

PLUMBING SYMBOLS & ABBREVIATIONS

NOTE: NOT ALL SYMBOLS ARE USED ON THIS PROJECT

ANNOTATION ABBREVIATIONS			PLUMBING SYMBOLOGY			ANNOTATION SYMBOLOGY	
AC	ABOVE CEILING	GPM	GALLONS PER MINUTE	PIPING SYSTEM CA COMPRESSED AIR CD CONDENSATE DRAIN P PROPANE GAS OST OVERFLOW STORM OW OIL WASTE PD PUMP DISCHARGE ST STORM W SANITARY WASTE OV OIL VENT V SANITARY VENT CW DOMESTIC COLD WATER NPCW NONPOTABLE COLD WATER HW DOMESTIC HOT WATER HW 140 DOMESTIC HOT WATER (OTHER TEMP.) HWC DOMESTIC HW RECIRCULATION		VACUUM RELIEF VALVE	PLUMBING KEYNOTE PLUMBING EQUIPMENT DESIGNATION DETAIL MODULE NUMBER DETAIL OR SECTION MARK SHOWN ON DRAWING
AFF	ABOVE FINISHED FLOOR	GC	GENERAL CONTRACTOR			BACKFLOW PREVENTER	
BAS	BUILDING AUTOMATION SYSTEM	HAP	HIGH AS POSSIBLE			HOSE BIBB / WALL HYDRANT	
BF	BELOW FLOOR	HB	HOSE BIBB (INTERIOR)			AUTOMATIC AIR VENT	
BG	BELOW GRADE	HS	HOSE STATION			PRESSURE GAUGE	
BH	BOOSTER HEATER	HWCP	HOT WATER RECIRCULATION PUMP			THERMOMETER	
BFP	BACKFLOW PREVENTION DEVICE	HWS	HANDWASHING SINK			FLOW SWITCH	
BJ	BETWEEN JOISTS	IM	ICE MAKER			PRESSURE SWITCH	
BOP	BOTTOM OF PIPE	L	LAVATORY			TEMPERATURE SWITCH	
BTUH	BRITISH THERMAL UNITS PER HOUR	LT	LAUNDRY TUB			PIPE UNION	
CF	COMBINATION FIXTURE	MBH	THOUSANDS OF BTU PER HOUR		WYE STRAINER		
COND	CONDENSATE	MC	MECHANICAL CONTRACTOR		WYE STRAINER W/DRAIN VALVE		
CP	CONDENSATE PUMP	MSB	MOP SINK BASIN		PIPE SLOPE ARROW		
CSS	CLINICAL SERVICE SINK	NTS	NOT TO SCALE		FLOW ARROW		
CV	CONTROL VALVE	ORD	OVERFLOW ROOF DRAIN		CONCENTRIC REDUCER		
DF	DRINKING FOUNTAIN	P	PUMP		ECCENTRIC REDUCER		
DN	DOWN	PC	PLUMBING CONTRACTOR		3-WAY CONTROL VALVE		
DW	DISHWASHER	PRV	PRESSURE RELIEF VALVE		ANGLE GATE VALVE		
EC	ELECTRICAL CONTRACTOR	RD	ROOF DRAIN		ANGLE GLOBE VALVE		
EEW	EMERGENCY EYE WASH	RPZ	REDUCED PRESSURE BFP		BALANCING/SHUTOFF VALVE		
EEWSH	COMB. EMERGENCY EYE WASH/SHOWER	SE	SEWAGE EJECTOR		BALL VALVE		
ES	EJECTOR SUMP	SF	SQUARE FOOT		BUTTERFLY VALVE		
ET	EXPANSION TANK	SH	SHOWER		CALIBRATED BALANCING VALVE		
EWC	ELECTRIC WATER COOLER	SK	SINK		CHECK VALVE		
EWH	ELECTRIC WATER HEATER	SP	SUMP PUMP		CONTROL VALVE		
FA	FROM ABOVE	SS	SERVICE SINK		GAS COCK		
FB	FROM BELOW	TFA	TO FLOOR ABOVE		GATE VALVE		
FBO	FURNISHED BY OTHERS	TB	TO BELOW		GLOBE VALVE		
FCO	FLOOR CLEANOUT	TFB	TO FLOOR BELOW		PLUG VALVE		
FD	FLOOR DRAIN	TMV	THERMOSTATIC MIXING VALVE		PRESSURE REDUCING VALVE (WATER)		
FFA	FROM FLOOR ABOVE	TOP	TOP OF PIPE		PRESSURE REGULATOR (GAS)		
FFB	FROM FLOOR BELOW	VB	VACUUM BREAKER		QUICK OPEN VALVE		
FPC	FIRE PROTECTION SUBCONTRACTOR	VTR	VENT THRU ROOF		SAFETY RELIEF VALVE		
FS	FLOOR SINK	WC	WATER CLOSET		SOLENOID VALVE		
GCO	YARD CLEANOUT	WCO	WALL CLEANOUT				

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ELEVEN MILE PHASE 1
BID SET

PLUMBING SYMBOLS & ABBREVIATIONS

PROJECT NO.: 0180930.00
DRAWN: SH
REVIEWED: JB/CF
DATE: 09/12/18

P0.1

PLUMBING GENERAL NOTES

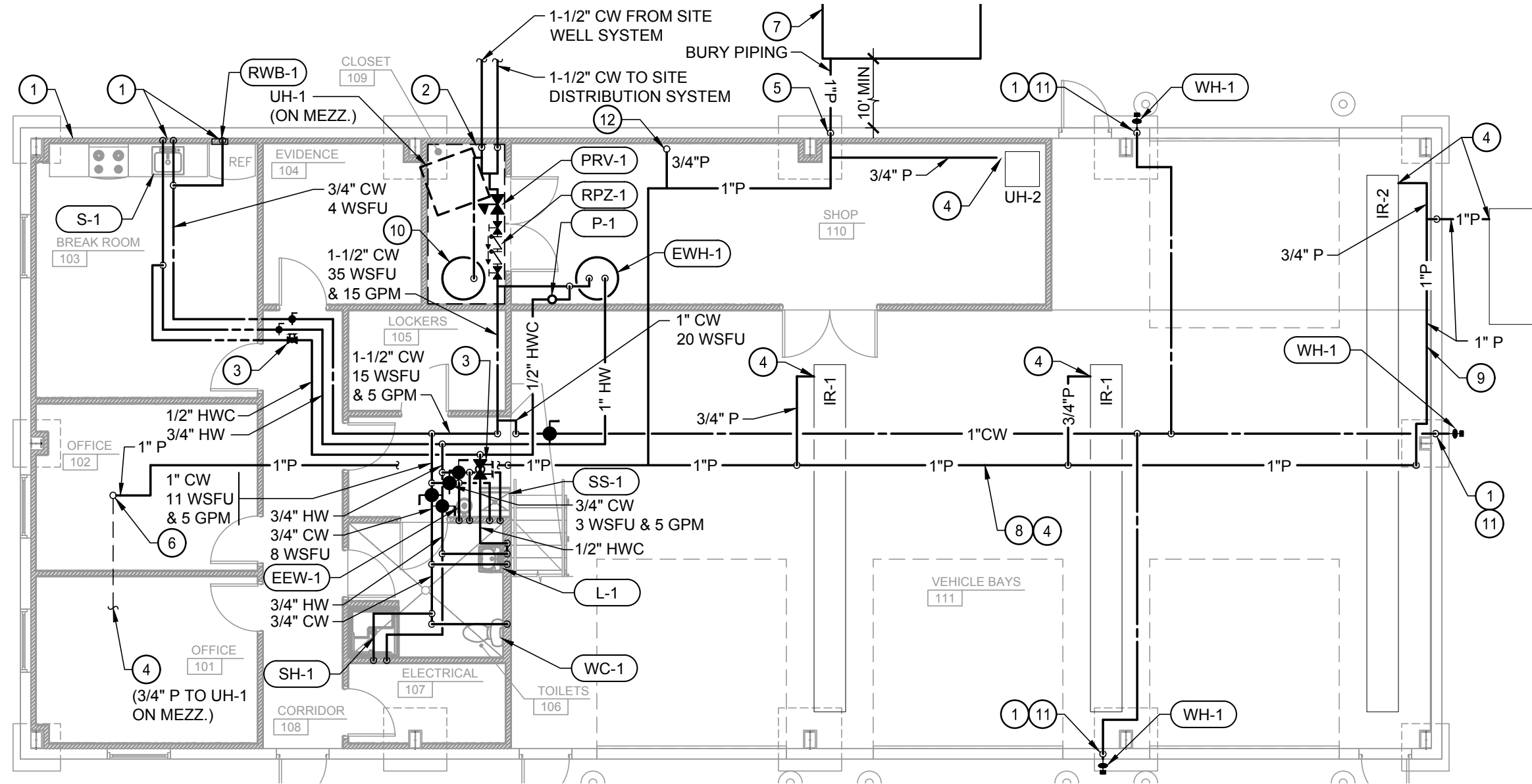
- A. WORK SHALL BE PERFORMED BY A LICENSED PLUMBER OF THE STATE OF COLORADO.
- B. MATERIALS, INSTALLATION AND TESTING SHALL BE IN ACCORDANCE WITH THE LATEST ADOPTED EDITION OF STATE AND LOCAL CODE PROCEDURES, METHODS AND REQUIREMENTS, INCLUDING THE MOST STRINGENT OF HEALTH AND SAFETY STANDARDS AS REQUIRED AND AS INTERPRETED BY THE AUTHORITY HAVING JURISDICTION. MINIMUM CODE AND STANDARDS REQUIRED, BUT NOT LIMITED TO THE FOLLOWING:
"COLORADO STATE PLUMBING CODE" (2017 EDITION)
"INTERNATIONAL PLUMBING CODE" (2015 EDITION)
"NFPA 54 - NATIONAL FUEL GAS CODE"
APPLICABLE LOCAL AND MUNICIPAL CODES AND ORDINANCES.
- C. MEANING AND INTENT OF DRAWINGS: DRAWINGS ARE DIAGRAMMATIC. PIPING IS SHOWN IN SCHEMATIC FORM. SCALES INDICATED ARE FOR ARCHITECTURAL REFERENCE ONLY. IT IS NOT INTENDED THAT THE DRAWINGS SHOW EVERY WASTE, VENT, WATER PIPE, FITTING, SUPPORTS, ETC., AND IT IS UNDERSTOOD THAT THE DRAWINGS MUST BE FOLLOWED AS CLOSELY AS CIRCUMSTANCES WILL PERMIT, THE PROPER INSTALLATION ACCORDING TO THE TRUE INTENT AND MEANING OF THE DRAWINGS, LOCAL CODES AND STANDARD PRACTICES SHALL BE PROVIDED. PLUMBING CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS PRIOR TO INSTALLATION. REPORT ANY PROBLEMS OR CONFLICTS TO THE ARCHITECT/ENGINEER. NOTED DIMENSIONS TAKE PRECEDENCE OVER SCALED DIMENSIONS. DO NOT SCALE DRAWINGS. ANY MINOR CHANGES IN LOCATION OF EQUIPMENT, WASTE VENT, WATER PIPE, ETC., FROM THOSE LOCATIONS SHOWN ON THE DRAWINGS, SHALL BE MADE WITHOUT EXTRA COST, IF SO DIRECTED BY THE ARCHITECT/ENGINEER BEFORE THE INSTALLATION IS MADE. A MINOR CHANGE IN LOCATION IS CONSIDERED TO BE WITHIN 5'-0" OF THE ORIGINAL INDICATED LOCATION. THE EQUIPMENT INDICATED ON THESE DRAWINGS INCLUDE ONLY THE MAJOR EQUIPMENT REQUIREMENTS. NOT WITHSTANDING, THE DETAILS PRESENTED IN THESE DRAWINGS VERIFY THE COMPLETENESS OF THE MATERIALS LISTS AND SUITABILITY OF DEVICES TO MEET THE INTENT OF THIS PROJECT. ANY ADDITIONAL EQUIPMENT OR MATERIAL REQUIRED, EVEN IF NOT SPECIFICALLY MENTIONED HEREIN SHALL BE PROVIDED WITHOUT CLAIM FOR ADDITIONAL PAYMENT; IT BEING UNDERSTOOD THAT A COMPLETE AND OPERATIONAL PLUMBING SYSTEM, SATISFACTORY TO THE ARCHITECT/ENGINEER AND THE OWNER SHALL BE PROVIDED. USE ONLY THE MANUFACTURER'S TESTED ASSEMBLIES.
- D. ALL GENERAL NOTES ARE PART OF THIS CONTRACT.
- E. ALL EXPENSES CARRIED BY THE ARCHITECT/ENGINEER IN TROUBLESHOOTING SYSTEM(S) PROBLEMS CAUSED BY INADEQUATE WORKMANSHIP, LACK OF TECHNICAL EXPERTISE OR OTHER FORMS OF POOR PERFORMANCE ON THE PART OF A CONTRACTOR, SHALL BE BORN BY THAT CONTRACTOR.
- F. PLUMBING CONTRACTOR IS RESPONSIBLE FOR ALL SERVICES IN BUILDING AND TO 5'-0" BEYOND THE BUILDING CONSTRUCTION LINE. SITE UTILITY CONTRACTOR IS RESPONSIBLE FOR ALL OTHER PIPING.
- G. COORDINATE ROUTING OF PIPING WITH ALL OTHER TRADES AND STRUCTURAL CONDITIONS TO AVOID ANY CONFLICTS AND ADVISE ARCHITECT/ENGINEER OF ANY POSSIBLE CONFLICTS. VERIFY EXACT LOCATIONS, ELEVATIONS, AND DIMENSIONS OF STRUCTURAL MEMBERS AND OPENINGS.
- H. MAINTAIN A MINIMUM CLEARANCE OF 3'-0" IN FRONT OF ELECTRICAL PANELS AND 1'-0" EITHER SIDE FROM STRUCTURE TO STRUCTURE AND FLOOR TO STRUCTURE. ROUTE PIPING AROUND AND NOT DIRECTLY ABOVE ELECTRICAL PANELS. VERIFY CLEARANCE REQUIREMENTS WITH ELECTRICAL CONTRACTOR PRIOR TO INSTALLING PIPE.
- I. INCLUDE IN BID, ALL LICENSE, PERMIT, INSPECTION AND OTHER FEES REQUIRED BY UTILITY COMPANIES OR AUTHORITIES HAVING JURISDICTION REQUIRED FOR COMPLETION OF WORK SO THAT NO UNEXPECTED ADDITIONAL EXPENSES ARE INTRODUCED TO OWNER.
- J. PROMPTLY INFORM THE ENGINEER, IN WRITING, OF ANY DEVIATIONS IN THE CONTRACT DOCUMENTS FROM REQUIREMENTS OF LOCAL UTILITIES, MUNICIPALITIES, STATE OR FEDERAL LAWS AND REGULATIONS. PERFORM THE WORK IN ACCORDANCE WITH SUCH REQUIREMENTS AT NO ADDITIONAL COST TO THE OWNER.
- K. PROVIDE ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, ETC. REQUIRED FOR COMPLETE AND FUNCTIONAL SYSTEM AS SPECIFIED AND INDICATED ON THE DRAWINGS.
- L. DURING CONSTRUCTION PROCEDURES, THE ENTIRE WORK AREA SHALL BE CLEAN OF ALL DUST, DIRT AND OTHER DEBRIS BEFORE APPLICATION OF ANY NEW MATERIALS.
- M. ALL VENTS FROM HORIZONTAL SOIL OR WASTE PIPE SHALL COME OFF TOP OR AT 45 DEGREE VERTICALLY FROM CENTER OF PIPE BEFORE OFFSETTING HORIZONTALLY TO RISER.
- N. ALL VENT TERMINATIONS SHALL BE COORDINATED WITH BUILDING OPENINGS, AIR INTAKES AND AIR EXHAUST OPENINGS. ADJUST VENT THROUGH ROOF LOCATIONS TO COMPLY WITH APPLICABLE CODE AND TO BE IN THE LEAST VISIBLE EXTERIOR VIEWPOINT.
- O. SUPPORT ALL NEW PIPING AND EQUIPMENT FROM STRUCTURE ABOVE AS REQUIRED. PLUMBING CONTRACTOR SHALL PROVIDE ALL SUPPLEMENTAL STEEL TO SPAN BETWEEN PRIMARY BUILDING STRUCTURAL MEMBERS. PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE DESIGN OF SUPPLEMENTAL STEEL AND PIPE SUPPORTS, INCLUDING REACTION LOADS TO PRIMARY BUILDING STRUCTURAL MEMBERS.
- P. PLUMBING CONTRACTOR TO PROVIDE AND INSTALL NAIL PLATES WHERE PIPING PASSES THROUGH STUD(S) WITHIN 2" OF NAILING SURFACE TO PROTECT PIPE FROM NAILS OR DRYWALL SCREWS.
- Q. PLUMBING CONTRACTOR SHALL INSTALL HOT WATER DISTRIBUTION LOOP AND BRANCH SUPPLY PIPING AS CLOSE AS POSSIBLE TO THE HOT WATER INLET SIDE OF POINT OF USE THERMOSTATIC MIXING VALVE, INCLUDING FIXTURES WITH INTEGRAL MIXING VALVES, SO THAT THERE IS NO MORE THAN 10 LINEAR FEET DISTANCE. THIS SHALL BE IN SINGLE FIXTURE APPLICATIONS. LAVATORY HOT WATER PIPING SHALL BE INSTALLED SO THAT THERE IS A MAXIMUM DISTANCE OF 2 FT FROM THE THERMOSTATIC MIXING VALVE TO THE HOT WATER DISTRIBUTION PIPING PER C404.5 OF THE 2015 IECC. IN MULTIPLE FIXTURE APPLICATIONS BATTERED IN WALL OR PIPE CHASES, THE HOT WATER SUPPLY PIPING SHALL BE AS CLOSE AS REASONABLY POSSIBLE TO THE FIXTURE CONNECTIONS.
- R. ALL P-TRAPS FOR FLOOR DRAINS AND FLOOR SINKS SHALL BE DEEP SEAL TRAP FILLED WITH WATER. 2" TRAPS SHALL HAVE A 4" MINIMUM WATER SEAL, 3" AND LARGER SHALL HAVE A 5" WATER SEAL.
- S. PLUMBING CONTRACTOR TO INSTALL, TEST, AND FIELD BALANCE APPROVED EQUIPMENT PER MANUFACTURER'S WRITTEN INSTRUCTIONS AND RECOMMENDATIONS.

KEYED NOTES

- | | | | |
|--|---|---|---|
| 1. ROUTE DOMESTIC PIPING ON INTERIOR SIDE OF INSULATION ON EXTERIOR WALL. | 5. WELD ALL PROPANE PIPING INTERNAL TO BUILDING. EXTERIOR PIPING MAY BE THREADED. PAINT EXTERIOR PIPING TO MATCH BUILDING EXTERIOR. PAINT EXPOSED INTERIOR PIPING TO MATCH CEILING IN EACH SPACE. | 7. PROVIDE MIN 1000GAL PROPANE TANK MIN 10 FT FROM BLDG EDGE. COORDINATE EXACT LOCATION REQUIREMENTS AND RECOMMENDED SIZE WITH PROPANE PROVIDER. | 9. ROUTE 1" PROPANE LINE TIGHT TO INTERIOR OF EXTERIOR WALL HERE. |
| 2. REFER TO WATER ENTRY DIAGRAM FOR ADDITIONAL INFORMATION. | 6. ROUTE PROPANE PIPING UP TO GAS FURNACE ON MEZZANINE LEVEL AND CONNECT. | 8. ROUTE PROPANE PIPING TIGHT TO STRUCTURE IN OVERHEAD ABOVE THE INFRARED HEATERS. COORDINATE MECHANICAL EQUIPMENT HEATER CLEARANCES WITH MECHANICAL CONTRACTOR PRIOR TO PURCHASE AND INSTALLATION. | 10. REFER TO SHEET P5.2. |
| 3. SET CALIBRATED BALANCE VALVES TO APPROXIMATELY 0.5 GPM. | | | 11. PROVIDE ISOLATION AND HIGH POINT VENT VALVES IN RISER TO ALLOW FOR WINTER DRAIN DOWN OF WALL HYDRANT. |
| 4. CONNECT TO MECHANICAL EQUIPMENT HERE. REFER TO MECHANICAL PLANS FOR ADDITIONAL INFORMATION. | | | 12. 3/4"PROPANE TO UH-1 ON MEZZANINE. |

GENERAL NOTES

- A. SANITARY WASTE PIPING SHALL BE SLOPED AT 1/8-INCH PER FOOT MINIMUM FOR ALL PIPING 4-INCH AND LARGER AND AT 1/4-INCH PER FOOT MINIMUM FOR ALL PIPING 3-INCH AND SMALLER.
- B. PLUMBING CONTRACTOR SHALL INSTALL APPROVED WATER HAMMER ARRESTORS IN WATER LINES, BOTH HOT AND COLD, SERVING BATTERY AND BACK TO BACK FIXTURE INSTALLATIONS IN PIPE SPACE AND PIPE CHASES AND SHALL BE ACCESSIBLE.
- C. SEAL ALL EXTERIOR WALL PENETRATIONS AIR AND WATER TIGHT.
- D. ROUTE ALL PIPING THROUGH STRUCTURAL ELEMENTS. COORDINATE PENETRATION SIZES AND LOCATIONS WITH STRUCTURAL. LOCATE ALL VALVES IN-BETWEEN JOISTS AND PROVIDE ACCESS PANELS FOR FULL VALVE ACCESSIBILITY. REFERENCE STRUCTURAL DRAWINGS.
- E. SEE PLUMBING FIXTURE SCHEDULE FOR PIPE SIZING TO INDIVIDUAL PLUMBING FIXTURES.
- F. INSULATE ALL DOMESTIC WATER PIPING PER TABLE C403.2.10 OF THE 2015 IECC. REFER TO SPECIFICATIONS FOR ADDITIONAL INSULATION REQUIREMENTS.

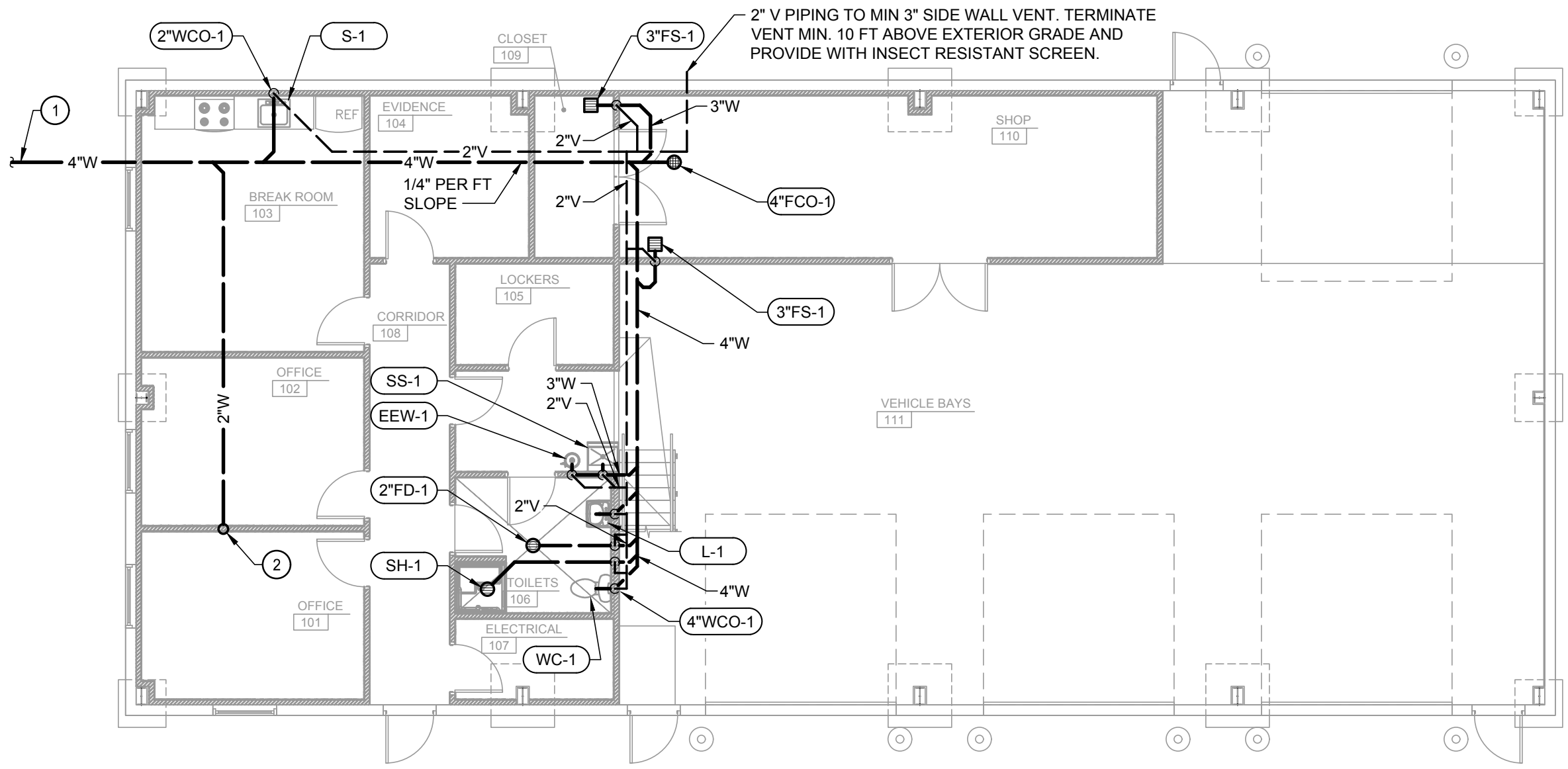


1 DOMESTIC PLUMBING PLAN
SCALE: 1/8" = 1'-0"



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GENERAL NOTES

- A. SANITARY WASTE PIPING SHALL BE SLOPED AT 1/8-INCH PER FOOT MINIMUM FOR ALL PIPING 4-INCH AND LARGER AND AT 1/4-INCH PER FOOT MINIMUM FOR ALL PIPING 3-INCH AND SMALLER.
- B. PLUMBING CONTRACTOR SHALL INSTALL APPROVED WATER HAMMER ARRESTORS IN WATER LINES, BOTH HOT AND COLD, SERVING BATTERY AND BACK TO BACK FIXTURE INSTALLATIONS IN PIPE SPACE AND PIPE CHASES AND SHALL BE ACCESSIBLE.
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- D. ROUTE ALL PIPING THROUGH STRUCTURAL ELEMENTS. COORDINATE PENETRATION SIZES AND LOCATIONS WITH STRUCTURAL. LOCATE ALL VALVES IN-BETWEEN JOISTS AND PROVIDE ACCESS PANELS FOR FULL VALVE ACCESSIBILITY. REFERENCE STRUCTURAL DRAWINGS.
- E. SEE PLUMBING FIXTURE SCHEDULE FOR PIPE SIZING TO INDIVIDUAL PLUMBING FIXTURES.
- F. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION AND INSTRUCTIONS.

GENERAL NOTES

- 1. 4" W APPROX. 30" B.F.F., ROUTED IN INSULATED TRENCH TO (E) SEPTIC. REFER TO SITE PLAN.
- 2. 2" W UP TO 2" FD IN THE MEZZANINE MECHANICAL EQUIPMENT ROOM FOR CONDENSATE. LOCATE FD FOR EASE OF MAINTENANCE ACCESS AND ADJACENT TO GAS FURNACE. 2" VENTING FROM FD IS TO BE ROUTED UNDER ROOF AND CONNECTED TO NEAREST MIN 2" V PIPING PRIOR TO ROOF PENETRATION.

1

DWV PLUMBING PLAN

SCALE: 1/8" = 1'-0"



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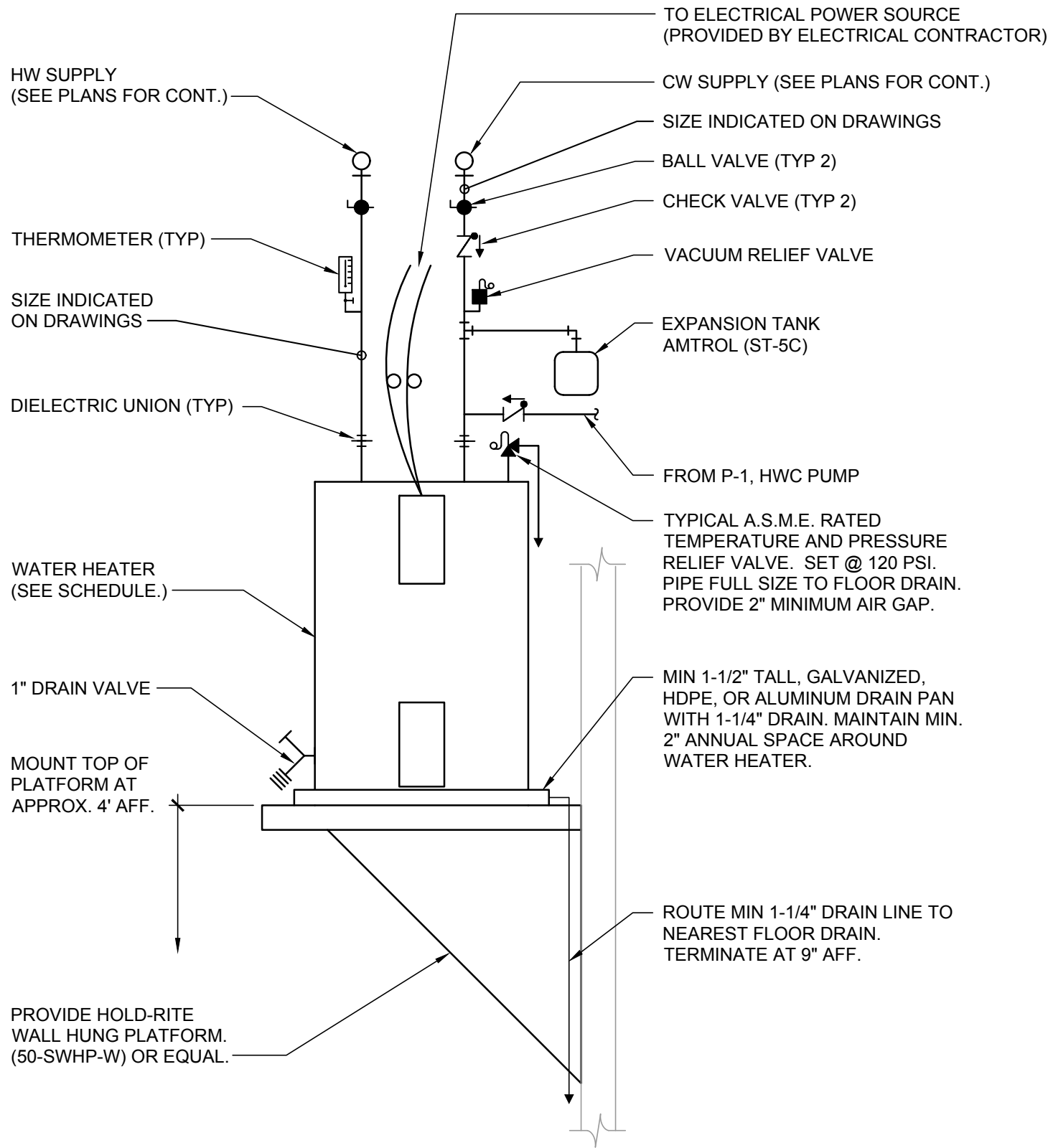
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DWV PLUMBING PLAN

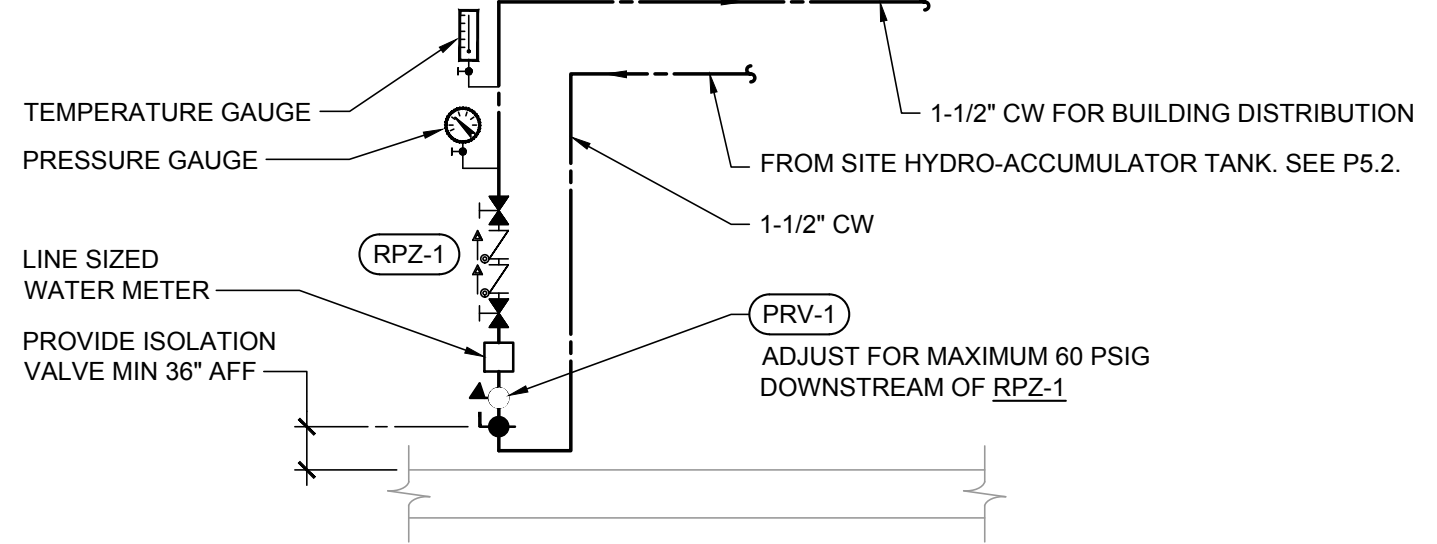
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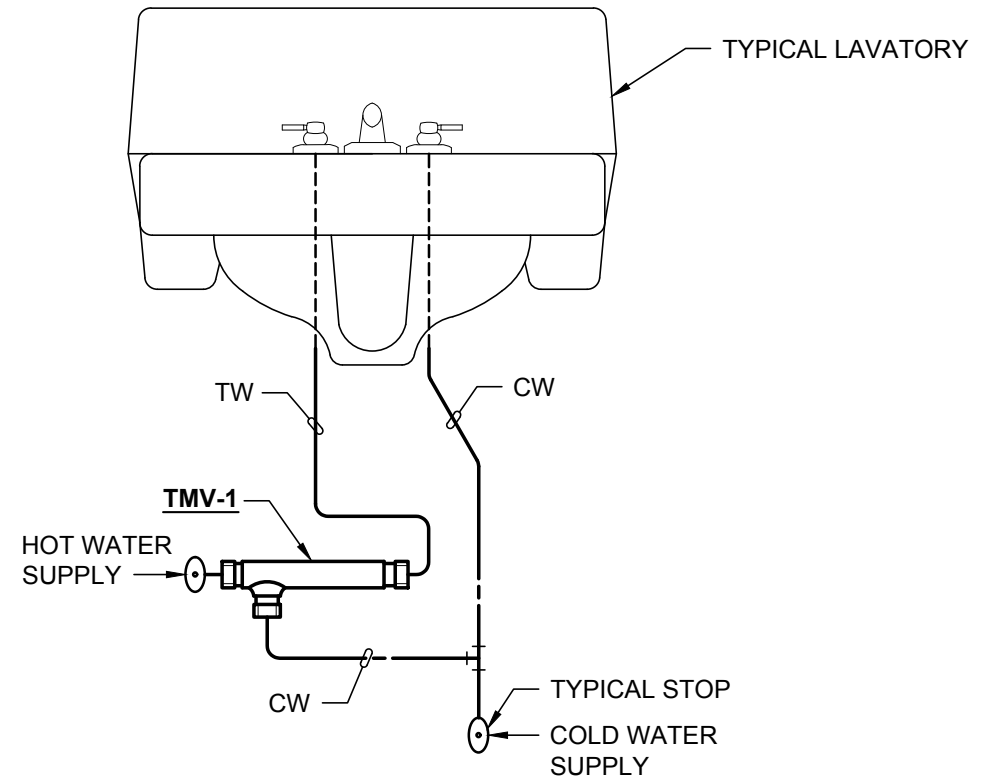
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2 ELECTRIC WATER HEATER DIAGRAM
SCALE: NO SCALE

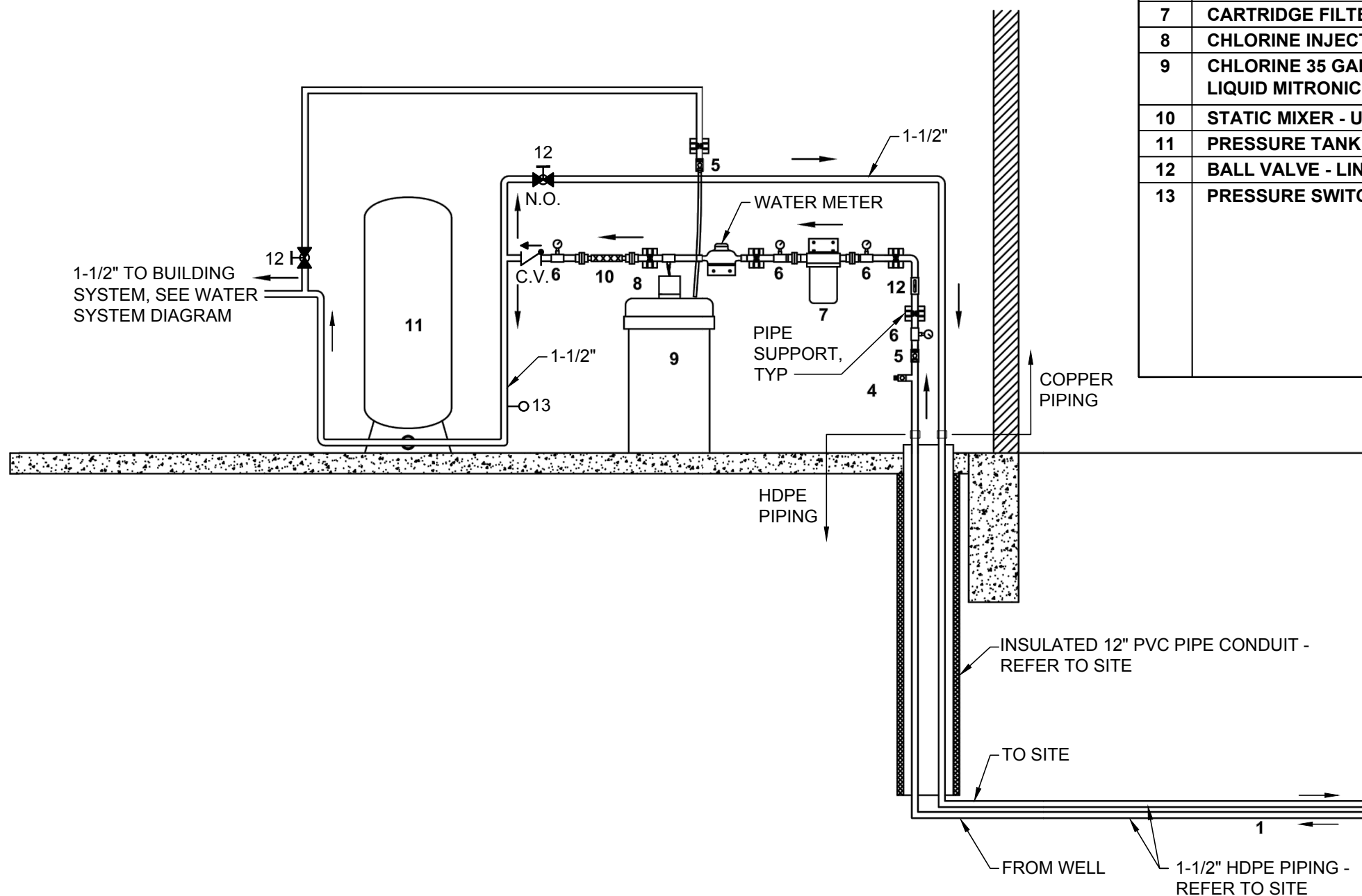


3 WATER ENTRY DIAGRAM
SCALE: NO SCALE



1 LAVATORY TMV DIAGRAM
SCALE: NO SCALE

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COMPONENTS IN CONTRACT	
1	1-1/2" RAW WATER PIPE (FROM WELL)
2	1-1/2" WATER DISTRIBUTION PIPE
3	12" PVC PIPE WRAPPED IN 1-1/2" RIGID INSULATION WITH 1/2" x 1/2" SCREEN COVER
4	PRESSURE RELIEF VALVE SET AT 80 PSI - DISCHARGE TO FLOOR SINK
5	HOSE BIBB
6	PRESSURE GAUGE
7	CARTRIDGE FILTER - USA BLUE BOOK - HIGH FLOW WITH 5 MICRON NSF FILTER
8	CHLORINE INJECTION PUMP - STENNER ST-45 MJL 1A STAA
9	CHLORINE 35 GALLON SOLUTION TANK - LIQUID MITRONIC POLY DRUM WITH LIQUID MITRONIC LIQUID LEVEL CONTROLLER.
10	STATIC MIXER - USA BLUE BOX 1-1/2", 6 ELEMENTS
11	PRESSURE TANK - WELL MATE WM-60
12	BALL VALVE - LINE SIZE
13	PRESSURE SWITCH - WELL PUMP ON AT 58 PSI WELL PUMP OFF AT 75 PSI PROVIDE ALL WIRING INTERCONNECTIONS FOR SYSTEM OPERATION USING EXISTING WELL PUMP. IF WELL PUMP IS OPERATING, CHLORINE PUMP (#8) SHALL OPERATE. IF A LOW LEVEL IS INDICATED IN THE CHLORINE SOLUTION TANK, BOTH THE WELL AND CHLORINE PUMPS SHALL SHUT OFF.

1 PIPING DIAGRAM
SCALE: NO SCALE

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DOMESTIC PUMP SCHEDULE													
TAG	SERVICE	LOCATION	TYPE	ARRANGEMENT	FLUID	GPM	FT HD	RPM	HP	VOLT/PH	MANUFACTURER	MODEL	NOTES
P-1	DOMESTIC HOT WATER CIRC	FIRST LVL JANITOR RM	DOMESTIC HOT WATER	INLINE	WATER	1	1.5	3250	1/40	115/1	TACO	003-SC4	1-3
NOTES: 1. ALL STAINLESS STEEL CONSTRUCTION 2. HORIZONTAL INLINE MOUNTED CIRC PUMP WITH 24/7 PROGRAMMABLE LINE VOLTAGE TIMECLOCK CONTROLLER. 3. COORDINATE TIME CLOCK OPERATION SETTINGS WITH OWNER.													

ELECTRIC WATER HEATER SCHEDULE													
PLAN MARK	MANUFACTURER	MODEL	STORAGE IN GALLONS	RECOVERY GPH @ 100 DEG.	KW INPUT	NUMBER OF ELEMENTS	VOLTS	PHASE	FLA	HEIGHT (IN.)	DIAMTER (IN.)	OPERATING WEIGHT (LBS.)	REMARKS
EW-1	AO SMITH	DSE-30	30	49	12.0	1	240	1	50	31.75	22	398	1-3
NOTES: 1. GLASS LINED VESSEL. 2. SET MAX OUTLET TEMPERATURE TO 140°F. 3. PROVIDE WITH LOW WATER CUT OFF FOR HEATING ELEMENTS.													

PLUMBING PIPING MATERIAL SCHEDULE	
SYSTEM TYPE	MATERIAL SELECTION
DOM. CW ABOVE GRADE	TYPE L COPPER
DOM. HW ABOVE GRADE	TYPE L COPPER
DOM. HWC ABOVE GRADE	TYPE L COPPER
SANITARY BELOW GRADE PIPING	CAST IRON, CISPI 301 HUBLESS OR HUB AND SPIGOT PIPING; OR ASTM D2665 SCHEDULE 40 PVC
SANITARY ABOVE GRADE PIPING TO FIXTURES (NOT IN PLENUM SPACES)	CAST IRON, CISPI 301 HUBLESS OR HUB AND SPIGOT PIPING; OR ASTM D2665 SCHEDULE 40 PVC
SANITARY VENT PIPING	CAST IRON PIPING OR PVC - NO PVC VENT PIPING ALLOWED IN RETURN AIR PLENUMS
NOTES: PROVIDE ALL DOMESTIC WATER SYSTEMS WITH ASTM B88 (ASTM B88M) PIPING, ASME B16.18 OR ASME B16.22 PIPE FITTINGS, SOLDER AND FLUX (IF USED) THAT COMPLY WITH NSF 61 AND NSF 372 FOR MAXIMUM LEAD CONTENT FOR COPPER PIPING INSTALLATIONS. PROVIDE ASTM D2564 SOLVENT FOR ANY PVC DRAIN PIPING. IN ALL CASES REFER TO PLUMBING SPECIFICATIONS.	

BUILDING GAS LOAD SCHEDULE		
EQUIPMENT	INPUT	
	(BTU/HR)	
GF-1	60,000	
MAU-1	600,000	
UH-1	150,000	
UH-2	30,000	
IRH-1	60,000	
IRH-2	60,000	
IRH-3	125,000	
TOTAL	1,085,000	
NOTES		
SITE ALTITUDE ABOVE SEA LEVEL	8600	FT
TABLE 402.4 (27) USED FOR PROPANE PIPE SIZING		
TOTAL DEVELOPED LENGTH	174	FT
GAS PRESSURE SUPPLIED BY TANK	2	PSI
MAX ALLOWABLE PRESSURE DROP	1	PSI

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PLUMBING FIXTURE SCHEDULE						
PLAN MARK	FIXTURE DESCRIPTION AND REMARKS	MINIMUM INDIVIDUAL LINE SIZES				
		COLD WATER	HOT WATER	WASTE	VENT	ELEC
EEW-1	EMERGENCY EYE/FACE WASH: 304 STAINLESS STEEL BOWL WITH CLEAR PLASTIC DUST COVER. 304 STAINLESS STEEL EYE/FACE WASH SPRAYER AND YOKE, WITH GENTLE FLOW. PROVIDE WITH 304 STAINLESS STEEL PIPING AND 316 SS, STAY OPEN BALL VALVE WITH 316 STAINLESS STEEL ACTIVATION HANDLE. WATER MUST FLOW AT 3 GPM MIN FLOW RATE. AND DRAIN TO THE SANITARY SYSTEM. ACCEPTABLE MANUFACTURERS: BRADLEY (S192140B2FFB0P), SPEAKMAN, HAWS, CHICAGO FAUCET, WESTERN. ACCESSORIES: PROVIDE WITH AN ASSE 1071 RATED THERMOSTATIC MIXING VALVE SET TO 85°F FOR SCALD PROTECTION, PROVIDE WITH REFLECTIVE TAPE ON PIPING.	1"	1"	1-1/2" MIN	1-1/2" MIN	N/A
FD-1	FLOOR DRAIN - DUCCO CAST IRON BODY WITH ROUND, POLISHED NICKEL-BRONZE FINISHED STRAINER, HEEL-PROOF GRATE, WITH ADJUSTABLE STRAINER HEAD. PROVIDE WITH TS-1. ACCEPTABLE MANUFACTURERS: JAY R. SMITH (2005) ZURN, WADE, OR JOSAM.	N/A	N/A	2"	1-1/4" MIN	N/A
FS-1	FLOOR SINK - 8 INCH DEEP, CAST IRON BODY AND 12X12 INCH SQUARE AREA, HEEL-PROOF. PROVIDE WITH A HALF GRATE UNLESS OTHERWISE NOTED ON DRAWINGS. PROVIDE WITH TS-1. ACCEPTABLE MANUFACTURERS: JOSAM (49340A-NB SERIES), WADE, ZURN, OR JAY R SMITH.	N/A	N/A	3"	1-1/2" MIN	N/A
L-1	LAVATORY- WALL HUNG, WHITE, VITREOUS CHINA, 20 INCH x 18 INCH, WITH 4 INCH CENTERS, CONCEALED ARM SUPPORTS, 4 INCH BACKSPLASH AND OVERFLOW MOUNTED AT ADA REQUIRED HEIGHT. ACCEPTABLE MANUFACTURERS: AMERICAN STANDARD (0355.012), KOHLER, ZURN, ELJER, CRANE, GERBER, TOTO. LAVATORY TRIM: MANUAL, SINGLE LEVER VALVE FAUCET. BRASS CONSTRUCTION, WITH CHROME PLATED FINISH, AND 0.5 GPM, VANDAL RESISTANT AERATOR. PROVIDE WITH TMV-1 AND SET MAX OUTLET TEMPERATURE AT 105°F. ACCEPTABLE MANUFACTURERS: ZURN (Z6955-XL-S-F-LL), DELTA , T&S BRASS, SPEAKMAN, CHICAGO FAUCET. ACCESSORIES: PROVIDE DRAIN LINE WITH MIN. 17 GAUGE OFFSET GRID STRAINER AND TAILPIECE WITH MIN. 17 GAUGE P-TRAP WITH INTEGRAL CLEANOUT. PROVIDE WITH ADA TRAP, STOP AND SUPPLY PROTECTORS IF UNDERCOUNTER PIPING IS EXPOSED. PROVIDE QUARTER TURN, SOLID BRASS, CHROME PLATED ANGLE STOPS WITH FLEXIBLE HOSE SUPPLIES AND CHROME PLATED WALL ESCUTCHEONS.	1/2"	1/2"	1-1/4"	1-1/2"	N/A
PRV-1	PRESSURE REGULATING VALVE- LEAD FREE, PROVIDE WITH PRESSURE AND TEMPERATURE GAUGES AT OUTLET. ACCEPTABLE MANUFACTURERS: WATTS (LF25AUB-Z3), ZURN, BELL AND GOSSETT	1-1/2"	N/A	N/A	N/A	N/A
RPZ-1	REDUCED PRESSURE BACKFLOW PREVENTER - BRONZE SEATS AND STAINLESS STEEL TRIM. THE ASSEMBLY SHALL INCLUDE QUARTER TURN SHUT-OFF VALVES, TEST COCKS, AND WYE STRAINER. ACCEPTABLE MANUFACTURERS: WATTS (LF909QT).	1-1/2"	N/A	N/A	N/A	N/A
RWB-1	RECESSED WALL BOX - 5 INCH x 6 INCH BOX CONSTRUCTED OF GALVANIZED STEEL WITH WHITE POWDER COAT FINISH. PROVIDE WITH QUARTER TURN, LOW LEAD COLD WATER SUPPLY CONNECTION AND INTEGRAL WATER HAMMER ARRESTOR. ACCEPTABLE MANUFACTURERS: OATEY (39140), GUY GRAY, PPP OR EQUAL. ACCESSORIES: VERIFY EQUIPMENT LOCATION AND ROUGH IN REQUIREMENTS. MOUNT IN ACCORDANCE WITH MANUFACTURER'S WRITTEN INSTRUCTIONS.	1/2"	N/A	N/A	N/A	N/A

PLUMBING FIXTURE SCHEDULE						
PLAN MARK	FIXTURE DESCRIPTION AND REMARKS	MINIMUM INDIVIDUAL LINE SIZES				
		COLD WATER	HOT WATER	WASTE	VENT	ELEC
S-1	SINK- ADA, COUNTER MOUNTED, SELF-RIMMING, 18 GAUGE 304 STAINLESS STEEL, 25 INCH x 21 INCH x 6-1/2 INCH DEEP, SINGLE COMPARTMENT, UNDERCOATED WITH THREE HOLE DRILLINGS ON 4" CENTERS. ACCEPTABLE MANUFACTURERS: ELKAY (LRAD252165PD), JUST MFG. MOEN, AMERICAN STANDARD. SINK TRIM: MANUAL, SINGLE LEVER FAUCET WITH 8 INCH COVER PLATE AND PULL DOWN SPRAYER. 1.8 GPM FLOWRATE. PROVIDE WITH TMV-1 SET TO 120°F MAX OUT TEMP. ACCEPTABLE MANUFACTURERS: KOHLER (K-7305-5A), DELTA, MOEN, AMERICAN STANDARD. ACCESSORIES: PROVIDE DRAIN LINE WITH MIN. 17 GAUGE OFFSET GRID STRAINER AND TAILPIECE WITH MIN. 17 GAUGE P-TRAP WITH INTEGRAL CLEANOUT. PROVIDE WITH ADA TRAP, STOP AND SUPPLY PROTECTORS IF UNDERCOUNTER PIPING IS EXPOSED. PROVIDE QUARTER TURN, SOLID BRASS, CHROME PLATED ANGLE STOPS WITH FLEXIBLE HOSE SUPPLIES AND CHROME PLATED WALL ESCUTCHEONS.	1/2"	1/2"	1-1/2"	1-1/2"	N/A
SH-1	SHOWER- WHITE, SMOOTH WALL, BARRIER FREE, L-SHAPED GRAB BAR, 3/4 INCH SKIRT, CENTER DRAIN AND GELCOATED SURFACE. ACCEPTABLE MANUFACTURERS: AQUATIC (1363BFSD) SHOWER VALVE: PRESSURE BALANCED MIXING VALVE SHALL BE FLUSH MOUNTED WITH CONCEALED PIPING AT ADA REQUIRED HEIGHT, SINGLE LEVER HANDLE AND INTEGRAL SCREWDRIER STOPS. SET LIMIT STOPS AT 110°F, 2.5 GPM FLOW CONTROL, WITH COMBINATION SLIDE AND GRAB BAR. ACCEPTABLE MANUFACTURERS: AQUATIC (PART OF ADA PACKAGE), DELTA, AMERICAN STANDARD, SYMMONS, SPEAKMAN, LEONARD, POWERS. SHOWER TRIM: PROVIDE WITH SOAP DISH, BRASS DRAIN AND ADA COMPLIANT SHOWER CURTAIN. PROVIDE ADA SEAT IN LEFT HAND OR RIGHT HAND CONFIGURATION AS INDICATED ON DRAWINGS.	1/2"	1/2"	2"	2"	N/A
SS-1	SERVICE SINK- FLOOR MOUNTED ON 18 GAUGE, STAINLESS STEEL LEGS. PROVIDE WITH 18 GAUGE STAINLESS STEEL BASIN, 20 INCH x 16 INCH x 8 INCH DEEP. PROVIDE REINFORCING IN WALL FOR MOUNTING FAUCET SUPPORT BRACKET. ACCEPTABLE MANUFACTURERS: FLORESTONE ADVANCE TABCO (8-OP-16). MOP SERVICE BASIN TRIM: CHROME PLATED CAST BRASS VACUUM BREAKER SPOUT, 3/4 INCH HOSE THREADED OUTLET, PAIL HOOK WITH WALL SUPPORT, INTEGRAL SCREWDRIER STOPS WITH COVERING CAPS, STRAIGHT SHANK WITH FLANGE AND CROSS TYPE HANDLES. PROVIDE WITH TMV-1 AND SET MAX OUTLET TEMPERATURE AT 120°F. ACCEPTABLE MANUFACTURERS: DELTA (28T9) ACCESSORIES: PROVIDE WITH 5 FEET OF 1/2 INCH PLAIN END REINFORCED RUBBER HOSE, HOSE CLAMP AND ADJACENT MOP HANGER.	1/2"	1/2"	3"	1-1/2"	N/A
TMV-1	THERMOSTATIC MIXING VALVE- LEAD FREE CONSTRUCTION, FOR SINGLE FIXTURE APPLICATION, ALLOWING DOWN TO 0.25 GPM. WITH INTEGRAL CHECK VALVES AND FILTER SCREEN. ACCEPTABLE MANUFACTURERS: WATTS (MODEL LFUSG-B) OR EQUIVALENT.	3/8"	3/8"	N/A	N/A	N/A
TS-1	TRAP SEAL - ELASTOMERIC MATERIAL WITH TORTUROUS PATH. ASSE 1072 COMPLIANT. ACCEPTABLE MANUFACTURERS: SURE SEAL (SS2009V.)	N/A	N/A	SEE DWGS	N/A	N/A
WC-1	WATER CLOSET- ADA, FLOOR MOUNTED WITH 12 INCH ROUGH-IN, PRESSURE ASSISTED FLUSH TANK. PROVIDE WITH WHITE, VITREOUS CHINA, AND ELONGATED BOWL. UNIT SHALL FLUSH ON 1.0 GALLON OF WATER PER FLUSH AND MUST BE EPA WATER SENSE CERTIFIED WITH A MAP SCORE OF 1000 OR GREATER. APPROVED MANUFACTURERS: KOHLER (HIGHLINE, K-3519), AMERICAN STANDARD, ELJER, ZURN, CRANE, GERBER, TOTO. ACCESSORIES: PROVIDE WITH WHITE, OPEN FRONT SEAT LESS COVER WITH SELF SUSTAINING CHECK HINGES. COORDINATE VERTICALLY ADJUSTABLE CARRIER INSTALLATIONS WITH WALL THICKNESS PRIOR TO INSTALL. (ZURN, ZN1209-N4)	1-1/2"	N/A	3"	2"	N/A
WCO-1	WALL CLEAN OUT - DUCO CAST IRON CLEANOUT TEE WITH GAS AND WATER TIGHT BRONZE PLUG, SMOOTH STAINLESS STEEL ACCESS COVER AND VANDAL PROOF SCREW. APPROVED MANUFACTURERS: JAY R. SMITH (4510), ZURN	N/A	N/A	SEE DWGS	SEE DWGS	N/A
WH-1	WALL HYDRANT - CONCEALED, FREEZEPROOF WALL HYDRANT WITH HOSE CONNECTION AND BACKFLOW PREVENTER. ACCEPTABLE MANUFACTURERS: WOODFORD (B67)	3/4"	N/A	N/A	N/A	N/A