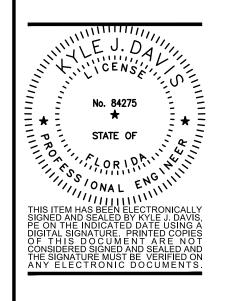
DATE 09/12/2024

2338 **POO1**

PLUMBING GENERAL NOTES	PLUMBING S	YMBOL LEGEND		PLUM	IBING AE	BREVI	ATIONS
ALL WORK SHALL BE DONE IN STRICT ACCORDANCE WITH 2023 FLORIDA BUILDING CODE, 2023 FLORIDA ENERGY CONSERVATION CODE, AND 2023 FLORIDA PLUMBING CODE.	SYMBOL	DESCRIPTION	SYMBOL	DESCRIPTION		SYMBOL	DESCRIPTION
PLUMBING CONTRACTOR SHALL VERIFY LOCATION, SIZE, AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO BEGINNING CONSTRUCTION.	CD	- ABOVE GROUND CONDENSATE DRAIN	AFF	-ABOVE FINISHED FLOOR		LAV	-LAVATORY
DRAWINGS ARE DIAGRAMMATIC. DO NOT SCALE DRAWINGS. EXACT DIMENSION LAYOUTS ARE THE	— — — CD — — —	- BELOW GROUND CONDENSATE DRAIN	AFG	-ABOVE FINAL GRADE		LBS	-POUNDS
RESPONSIBILITY OF THE GENERAL CONTRACTOR AND THE PLUMBING SUB—CONTRACTOR.		- DOMESTIC COLD WATER	B/S	-BELOW SLAB		MH	-MANHOLE
4. CONTRACTOR SHALL VISIT THE JOB SITE AND THOROUGHLY FAMILIARIZE THEMSELVES WITH ALL EXISTING CONDITIONS.		DOMESTIC HOT WATERDOMESTIC HOT WATER RECIRCULATING	CB	-CATCH BASIN		NIC	-NOT IN CONTRACT
5. ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS		- GREASE WATER	CD	-CONDENSATE DRAIN		NC	-NORMALLY CLOSED
OF CONSTRUCTION.	S	- ABOVE GROUND SANITARY	CFH	-CUBIC FEET PER HOUR		NO	-NORMALLY OPEN
6. ALL REQUIRED INSURANCE SHALL BE CARRIED BY THE CONTRACTOR FOR THE PROTECTION AGAINST PUBLIC LIABILITY OR PROPERTY DAMAGE FOR THE DURATION OF THE WORK.	s·	- BELOW GROUND SANITARY	CO	-CLEANOUT		NP	-NON-POTABLE WATER
7. ALL EXCAVATION AND BACKFILL AS REQUIRED FOR THIS PROJECT SHALL BE PROVIDED AS PART OF THIS CONTRACT.		- SANITARY VENT	CONT	-CONTINUATION		NTS	-NOT TO SCALE
8. ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS	——————————————————————————————————————	ABOVE GROUND STORM WATER LEADERBELOW GROUND	CW	-DOMESTIC COLD WATER		OD	-OUTSIDE DIAMETER
WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERABLE AND ACCEPTANCE BY THE OWNER MUST BE A CONDITION OF THE CONTRACT.	——————————————————————————————————————	- STORM WATER OVERFLOW	DN DS	-DOWN -DOWNSPOUT		PRV PSI	-PRESSURE REDUCING VALVE -POUNDS PER SQUARE INCH
9. ANY SLAB CUTS AND REPAIRS SHALL BE COORDINATED WITH THE GENERAL CONTRACTOR TO DETERMINE	M	- WATER METER	DWG	-DRAWING		PVC	-POLYVINYL CHLORIDE PIPE
IF IT SHOULD BE INCLUDED IN THE PLUMBING CONTRACTORS BID.	D-0	- WALL HYDRANT	EXIST	-FXISTING		RD	-ROOF DRAIN
10. ALL MATERIALS SHALL BE NEW. ALL WATER SUPPLIES, VENT, WASTE, AND CONDENSATE LINES SHALL BE CONCEALED IN CEILING, WALLS, OR UNDER FLOOR SLAB UNLESS SPECIFICALLY NOTED OTHERWISE. SOME LINES MAY BE GRAPHICALLY DEPICTED OUTSIDE THE WALLS FOR CLARITY ONLY. THESE LINES ARE		- HOSE BIBB	ECO	-EXTERIOR CLEAN OUT		RPBP	-REDUCED PRESSURE BACKFLOW PREVENTOR
INTENDED TO BE CONCEALED UNLESS SPECIFICALLY NOTED OTHERWISE.	CO I	- CLEAN OUT PLUG	°F	-DEGREE FAHRENHEIT		SAN	-SANITARY
11. ALL SHUTOFF VALVES SHALL BE 4 TURN BALL VALVES.	WC0 -C	- WALL CLEANOUT	FC0	-FLOOR CLEANOUT		SD	-STORM DRAIN
12. ALL FIXTURES MUST BE PROVIDED WITH READILY ACCESSIBLE STOPS. STOPS SHALL BE CHROMED BRASS WITH CHROMED BRASS TUBING AND COMPRESSION FITTINGS. PVC SUPPLIES ARE NOT ACCEPTABLE.	EWCO	- EXTERIOR WALL CLEAN OUT	FD	-FLOOR DRAIN		SF	-SQUARE FEET
13. ALL PLUMBING FIXTURES SHALL HAVE AIR CHAMBERS UNLESS SYSTEM WATER HAMMER ARRESTORS ARE	<u> </u>	- FLOOR CLEAN OUT	FS	-FLOOR SINK		SH	-SHEET
SHOWN. ALL FLOOR DRAINS SHALL HAVE TRAP PRIMERS.	FD ZC FD CC	- FLOOR DRAIN	G	-GAS		SOV	-SHUTOFF VALVE
14. PROVIDE CLEANOUTS FLUSH WITH GRADE OR SLAB WITH APPROPRIATE COVERS. COVERS SHALL BE BRONZE TOP WITH SCORED SURFACES AND LABELED "C.O".	FS ₽ (Ô)	– FLOOR SINK – ROOF DRAIN	GPH	-GALLONS PER HOUR		ST	-STORM WATER LEADER
15. PENETRATIONS OF FIRE RATED WALLS SHALL BE MADE PER THE UL OR GYP RATING SYSTEM AS	(<u>0</u>)	- KOUF DRAIN - WATER CLOSET	GPM	-GALLONS PER MINUTE		ST0	-OVERFLOW STORM WATER
SPECIFIED BY THE ARCHITECT. 16. ALL PLUMBING FIXTURES AND TRIM SHALL BE PER THE FIXTURE SCHEDULE. SUPPLY OWNER WITH	— <u> </u>	- TRAP (LAV OR SINK)	GW	-GREASE WATER		Т	-FLUSH VALVE TOILET
SUBMITTALS FOR HIS/HER REVIEW. IF THERE ARE SUBSTITUTIONS OR THE OWNER WISHES TO MAKE A CHANGE, ANY COST ADJUSTMENTS WILL BE BASED ON THE FIXTURE SCHEDULE.	——————————————————————————————————————	- SHUT-OFF VALVE IN VALVE BOX	НВ	-HOSE BIBB		T.P.	-TRAP PRIMER
17. IF DISSIMILAR METALS ARE TO BE JOINED, APPROVED INSULATION UNIONS SHALL BE USED.		- SHUTOFF VALVE	HC	-ADA ACCESSIBLE		U/G	-UNDERGROUND
18. PROVIDE WATER HEATER(S) AS SHOWN ON THE DRAWINGS AND PLUMBING SCHEDULES. WATER HEATERS	———б——	– BALL VALVE	HD	-HUB DRAIN		V	-VENT
SHALL BE INSTALLED WITH HEAT TRAPS, THERMOSTATIC RELIEF VALVE, AND A DRAIN PROPERLY PIPED TO THE OUTSIDE OR TO THE EMERGENCY OVERFLOW PLAN. PLUMBING CONTRACTOR SHALL PROVIDE A	—————————————————————————————————————	- CALIBRATED BALANCING VALVE	HW	-DOMESTIC HOT WATER		VTR	-VENT THRU ROOF
COMPLETE CONDENSATE SYSTEM INCLUDING A 2" DEEP EMERGENCY DRAIN PAN AS SHOWN ON THE DRAWINGS.		- CHECK VALVE (SWING)	HWR	-DOMESTIC HOT WATER R	RETURN (RECIRC)	VTW	-VENT THRU WALL
19. WALL PENETRATIONS OF SUPPLY PIPING SHALL BE MADE WITH COPPER PIPING OR SLEEVED CPVC WITH CAULKING.	—————————————————————————————————————	 SOLENOID OPERATED VALVE 	IE	-INVERT ELEVATION		WC	-TANK TYPE WATER CLOSET
20. FOR NEW BUILDING PROJECTS, COORDINATE UTILITY SERVICE LOCATIONS WITH CIVIL DRAWINGS.	<u></u>	– RELIEF OR SAFETY VALVE	IW	-INDIRECT WASTE		WCO	-WALL CLEANOUT
21. PROVIDE ACCESS PANELS FOR ALL VALVES CONCEALED IN WALLS OR ABOVE NON-ACCESSIBLE CEILINGS.	——————————————————————————————————————	GAS COCKGAS PRESSURE REGULATOR	JAN	-JANITOR SINK (SEE SPEC	C)	WTR	-WATER
22. REFER TO ARCHITECTURAL DRAWINGS FOR FIXTURE LOCATIONS AND MOUNTING HEIGHTS.		- GAS PRESSURE REGULATOR - SHUTOFF VALVE ON RISER	KW	-KILOWATT		WHA	-WATER HAMMER ARRESTOR
23. MOUNT HOSE BIBBS 24" ABOVE FINISHED GRADE UNLESS OTHERWISE NOTED.	۰C	- GAS COCK ON RISER					
24. COORDINATE EXACT FLOOR DRAIN LOCATIONS WITH ARCHITECTURAL DRAWINGS. SET FLOOR DRAINS		- CONNECTION, TOP					
BELOW FINISHED FLOOR TO ALLOW FOR FLOOR SLOPING TO THE DRAIN. 25. COORDINATE PIPING WITH ALL ELECTRICAL EQUIPMENT INCLUDING BUT NOT LIMITED TO ELECTRICAL		- CONNECTION, BOTTOM					
PANELS AND TRANSFORMERS. DO NOT ROUTE ANY PIPING OVER ANY ELECTRICAL EQUIPMENT UNDER ANY CIRCUMSTANCES. PLUMBING PIPING SHALL NOT RUN THROUGH DEDICATED ELECTRICAL OR TELECOM	C	- ELBOW, TURNED DOWN					
ROOMS UNDER ANY CIRCUMSTANCE. ANY PIPING RUN OVER ELECTRICAL EQUIPMENT OR THROUGH ELECTRICAL / TELECOM ROOMS SHALL BE RE-ROUTED AT NO ADDITIONAL COST.	0	- ELBOW, TURNED UP					
26. ALL DOMESTIC WATER PIPING SYSTEMS SHALL BE TESTED FOR ABSOLUTE TIGHTNESS BY SUBJECTING THE		- TEE, TURNED UP			SHEET	INDE	X
SYSTEM TO HYDROSTATIC PRESSURE OF 150 PSI GAUGE OR 50 PSI OVER WORKING PRESSURE, WHICHEVER IS GREATER. TESTING SHALL BE COMPLETED FOR NOT LESS THAN EIGHT (8) HOURS.		- TEE, TURNED DOWN		P001 GENER	AL NOTES, LEGEI	ND, & SHEE	T INDEX — PLUMBING
27. SOIL, VENT PIPES, AND CONDENSATE DRAINS SHALL BE TESTED BY TEMPORARILY PLUGGING ALL		- CAP		P111 GRAVIT	Y PIPING FLOOR	PLAN	
OUTLETS AND FILLING THE SYSTEM WITH WATER TO THE LEVEL OF THE HIGHEST VENT STACK. THE SYSTEM MUST BE INSPECTED AND ALL LEAKS REPAIRED.		- DIRECTION OF FLOW		P211 PRESSI	IRE PIPING FLOOI	R PLAN	
	0	- ELECTRIC WATER HEATER		P301 PLUMB	ING RISER DIAGR	RAMS	
				P401 PLUMB	ING DETAILS		
		- CEILING MOUNTED ACCESS DOOR	F	P402 PLUMB	ING DETAILS		
	XX	- REVISION REFERENCE		P501 PLUMB	ING SCHEDULES		
				P601 PLUMB	ING SPECIFICATION	DNS	
	$\left(\begin{array}{c} I \\ P-1 \end{array}\right)$	- DETAIL REFERENCE: TOP - DETAIL#; BOTTOM - DRAWING# SHOWN ON					
	XX	- SHEET NOTE CALLOUT					
		- DEMO TO					
		- CONNECT TO					
	NOTE COUR DATE OF THE PROPERTY	LECEND MAY NOT DEDTAIN TO THE DROJECT					

NOTE: SOME SYMBOLS SHOWN ON THIS LEGEND MAY NOT PERTAIN TO THIS PROJECT





Date Revisions

PIPING

DATE 09/12/2024

2338 P111

COBURN AND ASSOCIATES CONSULTING ENGINEERS
P.O. BOX 577
HIGH SPRINGS, FLORIDA 32655-0577
(386)454-3748
FLORIDA LICENSED ENGINEERS EB 0003687 CA JOB NUMBER 2390

Date Revisions

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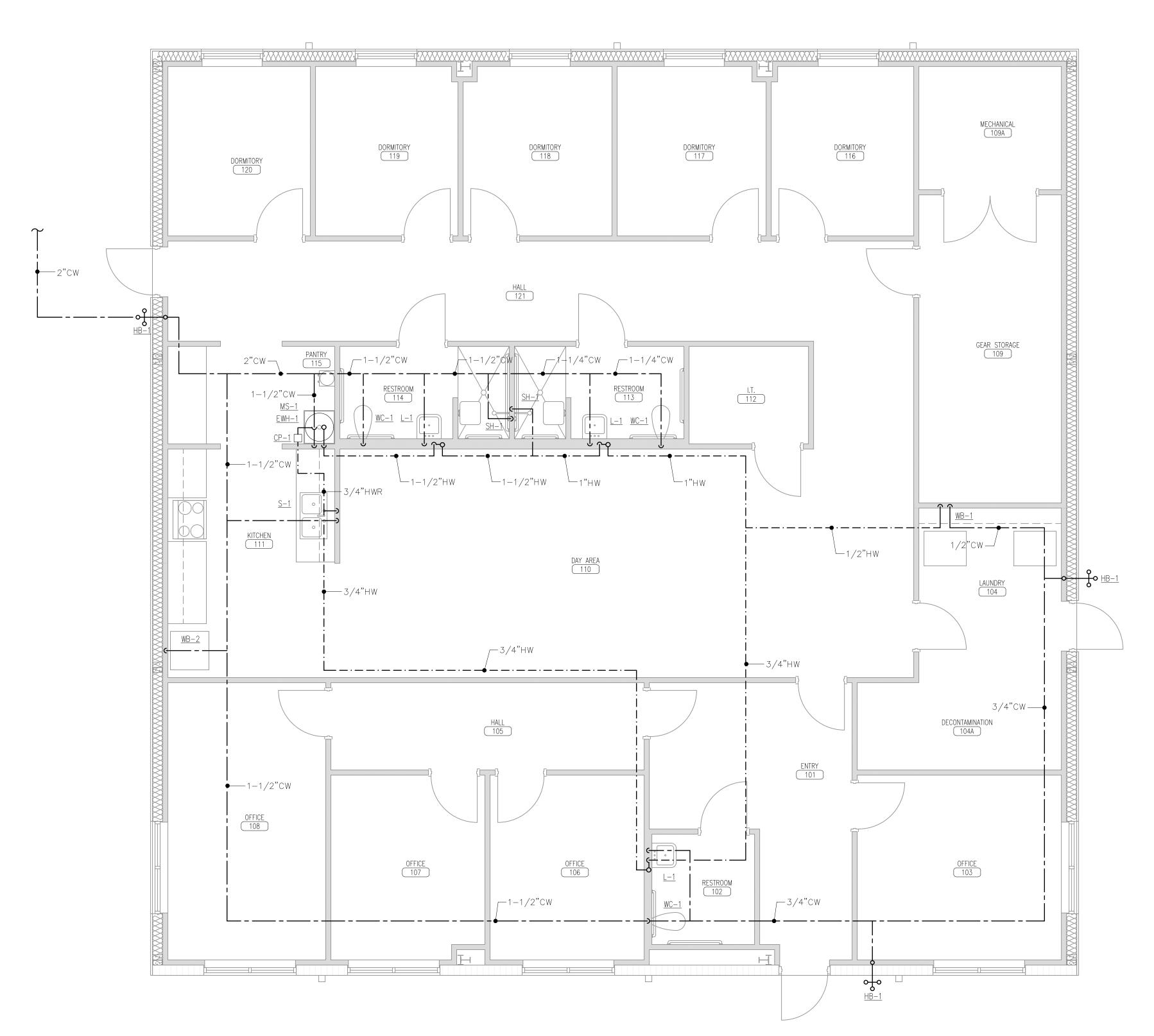
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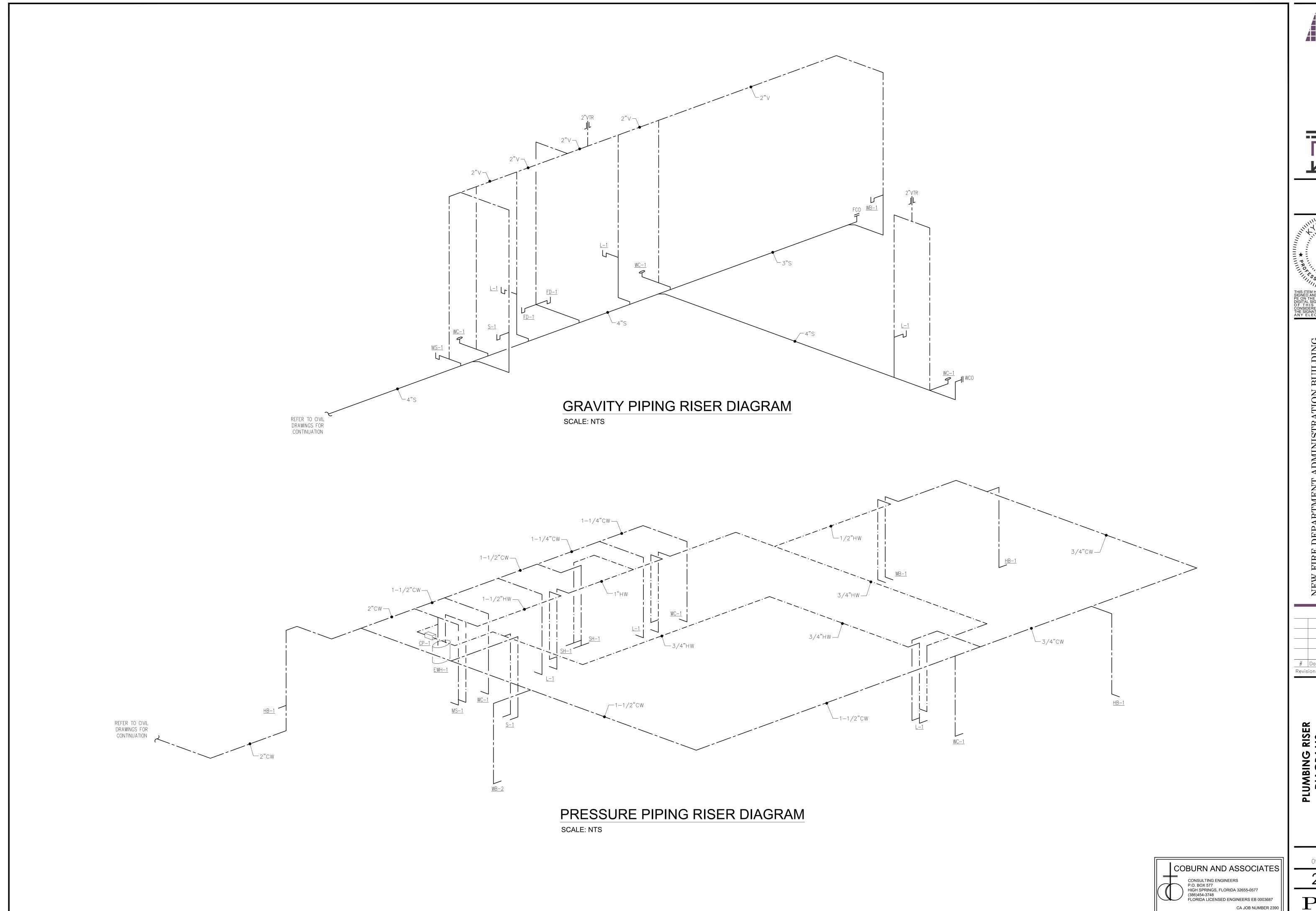
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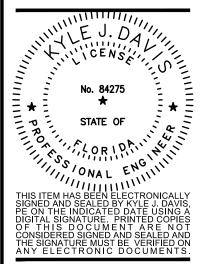


ARCHITECTURE & INTERIORS

AA26002508

GAINESVILE, FLORIDA

352-871-4935



5W FIRE DEPARTMENT ADMINISTRATION B
9 NW LAKE JEFFERY ROAD

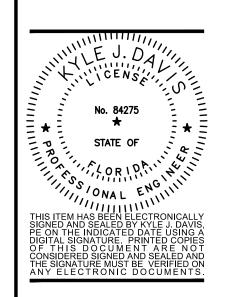
Date Note
Revisions

PLUMBING RISER
DIAGRAMS

DATE 09/12/2024

2338





NEW FIRE DEPARTMENT ADMINISTRATION 1579 NW LAKE JEFFERY ROAD LAKE CITY, FLORIDA

Date Note
Revisions

PLUMBING DETAILS

DATE 09/12/2024

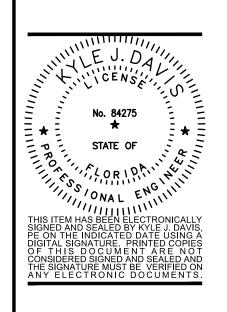
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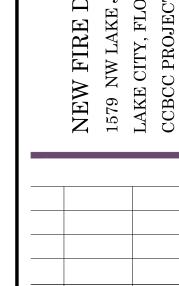
(386)454-3748 FLORIDA LICENSED ENGINEERS EB 0003687

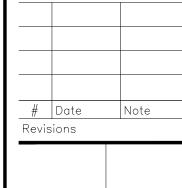
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DETAILS

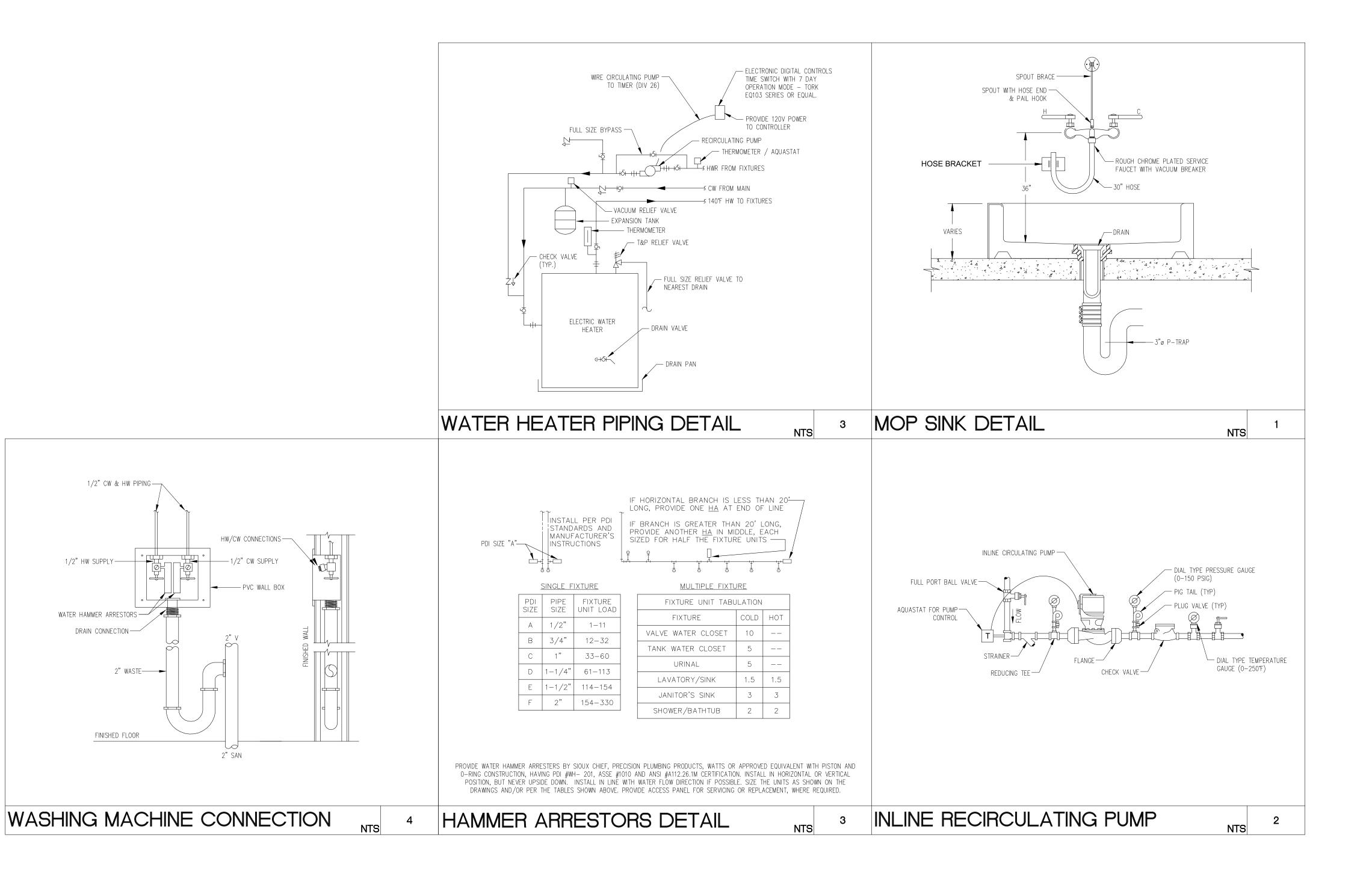
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(386)454-3748
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Note

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	PLUMBING FIXTURE SCHEDULE												
MARK	FIXTURE	MANUFACTURER	MODEL NUMBER	TYPE	MATERIAL	WASTE	VENT	CW	HW	REMARKS			
WC-1	WATER CLOSET	ZURN	Z5645-BWL	FLUSH VALVE FLOOR MOUNT	VITREOUS CHINA	4"	2"	1-1/4"	_	FLOOR MOUNTED FLUSH VALVE ADA HEIGHT 1.28 GALLONS PER FLUSHING CYCLE HIGH EFFICIENCY, VITREOUS CHINA ELONGATED BOWL. 1-1/2" INLET SPUD. TOILET SEAT, ZURN Z5955SS-EL OR EQUIVALENT. ZURN Z6000AV-HET (1.28 GPF) FLUSH VALE OR EQUIVALENT.			
L-1	LAVATORY	ZURN	Z5328	WALL MOUNTED	VITREOUS CHINA	1-1/2"	1-1/2"	1/2"	1/2"	ADA ACCESSIBLE WALL HUNG 23"x21.5" VITREOUS CHINA LAVATORY WITH 8" CENTER FAUCET HOLES, DRILLED FOR CONCEALED CARRIER. FAUCET: ZURN Z867R0-XL-3M (0.5 GPM) METERING FAUCET. DRAIN: Z8746-PC. OFFSET WHEELCHAIR GRID DRAIN. P-TRAP: Z8700-8B-PC. TRAP WRAP: Z8946-1-NT. SUPPLY: MCGUIRE 2165CC.			
S-1	TWO COMPARTMENT SINK	ELKAY	ECTSRA33229TFLC	DROP-IN	STAINLESS STEEL	1-1/2"	1-1/2"	3/4"	3/4"	DROP-IN 33"x22", STAINLESS STEEL, SINGLE HOLE TWO COMPARTMENT SINK. FAUCET: LKAV7051FCR			
MS-1	MOP SINK	ZURN	Z1996-24	FLOOR MOUNT	COMPOSITE	3"	2"	3/4"	3/4"	FLOOR MOUNTED 24"x24" COMPOSITE CUSTODIAL MOP SINK, 3" IPS CONNECTION DRAIN ASSEMBLY, SERVICE SINK FCT W/6" INTEGRAL VB SPOUT W/HOSE THREAD OUTLET & PAIL HOOK, ADJUSTABLE SWIVEL INLETS, 2-1/2" LEVER HANDLES, HOSE AND BRACKET. FAUCET: ZURN - Z843M1.			
SH-1	SHOWER							1/2"	1/2"				
WB-1	WALL BOX	OATLEY	28529	WALL	POLYSTYRENE	2"	1-1/2"	1/2"	1/2	1/2" HIGH IMPACT POLYSTYRENE, 4 SUPPORT BRACKETS, SNAP-ON FACEPLATE FRAME, ACCOMMODATES UP TO 1" DRYWALL WITH 1/4 TURN BRASS BALL VALVE.			
WB-2	WALL BOX	OATLEY	39156	WALL	POLYSTYRENE	_	-	1/2"	_	1/2" HIGH IMPACT POLYSTYRENE, 4 SUPPORT BRACKETS, SNAP-ON FACEPLATE FRAME, ACCOMMODATES UP TO 1" DRYWALL WITH 1/4 TURN BRASS BALL VALVE.			
		<u> </u>											

DRAINAGE SPECIALTIES SCHEDULES										
MARK	FIXTURE	MANUFACTURER	MODEL NO.	MATERIAL	STYLE	SIZE	REMARKS			
FD-1	FLOOR DRAIN	ZURN	EZ-PV2-R6	PVC SOLVENT WELD BODY	NICKEL BRONZE ROUND	3"	ZURN EZ1 FLOOR DRAIN, PVC SOLVENT WELD BODY WITH BOTTOM OUTLET AND 1/2" TRAP PRIMER CONNECTION KNOCK-OUT PLUG AND TOP ASSEMBLY. FLOOR DRAIN IS CAPABLE OF UP TO 3/4" OF VERTICAL POST POUR ADJUSTMENT.			

ELECTRIC WATER HEATER SCHEDULE										
MARK	MAKE & MODEL NO.	KW PER ELEMENT	NUMBER OF ELEMENTS	VOLTS/PH	TOTAL KW	RECOVERY (GPH) @ 70F	STORAGE (GAL.)	DIMENSIONS (D"xH") / LBS		
EWH-1	AO SMITH DRE-52	4.1	3	240/1	12.3	72	50	21.75"x55.75" / 265		

PIPING SCHEDULE											
SYSTEM SIZE TYPE CONNECTION INSULATION THICKNESS COMMENTS											
DOMESTIC COLD WATER	ALL	CPVC	GLUED	NONE		SCH 40 ASTM D2846					
DOMESTIC HOT WATER	ALL	CPVC	GLUED	FIBERGLASS	1" MIN R4	SCH 40 ASTM D2846					
SANITARY/VENT	ALL	DWV	GLUED	NONE		SCH. 40 ASTM D 1784 60T					

HOT WATER RECIRC. PUMP SCHEDULE										
MARK	MAKE & MODEL NO.	TYPE	CAPACITY (GPM)	HEAD (FEET)	MOTOR HP	V/PH/HZ				
CP-1	TACO - 006-IQB4	INLINE	0-11.5	0-9.5	1/40	115/1/60				

turnbuckles and/or threaded rods.

Acceptable Manufacturers

Grinell
 Fee and Mason

All adjustments shall be positively secured by a locknut or setscrew.

Hangers shall support the pipe size for which they are manufactured.

maintained, the architect / engineer shall have the authority to require disassembly of

1. Any disassembly, cleaning, or repair shall be performed at no additional cost to the

2. Disinfection, flushing, and testing shall be repeated upon reassembly of the piping.

piping as deemed necessary to determine the cause of contamination

1. All piping shall be supported from structural building members, IE block, beams, columns, purlins, floor joists, etc. 2. Piping shall not be supported from ceiling tile or grids, conduit, mechanical equipment, ductwork, or non-structural steel. 3. Perforated strapping may only be used for piping 3/4" or smaller and only when concealed in walls or ceilings. 4. Hangers for piping run flush along walls shall utilize stamped steel straps similar to conduit straps for pipes sizes 2" and smaller. 5. Hangers for piping run flush along walls shall be steel wall brackets with steel clevis type hangers and threaded rod supports for pipe over 2". 6. Hangers for piping not run along walls shall be clevis type hangers and threaded rod supports for all piping over 3/4". 1. Vertical runs of piping not over 15 feet long shall be supported by hangers placed not over one foot from elbows or connecting horizontal run. 2. Hangers shall be placed so as to prevent sag and permit proper drainage. 3. Hangers shall not be placed at more than a maximum distance as shown on the table below. Pipe Size Max. Span (Ft,) 1/2" and 3/4" 1" and 1-1/4" 1-1/2", 2", 2-1/2" 3" and 4" 5" and 6" 8" and larger 4. Concentrations of valves and fittings will require closer spaces than outlined above. J. Hanger Attachments: 1. Pipe hangers shall be attached to structural steel by heavy steel clamps. a. Clamps shall be bolted to steel or welded. 2. Piping hangers or clamps shall be attached to walls by means of expansions bolts UNIONS 1. All unions shall be the same size as the line in which they are installed unless noted otherwise. B. Location 1. Unions shall be located between the shut-off valve and each of the following: a. Inlet and outlet to all water heaters b. Lavoratories and Sinks c. Water Coolers d. Water closets and toilets e. Inlet and Outlet of Cooling Coil f. Inlet and outlet of pumps 2. Where final fixture connection is made by compression—type fitting, unions shall not be required. a. This exception does not apply to the water heater. C. Acceptable Manufacturers 1. Crane Jenkins 3. Vogt 4. Stockman D. Unions for 2-1/2" and smaller copper 1. Brass ground joints, brass body. 2. Rated for 150# 3. Sweat to threaded to match the system in which they are installed. E. Install in locations where wrenches can be used on each half of the union with enough clearance for at least 180 degree rotation on a 6" pipe wrench. VALVE, COCKS, AND FAUCETS A. Hot, Cold, and/or Tempered Water 1. Shutoff valves above grade a. Bronze Gate Valve 2. Shutoff valve below grade a. Bronze Gate Valve — Install in fiberglass box with cover. Drain valves a. Bronze Gate Valve B. Acceptable Manufacturers 1. Crane 2. Vogt 3. Sterling C. Bronze gate valves: 3" and smaller a. Rising stem, wedge disc gate, bronze body b. 200 psi, water, oil, gas c. Stuffing, box and brass gland, screw—in bonnet d. Threaded ends e. Model equal to Nibco T-111 D. Bronze Globe Valve 1. 3" and smaller a. Rising stem, bronze only b. 150 psi, water, oil, gas c. Stuffing box, brass gland, screw—in bonnet d. Threaded ends. E. Hose Bibbs 1. 3/4" Female thread inlet 2. 3/4" Male thread hose outlet 3. Rough chrome plated Loose-key type 5. Provide with vacuum breaker 6. Model a. Equal to Chicago No. 3877—E27, Nibco 763—LS, or equal 7. Provide with vacuum breaker. F. Check Valve . Swing check valve 2. Screwed ends and cap 3. Bronze ground disc 4. 200 lb WOG 5. NIBCO T413 or equal G. Wall Hydrant 1. Fully recessed with "key" operated cover. 2. 3/4" female inlet 3. 3/4" male threaded hose outlet 4. Rough chrome plated Vacuum breaker PRESSURE - TEMPERATURE RELIEF VALVE A. Supply a pressure relief valve on each hot water heater and hot water booster tank. B. Valve size, pressure, and temperature rating shall be specified by the tank manufacturer. In no case shall the valve be smaller than 3/4" inlet and outlet. Valve shall have a handle for manual operation and testing. Valve shall be cast brass or bronze. E. Pipe the outlet of the pressure—temperature relief valve to outside of the building and terminate 2" above grade or minimum height per the local code. A. Provide piping insulation on all designated on the Piping Schedule as shown on drawings and pre the Florida Energy Code. Minimum R4 per inch of insulation. B. Acceptable Manufacturers Certainteed C. Fiberglass Insulation . Rigid lightweight heavy density fiberglass with jacket. 2. Temperature applications to 650 degrees F 3. Insulation, jacket, and adhesive shall be tested under procedure ASTM E—84, NFPA 255, and UL 723, not exceeding the following flame and smoke index. a. Flame Spread: 25 b. Smoke developed: 50 4. Equal to Johns-Manville Micro-Lok 650 AP-T. D. Closed Cell Rubber Insulation 1. Closed cell, elastomeric tubular pipe insulation 2. Tested under procedure ASTM E-84, NFPA 255, and UL 723, not exceeding the following flame and smoke index. a. Flame Spread: 30 b. Smoke Density: 100 Adhesive a. Air drying contact cement b. Equal to Johns-Manville "Aerotube Elastomeric Pipe Insulation" E. Install insulation only after pipe has been thoroughly inspected and tested and accepted by the Architect / Engineer and State or local inspectors.

PIPE AND FITTINGS

H. Installation:

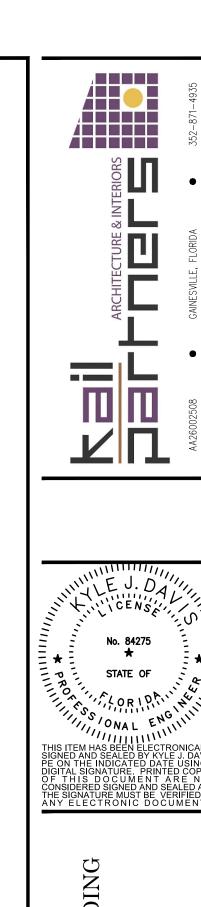
F. All clamps, hangers, clevis, etc. shall be steel.

approved dielectric material.

G. Pipe hangers in direct contact with copper shall be copper or lead plated, or of an

installing any insulation. G. Installation of Fiberglass Insulation: 1. All insulation shall be continuous through wall and ceiling openings. 2. Vapor barrier jackets shall be used on piping except domestic hot water. 3. Hangers, supports, anchors, etc., that are secured directly to cold surfaces must be adequately insulated and vapor sealed to prevent condensation. 4. Metal shields shall be applied between hangers and supports and the pipe insulation. 5. Shields shall be formed to fit the insulation and shall extend up to the centerline of the pipe and shall be a minimum of 12" long. 6. Shields shall be 16 gauge sheet metal. Shields exposed to corrosive environments or installed outdoors shall be aluminum. 7. Fittings shall be covered with equivalent density insulation and covered with preformed PVC insulation fitting covers. a. Wrap fittings with insulation. b. Pop the preformed cover in place, tape or tack. H. Installation of Closed-Cell Rubber: 1. Make all cuts nearly with a razor blade or sharp knife. 2. All longitudinal cuts shall be sealed with adhesive. 3. All butt joints shall be made neatly and sealed with adhesive. 4. Tape shall not be allowed on joints or seams. 5. Insulation shall be applied in a relaxed state, not stretched or crushed. 6. Fittings shall be insulated by fabricating tees, elbows, or crosses as required from the tube insulation as described by the manufacturer's literature. 7. Valves shall be insulated up to the packing nut. 8. All insulation on exposed piping shall receive two coats of paint. Paint shall match the color of the wall against which it is mounted. 9. Joints shall be sealed with adhesive as recommended by the manufacturer. FLOOR AND SHOWER DRAINS A. Acceptable Manufacturers: 1. Wade 2. Josam B. Floor Drains: 1. Cast iron floor drain with integral clamping collar 2. Seepage openings 3. Heavy duty grate, with vandalproof screws 4. Square top, polished brass 5. Adiustable top 6. 4—inc outlet unless otherwise noted on drawings 7. Model — equal to Wade series W—1390 or scheduled drain. C. Installation 1. Floor drains shall be installed in locations shown on floor plans. 2. Care shall be taken that rim of floor drain is not higher than the finished floor in order to prevent puddling of water ground the drain. 3. Floor drain top shall be flush with finished floor. 4. Hub drains shall extend 1" above finished floor. CLEANOUTS AND ACCESS COVERS A. Provide cleanouts as shown on drawings or as required by the Florida Plumbing Code. B. Acceptable Manufacturers 1. Wade 2. Josan C. Floor Cleanouts 1. Same size as drain pipe through 4 inches. 2. Adjustable housing to match finished floor Heavy duty top. 4. Nickel brass secured cover 5. Ferrule as required to match soil pipe 6. Cast iron 7. Cover shall be marked "C.O." 8. Model Number: a. Synthetic floor covering: Wade W-7030-D Series or Equal b. Finished Slab — no covering: Wade W—7030 Series or Equal c. Terrazzo finish: Wade W-7010-U Series or Equal D. Concealed Cleanouts: 1. Cleanouts in crawl space or in unfinished mechanical rooms. 2. Cast iron cleanout tee on T—wall with ferrule fitting and neoprene seal raised plug 3. Same size as drain pipe through 4 inches. 4. Position cleanout plug for easy access by electric eel. 5. Model number: Cleanout Ferrule: Wade W-8530-B series or Equal. E. Exposed Wall Cleanouts 1. Same size as pipe. F. Install all cleanouts and coverplates flush with the finished floor in which they are 1. Any cleanout which presents a tripping hazard due to improper installation shall be removed and reinstalled. DOMESTIC WATER HEATERS - ELECTRIC A. Water heaters shall be UL listed, ASME constructed, and meet ASHRAE 90.1 energy efficiency standards. B. Acceptable Manufacturers 1. A.O. Smith Lochinvar 3. Laars C. Electric Water Heaters 1. Glass lining fused to steel tank 2. Screw-in type, direct immersion 3. Working pressure - 150 PSI 4. Fully automatic thermostat controls with high temperature limit safety shutoff 5. Screw-in anode corrosion protection 6. Three-year warranty 7. 3/4" inlet, outlet, and relief opening 8. Outer jacket of backed enamel finish D. Model and Capacity 1. Refer to electric water heater schedule E. Install per manufacturer's recommendations Mount units on wall shelf where noted on drawings. G. Provide thermostatic relief valve on each unit. PLUMBING FIXTURES A. Furnish and install plumbing fixtures per the Plumbing Fixture Schedule 1. Manufacturers and Model Numbers establish quality, equivalent fixtures by other manufacturers are acceptable. ELECTRIC WATER COOLERS (EWC) A. Acceptable Manufacturers Halsey Taylor 3. Elkay B. Dual Height (Unless otherwise noted) Semi-recessed 2. Stainless steel top, sides, and front. 3. 14 inches from wall to front. 4. Self—closing pushbutton valve with optional "soft touch" handle 5. Automatic pressure regulating valve 6. Mounting height — 31" floor to top of basin. a. 14 GPH @ 50 degree F water 8. Model and Manufacturer: Refer to plumbing fixture schedule a. Furnish with 1-1/4" ground joint tubular, 17 gauge, chrome—plated P—trap, deep flange with brass nuts; less cleanout, sterling 50190 or Dearborn b. Furnish with supply assembly equal to Kohler 7666 with loosekey stop and flexible 3/8" tube risers. C. Unit shall be installed on wall using bracket supplied by the manufacturer. Unit shall be blocked and supported per manufacturer recommendations. E. Unit shall be installed per ANSI Standard 117.1—1980, Section 4.15

F. All surface to receive insulation shall be cleaned of all dirt, grease, and moisture prior to



COBURN AND ASSOCIATES

CONSULTING ENGINEERS
P.O. BOX 577
HIGH SPRINGS, FLORIDA 32655-0577
(386)454-3748
FLORIDA LICENSED ENGINEERS EB 0003687

CA JOB NUMBER 2390

DATE 09/12/2024 2338

|Date

PLUMBING CIFICATION

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Revisions

Note

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