

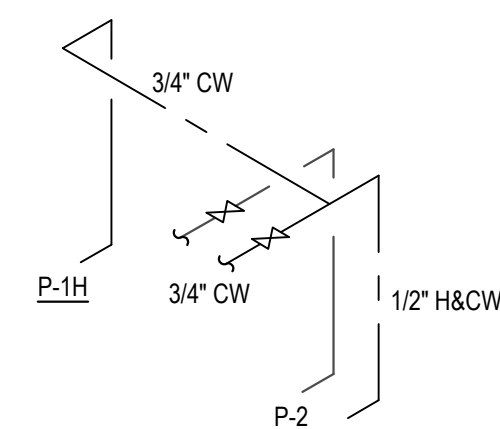
SPECIFICATIONS

SECTION 220100 - PLUMBING GENERAL:

- A. GENERAL
- CONTRACTOR SHALL PROVIDE ALL MATERIALS, EQUIPMENT, TOOLS AND LABOR NECESSARY TO PROVIDE A COMPLETE PLUMBING SYSTEM COMPLIANT WITH ALL REQUIRED CODES & STANDARDS.
  - DRAWINGS ARE SCHEMATIC IN NATURE AND SHALL NOT BE SCALED.
  - ALL REQUIRED PERMITS & INSPECTIONS SHALL BE SECURED & PAID FOR UNDER THIS CONTRACT. INSPECTION CERTIFICATIONS SHALL BE PROVIDED TO THE OWNER.
  - CONTRACTOR SHALL VISIT THE SITE TO THOROUGHLY EXAMINE EXISTING CONDITIONS PRIOR TO SUBMITTING BID. IF EXISTING CONDITIONS DIFFER FROM DESIGN DOCUMENTS IN SUCH A MANNER THAT AFFECTS PRICING, THE CONTRACTOR SHALL ADJUST THE BID ACCORDINGLY AND NOTIFY THE OWNER & ENGINEER PRIOR TO SUBMITTING THE BID. NO ALLOWANCES WILL BE MADE FOR LACK OF KNOWLEDGE REGARDING THE EXISTING CONDITIONS.
- C. IDENTIFICATION
- PERMANENT BAKELITE TAGS WITH 1" TALL LETTERS SHALL BE PROVIDED FOR ALL EQUIPMENT. EQUIPMENT NUMBERING SHALL MATCH BUILDING STANDARDS.
- D. STARTERS
- ALL MOTORS SHALL BE PROVIDED WITH MAGNETIC MOTOR STARTERS WITH OVERLOAD PROTECTION.
  - STARTERS SHALL BE PROVIDED WITH HAND-OFF-AUTO SWITCHES.
  - INDOOR MOTOR STARTERS SHALL BE FURNISHED WITHIN A NEMA 1 ENCLOSURE.
  - OUTDOOR MOTOR STARTERS SHALL BE FURNISHED WITHIN A NEMA 3R ENCLOSURE.
- E. SUBMITTALS & SHOP DRAWINGS
- CONTRACTOR SHALL SUBMIT SHOP DRAWINGS & PRODUCT DATA FOR ALL PLUMBING EQUIPMENT & SYSTEMS TO BE PROVIDED AND/OR INSTALLED.
- F. SUBSTITUTE MANUFACTURERS
- CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION & COST OF ALL CHANGES REQUIRED FOR INSTALLATION OF EQUIPMENT & PRODUCTS MANUFACTURED BY THOSE OTHER THAN WHAT IS SPECIFIED IN THE CONTRACT DOCUMENTS.
  - CAREFULLY COORDINATE SUBSTITUTE MANUFACTURER'S INSTALLATION REQUIREMENTS WITH ALL OTHER TRADES INCLUDING BUT NOT LIMITED TO STRUCTURE, ELECTRICAL, PLUMBING AND ARCHITECTURAL. ALL INSTALLATION COSTS ASSOCIATED WITH INSTALLATION OF SUBSTITUTE MANUFACTURER SHALL BE INCLUDED IN BID. NO ALLOWANCES SHALL BE GIVEN FOR CHANGES ASSOCIATED WITH INSTALLATION OF SUBSTITUTE EQUIPMENT & SYSTEMS.
  - LISTING OF A MANUFACTURER AS AN "EQUAL" DOES NOT RELIEVE CONTRACTOR'S RESPONSIBILITY OF COORDINATION & COST ASSOCIATED WITH CHANGES REQUIRED TO OTHER TRADES.
- G. WARRANTY
- CONTRACTOR SHALL WARRANT ALL EQUIPMENT, MATERIALS AND WORKMANSHIP FOR A PERIOD OF NOT LESS THAN ONE (1) YEAR.
  - ALL HVAC COMPRESSORS SHALL BE WARRANTED FOR A PERIOD OF NOT LESS THAN 5 YEARS.
- H. AS-BUILT DRAWINGS
- CONTRACTOR SHALL KEEP REDLINE SET OF DRAWINGS ON SITE DURING CONSTRUCTION TO UPDATE LOCATION OF ALL EQUIPMENT AND SYSTEMS AS THE CONSTRUCTION PROGRESSES. REDLINE SET OF DRAWINGS SHALL BE TURNED OVER TO OWNER AT COMPLETION OF CONSTRUCTION.
- I. OPERATION & MAINTENANCE MANUALS
- CONTRACTOR SHALL PROVIDE AN ELECTRONIC SET AND ONE (1) SET OF HARD COPIES OF INSTALLATION AND MAINTENANCE MANUALS FOR ALL EQUIPMENT & SYSTEMS PROVIDED UNDER THIS CONTRACT.
- J. INSTRUCTION
- CONTRACTOR SHALL THOROUGHLY INSTRUCT OWNER ON OPERATION AND RECOMMENDED MAINTENANCE PROCEDURES OF ALL INSTALLED EQUIPMENT & SYSTEMS.

SECTION 24000 PLUMBING SYSTEMS

- ALL 3" AND LARGER SANITARY PIPING SHALL BE SLOPED AT 1/8" PER FOOT. ALL 2 1/2" AND SMALLER SANITARY PIPING SHALL BE SLOPE AT 1/4" PER FOOT.
- SANITARY & VENT PIPING SHALL BE SCHEDULE 40 PVC UNDERGROUND.
- ABOVE GRADE SANITARY AND VENT PIPING SHALL BE HUBLESS CAST IRON.
- DOMESTIC WATER & CONDENSATE PIPING SHALL BE TYPE L HARD COPPER WITH LEAD FREE SOLDERED JOINTS. CONDENSATE PIPING SHALL BE INSTALLED WITH DWV TYP FITTINGS.
- ALL CONDENSATE & COLD WATER PIPING SHALL BE INSULATED WITH 1/2" THICK FIBERGLASS INSULATION WITH WHITE ALL SERVICE JACKET, AND HOT WATER PIPING SHALL BE INSULATED WITH 1" THICK FIBERGLASS INSULATION WITH WHITE ALL SERVICE JACKET.
- WATER HAMMER ARRESTORS SHALL BE PROVIDED & SIZED PER PDI GUIDELINES AT ALL QUICK CLOSING VALVES.
- ALL PIPING SHALL BE PRESSURE TESTED PRIOR TO CONCEALING OR INSULATING THE PIPING.
- ALL PIPING SHALL BE CONCEALED WITHIN WALLS OR ABOVE CEILING.
- PIPING INSTALLED ABOVE CEILING SHALL BE INSTALLED AS HIGH AS POSSIBLE.
- ALL VALVES LOCATED ABOVE CEILING SHALL BE LOCATED WITHIN 1' OF ACCESS PANEL OR 1' ACCESSIBLE CEILING.
- REFER TO ARCHITECTURAL FLOOR PLANS & ELEVATIONS FOR EXACT LOCATIONS OF PLUMBING FIXTURES.
- PLUMBING SYSTEMS SHALL NOT BE INSTALLED WITHIN OR PASSING THROUGH, ELECTRICAL CLOSETS, SWITCHGEAR ROOMS, TELEPHONE ROOMS, ELEVATOR EQUIPMENT ROOMS OR ABOVE ELECTRICAL PANELS.
- INSTALL IDENTIFICATION MARKERS ON ALL PIPING SYSTEMS & VALVES THAT INCLUDE SERVICE TYPE & DIRECTION OF FLOW PER ASME A13.1.
- ALL DOMESTIC WATER PIPING SYSTEMS SHALL BE FLUSHED & DISINFECTED. SYSTEMS SHALL BE FILLED WITH AN EVENLY DISTRIBUTED DOSE OF 50 TO 200 PPM CHLORINE. ALL FIXTURES & OUTLETS SHALL BE TESTED TO ENSURE EVEN DISTRIBUTION. AFTER 12 HOURS THE RESIDUAL CHLORINE SHALL BE TESTED. DISINFECTION PROCEDURE SHALL BE REPEATED UNTIL RESIDUAL CHLORINE LEVEL IS GREATER THAN 10 PPM AFTER SITTING UNDISTURBED FOR 12 HOURS. ONCE DISINFECTION PROCEDURE IS COMPLETE, SYSTEM SHALL BE THOROUGHLY FLUSHED WITH CLEAN WATER.



5 TYP. RESTROOM - DOMESTIC WATER RISER  
P001 SCALE: N.T.S.

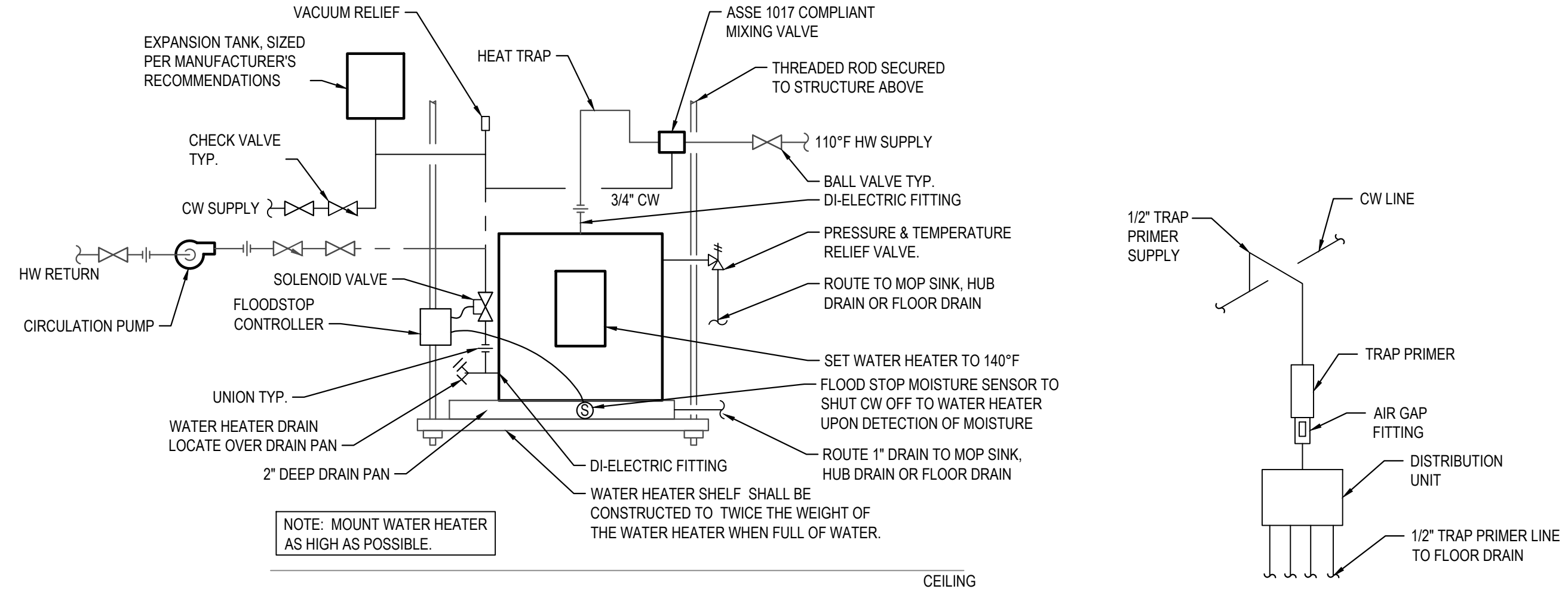
SECTION 21525 FIRE PROTECTION SYSTEMS

- FIRE PROTECTION SYSTEM SHALL BE DESIGNED BY A LICENSED FIRE PROTECTION CONTRACTOR.
- FIRE PROTECTION SYSTEM SHALL CONFORM TO NFPA 13 AND ALL LOCAL CODE REQUIREMENTS.
- FIRE PROTECTION SYSTEM DESIGN SHALL BE SUBJECT TO THE APPROVAL OF THE FIRE MARSHAL AND THE OWNER'S UNDERWRITER.
- DOUBLE CHECK BACKFLOW PREVENTER SHALL BE WATTS 709 OR EQUAL.
- PIPING 2" AND LARGER SHALL BE SCHEDULE 10 WITH ROLL GROOVED VICTAULIC JOINTS.
- PIPING SMALLER THAN 2" SHALL BE SCHEDULE 40 STEEL WITH THREADED JOINTS AND MALLEABLE IRON FITTINGS.
- THE USE OF LIGHTWALL PIPING SMALLER THAN SCHED 10, IS NOT ACCEPTABLE.
- SPRINKLER HEADS LOCATED IN LAY-IN CEILINGS SHALL BE SEMI-RECESSED CHROME PLATED.
- SPRINKLER HEADS LOCATED IN HARD CEILINGS SHALL BE FULLY RECESSED WITH COVER MATCHING THE COLOR OF THE CEILING.
- AREAS WITH NO CEILINGS SHALL HAVE UPRIGHT, BRASS HEADS.
- FIRE PROTECTION SYSTEM SHALL BE TESTED PRIOR TO OWNER ACCEPTANCE.

GENERAL NOTES (APPLY TO ALL SHEETS):

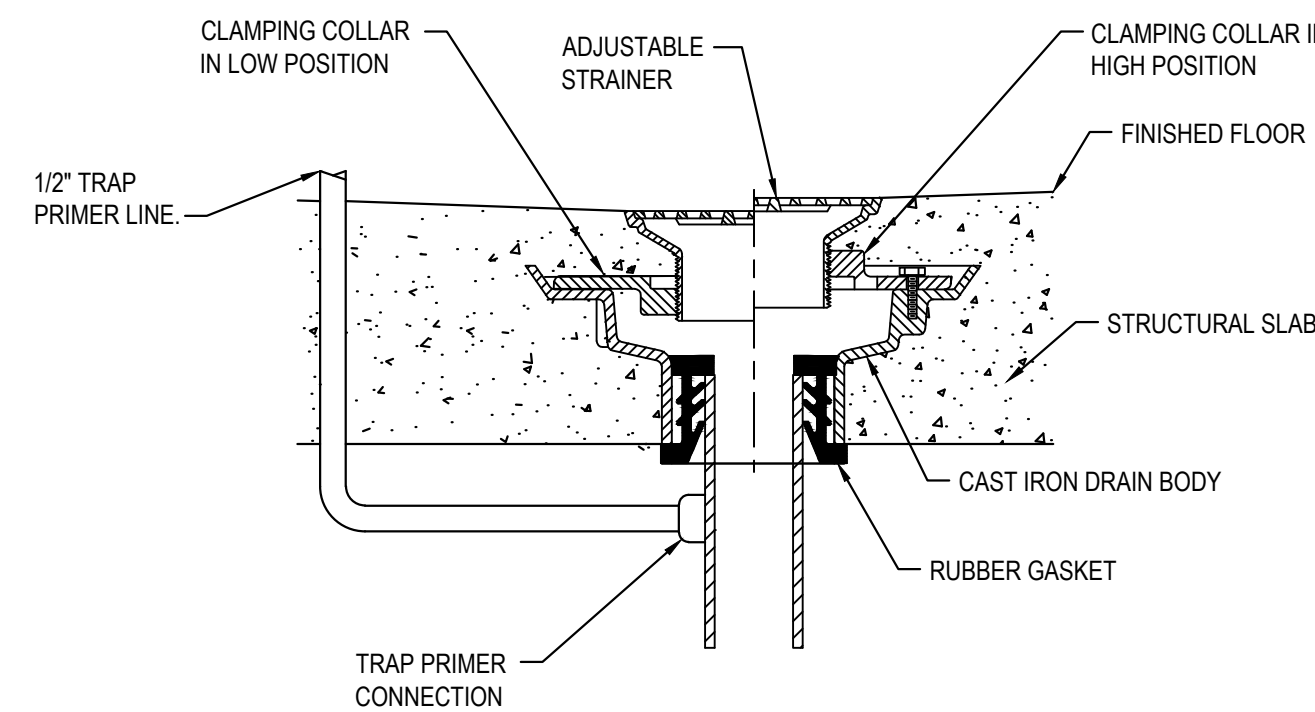
- DRAWINGS ARE SCHEMATIC IN NATURE. CONTRACTOR SHALL PROVIDE ALL MATERIALS, EQUIPMENT, TOOLS AND LABOR NECESSARY TO PROVIDE A COMPLETE PLUMBING SYSTEM COMPLIANT WITH ALL REQUIRED CODES & STANDARDS.
- CONTRACTOR SHALL VISIT THE SITE TO THOROUGHLY EXAMINE EXISTING CONDITIONS PRIOR TO SUBMITTING BID. IF EXISTING CONDITIONS DIFFER FROM DESIGN DOCUMENTS IN SUCH A MANNER THAT AFFECTS PRICING, THE CONTRACTOR SHALL ADJUST THE BID ACCORDINGLY AND NOTIFY THE OWNER & ENGINEER PRIOR TO SUBMITTING THE BID. NO ALLOWANCES WILL BE MADE FOR LACK OF KNOWLEDGE REGARDING THE EXISTING CONDITIONS.
- REFER TO ARCHITECTURAL DRAWINGS FOR EXACT FIXTURE MOUNTING HEIGHTS & LOCATIONS.
- COORDINATE ALL SAN, VENT, CW, HW, ETC. WITH EXISTING CONDITIONS & ALL OTHER TRADES.
- ALL SANITARY PIPING SHALL BE SLOPED AT 1/8" PER FOOT.
- SANITARY & VENT PIPING SHALL BE SCHEDULE 40 PVC.
- DOMESTIC WATER & CONDENSATE PIPING SHALL BE TYPE L HARD COPPER WITH LEAD FREE SOLDERED JOINTS. CONDENSATE PIPING SHALL BE INSTALLED WITH DWV TYP FITTINGS.
- ALL CONDENSATE & COLD WATER PIPING SHALL BE INSULATED WITH 1/2" AND HOT WATER SHALL BE INSULATED WITH 1" THICK FIBERGLASS INSULATION WITH WHITE ALL SERVICE JACKET.
- WATER HAMMER ARRESTORS SHALL BE PROVIDED & SIZED PER PDI GUIDELINES AT ALL QUICK CLOSING VALVES.
- ALL PIPING SHALL BE PRESSURE TESTED PRIOR TO CONCEALING OR INSULATING THE PIPING.

LEGEND		
TAG	SYMBOL	DESCRIPTION
A/C		ABOVE CEILING
AFF		ABOVE FINISHED FLOOR
AHU		AIR HANDLING UNIT
B/F		BELOW FLOOR
B/G		BELOW GRADE
CO		CLEAN OUT
CW	—	DOMESTIC COLD WATER
	↗	CHECK VALVE
	—	NEW WORK
EXIST.	—	EXISTING PIPE / EQUIPMENT
FCU		FAN COIL UNIT
FCO	⊙	FLOOR CLEAN OUT
FD	—	FLOOR DRAIN
FDC		FIRE DEPARTMENT CONNECTION
FS		FLOOR SINK
FW		FILTERED WATER
HB	—	HOSE BIBB
HD	—	HUB DRAIN
HW	—	DOMESTIC HOT WATER
HWR	—	HOT WATER RETURN
NFWH	—	NON FREEZE WALL HYDRANT
SAN	—	SANITARY PIPING
ST		STORM PIPING
V		VENT PIPING
VTR		VENT THROUGH ROOF
	⊘	BALL VALVE
WCO		WALL CLEAN OUT
W		WASTE PIPING
WSHP		WATER SOURCE HEAT PUMP



1 SUSPENDED WATER HEATER DETAIL  
P001 SCALE: N.T.S.

2 TRAP PRIMER DETAIL  
P001 SCALE: N.T.S.



3 FLOOR DRAIN DETAIL  
P001 SCALE: N.T.S.

4 TYP. RESTROOM - SAN & VENT RISER  
P001 SCALE: N.T.S.

ELECTRIC WATER HEATER SCHEDULE						
TAG	CAPACITY (GAL)	ELEMENT KW	RECOVERY RATE (GPH @ 90F)	VOLTS/PHASE	BASIS OF DESIGN	NOTES
WH-1	30	4.5	21	208/1	AO SMITH DEL-30	

PUMP SCHEDULE										
TAG	FLOWRATE (GPM)	HEAD (FT)	NPSHR (FT)	RPM	MOTOR HP	EFFICIENCY	VOLTS/PHASE	PUMP TYPE	BASIS OF DESIGN	NOTES
HWRP-1	30	20	--	2650	1/12	--	120/1	INLINE	BELL & GOSSETT PL-30B	1,2

- NOTES:
- ALL WETTED PUMP PARTS SHALL BE LEAD FREE.
  - PROVIDE WITH REMOTE AQUASTAT & TIMER TO CYCLE PUMP ON AND OFF TO MAINTAIN HW LOOP TEMPERATURE DURING OCCUPIED HOURS.

PLUMBING FIXTURES & CONNECTION SCHEDULE									
TAG	FIXTURE	CW	HW	WASTE	VENT	FIXTURE SPECIFICATION			
P-1H	ADA WATER CLOSET	3/4"	--	4"	2"	ADA COMPLIANT, WHITE VITREOUS CHINA, FLOOR MOUNT, ELONGATED, 17" HIGH BOWL WITH 1.28 GPF FLUSH, FLUSH HANDLE ON OPEN SIDE OF FIXTURE AND SOLID PLASTIC ANTIMICROBIAL OPEN FRONT SEAT WITH SELF SUSTAINING CHECK HINGES. BASIS OF DESIGN: KOHLER K-4199 TOILET, KOHLER K-4467 TANK AND KOHLER K-4731-SC SEAT.			
P-2	LAVATORY	1/2"	1/2"	2"	2"	ADA COMPLIANT, ENAMELED CAST IRON 1/2" RECTANGULAR VESSEL LAVATORY WITH OVERFLOW, GRID STRAINER, TAIL PIECE, OFFSET P-TRAP, LOOSE KEY SERVICE STOPS, ADA INSULATION KIT, 0.5 GPM, SOLID BRASS. BASIS OF DESIGN: KOHLER IRON PLAINS K-5400-PAG SINK, KS8120.1, 2, 3, 5, 6, 7, 8DL TWIN HANDLES WALL MOUNT BATHROOM FAUCET.			
P-3	SINK - BREAK ROOM	1/2"	1/2"	2"	2"	ADA COMPLIANT, QUARTZ UNDERMOUNT SINK WITH 25" X 18-1/2" X 5-1/2" DEPTH, SINGLE BOWL DIMENSIONS, BASKET STRAINER, TAIL PIECE, OFFSET P-TRAP, SERVICE STOPS, ADA INSULATION KIT AND 1.5 GPM, SOLID BRASS, SINGLE LEVER FAUCET/ DRAIN INCLUDED. BASIS OF DESIGN: ELKAY QUARTZ CLASSIC ELGUAD2519PD SINK AND KOHLER CRUE K-22972 PULL-DOWN THREE-FUNCTION SPRAYHEAD FAUCET.			
P-4	B-LEVEL DRINKING FOUNTAIN WITH BOTTLE FILLER	1/2"	--	2"	2"	ADA COMPLIANT, B-LEVEL BARRIER FREE DRINKING FOUNTAIN WITH BOTTLE FILLING STATION. DRINKING FOUNTAIN SHALL PRODUCE 8.0 GPH OF 50F WATER AT 90F AMBIENT TEMPERATURE. BASIS OF DESIGN: ELKAY EZ2SLBWSLK.			
P-5	MOP SINK	3/4"	3/4"	3"	2"	24"x24" TERRAZO FLOOR MOUNTED MOP SINK WITH FULL PERIMETER STAINLESS STEEL CAP, 3" CAULKED DRAIN CONNECTION, STAINLESS STEEL GRID STRAINER, 36X36 STAINLESS STEEL WALL PANELS ON ALL ADJACENT WALLS, 36" LONG HOSE, HOSE HOOK SERVICE SINK FAUCET WITH BUCKET HOOK AND 3/4" HOSE CONNECTION. BASIS OF DESIGN: STERN WILLIAMS - SB900 SINK AND STERN WILLIAMS T-10-VB FAUCET.			
IMB	ICE MAKER BOX	1/2"	--	--	--	ICE MAKER BOX FOR REFRIGERATOR/WATER COOLER/COFFEE MAKER. EXACT ICEMAKER BOX LOCATION SHALL BE COORDINATED WITH EQUIPMENT LAYOUT TO ENSURE ICEMAKER BOX IS NOT VISIBLE. PROVIDE FINAL CONNECTION TO EQUIPMENT FROM ICEMAKER BOX. ICEMAKER BOX BASIS OF DESIGN: OATEY 38608.			
FD	FLOOR DRAIN - FINISHED AREAS	1/2" TP	--	2 1/3"	2"	FLOOR DRAINS IN FINISHED AREAS SHALL HAVE 6" SQUARE ADJUSTABLE, VANDAL PROOF STRAINER IN NICKLE BRONZE FINISH. BASIS OF DESIGN: JR SMITH 2000 SERIES. PROVIDE WITH TRAP PRIMER			



#	DATE	TITLE

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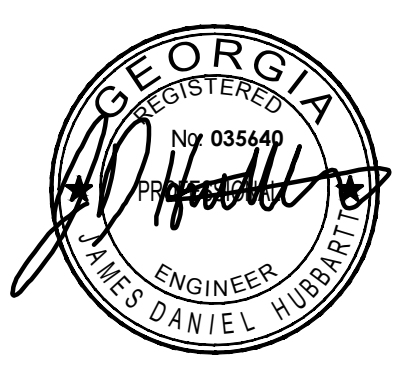
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1167 PACE ST, COVINGTON, GA

LEGEND,  
NOTES,  
DETAILS,  
SCHEDULES

P001

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