

PLUMBING PIPING LEGEND

NOTES: 1. ALL SYMBOLS MAY NOT BE USED ON THESE DRAWINGS.

SYMBOLS	ABV.	DESCRIPTION
CA	CA	COMPRESSED AIR
CW	CW	COLD WATER
HW	HW	HOT WATER
HWR	HWR	HOT WATER RETURN
F	F	FIRE LINE
G	G	NATURAL GAS PIPING
GW	GW	GREASE WASTE BELOW SLAB
GW	GW	GREASE WASTE ABOVE SLAB
OFD	OFD	STORM OVER FLOW DRAIN
SD	SD	STORM DRAIN ABOVE SLAB
SD	SD	STORM DRAIN BELOW SLAB
SP	SP	SPRINKLER LINE
SS	SS	SANITARY SEWER ABOVE SLAB
SS	SS	SANITARY SEWER BELOW SLAB
SV	SV	SANITARY VENT
→		DIRECTION OF FLOW
↘		DIRECTION OF SLOPE DOWN
○		DROP IN PIPE
○		RISE IN PIPE
⊗		GATE VALVE
⊗		BALL VALVE
⊗		CHECK VALVE
⊗		FLOOR DRAIN
⊗		FLOOR SINK
CO	CO	END OF LINE CLEANOUT
FCO	FCO	FLOOR CLEANOUT
WCO	WCO	WALL CLEANOUT
⊔		CAP
⊔		NEW CONNECTION TO EXISTING
(A)	(A)	ITEM NOTED TO BE ABANDONED
(D)	(D)	ITEM NOTED TO BE DEMOLISHED
(E)	(E)	EXISTING ITEM
(R)	(R)	ITEM NOTED TO BE RELOCATED
A.F.F.	A.F.F.	ABOVE FINISHED FLOOR
F.F.	F.F.	FINISHED FLOOR
F.L.	F.L.	FLOOR LINE

NOTE: ANY PLUMBING THAT IS NOT LABELED SPECIFICALLY AS "E" OR "EXISTING" OR "EXISTING TO REMAIN" MUST BE ASSUMED TO BE NEW.

15030 PLUMBING

PROVIDE ALL MATERIALS AND LABOR FOR COMPLETE PLUMBING SYSTEM.

VALVES: VALVES TO BE CRANE OR NIBCO: GATE - #438 OR #1320, GLOBE - #7 OR #1310, CHECK - #34 OR #1303. UNDERGROUND GATE VALVES TO BE INSTALLED IN CAST IRON BOXES, WITH CAST IRON COVER MARKED "WATER".

PIPE HANGERS: SECURELY SUSPEND PIPES FROM BUILDING STRUCTURE. INDIVIDUAL HANGERS - UNISTRUT HL-1000, MULTIPLE PIPES - UNISTRUT P-1000, WALL SUPPORTS - GRINNELL #168. SUPPORT AT 6' CENTERS ON 3/8" DIAMETER RODS AND AT EACH CHANGE OF DIRECTION. ALL MATERIALS USED IN SUPPORTING PIPE TO BE GALVANIZED. PROVIDE CRANE CHROMIUM PLATED WALL, CEILING AND FLOOR PLATES WHERE PIPES PASS THROUGH WALLS OR CEILINGS. PROVIDE GALVANIZED STEEL PIPE SLEEVES FOR PIPES THROUGH WALLS, FLOORS, AND ROOFS.

INSULATION: INSULATE HOT WATER PIPING WITH MICROLOK, FIRE RETARDANT, WHITE JACKETED INSULATION. ALL INSULATION MUST COMPLY WITH ECCC. SEAL ALL JOINTS WITH SELF SEALING TAPE. FITTINGS SHALL BE PRE MOLDED TYPE, SEALED AS REQUIRED. INSULATE ALL COLD WATER PIPING IN OUTSIDE WALL CHASES, OR CEILINGS SAME AS HOT WATER PIPE. EXTERIOR PIPING SHALL BE INSULATED WITH WATER PROOF-COVERED INSULATION. EXPOSED INSULATION OUTSIDE SHALL HAVE ALUMINUM COVERS. PROVIDE 18 GAUGE GALVANIZED SADDLES AT SUPPORT POINTS AS REQUIRED.

ELECTRICAL: ELECTRICAL CONTRACTOR WILL DO ALL THE ELECTRICAL WIRING FOR POWER SUPPLY AND CONTROL.

SANITARY SYSTEM: PIPING BELOW GROUND TO 5 FEET FROM BUILDING SHALL BE SCHEDULE 40 PVC. ALL PIPE FROM 5 FEET OF THE BUILDING SHALL BE STANDARD WEIGHT CAST IRON, VITRIFIED CLAY. VENT PIPES ABOVE GROUND AND IN THE BUILDING SHALL BE STANDARD WEIGHT CAST IRON. VENT PIPE 2" AND SMALLER SHALL BE SCHEDULE 40 GALVANIZED STEEL WITH SCREWED GALVANIZED CAST IRON FITTINGS. ALTERNATE DEDUCT PRICE: PROVIDE "ALTERNATE DEDUCT IN PRICE" FOR USING PVC WASTE PIPING (BELOW GRADE ONLY). PROVIDE PROPER TRANSITION COUPLING BETWEEN PVC AND STEEL PIPING TO PREVENT DAMAGE TO PVC PIPE.

WATER SYSTEMS: WATER PIPING INSIDE THE BUILDING SHALL BE TYPE "L" COPPER. UNDERGROUND LINES SHALL BE CAST IRON WATER PIPE AND FITTINGS, WITH MECHANICAL JOINTS OR TYPE "K" COPPER. PROVIDE DIELECTRIC FITTINGS AT POINTS OF CONNECTION OF DISSIMILAR METALS.

PIPE INSTALLATION: INSTALL WATER PIPING LEVEL. PROVIDE DRAINS AT LOW POINTS OF SYSTEM. SEWERS SHALL BE SLOPED AT NOT LESS THAN 1/8" INCH PER FOOT. PROVIDE DEEP SEAL TRAPS FOR ALL FLOOR DRAINS. PIPE SHALL RUN PARALLEL TO BUILDING LINES. FULL PROVISION SHALL BE MADE FOR EXPANSION AND CONTRACTION OF PIPING. PROVIDE AIR CHAMBERS AT EACH FIXTURE. FULL LINE SIZE 12" HIGH. VENT PIPES SHALL BE FLASHED AT THE ROOF WITH 4 POUND SHEET LEAD, EXTENDING NOT LESS THAN 10" IN ALL DIRECTIONS IN ALL DIRECTIONS. TURN LEAD DOWN IN TO VENT 1 INCH. PROVIDE A STOP VALVE AT EVERY FIXTURE OR EQUIPMENT. ALL CONNECTION TO EQUIPMENT SHALL BE MADE WITH UNIONS. PIPING SHALL NOT CONTACT AN ELECTRICAL CONDUIT AT ANY POINT. ACCESS DOORS OR PANELS SHALL BE FURNISHED BY THIS CONTRACTOR.

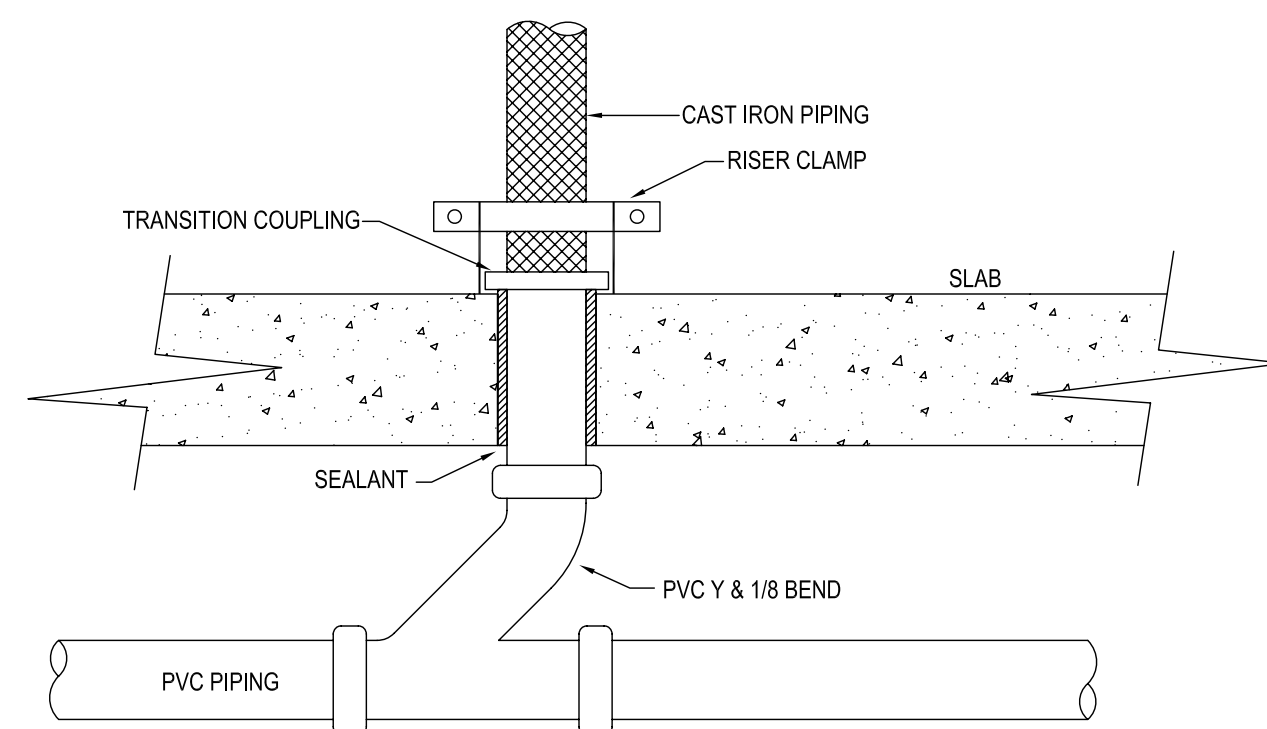
JOINTS: CAST IRON - TYSEAL JOINTS. COPPER PIPE - LEAD FREE SOLDER. SCREW JOINTS - AMERICAN STANDARD WITH TEFLON TAPE. MECHANICAL JOINTS - ASA S 21.11-53 UNIONS - AT EACH ITEM OF EQUIPMENT. WHERE COPPER AND STEEL PIPES ARE CONNECTED, MAKE CONNECTIONS WITH INSULATED TYPE FITTINGS.

PLUMBING FIXTURES: ALL PLUMBING FIXTURES SHALL MEET THE REQUIREMENTS FOR WATER CONSERVATION AS REQUIRED BY ANSI AND LOCAL CODE. FIXTURES AND INSTALLATION MUST MEET ALL ADA REQUIREMENTS. REFERENCE DRAWING FOR PLUMBING FIXTURE SCHEDULES. ADA SAFETY DEVICES: WHEELCHAIR DRAIN ASSEMBLY - MCGUIRE 155-WC WITH MCGUIRE P-TRAP 8872; WHEELCHAIR LAVATORY SUPPLY MCGUIRE 2165; HANDI LAV-GUARD MODEL 101 P-TRAP INSULATION, HOT WATER ANGLE VALVE INSULATION AND FASTENERS; HANDI LAV-GUARD MODEL 102 P-TRAP INSULATION, HOT AND COLD WATER ANGLE VALVE INSULATION AND FASTENERS.

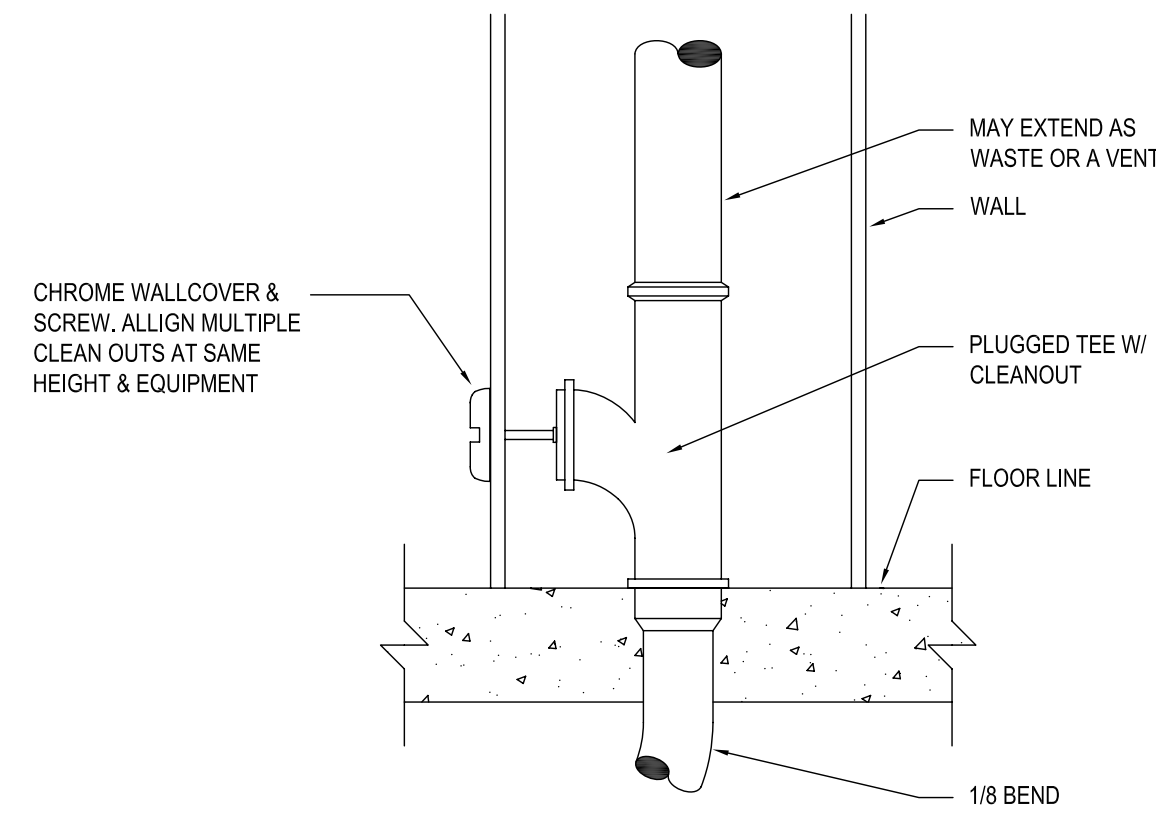
TRAP PRIMER "TP": TRAPS SHALL HAVE TRAP PRIMERS. PROVIDE TRAP PRIMER DISTRIBUTION UNIT FOR ONE THROUGH FOUR DRAINS. EXTEND 3/8" COPPER PIPE TO ALL FIXTURES AS REQUIRED BY CODE OR SHOWN ON THE DRAWINGS. WALL HYDRANT "WH": JOSAM #71020 SERIES ALL BRONZE WALL HYDRANTS WITH VACUUM BREAKERS, FREEZE PROOF FOR COLD CLIMATES.

HOSE BIBB: CHICAGO 293 ALL BRASS 3/4" HOSE BIBB WITH WATTS 8A VACUUM BREAKERS.

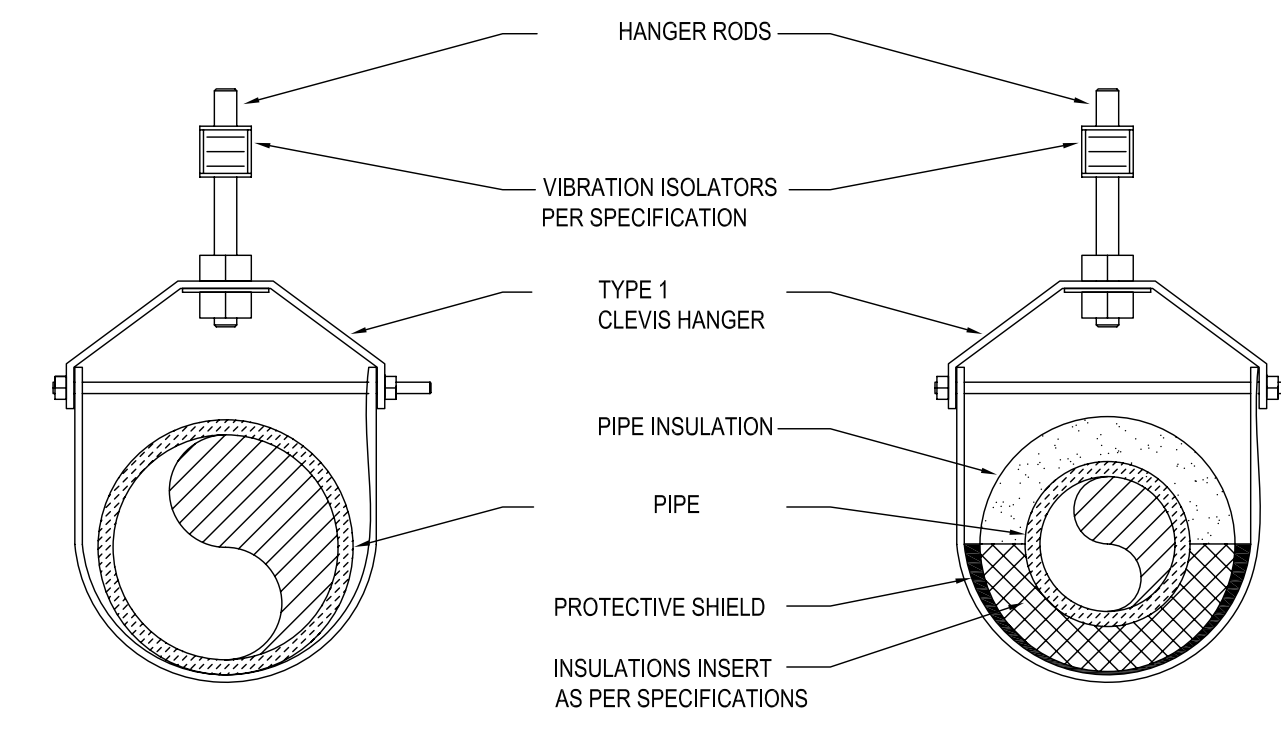
END OF SECTION 15030



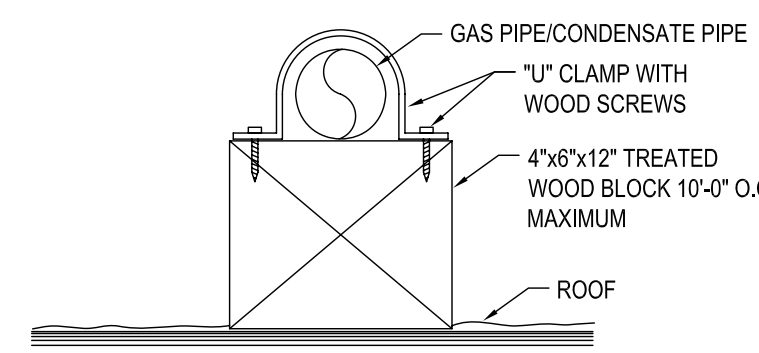
CAST IRON TO PVC PIPING BELOW SLAB 7 NO SCALE



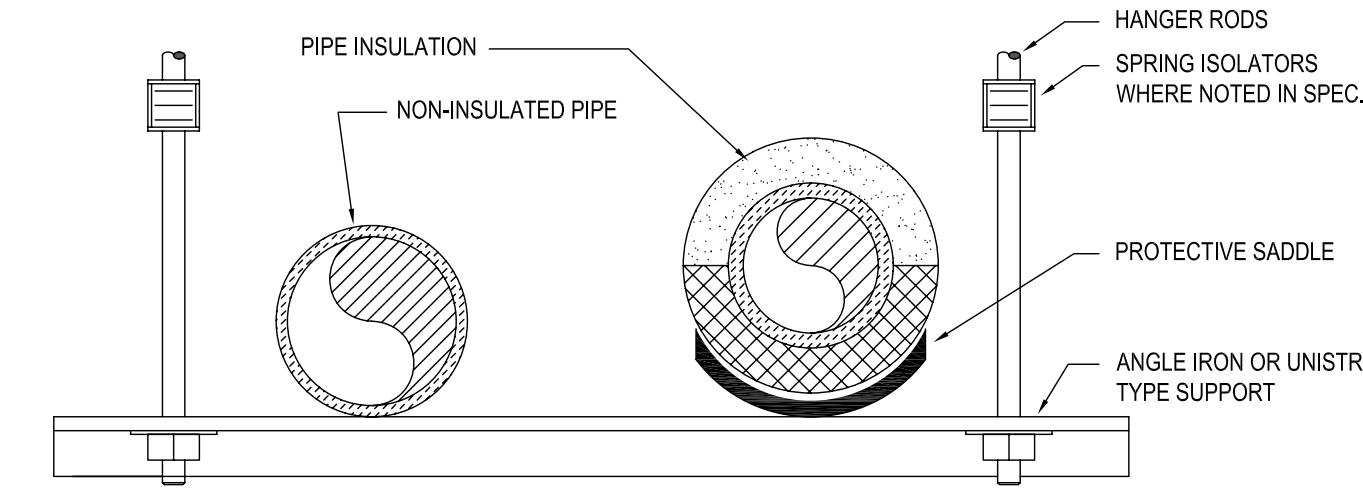
WALL CLEANOUT DETAIL 1 NO SCALE



SINGLE PIPE CLEVIS HANGER 2 NO SCALE

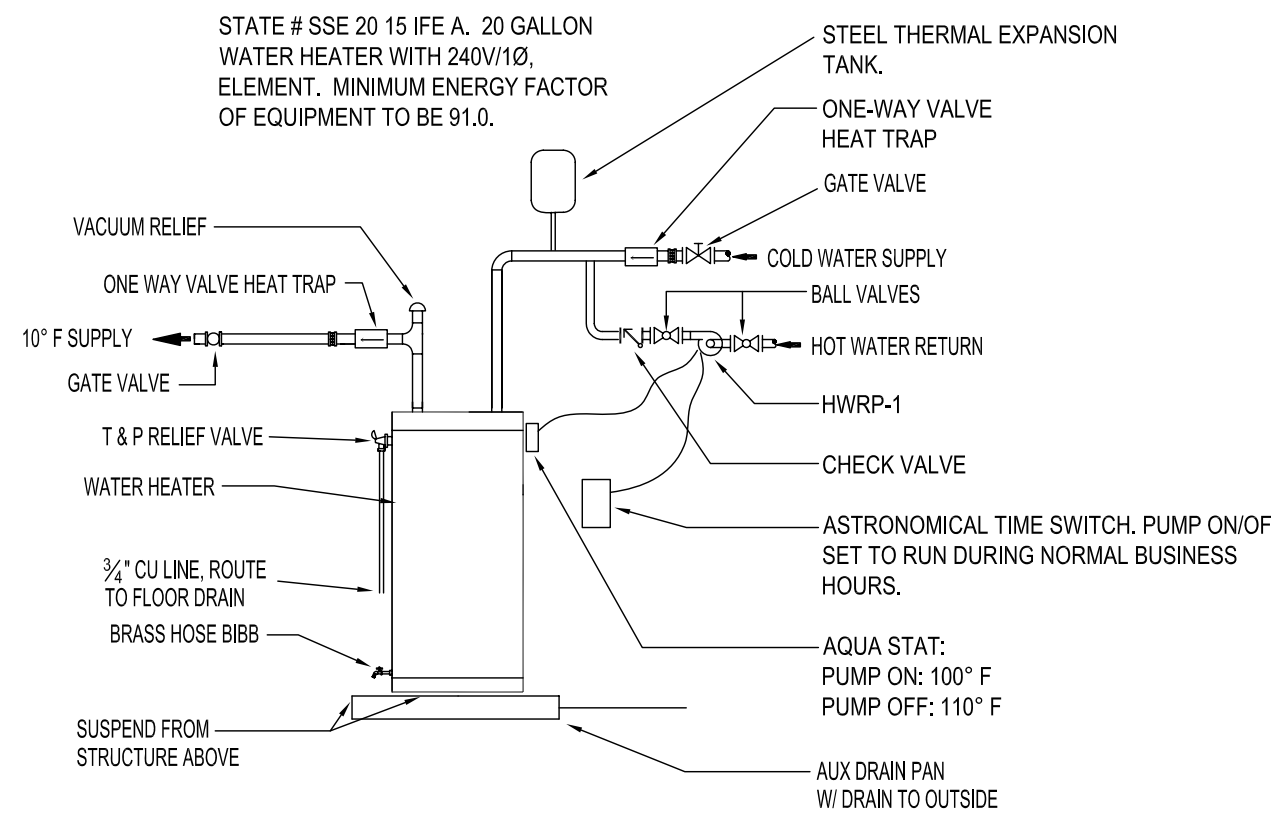


GAS PIPE SUPPORT DETAIL 3 NO SCALE

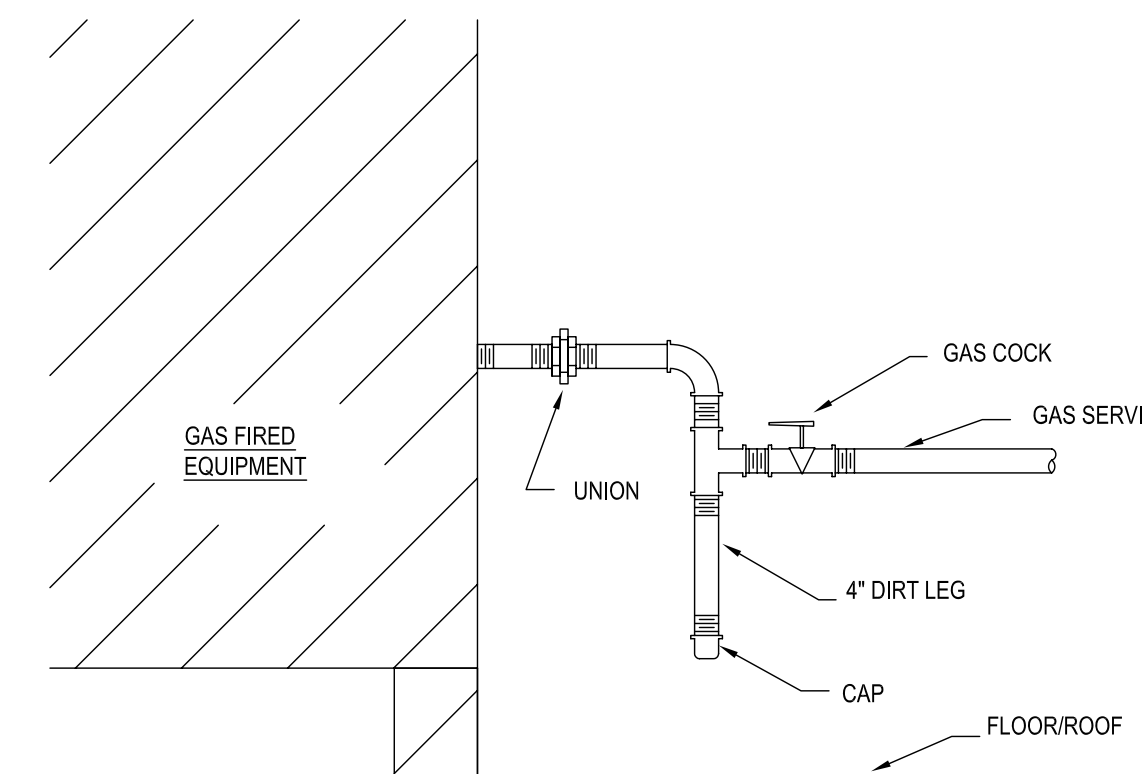


PIPE SUPPORT TRAPEZE TYPE 4 NO SCALE

NOTES:
1. SIZE RODS, SPRING CUSHION, AND HORIZONTAL MEMBER APPROVED TO SATISFY LOAD REQUIREMENT W/SAFETY FACTOR OF 5.



WATER HEATER DETAIL 5 NO SCALE

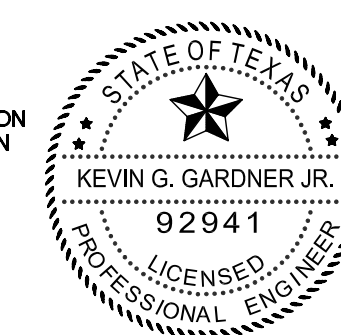


GAS PIPING CONNECTION DETAIL 6 NO SCALE

MARK	SERVICE	FLOW (GPM)	RPM	HEAD (FT.)	TYPE	MOTOR			MANUFACTURER/MODEL
						VOLTS	PH	POWER	
HWRP-1	HOT WATER RECIRCULATION	5	1750	8.0	IN-LINE BRONZE	120	1	1/25hp	GRUNDFOS #UP-1542SF

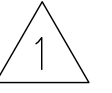
THIS DOCUMENT HAS BEEN REPRODUCED ELECTRONICALLY AT THE REQUEST OF EL CENTRO DE CORAZÓN CANAL ST. FOR REFERENCE USE ONLY. THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY KEVIN G. GARDNER, J.R. P.E. #2948 ON 19 NOV. 2009. TO RECEIVE REPRODUCTIONS OF THE ORIGINAL SIGNED AND SEALED CONSTRUCTION DRAWINGS (DATED 19 NOV. 2009) PLEASE CONTACT THE ENGINEER OF RECORD AT THE ADDRESS SHOWN BELOW. ALTERATION OF A SEALED DOCUMENT WITHOUT PROPER NOTIFICATION TO THE RESPONSIBLE ENGINEER IS AN OFFENSE UNDER THE TEXAS ENGINEERING PRACTICE ACT.

RICE & GARDNER CONSULTANTS INC. TX PE FIRM F-9057



GENERAL NOTES

REVISIONS
NOVEMBER 18, 2009



EL CENTRO DE CORAZÓN CANAL ST.
7635 CANAL ST.
HOUSTON, TEXAS 77012

100% CONSTRUCTION DOCUMENTS

deborah morris studios
2101 Winter Street, Studio 7
Houston, Texas 77007

PROJECT ISSUED FOR PERMIT
OCTOBER 20, 2009
TITLE
PLUMBING DETAILS
SHEET



RICE & GARDNER CONSULTANTS, INC.
6161 Savoy Drive, Suite 1212
Houston, TX. 77036
713.482.2300 tel
713.482.2314 fax

P-4.0