

PLUMBING NOTES

SCOPE: THE CONTRACTOR SHALL EXAMINE THE DRAWINGS AND SPECIFICATIONS BEFORE SUBMITTING A PROPOSAL. THE INFORMATION GIVEN HEREIN AND ON THE DRAWINGS IS AS EXACT AS COULD BE SECURED, BUT ITS EXTREME ACCURACY IS NOT GUARANTEED. CONTRACTOR SHALL FIELD VERIFY ALL INFORMATION GIVEN AS EXISTING CONDITIONS.

THE DRAWINGS ARE DIAGRAMMATIC, INTENDED TO SHOW GENERAL ARRANGEMENT, CAPACITY AND LOCATION OF VARIOUS COMPONENTS, EQUIPMENTS, AND DEVICES.

ALL WORK SHALL BE IN ACCORDANCE WITH THE FLORIDA BUILDING CODE, AND LOCAL CODES AND ORDINANCES. INSTALLATION SHALL COMPLY WITH THE STANDARDS SET BY NFPA, ASPE, NEC AND UL.

THE SYSTEMS, EQUIPMENT, DEVICES AND ACCESSORIES SHALL BE INSTALLED, FINISHED, TESTED AND ADJUSTED FOR CONTINUOUS AND PROPER OPERATION.

IF WORK IS REQUIRED IN A MANNER TO MAKE IT IMPOSSIBLE TO PRODUCE FIRST CLASS WORK, OR SHOULD DISCREPANCIES APPEAR AMONG THE CONTRACT DOCUMENTS, OR BETWEEN THE CONTRACT DOCUMENTS AND THE MANUFACTURER'S RECOMMENDATIONS, OR BETWEEN CONTRACT DOCUMENTS AND ACTUAL FIELD CONDITIONS, THE CONTRACTOR SHALL REQUEST INTERPRETATION BEFORE PROCEEDING WITH WORK.

CONTRACTOR SHALL FURNISH AND INSTALL ALL MINOR ITEMS WHICH ARE OBVIOUSLY AND REASONABLY NECESSARY TO COMPLETE THE INSTALLATION WHETHER OR NOT SPECIFIED IN THE DOCUMENTS.

EXACT LOCATIONS AND MOUNTING HEIGHTS OF PLUMBING FIXTURES SHALL BE OBTAINED FROM ARCHITECTURAL DRAWINGS.

COORDINATION: THE CONTRACTOR SHALL BE RESPONSIBLE FOR HIS WORK FITTING IN PLACE AND SHALL COORDINATE WITH OTHER TRADES TO AVOID INTERFERENCE WITH THEIR WORK.

INSTALL ALL PLUMBING TO AVOID INTERFERENCE WITH ELECTRICAL AND MECHANICAL EQUIPMENT AND STRUCTURAL FRAMING. NO WATER OR DRAIN LINES PERMITTED OVER OR UNDER ELECTRICAL PANELS.

SERVICE AND PERMITS: CONTRACTOR SHALL MAKE ALL ARRANGEMENTS WITH UTILITY COMPANIES FOR SERVICE AND CONNECTIONS AND SHALL PAY FOR PERMITS.

SHOP DRAWINGS: EACH TRADE SHALL PREPARE AND SUBMIT SHOP DRAWINGS IN ACCORDANCE WITH PROCEDURES OUTLINED IN DIVISION 1. RESPONSIBILITY FOR ERRORS OR OMISSIONS IN THE SUBMITTALS SHALL NOT BE RELIEVED BY THE ARCHITECT'S OR ENGINEER'S REVIEW. ENGINEER'S PROCESSING WILL NOT CONSTITUTE A COMPLETE CHECK BUT WILL INDICATE ONLY THAT A GENERAL METHOD OF CONSTRUCTION AND DETAILING IS SATISFACTORY.

AS-BUILT DRAWINGS: DURING THE PROGRESS OF THE WORK, MAINTAIN AN ACCURATE RECORD SHALL SHOW CHANGES IN MANUFACTURER (WITH NUMBERS AND TRADE NAMES), MATERIALS, SIZES, LOCATIONS AND HOOK-UP POINTS. AS-BUILTS SHALL BE GIVEN TO OWNER'S CONSTRUCTION MANAGER AT COMPLETION OF JOB.

REQUIRED ACCESS: CONTRACTOR SHALL ENSURE THAT ALL EQUIPMENT AND DEVICES THAT REQUIRE REPLACEMENT, SERVICING, ADJUSTING OR MAINTENANCE SHALL BE LOCATED TO ALLOW EASY ACCESS AND SPACE FOR REMOVAL OF INTERNAL ASSEMBLIES, IF REQUIRED. CONTRACTOR SHALL PROVIDE ACCESS PANELS WHERE REQUIRED TO ALLOW ACCESS, EVEN IF NOT INDICATED ON THE DRAWINGS AT NO ADDITIONAL COST TO OWNER.

OPERATING AND MAINTENANCE DATA: SUBMIT THREE COPIES OF MANUFACTURER'S OPERATING AND MAINTENANCE INSTRUCTIONS AND SPARE PARTS LIST FOR EACH PIECE OF EQUIPMENT.

VALVES: ALL VALVES SHALL HAVE A MINIMUM OF 125 PSIG WORKING PRESSURE. VALVES AND COCKS MAY NOT BE INDICATED IN EVERY INSTANCE ON THE DRAWINGS, BUT WHETHER OR NOT SHOWN, ALL VALVES, COCKS AND CHECK VALVES NECESSARY FOR THE PROPER OPERATION OF THE SYSTEM SHALL BE FURNISHED AND INSTALLED.

PROVIDE ANGLE STOPS ON ALL WATER SERVICE LINE TO INDIVIDUAL FIXTURES FOR SHUT-OFF.

DIELECTRIC UNIONS: PROVIDE DIELECTRIC UNIONS OR FLANGES AT CONNECTIONS OR CONTACT BETWEEN PIPES OF DISSIMILAR METALS.

PLUMBING FIXTURES AND TRIM: PLUMBING FIXTURES SHALL BE FURNISHED AND INSTALLED IN A NEAT AND WORKMANLIKE MANNER WITH PROPER CONNECTIONS TO SUPPLY AND DRAINAGE PIPING. ALL FIXTURES SHALL BE FREE OF FLAWS AND DEFECTS OF ANY SORT IN MATERIAL AND WORKMANSHIP AND SHALL OPERATE PERFECTLY WHEN INSTALLED IN ACCORDANCE WITH MANUFACTURER'S DIRECTIONS. CONTRACTOR SHALL PROVIDE ROUGH-IN, AND SHALL CONNECT ALL FIXTURES TO THE PLUMBING SYSTEMS. PROVIDE CONCEALED ARM CARRIERS AND SUPPORTS FOR ALL FIXTURES REQUIRING SAME.

PIPE PENETRATION: PROVIDE SLEEVES THROUGH ALL PENETRATIONS THROUGH CONCRETE AND MASONRY FLOORS AND WALLS. SEAL ALL PENETRATIONS WATER TIGHT.

ALL FIRE RATED FLOOR AND WALL PENETRATIONS SHALL BE PROPERLY PROTECTED FROM FIRE, SMOKE AND WATER PENETRATION BY FILLING VOIDS BETWEEN PIPE AND WALL/FLOOR SLEEVES WITH FIRE RATED FOAM TO ACHIEVE THE SAME RATING AS WALLS OR FLOOR.

WATER PIPING: CPVC TUBING WITH THE FOLLOWING CHARACTERISTICS. TUBING, FITTINGS AND CEMENT SHALL MEET ASTM D-2846, 100 PSI @ 180°F CONTINUOUS RATING. CPVC TUBING AND FITTINGS SHALL MEET 25/50 FLAME SPREAD/SMOKE DEVELOPED REQUIREMENTS FOR PLENUMS. CONTRACTOR SHALL INSTALL CPVC IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. CONTRACTOR SHALL PROVIDE FOR EXPANSION AND CONTRACTION OF TUBING. TUBING SHALL BE SLEEVED AT PENETRATION OF CONCRETE SLABS OR WALLS. CPVC TUBING SHALL BE FLOWGUARD GOLD OR APPROVED EQUAL.

PROVIDE WATER HAMMER ARRESTERS FOR ALL PLUMBING FIXTURE GROUPS. THIS APPLIES TO ALL HOT AND COLD WATER SUPPLIES. SIZE AND LOCAGTE PER MANUFACTURER'S INSTALLATION INSTRUCTIONS.

PROVIDE BID ALTERNATE FOR PEX TUBING WITH THE FOLLOWING CHARACTERISTICS. TUBING AND FITTINGS SHALL MEET ASTM F876, ASTM F877, AND ASTM F1807. PEX TUBING AND FITTINGS SHALL MEET 25/50 FLAME SPREAD/SMOKE DEVELOPED REQUIREMENTS FOR PLENUMS. CONTRACTOR SHALL INSTALL PEX IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS. TUBING SHALL BE SLEEVED AT PENETRATION OF CONCRETE SLABS OR WALLS. PEX TUBING SHALL BE ZURN-PEX OR APPROVED EQUAL.

SANITARY, STORM, DRAIN AND VENT PIPING: ALL BURIED AND UNBURIED PIPING AND FITTINGS SHALL BE SCHEDULE 40 PVC-DWV.

SLOPE OF SANITARY OR DRAINAGE PIPING 2-1/2" AND SMALLER SHALL BE A MINIMUM OF 1/4" PER FOOT; PIPING 3" AND LARGER SHALL BE SLOPED A MINIMUM OF 1/8" PER FOOT.

VENTING: THE STACKS SHALL BE EXTENDED THROUGH ROOF OF BUILDING TO POINTS NOT LESS THAN 12" ABOVE ROOF. VENTS SHALL BE OFFSET AS REQUIRED TO PENETRATE ROOFS AT LEAST 3 FEET EDGE OF BUILDING AND 10 FEET FROM ANY FRESH AIR INTAKE OR OPERABLE WINDOW OR DOOR.

DOMESTIC HOT WATER HEATERS (ELECTRIC): HOT WATER HEATER SHALL BE UL CERTIFIED. UNITS SHALL BE EQUIPPED WITH CODE-APPROVED TEMPERATURE AND PRESSURE RELIEF VALVES. TANKS SHALL BE GLASS-LINED AND SHALL HAVE MANUFACTURER'S STANDARD WARRANTY.

EQUIPMENT FURNISHED BY OTHERS: THE CONTRACTOR SHALL MAKE ALL PIPING CONNECTIONS TO EQUIPMENT FURNISHED BY OTHERS. THIS WORK SHALL INCLUDE FURNISHING AND INSTALLATION OF ALL WATER AND DRAIN PIPING. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH RECOMMENDATIONS OF EQUIPMENT MANUFACTURER.

CLEANOUTS: PROVIDE CLEANOUT WHERE SANITARY LINE LEAVES BUILDING. PROVIDE CLEANOUTS AT BASE OF EACH STACK. CONCEALED CLEANOUTS SHALL HAVE CAST BRASS CHROMIUM PLATED FLAT ACCESS COVER PLATE.

CONDENSATE DRAINS: COORDINATE WITH MECHINICAL CONTRACTOR. RUN CONDENSATE DRAIN LINES FOR MECHANICAL AIR HANDLER. CONDENSATE DRAIN SHALL BE MINIMUM OF 1" SCHEDULE 40 PVC. DRAINS SHALL BE PITCHED NOT LESS THAN 1" IN 10'. PROVIDE P-TRAP AND CLEANOUT AT DRAIN PAN CONNECTIONS. INSULATE CONDENSATE DRAINS WITH 1/2" ARMAFLEX. DRAINS SHALL BE ROUTED TO DRYWELL OR AN APPROVED LOCATION.

STERILIZATION OF DOMESTIC WATER SYSTEM: THE DOMESTIC WATER DISTRIBUTION SYSTEM SHALL BE THOROUGHLY STERILIZED AS REQUIRED BY THE HEALTH AUTHORITY OR WATER PURVEYOR HAVING JURISDICTION, OR IN THE ABSENCE OF A PRESCRIBED METHOD, THE PROCEDURE DESCRIBED IN EITHER AWWA C651 OR AWWA C652, OR AS DESCRIBED IN SECTION 610 FBC-P.

TESTING: TEST ALL WASTE AND VENT PIPING FOR A PERIOD OF NOT LESS THAN 8 HOURS BY CAPPING OR PLUGGING. ALL JOINTS TO A LEVEL OF THE HIGHEST FIXTURE OR FITTINGS. FILLING THE SYSTEM WITH WATER, AND OBSERVING FOR LEAKS.

TEST UNDERGROUND SECTION OF PIPE WITH A RISER TO ACHIEVE THE PRESSURE EQUIVALENT TO THE HIGHEST FIXTURE OR FITTING.

TEST WATER PIPING AT 100 PSIG FOR A PERIOD OF 8 HOURS, OBSERVING FOR ANY VISIBLE LEAKS. TEST PIPING AGAIN WITH FIXTURES INSTALLED.

REPAIR ANY LEAKS FOUND BY REMAKING JOINT. DO NOT USE CAULKING OR SIMILAR METHODS TO CORRECT LEAKS. UPON REPAIRING ANY LEAKS FOUND, AGAIN TEST THAT PORTION OF THE SYSTEM AS DESCRIBED ABOVE.

PLUMBING LEGEND

SYMBOL	DESCRIPTION
	SANITARY DRAIN
	VENT
	COLD WATER SUPPLY
	HOT WATER SUPPLY
	PLUMBING VALVE
	CHECK VALVE
	PIPE DOWN
	PIPE UP
	PLUMBING FIXTURE NUMBER

PLUMBING ABBREVIATION

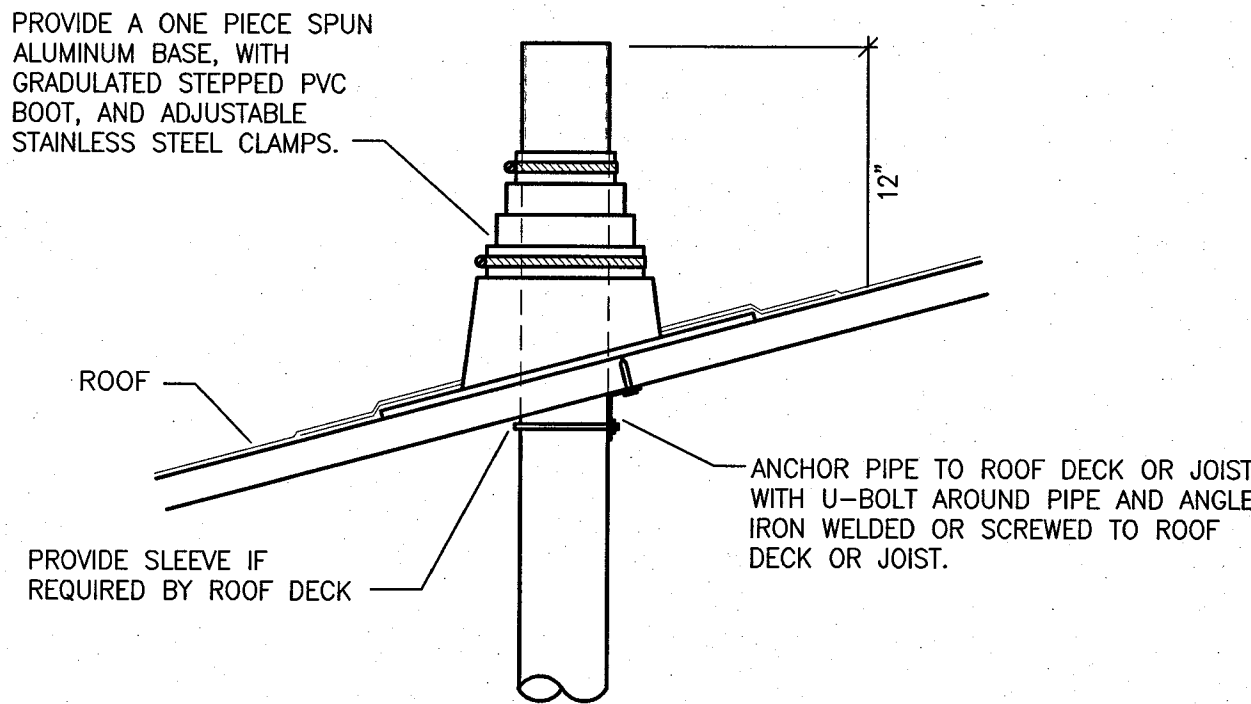
ABBREVIATION	DESCRIPTION
AFF	ABOVE FINISHED FLOOR
CO	CLEANOUT
CV	CHECK VALVE
CWS	COLD WATER SUPPLY
FD	FLOOR DRAIN
GPM	GALLONS PER MINUTE
HB	HOSE BIBB
HWH	HOT WATER HEATER
HWS	HOT WATER SUPPLY
HWR	HOT WATER RETURN
PRV	PRESSURE REDUCING VALVE
SAN	SANITARY
T&P	TEMPERATURE AND PRESSURE
VTR	VENT THRU ROOF
WCO	WALL CLEAN OUT

NOT ALL SYMBOLS AND ABBREVIATION MAY BE USED ON THIS PROJECT

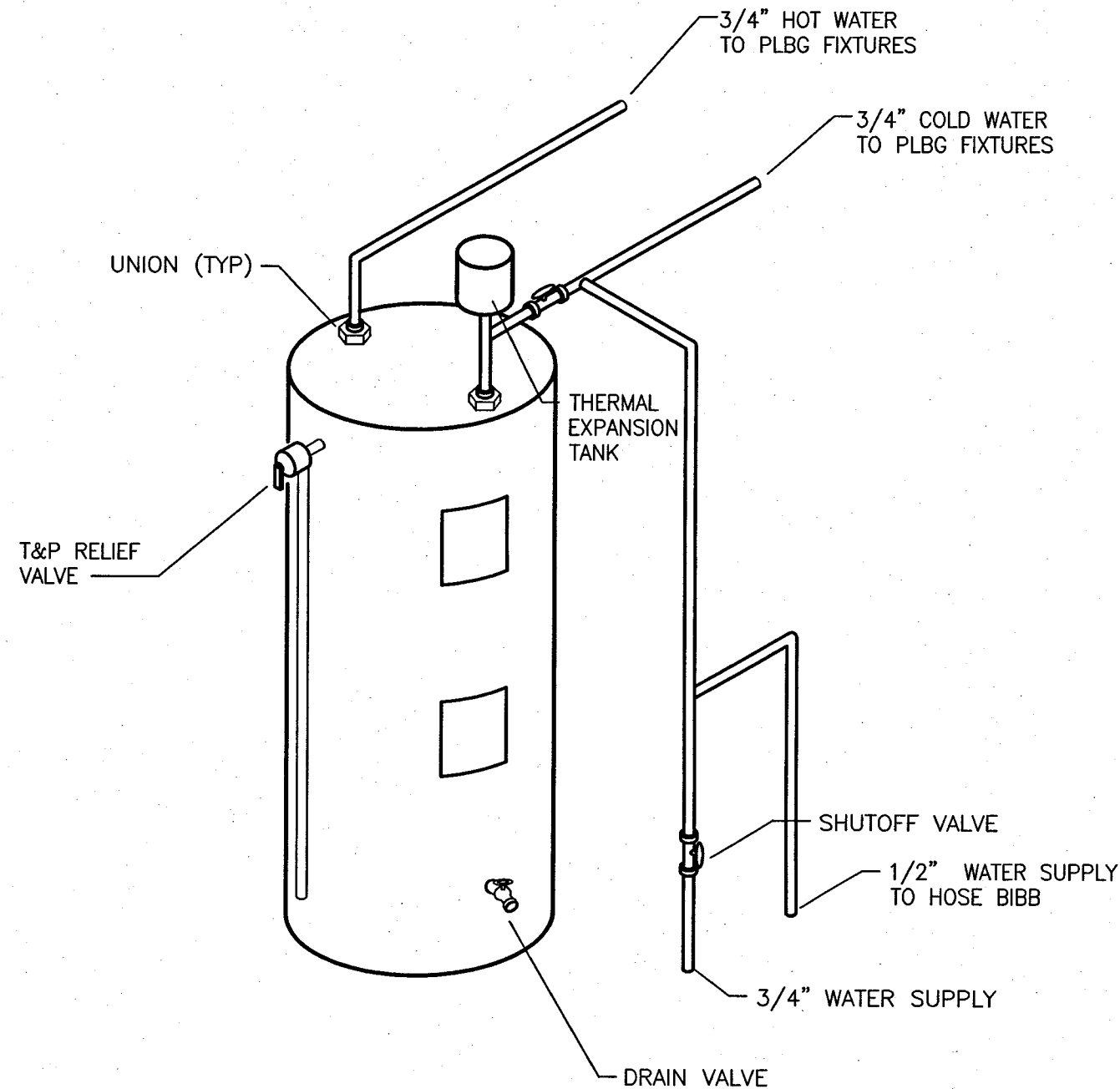
FIXTURE CONNECTION SCHEDULE

MARK	FIXTURE	BRANCH SIZE				MANUFACTURER/MODEL	REMARKS
		WASTE	VENT	COLD	HOT		
(WC-1)	WATER CLOSET	3"	2"	1/2"	---	AMERICAN STANDARD CADET 2852.000 OR EQUAL	VITREOUS CHINA, ROUND BOWL, FLOOR MOUNTED TANK TYPE WITH WHITE SOLID PLASTIC SEAT WITH LID. PROVIDE 3/8" SUPPLY AND STOP.
(L-1)	LAVATORY	2"	2"	1/2"	1/2"	AMERICAN STANDARD AQUALYN 0476.028 AMERICAN STANDARD RELIANT 2385.006 OR EQUAL	20x17, SELF-RIMMING, VITREOUS CHINA, WITH FAUCET LEDGE AND INTERNAL OVERFLOW. PROVIDE SINGLE LEVER FAUCET, 4" CENTER, POP-UP DRAIN ASSEMBLY. PROVIDE TAILPEICE, P-TRAP, SUPPLY AND STOP.
(S-1)	SINK	2"	2"	1/2"	1/2"	PROFLO PFT332264 SINK PROFLO PF2001M FAUCET BADGER 5 DISPOSAL OR EQUAL	33x22, DOUBLE BOWL, STAINLESS STEEL SINK UNDERSIDE FULLY SOUND DEADENED, PROVIDE DUO STRAINER, TAIL-PEICE, P-TRAP, SUPPLY AND STOP. CHROME FINISH, SINGLE HANDLE, KITCHEN SPOUT.
(SH-1)	SHOWER	2"	2"	1/2"	1/2"	CONTRACTOR BUILT SHOWER UNIT. ZURN TEMP-GARD III Z27301-SS-MT OR EQUAL	REFER TO ARCHITECTURAL DRAWINGS FOR SHOWER UNIT. PROVIDE CHROME FINISHED PRESSURE-BALANCING MIXING VALVE WITH INTEGRAL SERVICE STOPS, SINGLE LEVER HANDLE AND SHOWER HEAD.
(ST-1)	SHOWER-TUB	2"	2"	1/2"	1/2"	PROFLO PFB6112 RIGHT-HAND TUB PROFLO PFB6113 LEFT-HAND TUB AURN TEMP-GARD III Z7302-SS-MT OR EQUAL	CONTRACTOR SHALL FIELD VERIFY QUANTITY OF LEFT HAND AND RIGHT HAND TUBS. TUBS SHALL BE CONSTRUCTED WITH ENAMELED STEEL WITH SLOPING BACK SUPPORT. TUBS SHALL HAVE INTEGRAL OVERFLOW, LIFT AND TURN STOPPER. PROVIDE CHROME FINISHED PRESSURE-BALANCING MIXING VALVE WITH INTEGRAL SERVICE STOPS, SINGLE LEVER HANDLE, SHOWER HEAD AND TUB SPOUT.
(CB-1)	ICE-MAKER CONNECTION BOX	---	---	1/2"	---	OATEY 38614 OR EQUAL	1/4 TURN BRASS BALL VALVE, PCVC RECESSED VALVE BOX.
(CB-2)	LAUNDRY CONNECTION BOX	2"	2"	1/2"	1/2"	OATEY 38747 OR EQUAL	1/4 TURN BRASS BALL VALVE, 2" DRAIN OPENING, PCVC RECESSED VALVE BOX.
(HB-1)	HOSE BIBB	---	---	1/2"	---	WOODFORD MODEL 24 OR EQUAL	ANTI-SIPHON PROTECTION
(AV-1)	AIR ADMITTANCE VALVE	---	2"	---	---	STUDOR MINI-VENT OR EQUAL	
(HWH-1)	HOT WATER HEATER	---	---	3/4"	3/4"	AO SMITH ECJ-40 OR EQUAL	43 GALLON, ELECTRIC, 240/1, 6 KW. PROVIDE EXPANSION TANK, SAFETY FAN, T&P VALVE AND ISOLATION VALVES.

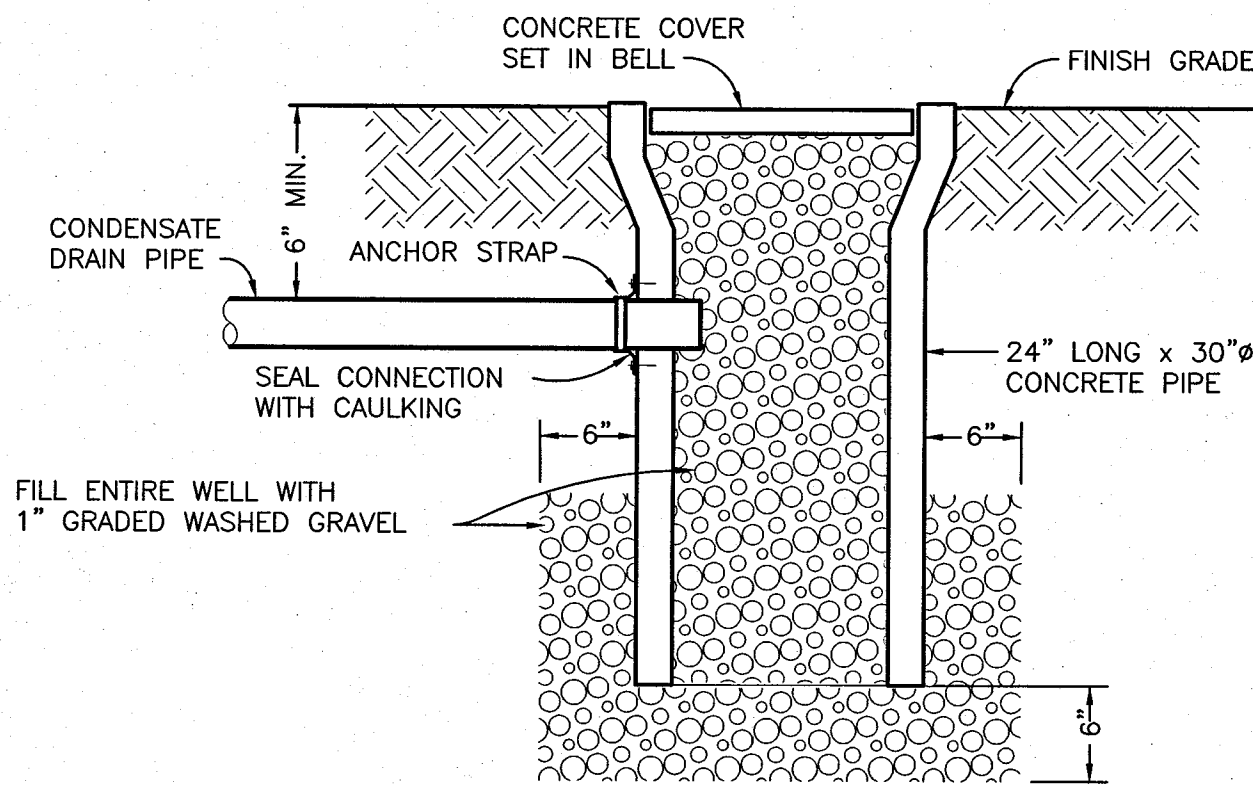
MAKE AND MODEL FOR BID PURPOSES ONLY. PROVIDE FIXTURE SUBMITTAL TO OWNER FOR APPROVAL



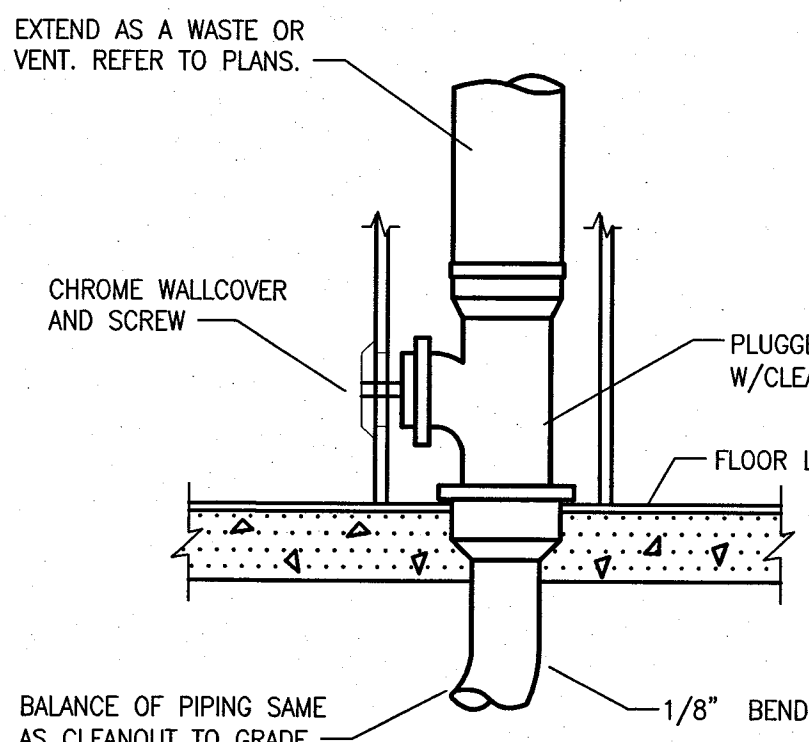
2 VENT THROUGH ROOF DETAIL N.T.S



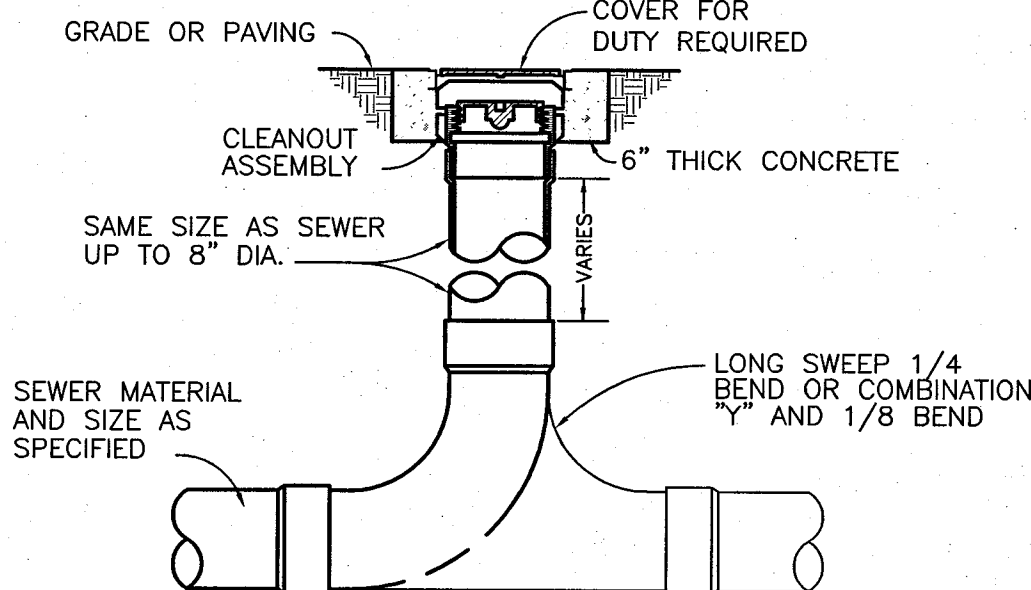
1 WATER HEATER DETAIL N.T.S



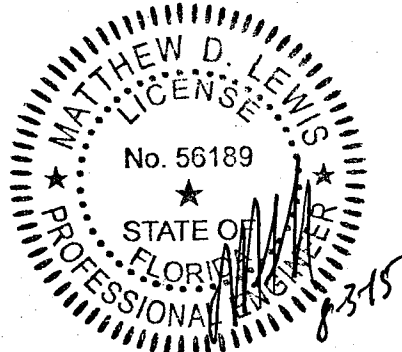
5 CONDENSER TIE DOWN DETAIL N.T.S



4 WALL CLEANOUT DETAIL N.T.S



3 GRADE CLEANOUT DETAIL N.T.S



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PLUMBING NOTES
DETAILS AND
SCHEDULES

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