

GENERAL

COMPLY WITH THE PERTINENT REQUIREMENTS FOR SUBMITTALS. SUBMITTALS INCLUDE: SHOP DRAWINGS, OPERATING AND MAINTENANCE MANUALS, INSTALLATION DRAWINGS FOR SPECIAL SYSTEMS, AND PROJECT RECORD DOCUMENTS. AS A MINIMUM PROVIDE SUBMITTALS ON THE FOLLOWING: EQUIPMENT, FIXTURES, PIPING AND VALVES, HANGERS, INSULATION, AND CONTROLS. SUBMIT COMPLETE PLUMBING SUBMITTAL PACKAGE FOR REVIEW AT ONE TIME. DO NOT SUBMIT PARTIAL PACKAGES.

THE CONTRACTOR SHALL PROVIDE PLUMBING EQUIPMENT BY THE SCHEDULED MANUFACTURER AND MEETING THE SCHEDULED PERFORMANCE UNLESS OTHERWISE NOTED. CONTRACTOR MAY CHOOSE TO SUBMIT AN ALTERNATE MANUFACTURER TO THAT SCHEDULED ONLY WHEN THE DRAWINGS INDICATE THAT AN EQUAL MAY BE PROVIDED. HOWEVER, IT IS THE CONTRACTORS RESPONSIBILITY TO PROVE THAT ALTERNATE EQUIPMENT IS IN FACT EQUAL TO THAT SCHEDULED AND IT IS THE ENGINEERS RIGHT TO MAKE THE FINAL DETERMINATION OF EQUAL OR NOT.

WHEN THE CONTRACTOR SUBMITS EQUAL EQUIPMENT, IT IS THE CONTRACTORS FULL RESPONSIBILITY TO COORDINATE ALL POWER REQUIREMENTS INCLUDING BUT NOT LIMITED TO VOLTAGE, CURRENT, CIRCUIT AMPACITY, DISCONNECTING MEANS AND DISCONNECTING SIZE AND LOCATION, AND ALL MECHANICAL CONNECTIONS INCLUDING BUT NOT LIMITED TO FLUE OR VENT SIZE, PRESSURE LOSS, AND CAPACITY, WITH THE ELECTRICAL AND MECHANICAL CONTRACTOR. ALTERATIONS IN WORK OR MATERIAL BEYOND THE BASE BID REQUIRED BY THE ELECTRICAL AND MECHANICAL CONTRACTOR SHALL BE PERFORMED AT THE EXPENSE OF THE PLUMBING CONTRACTOR AND SHALL RESULT IN NO ADDITIONAL COST TO THE OWNER. ADDITIONALLY, THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR ANY CHANGES REQUIRED IN PIPING ORIENTATION OR SIZE AND FOR MAINTAINING ANY AND ALL REQUIRED SERVICE AND/OR CODE CLEARANCES TO THE ALTERNATE EQUIPMENT.

AT THE TIME OF FINAL INSPECTION AND TESTS OF THE PLUMBING SYSTEMS, ALL MECHANICAL, PIPING, ELECTRICAL, AND CONTROLS CONNECTIONS TO THE SYSTEM SHALL BE COMPLETE.

UTILITY CONNECTIONS

THIS CONTRACTOR SHALL, BEFORE COMMENCEMENT OF THE PROJECT VERIFY THE LOCATION, DEPTH, SIZE AND PRESSURE OR GRADE OF ALL UTILITY LINES TO WHICH HE IS TO MAKE CONNECTIONS. IF ANY CONDITIONS APPEAR THAT WILL ADVERSELY AFFECT THE PROPER INSTALLATION AND OPERATION OF THE SYSTEM SUCH CONDITIONS SHALL BE REPORTED TO THE ARCHITECT IN WRITING FOR HIS DECISION.

ALL CHANGES FOR CONNECTIONS TO UTILITY SERVICES AND COST FOR CUTTING AND PATCHING OF PAVING, CURBS, WALKS, ETC., REQUIRED FOR THE SERVICES SHALL BE INCLUDED IN THE BID.

SANITARY SEWER SYSTEM

FURNISH AND INSTALL A COMPLETE SANITARY SYSTEM OF SOIL, WASTE AND VENT PIPING, FOR ALL FIXTURES, DRAINS, EQUIPMENT DISCHARGES, ETC. AS SHOWN ON THE DRAWINGS, AND/OR HEREINAFTER SPECIFIED. ALL PIPING SHALL ROUTE AS STRAIGHT AS POSSIBLE AND BE INSTALLED TO GRADE 1/4" PER FOOT MINIMUM FOR PIPING 2" AND SMALLER, 1/8" PER FOOT MINIMUM FOR PIPING 3" AND LARGER.

UNLESS NOTED OTHERWISE ON THE PLANS, ALL SANITARY SYSTEM SOIL, WASTE, AND VENT PIPING SHALL BE PVC SCHEDULE 40 PIPE WITH SOLVENT WELD JOINT FITTINGS. INSTALL THE SYSTEM IN ACCORDANCE WITH THE LOCAL CODE.

SANITARY VENTS SHALL EXTEND 15' ABOVE ROOF. FLASH SANITARY VENTS WITH FABRICATED WATERPROOFING FLASHING CONSISTING OF A BASE AND A RISER SLEEVE ALL MADE OF 4 LB SHEET LEAD. JOINTS BASE SHALL EXTEND OVER THE ROOF 12" FROM THE STACK. DRESS THE FLASHING RISER OVER TOP OF AND DOWN INTO THE VENT STACK FOR A RAINTIGHT LEAKPROOF INSTALLATION. FLASH WITH ROOFING MANUFACTURER ACCESSORIES TO MAINTAIN WARRANTY ON PENETRATIONS).

PROVIDE CLEANOUTS WHERE INDICATED ON THE PLANS AND AS REQUIRED FOR SNAKING OF THE SANITARY SYSTEM PIPING, ADJUST CLEANOUT BODIES TO HAVE THE ACCESS COVER TOP SURFACE FLUSH WITH FINISH FLOOR. CLEANOUT SPACING IN STRAIGHT PIPE LENGTHS SHALL NOT EXCEED 50' INSIDE AND 100' OUTSIDE.

FLOOR DRAINS

INSTALL FLOOR DRAINS SO THAT THE TOP OF THE DRAIN IS FLUSH WITH FINISHED FLOORING MATERIAL. SLOPE TO DRAIN SHALL BE IN ACCORDANCE WITH THE FOUNDATION PLAN AND CODE REQUIREMENTS.

DRAINS SHALL BE OF CAPACITIES, CHARACTERISTICS, SIZE, ETC. AS INDICATED AND SCHEDULED ON THE DRAWINGS.

WATER SYSTEM

FURNISH AND INSTALL A COMPLETE WATER SYSTEM WITH BRANCH LINES, SERVICING FUTURE PLUMBING FIXTURES, FAUCET, EQUIPMENT, ETC., AS INDICATED ON THE PLANS AND HEREIN SPECIFIED.

ALL WATER PIPING LOCATED ABOVE GRADE 3" AND SMALLER SHALL BE TYPE L HARD COPPER TUBING WITH ASA B16.22 WROUGHT COPPER FITTINGS. JOINTS, JOINTS SHALL BE MADE WITH 95% TINANTIMONY SOLDER. WATER PIPING LOCATED BELOW GRADE SHALL BE TYPE K SOFT COPPER, THERE SHALL NOT BE JOINTS IN TUBING LOCATED UNDER THE SLAB.

PIPING SHALL BE INSTALLED WITH A GRADE FOR DRAINAGE TOWARD MAIN SUPPLY RISERS AND TO FIXTURE CONNECTIONS TO ALLOW COMPLETE DRAINAGE OF THE SYSTEMS.

WATER SYSTEMS SHALL BE STERILIZED WITH A SOLUTION IN ACCORDANCE WITH THE REQUIREMENTS OF THE STATE PUBLIC HEALTH DEPARTMENT. PUMP THE STERILIZATION SOLUTION INTO THE WATER SYSTEM AND FILL THE COMPLETE SYSTEM INCLUDING BRANCH PIPES.

ALL HORIZONTAL RUNS OF PIPING SHALL BE SUSPENDED FROM THE STRUCTURAL MEMBERS ABOVE BY MEANS OF APPROVED HANGERS. SUPPORTS AND HANGERS SHALL BE INSTALLED TO PERMIT FREE EXPANSION AND CONTRACTION IN THE PIPING SYSTEM.

PROVIDE ACCESS DOORS AS REQUIRED FOR ACCESS TO ALL VALVES BEHIND GYPSUM BOARD CEILINGS AND WALLS. PAINT TO MATCH.

INSTALL CHECK VALVES IN THE COLD WATER BRANCHES

INSULATION

INSULATION OF ALL HOT AND COLD WATER PIPING WITHIN THE BUILDING, ALL CONDENSATE DRAIN PIPING, EXCEPT FOR DRAIN LINES ABOVE THE ROOF.

- INSULATION TYPE:
1. DOMESTIC COLD AND HOT WATER - 1" MOLDED FIBERGLASS WITH FIRE RESISTANT JACKET. ELBOW AND FITTINGS WILL BE THE SAME THICKNESS
 2. REFRIGERANT - SAME AS DOMESTIC WATER
 3. CONDENSATE DRAIN - 1" ARMAFLEX
 4. ROOF AND OVERFLOW DRAINS - (HORIZONTAL RUNS ONLY) SAME AS DOMESTIC WATER.

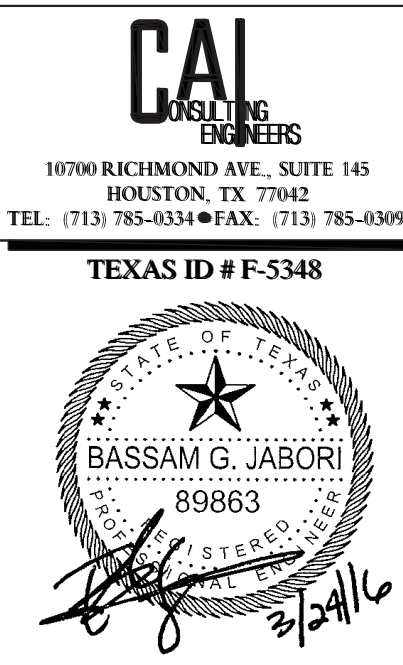
TESTS AND INSPECTIONS

WASTE AND VENT PIPING SHALL BE TESTED ON COMPLETION OF THE ROUGH WORK AND BEFORE FIXTURES AND TRAPS ARE CONNECTED. ALL OPENINGS, EXCEPT HIGHEST VENTS, ARE TO BE PLUGGED AND THE SYSTEM COMPLETELY TESTED WITH WATER. SYSTEM SHALL STAND WITHOUT LEAK OR LOSS OF WATER FOR A PERIOD OF NOT LESS THAN FOUR (4) HOURS.

ALL WATER PIPING SHALL BE PRESSURIZED HYDRAULICALLY AT 150 POUNDS PER SQUARE INCH AND THIS PRESSURE SHALL BE HELD WITHOUT ADDITIONAL PRESSURIZATION FOR NOT LESS THAN ONE (1) HOUR. EQUIPMENT, ETC., IN THE SYSTEM THAT MAY BE DAMAGED BY THIS PRESSURE SHALL BE ISOLATED OR DISCONNECTED FROM THE SYSTEM PRIOR TO TESTING.

GAS PIPING SHALL BE TESTED WITH AIR PRESSURE BY MERCURY GAUGE TO A PRESSURE EQUAL TO 18" MERCURY COLUMN FOR A PERIOD OF FOUR (4) HOURS. SYSTEM SHALL HOLD THE PRESSURE WITHOUT RE-PRESSURIZATION.

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PAD BUILDING AT THE
CROSSROADS MALL
GREENVILLE, TEXAS
GREENVILLE PROPERTIES LTD.
GREENVILLE, TEXAS

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DRAWN BY:

PLUMBING SPECIFICATIONS

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