACTOR SHALL DETERMINE LOCATION OF ALL FIRE AND SMOKE RATED WALLS, FLOORS AND CEILINGS FROM ARCHITECTURAL DRAWINGS. PIPING PENETRATIONS OF FIRE RATED ASSEMBLIES SHALL BE AS REQUIRED BY N.C. BUILDING CODE, WITH APPROVED AND APPROPRIATELY RATED UL FIRESTOP SYSTEMS AT ALL PENETRATIONS. ALL FIRESTOP SYSTEMS SHALL BE APPROVED FOR THEIR APPLICATION BY LOCAL INSPECTION AUTHORITIES PRIOR TO FIELD INSTALLATION.

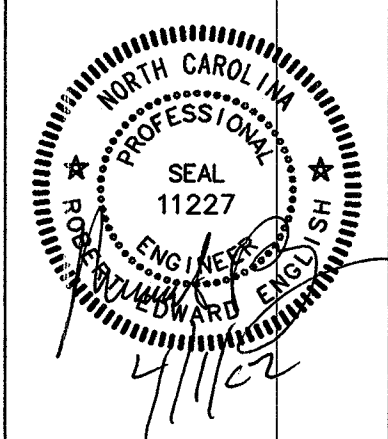
PLUMBING FIXTURE SCHEDULE -								
SYM.	FIXTURE	CW	HW	DRAIN	STOPS & VALVES	MANUF.	MODEL	REMARKS
P-1	WATER CLOSET TANK HANDICAP	1/2"	-	3"	1/2"x3/8" ANGLE	AMERICAN STANDARD	2216.143	EASTMAN SW600 SUPPLY VALVE W/CHROME PLATED RISER AND WALL FLANGE. CHURCH #295C OPEN FRONT SEAT W/O COVER. SEE NOTES 1 & 2
P-2	NOT USED	-	-	-	-	-	-	-
P-3	FLOOR DRAIN	-	-	3"	-	ZURN	ZN-415-SB-P	NIKOLAY TOP DEEP SEAL TRAP, PROVIDE PRIMER TAP. SEE NOTE 4
P-4	FLOOR SINK	-	-	3"	-	ZURN	ZN-1900-2-23-K	HALF TOP GRATE, 12"x12" TOP, SEDIMENT BUCKET.
P-5	MOP SINK	3/4"	3/4"	3"	-	FIAT	MSB2424	FAUCET: 830AA W/VACUUM BREAKER / HOSE: 832-AA MOP HANGER: 889-CC / STRAINER: E72-DD SEE NOTE 5
P-6	CAN WASH	3/4"	3/4"	3"	GATE	WOODFORD	HC65	DRAIN ZURN Z-550-Y. SEE NOTE 5.
P-7	WATER HEATER 100 GALLON GAS	3/4"	3/4"	-	GATE	A. O. SMITH	BTH-199	199,000 BTUH PROPANE
P-8	DIAPHRAGM TANK	3/4"	-	-	-	STATE	ETC-5X	-
P-9	HOT WATER CIRCULATION PUMP	3/4"	-	-	-	TACO	005B	2 GPM @ 9' TDH, 110 VOLT, 1/35 HP
P-10	WATER HEATER 30 GALLON ELECTRIC	3/4"	3/4"	-	GATE	STATE	P6-30-10MS-K	240 VOLT, 4.5 KW.
P-11	DIAPHRAGM TANK	3/4"	-	-	-	STATE	ETC-2X	-
P-12	FINISHED FLOOR CLEANOUT	-	-	-	-	ZURN	ZN-1400-T	WITH NIKOLAY TOP
P-13	EXTERIOR CLEANOUT	-	-	-	-	ZURN	Z-1400	WITH CAST IRON TOP. SEE $\frac{9}{8}$
P-14	WALL CLEANOUT COVERPLATE	-	-	-	-	ZURN	Z-1469	STAINLESS STEEL
P-15	GREASE TRAP	-	-	4"	-	PRE-CAST	-	TRAFFIC RATED 1000 GAL. SEE $\frac{A}{8}$
P-16	HOSE BIBB	3/4"	-	-	-	ZURN	Z-1320	PROVIDE VACUUM BREAKER FREEZEPROOF LOCKING COVER.
P-17	ELECTRIC WATER COOLER BI-LEVEL	1/2"	-	1-1/4"	-	ELKAY	EBFA-TL8	STAINLESS STEEL - BRUSHED OR SATIN. SEE NOTE 1
P-18	LAVATORY COUNTER HANDICAP	1/2"	1/2"	1-1/4"	1/2"x3/8" ANGLE	AMERICAN STANDARD	0476.028	EASTMAN SW600 SUPPLY VALVES W/CHROME PLATED RISERS AND WALL FLANGES. 5401.12H FAUCET WITH POP-UP DRAIN. 4" WRIST OPERATORS 1-1/4X1-1/4 SEE NOTES 1,3
P-19	WATER CLOSET TANK - FLOOR MOUNT	1/2"	-	3"	1/2"x3/8" ANGLE	AMERICAN STANDARD	2174.139	EASTMAN SW600 SUPPLY VALVE W/CHROME PLATED RISER AND WALL FLANGE. CHURCH #295C OPEN FRONT SEAT W/O COVER. SEE NOTE 2
P-20	URINAL HANDICAP	3/4"	-	2"	FLUSH VALVE	AMERICAN STANDARD	6541.132	INCLUDE SLOAN 186-1 FLUSH VALVE SEE NOTE 1
P-21	WATER HEATER 6 GALLON ELECTRIC	3/4"	3/4"	-	GATE	STATE	PV-6-10MS-K	120 VOLT, 1.65 KW.

- NOTES:
- MATERIAL AND INSTALLATION SHALL BE PER STATE HANDICAP CODE REQUIREMENTS AND ADA REQUIREMENTS.
 - TANK TOILETS SHALL FLUSH ON A MAXIMUM OF 1.6 GALLONS PER FLUSH.
 - LAVATORIES SHALL HAVE .5 GPM FLOW AERATORS.
 - FLOOR DRAIN SHALL BE PRIMED WITH 1/2" COPPER LINE FROM NEARBY CLEAR WATER FIXTURE (LAVATORY). TAP CLEAR WATER FIXTURE TAIL PIECE WITH WATER SAVER TRAP PRIMER AND ROUTE COPPER SUPPLY LINE UNDER SLAB TO DRAIN PRIMER CONNECTION. WATER SAVER TRAP PRIMER SHALL BE ACCESSIBLE AND CODE APPROVED. IF A CLEAR WATER FIXTURE, SUCH AS A LAVATORY IS NOT AVAILABLE TAP NEARBY COLD WATER LINE AND ROUTE 1/2" PRIMER LINE THROUGH PRIMER VALVE CODE APPROVED FOR WASTE/WATER CROSS CONNECTION. VALVE SHALL BE ACCESSIBLE.
 - INSTALL CHECK VALVE ON COLD & HOT SUPPLY LINES SERVING MOP SINK AND CAN WASH.



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PLUMBING FIXTURE
SCH. & DETAILS

SHEET:

P-3

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