

ABBREVIATIONS			
AC	AIR COMPRESSOR	HVAC	HEATING, VENTILATION, AIR COND.
ACU	AIR CONDITIONING UNIT	HP	HORSE POWER
AD	AREA DRAIN	HRWH	HEAT RECLAIM WATER HEATER
AFC	ABOVE FINISH CEILING	HS	HOSE STATION
AFF	ABOVE FINISH FLOOR	HW	HOT WATER
AFG	ABOVE FINISHED GRADE	HWG	HOT WATER GENERATOR
AHJ	AUTHORITY HAVING JURISDICTION	HWR	HOT WATER RETURN
APPROX	APPROXIMATE	HWST	HOT WATER STORAGE TANK
ARCH	ARCHITECT/ARCHITECTURAL	ID	INSIDE DIAMETER/DIMENSION
ARD	AUXILIARY ROOF DRAIN	KW	KILOWATTS
BFF	BELOW FINISH FLOOR	LV	LAVATORY
BLDG	BUILDING	LF	LINEAR FEET
BTU	BRITISH THERMAL UNITS	LPG	LIQUID PETROLEUM GAS
BTUH	BRITISH THERMAL UNITS/HOUR	LWT	LEAVING WATER TEMPERATURE
CAP	CAPACITY	MAX	MAXIMUM
CB	CATCH BASIN	MBH	THOUSAND BTU/PER HOUR
CD	CONDENSATE DRAIN	MECH	MECHANICAL
CFH	CUBIC FEET/HOUR	MDL	MODEL
CFM	CUBIC FEET/MINUTE	MFR	MANUFACTURER
CI	CAST IRON	MH	MANHOLE
CLG	CEILING	MIN	MINIMUM
CO	CLEAN OUT	MISC	MISCELLANEOUS
COL	COLUMN	MTD	MOUNTED
CONC	CONCRETE	NA	NOT APPLICABLE
CONN	CONNECT	NFPA	NATIONAL FIRE PROTECTION ASSO.
CONST	CONSTRUCTION	NTS	NOT TO SCALE
CONT	CONTINUE	OA	OUTSIDE AIR
COTG	CLEAN OUT TO GRADE	OD	OUTSIDE DIAMETER/DIMENSION
CP	CIRCULATING PUMP	PD	PRESSURE DROP
CR	CONDENSATE RETURN	PLBG	PLUMBING
CW	COLD WATER	PRESS	PRESSURE
DCOTG	DOUBLE CLEANOUT TO GRADE	PRV	PRESSURE REDUCING VALVE
DD	DESICCANT DEHUMIDIFIER	PSI	POUNDS PER SQUARE INCH
DEG(*)	DEGREE	RA	RETURN AIR
DEMO	DEMOLITION	RD	ROOF DRAIN
DF	DRINKING FOUNTAIN	REF	REFERENCE
DS	DOWN SPOUT	REQD	REQUIRED
DIA	DIAMETER	REV	REVISION, REVISED
DTL	DETAIL	RM	ROOM
(G/E)WH	DOMESTIC WATER HEATER (G) GAS (E) ELECTRIC	RPM	REVOLUTIONS PER MINUTE
EFF	EFFICIENT	RPZ	REDUCED PRESSURE ZONE
ELEV	ELEVATION	SCH	SCHEDULE
ELEC	ELECTRICAL	SECT	SECTION
EQ	EQUAL	SK	SINK
EQUIP	EQUIPMENT	SP	STATIC PRESSURE
EWT	ENTERING WATER TEMPERATURE	SPEC	SPECIFICATION(S)
EX, EXT	EXISTING	SS	SANITARY SEWER
EXP	EXPANSION	ST	STEAM
FCO	FLOOR CLEANOUT	SUCT	SUCTION
FD	FLOOR DRAIN	TEMP	TEMPERATURE
FL	FLOW LINE	TDH	TOTAL DYNAMIC HEAD
FLEX	FLEXIBLE CONNECTION	TH	TOTAL HEAD
FLR	FLOOR SINK	TVMV	THREE WAY MODULATING VALVE
FPM	FLOOR	TMV	THERMOSTATIC MIXING VALVE
FS	FEET PER MINUTE	TYP	TYPICAL
FPWH	FREEZE PROOF WALL HYDRANT	UL	UNDERWRITERS LABORATORY
FPRH	FREEZE PROOF ROOF HYDRANT	UR	URINAL
G	GAS	V	VENT
GA	GAUGE	VLV	VALVE
GAL	GALLON	VERT	VERTICAL
GALV	GALVANIZED	VTR	VENT THROUGH ROOF
GI	GREASE INTERCEPTOR	VOL	VOLUME
GPH	GALLONS PER HOUR	WC	WATER CLOSET
GPM	GALLONS PER MINUTE	WCO	WALL CLEANOUT
GT	GREASE TRAP	WF	WATER FILTER
HB	HOSE BIBB	WH	WATER HEATER
HT	HEIGHT	WM	WATER METER
HTG	HEATING	WTR	WATER
		WP	WORKING PRESSURE
		WT	WEIGHT

GENERAL PLUMBING SYMBOLS			
	REVISION NUMBER SHOWN ON PLANS		POINT WHERE NEW CONNECTS TO EXISTING
	DEMOLISH TO POINT INDICATED		NUMBER OF DETAIL ON SHEET NUMBER OF SHEET WHERE DETAIL APPEARS
	KEYNOTE		PIPE CONTINUATION
SPACE TAG:			
OFFICE	SPACE NAME		SPACE NUMBER
100 SF	SPACE AREA		
	ITEM TO BE DEMOLISHED		
	AREA NOT IN CONTRACT		

PIPING LEGEND	
	EXISTING PIPE TAG
	DEMOLISHED PIPE TAG
NEW CONSTRUCTION	
	CW DOMESTIC COLD WATER
	HW HOT WATER 120°F
	HWR HOT WATER 120°F RECIRC.
	G NATURAL GAS
	CD CONDENSATE DRAIN
	SPD PUMP DISCHARGE
	SS SANITARY SEWER
	V SANITARY VENT
	SD STORM DRAIN
	ASD STORM DRAIN OVERFLOW / AUX
PRESSURE PIPE SYMBOLS	
	PIPE TEE
	PIPE DROP
	PIPE ELBOW
	PIPE CAP
	PIPE RISE
GRAVITY PIPE SYMBOLS	
	PIPE RISE
	PIPE CAP
	PIPE WYE 8TH TEE
	PIPE TEE
	PIPE DROP
	PIPE CROSS
	PIPE PLUG
PLUMBING TAGS	
PIPE TAG	
	APPROX. INVERT ELEVATION
	SIZE, SYSTEM, FU FLOW
	SYSTEM ABBREVIATION
FIXTURE TAG	
	OUTLET SIZE AND FIXTURE IDENTITY
	FIXTURE IDENTITY
	IDENTITY AND FIXTURE UNIT
	IDENTITY AND WFU FIXTURE UNIT
PIPE ACCESSORIES	
	3-WAY MOTORIZED CONTROL VALVE
	3-WAY MIXING VALVE
	BALANCING VALVE
	BALL VALVE
	BUTTERFLY VALVE
	CHECK VALVE
	ELBOW VALVE
	GATE VALVE
	GLOBE VALVE
	MOTOR CONTROL VALVE
	PRESSURE REDUCING VALVE
	PLUG VALVE
	SOLENOID VALVE
	THREE-WAY VALVE
	STRAINER-WYE
	STRAINER-WYE WITH BLOWOFF VALVE
PLUMBING PHASING	
	NEW CONSTRUCTION PLUMBING EQUIPMENT (TYPICAL TAG FOR ALL NEW CONSTRUCTION)
	EXISTING PLUMBING EQUIPMENT (TYPICAL FOR ALL EXISTING TAGS)
	PLUMBING EQUIPMENT FOR DEMOLITION (TYPICAL FOR ALL DEMOLITION TAGS)
PLUMBING SHEET SET NOTE	
* NOTE *	
ALL OF GENERAL NOTES ON THIS SHEET ARE TO BE APPLIED TO ALL OTHER DRAWINGS IN THIS SET. SYMBOLS AND ABBREVIATIONS SHOWN ON THIS SHEET MAY OR MAY NOT BE USED IN THE CONTAINED REFERENCE DRAWINGS.	

SEISMIC DESIGN CRITERIA	
1.	SEISMIC DESIGN DATA: A. SEISMIC DESIGN CATEGORY: C a. SEE SHEET S-001 FOR MORE INFO.
2.	THE FOLLOWING COMPONENT IMPORTANCE FACTORS ARE USED: A. WATER HEATERS (STORAGE WATER 140°F): 1.0 B. WATER PIPING (GREATER THAN 120°F): 1.0 C. SEWER PIPING: 1.0
3.	SEISMIC BRACING IS NOT REQUIRED FOR THE PLUMBING COMPONENTS.
4.	REFER TO THE SPECIFICATIONS.

## PLUMBING GENERAL NOTES

- ALL PLUMBING SYSTEMS SHALL BE INSTALLED AS PER SPECIFICATIONS AND GOVERNING CODES.
- ALL DRAWINGS ARE DIAGRAMMATIC AND INDICATE THE GENERAL ARRANGEMENTS OR GEOMETRIC RELATIONSHIPS OF EQUIPMENT AND SERVICES. THEY ARE NOT INTENDED TO SPECIFY OR SHOW EVERY OFFSET, FITTING OR COMPONENT. CONTRACTOR SHALL NOT SCALE DRAWINGS. INFORMATION AND COMPONENTS SHOWN ON RISER DIAGRAMS OR DETAILS, BUT NOT SHOWN ON PLANS, AND VICE-VERSA, SHALL BE PROVIDED AS IF EXPRESSLY REQUIRED BY BOTH. THE CONTRACTOR SHALL SUBMIT A REQUEST FOR INFORMATION (RFI) IF INFORMATION CONFLICTS. DRAWINGS SPECIFIC TO THIS DISCIPLINE DO NOT LIMIT THE RESPONSIBILITY OF WORK REQUIRED BY CONTRACT DOCUMENTS. REFER TO ARCHITECTURAL, STRUCTURAL, ELECTRICAL AND OTHER DRAWINGS FOR COMPLETE INFORMATION.
- BY NECESSITY, THESE DRAWINGS REFLECT A SYSTEM DESIGNED AROUND SPECIFIC REFERENCE PRODUCTS, THE SELECTION OF WHICH HAS IMPACTED THE DESIGNS OF OTHER TRADES (HVAC, ELECTRICAL, STRUCTURAL, ETC.). IF ALTERNATE MANUFACTURERS, FUEL SOURCES, SIZES, OR MODEL NUMBERS ARE SUBMITTED OR BID, IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR AND ALL SUBCONTRACTORS TO COORDINATE ALL DIFFERENCES PRIOR TO BID. NO EXTRAS WILL BE ALLOWED FOR CHANGES REQUIRED TO OTHER TRADES IF ALTERNATE EQUIPMENT IS BID OR INSTALLED AT THE CONTRACTORS OPTION.
- EXCEPT WHERE MODIFIED BY SPECIFIC NOTATION TO THE CONTRARY, IT SHALL BE UNDERSTOOD THAT THE INDICATION AND/OR DESCRIPTION OF ANY ITEM, IN THE DRAWINGS OR SPECIFICATIONS OR BOTH, CARRIES WITH IT THE INSTRUCTION TO FURNISH AND INSTALL THE ITEM, REGARDLESS OF WHETHER OR NOT THIS INSTRUCTION IS EXPLICITLY STATED AS PART OF THE INDICATION OR DESCRIPTION.
- CONTRACTOR SHALL PAY ALL UTILITY FEES & CHARGES AS PART OF BASE BID IN THE CONTRACT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING ALL WORK WITH THAT OF OTHER TRADES; i.e., ARCHITECTURAL, HVAC, ELECTRICAL, STRUCTURAL, FIRE PROTECTION AND CIVIL PRIOR TO CONSTRUCTION.
- THE CONTRACTOR SHALL COORDINATE UTILITY LOCATIONS, SIZES AND INVERT ELEVATIONS PRIOR TO CONSTRUCTION; i.e., SANITARY SEWER, FIRE PROTECTION, DOMESTIC WATER. ALL SERVICES SHALL TERMINATE 5 FEET OUTSIDE THE BUILDING, EXCEPT WHERE SHOWN OTHERWISE. SEE SITE UTILITY DRAWINGS FOR CONTINUATION OF ALL SERVICE LINES.
- PROVIDE ISOLATION VALVES AT EACH FIXTURE GROUP OR BATTERY OF FIXTURES IN THE DOMESTIC CW, HW, HWR AND GAS PIPING. VALVES SHALL BE EASILY ACCESSIBLE. WHERE HARD CEILINGS ARE LOCATED, VALVES SHALL BE ACCESSED THROUGH ACCESS PANELS. ACCESS PANELS SHALL BE COORDINATED WITH ARCHITECT PRIOR TO CONSTRUCTION.
- PROVIDE STOP VALVES AT ALL PLUMBING FIXTURES ON BOTH HOT AND COLD WATER SUPPLY LINES. VALVES, ESCUTCHEONS, FITTINGS, ETC., SHALL BE CHROME PLATED AND INSTALLED TIGHT TO WALL. WHERE PIPING IS EXPOSED, CHROME PLATED PIPE SHALL BE USED.
- ALL EXPOSED OR ACCESSIBLE P-TRAPS SHALL BE CHROME PLATED AND PROVIDED WITH BOTTOM CLEANOUT PLUGS.
- SLOPE 2-1/2" AND SMALLER DRAIN WASTE AND VENT (DWV) LINES AT MIN, (2%) 1/4" FALL PER FT., 3" TO 6" DWV LINES AT MIN. (1%) 1/8" FALL PER FT. SANITARY SEWER AND WATER SHALL BE A MINIMUM OF 10' APART OR THE DOMESTIC WATER SERVICE SHALL BE 12" ABOVE THE TOP OF THE SEWER LINE, AT ITS HIGHEST POINT, IF PLACED IN SAME TRENCH.
- PROVIDE ALL FITTINGS, TRANSITIONS, COUPLINGS, ADAPTERS, UNIONS, AND OTHER ACCESSORIES NEEDED TO COMPLETE CONNECTIONS AND PROPER OPERATIONS OF PLUMBING FIXTURES AND PLUMBING EQUIPMENT.
- REFER TO SPECIFICATIONS FOR ACCEPTABLE MANUFACTURERS OF PLUMBING FIXTURES AND EQUIPMENT, AND PROPER APPLICATIONS OF SAME.
- PROVIDE CLEANOUTS IN ALL SEWERS, WHETHER SHOWN OR NOT, AT INTERVALS NOT TO EXCEED 50 FEET, AT EACH CHANGE OF DIRECTION GREATER THAN 45°, AND ALL VERTICAL STACKS AT A HEIGHT OF 30" ABOVE FINISH FLOOR AT THE BASE OF EACH STACK.
- WHERE WATER PRESSURES EXCEED 80 PSI, PROVIDE WATER PRESSURE REDUCING VALVES (PRV) CONFORMING TO ASSE 1003 WITH STRAINER IN WATER SUPPLY LINES, SETTING AT 80 PSI. SEE CODE AND MANUFACTURER INFORMATION FOR ACCEPTABLE PRESSURE REQUIREMENTS.
- ALL PIPING PENETRATIONS OF THE RATED CEILING AND WALL MUST BE MADE WITH METAL PIPE OR UL LISTED APPROVED DEVICES. FIRE STOP ALL PIPE PENETRATIONS THRU RATED WALLS. SEE ARCHITECTURAL DRAWINGS FOR LOCATIONS, RATINGS AND FIRE STOPPING DETAILS.
- DO NOT ROUTE ANY PIPING OVER ELEC. ROOMS, COMPUTER ROOMS, OR ELEC. PANELS.
- INSTALL AN AGA LISTED NATURAL GAS COCK, DIRT LEG AND UNION IMMEDIATELY UPSTREAM OF EQUIPMENT CONNECTIONS. AS NOTED ON DRAWINGS PROVIDE AN AGA LISTED VENT LIMITING GAS REGULATOR. GAS REGULATORS SHALL NOT BE INSTALLED IN AIR PLENUMS (SEE HVAC PLANS FOR AIR PLENUM LOCATIONS). PAINT ALL NATURAL GAS PIPING WITH TWO COATS OF OIL BASED YELLOW PAINT IN ALL LOCATIONS NOT SPECIFIED BY ARCHITECT.
- ALL DOMESTIC WATER PIPING ROUTED IN AREAS SUBJECT TO FREEZING TEMPERATURES SHALL BE ROUTED BELOW INSULATION AND WITHIN THE HEATED ENVELOPE OF THE BUILDING. WHERE PIPING CAN NOT BE ROUTED BELOW INSULATION, PIPING SHALL HAVE 5 WATT/FT HEAT TRACING ATTACHED. SEE ARCHITECTURAL DRAWINGS FOR INSULATION PLACEMENT AND DETAILS. COORDINATE ELECTRICAL REQUIREMENTS WITH ELECTRICAL CONTRACTOR AND ENGINEER.
- UNLESS OTHERWISE INDICATED, DO NOT ROUTE WATER PIPING IN EXTERIOR WALLS. WHEN ROUTED IN EXTERIOR WALLS, CAREFULLY POSITION WATER PIPING ON THE HEATED SIDE (INTERIOR SIDE) OF THE WALL INSULATION.
- MAINTAIN 10'-0" MINIMUM CLEARANCE BETWEEN FRESH AIR INTAKES, OPERABLE WINDOWS AND FLUES, PLUMBING VENTS AND GAS REGULATORS.
- ALL SEWER & VENT PIPING SHALL BE RODDED AND CLEANED AT END OF CONSTRUCTION. ALL TRAPS SHALL BE CLEANED AND PRIMED AT END OF CONSTRUCTION.
- ALL PIPE DROPS FROM CEILING PLENUM TO FLOOR SHALL BE MADE IN FURROUTS AT COLUMNS, IN WEB OF BEAMS AT COLUMNS OR IN WALLS. PIPING SHALL BE CONCEALED UNLESS APPROVED BY ARCHITECT.
- PROVIDE WATER HAMMER ARRESTORS IN FIXTURE BRANCHES WHERE QUICK CLOSING VALVES ARE INSTALLED; i.e., FLUSH VALVES, ICE MAKERS, DISHWASHERS, ETC.
- BELOW SLAB WATER PIPE TO BE TYPE K SOFT DRAWN COPPER WITHOUT FITTINGS OR JOINTS. SLEEVE IN ENTIRETY WITH ARMAFLEX OR APPROPRIATE POLYETHYLENE SLEEVE MATERIAL.
- PROVIDE APPROVED BACKFLOW PREVENTION OR ANTI-SIPHON DEVICES AT ALL FIXTURES THAT COULD CONTAMINATE THE POTABLE WATER SYSTEM.
- INSULATE ALL WATER PIPING ABOVE FINISH FLOOR. SEE SPECIFICATIONS FOR THICKNESS SCHEDULE.
- INSULATE ALL EXPOSED HOT WATER & DRAIN PIPING FOR ACCESSIBLE FIXTURES PER ANSI A117.1 AND ADA REQUIREMENTS.
- FLOOR DRAINS IN MECHANICAL ROOMS ARE SHOWN FOR GENERAL LOCATION ONLY. FLOOR DRAINS SHALL BE ACCESSIBLE AND SHALL BE VERIFIED WITH EQUIPMENT LAYOUT FOR INTERFERENCES.
- AN APPROVED TRAP SEAL DEVICE CONFORMING TO ASSE 1072 SHALL BE INSTALLED AT ALL FLOOR AND HUB DRAINS. ALL DRAINS SHALL HAVE DEEP SEAL TRAPS, 4" DEEP SEAL MINIMUM. INSTALL TRAP GUARD DEVICES PER MANUFACTURER'S INSTRUCTIONS.
- DOMESTIC WATER SERVICE PIPING AND FITTINGS; E.G., CHECK VALVES, RPZA, SHUT-OFF VALVES, STRAINERS, PRESSURE REGULATORS, ETC. SHALL COMPLY WITH NSF 61 CRITERIA. ALL CAST IRON EQUIPMENT IS TO BE INTERNALLY EPOXY COATED.

## ADA REQUIREMENTS

WATER CLOSETS: THE HEIGHT OF WATER CLOSETS SHALL BE 17"-19" MEASURED FROM THE TOP OF THE TOILET SEAT. SEATS SHALL NOT BE SPRUNG OR RETURN TO A LIFTED POSITION. THE WATER CLOSET SHALL BE LOCATED 18" FROM THE SIDE WALL TO THE CENTER OF THE BOWL. HAND OPERATED FLUSH CONTROLS SHALL BE MOUNTED ON THE WIDE SIDE OF THE TOILET AREAS NO MORE THAN 29" ABOVE FINISHED FLOOR. SEE ARCHITECTURAL SHEETS FOR GRAB BAR LOCATIONS.

LAVATORIES: LAVATORIES SHALL BE MOUNTED WITH THE RIM OR COUNTER SURFACE NO MORE THAN 34" ABOVE FINISHED FLOOR. PROVIDE A CLEARANCE OF AT LEAST 29" ABOVE FINISHED FLOOR TO THE BOTTOM OF THE APRON. KNEE SPACE SHALL BE 8" FROM THE BOTTOM EDGE OF APRON TO THE LEADING EDGE OF THE BOTTOM OF BOWL. THE BOTTOM OF THE BOWL SHALL BE A MINIMUM OF 27" ABOVE FINISHED FLOOR. ALL WATER AND DRAIN PIPING UNDER LAVATORIES SHALL BE INSULATED WITH FOAM INSERT, COVERED WITH A 1/8" VINYL OUTER SHELL. ANGLE STOPS SHALL HAVE A FLIP TOP ACCESS.



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# AEROJET New Guard Post - 2

Project \_\_\_\_\_

Design Phase \_\_\_\_\_

Revisions

No.	Date	Description

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07-17-2024

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2024-052

07-17-2024

PLUMBING LEGEND  
AND NOTES

Sheet Number \_\_\_\_\_

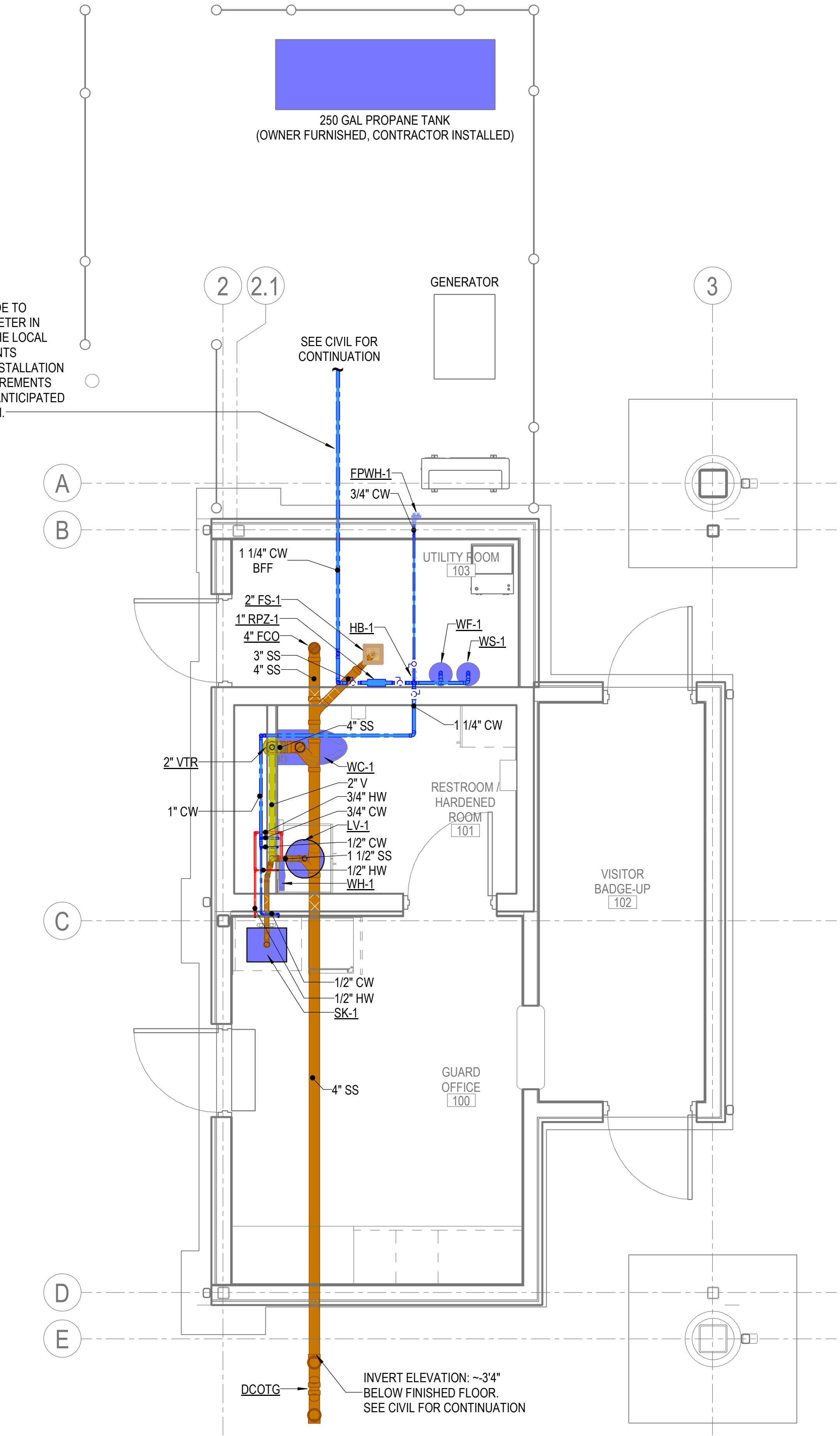
P-001



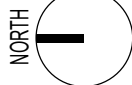
GENERAL NOTES

- 1 REFER TO SHEET P-001 FOR LEGEND AND NOTES.

DOMESTIC WATER SUPPLY:  
ROUTE 1-1/4" CW BELOW GRADE TO  
BUILDING. PROVIDE WATER METER IN  
STRICT ACCORDANCE WITH THE LOCAL  
WATER UTILITY'S REQUIREMENTS  
INCLUDING SIZE, TYPE, AND INSTALLATION  
DETAILS. CONFIRM ALL REQUIREMENTS  
PRIOR TO BID OR ROUGH-IN. ANTICIPATED  
PEAK WATER DEMAND=15 GPM.



1 OVERALL PLUMBING PLAN  
3/8" = 1'-0"



Project

AEROJET  
New Guard  
Post - 2

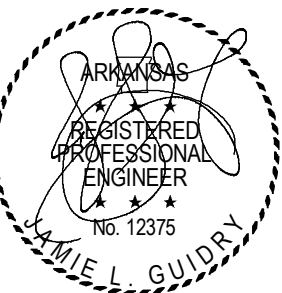
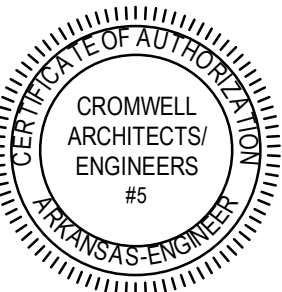
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OVERALL PLUMBING  
PLAN

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P-101

Project

AEROJET  
New Guard  
Post - 2

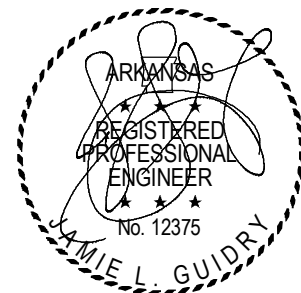
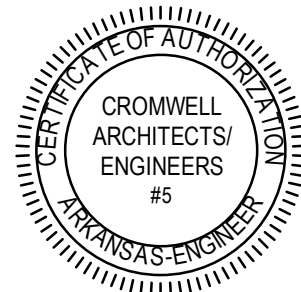
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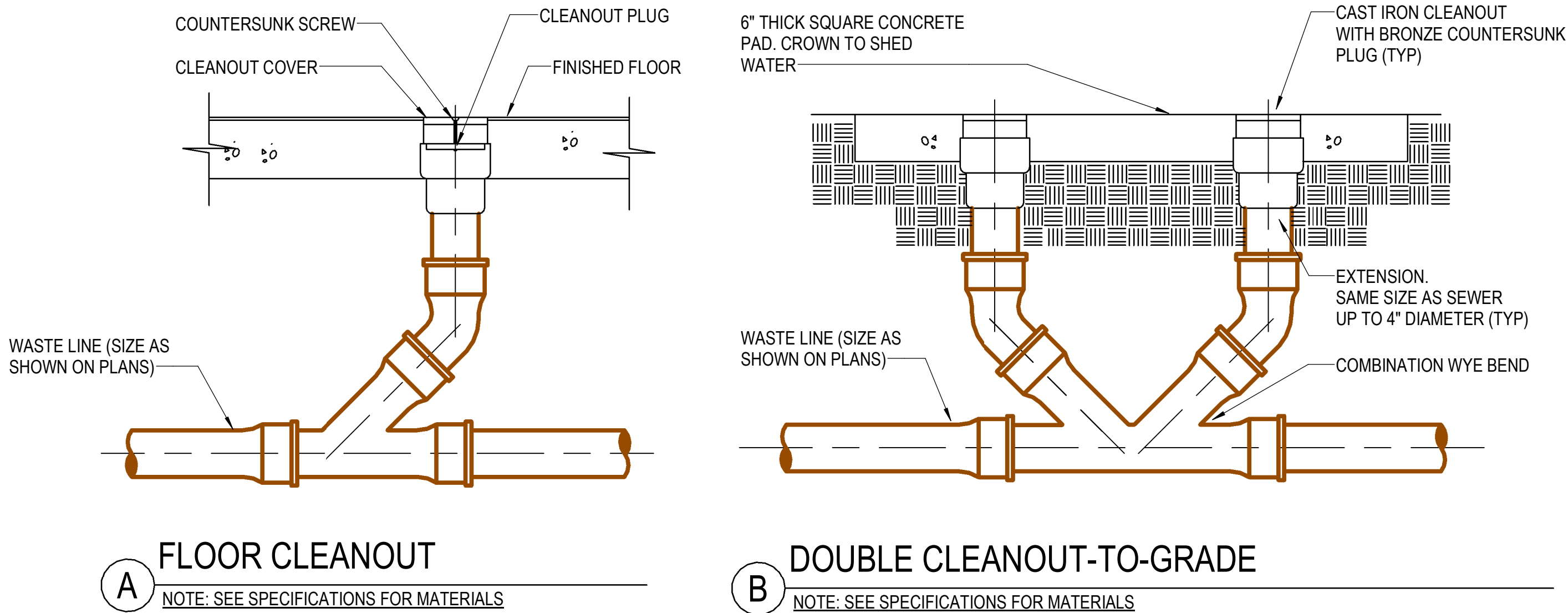
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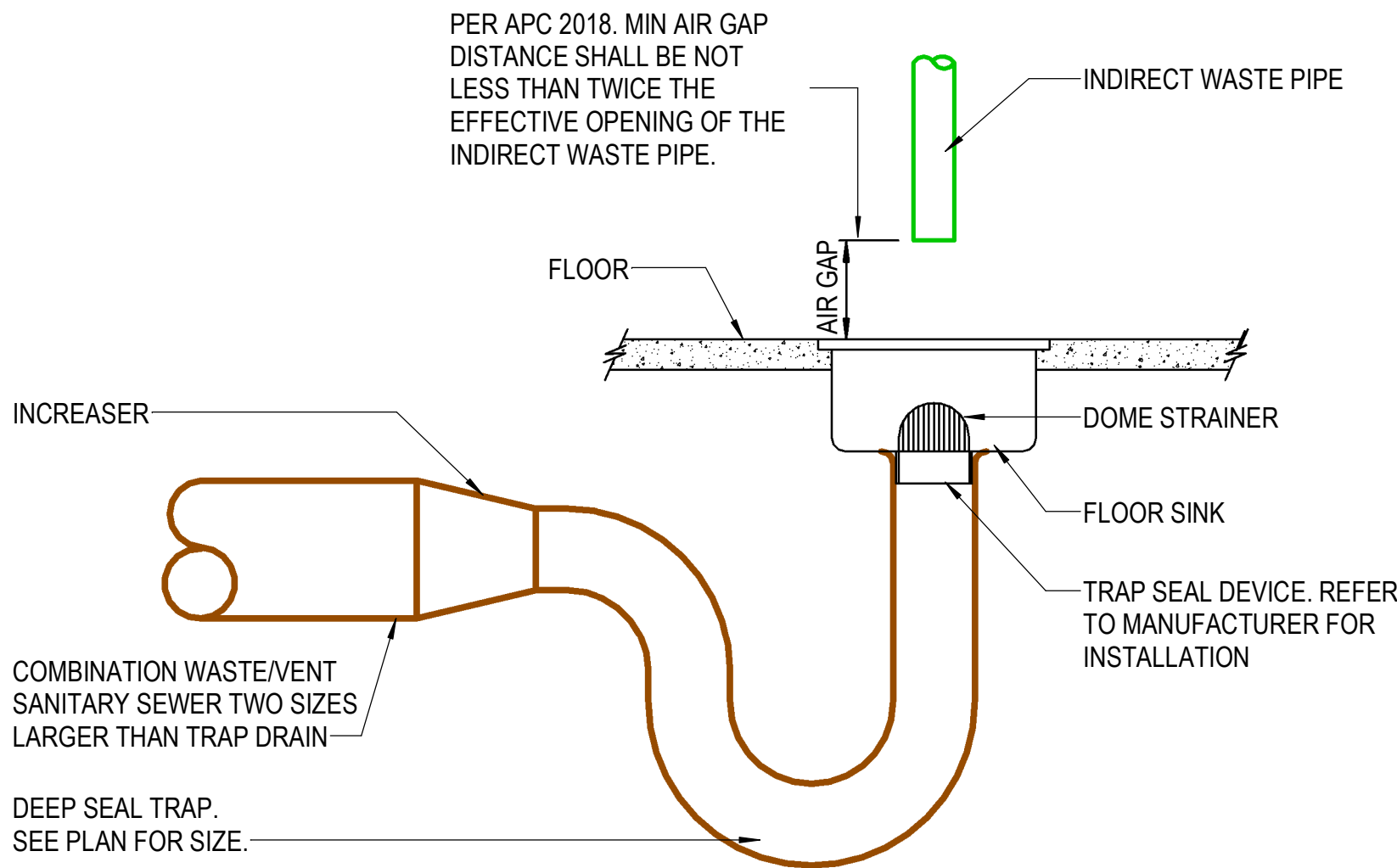
PLUMBING DETAILS

Sheet Number

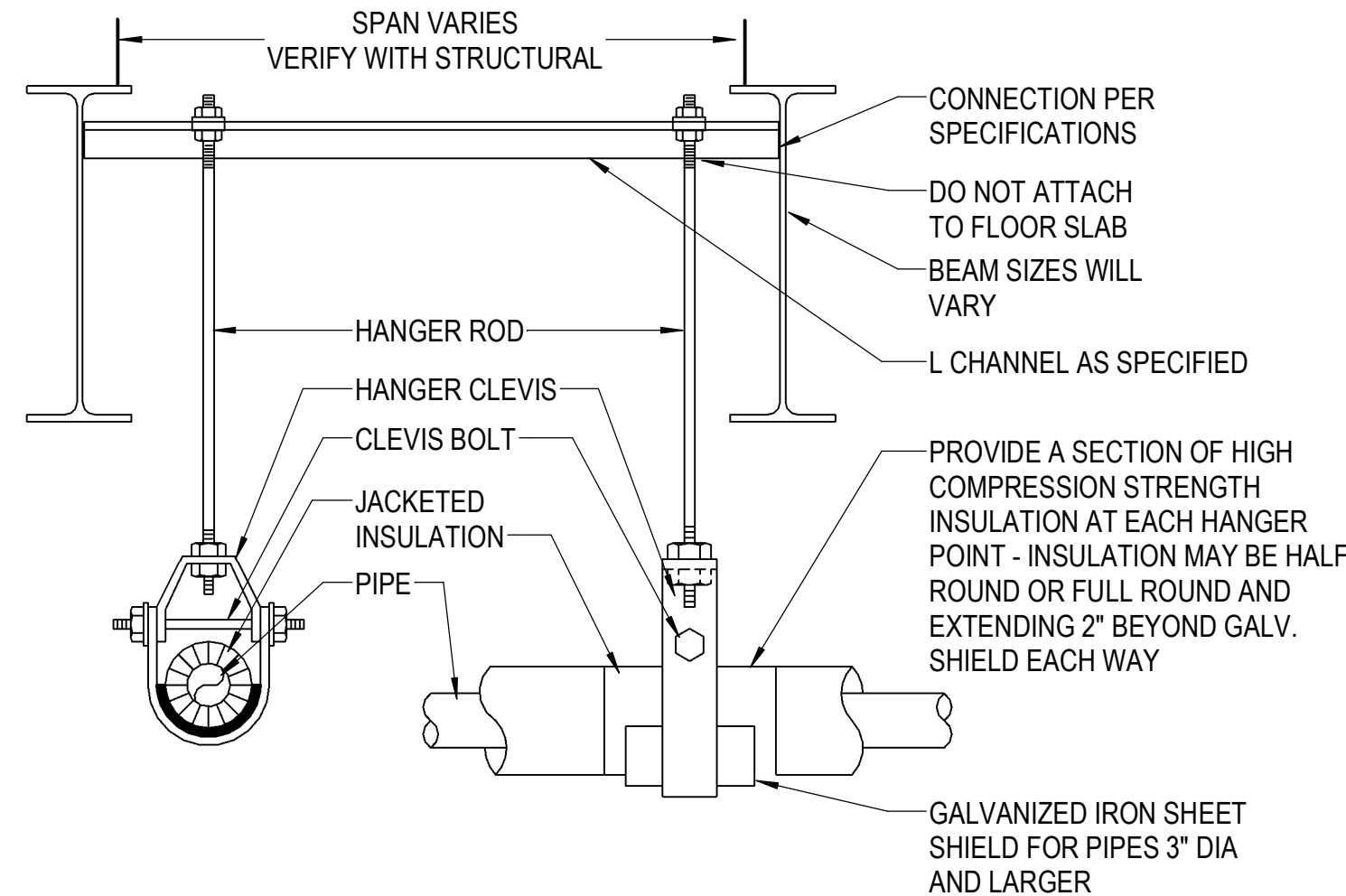
P-501



1 TYPICAL CLEANOUTS  
NOT TO SCALE

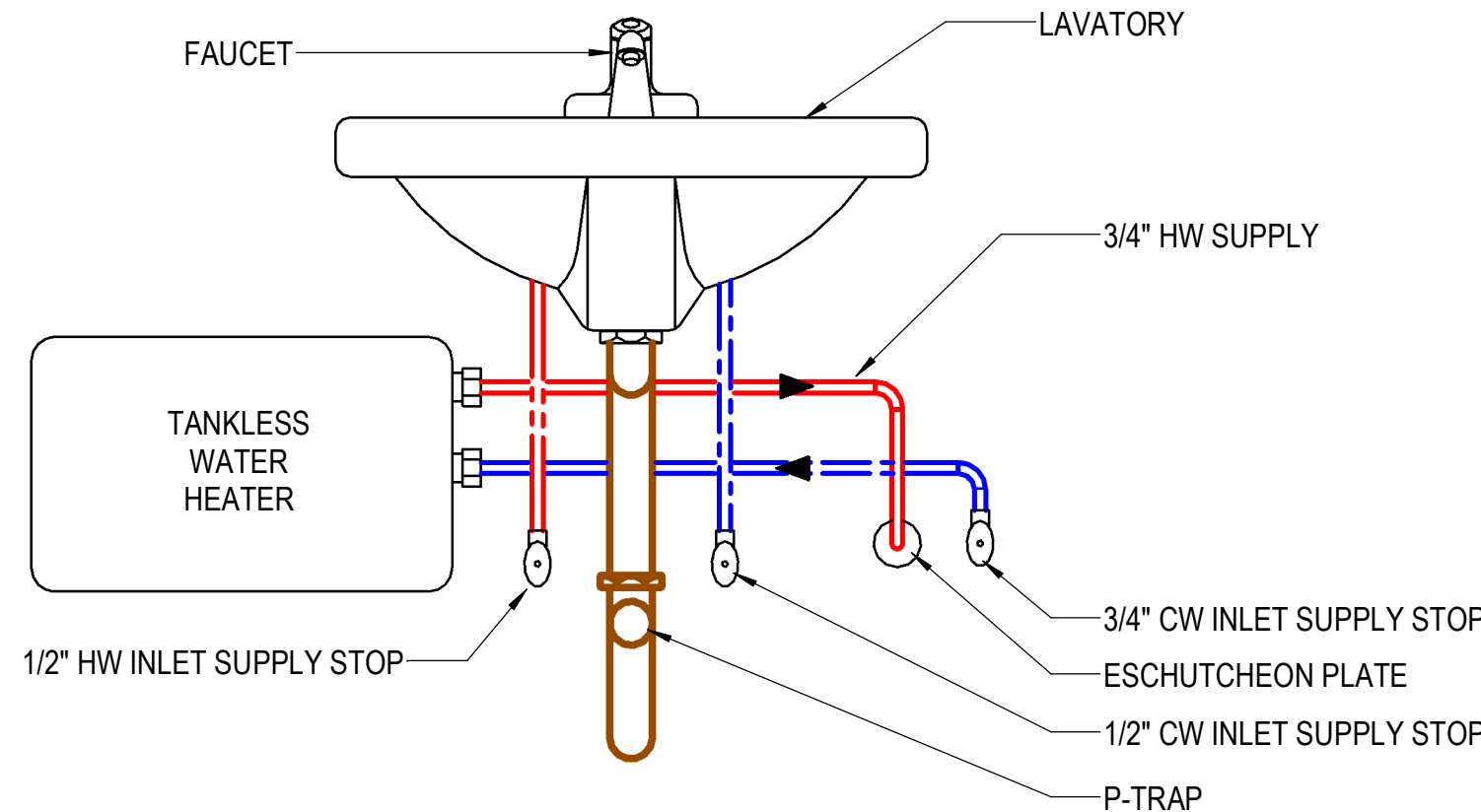


3 FLOOR SINK - FS-1  
NOT TO SCALE



- NOTES:
1. INSULATION TO BE CONTINUOUS THROUGH HANGERS. DO NOT BREAK INSULATION AT SUPPORTS, DO NOT INSULATE AROUND HANGERS.
  2. INSULATION JACKET TO BE CONTINUOUS THROUGH PIPE SUPPORT COMPONENTS.
  3. USE CLEVIS HANGERS FOR SINGLE PIPE RUNS, USE TRAPEZE HANGERS TO GROUP AS MUCH PIPING AS POSSIBLE PER HANGER.

2 ADJUSTABLE CLEVIS HANGER  
NOT TO SCALE



4 P.O.U INSTANT WATER HEATER - WH-1  
NOT TO SCALE

AEROJET  
New Guard  
Post - 2

CONSTRUCTION  
DOCUMENTS

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CROMWELL  
ARCHITECTS/  
ENGINEERS  
#5  
KANSAS ENGINEER

ARMK/SAS  
REGISTERED  
PROFESSIONAL  
ENGINEER  
NO. 12375  
JAMIE L. GUIDRY  
07-17-2024

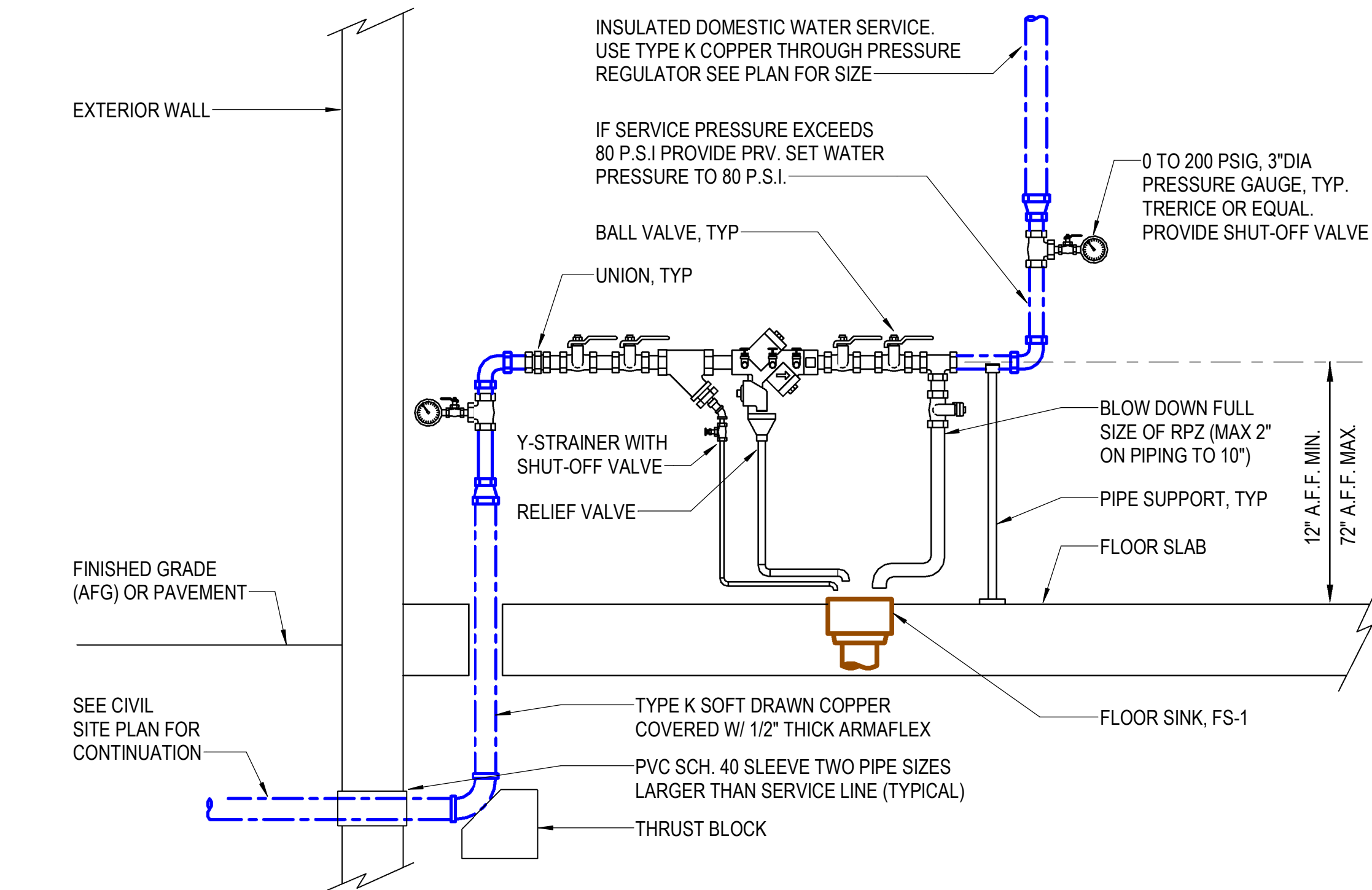
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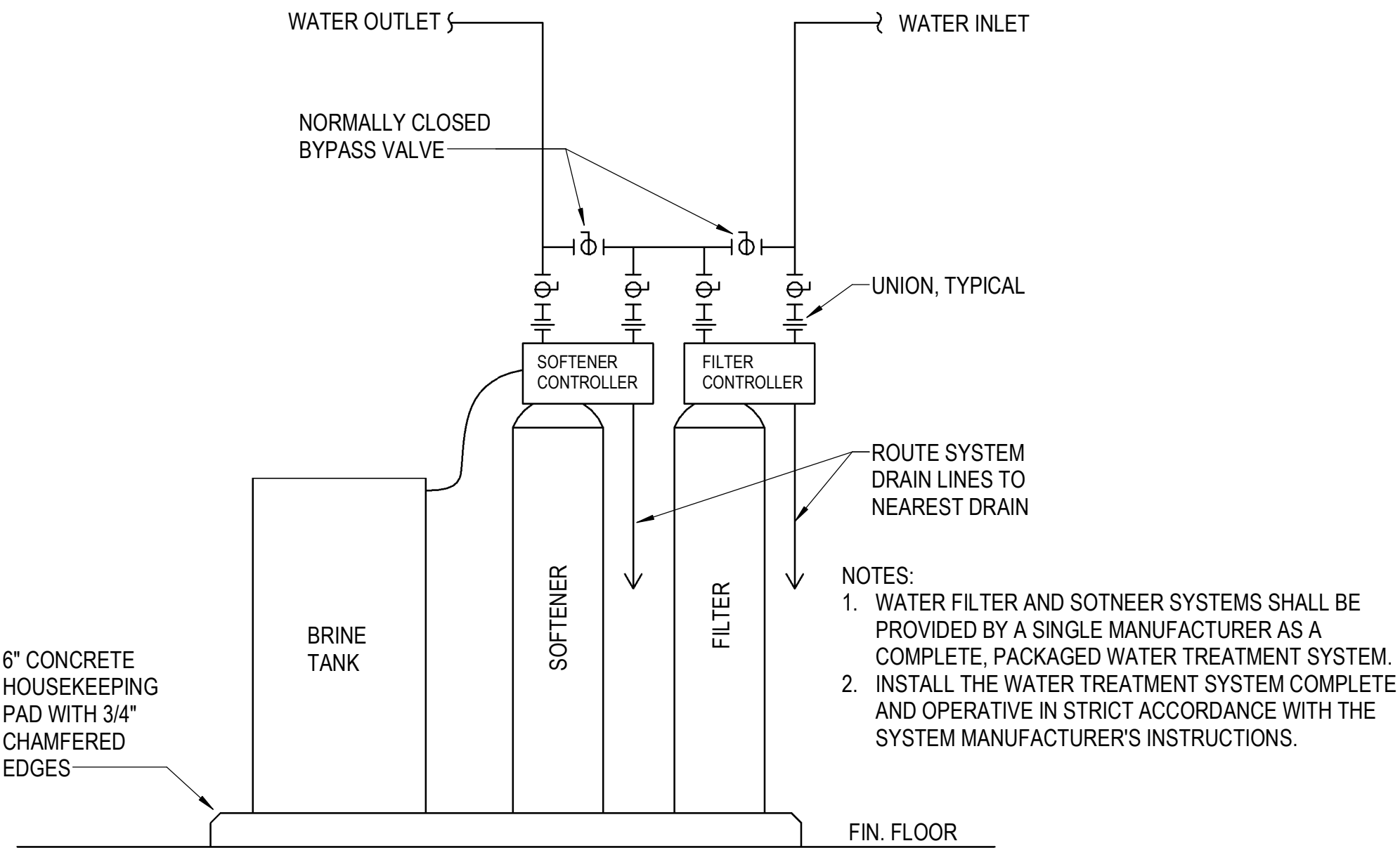
PLUMBING DETAILS &  
RISER

Sheet Number

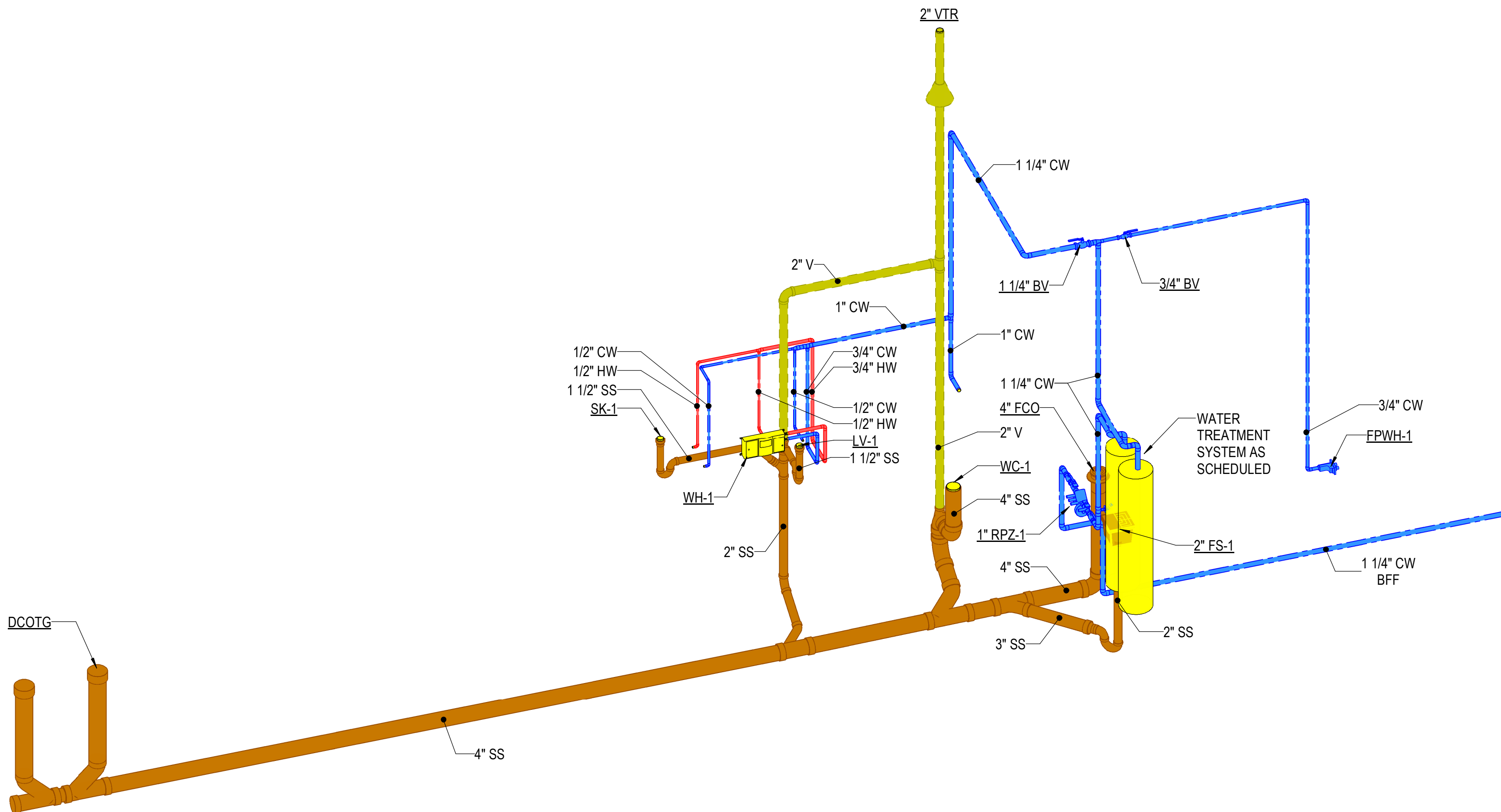
P-502



1 DOMESTIC WATER BUILDING SERVICE - RPZ-1  
NOT TO SCALE



2 WATER FILTER / SOFTENER SYSTEM  
NOT TO SCALE



3 OVERALL PLUMBING RISER



PLUMBING ACCESSORY			
ID	BASIS OF DESIGN		SPECIFICATION
	MANUFACTURER & MODEL	UTILITY CONNECTION	
RPZ-1	FEBCO #825YA,	1" CW	REDUCED PRESSURE ZONE ASSEMBLY - 13-1/3"x8-1/2"x8", 1" ASSEMBLY, VERTICAL UP FLOW IN/HORIZONTAL FLOW OUT, MAINLINE VALVE & RELIEF VALVE BODY SHALL BE BRONZE, CHECK VALVE MOVING MEMBERS SHALL BE CENTER STEM GUIDED, RELIEF VALVE SHALL HAVE REMOVABLE SEAT RING, ALL SEAT DISCS SHALL BE REVERSIBLE, INCLUDES TWO INDEPENDENTLY OPERATING, SPRING LOADED, "Y" PATTERN CHECK VALVES, AND ONE HYDRAULICALLY DEPENDENT DIFFERENTIAL RELIEF VALVE, INCLUDE WYE-STRAINER ON VERTICAL INLET, MAX WORKING PRESSURE 175 PSI, MAX TEMPERATURE RANGE 32F-140F, 11 PSI HEAD LOSS @23 GPM, ASSE 1013 CERTIFIED, ANSI/AWWA C511 APPROVED
FCO	WATTS #CO-1200-RX-4-NH,	SAME SIZE AS LINE, MAX 4"	FLOOR CLEANOUT - SAME SIZE AS LINE, MAX. 4", EPOXY COATED CAST IRON FLOOR CLEANOUT WITH 5" ROUND ADJUSTABLE GASKETED EXTRA HEAVY DUTY STAINLESS STEEL TOP, REMOVABLE GAS TIGHT GASKETED BRASS CLEANOUT PLUG, AND NO HUB OUTLET
DCOTG	WADE, 6000-12 SERIES	SAME SIZE AS LINE, MAX 4"	CLEANOUT-TO-GRADE/DOUBLE-CLEANOUT-TO-GRADE - SAME SIZE AS LINE, MAX. 4 INCH, HEAVY DUTY CAST IRON, FERRULE, THREADED ADJUSTABLE HOUSING, INTEGRAL CLAMPING COLLAR, ABS PLUG, 7-1/8 INCH SQUARE HEAVY DUTY DUCTILE IRON TOP

PLUMBING EQUIPMENT								
ID	BASIS OF DESIGN	ELECTRICAL						SPECIFICATION
	MANUFACTURER & MODEL	UTILITY CONNECTIONS	CONNECTION TYPE	VOLTAGE	PHASE	POWER	AMPS	
WH-1	CHRONOMITE #CMI-15L/240,	1/2"CW, 1/2"HW	HARDWIRED WITH GFCI PROTECTION	240 V	1	3.6 kW	15	ELECTRIC TANKLESS WATER HEATER - 49°F RISE @ 0.5 GPM, 13-7/16"x6-1/4"x2-3/4"D, POINT-OF-USE, MULTIPLE LAVATORY, 0.2 GPM ACTIVATION FLOW, FACTORY SET TO 110°F, 99% ENERGY EFFECIENT, MICROPROCESSOR THERMOSTATIC TEMPERATURE CONTROL, ASSE 1070 COMPLIANT, LESS DISCONNECT SWITCH

PLUMBING FIXTURE									
ID	BASIS OF DESIGN								SPECIFICATION
	MANUFACTURER & MODEL	ACCESSORIES	COLD	HOT	WASTE	INDIRECT	VENT	TRAP	
WC-1	WATER CLOSET - AMERICAN STANDARD "MADERA" #3043.001, FLUSH VALVE - SLOAN #111-1.6,	AMERICAN STANDARD SEAT #5901.100SS,	1"	---	4"	---	2"	INTEGRAL	WATER CLOSET - ADA ACCESSIBLE, 16-1/2" RIM HEIGHT, FLOOR MTD, VITREOUS CHINA LESS EVERCLEAN SURFACE, ELONGATED BOWL, INTEGRAL STOPS AND TRAP, SIPHON JET, 1-1/2" EXPOSED TOP SPUD, FLUSH VALVE - 1.6 GPF, POLISHED CHROME FINISH, TOP SPUD, MANUAL SINGLE FLUSH, PERMEX SYNTHETIC RUBBER DIAPHRAGM WITH LINEAR FILTERED BYPASS AND VORTEX CLEANSING ACTION, VACUUM BREAKER WITH FLUSH CONNECTION, VANDAL RESISTANT STOP CAP ON ANGLE CHECK STOP, SEAT - OPEN FRONT ELONGATED SEAT, SELF SUSTAINING, LESS COVER
LV-1	SINK - AMERICAN STANDARD "AQUALYN" #0476.028 FAUCET - DELTA #22C451,	OPEN GRID STRAINER - DELTA #33T260, P-TRAP - ZURN #Z8701-PC, SUPPLY STOP VALVES - ZURN #Z8807-XL-LR-PC,	1/2"	1/2"	1-1/2"	---	2"	1-1/4"	LAVATORY - ADA COMPLIANT, 20-3/8"x17-3/8"x5-5/8"D (16"x10"x5-5/8" INSIDE), DROP IN-COUNTERTOP, WHITE VITREOUS CHINA, FRONT OVERFLOW, THREE FAUCET HOLES ON 4" CENTERS, FAUCET - 0.5 GPM, MANUAL, SINGLE LEVER, POLISHED CHROME-PLATED FINISH, LEAD FREE, 2.8" SPOUT HEIGHT, 5.9" SPOUT REACH, VANDAL RESISTANT SPRAY OUTLET, OPEN GRID STRAINER INCLUDED, CARRIER - CONCEALED ARM WALL CARRIER
SK-1	SINK - JUST MANUFACTURING #SLADA17519A55-J, FAUCET - DELTA #100LF-HDF,	DRAIN - JUST MANUFACTURING #J-35, P-TRAP - ZURN #8702-PC, SUPPLY STOP VALVES - ZURN #Z8807-XL-LR-PC,	1/2"	1/2"	2"	---	2"	1-1/2"	SINK - ADA COMPLIANT, 19"x18"x5-1/2"D, 1 COMPARTMENT (16"x11-1/2"x5-3/8"D INSIDE), COUNTER-TOP DROP IN, SELF RIMMING, 18 GAUGE TYPE 304 STAINLESS STEEL, LUSTROUS SATIN FINISH, CENTER DRAIN OUTLET, THREE FAUCET HOLES ON 8" CENTERS, FAUCET - 1.5 GPM, CHROME PLATED LEAD FREE, MANUAL SINGLE HANDLE, 4-3/4" SPOUT HEIGHT, 8-11/16" SPOUT REACH, SWIVEL SPOUT, DECK MTD, 10-1/2" DECK PLATE
HB-1	WOODFORD, 26	PROVIDE FULL PORT ISOLATION BALL VALVE FOR FIXTURE,	3/4"	---	---	---	---	---	HOSE BIBB - 3-3/4"x4-3/4", BRASS CONSTRUCTION, EPDM PACKING, POLYCARBONATE WHEEL HANDLE AND LOOSE TEE KEY, 1/2" INLET, 125 PSI MAX PRESSURE, 120F MAX TEMP, INCLUDES BACKFLOW PREVENTER WITH TWO INDEPENDENT CHECKS, DRAINS AUTOMATICALLY, ASSE 1052 APPROVED T
FPWH-1	WOODFORD #B67,	PROVIDE FULL PORT ISOLATION BALL VALVE FOR FIXTURE,	3/4"	---	---	---	---	---	FREEZEPROOF WALL HYDRANT - SIZE FOR WALL THICKNESS+4", RED BRASS VALVE BODY, 3/8" SOLID BRASS OPERATING ROD, HARDENED STAINLESS STEEL STEM, ONE PIECE VALVE PLUNGER, COPPER CASTING TUBES, DRAIN PORT UNDER NOZZLE, 3/4" HOSE CONNECTION W/ HIGH FLOW DOUBLE CHECK BACKFLOW PREVENTER, ADJUSTABLE WALL CLAMP, ASSE 1052 CERTIFIED
FS-1	ZURN #Z1910,	TRAP SEAL DEVICE,	---	---	SEE PLAN	---	2"	SEE PLAN	FLOOR SINK - 8"x8"x6-1/2"D, ACID RESISTANT PORCELAIN ENAMEL COATING ON DRAIN AND GRATE, LOOSE SET 1/2 GRATE, ANTI-SPLASH ALUMINUM DOME STRAINER, DEEP SEAL TRAP. PROVIDE TRAP SEAL EQUAL TO MIFAB MI-GUARD.
WS-1	CULLIGAN, HE-60, 12"		1-1/4"	---	---	---	---	---	WATER SOFTENER SYSTEM, 2.0 CU. FT. RESIN, 12.6 GPM @ 15 PSIG AUXILIARY FLOW, 3.0 GPM MAX. DRAIN FLOW, 59267 @ 24 DOWNFLOW REGEN. MAX. CAPACITY.
WF-1	CULLIGAN, HE 10" FILTER CLEER		1-1/4"	---	---	---	---	---	WATER FILTER SYSTEM, 12.0 GPM @ 15 PSIG RATED SERVICE FLOW, 7.0 GPM MAX. DRAIN FLOW.

WATER HAMMER ARRESTOR						
P.D.I. UNITS	A	B	C	D	E	F
FIXTURE UNITS	1-11	12-32	33-60	61-113	114-154	155-330
WADE "SHOKSTOP" #4481 SERIES WATER HAMMER ARRESSTOR, SEAMLESS COPPER CONSTRUCTION, POLYPROPYLENE PISTON, (2) EPDM ORINGS, MNPT CONNECTION, MAX. PRESS. 350 PSI, MAX. TEMP. 250°F, PROVIDE PROPERLY SIZED WATER HAMMER ARRESSTORS AND LOCATE ON PIPING IMMEDIATELY UPSTREAM OF ALL QUICK CLOSING VLAVES (E.G. FLUSH VLAVES, DISHWASHER, ICE MAKERS, SOLENOID VALVES, ETC.)						

Project

AEROJET  
New Guard  
Post - 2

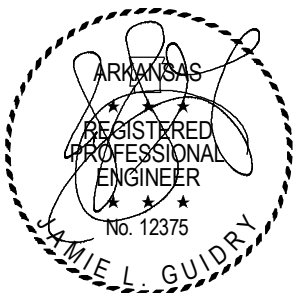
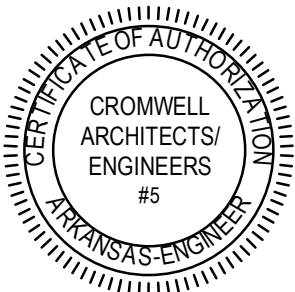
Design Phase

CONSTRUCTION  
DOCUMENTS

Revisions

No.	Date	Description

Stamp



07-17-2024

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Sheet Title

PLUMBING  
SCHEDULES

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