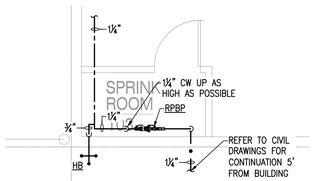
CONSTRUCTION NOTES

1. TURN ¾" CW DOWN TIGHT TO EXTERIOR WALL – PROVIDE ISOLATION SHUT-OFF VALVE MOUNTED AT 9'-6" A.F.F. – EXTEND DOWN WITHIN WALL.

UTILITY INFORMATION	
WATER	BACLIFF MUNICIPAL UTILITY DISTRICT 4302 12TH STREET BACLIFF, TX. 77518 PH: (281) 339-1634
NATURAL GAS	RELIANT ENERGY CENTER POINT (281) 471-4333

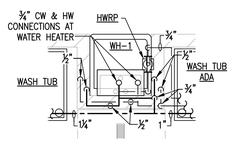
PLUMBING FIXTURE LEGEND

SYMBOL	DESCRIPTION
	COLD WATER ABOVE SLAB
	HOT WATER ABOVE SLAB
	COLD WATER BELOW SLAB OR GRADE
	WASTE LINE BELOW SLAB OR GRADE
V	VENT LINE ABOVE OR BELOW SLAB
GAS	GAS LINE ABOVE SLAB OR GRADE
	EXTERIOR CLEANOUT UP FROM BELOW SLAB OR GRADE
	CLEANOUT UP FROM BELOW FLOOR OR SLAB
	PIPE TURNED DOWN
	PIPE TURNED UP
	BALL VALVE
	RPBP
	HOSE BIBB
	NEW FIXTURES
WC1, ETC.	FIXTURE IDENTIFICATIONS
CW	COLD WATER
HW	HOT WATER
VTR	VENT THRU ROOF
ECO	EXTERIOR CLEANOUT
ICO	INTERIOR CLEANOUT
WCO	WALL CLEANOUT
AFF	ABOVE FINISHED FLOOR
	PRESSURE REGULATING VALVE



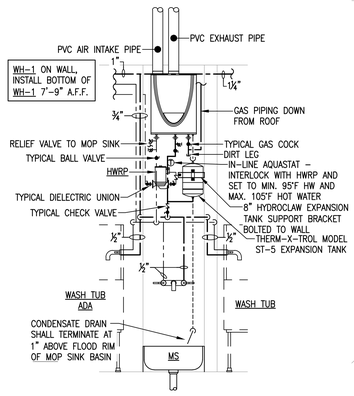
ENLARGED SPRINKLER ROOM

SCALE: 1/4" = 1'-0"



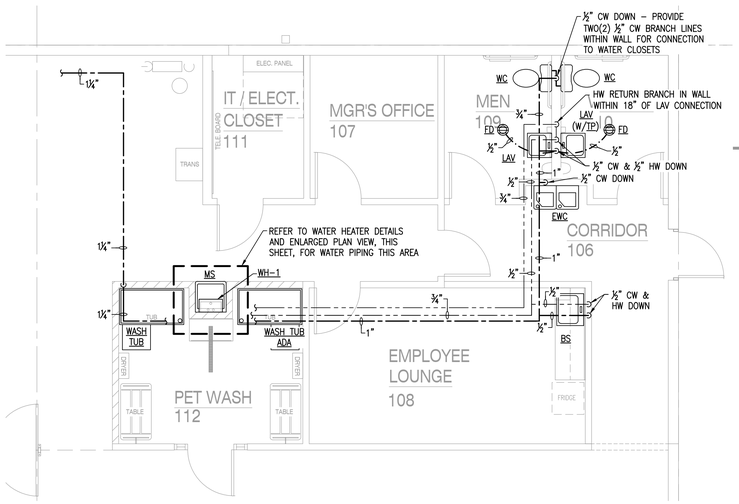
INSTANTANEOUS WATER HEATER ABOVE MOP SINK ENLARGED PLAN

SCALE: 1/2" = 1'-0"



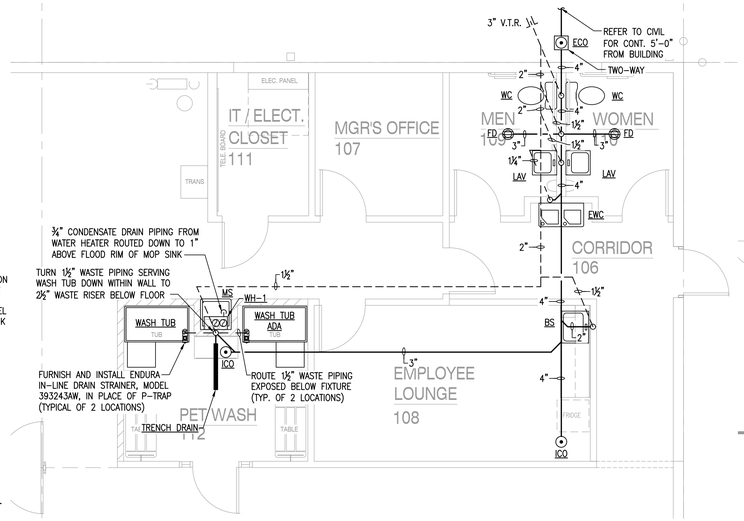
INSTANTANEOUS WATER HEATER ABOVE MOP SINK DETAIL - ELEVATION VIEW

SCALE: 1/2" = 1'-0"



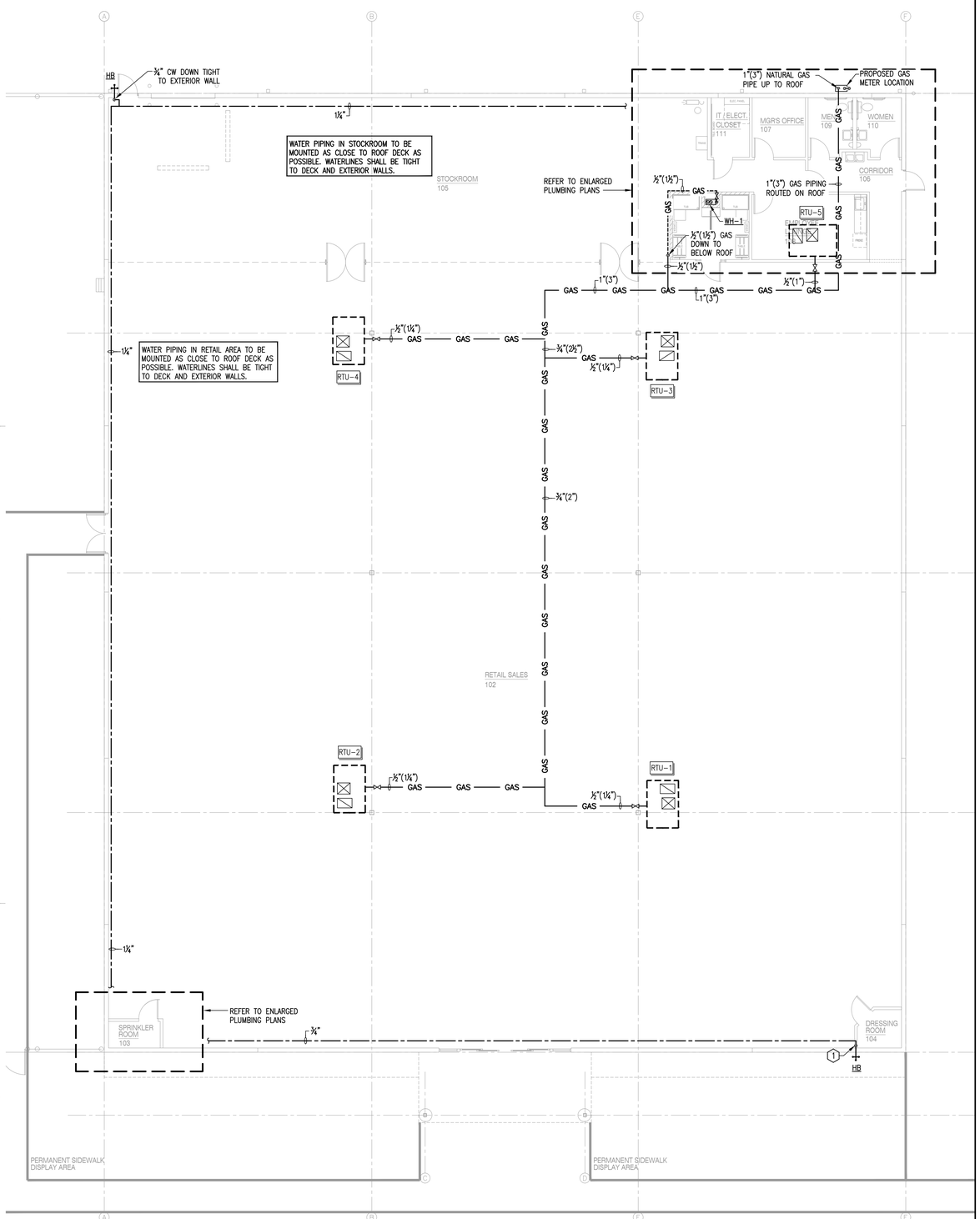
ENLARGED PLUMBING PLAN: WATER

SCALE: 1/4" = 1'-0"



ENLARGED PLUMBING PLAN: WASTE/VENT

SCALE: 1/4" = 1'-0"



PLUMBING FLOOR PLAN

SCALE: 1/8" = 1'-0"

OXFORD ARCHITECTURE

2934 Sidco Drive
Suite 120
Nashville, TN 37204

Architecture
Planning
Interior Architecture

STATE OF TEXAS
GARY W. SCHELTON
93434
LICENSED
PROFESSIONAL ENGINEER
11/14/20

TSC

TRACTOR SUPPLY COMPANY

TEXAS CITY (BACLIFF) TEXAS

Job Number: 1983

Date: 12.13.2019

Revisions:

Revisions:

Revisions:

PLUMBING FLOOR PLAN

Sheet Number: P1.0

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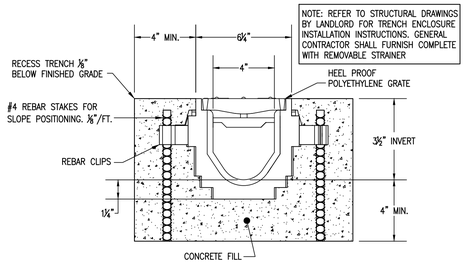
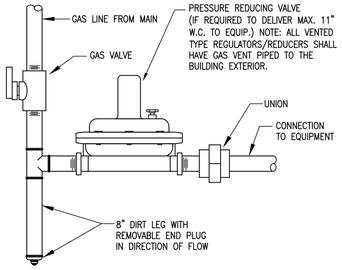


TRENCH DRAIN DETAIL

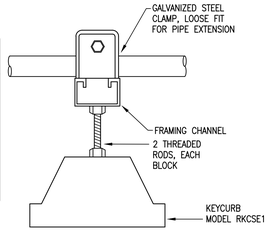
SCALE: NONE



TYPICAL GAS CONNECTION DETAIL

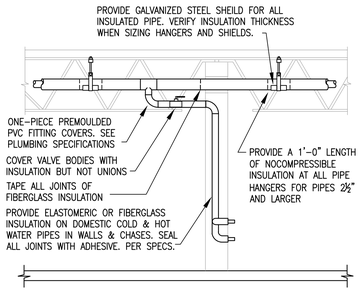
SCALE: NONE

BLOCK SPACING CHART (METAL PIPE)	
PIPE SIZE	MAX SPACING
½" – 1½"	6'
2" – 2½"	10'
3" – 4"	12'
* BLOCK SPACING FOR PLASTIC PIPE (ALL SIZES) SHALL BE 4' MAX	



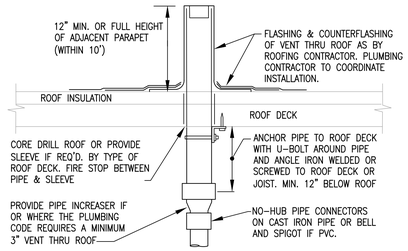
GAS PIPE SUPPORT DETAIL

SCALE: NONE



PIPE INSULATION - BAR JOIST

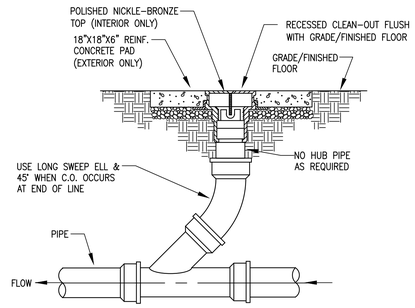
SCALE: NONE



REFER TO PLANS FOR VTR PIPE SIZES AND LOCATIONS. LOCATE VTR MIN. THREE FEET FROM PROPERTY LINE, OR TEN FEET HORIZONTAL OR THREE FEET VERTICAL ABOVE ANY BUILDING OPENING OR FRESH AIR INTAKE, OR ONE FOOT FROM ANY VERTICAL SURFACE. LOCATE VTR MINIMUM 18" FROM PARAPET, EXPANSION JOINT, EQUIPMENT CURB, ETC. OFFSET IN CEILING SPACE WHERE REQUIRED TO MEET THESE CONDITIONS.

VENT THRU ROOF - VTR

SCALE: NONE

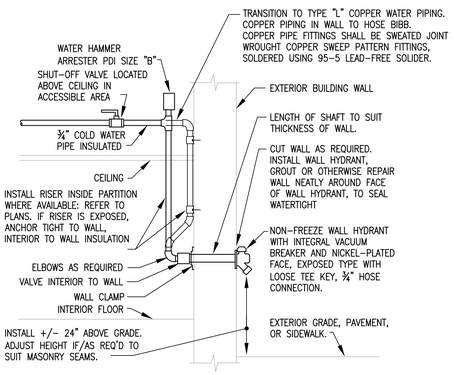


CLEAN-OUT DETAIL

SCALE: NONE

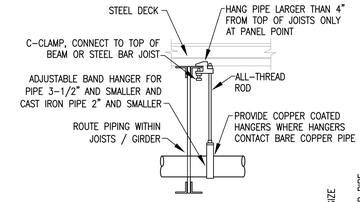
PLUMBING FIXTURE SCHEDULE

MARK	DESCRIPTION	UTILITIES CW	HW	DR	VENT
WC	WATER CLOSET (ACCESSIBLE, FLOOR MOUNTED, PRESSURE ASSISTED FLUSH TANK): AMERICAN STANDARD 2467.016, CADET, 12" ROUGH-IN, 1.6 GPF, PRESSURE ASSISTED SIPHON JET ACTION, LOW CONSUMPTION, VITREOUS CHINA, 17" HIGH, ELONGATED BOWL FLUSH TANK WATER CLOSET WITH LEFT HAND TRIP LEVER. PROVIDE A MCGUIRE 2166-CC SUPPLY WITH STOPS AND A OLSONITE 10-CC/SS WHITE OPEN FRONT SEAT. FOR RIGHT HAND TRIP LEVER PROVIDE WITH ALTERNATE TANK CONFIGURATION MODEL 4142.800. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING CORRECT TANK SELECTION WITH LATEST ARCHITECTURAL DRAWINGS TO ACCOMODATE ADA ACCESSIBILITY PRIOR TO ORDERING.	½"	X	4"	2"
LAV	LAVATORY (ACCESSIBLE, WALL HUNG, SINGLE LEVER, GRID DRAIN): AMERICAN STANDARD 0355.012, VITREOUS CHINA LAVATORY WITH AN AMERICAN STANDARD 7385.004 FAUCET, POLISHED CHROME FINISH, AMERICAN STANDARD 7723.018 OFFSET GRID DRAIN, MCGUIRE PW 2125 P-TRAP AND(2) MCGUIRE 2165-CC SUPPLIES WITH STOPS. PROVIDE A JOSAM FIG. NO. 17100-67 CARRIER AND A TRUEBRO INC., HANDI-LAV-GUARD INSULATION KIT MODEL 102W WITH ACCESSORY 105W. MOUNT FIXTURE WITH FLOOD RIM 34" AFF. FURNISH AND INSTALL THERMAL MIXING VALVE FOR MAX. 110°F HOT WATER.	½"	½"	1¼"	1¼"
BS	BREAKROOM SINK: (SINGLE BOWL, S.S., GOOSENECK): PROVIDED BY TRACTOR SUPPLY COMPANY & INSTALLED BY CONTRACTOR.	½"	½"	1½"	1¼"
EWC	ELECTRIC WATER COOLER (ACCESSIBLE, DUAL-HEIGHT): ELKAY MODEL EZSTLBLC WITH TOUCH PAD CONTROLS AND WALL MOUNTING BRACKET. 8 GPH, 115/1/60. MOUNT HIGH UNIT AT 42" MAXIMUM FROM FLOOR TO SPOUT OUTLET AND LOW UNIT AT 36" MAXIMUM FROM FLOOR TO SPOUT OUTLET. PROVIDE MCGUIRE 8872 P-TRAP AND MCGUIRE 165-CC SUPPLY WITH STOP. COORDINATE WITH ELECTRICAL CONTRACTOR TO LOCATE RECEPTACLE BEHIND WATER COOLER CABINET.	½"	X	1¼"	1¼"
MS	MOP SINK : MUSTEE MODEL 63M 24"x24" FIBERGLASS MOP SERVICE BASIN. COMPLETE WITH MODEL 63.401 EXTRUDED BUMPER GUARD, CHICAGO MODEL 897-RCF CHROME PLATED SPOUT WITH VACUUM BREAKER, ¾" HOSE THREAD OUTLET, PAIL HOOK. WALL SUPPORT, INTEGRAL STOPS, MODEL 369 2½" METAL LEVER HANDLES AND 36" LENGTH OF THREADED HOSE.	½"	½"	3"	1½"
WH-1	WATER HEATER (GAS INSTANTANEOUS, 96% EFFICIENCY, 120V/1ø, 4 AMPS): A.O. SMITH MODEL 540H OR EQUAL, INTERIOR WALL MOUNTED, GAS, INSTANTANEOUS WATER HEATER, RATED AT 13,000 TO 199,000 BTUH, WITH CAPACITY OF 0.26-9.8 GAL./MIN. WATER HEATER SHALL CONFORM TO IECC 701, 504, AND ASHRAE 90.1 SET TO 120°F OUTLET TEMP. PROVIDE W/ ISOLATION VALVE KIT AND CONCENTRIC VENT KIT.	¾"	¾"	X	X
FD	FLOOR DRAIN (3" DIA. OUTLET): ROUND TOP, J.R. SMITH MODEL 2005Y-A-P050-PB WITH CAST IRON BODY AND FLASHING COLAR, TRAP PRIMER CONNECTION AND POLISHED BRONZE STRAINER. INSTALL WITH TOP FLUSH WITH FINISHED FLOOR.	X	X	3"	1½"
TP	TRAP PRIMER: JOSAM FIG. NO. 88250, AUTOMATIC TRAP PRIMER, MOUNTED INSIDE WALL CAVITY UNDER LAVATORY. PROVIDE 8" X 8" ACCESS PANEL TO CLEAR LAVATORY ROUGH-IN AND PAINTED TO MATCH WALL. RUN 1/2" COPPER LINE FROM TRAP PRIMER TO ADJACENT FLOOR DRAIN AS SHOWN ON THE CONTRACT DRAWINGS. **INLINE FLOOR DRAIN TRAP SEAL MAY BE USED IN LIEU OF TRAP PRIMERS PENDING LOCAL CODE APPROVAL. TRAP SEALS SHALL MEET REQUIREMENTS OF ASSE 1072 AND SHALL BE MADE OF CHEMICALLY RESISTANT ELASTOMER.**	½"	X	X	X
WHA	WATER HAMMER ARRESTER: JOSAM FIG. NO. 75001 THROUGH 75006, SIZE AS RECOMMENDED BY MANUFACTURER.	X	X	X	X
HB	HOSE BIBB (NON-FREEZE, KEYED HANDLE): WOODFORD MODEL 67, ¾", AUTOMATIC DRAINING BRASS FINISH, NIDEL MODEL 34HA VACUUM BREAKER. PROVIDE LOOSE TEE KEY FOR EACH HYDRANT.	¾"	X	X	X
TRENCH DRAIN	TRENCH DRAIN (36"x6"): ZURN MODEL Z886-HPP. 36"x6" HIGH DENSITY POLYETHYLENE TRENCH DRAIN WITH BOTTOM OUTLET 3" DRAIN AT DEEP END. FURNISH AND INSTALL COMPLETE WITH HEEL PROOF POLYETHYLENE GRATE WITH GRATE LOCKDOWN. G.C. TO INSTALL P-TRAP WITH MINIMUM 8" DEPTH BELOW DRAIN OUTLET AND PROVIDE REMOVABLE STRAINER, DRAIN-NET MODEL TDS380, OR APPROVED EQUAL, AT DRAIN OUTLET IN TRENCH DRAIN.	X	X	3"	1½"
WASH TUB	PET WASH TUB: TUB AND ANTI-SIPHON FAUCET TO BE PROVIDED BY TSC AND INSTALLED BY CONTRACTOR. PROVIDE WITH ENDURA IN-LINE DRAIN STRAINER, MODEL 393243AW, BELOW TUB IN PLACE OF P-TRAP. STRAINER CLEANOUT SHALL BE INSTALLED IN EASILY ACCESSIBLE LOCATION. COORDINATE LEFT HAND / RIGHT HAND CONFIGURATION AS SHOWN ON DRAWINGS WITH TSC. FURNISH COMPLETE WITH TEMPERATURE LIMITING MIXING VALVE.	½"	½"	1½"	1½"
WASH TUB ADA	PET WASH TUB: 6" DEEP ADA ACCESSIBLE TUB AND ANTI-SIPHON FAUCET PROVIDED BY TRACTOR SUPPLY COMPANY & INSTALLED BY CONTRACTOR. PROVIDE WITH ENDURA IN-LINE DRAIN STRAINER, MODEL 393243AW, BELOW TUB IN PLACE OF P-TRAP. STRAINER CLEANOUT SHALL BE INSTALLED IN EASILY ACCESSIBLE LOCATION. COORDINATE LEFT HAND / RIGHT HAND CONFIGURATION AS SHOWN ON DRAWINGS WITH TSC. FURNISH COMPLETE WITH TEMPERATURE LIMITING MIXING VALVE.	½"	½"	1½"	1½"
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER : WATTS MODEL 919-QTS, 1¼" REDUCED PRESSURE BACKFLOW PREVENTER WITH A MODEL 919-AG AIR GAP DRAIN. INSTALL UNIT IN HORIZONTAL POSITION WITH CENTERLINE A MAXIMUM OF 4'-6" AFF. REFER TO DETAIL ON DRAWINGS.	1¼"	X	X	X
HWRP	HOT WATER RECIRCULATION PUMP (FOR USE AT WATER HEATER): BELL & GOSSETT MODEL PL-30B WITH ¾" CONNECTIONS, RATED @ 1/12 HP, 120-1-60, .5 GPM AT .75 TDH. PROVIDE MAIN CUTOFF SWITCH (MANUAL) FOR PUMP TO CUT OFF POWER AS REQUIRED UNDER ASHRAE STANDARD 9075, PARAGRAPH 7.6. INSTALL & SUPPORT PUMP PER SCHEMATIC ON CONTRACT DRAWINGS AND MANUFACTURER'S RECOMMENDATIONS.	¾"	X	X	X



NON-FREEZE WALL HYDRANT

SCALE: NONE

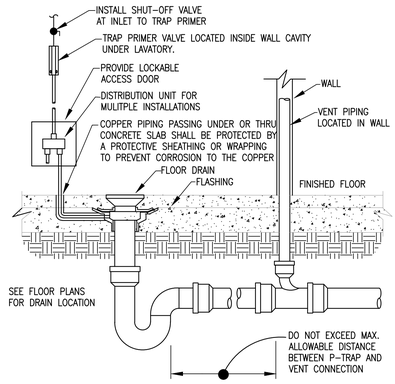


PROVIDE UPPER ATTACHMENT AS REQUIRED FOR CASES NOT SHOWN HERE. DO NOT INSTALL HANGER INSIDE INSULATION OR OTHERWISE PENETRATE VAPOR BARRIER. DO NOT HANG ONE PIPE FROM ANOTHER EXCEPT IN CHASES. SLOPE ALL WATER PIPING SLIGHTLY TOWARD DRAINABLE LOCATIONS. HANGER SPACING FOR PIPE SIZE: AS INDICATED ON TABLE. CAST IRON:: 10' AND WITHIN 1'-0" OF ALL JOINTS. ROD SIZES FOR PIPE SIZE: 2" AND SMALLER = ⅜", 2½" TO 3" = ½", 4=⅝", 6"=¾", 8" AND LARGER = ⅞". LOCATE HANGERS WITHIN 1'-0" OF VALVES AND FITTINGS. PROVIDE SUPPLEMENTARY STEEL STRUTS BETWEEN JOISTS IF REQUIRED. LOCATE HANGERS WITHIN 1'-0" OR EQUIPMENT CONNECTIONS. ANCHOR WATER PIPE AGAINST SWAYING DUE TO CHANGES IN WATER VELOCITY. CHAINS AND PERFORATED STRAP IRON AND STEEL ARE NOT ACCEPTABLE. DO NOT SUSPEND PIPE FROM JOIST BRACING MEMBERS. REFER TO CODE AND SPECIFICATIONS FOR FUTHER INFORMATION. PROVIDE SEISMIC BRACING IF/AS REQUIRED BY LOCAL AUTHORITIES. TRAPEZE HANGERS MAY BE USED FOR MULTIPLE PARALLEL PIPES, SEE "TRAPEZE PIPE HANGER DETAIL"

PIPE SIZE	COPPER PIPE HANGER SPACING	STEEL PIPE HANGER SPACING	PEX, PIPE HANGER SPACING
½"	5'	7'	32"
¾"	5'	7'	32"
1"	6'	7'	32"
1¼"	7'	8'	32"
1½"	8'	9'	32"
2"	8'	10'	32"
2½"	10'	11'	32"
3"	11'	12'	32"
4"	12'	12'	32"

PIPE HANGER - BAR JOIST

SCALE: NONE

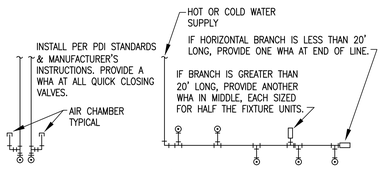


FLOOR DRAIN DETAIL

SCALE: NONE

WASTE & WATER FIXTURE LOAD CALCULATIONS

FIXTURE TAG	FIXTURE/EQUIPMENT	QUANTITY	WATER CW F.U. PER FIXTURE	WATER HW F.U. PER FIXTURE	WATER TOTAL F.U. PER FIXTURE	WATER TOTAL F.U.	WASTE WASTE F.U. PER FIXTURE	WASTE TOTAL F.U.
WC	WATER CLOSET	2	5.0	–	5.0	10.0	4.0	8.0
LAV	LAVATORY	2	1.5	1.5	2.0	4.0	1.0	2.0
BS	BREAK ROOM SINK	1	1.0	1.0	1.4	1.4	2.0	2.0
EWC	ELECT. WATER COOLER	1	0.25	–	0.25	0.25	–	–
MS	MOP SINK	1	2.25	2.25	3.0	3.0	2.0	2.0
FD	FLOOR DRAIN	2	–	–	–	–	2.0	4.0
WASH TUB	PET WASHING TUB	2	2.25	2.25	3.0	6.0	2.0	4.0
TRENCH DRAIN	TRENCH DRAIN	1	–	–	–	–	2.0	2.0
	TOTALS					24.65		24.0
MAXIMUM WATER DEMAND AT 24.65 F.U. = 23 GPM + 15 GPM (H.B.) = 1 1/4" MIN. WATER MAIN SUPPLY								
MAXIMUM WASTE DEMAND AT 24.0 F.U. = 4" SANITARY SEWER WASTE								
FIXTURE UNITS BASED ON 2015 INTERNATIONAL PLUMBING CODE								



SINGLE/DOUBLE FIXTURE

PDI SIZE	PIPE SIZE	FIXTURE UNIT LOAD
A	½"	1-11
B	¾"	12-32
C	1"	33-60
D	1¼"	61-113
E	1½"	114-154
F	2"	154-330

WATER HAMMER ARRESTERS

SCALE: NONE

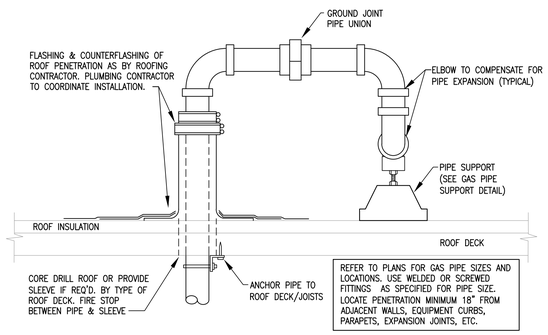
GAS CONNECTION SCHEDULE

EQUIPMENT	LOAD
RTU-1	180,000 BTU'S
RTU-2	180,000 BTU'S
RTU-3	180,000 BTU'S
RTU-4	180,000 BTU'S
RTU-5	80,000 BTU'S
WH-1	199,000 BTU'S
TOTAL NEW CONNECTED LOAD:	999,000 BTU'S

ALL NATURAL GAS PIPING IS SIZED FOR SCHEDULE 40 METALLIC PIPE.

GAS LINE SIZED AT 2.0 PSI INLET PRESSURE WITH 1.0 PSI PRESSURE LOSS FOR 250'-0" FURNISH AND INSTALL PRV AT EQUIPMENT CONNECTION AS REQUIRED. CONTRACTOR SHALL VERIFY GAS AVAILABILITY @ 2 PSI WITH LOCAL PROVIDER PRIOR TO CONSTRUCTION.

IF 2 PSI INLET PRESSURE IS UNAVAILABLE REFER TO PIPE SIZES INDICATED IN PARENTHESIS ON DRAWING SHEET P1.0.



REFER TO PLANS FOR GAS PIPE SIZES AND LOCATIONS. USE WELDED OR SCREWED FITTINGS AS SPECIFIED FOR PIPE SIZE. LOCATE PENETRATION MINIMUM 18" FROM ADJACENT WALLS, EQUIPMENT CURBS, PARAPETS, EXPANSION JOINTS, ETC.

GAS PIPING ROOF PENETRATION

SCALE: NONE

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2934 Sidco Drive
Suite 120
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Architecture
Planning
Interior Architecture

STATE OF TENNESSEE
GARY W. SCHELTON
23434
LICENSED
PROFESSIONAL ENGINEER

TSC
TRACTOR SUPPLY COMPANY

TEXAS CITY (BACLIFF) TEXAS

Job Number: 1983
Date: 12.13.2019
Revisions:
Revisions:
Revisions:

PLUMBING SPECIFICATIONS

Sheet Number: P2.0

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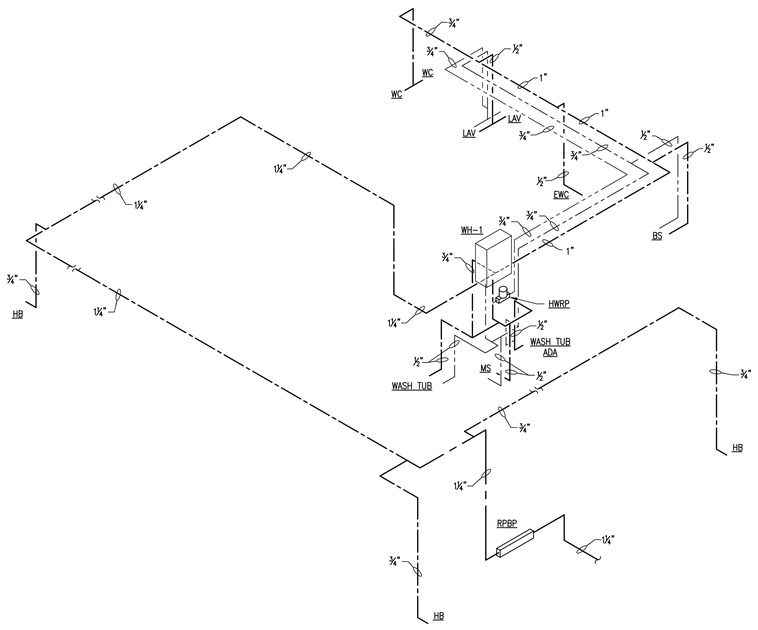
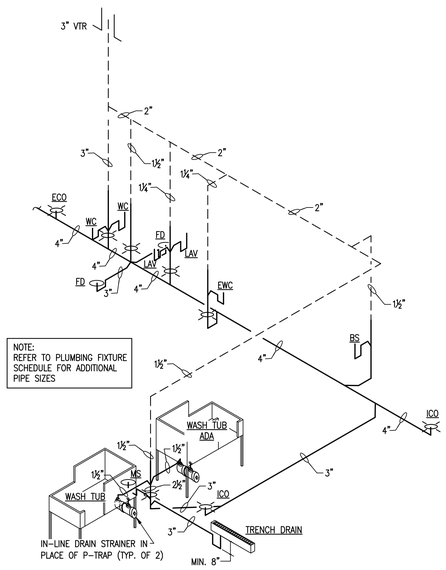


DOMESTIC WATER RISER

SCALE: NONE



WASTE & VENT RISER

SCALE: NONE

PLUMBING SPECIFICATIONS

PART 1 GENERAL

1. COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, STATE AND LOCAL CODES AND ORDINANCES, INCLUDING BUT NOT LIMITED TO THE LATEST APPROVED EDITIONS OF THE FOLLOWING:

   STATE BUILDING CODE, INTERNATIONAL BUILDING CODE, INTERNATIONAL PLUMBING CODE, INTERNATIONAL ENERGY CONSERVATION CODE, NFPA-90A, NFPA-101, NFPA-54.

2. OBTAIN AND PAY FOR ALL REQUIRED PERMITS, INSPECTION FEES, TAPPING FEES, CONNECTION CHARGES, AND UTILITY COMPANY SERVICE CHARGES.

3. INSTALLATION SHALL BE DONE IN A NEAT AND WORKMANLIKE MANNER.

4. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL LABOR AND INSTALL ALL MATERIAL CALLED FOR IN THE CONTRACT DOCUMENTS PER LOCAL CODE REQUIREMENT AND THE MANUFACTURER'S INSTALLATION INSTRUCTIONS.

5. THE CONTRACTOR'S INSTALLATION SHALL INCLUDE ALL REQUIRED ROUGH-INS, DUCTWORK, PIPING OR ELECTRICAL WIRING INCLUDING DEVICES (GAGES, VALVES, DISCONNECTS, STARTERS, ETC.) NEEDED FOR ALL SYSTEMS TO BE COMPLETE AND FULLY OPERATIONAL WHETHER OR NOT SHOWN OR NOTED ON THE CONTRACT DOCUMENTS.

6. THE CONTRACTOR'S BID SHALL INCLUDE ALL SUCH ITEMS REASONABLY INFERRED OR REQUIRED FOR COMPLETE SYSTEMS. THE CONTRACTOR SHALL NOTIFY THE DESIGN ENGINEER PROMPTLY OF ANY CONFLICT BETWEEN BUILDING CODES AND/OR THE MANUFACTURER'S INSTALLATION INSTRUCTIONS AND THE CONTRACT DOCUMENTS.

7. NO DEVIATIONS OR ADJUSTMENTS SHALL BE MADE TO THE CONTRACT DOCUMENTS WITHOUT COORDINATION AND THE APPROVAL OF THE DESIGN ENGINEER. ANY SUCH APPROVED DEVIATIONS OR ADJUSTMENTS TO THE CONTRACT DOCUMENTS SHALL BE MARKED ON A SET OF RECORD DRAWINGS BY THE CONTRACTOR. THE RECORD AS-BUILT DRAWINGS SHALL BE TURNED OVER TO THE DESIGN ENGINEER AT THE COMPLETION OF CONSTRUCTION.

PART 2 PRODUCTS

1. ALL PIPING AND FITTINGS FOR THE DOMESTIC WATER SYSTEM SHALL BE CERTIFIED BY THE UNDERWRITERS LABORATORY TO MEET THE ANSI NSF, 61 SECTION 9 STANDARD.

2. ALL PIPING INSIDE THE BUILDING AND BELOW SLAB TO 5'-0" OUTSIDE THE BUILDING SHALL BE ASTMF876 APPROVED CROSSLINKED POLYETHYLENE (PEX) TUBING WITH A MINIMUM CLASS 1006 CHLORINE RESISTANCE RATING, WATTS, ZURNER, OR NIBCO. FITTINGS SHALL BE BARBED CRIMP PIPING OR QUICK CONNECT FITTINGS, WATTS, ZURNER, OR NIBCO. EXPOSED PIPING INSIDE SHALL BE 10' OR 20' STICKS. ROLLS MAY BE USED IN WALLS NOT EXPOSED AND UNDERSLAB. ALL PIPING (PEX) UNDER INTERIOR SLAB SHALL BE SLEEVED. NO FITTINGS SHALL BE PERMITTED UNDER GROUND.

3. ALL SANITARY WASTE AND VENT PIPING INSIDE AND UNDERSLAB TO 5'-0" OUTSIDE THE BUILDING SHALL BE SCHEDULE 40 PVC, DWV OR SERVICE WEIGHT CAST IRON WITH DRAINAGE FITTINGS.

4. JOINT FOR PVC SANITARY WASTE AND VENT PIPING SHALL BE SOLVENT WELD TYPE INSIDE AND UNDERSLAB TO 5'-0" OUTSIDE THE BUILDING. JOINTS FOR CAST IRON PIPE SHALL BE NO-HUB TYPE ABOVE, SLAB ON GRADE AS MANUFACTURED BY CLAMP-ALL OR ANACO HUSKY. CAST IRON SOIL PIPING INSTITUTE NO-HUB, DOUBLE BAND CONNECTORS SHALL NOT BE ALLOWED. JOINTS FOR CAST IRON PIPE BELOW SLAB OR GRADE SHALL BE NEOPRENE PUSH-ON TYPE.

5. HANGERS: PIPE SIZES 1/2" TO 1-1/2": ADJUSTABLE WROUGHT STEEL LOOP (COPPER, ELECTROPLATE IF APPLICABLE).

6. HANGERS: PIPE SIZES 2" AND UP: ADJUSTABLE WROUGHT STEEL CLEVIS (COPPER, ELECTROPLATE IF APPLICABLE).

7. MULTIPLE OR TRAPEZE HANGERS: STEEL CHANNELS WITH WELDED SPACERS AND HANGER RODS.

8. PROVIDE STEEL HANGER RODS, THREADED BOTH ENDS, THREADED ONE END, OR CONTINUOUS THREADED AS REQUIRED.

9. INSULATE (PEX) PIPING WITH SELF SEALING ELASTOMERIC RUBBER INSULATION. SEAL ENDS WITH CONTACT ADHESIVE AND TAPE PER MANUFACTURER'S RECOMMENDATIONS.

10. INSULATE ALL DOMESTIC HOT WATER PIPING WITH 1" THICK INSULATION. INSULATE ALL DOMESTIC COLD WATER PIPING WITH 1/2" THICK INSULATION.

11. INSULATE ALL DOMESTIC WATER PIPING BELOW SLAB AND TO 5'-0" OUTSIDE THE BUILDING WITH 1/2" ARMAFLEX.

12. PIPE INSULATION AND COVERINGS SHALL HAVE A RATING OF NO GREATER THAN 25 FLAME SPREAD, NO HIGHER THAN 50 SMOKE DEVELOPED, AND NO MORE THAN 50 FUEL CONTRIBUTED.

13. ALL GAS PIPING SHALL BE SCHEDULE 40 BLACK STEEL WITH SCREWED OR WELDED FITTINGS AND GASKET TYPE UNIONS AND FLANGES. ALL GAS PIPING INSTALLED OUTDOORS SHALL BE COATED WITH A CORROSION RESISTANT PAINT. PAINT COLOR SHALL BE ORANGE OR YELLOW.

14. CONCRETE ANCHORS (WEDGE ANCHORS) SHALL BE ZINC-PLATED CARBON STEEL WEDGE ANCHORS AVAILABLE IN ANCHOR/DRILL SIZES 1/4" TO 3/4" AND LENGTHS OF 1-3/4" THROUGH 12", MEETING U.S. GOVERNMENT G.S.A. SPECIFICATIONS FF-S-325 GROUP II, TYPE 4, CLASS I, FOR FASTENING PLUMBING SYSTEMS TO CONCRETE AND PIPE HANGING. ITW RAMSET/RED HEAD BRAND OR APPROVED EQUAL.

15. GAS REGULATORS SHALL BE MAXITROL 325 SERIES OR EQUAL.

16. ACCEPTABLE FIXTURE MANUFACTURERS

   A. NO OTHER MANUFACTURER SUBSTITUTIONS SHALL BE ALLOWED WITHOUT PRIOR WRITTEN APPROVAL FROM THE ENGINEER FIVE (5) DAYS BEFORE BIDDING.

   B. CONTRACTOR SHALL PROVIDE FAUCETS AND FITTINGS THAT ARE CERTIFIED BY UNDERWRITERS LABORATORY TO MEET THE ANSI NSF 61, SECTION 9 STANDARD.

   C. FITTINGS: AMERICAN STANDARD, KOHLER, DELTA, MOEN, SYMMONS, LEONARD, CHICAGO FAUCET COMPANY, T&S BRASS, OR POWERS REGULATOR.

PART 3 EXECUTION

1. EXCAVATION, BACKFILLING AND TRENCH WORK SHALL BE DONE IN ACCORDANCE WITH O.S.H.A. AND EXISTING SAFETY STANDARDS.

   A. PROVIDE SHORING AND CLEANING NECESSARY TO KEEP TRENCHES IN WORKING CONDITIONS, INCLUDING PUMPING OUT WATER.

   B. IN MOSTLY ROCK MATERIAL, TRENCHES SHALL BE EXCAVATED TO AT LEAST 6" BELOW THE ELEVATION OF THE BOTTOM OF THE PIPES. AFTER EXCAVATION, TRENCH SHALL THEN BE FILLED TO THE PROPER ELEVATION WITH CRUSHED LIMESTONE. GRAVEL SHALL BE SCOOPED OUT UNDER PIPE BELLS SO THE PIPE RESTS FIRMLY ON THE TRENCH BOTTOM.

   C. IN MOSTLY EARTH OR SAND MATERIAL, THE LAST 6" OF EXCAVATION SHALL BE DONE BY HAND. TRENCH BOTTOM SHALL BE SCOOPED OUT AT PIPE BELLS SO THE PIPE RESTS FIRMLY ON THE TRENCH BOTTOM.

   D. BACKFILLING AND TAMPING SHALL BE CAREFULLY DONE SIMULTANEOUSLY ALONG BOTH SIDES OF THE PIPE USING ROCK FREE EARTH, CRUSHED STONE OR SAND UNTIL THE PIPE IS COVERED TO A DEPTH OF AT LEAST 12". THE REST OF THE FILL UP TO THE TOPSOIL LAYER MAY BE GRAVEL OR ROCK FREE EARTH. ACCEPTABLE SOIL MATERIALS FOR BACKFILL AND FILL SHALL BE FREE OF CLAY, ROCK OR GRAVEL LARGER THAN 2" IN ANY DIMENSION, DEBRIS; WASTE, FROZEN MATERIALS AND OTHER DELETERIOUS MATTER HAVING A PLASTICITY INDEX LESS THAN 30. BACKFILL SHALL BE DONE IN LAYERS OF NOT MORE THAN 8" AND EACH LAYER SHALL BE COMPACTED. THE LAST 12" OF BACKFILL SHALL BE ROCK FREE TOPSOIL.

   E. SURFACE SHALL BE RESTORED TO ITS ORIGINAL CONDITION.

2. EXPOSED HOT AND COLD WATER TRIM IN FINISHED AREAS SHALL BE CHROME FINISHED.

3. ALL HORIZONTAL AND VERTICAL PIPING SHALL BE SUPPORTED IN ACCORDANCE WITH APPLICABLE STATE AND LOCAL CODE RECOMMENDATIONS. SUPPORTS SHALL SECURELY HOLD PIPING, PREVENT VIBRATION, COMPENSATE FOR ALL STATIC AND OPERATIONAL CONDITIONS OF THE VARIOUS SYSTEMS AND SHALL NOT BE SUBJECT TO ELECTROLYTIC ACTION. THIS SHALL BE ACCOMPLISHED BY USING THE SUMMER SYSTEM, THE POSIFIX, STAKFIX, PIPEFIX OR CHANNEL.

4. WATER HAMMER ARRESTERS SHALL BE INSTALLED ON ALL HOT AND COLD WATER BRANCH LINES CONTAINING SINGLE LEVER FAUCETS, FLUSH VALVES OR QUICK CLOSING VALVES SUCH AS DISHWASHERS, CLOTHES WASHERS, AND OTHER EQUIPMENT, BETWEEN THE LAST TWO FIXTURES. SHOCK ABSORBERS SHALL BE MOUNTED IN THEIR VERTICAL POSITION.

5. SANITARY WASTE AND VENT PIPING SHALL BE UNIFORMLY GRADED TO ELEVATIONS SHOWN. IF NO ELEVATIONS ARE GIVEN, SEWERS SHALL BE PITCHED NOT LESS THAN 1/4" PER FOOT FOR ALL PIPING 3" IN DIAMETER AND SMALLER AND 1/8" PER FOOT FOR PIPE LARGER THAN 3" IN DIAMETER.

6. SUPPORT HORIZONTAL PIPING AS FOLLOWS: REFER TO IPC 2009 TABLE 308.5 FOR HANGER SPACING REQUIREMENTS.

MAXIMUM NOMINAL PIPE SIZE (IN.)	HANGER ROD DIAMETER (IN.)
1/2	3/8
3/4 TO 1-1/4	3/8
1-1/2 TO 2	3/8
2-1/2 TO 3	1/2
4	5/8
6	3/4
8 AND UP	7/8

7. HANGERS FOR PIPING GREATER THAN 1" SHALL PASS OVER THE INSULATION. PROVIDE SADDLES FOR INSULATED PIPING.

8. HANGERS SHALL BE ATTACHED TO STRUCTURAL STEEL WORK BY CLAMPING OR OTHER APPROVED METHODS, EXCEPT THAT STRUCTURAL WORK SHALL NOT BE DRILLED AND PUNCHED.

9. INSULATION SHALL BE APPLIED WITH JOINTS TIGHTLY BUTTED. OPEN CRACKS, VOIDS AND DEPRESSIONS SHALL BE FILLED WITH HYDRAULIC SETTING CEMENT AND LAPPING MATCHING THE FINISH SHALL BE PASTED NEATLY OVER JOINTS.

10. FITTINGS AND VALVES SHALL BE INSULATED WITH THE SAME TYPE INSULATION AS THE PIPING OR WITH HYDRAULIC SETTING CEMENT, BUILT UP TO THE SAME THICKNESS AS LINES. COVER SHALL BE SAME AS ADJACENT PIPING OR PVC PREFORMED JACKET.

11. PROVIDE AND INSTALL A CUT-OFF VALVE, UNION AND FULL SIZE DIRT LEG AT CONNECTION TO EACH GAS-FIRED PIECE OF EQUIPMENT.

12. SEAL ALL PENETRATIONS OF RATED PARTITIONS WITH U.L. RATED FIRE BARRIER MATERIAL.

13. AIR ADMITTANCE VALVES SHALL NOT BE ALLOWED ON SANITARY WASTE AND VENT SYSTEMS.

14. THE SYSTEM TESTS DESCRIBED HEREIN ARE MINIMUM REQUIREMENTS. HOWEVER, ADDITIONAL TESTS AS REQUIRED BY THE AUTHORITY HAVING JURISDICTION SHALL ALSO BE PERFORMED.

15. DOMESTIC WATER PIPING SHALL BE TESTED AT 125 PSI. IN ADDITION, PIPING SHALL BE TESTED IN ACCORDANCE WITH APPLICABLE CODE REQUIREMENTS.

16. THE DOMESTIC WATER SYSTEM SHALL BE FLUSHED OUT PROGRESSIVELY BY OPENING OUTLETS AND FLOWING WATER UNTIL IT RUNS CLEAR. AFTER PIPE CLEANING IS COMPLETED, THE STRAINERS SHALL BE REMOVED, CLEANED, AND REPLACED. THEN THE ENTIRE DOMESTIC WATER SYSTEM SHALL BE DISINFECTED IN ACCORDANCE WITH THE AUTHORITY HAVING JURISDICTION.

17. THE SANITARY WASTE SYSTEM SHALL BE FLUSHED OUT PROGRESSIVELY WITH FLOWING WATER UNTIL IT RUNS CLEAR.

18. THE ENTIRE SANITARY WASTE SYSTEM SHALL BE TESTED AGAINST A HEAD PRESSURE OF 10' TSH FOR 8 HOURS WITHOUT LEAKAGE.

19. GAS PIPING SHALL BE LEAK TESTED AT 30 PSI FOR 24 HOURS.

20. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER A LETTER STATING THAT THE ABOVE MENTIONED TESTING, CLEANING AND DISINFECTING WAS COMPLETED, AND ALL LEAKS (IF ANY) WERE REPAIRED AND SYSTEM CLEANED AND RETESTED. THE LETTER SHALL BE SIGNED AS WITNESSED BY THE LOCAL AUTHORITY HAVING JURISDICTION, THE GENERAL SUPERINTENDENT OR THE DESIGN ENGINEER.

21. FIXTURES SHALL BE MOUNTED RIGID TO WALLS AND FLOOR.

22. PROVIDE HEAT TRAPS ON INLET AND OUTLET OF ALL WATER HEATING STORAGE TANKS.

23. DRAIN MANAGEMENT PROGRAM:

   A. ALL DRAINS, VENTS, ETC. MUST BE TAPED OVER DURING CONSTRUCTION TO PREVENT DEBRIS FROM INFILTRATING THE LINES.

   B. GC/DEVELOPER IS REQUIRED TO SUBMIT PHOTOS OF TAPED DRAINS.

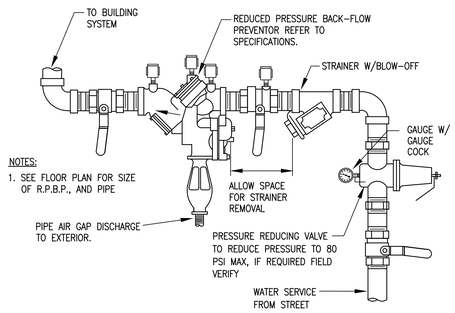
   C. GC WILL BE FINED $150 PER DAY IF PHOTOS ARE NOT SUBMITTED BY THE BEGINNING OF WEEK TWO OF THE PROJECT OR IF ANY DRAIN IS DISCOVERED TO BE UNCOVERED DURING A PM SITE VISIT. FINES WILL TERMINATE ON THE DAY THAT PHOTOGRAPHIC EVIDENCE OF COMPLETION IS SUBMITTED TO AND VERIFIED BY THE TRACTOR SUPPLY PM.

   D. GC/DEVELOPER WILL BE REQUIRED TO JET AND CAMERA ANY LINE IN WHICH THE DRAIN IS DISCOVERED TO BE UNCOVERED. RECEIPTS AND VIDEO MUST BE SUBMITTED TO TRACTOR SUPPLY FOR VERIFICATION.

   E. DRAIN MANAGEMENT SIGNAGE WILL BE PROVIDED BY TRACTOR SUPPLY AND INSTALLED BY THE GC/DEVELOPER.

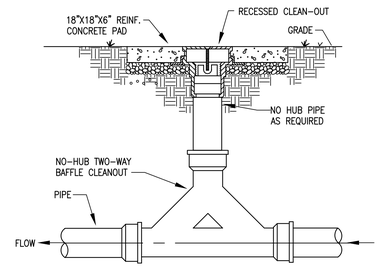
   F. IF SIGNAGE IS NOT INSTALLED AT PUNCH, CLEANING/CAMERA POLICY WILL APPLY.

   G. GC WILL BE FINED $150 PER DAY IF SIGNAGE IS NOT INSTALLED AT PUNCH. FINES WILL TERMINATE ON THE DAY THAT PHOTOGRAPHIC EVIDENCE OF COMPLETION IS SUBMITTED TO AND VERIFIED BY TRACTOR SUPPLY PM.



REDUCED PRESSURE BACKFLOW PREVENTER DETAIL

SCALE: NONE



TWO-WAY EXTERIOR CLEAN-OUT DETAIL

SCALE: NONE

OXFORD ARCHITECTURE

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Architecture
Planning
Interior Architecture

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TRACTOR SUPPLY COMPANY

TEXAS CITY (BACLIFF) TEXAS

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