

DO NOT INCLUDE INFORMATION IN THIS BORDER ON THE FIRE FIGHTER'S CONTROL PANEL.

**FIRE-FIGHTER'S SMOKE CONTROL PANEL NOTES:**

1. FIRE-FIGHTER'S SMOKE CONTROL PANEL SHALL BE LISTED AS SMOKE CONTROL EQUIPMENT.
2. PANEL SHALL MEET THE REQUIREMENTS OF SECTION 6.4 OF NFPA 92A.
3. LAMP TEST PUSH BUTTON SHALL ILLUMINATE ALL INDICATOR LAMPS ON BOARD WHEN DEPRESSED. LAMP TEST BUTTON SHALL BE USED TO DETECT BURNT-OUT INDICATOR LAMPS.
4. SMOKE ZONES 3 AND 4 ARE RESERVED FOR THE FUTURE EXPANSION OF THE SOUTHWEST CORNER OF THE JAIL.

**FIRE-FIGHTER'S SMOKE CONTROL PANEL LEGEND:**

- ⊖ 3-POSITION SWITCH
- ★ LED LAMP
- Ⓢ KEYED SWITCH OR LOCK
- Ⓢ PUSH-BUTTON

**CONTROLS FOR SMOKE CONTROL SYSTEM:**

1. SEE SMOKE CONTROL SEQUENCE ON SHEETS M503.

**STATUS INDICATOR LIGHT LEGEND**

- ⊖ WHITE - "NORMAL" STATUS
- ★ RED - "OFF" OR "CLOSED" STATUS
- Ⓢ GREEN - "ON" OR "OPEN" STATUS
- ★ YELLOW - "FAULT" STATUS

① FIRE-FIGHTER'S CONTROL PANEL NTS

DISABLE  
① ENABLE  
SILENCE  
① LAMP TEST BUTTON  
DOOR KEY LOCK  
①







**PLUMBING SYMBOLS**

THIS IS A MASTER LEGEND AND NOT ALL SYMBOLS OR ABBREVIATIONS ARE USED. V2.02

STANDARD MOUNTING HEIGHTS		PIPING SYMBOLS		PIPING LINETYPES	
CLINIC SERVICE SINKS (RIM)	30"		OXYGEN OUTLET		DOMESTIC COLD WATER (CW)
HOSE BIBS (CENTERLINE)	36"		NITROGEN OXIDE OUTLET		SOFTENED COLD WATER (SCW)
ICE MAKER OUTLET BOX (CENTER OF BOX)	24"		MEDICAL AIR OUTLET		DOMESTIC HOT WATER (HW)
JANITOR'S SINK FAUCET FITTINGS (CENTERLINE)	42"		NITROGEN OUTLET		DOMESTIC HOT WATER RECIRC. (HWR)
LAVATORY OR SINK STANDARD HEIGHT (RIM)	31"		MEDICAL VACUUM INLET		DOMESTIC HOT WATER (140")
ADA ACCESSIBLE (RIM)	34"		FLOOR SINK (FS), SIZE & TYPE		TRAP PRIMER LINE (T)
CHILD HEIGHT (RIM)	24"		FLOOR DRAIN (FD), SIZE & TYPE		SOIL PIPING - ABOVE FLOOR (S)
NON FREEZE WALL HYDRANT (AFG TO CENTERLINE)	18"		ROOF DRAIN (RD), SIZE & TYPE		SOIL PIPING - BELOW FLOOR (S)
SHOWER HEAD MEN (CENTERLINE)	78"		BALL VALVE		WASTE PIPING - ABOVE FLOOR (W)
WOMEN (CENTERLINE)	72"		CONTROL VALVE		WASTE PIPING - BELOW FLOOR (W)
SHOWER VALVE STANDARD HEIGHT - MEN (CENTERLINE)	48"		SHUTOFF VALVE		GREASE WASTE - ABOVE FLOOR (GW)
STANDARD HEIGHT - WOMEN (CENTERLINE)	42"		CHECK VALVE		GREASE WASTE - BELOW FLOOR (GW)
ADA ACCESSIBLE (CENTERLINE)	38" TO 48"		BALANCING VALVE WITH PRESSURE PORTS		COMBINATION GREASE WASTE AND VENT (CGWW)
SURGEON'S SCRUB-UP SINK (FRONT RIM)	35"		WATER METER		COMBINATION WASTE AND VENT (CWW)
TUB VALVE STANDARD HEIGHT (CENTERLINE)	32"		STRAINER		STORM DRAIN - ABOVE FLOOR (ST)
ADA ACCESSIBLE CENTER BETWEEN GRAB BAR AND TUB RIM	32"		STRAINER WITH BLOWOFF		STORM DRAIN - BELOW FLOOR (ST)
URINAL STANDARD HEIGHT (RIM)	24"		RELIEF/SAFETY VALVE		OVERFLOW STORM DRAIN - ABOVE FLOOR (OST)
ADA ACCESSIBLE (RIM)	17"		SOLENOID VALVE		VENT BELOW GRADE (VGB)
CHILD HEIGHT (RIM)	14"		PRESSURE REDUCING VALVE		VENT BELOW FLOOR (VBF)
WASHING MACHINE OUTLET BOX (RIM)	42"		GAS PRESSURE REGULATOR		INDIRECT DRAIN (ID)
WATER CLOSET STANDARD HEIGHT (RIM)	15"		THERMOSTATIC MIXING VALVE		CONDENSATE DRAIN - HIGH EFFICIENCY RTU (CDH)
ADA ACCESSIBLE (TOP OF SEAT)	17" TO 19"		PIPE ANCHOR		CONDENSATE DRAIN (CD)
CHILD HEIGHT (RIM)	10"		EXPANSION JOINT		AUXILIARY CONDENSATE DRAIN (ACD)
WATER COOLER OR DRINKING FOUNTAIN STANDARD HEIGHT (SPOUT)	41"		BACKFLOW PREVENTER		SUMP OR SEWAGE PUMP DISCHARGE (SPD)
ADA ACCESSIBLE (SPOUT)	36"		PRESSURE GAUGE		NATURAL GAS (G)
CHILD HEIGHT (SPOUT)	30"		THERMOMETER		NATURAL GAS ON ROOF (G)
INSTALL PLUMBING FIXTURES AT THE MOUNTING HEIGHTS SHOWN ABOVE UNO IN THE ARCHITECTURAL DRAWINGS OR ELSEWHERE IN THE CONSTRUCTION DOCUMENTS. FINAL APPROVAL OF LOCATIONS BY ARCHITECT. MOUNTING HEIGHTS LISTED ABOVE, OR ELSEWHERE IN THE CONSTRUCTION DOCUMENTS, ARE AFF. UNO. ALL DEVICES SHALL BE INSTALLED IN COMPLIANCE WITH CURRENT ADA AND LOCAL REQUIREMENTS.			UNION		MEDIUM PRESSURE NATURAL GAS (MPG)
			FLANGE CONNECTION		MEDIUM PRESSURE NATURAL GAS ON ROOF (MPG)
			HOSE BIBB (HB)		NON-POTABLE WATER (NPW)
			NON-FREEZING WALL HYDRANT (NW)		LIQUEFIED PETROLEUM GAS (LPG)
			MANUAL / AUTOMATIC AIR VENT OR VACUUM RELIEF VALVE		WATER SERVICE (WS)
			PRESSURE / VACUUM SWITCH		FIRE PROTECTION SPRINKLER DRY (DFP)
			CLEANOUT		FIRE PROTECTION SPRINKLER WET (FP)
			CAP		FIRE PROTECTION STANDPIPE DRY (DSP)
			WALL CLEANOUT (WCO)		FIRE PROTECTION STANDPIPE WET (WSP)
			FLOOR CLEANOUT (FCO)		CONDENSATE PUMP DISCHARGE (PD)
			EXTERIOR CLEANOUT (ECO)		VENT PIPING (V)
			ELBOW UP		ACID WASTE - ABOVE FLOOR (AW)
			ELBOW DOWN		ACID WASTE - BELOW FLOOR (AW)
			TEE UP		ACID VENT (AV)
			TEE DOWN		GRAY WATER (GWS)
			ELBOW UP WITH SHUT-OFF VALVE (SOV)		COMPRESSED AIR (CA)
			ELBOW DOWN WITH SHUT-OFF VALVE (SOV)		MEDICAL AIR (MA)
			TEE UP WITH SHUT-OFF VALVE (SOV)		MEDICAL VACUUM (VE)
			TEE DOWN WITH SHUT OFF VALVE (SOV)		HELIUM (HE)
			WATER HAMMER ARRESTOR (WHA) WITH PDI SIZES, (A, B, C, D, & E)		INSTRUMENT AIR (IA)
			RECIRCULATION PUMP		INSTRUMENT VACUUM (IV)
			P-TRAP		NITROGEN (N2)
			GAS COCK		NITROUS OXIDE (N2O)
			TRAP PRIMER		OXYGEN (O2)
			TRAP PRIMER WITH DISTRIBUTION UNIT		EVAC/WAGD (EV)
					CARBON DIOXIDE (CO2)
					MEDICAL AIR INTAKE (AI)
					MEDICAL VACUUM EXHAUST (VE)
					DENTAL AIR (DA)
					DENTAL VACUUM (DV)
					FILTERED WATER (FW1)
					FILTERED WATER W/ SCALE INHIBITOR (FW2)
					REVERSE OSMOSIS (RO)
					REVERSE OSMOSIS REMINERALIZATION (ROR)
<b>ANNOTATION</b>		<b>LINETYPE LEGEND</b>			
	PLUMBING PLAN NOTE CALLOUT	THROUGHOUT THE DRAWINGS DIFFERENT LINETYPES ARE USED IN COMBINATION WITH THE SYMBOLS TO INDICATE THE STATUS OF ITEMS AS EXISTING, TO BE DEMOLISHED, TO BE INCLUDED AS PART OF NEW WORK AND/OR ITEMS WHICH ARE ANTICIPATED TO BE PROVIDED IN THE FUTURE. THE STATUS OF ITEMS USING THESE LINETYPES ARE RELATIVE TO THE VIEW IN WHICH THEY APPEAR. PHASING SHOWN IN DRAWINGS IS NOT INTENDED TO FULLY DESCRIBE ALL NECESSARY CONSTRUCTION PHASING, WHICH IS DETERMINED BY THE CONTRACTOR AS PART OF THEIR RESPONSIBILITIES. ANY SUCH PHASES DESCRIBED IN THE CONSTRUCTION DOCUMENTS ARE GENERAL AND ONLY INTENDED TO INDICATE A BROAD ORDER FOR THE SAKE OF DESCRIBING THE PROJECT. THE FOLLOWING LINETYPES MAY BE USED ON ANY DEVICE, EQUIPMENT, NOTE, LINE, SHAPE, ETC.			
	PLUMBING EQUIPMENT DESIGNATION (CONTRACTOR FURNISHED AND INSTALLED); REFER TO PLUMBING FIXTURE OR EQUIPMENT SCHEDULES	EXISTING		NEW	
	EQUIPMENT DESIGNATION (OWNER FURNISHED, CONTRACTOR INSTALLED)	DEMOLISH		FUTURE	
	MECHANICAL EQUIPMENT DESIGNATION (CONTRACTOR FURNISHED AND INSTALLED UNLESS NOTED OTHERWISE)	<b>HATCHING LEGEND</b>			
	CONNECTION POINT OF NEW WORK TO EXISTING	ENLARGED PLAN			
	DETAIL REFERENCE UPPER NUMBER INDICATES DETAIL NUMBER LOWER NUMBER INDICATES SHEET NUMBER	NOT IN SCOPE (NIS)			
	SECTION CUT DESIGNATION				
	DEDICATED EQUIPMENT ACCESS TILE				
	ACCESS PANEL				
<b>ABBREVIATIONS</b>					
ADA	AMERICANS WITH DISABILITIES ACT	MIN	MINIMUM		
AFF	ABOVE FINISHED FLOOR	NC	NORMALLY CLOSED		
AFG	ABOVE FINISHED GRADE	N/O	NORMALLY OPEN		
AHU	AIR HANDLING UNIT	NIC	NOT IN CONTRACT		
AP	ACCESS PANEL	ORD	OVERFLOW ROOF DRAIN		
BAS	BUILDING AUTOMATION SYSTEM	PDJ	PLUMBING DRAINAGE		
BFF	BELOW FINISHED FLOOR	PRV	PRESSURE REDUCING VALVE		
BFG	BELOW FINISHED GRADE	PVC	POLYVINYL CHLORIDE		
BOP	BOTTOM OF PIPE	RCP	REINFORCED CONCRETE		
BOS	BOTTOM OF STRUCTURE	RD	PIPE		
BTU	BRITISH THERMAL UNIT	RPM	REVOLUTIONS PER MINUTE		
CP	CONDENSATE PUMP	RTU	ROOFTOP UNIT		
CPVC	CHLORINATED POLYVINYL CHLORIDE	SF	SQUARE FEET		
CU	COPPER	SP	SUMP		
DI	DUCTILE IRON	SS	STAINLESS STEEL		
DN	DOWN	SS	SANITARY SEWER, SOIL STACK		
DFU	DRAINAGE FIXTURE UNIT	TDH	TOTAL DYNAMIC HEAD		
DS	DOWNSPOUT	TFA	TO FLOOR ABOVE		
(E)	EXISTING	TFB	TO FLOOR BELOW		
EMS	ENERGY MANAGEMENT SYSTEM	TYP	TYPICAL		
ETR	EXISTING TO REMAIN	UL	UNDERWRITERS LABORATORIES, INC. UNLESS NOTED OTHERWISE		
EWC	ELECTRIC WATER COOLER	UPS	UNINTERRUPTIBLE POWER SUPPLY		
FD	FLOOR DRAIN	VCP	VITRIFIED CLAY PIPE		
FF	FINISHED FLOOR	VFD	VARIABLE FREQUENCY DRIVE		
FL	FLOW LINE	VS	VENT STACK		
FLA	FULL LOAD AMPS	VTR	VENT THROUGH ROOF		
FLR	FLOOR	W/O	WITHOUT		
GPM	GALLONS PER MINUTE	WC	WATER COLUMN		
HD	HEAD, HUB DRAIN	WS	WASTE STACK		
HZ	HERTZ	WSFU	WATER SUPPLY FIXTURE UNIT		
IE	INVERT ELEVATION	WWS	WASTE VENT STACK		
IN WC	INCHES OF WATER COLUMN				
JB	JUNCTION BOX				
J-BOX	JUNCTION BOX				
KW	KILOWATT				
MAU	MAKE-UP AIR UNIT				
MAX	MAXIMUM				
MBH	1000 BTU PER HOUR				
MH	MANHOLE				

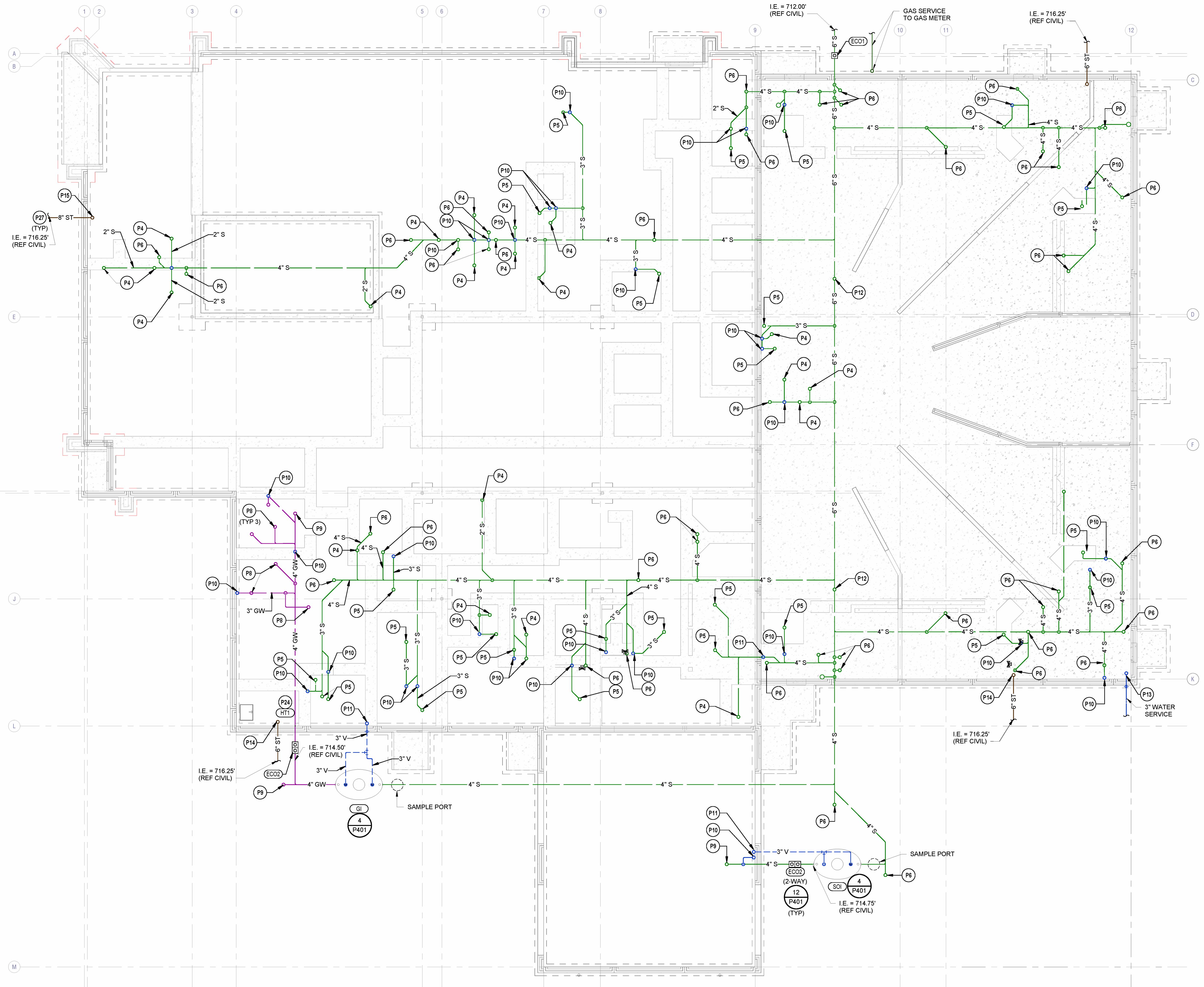
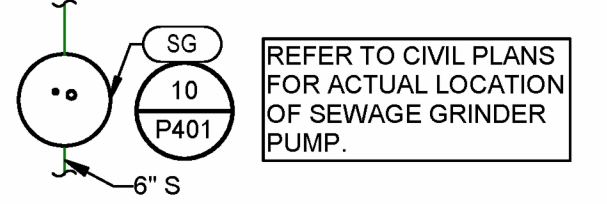
**GENERAL NOTES:**

- PROVIDE A CONSTRUCTION RECORD SET OF "AS-BUILT" DOCUMENTS TO THE ARCHITECT REFLECTING ANY VARIANCES OF INSTALLED PIPING LOCATIONS OR EQUIPMENT CONTRARY TO THE CONSTRUCTION DOCUMENTS. REFER TO SPECIFICATIONS.
- DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY THE ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
- DRAWINGS ARE DIAGRAMMATIC ONLY AND REPRESENT THE GENERAL SCOPE OF THE WORK. PRIOR TO SUBMITTING BID, VISIT THE JOB SITE TO OBSERVE THE EXISTING CONDITIONS OF THE PROJECT. REVIEW THE GENERAL NOTES, SPECIFICATIONS AND PLANS FOR ADDITIONAL REQUIREMENTS THAT MAY NOT BE SPECIFICALLY CALLED OUT IN THIS PORTION OF THE CONSTRUCTION DOCUMENTS. NOTIFY ARCHITECT OF ANY CONFLICTS OR DISCREPANCIES PRIOR TO SUBMISSION OF BID.
- PROVIDE TO THE ARCHITECT A COPY OF INSPECTION REPORTS AND APPROVAL CERTIFICATES FROM LOCAL AND STATE INSPECTIONS, REFER TO SPECIFICATIONS.
- INSTALLATION SHALL COMPLY WITH LEGALLY CONSTITUTED CODES AND THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION AND ALSO MEET ALL REQUIREMENTS OF THE LANDLORD. OBTAIN A COPY OF THE LANDLORD'S REQUIREMENTS AND REVIEW PRIOR TO SUBMITTING BID.
- PLANS AND SPECIFICATIONS GOVERN WHERE THEY EXCEED CODE REQUIREMENTS.
- VERIFY LOCATION AND DEPTH OF UTILITIES AT POINTS OF CONNECTION BEFORE START OF PIPING INSTALLATION.
- REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATION AND MOUNTING HEIGHTS OF PLUMBING FIXTURES.
- DO NOT SCALE FLOOR PLANS FOR EXACT HORIZONTAL LOCATION OF PIPE ROUTING.
- INSTALL CONCEALED PIPING TIGHT TO THE STRUCTURE AND AS HIGH AS POSSIBLE.
- VALVES SHALL BE LINE SIZE UNLESS OTHERWISE NOTED.
- INSTALL EXPOSED PIPING, WHERE NECESSARY, IN FINISHED AREAS TIGHT TO THE STRUCTURE, WALL OR CEILING AND AS HIGH AS POSSIBLE. INSTALL PIPING PARALLEL AND / OR PERPENDICULAR TO WALLS.
- INSTALL VALVES AND APPURTENANCES A MAXIMUM OF 24" ABOVE CEILING IN ACCESSIBLE LOCATION WITHIN 24" OF ACCESS DOORS OR ACCESSIBLE CEILING TILES. PROVIDE PIPE AND FITTINGS TO INSTALL VALVES AND APPURTENANCES AT REQUIRED HEIGHT AND WITHIN 24" OF ACCESS DOORS OR ACCESSIBLE CEILING TILES.
- INSTALL NO PLASTIC PIPE OF ANY KIND ABOVE SLAB INSIDE OR UNDER THE BUILDING. INSTALL NO PLASTIC PIPE IN THE CEILING RETURN AIR PLENUM.
- COORDINATE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
- COORDINATE PIPING INSTALLATION WITH STRUCTURAL GRADE BEAMS, FOOTINGS, COLUMN PIERS, ETC. SLEEVE PIPING THROUGH GRADE BEAMS, FOOTING, ETC. WHERE REQUIRED AND AS NOTED ON PLANS. COORDINATE SLEEVE INSTALLATIONS WITH THE ARCHITECT, STRUCTURAL ENGINEER, STRUCTURAL CONTRACTOR AND GENERAL CONTRACTOR BEFORE CONCRETE IS INSTALLED.
- CLEAN FAUCET AERATORS AND PIPE STRAINERS PRIOR TO TURNING BUILDING OVER TO THE OWNER.
- PROVIDE TRAP PRIMERS WHERE REQUIRED BY LOCAL AUTHORITIES.
- COORDINATE PIPE ROUTING AWAY FROM ELECTRICAL PANELS. DO NOT INSTALL PIPING OVER ELECTRICAL PANELS.
- PAINT ALL EXPOSED GAS AND WATER PIPING USING RUST INHIBITOR PAINT. PAINT AND COLOR SHALL BE COORDINATED WITH THE ARCHITECT AND / OR OWNER.
- COORDINATE ALL ROOF PENETRATIONS WITH OTHER TRADES. MAINTAIN 10" MINIMUM CLEARANCE FROM ALL AIR INTAKES. MAINTAIN 2" CLEARANCE FROM ALL OTHER EQUIPMENT.
- INSULATE PIPING ROUTED IN EXTERIOR BUILDING WALLS WITH MINIMUM 2" BATT INSULATION TO PREVENT FREEZING.
- PROVIDE "HEAVY-DUTY" NO-HUB COUPLINGS ON STORM PIPING, INCLUDING CONNECTIONS TO ROOF DRAINS. SEE DIVISION 22 SPECIFICATION SECTION "STORM DRAINAGE PIPING AND SPECIALTIES" FOR MORE INFORMATION.
- PROVIDE TRANSITION ADAPTER COUPLINGS FOR CONNECTION OF PVC DWV TO CAST IRON AT SLAB ON GRADE. SEE DIVISION 22 SPECIFICATION FOR MORE INFORMATION.
- PROVIDE TRANSITION ADAPTER COUPLINGS FOR CONNECTION OF PVC DWV TO CAST IRON SANITARY, WASTE AND VENT PIPE AT SLAB ON GRADE. SEE DIVISION 22 SPECIFICATION SECTION "SANITARY DRAINAGE AND VENT PIPING AND SPECIALTIES" FOR MORE INFORMATION.
- PROVIDE TRANSITION ADAPTER COUPLINGS FOR CONNECTION OF PVC DWV TO CAST IRON STORM PIPE AT SLAB ON GRADE. SEE DIVISION 22 SPECIFICATION SECTION "STORM DRAINAGE PIPING AND SPECIALTIES" FOR MORE INFORMATION.
- FLOW CONTROL VALVES SHALL BE SIZE 1/2" AND SET AT 0.5 GPM UNLESS NOTED OTHERWISE.
- WATER HAMMER ARRESTORS SHALL BE SIZE "A" UNLESS NOTED OTHERWISE.
- PROVIDE VERTICAL LIFT SPRING LOADED CHECK VALVES IN HOT AND COLD WATER SUPPLIES FOR MOP SINK FAUCETS DOWNSTREAM OF SHUTOFF VALVES.
- PROVIDE WALL PIPES AT PIPING PENETRATIONS OF ELEVATED WATERPROOF FLOOR SLABS, REFER TO SPECIFICATIONS.
- VERIFY EXISTING EQUIPMENT, INCLUDING ACCESSORIES, IS NOT DAMAGED AND IS IN GOOD WORKING ORDER. REPORT ANY DEFICIENCIES TO THE ARCHITECT.



**PLUMBING PLAN NOTES:**

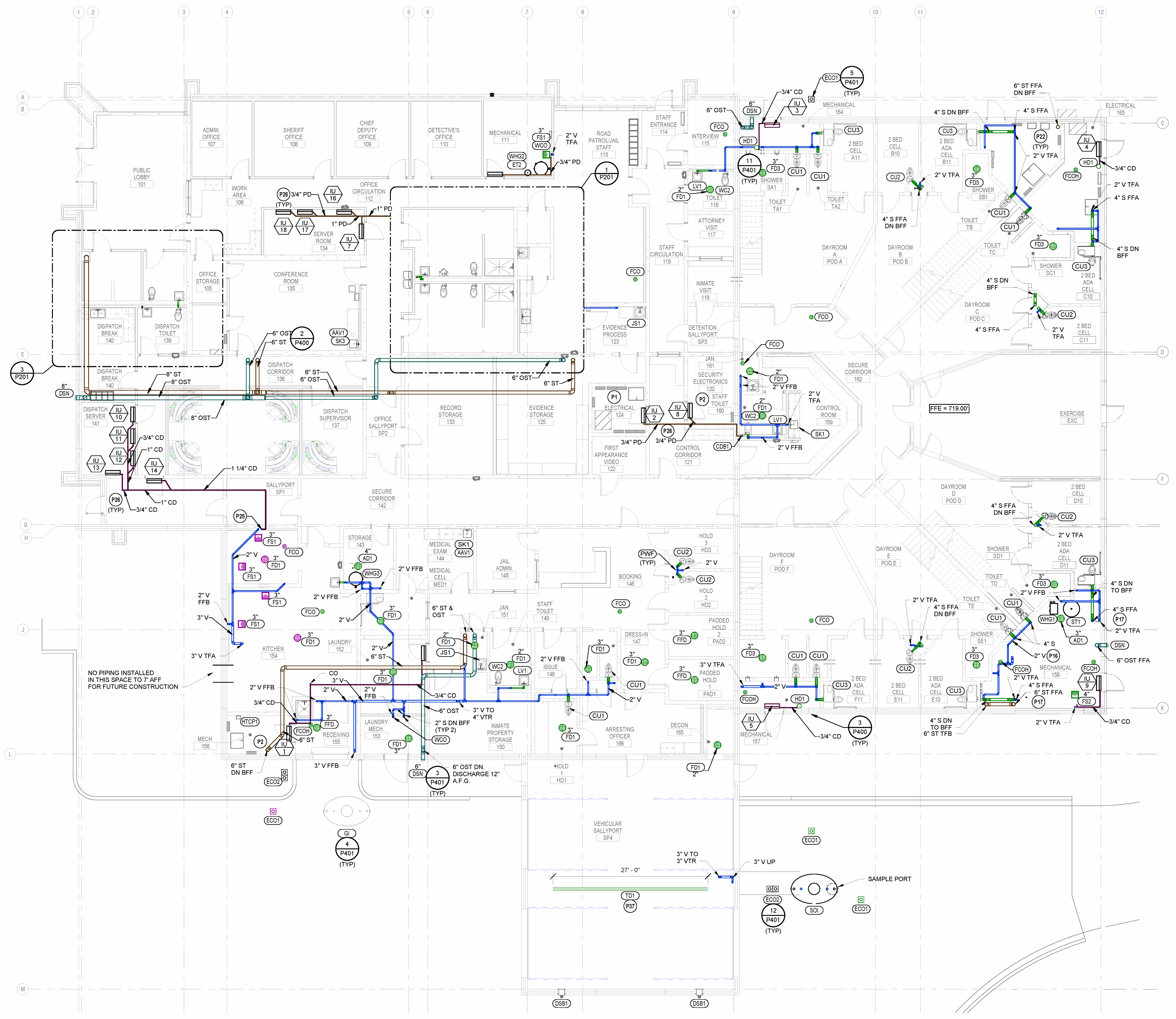
- P4 2" S FFA
- P5 3" S FFA
- P6 4" S FFA
- P8 3" GW FFA
- P9 4" GW FFA
- P10 2" V TFA
- P11 3" V TFA
- P12 6" S FFA
- P13 3" WATER SERVICE TFA
- P14 6" ST FFA
- P15 8" ST FFA
- P24 INSTALL HEAT TRACE TO ENTIRE GREASE WASTE SYSTEM  
ALL GREASE WASTE PIPING SHALL BE CAST IRON WRAPPED  
WITH 2" INSULATION. REFERENCE SPECIFICATIONS FOR  
ADDITIONAL INFORMATION.
- P27 INSTALL BELOW GRADE INSULATION ON STORM DRAIN  
PIPING A MINIMUM OF 20' BEYOND EXTERIOR WALL OF  
BUILDING.



**PLUMBING FOUNDATION PLAN**  
1/8" = 1'-0"



- PLUMBING PLAN NOTES:**
- P1 DO NOT INSTALL PLUMBING PIPING OVER ELECTRICAL PANELS OR EQUIPMENT
  - P2 COORDINATE WATER PIPE ROUTING AWAY FROM ELECTRIC PANELS. MAINTAIN CLEARANCES PER NEC.
  - P16 ROUTE VENT PIPING BELOW MEZZANINE SLAB DOWN TO EDGE OF SLAB TO RISER. COORDINATE PIPE ROUTING WITH ALL OTHER DISCIPLINES.
  - P17 INDICATED PIPE RISERS TO BE ROUTED UP AT EDGE OF MEZZANINE SLAB OVERHEAD.
  - P22 INSTALL DRAIN PANS UNDER SANITARY PIPING AS NEEDED TO PROTECT ELECTRICAL EQUIPMENT MOUNTED BELOW PIPING. ADD ABOVE SLAB HUB DRAINS IN EXPOSED SANITARY PIPING IF NEEDED TO SERVE DRAIN PAN DISCHARGE.
  - P25 ROUTE 3/4" CD DOWN IN WALL AND DISCHARGE TO FLOOR SINK WITH AIR GAP.
  - P26 INSTALL CHECK VALVE IN EACH UNITS PUMPED CONDENSATE BRANCH DISCHARGE PIPING TO PROTECT AGAINST BACKFLOW TO OTHER UNITS.
  - P37 INDICATED LENGTH OF TRENCH DRAIN IS NOMINAL. ACTUAL DIMENSION SHOULD BE SIMILAR BUT BASED ON MANUFACTURE AND INSTALLATION REQUIREMENTS.



1 PLUMBING WASTE & VENT FIRST FLOOR PLAN - OVERALL  
1/8" = 1'-0"





























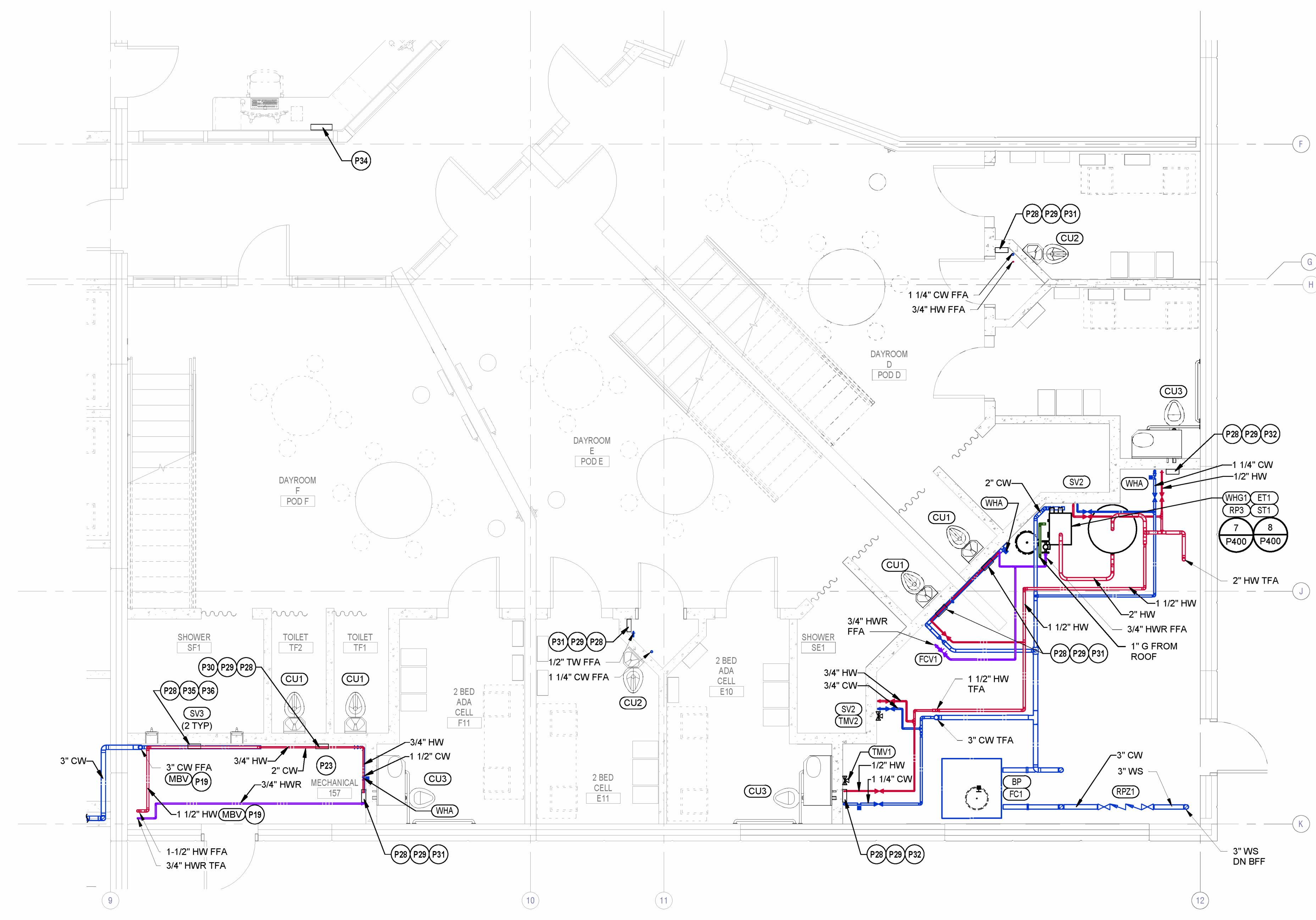
Architect's Name	HENDERSON ENGINEERS	
License #	XXXXXX	
Date	03/01/2024	
Issue		
Date		

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PLUMBING PLAN -  
ENLARGED - JAIL SOUTH

**P203**

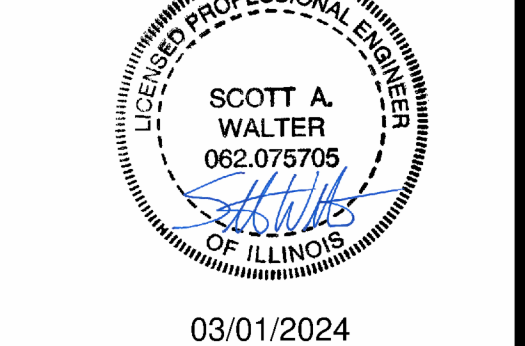
- PLUMBING PLAN NOTES:**
- P19 INSTALL MOTORIZED BALL VALVE ON WATER PIPE SERVING CELL FIXTURES PER OWNER REQUIREMENTS. REFER TO SECURITY AND ELECTRICAL DRAWINGS FOR MORE INFORMATION.
  - P23 STACK PIPING MOUNTED ALONG WALL. SECURE TO WALL AS REQUIRE PER SPECIFICATIONS.
  - P28 INSTALL "CV/C2" ELECTRONIC CONTROLLER AND ELECTRONIC VALVE ACTUATOR ON WALL AT 4'-0" AFF. FURNISH TRANSFORMER TO ELEC FOR INSTALLATION.
  - P29 PROVIDE 1/2" CW AND HW WITH SOV IN DROP AND CONNECT TO ELECTRONIC VALVE ACTUATOR.
  - P30 FEED (2) COMBIS WITH HOT AND COLD PE TUBING FROM ELECTRONIC VALVE ACTUATOR ASSEMBLY.
  - P31 FEED (1) COMBI WITH HOT AND COLD PE TUBING FROM ELECTRONIC VALVE ACTUATOR ASSEMBLY.
  - P32 FEED (1) COMBI AND (1) SHOWER WITH HOT AND COLD PE TUBING FROM ELECTRONIC VALVE ACTUATOR.
  - P34 PROVIDE PC FURNISHED WITH ELECTRONIC CONTROLLED FIXTURES TO ELEC FOR INSTALLATION. ELEC TO PROVIDE CABLES FROM "CV/C2" ELECTRONIC CONTROLLERS TO PC.
  - P35 FEED (2) SHOWERS WITH HOT PE TUBING FROM HOT WATER TEMPERATURE ACTUATOR.
  - P36 PROVIDE 3/4" HW WITH SOV DROP AND CONNECT TO ELECTRONIC VALVE ACTUATOR.



1 PLUMBING WATER & GAS - JAIL - SOUTH  
1/4" = 1'-0"

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225004109  
IL CORPORATE NO. 184-002985  
EXPIRES 4/30/2025



03/01/2024

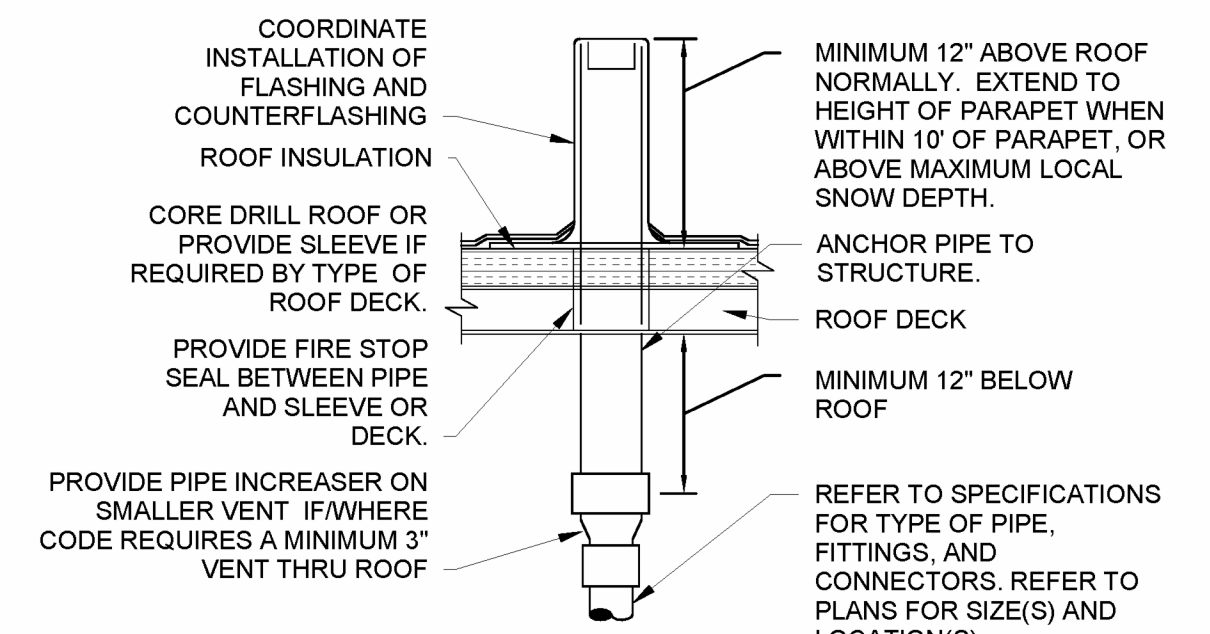




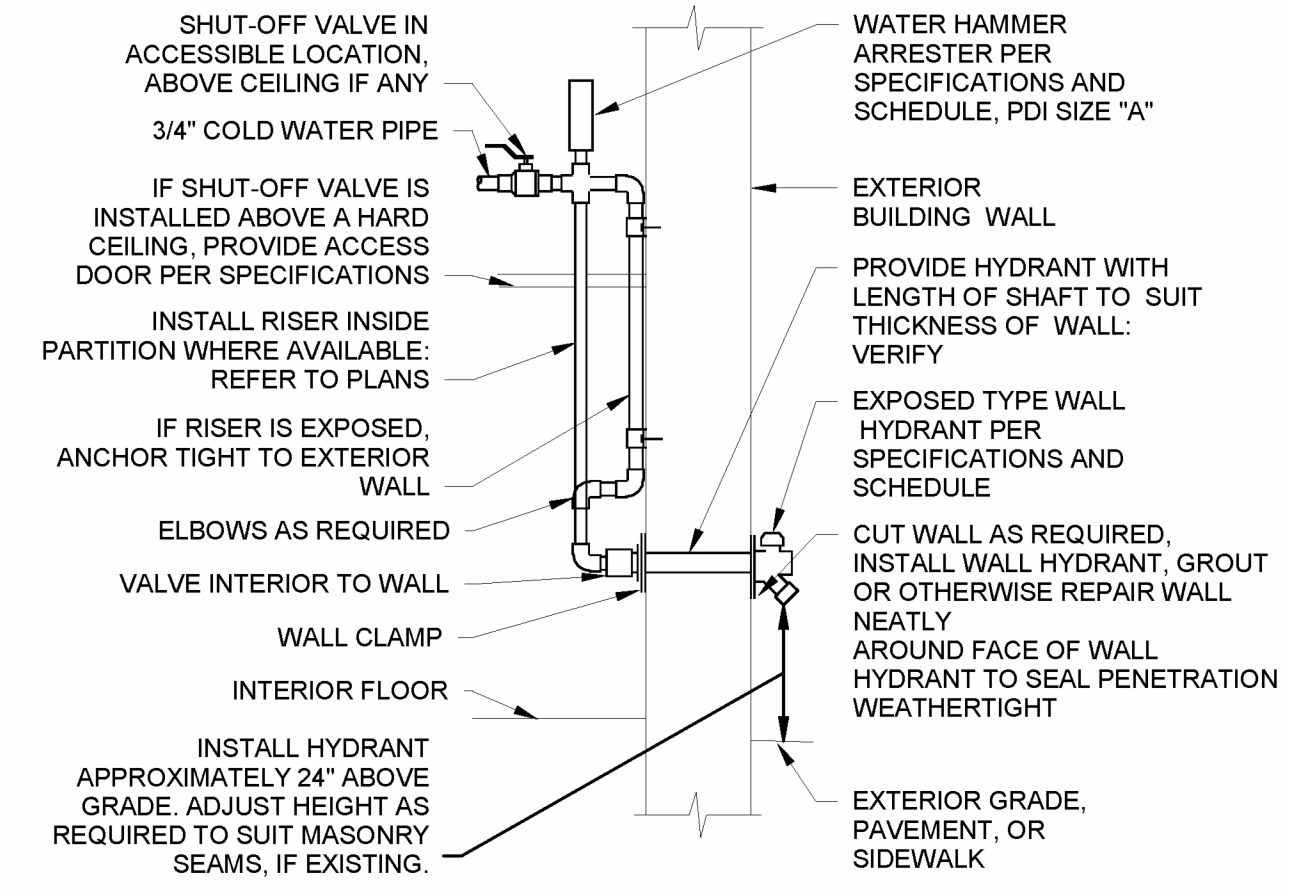




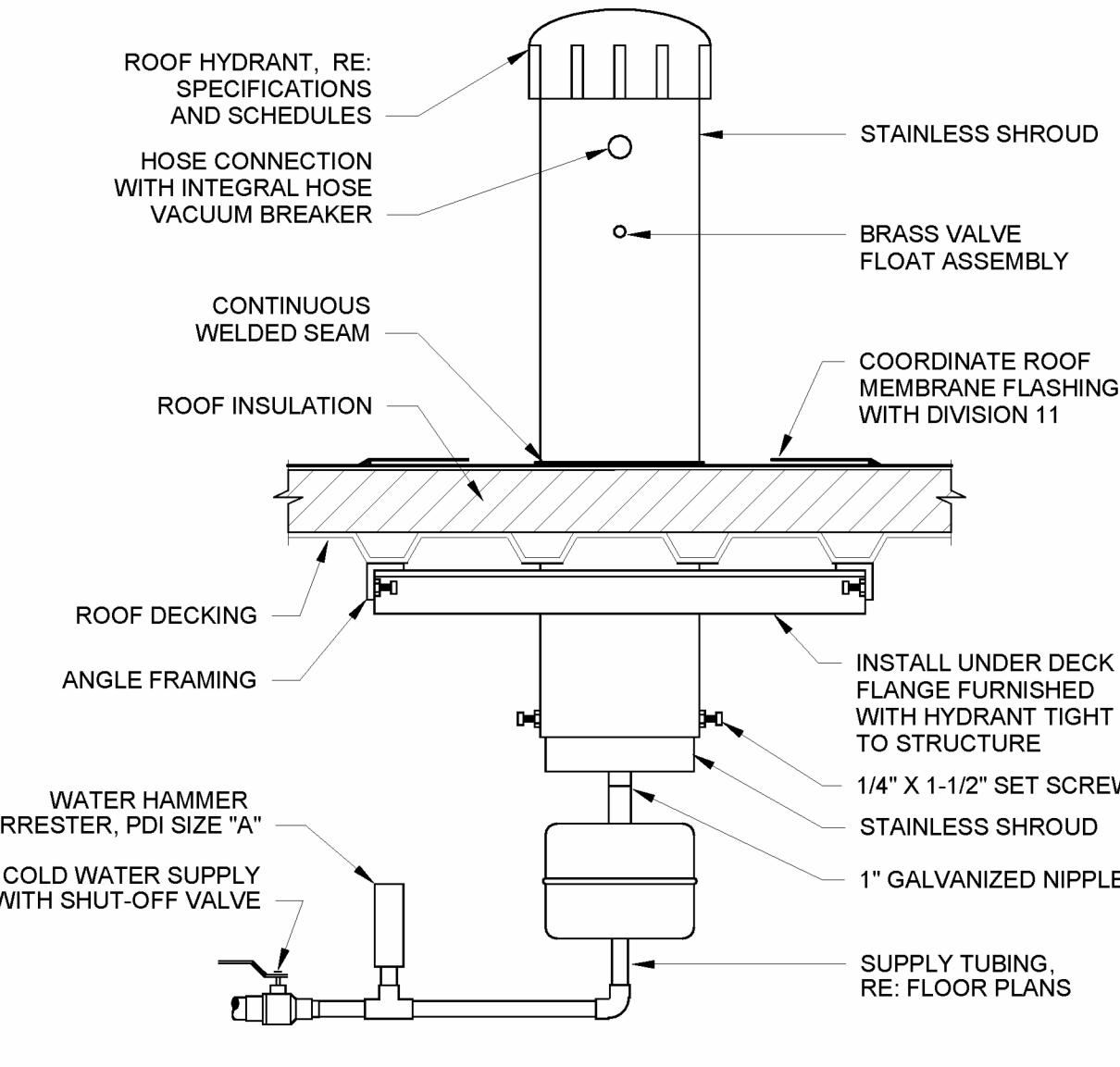




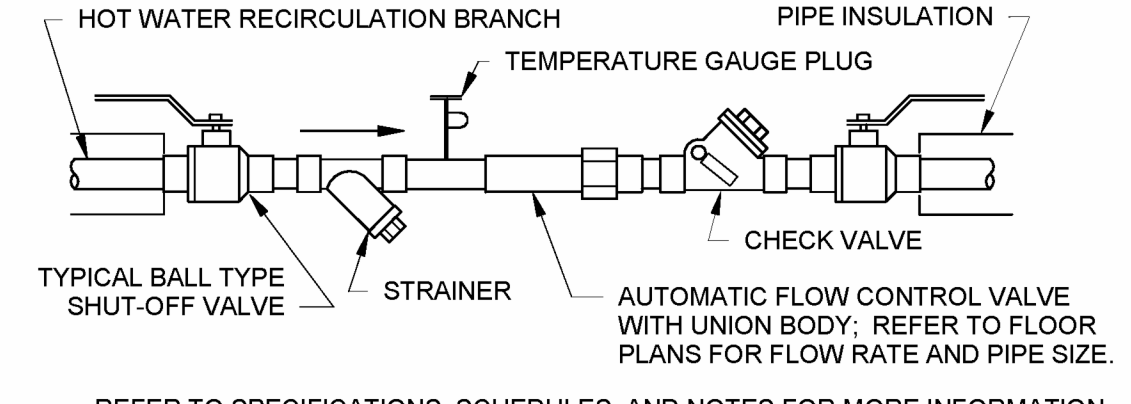
1 VENT THRU ROOF NTS



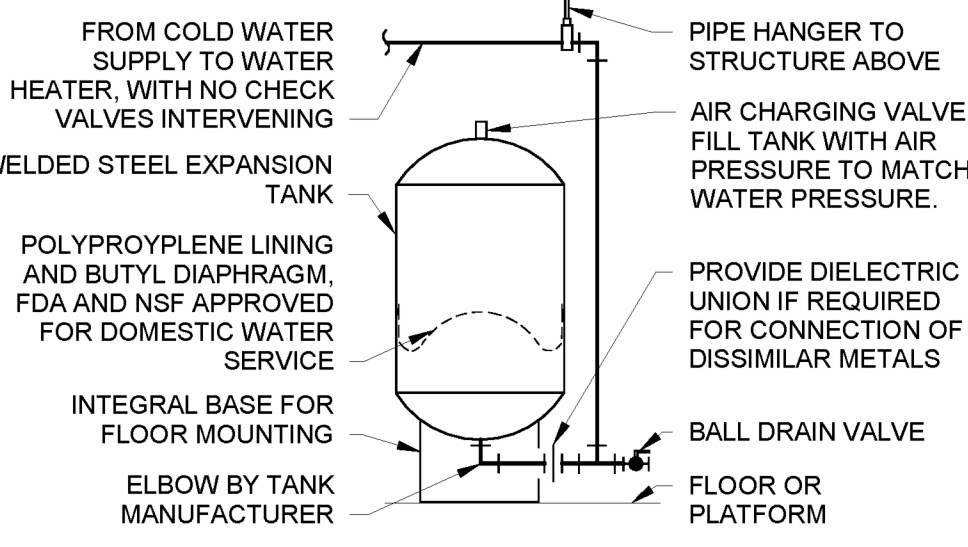
2 WALL HYDRANT INSTALLATION NTS



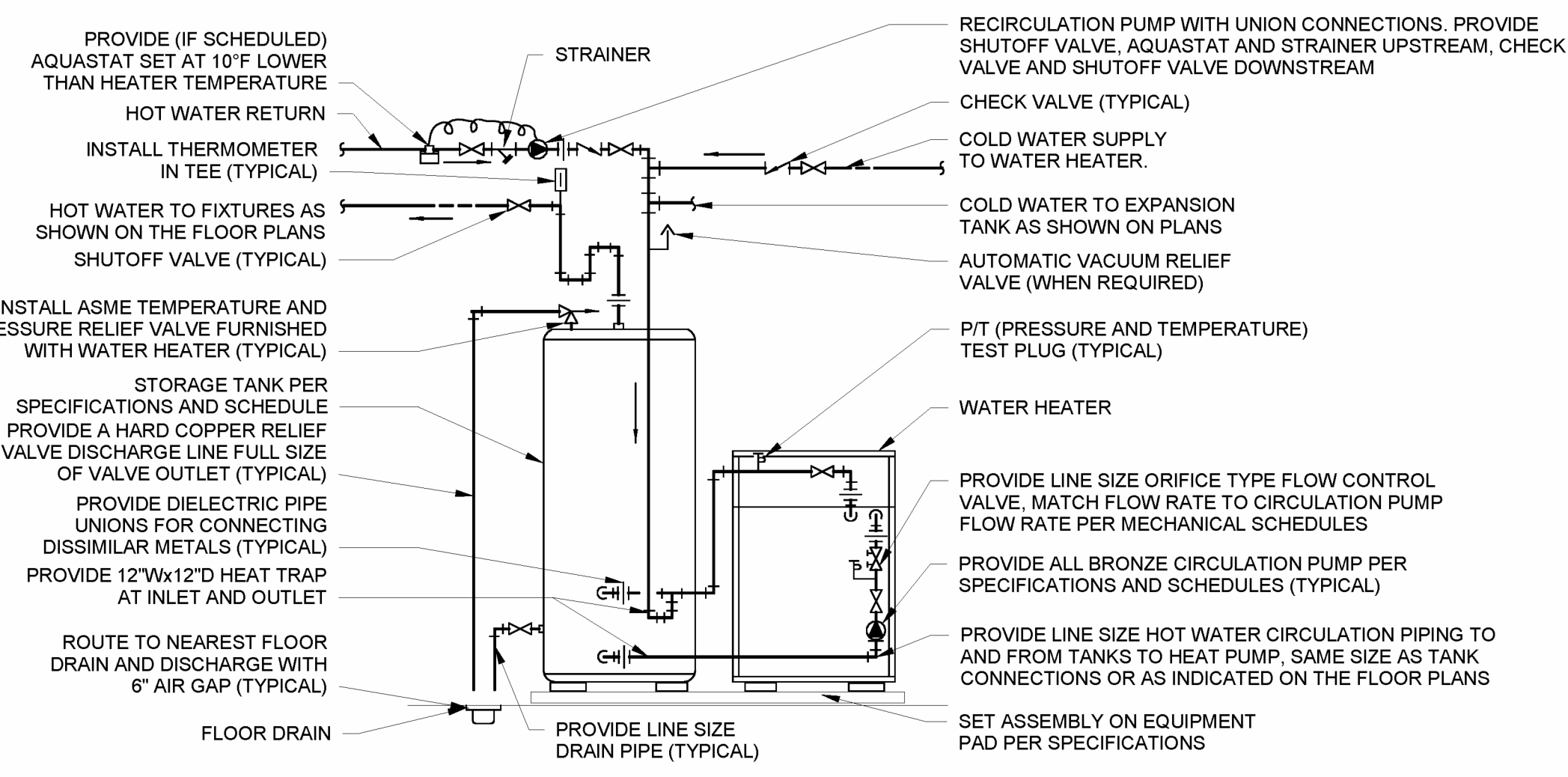
3 ROOF HYDRANT DETAIL NTS



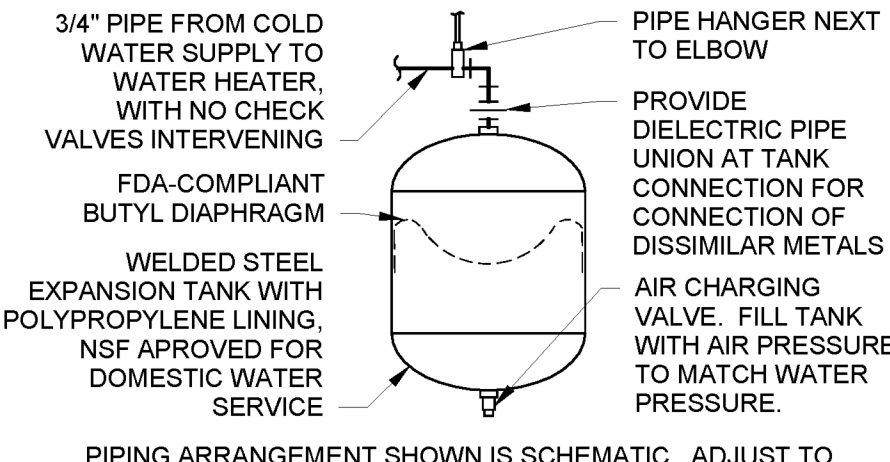
4 AUTOMATIC FLOW CONTROL VALVE TRAIN NTS



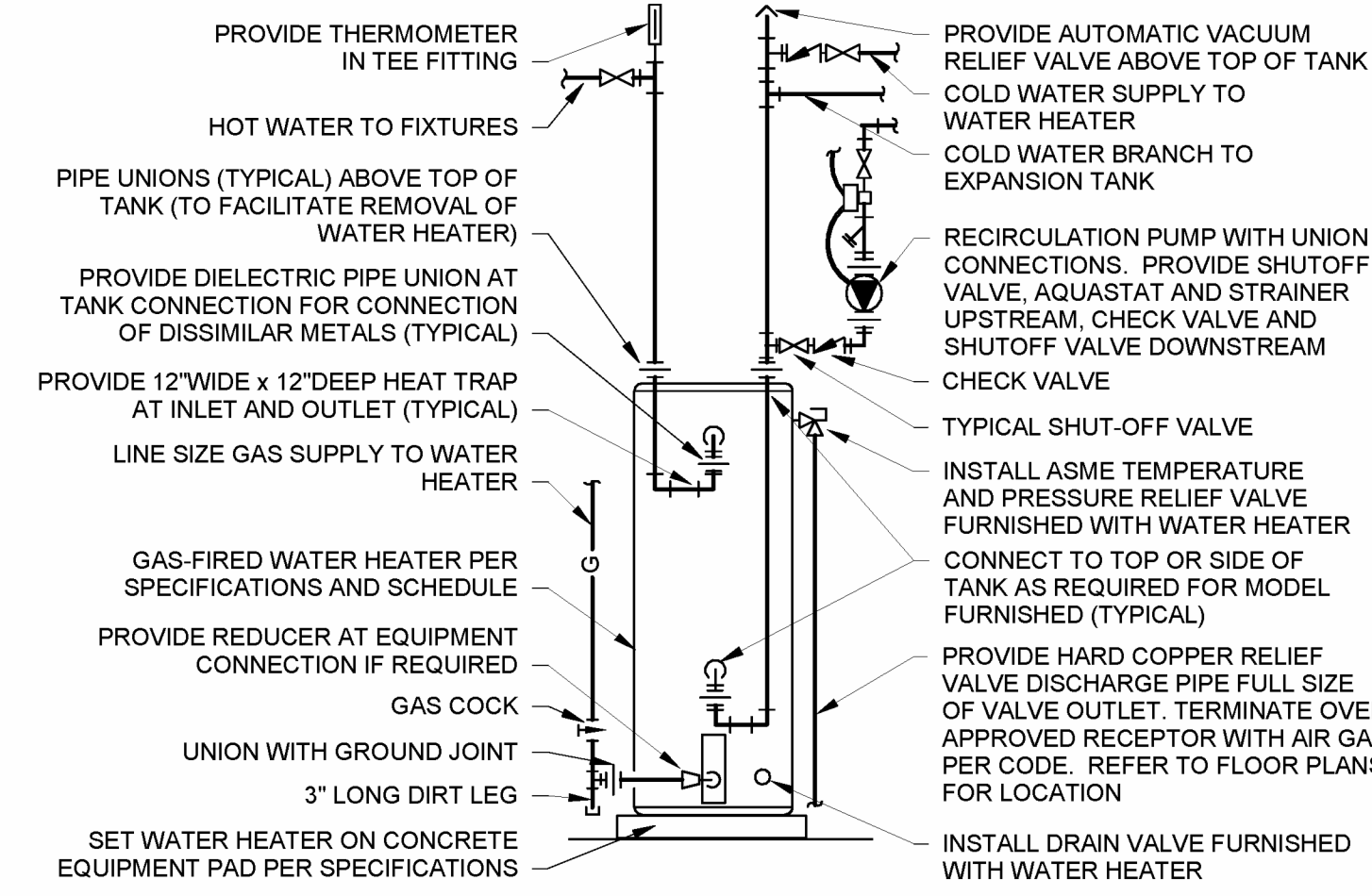
5 LARGE EXPANSION TANK NTS



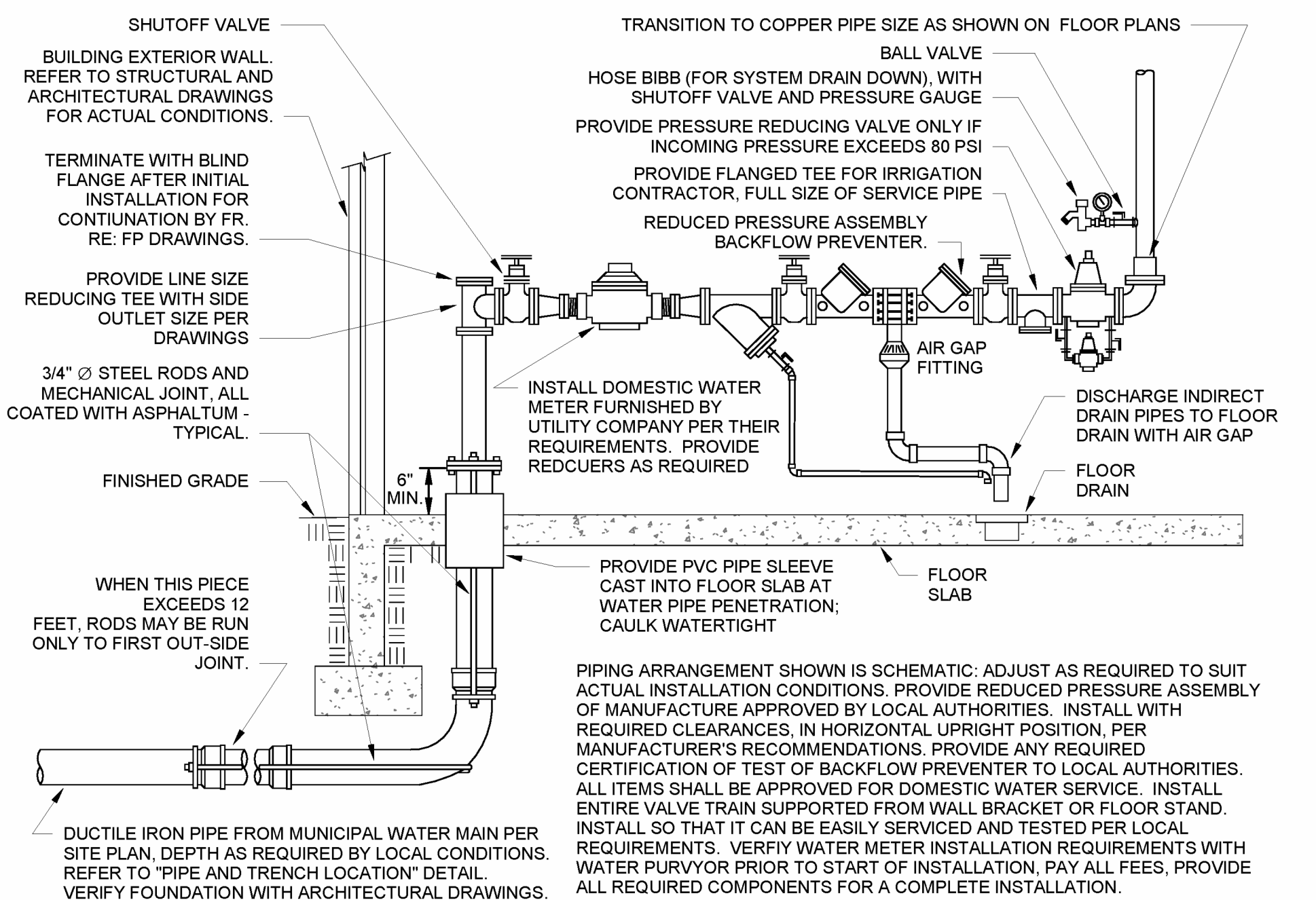
6 SINGLE STORAGE TANK AND WATER HEATER NTS



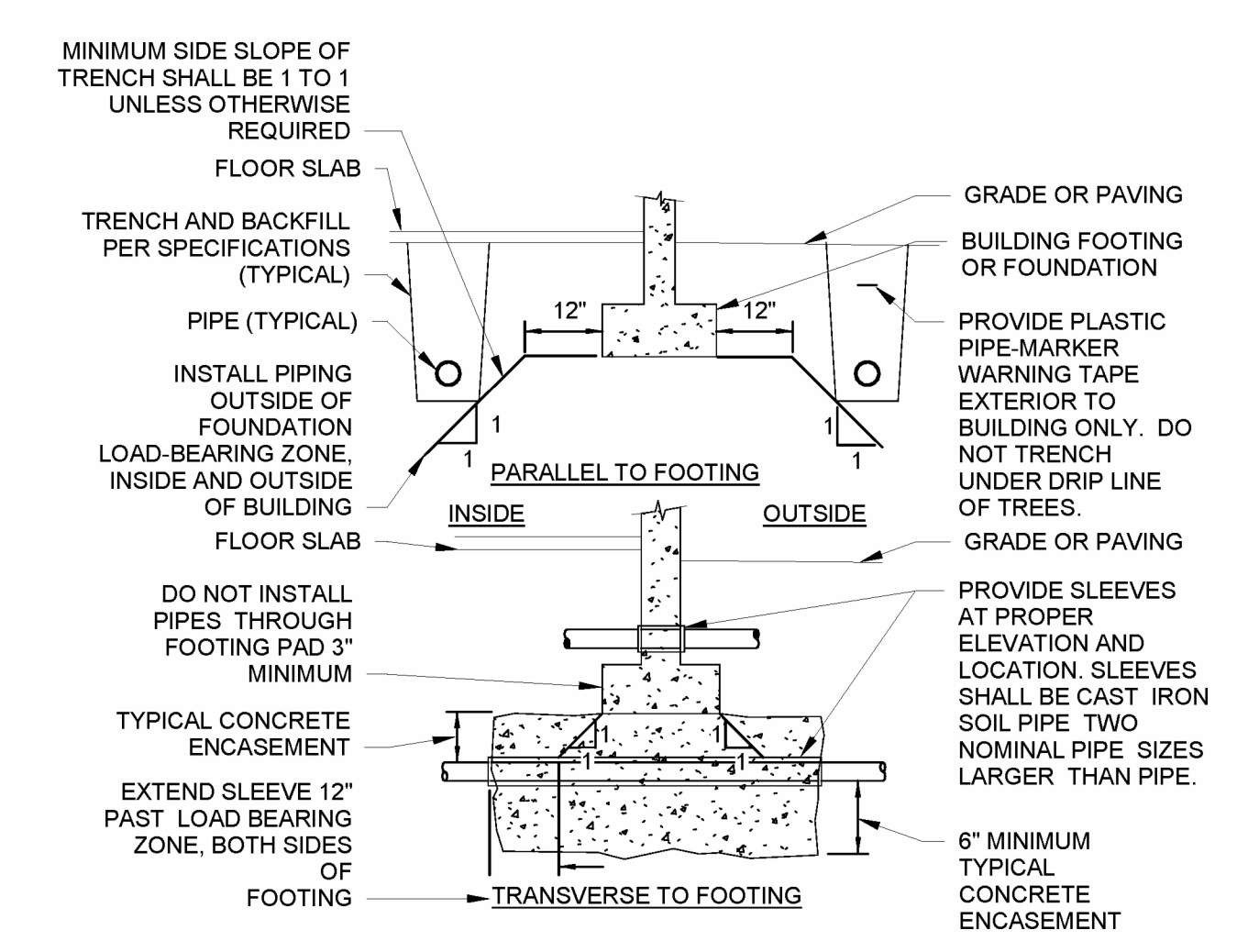
7 SMALL EXPANSION TANK NTS



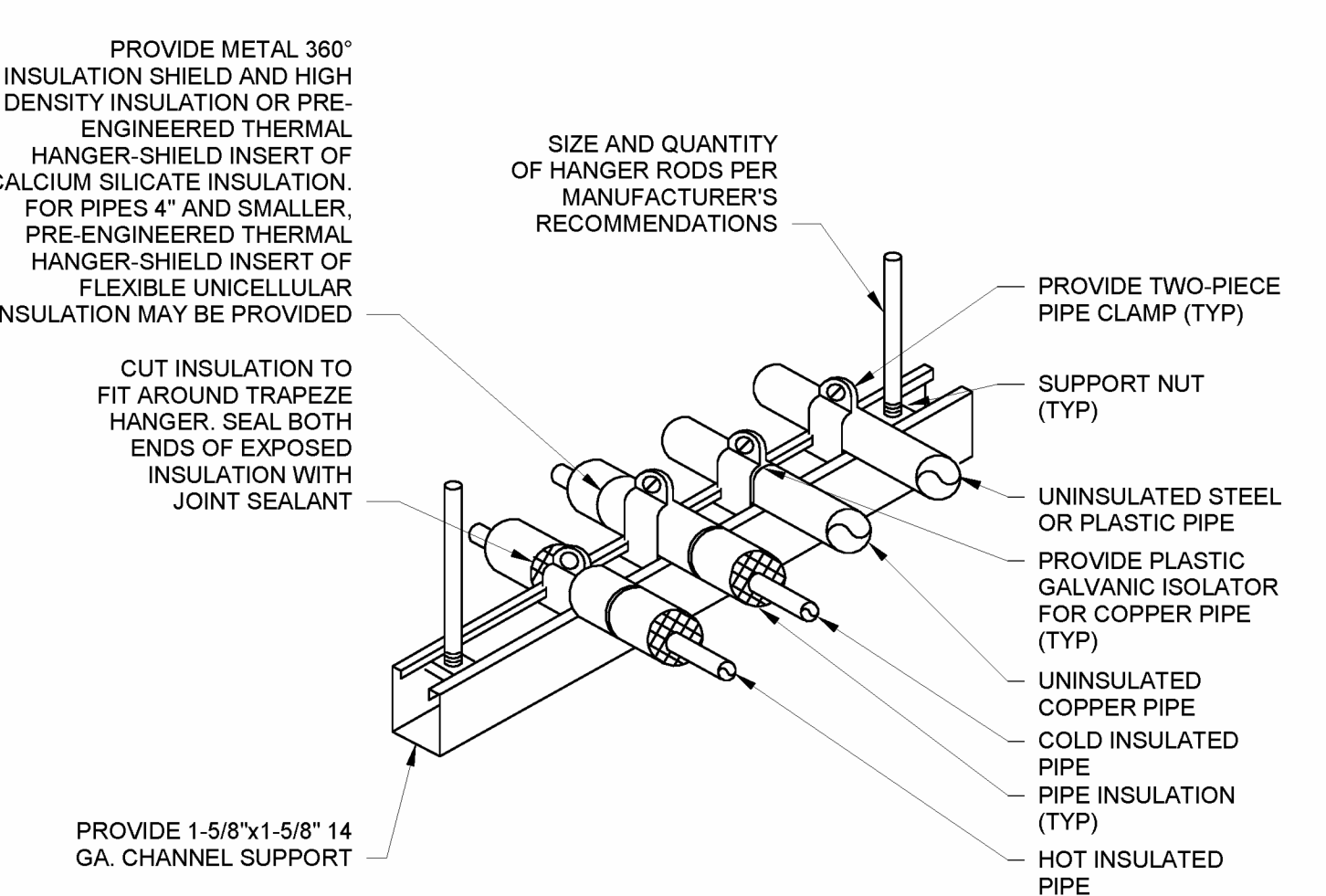
8 GAS FIRED WATER HEATER AND PUMP NTS



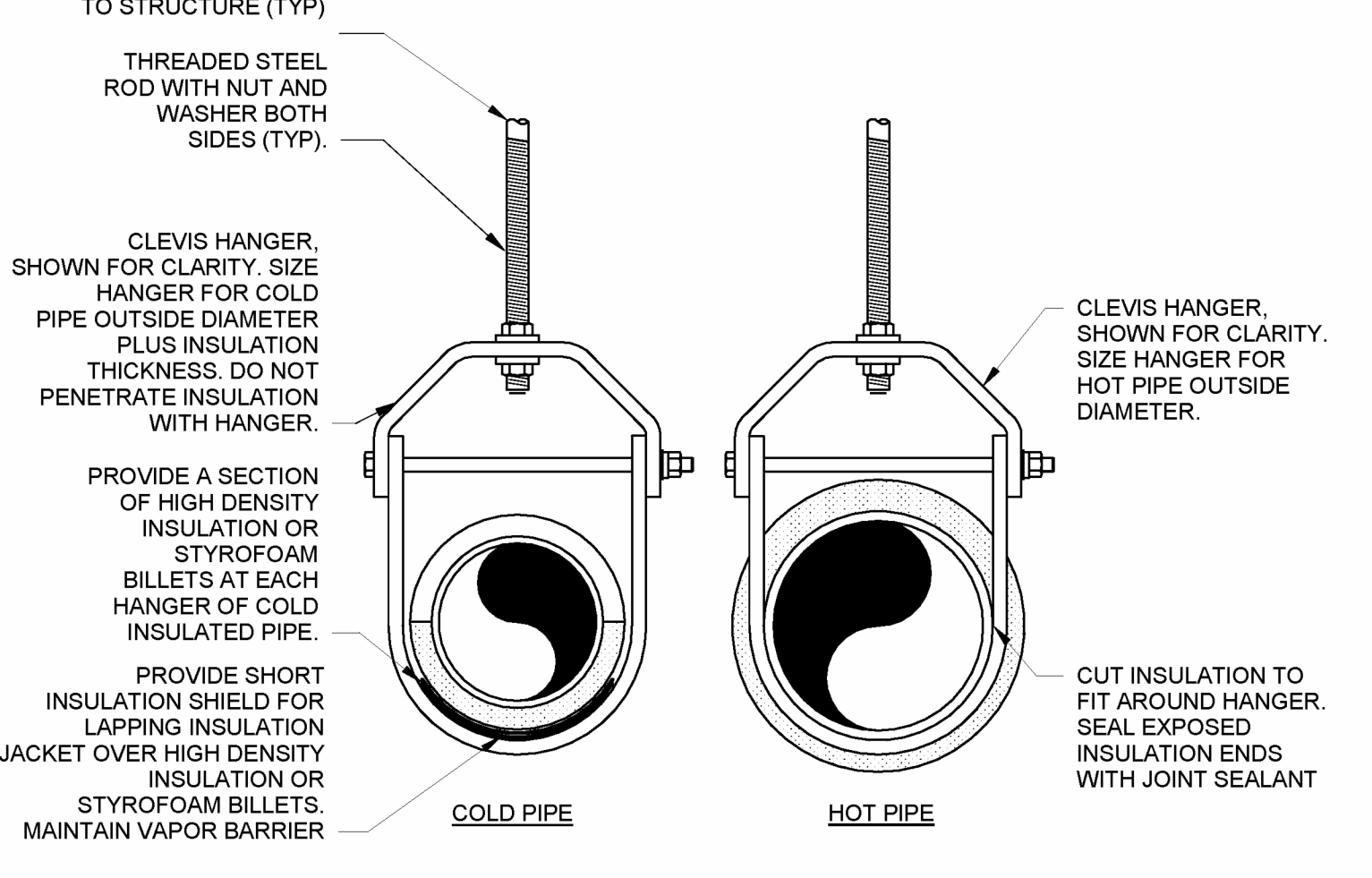
9 COMBINED FIRE AND DOMESTIC WATER SERVICE ENTRY - 2-1/2\"/>



10 PIPE AND TRENCH LOCATION NTS

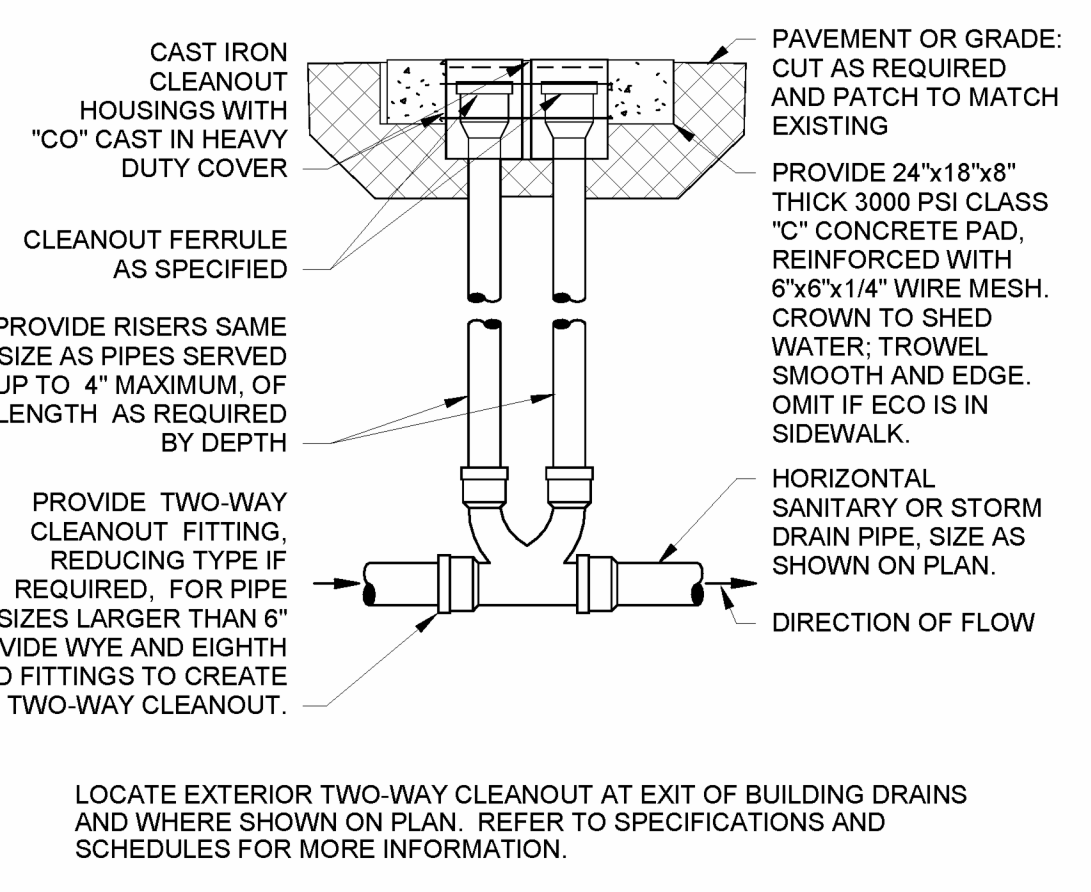


11 TRAPEZE PIPE HANGER NTS

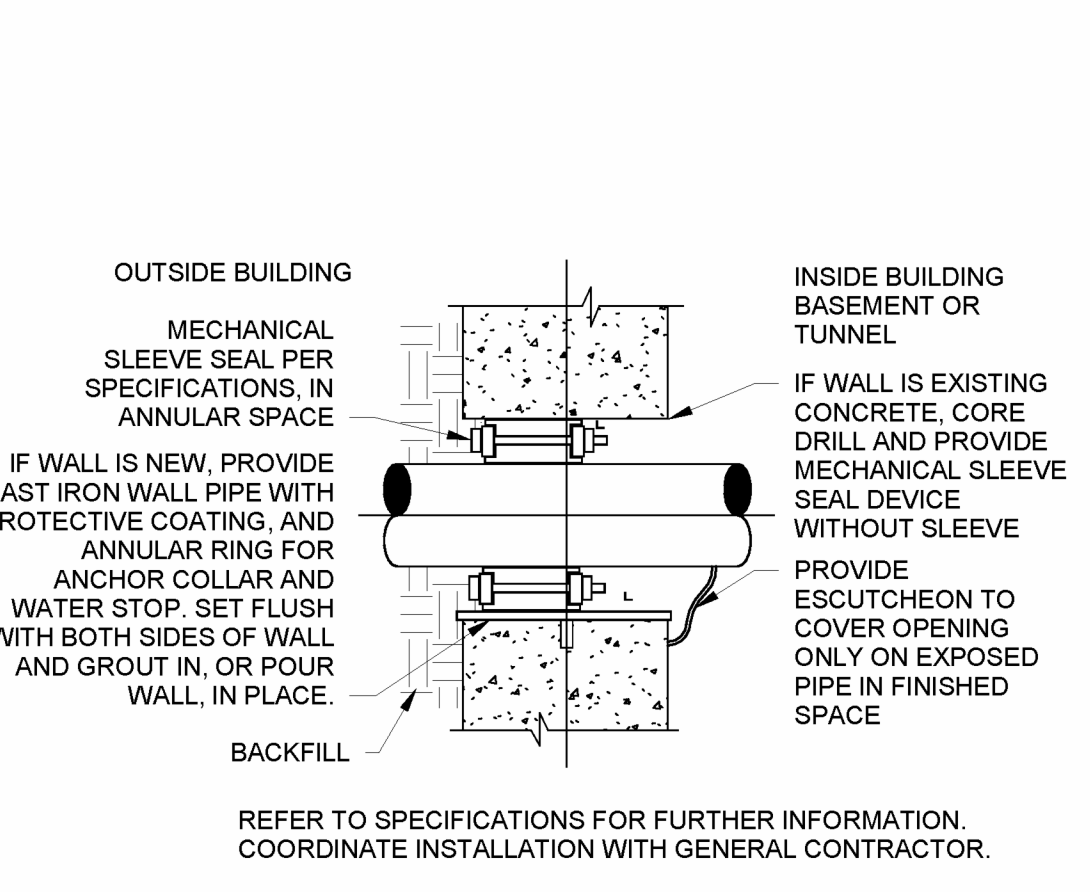


12 PIPE HANGER DETAIL NTS

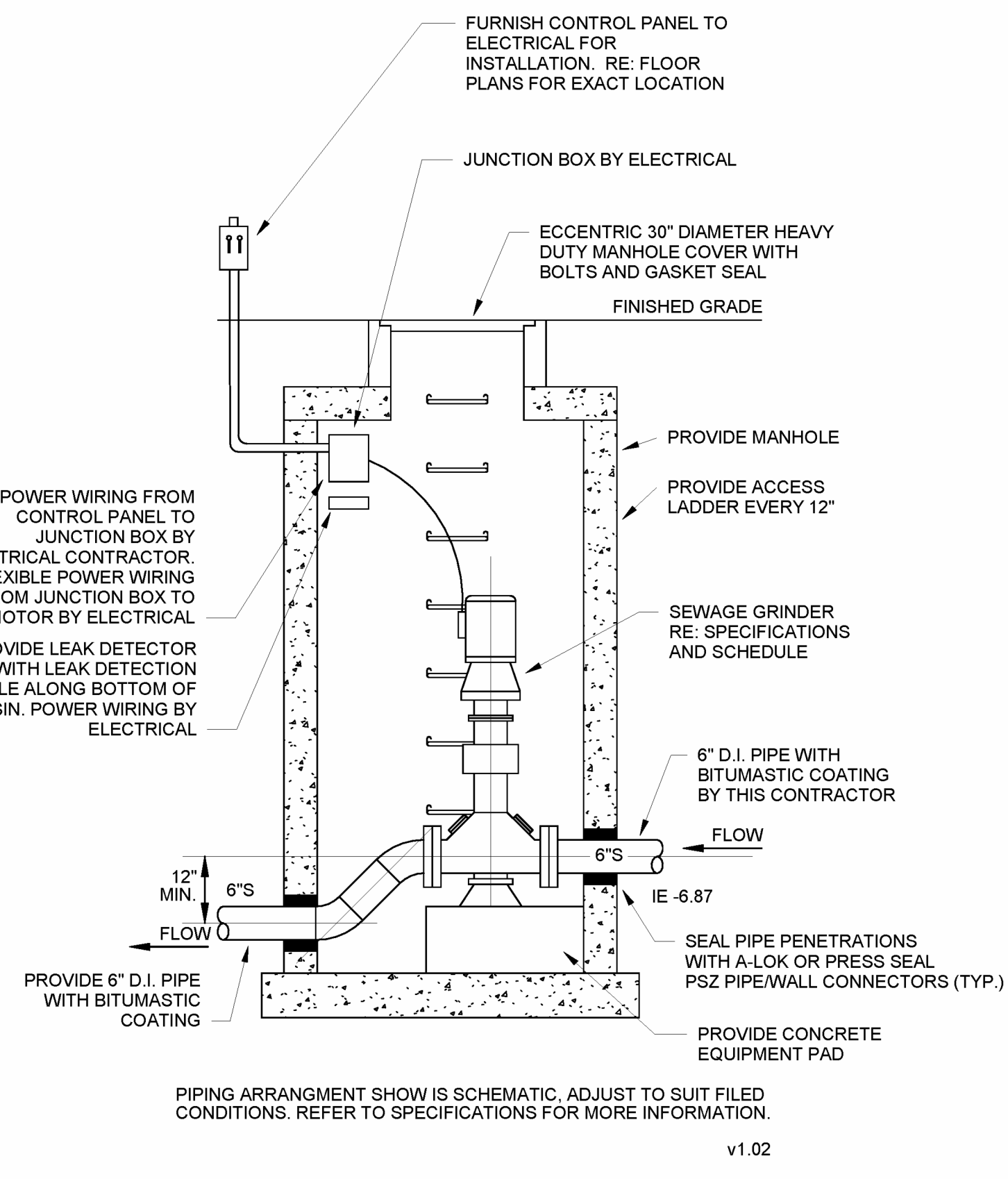




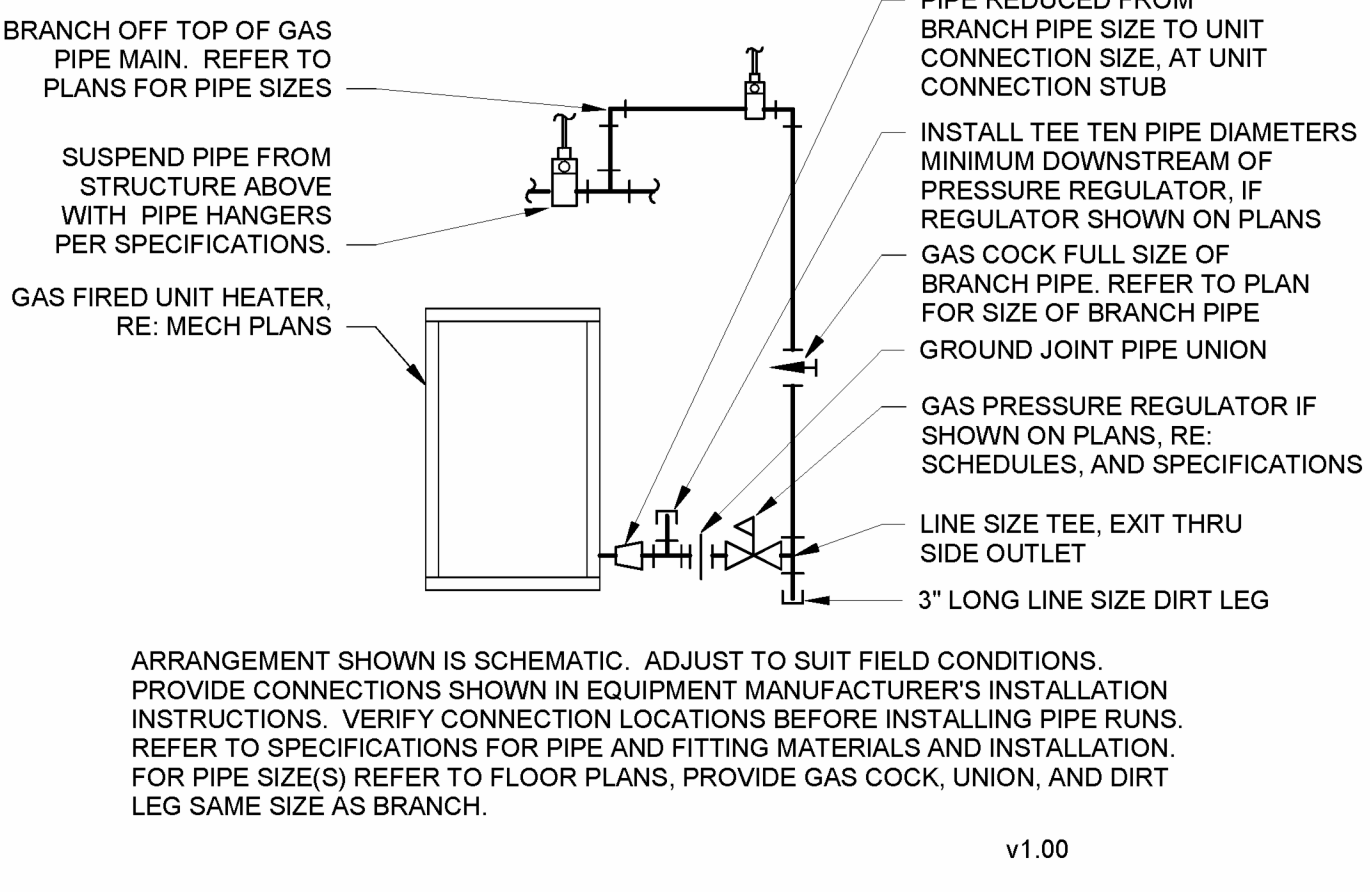
12 EXTERIOR TWO-WAY CLEANOUT  
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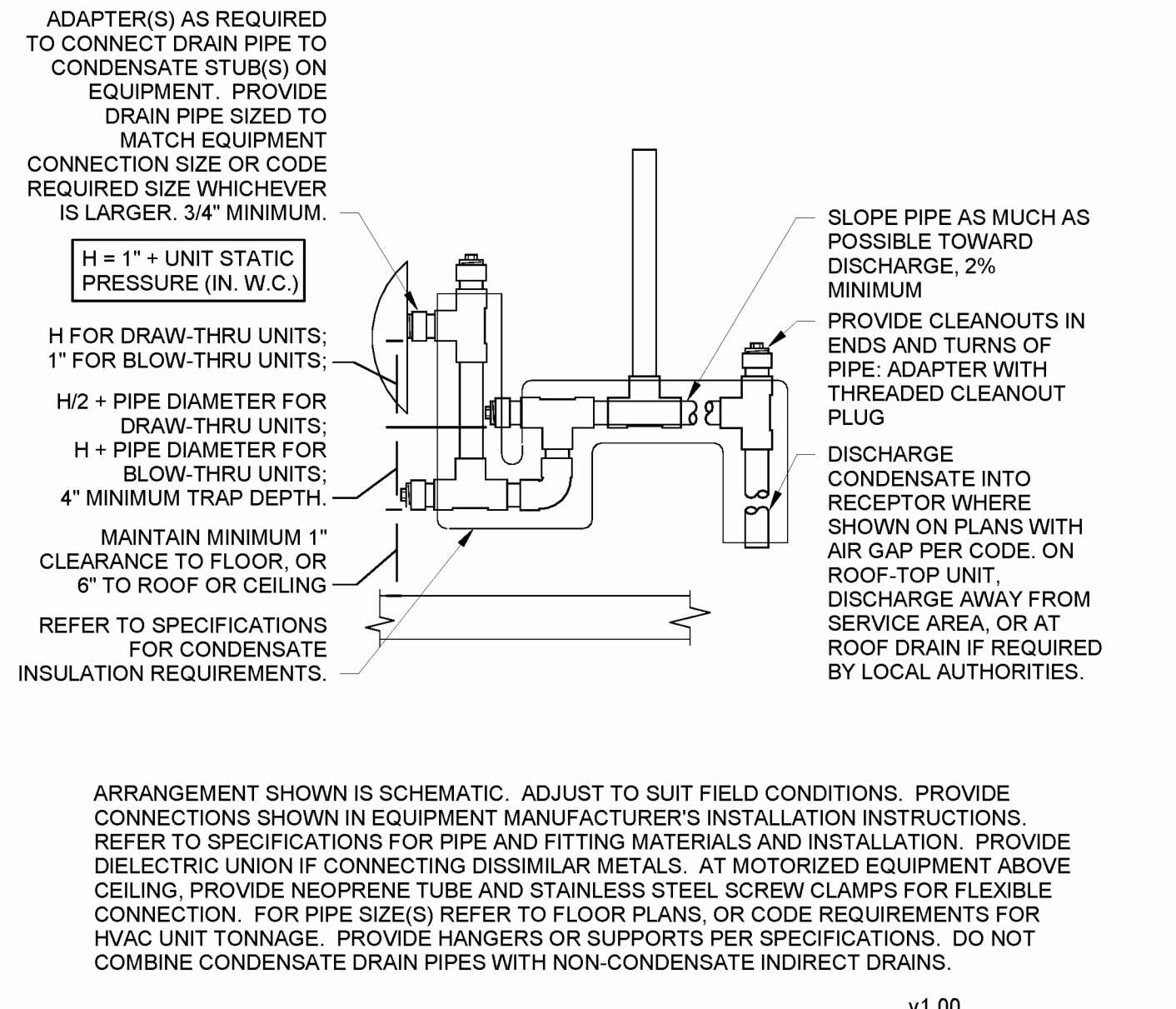
11 BELOW GRADE PENETRATION OF EXTERIOR WALL  
NTS



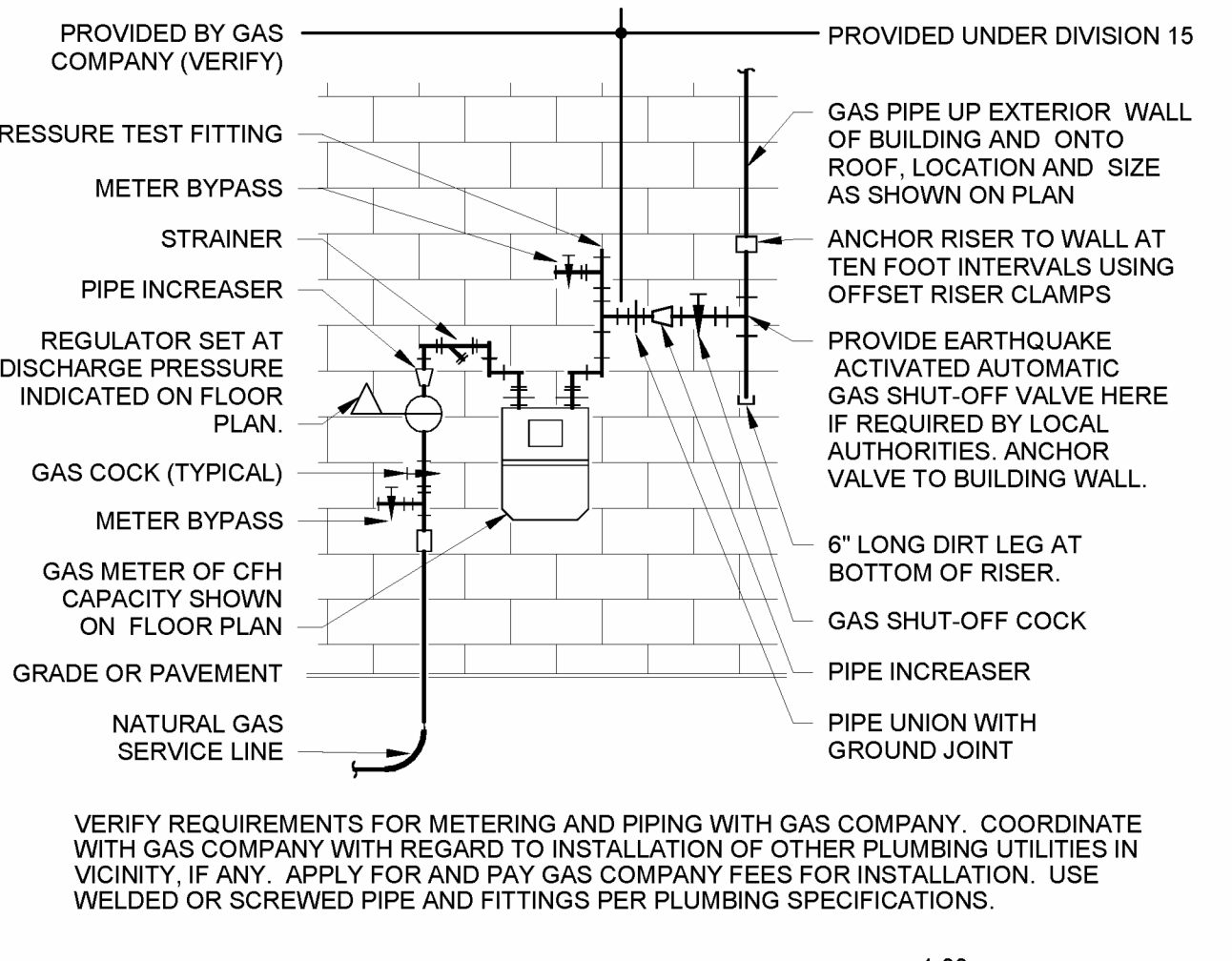
10 OUTDOOR SEWAGE GRINDER  
NTS



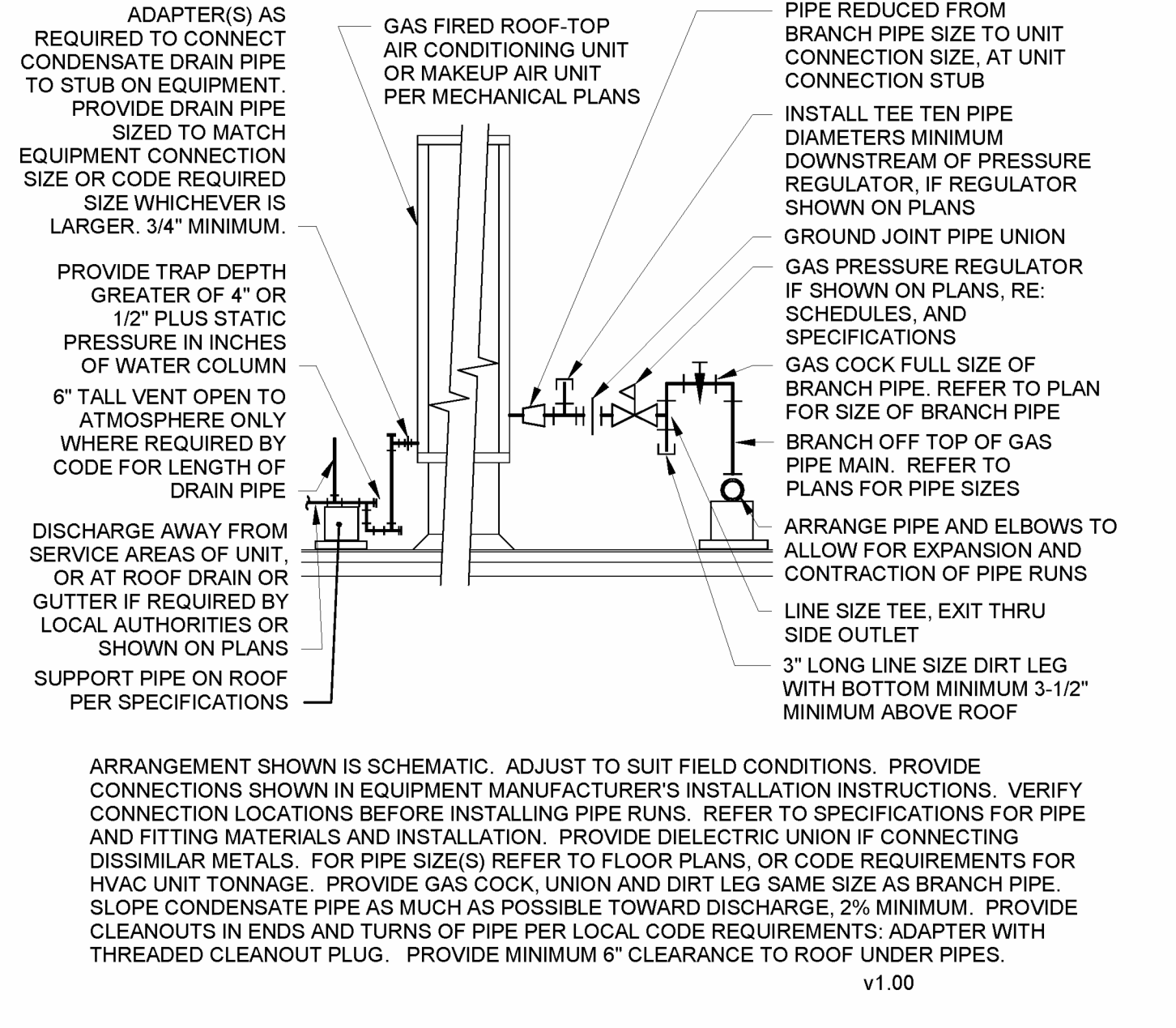
9 GAS HEATER CONNECTION  
NTS



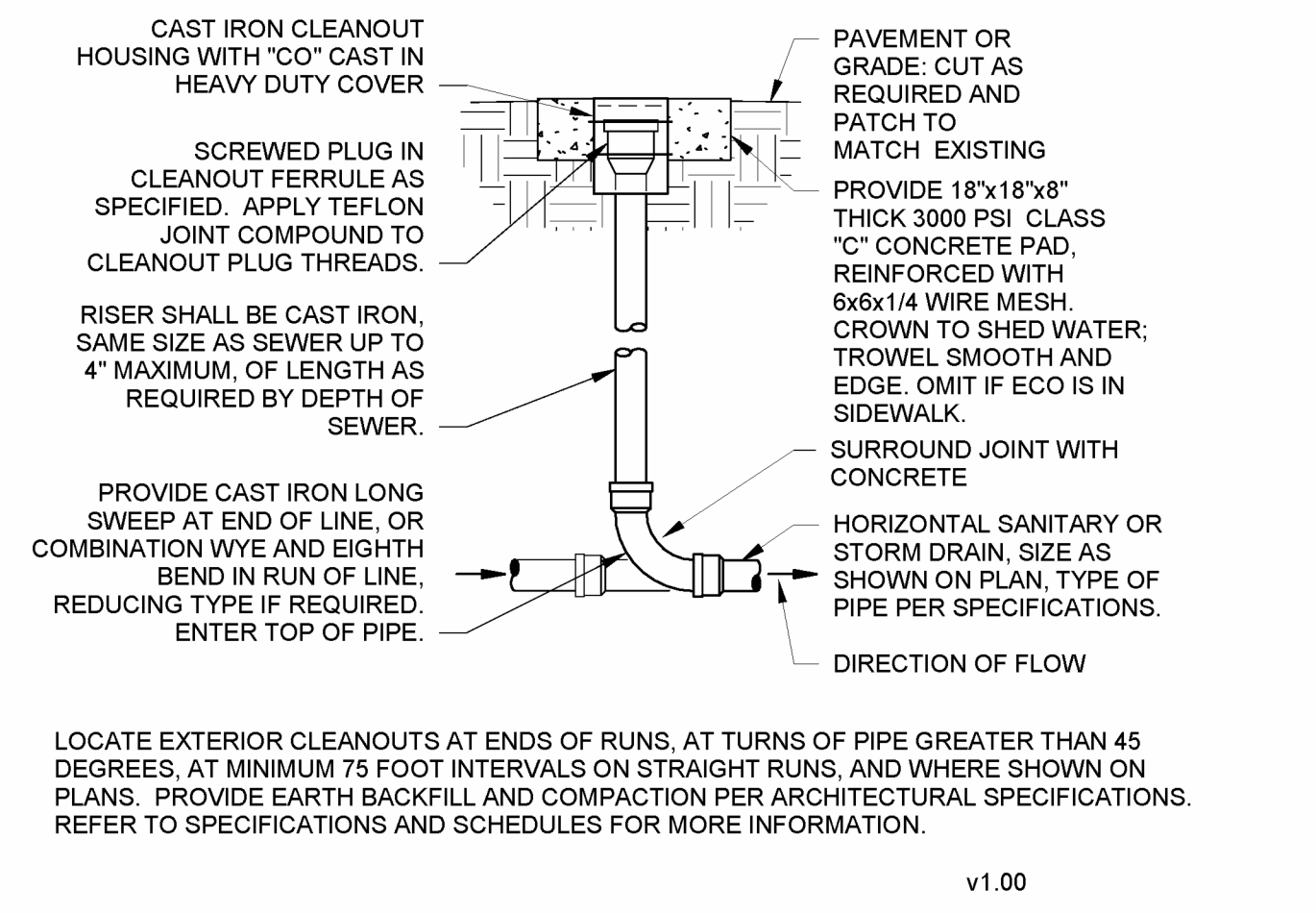
8 CONDENSATE DRAIN INSTALLATION  
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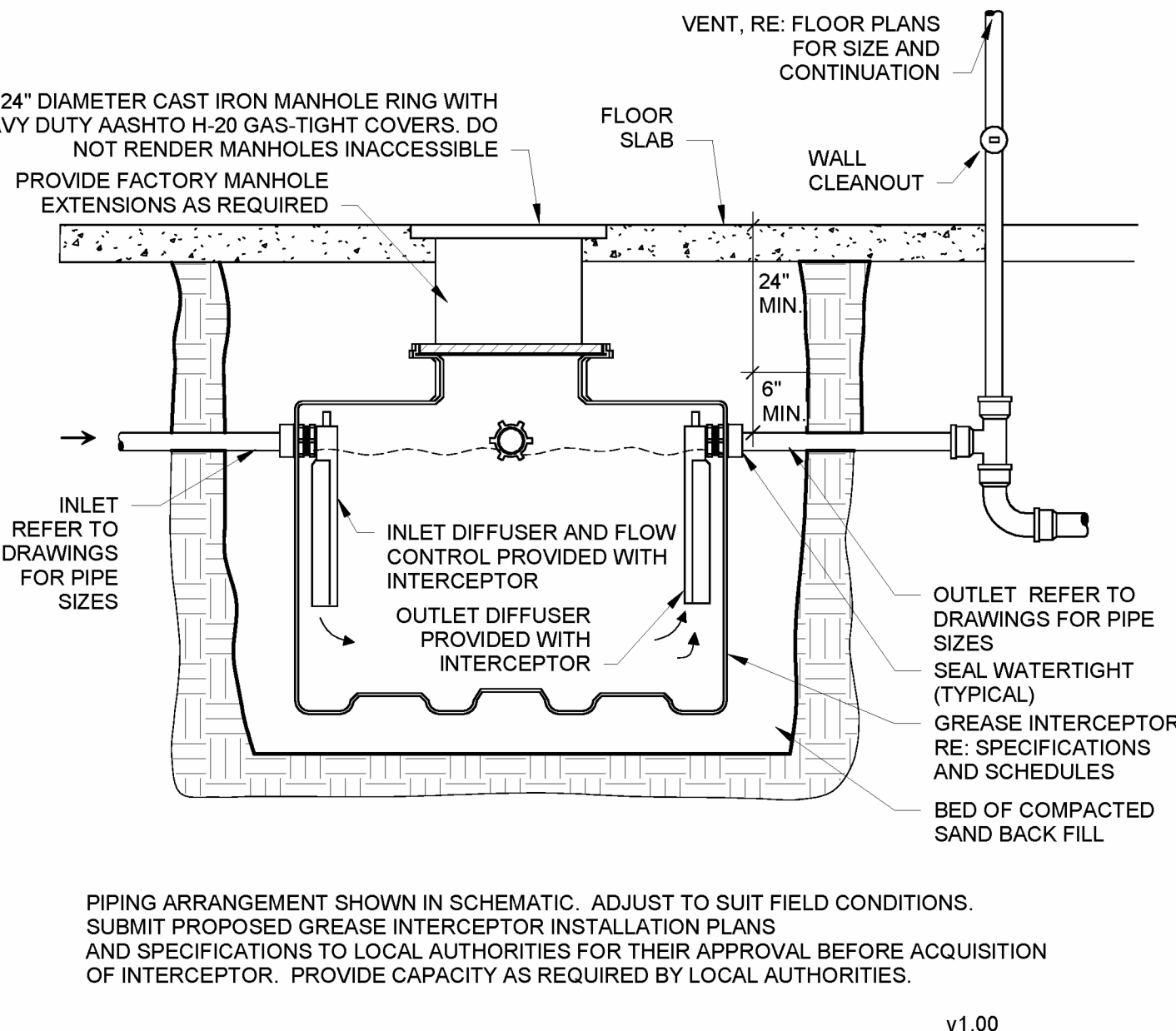
7 GAS METER SETTING  
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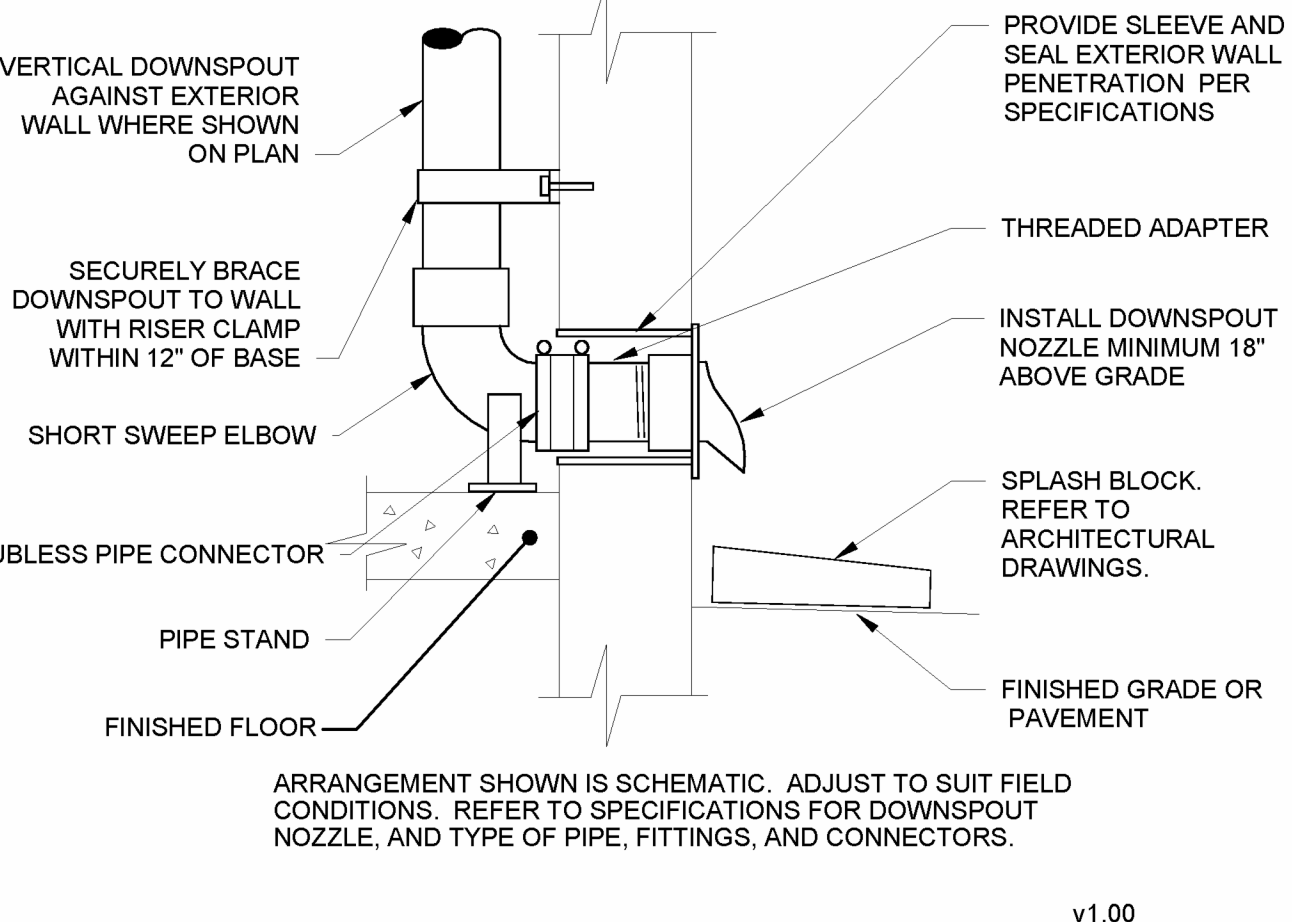
6 CONNECTIONS TO ROOF-TOP UNIT  
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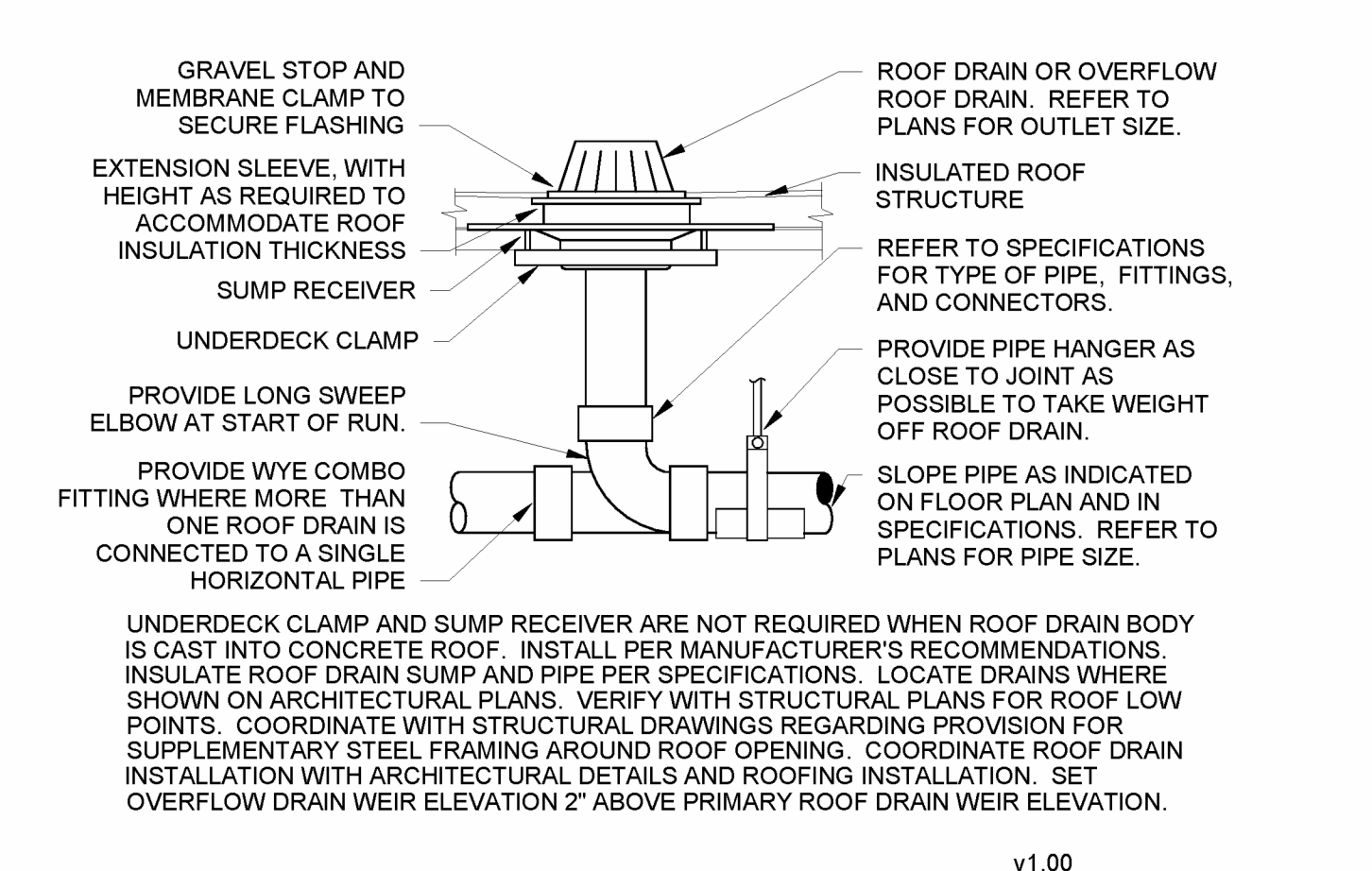
5 EXTERIOR CLEANOUT  
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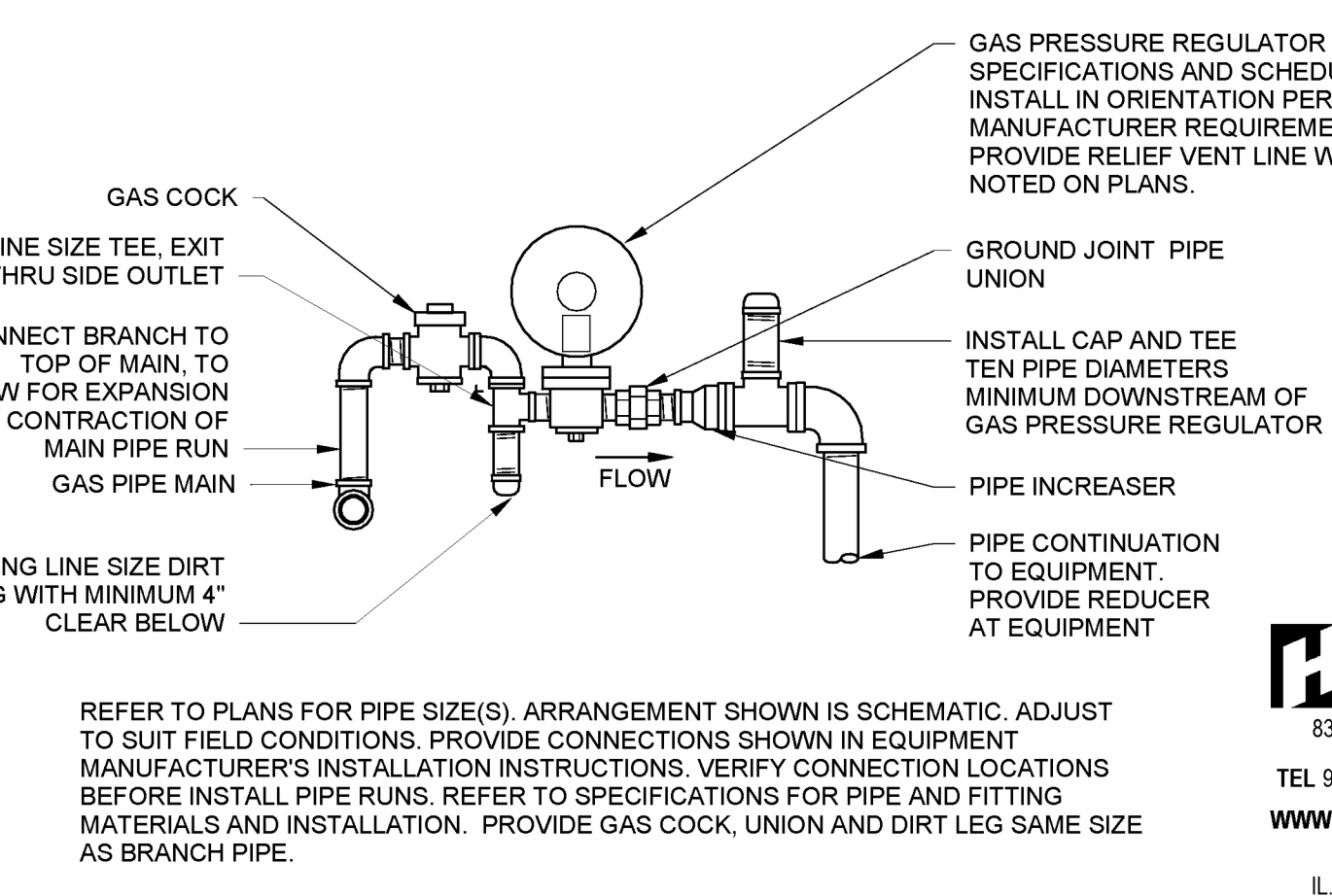
4 GREASE INTERCEPTOR  
NTS



3 DOWNSPOUT NOZZLE  
NTS



2 ROOF DRAIN INSTALLATION  
NTS



1 GAS PRESSURE REGULATOR  
NTS



### PLUMBING FIXTURE SCHEDULE

PLUMBING PLAN MARK	DESCRIPTION
AAV1	AIR ADMITTANCE VALVE; STUB-UP "MINI-VENT" # 20301; MEETINGS ASSE 1051 TYPE "A", POLYSTYRENE PROTECTIVE COVER, ABS VALVE WITH ELASTOMERIC MEMBRANE AND PVC CONNECTOR, 2" INLET, AND ATMOSPHERIC PORT.
AD1	AREA DRAIN; JAY R. SMITH # 2120L (M), CAST IRON BODY, HEAVY-DUTY, 8" DIAMETER, DUCTILE IRON GRATE, SEEPAGE PAN, AND MEMBRANE FLASHING CLAMP. USE PUSH-ON JOINT OR CAULK OUTLET OF SIZE AS SHOWN ON PLANS.
AP1	ACCESS PANEL; JAY R. SMITH # 4762 - 12" x 12" - CL, TYPE 304 STAINLESS STEEL PANEL AND FRAME WITH CONCEALED HINGE, KEY OPERATED CYLINDER LOCK, PROVIDE WITH NALER SLOTS FOR INSTALLATION IN STUD WALLS AND ANCHOR STRIPS FOR INSTALLATION IN MASONRY CONSTRUCTION.
COB1	CONDENSATE DRAIN BOX; "SLOAN" "DIXIE" MODEL # 896-3 OUTLET BOX, MODEL #96-C SECONDARY DRAINAGE FUNNEL AND #96-SC SOLID COVER PLATE.
CU1	SECURITY WATER CLOSET / LAVATORY COMBINATION; ACORN 1418-LJL-AL OR AR-2-BP-04-M-09-MA-2-FVBO-PH-LWE-PT-C01-FT-PC-SW 18" WIDE X 12" DEEP LAVATORY BOWL WITH RIGHT OR LEFT ANGLED 1.28 GALLON PER FLUSH WATER CLOSET BOWL, FLOOR MOUNTED, BACK OUTLET TYPE OF 1/4 GAUGE 304 STAINLESS STEEL WELDED CONSTRUCTION, # 4 FINISH, WITH PENAL BUBBLER WITH 0.5 GPM FLOW CONTROL, "AIR-TROL" HOT AND COLD AIR ACTIVATED CONTROL VALVES WITH PUSH BUTTONS CONFIGURED TO FEED TWO LAVATORIES FED WITH FDA POLYETHYLENE TUBING AS INDICATED ON THE DRAWINGS, TOILET PAPER HOLDER, 1-1/2" REMOVABLE P-TRAP WITH THROUGH WALL EXTENSION, CLEANOUT TEE WITH 3" PLAIN WASTE INLET, 4" NO-HUB OUTLET WITH CLEANOUT PIN (EXTEND PIN TO 2" ABOVE FLOW LINE), PUNCHED OPENING FOR FLUSH VALVE BY OTHERS AND ANTI FLOOD CONTROL DEVICE WITH MANUAL RESET. INSTALL WITH WALL SLEEVE, 8" LONG FLUSH VALVE THROUGH WALL CONNECTION KIT TRIM: SLOAN "SLOAN" # 903-128-MBFW HYDRAULICALLY ACTUATED FLUSH VALVE WITH SWEAT ADAPTER KIT, WHEEL HANDLE STOP VALVE AND REAR ACCESS METAL BUTTON FIXTURE WALL ACTUATOR. INSTALL WHERE INDICATED ON THE DRAWINGS SUPPORTING TWO FIXTURES, WITH A HUBLESS 4" SANITARY CROSS.
CU2	SECURITY WATER CLOSET / LAVATORY COMBINATION; ACORN 1418-LJL-AL OR AR-2-BP-04-M-09-MA-2-FVBO-PH-LWE-PT-C01-FT-PC-SW 18" WIDE X 12" DEEP LAVATORY BOWL WITH RIGHT OR LEFT ANGLED 1.28 GALLON PER FLUSH WATER CLOSET BOWL, FLOOR MOUNTED, BACK OUTLET TYPE OF 1/4 GAUGE 304 STAINLESS STEEL WELDED CONSTRUCTION, # 4 FINISH, WITH PENAL BUBBLER WITH 0.5 GPM FLOW CONTROL, "AIR-TROL" HOT AND COLD AIR ACTIVATED CONTROL VALVES WITH PUSH BUTTONS CONFIGURED TO FEED TWO LAVATORIES FED WITH FDA POLYETHYLENE TUBING AS INDICATED ON THE DRAWINGS, TOILET PAPER HOLDER, 1-1/2" REMOVABLE P-TRAP WITH THROUGH WALL EXTENSION, CLEANOUT TEE WITH 3" PLAIN WASTE INLET, 4" NO-HUB OUTLET WITH CLEANOUT PIN (EXTEND PIN TO 2" ABOVE FLOW LINE), PUNCHED OPENING FOR FLUSH VALVE BY OTHERS AND ANTI FLOOD CONTROL DEVICE WITH MANUAL RESET. INSTALL WITH WALL SLEEVE, 8" LONG FLUSH VALVE THROUGH WALL CONNECTION KIT TRIM: SLOAN "SLOAN" # 903-128-MBFW HYDRAULICALLY ACTUATED FLUSH VALVE WITH SWEAT ADAPTER KIT, WHEEL HANDLE STOP VALVE AND REAR ACCESS METAL BUTTON FIXTURE WALL ACTUATOR. INSTALL WHERE INDICATED ON THE DRAWINGS SUPPORTING TWO FIXTURES, WITH A JOSAM # 15984 NO-HUB VERTICAL 90 DEGREE PRISON FITTING WITH 2" THREADED AUXILIARY INLET, 2" COMMON NO-HUB VENT AND ANCHOR FEET SECURELY BOLTED TO THE FLOOR.
CU3	ADA SECURITY WATER CLOSET / LAVATORY COMBINATION; ACORN 1440-LJL-AL OR RO-2-DMB-0P-09-MA-2-FVBO-PH-LWE-PT-C01-FT-PC-SW 18" WIDE X 12" DEEP LAVATORY BOWL WITH RIGHT OR LEFT ANGLED 1.28 GALLON PER FLUSH WATER CLOSET BOWL, FLOOR MOUNTED, BACK OUTLET TYPE OF 1/4 GAUGE 304 STAINLESS STEEL WELDED CONSTRUCTION, # 4 FINISH, WITH PENAL BUBBLER WITH 0.5 GPM FLOW CONTROL, "AIR-TROL" HOT AND COLD AIR ACTIVATED CONTROL VALVES WITH PUSH BUTTONS CONFIGURED TO FEED TWO LAVATORIES FED WITH FDA POLYETHYLENE TUBING AS INDICATED ON THE DRAWINGS, TOILET PAPER HOLDER, 1-1/2" REMOVABLE P-TRAP WITH THROUGH WALL EXTENSION, CLEANOUT TEE WITH 3" PLAIN WASTE INLET, 4" NO-HUB OUTLET WITH CLEANOUT PIN (EXTEND PIN TO 2" ABOVE FLOW LINE), PUNCHED OPENING FOR FLUSH VALVE BY OTHERS AND ANTI FLOOD CONTROL DEVICE WITH MANUAL RESET. INSTALL WITH WALL SLEEVE, 8" LONG FLUSH VALVE THROUGH WALL CONNECTION KIT TRIM: SLOAN "SLOAN" # 903-128-MBFW HYDRAULICALLY ACTUATED FLUSH VALVE WITH SWEAT ADAPTER KIT, WHEEL HANDLE STOP VALVE AND REAR ACCESS METAL BUTTON FIXTURE WALL ACTUATOR. INSTALL WHERE INDICATED ON THE DRAWINGS SUPPORTING TWO FIXTURES, WITH A HUBLESS 4" SANITARY CROSS.
DCV1	DOUBLE CHECK VALVE BACKFLOW PREVENTER; WATTS # LF0070T-S, MEETING ASSE 1015, LEAD FREE CAST BRONZE BODY, SCREW DRIVER SLOTTED TEST COCKS, QUARTER TURN BALL VALVES, AND STRAINER
DSB1	DOWNSPOUT NOZZLE; JAY R. SMITH # 1787-24, 24" LONG CAST IRON BODY WITH CAST IRON SECURING STRAPS, 4" ROUND INLET, 2" CLEANOUT PLUG, AND 4" DIAMETER OUTLET.
DSN	DOWNSPOUT NOZZLE; JAY R. SMITH # 1770T, CAST BRONZE BODY AND FLANGE, PROVIDE OUTLET SIZE AS SHOWN ON PLANS.
EC01	EXTERIOR CLEANOUT; JAY R. SMITH # 4261L, SERIES DUCCO CAST IRON DOUBLE FLANGED HOUSING WITH HEAVY DUTY SECURED SCORLATED CAST IRON COVER WITH LIFTING DEVICE AND CLEANOUT BODY WITH ABS PLASTIC PLUG WITH GASKET SEAL AND PUSH-ON JOINT. REFER TO SPECIFICATIONS FOR INSTALLATION.
EC02	EXTERIOR CLEANOUT (2-WAY); JAY R. SMITH # 4261L, SERIES DUCCO CAST IRON DOUBLE FLANGED HOUSING WITH HEAVY DUTY SECURED SCORLATED CAST IRON COVER WITH LIFTING DEVICE AND CLEANOUT BODY WITH ABS PLASTIC PLUG WITH GASKET SEAL, AND PUSH-ON JOINT. REFER TO SPECIFICATIONS FOR INSTALLATION.
EWC	ELECTRIC WATER COOLER (ADA ACCESSIBLE); ELKAY # EZ218C WALL-MOUNTED, LEAD FREE, BARRIER FREE, DUAL-LEVEL, FRONT AND REAR PUSH ACTUATOR BARS, STAINLESS STEEL BOWL, FLEXIBLE POLYESTER ELASTOMER SAFETY BUBBLER AND GALVANIZED STEEL FRONT AND SIDES, CHILLER WITH 80 GALLONS PER HOUR CAPACITY, 50 F DRINKING WATER AT 80 F INLET TEMPERATURES 90 F ROOM TEMPERATURE. TRIM: MCGUIRE # LF2165CC LEAD FREE BRASS COMPRESSION ANGLE STOP VALVE WITH RISER AND ESCUTCHEON, MCGUIRE # B8912CF 1-1/2" 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP AND WASTE ARM WITH CLEANOUT PLUG AND ESCUTCHEON, AND SUITABLE CARRIER WITH STANCHIONS TO FLOOR. ELECTRICAL REQUIREMENTS: 120 VOLT, 4 FULL LOAD AMPS.
FC1	FLEXIBLE CONNECTOR; UNITED FLEXIBLE #48X1, 3" x 12" LONG CORRUGATED 316L STAINLESS STEEL BELLOW AND 304 STAINLESS STEEL SINGLE BRAID WITH CLASS 150 STAINLESS STEEL WELDED PLATE FLANGE ON EACH PIPE WITH A MAXIMUM OPERATING PRESSURE OF 250 PSI.
FCO	FLOOR CLEANOUT; JAY R. SMITH, CAST IRON BODY, FLASHING FLANGE WITH CLAMPING COLLAR, ABS PLUG, AND ADJUSTABLE, ROUND, SECURED, NICKEL BRONZE TOP # 4931L (F-C), SCORLATED TOP FOR EXPOSED, FLUSH WITH FINISHED FLOOR, APPLICATIONS: # 4931L (F-C-Y), STAINLESS STEEL MARKER FOR INSTALLATION IN CARPETED FLOOR AREAS, # 4151 (F-C), 1/8" RECESS FOR INSTALLATION IN TILED FLOOR AREAS, # 4191 (F-C), 1/2" RECESS FOR INSTALLATION IN TERRAZZO AND SIMILAR Poured FLOOR AREAS) REFER TO SPECIFICATIONS FOR INSTALLATION.
FCOH	FLOOR CLEANOUT; HEAVY DUTY; JAY R. SMITH #4111L CAST IRON BODY, FLASHING FLANGE WITH CLAMPING COLLAR, ABS PLUG, AND ADJUSTABLE, ROUND, SECURED, HEAVY DUTY SCORLATED NICKEL BRONZE TOP. REFER TO SPECIFICATIONS FOR INSTALLATION.
FCV1	FLOW CONTROL VALVE; FLOW/DESIGN # ICSS "AUTOFLOW", SERIES 300 STAINLESS UNION BODY WITH NICKEL PLATED UNION NUT, STAINLESS STEEL PRESSURE COMPENSATING CARTRIDGE, MEETING NSF # 1 ANNEX G, NAMEPLATE AND 1/2" VALVE BODY SIZE UNLESS SHOWN OTHERWISE ON PLANS. PROVIDE 0.5 GPM FLOW RATE CARTRIDGE UNLESS SHOWN OTHERWISE ON PLANS.
FD1	FLOOR DRAIN; JAY R. SMITH # 2005(A)-LN-6, CAST IRON BODY AND CLAMPING COLLAR, ADJUSTABLE 6" ROUND NICKEL BRONZE STRAINER AND VANDAL PROOF SCREWS. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS. TRAP SEAL, PROVIDE TRAP SEAL PER SPECIFICATIONS FOR ACTUAL FLOOR DRAIN MODEL AND SIZE.
FD2	FLOOR DRAIN; ZURN FDD255 SHOWER DRAIN, PVC BODY, CLAMP COLLAR WITH ADJUSTABLE PVC HEAD AND STAINLESS STEEL STRAINER. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS.
FD3	FLOOR DRAIN; WILLOUGHBY # LRFD SERIES, CAST IRON BODY AND CLAMPING COLLAR, NIKALOY ADJUSTABLE HOUSING, 6" ROUND STAINLESS STEEL LIGATURE-RESISTANT STRAINER AND VANDAL PROOF PIN TORX SCREWS. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS WITH DEEP SEAL TRAP.

### PLUMBING FIXTURE SCHEDULE

PLUMBING PLAN MARK	DESCRIPTION
FFD	FLUSHING FLOOR DRAIN; WILLOUGHBY #RD-1400-WF-EPV-WMS14" DIAMETER, 14 GAUGE, 304 STAINLESS STEEL FLOOR DRAIN WITH INTEGRAL P-TRAP WITH 3" NO-HUB CONNECTION, 1-1/2" COLD WATER FLUSH CONNECTION, 7 GAUGE STAINLESS STEEL FLUSH GRATE WITH 1/2" WIDE ELONGATED HOLES.
FS1	FLOOR SINK; JAY R. SMITH # 3111L (L2), 6" DEEP CAST IRON BODY WITH ACID RESISTING ENAMELED INTERIOR, ANCHOR FLANGE WITH SEEPAGE HOLES, CLAMP COLLAR, ALUMINUM SEDIMENT BUCKET, AND 12" SQUARE NICKEL BRONZE RIM AND HALF GRATE. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS.
FS2	FLOOR SINK; JAY R. SMITH # 3131L (L2), 10" DEEP CAST IRON BODY WITH ACID RESISTING ENAMELED INTERIOR, ANCHOR FLANGE WITH SEEPAGE HOLES, CLAMP COLLAR, WHITE ABS SEDIMENT BUCKET, AND 12" SQUARE NICKEL BRONZE RIM AND HALF GRATE. USE PUSH-ON JOINT OF OUTLET SIZE AS SHOWN ON PLANS.
GI	GREASE INTERCEPTOR; GREENTURTLE PROCEPTOR GMC 1000 FIBERGLASS REINFORCED PLASTIC BODY, SINGLE BAFFLE DESIGN, 1000 GALLON CAPACITY AND RATED FOR 577 GALLONS OF GREASE STORED, WITH (1) 24" GASKETED, AASHO H-20 LOAD RATED COVER WITH EXTENSIONS, TRAPPED INLET AND OUTLET AND (2) 3" VENT CONNECTIONS, EXTEND CLEANOUTS TO GRADE, UNIT SHALL INCLUDE 30 YEAR WARRANTY AGAINST LEAKS AND STRUCTURAL FAILURE.
HD1	HUB DRAIN FLOOR SINK; JAY R. SMITH # 3811T (D8), 7" DEEP X 6" DIAMETER CAST IRON BODY WITH ACID RESISTING ENAMELED INTERIOR AND EXTERIOR FUNNEL WITH 2" CAST IRON SCREWED OUTLET, SCREWED, HUBLESS ADAPTER, HUBLESS CAST IRON P-TRAP AND ALUMINUM DOME BOTTOM STRAINER.
IMB	FIRE RATED ELEC MAKER BOX; GUY GRAY MODEL # FRM12126DS, ASTM E814 LISTED, WHITE POWDER COAT ON COLD ROLLED STEEL BOX WITH TWO INTUMESCENT PADS AT EACH END, BOTTOM INLET WATER SUPPLY WITH 1/2" x 1/4" LEAD FREE COMPRESSION ANGLE STOP VALVE. TRIM: LOOP 4 FEET OF 1/4" TYPE "K" SOFT COPPER TUBING.
IMB1	ICE MAKER BOX; GUY GRAY MODEL # B1M75, 20 GAUGE GALVANIZED STEEL BOX, 18 GAUGE 3/4" FACE PLATE, BOTTOM INLET WATER SUPPLY WITH 1/2" x 1/4" COMPRESSION ANGLE STOP VALVE. TRIM: LOOP 4 FEET OF 1/4" TYPE "K" SOFT COPPER TUBING.
JS1	JANITORS SINK; STERN WILLIAMS # MTS-24X, 24" X 24" X 10" HIGH TERRAZZO BASIN WITH INTEGRAL STAINLESS STEEL DRAIN BODY.
LCV1	WALL MOUNTED LAVATORY (ADA ACCESSIBLE); AMERICAN STANDARD # 485.012 "LUCIFER", 30-1/2" X 15-1/4" RECTANGULAR WALL MOUNTED WHITE VITREOUS CHINA FIXTURE WITH FAUCET LEDGE AND FRONT OVERFLOW.
LV1	WALL MOUNTED LAVATORY (ADA ACCESSIBLE); AMERICAN STANDARD # 485.012 "LUCIFER", 30-1/2" X 15-1/4" RECTANGULAR WALL MOUNTED WHITE VITREOUS CHINA FIXTURE WITH FAUCET LEDGE AND FRONT OVERFLOW.
MBV	MOTORIZED BALL VALVE; LINE SIZED APOLLO # 82L-200, THREE PIECE LEAD-FREE BODY, SWEAR ENDS, FULL PORT BRASS BALL WITH APOLLO MOTORIZED ACTUATOR OR A200107, PERMANENTLY LUBRICATED GEAR TRAIN AND BEARINGS, 2 SPOT SWITCHES, NEMA 4 ENCLOSURE, POSITION TRANSMITTER AND # 7813201 STAINLESS STEEL MOUNTING KIT. ELECTRICAL REQUIREMENTS: 120 VOLT SINGLE PHASE POWER SUPPLY, 1 FLA.
NW1	NON-FREEZE WALL HYDRANT; PRIER PRODUCTS # C-34N1X1, SATIN NICKEL PLATED BRASS, 1" MALE INLET BY 3/4" FEMALE INLET, 3/4" THREADED HOSE CONNECTION, LOOSE KEY HANDLE, HYDRANT LENGTH AS REQUIRED FOR INSTALLED WALL THICKNESS, ADJUSTABLE WALL CLAMP, BRASS BODY WITH SATIN NICKEL PLATED FINISH AND INTEGRAL ASSE 1052 DOUBLE CHECK VACUUM BREAKER.
ORD1	OVERFLOW ROOF DRAIN; JAY R. SMITH # 1330Y (C-R-CID-WD-02), 8-1/2" DIAMETER CAST IRON BODY, FLASHING CLAMP, GRAVEL STOP, UNDERDECK CLAMP, SUMP RECEIVER, HUBLESS OUTLET, AND CAST IRON DOME BOLTED OR LOCKED DOWN. PROVIDE OUTLET SIZE AS SHOWN ON PLANS.
PWF	PRISON WASTE FITTING; CHARLOTTE PIPE AND FOUNDRY; # NH 502, 4" WITH PAT. CAST IRON MEETING STANDARDS CISPI 301, ASTM A88 AND BEARING CISPI AND ASTM TRADEMARKS, 4" NO-HUB PRISON FITTING WITH 2" TOP VENT, INTERIOR BAFFLE TO PREVENT PASSAGE OF CONTRABAND BETWEEN CELLS AND TAPPING BOSS FOR CLEANOUT ACCESS.
RD1	ROOF DRAIN; JAY R. SMITH # 1330Y (C-R-CID), 8-1/2" DIAMETER CAST IRON BODY, FLASHING CLAMP, GRAVEL STOP, UNDERDECK CLAMP, SUMP RECEIVER, HUBLESS OUTLET, AND CAST IRON DOME BOLTED OR LOCKED DOWN. PROVIDE OUTLET SIZE AS SHOWN ON PLANS.
RH	ROOF NON-FREEZE POST HYDRANT; MAPA PRODUCTS # MHP-24PF FREEZE PROOF POST HYDRANT MEETING ASSE #1057 WITH BLACK POWDER COATED CAST ALUMINUM WEATHER-GUARD DOME HANDLE, STAINLESS STEEL SHROULD WITH WELDED STAINLESS STEEL FLANGE, UNDER DECK CLAMP, BRONZE GLOBE ANGLE VALVE, 3/4" HOSE CONNECTION, QUICK DISCONNECT WITH BUILT-IN VACUUM BREAKER, STAINLESS STEEL RESERVOIR.
RP21	REDUCED PRESSURE ZONE BACKFLOW PREVENTER; WATTS # LF090T-S, MEETING ASSE 1013, LEAD FREE CAST BRONZE BODY, QUARTER TURN TEST COCKS, QUARTER TURN BALL VALVES, BRONZE STRAINER, AND # 909AG AIR GAP FITTING.
SG	SEWAGE GRINDER; JWC ENVIRONMENTAL MODEL 1000Z "MUFFIN MONSTER", GRINDER SUITABLE FOR 80 GPM, GRINDER/TACK WITH ALLOY STEEL CUTTERS, GREEN EPOXY COATED DUCTILE IRON ENH HOUSING AND HIGH FLOW SIDE RAIS, 304 STAINLESS STEEL GUIDE RAILS AND LIFT BALL CONTROLLER. JWC ENVIRONMENTAL #FC2200 STANDARD MOTOR ENCLOSURE IN NEMA 4X IN FIBERGLASS ENCLOSURE ACCEPTING 480V-3-60 INPUT POWER, INCLUDE REC STARTER WITH OVER CURRENT PROTECTION, JAM SENSING CURRENT TRANSFORMER AND MICRO PLC ELECTRICAL REQUIREMENTS: 480V-3-60, 2HP.
SK1	SINK; ELKAY # LR-1517-2, 15" x 17-1/2" x 7-1/2" DEEP, SINGLE COMPARTMENT, SELF-RIMMING, 18 GAUGE TYPE 302 STAINLESS STEEL, FIXTURE WITH FAUCET LEDGE. SET IN BED OF PUTTY. FAUCET: CHICAGO FAUCET # 895-207589AB 4" CENTERSET LEAD FREE FAUCET WITH VANDAL RESISTANT # 317 WRISTBLADE HANDLES, G1/4" GOOSENECK SPOUT, # E38VP 1.5 GPM VANDAL RESISTANT, LAMINAR FLOW AERATOR, QUARTER TURN CERAMIC CARTRIDGES. TRIM: MCGUIRE # LF2165CC LEAD FREE BRASS WHEEL HANDLE ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, MCGUIRE # 151M CUP STRAINER WITH 1-1/2" 17 GAUGE TAILPIECE, MCGUIRE # B8912CF 1-1/2" 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP WITH BRASS CLEANOUT AND ESCUTCHEON.

### PLUMBING FIXTURE SCHEDULE

PLUMBING PLAN MARK	DESCRIPTION
SK2	SINK (ADA ACCESSIBLE); ELKAY # LRAD-3310S-5.3, 33" x 19-1/2" x 5-1/2" DEEP, DOUBLE COMPARTMENT, SELF-RIMMING, 18 GAUGE TYPE 302 STAINLESS STEEL, FIXTURE WITH FAUCET LEDGE. SET IN BED OF PUTTY. FAUCET: CHICAGO FAUCET # 201-214914AB 8" SPREAD LEAD FREE FAUCET WITH VANDAL RESISTANT # 317 WRISTBLADE HANDLES, L9 SWING SPOUT, # E38VP 1.5 GPM VANDAL RESISTANT, LAMINAR FLOW AERATOR, QUARTER TURN CERAMIC CARTRIDGES. TRIM: MCGUIRE # LF2165CC LEAD FREE BRASS WHEEL HANDLE ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, (2) MCGUIRE # 151M CUP STRAINERS WITH 1-1/2" 17 GAUGE TAILPIECE, MCGUIRE # 111C1917 1-1/2" 17 GAUGE CONTINUOUS WASTE, MCGUIRE # B8912CF 1-1/2" 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP WITH BRASS CLEANOUT AND ESCUTCHEON, AND PLUMBEREX # EC03061 KITCHEN END OUTLET AND P-TRAP INSULATION KIT AND # X-4112 VALVE AND # X-4222 INSULATION KIT FOR WATER AND WASTE PIPES.
SK3	SINK (ADA ACCESSIBLE); ELKAY # LRAD-1517-2, 15" x 17-1/2" x 5-1/2" DEEP, SINGLE COMPARTMENT, SELF-RIMMING, 18 GAUGE TYPE 302 STAINLESS STEEL, FIXTURE WITH FAUCET LEDGE. SET IN BED OF PUTTY. FAUCET: CHICAGO FAUCET # 895-201199AB 4" CENTERSET LEAD FREE FAUCET WITH VANDAL RESISTANT # 317 WRISTBLADE HANDLES, G1/4" GOOSENECK SPOUT, # E38VP 1.5 GPM VANDAL RESISTANT, LAMINAR FLOW AERATOR, QUARTER TURN CERAMIC CARTRIDGES. TRIM: MCGUIRE # LF2165CC LEAD FREE BRASS WHEEL HANDLE ANGLE STOP VALVES WITH RISERS AND ESCUTCHEONS, MCGUIRE # 151M CUP STRAINER WITH 1-1/2" 17 GAUGE TAILPIECE, MCGUIRE # B8912CF 1-1/2" 17 GAUGE CAST CHROME PLATED BRASS ADJUSTABLE P-TRAP WITH BRASS CLEANOUT AND ESCUTCHEON, PLUMBEREX "PRO-EXTREME" # X-4222 INSULATION KIT FOR WATER AND WASTE PIPES.
SO1	OIL INTERCEPTOR; GREENTURTLE PROCEPTOR GMC 1500, FIBERGLASS REINFORCED PLASTIC BODY, SINGLE BAFFLE DESIGN, 1500 GALLON CAPACITY AND RATED FOR 819 GALLONS OF GREASE STORED, WITH (1) 24" GASKETED, AASHO H-20 LOAD RATED COVER WITH EXTENSIONS, TRAPPED INLET AND OUTLET AND (2) 3" VENT CONNECTIONS, EXTEND CLEANOUTS TO GRADE, UNIT SHALL INCLUDE 30 YEAR WARRANTY AGAINST LEAKS AND STRUCTURAL FAILURE.
SV1	SHOWER VALVE (ADA ACCESSIBLE); SYMONS # 806EXLR, PISTON TYPE PRESSURE BALANCING MIXING VALVE WITH BRASS STEM, MEETING ASSE 1016P, SINGLE BLADE LEVER HANDLE, SET ADJUSTABLE LIMIT STOP SCREW TO 10P, INTEGRAL SERVICE STOPS, DIVERTER VALVE, [1.5 GPM] (2 GPM) "CLEAR-FLD" SHOWER HEAD WITH ARM AND FLANGE, [1.5 GPM] (2 GPM) WALL-HAND SHOWER WITH FLEXIBLE METAL HOSE, IN-LINE VACUUM BREAKER, WALL CONNECTION AND FLANGE, AND 30" SLIDE BAR.
SV2	SECURITY SHOWER VALVE; ACORN # 1741-03-M-PY-RD, "PENAL-PAK", 14 GAUGE, TYPE 304 STAINLESS STEEL WALL SHOWER AND PANEL, STAINLESS STEEL OR CHROME-PLATED TRIM, PNEUMATICALLY AIR-CONTROLLED METERING VALVE CONFORMING TO NSF61, NON-HOLD OPEN TYPE PUSHBUTTON, 2.5 GPM VANDAL RESISTANT PNEUMATIC SHOWERHEAD WITH LOCKABLE UNIVERSAL BALL JOINT AND RECESSED SOAP DISH.
SV3	SECURITY SHOWER VALVE (ADA ACCESSIBLE); ACORN # 1741-04-PY-PSO-RD, "PENAL-PAK", 14 GAUGE, TYPE 304 STAINLESS STEEL WALL SHOWER AND PANEL, FRONT ACCESS, STAINLESS STEEL OR CHROME-PLATED TRIM, PNEUMATICALLY AIR-CONTROLLED METERING VALVE CONFORMING TO NSF61, NON-HOLD OPEN TYPE PUSHBUTTON, 2.5 GPM VANDAL RESISTANT PNEUMATIC SHOWERHEAD WITH LOCKABLE UNIVERSAL BALL JOINT HANDLED SHOWER WITH VACUUM BREAKER, QUICK DISCONNECT WITH POSITIVE SHUT-OFF AND MOUNTING BRACKET AND RECESSED SOAP DISH.
TD1	TRENCH DRAIN; ZURN # Z886-HDE1-U4-GDE-USA, 6-3/4" WIDE HIGH DENSITY POLYETHYLENE STRUCTURAL COMPOSITE TRENCH DRAIN WITH GALVANIZED STEEL SLOTTED CLASS E GRATE, CUT IN 20' SECTIONS FOR REQUIRED LENGTH AS SHOWN ON FLOOR PLAN, PROVIDE WITH END CAPS AND 4" BOTTOM OUTLET. INSTALL PER MANUFACTURER'S RECOMMENDATIONS.
TMV1	THERMOSTATIC MIXING VALVE; POWERS # LFE480, SOLID LEAD FREE BRASS BODY, THERMOSTATIC WAX ELEMENT, CORROSION RESISTANT INTERNAL PARTS, AND INTEGRAL CHECKS, ASSE 1070 COMPLIANT, CAPABLE OF 2.2 GPM WITH A 20 PSI DIFFERENTIAL AND A MINIMUM FLOW RATE OF 0.5 GPM. SET TEMPERATURE TO 110F FOR DUEL TEMPERATURE LAVATORIES AND HAND SINKS, 100F FOR SINGLE TEMPERATURE LAVATORIES AND HAND SINKS, AND 120F FOR SINKS. MOUNT BELOW THE PLUMBING FIXTURE WHERE INDICATED ON PLANS.
TMV2	THERMOSTATIC MIXING VALVE; POWERS # LFLM491-2, SOLID LEAD FREE BRASS BODY WITH 3/4" SWEAT CONNECTIONS, CORROSION RESISTANT INTERNAL PARTS, AND CHECK VALVES, ASSE 1071 COMPLIANT, CAPABLE OF 7.6 GPM WITH A 5 PSI DIFFERENTIAL AND A MINIMUM FLOW RATE OF 0.5 GPM. SET MAXIMUM TEMPERATURE TO 110F.
UR1	URINAL (ADA ACCESSIBLE); AMERICAN STANDARD # 6661 017 "TRIMBROOK" WHITE VITREOUS CHINA FIXTURE WITH FLASHING RIM, 3/4" TOP SPRUD, AND SIPHON FLUSH ACTION. VALVE; SLOAN "OPTIMA" - 510N MODEL # 186 ES-TMO 1.0 GALLON PER FLUSH EXPOSED, CHROME-PLATED, HARD WIRE, WALL MOUNTED SENSOR OPERATED, DIAPHRAGM TYPE, FLUSH VALVE LESS TRANSFORMER WITH CHLORAMINE RESISTANT DIAPHRAGM AND PROTECTED ORIFICE, MECHANICAL OVERRIDE BUTTON, ESCUTCHEON, INTEGRAL SCREWDRIVER STOP, VACUUM BREAKER, 3/4" FLUSH TUBE, AND SWEAT ADAPTER KIT.
WC1	FLOOR-MOUNTED WATER CLOSET; AMERICAN STANDARD # 2234 001 "MADERA" WHITE VITREOUS CHINA FIXTURE WITH ELONGATED UNIVERSAL BOWL AND DIRECT-FED SIPHON JET ACTION. VALVE; SLOAN "SLOAN" # 1111-6 GALLON PER FLUSH EXPOSED CHROME-PLATED DIAPHRAGM TYPE FLUSH VALVE WITH CHLORAMINE RESISTANT DIAPHRAGM AND PROTECTED ORIFICE, OSCILLATING ADA COMPLIANT HANDLE, ESCUTCHEON, INTEGRAL SCREWDRIVER STOP WITH VANDAL RESISTANT CAP, VACUUM BREAKER, AND SWEAT ADAPTER KIT. TRIM: SUITABLE CARRIER WITH STANCHIONS TO FLOOR.
WC2	FLOOR-MOUNTED WATER CLOSET (ADA ACCESSIBLE); AMERICAN STANDARD # 304 001 "MADERA" WHITE VITREOUS CHINA FIXTURE WITH ELONGATED UNIVERSAL BOWL AND DIRECT-FED SIPHON JET ACTION. VALVE; SLOAN "SLOAN" # 1111-6 GALLON PER FLUSH EXPOSED CHROME-PLATED DIAPHRAGM TYPE FLUSH VALVE WITH CHLORAMINE RESISTANT DIAPHRAGM AND PROTECTED ORIFICE, OSCILLATING ADA COMPLIANT HANDLE, ESCUTCHEON, INTEGRAL SCREWDRIVER STOP WITH VANDAL RESISTANT CAP, VACUUM BREAKER, AND SWEAT ADAPTER KIT. INSTALL FLUSH VALVE HANDLE ON THE WIDE SIDE OF THE STAL. TRIM: CHURCH # 9500SSCT WHITE OPEN-FRONT COURED, SOLID PLASTIC, HEAVY DUTY, SEAT LESS COVER WITH SELF-SUSTAINING CHECK HINGES AND STAINLESS STEEL BOLTS.
WCO	WALL CLEANOUT; JAY R. SMITH # 4530S, CAST IRON CLEANOUT TEE, COUNTER SUNK PLUG, STAINLESS STEEL ROUND COVER AND SCREW, AND IRON PLUG WITH GASKET SEAL. REFER TO SPECIFICATIONS FOR INSTALLATION.
WF1	WATER FILTER; CUNO # CF86112-S, 1 MICRON GRADED DENSITY CARBON FIBER, SCALE INHIBITOR, 3/8" CONNECTIONS, ONE QUICK CHANGE CARTRIDGE, AUTOMATIC SHUT-OFF VALVE, AND 1.5 GPM MAXIMUM FLOW RATE.
WHA	WATER HAMMER ARRESTER; PRECISION PLUMBING PRODUCTS, HARD DRAWN COPPER BODY WITH WROUGHT COPPER FITTINGS, PISTON TYPE WITH LUBRICATED EPDM O-RING SEALS, MEETING ASSE 1010 OR PDI WH-201, PROVIDE PDI SIZES "A" THROUGH "F" AS SHOWN ON PLANS. PROVIDE SIZE "A" UNLESS SHOWN OTHERWISE ON THE PLANS.



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PLUMBING SCHEDULES  
**P500**

SCOTT A. WALTER

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**DOMESTIC BOOSTER PUMP SCHEDULE**

MARK	SERVICE	MANUFACTURER / MODEL #	TYPE NOTE A	DISCHARGE HEADER PRESSURE (PSI)	SUCTION HEADER PRESSURE (PSI)	NUMBER OF PUMPS	SYSTEM FLOW RATE (GPM)	INDIVIDUAL PUMP CAPACITY	SUCTION HEADER SIZE (IN.)	DISCHARGE HEADER SIZE (IN.)	ELECTRICAL DATA (NOTE B)			ACCUMULATOR TANK SIZE (GAL.)	WEIGHT (LBS)	NOTES
											VOLTS	PHASE	HP			
BP	DOMESTIC BOOSTER	GRUNDFOS CRE 10-4	T	53	14	3	146	35%	3	3	480	3	3	40		C, D, E

NOTES:  
 A. BOOSTER PUMP CONFIGURATION TYPES: T-VFD = TRIPLEX W/ VARIABLE FREQUENCY DRIVE FOR EACH VERTICAL MULTI-STAGE PUMP (GRUNDFOS CRE 10-4). REFER TO SPECIFICATIONS FOR MORE INFORMATION.  
 B. MOTOR HORSEPOWER SHOWN IS FOR ONE PUMP.  
 C. PROVIDE WITH CONTROL PANEL. REFER TO SPECIFICATIONS FOR MORE INFORMATION.  
 D. MINIMUM DISCHARGE HEADER PRESSURE IS 53 PSI.  
 E. PROVIDE PUMPS WITH SCHEDULED DESIGN FLOW RATE WITH TOTAL DYNAMIC HEAD = DISCHARGE PRESSURE - SUCTION PRESSURE + 2PSI FOR SYSTEM LOSSES.

**WATER HEATER GAS COPPER FIN TUBE SCHEDULE**

MARK	MANUFACTURER/ MODEL #	AREA SERVED	INPUT MBH	ELECTRICAL REQUIREMENTS			THERMAL EFFICIENCY (%)	RECOVERY (GPH)	WEIGHT (LBS)	NOTES
				VOLTS	PHASE	FLA				
WHG1	LOCHINVAR #AVN2D1PM	JAIL	201	120	1	4.7	96	234	185	A, B, C, D

NOTES:  
 A. 100° TEMPERATURE RISE WITH 140°F OPERATING TEMPERATURE.  
 B. FURNISHED WITH FACTORY ALL-BRONZE CIRCULATION PUMP.  
 C. ULTRA LOW NOx TYPE - RESIDUAL NOx IS LESS THAN 14 ng / joule. COMPLIES WITH SCAQMD RULE 1146.2  
 D. PROVIDE WITH CONDENSATE NEUTRALIZATION KIT TO MATCH HEATER INPUT.

**GAS STORAGE WATER HEATER SCHEDULE**

MARK	MANUFACTURER/ MODEL #	AREA SERVED	TANK SIZE (GALLONS)	INPUT MBH	ELECTRICAL DATA			RECOVERY (GPH)	WEIGHT (LBS)	NOTES
					VOLTS	PHASE	FLA			
WHG2	A.O. SMITH # BTH-120	OFFICER AREA	60	120	1	5	154	970	A, B, C	
WHG3	A.O. SMITH # BTH-150	KITCHEN/BOOKING	100	150	1	5	198	1353	A, B, C	

NOTES:  
 A. 90° TEMPERATURE RISE WITH 140°F OPERATING TEMPERATURE.  
 B. AUTOMATIC FLUE DAMPER INTERLOCKED WITH WATER HEATER FIRE CONTROL.  
 C. FURNISH WITH CONDENSATE NEUTRALIZATION KIT TO MATCH HEATER INPUT, AO SMITH # CNS SERIES.

**EXPANSION TANK SCHEDULE**

MARK	MANUFACTURER / MODEL #	TANK SIZE (GALLONS)	MIN. ACCEPTANCE VOLUME (GALLONS)	AIR PRESSURE SETTING (PSI)	SERVICE	WEIGHT (LBS)	NOTES
ET2	AMTROL ST-12	4.4	1.96	40	WHG2	46	A
ET3	AMTROL ST-25V	10.3	4.64	40	WHG3	110	A

NOTES:  
 A. CHARGE TANK WITH AIR TO IDENTICAL PRESSURE AS STATIC DOMESTIC WATER PRESSURE.

**RECIRCULATION PUMP SCHEDULE**

MARK	MANUFACTURER / MODEL #	LOCATION	GPM	HEAD (FT.)	CONNECTION SIZE	IMPELLER SIZE (IN.)	ELECTR.			NOTES
							VOLTS	PHASE	HP	
RP1	BELL & GOSSETT # NBF-12U	WHG2	1	7	3/4"	N/A	120	1	1/18	A, B, C, D
RP2	BELL & GOSSETT # NBF-12U	WHG3	1	11	3/4"	N/A	120	1	1/18	A, B, C, D
RP3	BELL & GOSSETT # NBF-22U	WHG1	2.5	13	3/4"	N/A	120	1	1/18	A, B, C, D

NOTES:  
 A. ALL LEAD FREE CAST BRONZE BOOSTER.  
 B. PROVIDE WITH STRAINER UPSTREAM OF PUMP.  
 C. PROVIDE ADJUSTABLE, SURFACE MOUNTED AQUASTAT - HONEYWELL L6006C.  
 D. SET AQUASTAT TO SHUT OFF RECIRCULATION PUMP AT WATER HEATER SET POINT AND ON AT 10° BELOW SET POINT.

**HOT WATER STORAGE TANK SCHEDULE**

MARK	MANUFACTURER/ MODEL #	AREA SERVED	TANK SIZE (GALLONS)	WEIGHT (LBS)	NOTES
ST1	LOCHINVAR # RGA0257	JAIL	257	2960	A, B, C, D

NOTES:  
 A. REFER TO SPECIFICATIONS FOR MORE INFORMATION.  
 B. 150# ASME TANK.  
 C. VERTICAL TANK.  
 D. WITH FACTORY PROVIDED INSULATION AND METAL JACKET.

**WATER PIPE SIZING CHART (IPC) BRANCHES**

FIXTURE UNITS VS. PRESSURE LOSS										
IN PSI / 100 FEET FOR TYPE "L" COPPER TUBE										
PIPE SIZE	COLD WATER @ 4.00 PSI / 100'					HOT WATER @ 4.0 PSI / 100'				
	INTERNAL DIAMETER	FLUSH TANK SFU	FLUSH VALVE SFU	VELOCITY FEET / SEC	FLOW GPM	FLUSH TANK SFU	VELOCITY FEET / SEC	FLOW GPM		
1/2"	0.545	0.7	N/A	2.9	2.1	-	-	-		
3/4"	0.785	2.3	N/A	3.7	5.5	-	-	-		
1"	1.025	6.4	N/A	4.4	11.1	-	-	-		
1-1/4"	1.265	19.6	6.8	5.0	19.4	-	-	-		
1-1/2"	1.505	55.6	14.6	5.5	30.7	4.5	5	27.7		
2"	1.985	193.1	87.8	6.6	63.6	120.9	5	48.2		
2-1/2"	2.465	439.3	323.5	7.6	112.4	246.8	5	74.3		
3"	2.945	749.1	697.3	8.0	169.8	426	5	106.1		
4"	3.905	1764.4	1764.4	8.0	296.6	859.4	5	186.6		
6"	5.845	5269.9	5269.9	8.0	669.0	2859.7	5	418.1		
8"	7.725	10143.1	10143.1	8.0	1168.6	5653.3	5	730.3		

SIZED WITH HAZEN WILLIAMS CONSTANT "C" = 130 "UTILIZE COLD WATER SIZING CHART"

**PLUMBING FIXTURE CONNECTION SCHEDULE**

FIXTURE	COLD WATER	HOT WATER	WASTE	VENT
WATER CLOSET (FV)	1-1/4" (NOTE 1)	-	4"	2"
URINAL	3/4" (NOTE 2)	-	2"	2"
LAVATORY/HAND SINK	1/2"	1/2"	2"	1-1/2"
DRINKING FOUNTAIN	1/2"	-	2"	1-1/2"
JANITOR'S SINK	1/2"	1/2"	3"	2"
FLOOR DRAIN	-	-	4"	2"
TRENCH DRAIN	-	-	4"	2"
SINK	1/2"	1/2"	2"	1-1/2"

NOTES:  
 PIPE SIZES SHOWN ARE MINIMUM AND ARE FOR INDIVIDUAL SERVICE PIPE SIZES.  
 NOTE 1) PROVIDE 1-1/4" CW TO FLUSH VALVE. REDUCE TO 1" PRIOR TO CONNECTING TO FLUSH VALVE INLET AT INSIDE OF WALL.  
 NOTE 2) PROVIDE 1" CW TO FLUSH VALVE. REDUCE TO 3/4" PRIOR TO CONNECTING TO FLUSH VALVE INLET AT INSIDE OF WALL.

**TOTAL CONNECTED NATURAL GAS LOAD**

MECHANICAL EQUIPMENT DESIGNATION	DESCRIPTION	CFH (EACH)
UH1	UNIT HEATER	150
UH2	UNIT HEATER	60
RTU1	ROOF TOP UNIT	600
RTU2	ROOF TOP UNIT	200
RTU3	ROOF TOP UNIT	200
MUA1	MAKEUP AIR UNIT	150
WHG1	WATER HEATER	199.9
WHG2	WATER HEATER	120
WHG3	WATER HEATER	150
DRYER	LAUNDRY DRYER	175
TOTAL =		2004.9

TOTAL CONNECTED LOAD = 2004.9  
 NATURAL GAS SYSTEM OPERATING PRESSURE: 2 PSI  
 NATURAL GAS SYSTEM SIZED WITH TOTAL DEVELOPED LENGTH FROM GAS METER TO MOST REMOTE PIECE OF EQUIPMENT: 285 FEET  
 SYSTEM DESIGN PRESSURE DROP: 1 PSI

**GAS PRESSURE REGULATOR SCHEDULE FOR 2 PSI SYSTEMS**

MARK	MANUFACTURER	MODEL	VALVE TYPE	VALVE BODY SIZE (INCHES)	MAX. FLOW RATE (CFH)	INLET PRESSURE (PSI)	OUTLET PRESSURE (INCHES WATER COLUMN)	SERVICE	NOTES
GPR1	PIETRO-FIORENTINI	31052	C	3/4"	660	1	7"	UH1, UH2, MUA1, DRYER	A, B, D, E, F, G, H & I
GPR2	PIETRO-FIORENTINI	31151	C	3/4"	1,421	1	7"	WHG2, WHG3	A, B, D, E, F, G, H & I
GPR3	PIETRO-FIORENTINI	31053	C	1"	893	1	7"	RTU2, RTU3	A, B, D, E, F, G, H & I
GPR4	PIETRO-FIORENTINI	31152	C	1"	1,786	1	7"	WHG1	A, B, D, E, F, G, H & I
GPR5	PIETRO-FIORENTINI	31153	C	1-1/4"	3,735	1	7"	RTU1	A, B, D, E, F, G, H & I

NOTES:  
 A. C = SELF CONTAINED "DIRECT ACTING" DIAPHRAGM TYPE WITH INTERNAL VENT LIMITER.  
 B. DROOP = 1" WATER COLUMN MAXIMUM.  
 C. DROOP = 2" WATER COLUMN MAXIMUM.  
 D. 65# ALUMINUM BODY, SCREWED CONNECTIONS AND OVERPRESSURE PROTECTION TO 25 PSI.  
 E. MAXIMUM FLOW RATE SCHEDULED. MATCH BODY SIZE AND MAXIMUM FLOW RATE TO EQUIPMENT FLOW RATE. REFER TO EQUIPMENT SHOP DRAWINGS FOR EXACT LOADS.  
 F. LISTED TO MEET ANSI Z21.80 / CSA 6.22 WITH CSA LISTING STAMP ON REGULATOR BODY.  
 G. GAS PRESSURE REGULATOR INLET PRESSURE = OPERATING PRESSURE - DESIGN FRICTION LOSS.  
 H. 2 PSI MAXIMUM INLET PRESSURE AND 1 PSI MINIMUM INLET PRESSURE.  
 I. PROVIDE EXTERNAL VENT LIMITER (WHERE APPROVED BY LOCAL AUTHORITIES) FOR INDOOR INSTALLATION AND INSTALL PER SPECIFICATIONS. INSTALL OUTDOORS PER SPECIFICATIONS.

**PIPE HEAT TRACE SCHEDULE**

MARK	MANUFACTURER	MODEL #	APPLICATION	TOTAL LENGTH (FT)	NUMBER OF CIRCUITS	LENGTH PER CIRCUIT (FT)	PIPE HEAT LOSS (W/F)	TEMP. SETTING (°F)		ELECTRICAL		NOTES
								ON	OFF	VOLTS	PHASE	
HT-4	RAYCHEM	8XL2-CT	FLOW MAINTENANCE	160	1	160	7.3	110	120	277	1	B, C, D, E, G

NOTES:  
 A. POLYOLEFIN OUTER JACKET.  
 B. FLUOROPOLYMER OUTER JACKET.  
 C. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION.  
 D. REFER TO HEAT TRACE CONTROL PANEL SCHEDULE FOR ADDITIONAL INFORMATION.  
 E. COORDINATE WITH ELECTRICAL CONTRACTOR TO PROVIDE WIRING FROM CONTROL PANEL TO JUNCTION BOX ADJACENT TO THE BEGINNING OF THE HEAT TRACE SYSTEM.  
 F. PROVIDE 2' OF HEAT TRACE ON EACH F-TRAP. COORDINATE WITH ELECTRICAL CONTRACTOR TO PROVIDE WIRING FROM CONTROL PANEL TO A JUNCTION BOX ADJACENT TO EACH F-TRAP.  
 G. PRIOR TO BID COORDINATE WITH MANUFACTURER TO DETERMINE REQUIRED COMPONENTS TO COMPLETE THE SYSTEM.

**HEAT TRACE CONTROL PANEL SCHEDULE**

MARK	MANUFACTURER	MODEL #	DEVICE SERVED	QUANTITY	ELECTRICAL DATA			NOTES
					WATTS	VOLTS	PHASE	
HTGPI	RAYCHEM	# C910-485	HT-1	1	2100	277	1	A-G

NOTES:  
 A. NEMA 4X FRP ENCLOSURE WITH GROUND FAULT CIRCUIT PROTECTION.  
 B. LED DISPLAY AND KEYPAD INTERFACE.  
 C. ALARM LIGHTS FOR HIGH AND LOW TEMPERATURE, CURRENT AND GROUND FAULT.  
 D. DRY ALARM CONTACTS FOR INTERLOCK WITH BUILDING MANAGEMENT SYSTEM.  
 E. PROVIDE WITH # RTD4AL REMOTE TEMPERATURE DEVICE AND # RTD-200 STAINLESS STEEL CABLE. LENGTH AS REQUIRED. MOUNT REMOTE TEMPERATURE SENSING DEVICE ON PIPE UNDER INSULATION. REFER TO PLANS FOR LOCATION(S) AND QUANTITY.  
 F. COORDINATE INSTALLATION WITH ELECTRICAL CONTRACTOR. ELECTRICAL CONTRACTOR SHALL PROVIDE WIRING FROM CONTROL PANEL TO JUNCTION BOX WHERE HEAT TRACE SYSTEM BEGINS.  
 G. REFER TO SPECIFICATIONS FOR MORE INFORMATION.

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