GENERAL PLUMBING NOTES

I. GENERAL REQUIREMENTS:

1. PLUMBING CONTRACTOR IS TO FURNISH & PAY FOR ALL LABOR, MATERIAL, EQUIPMENT, PERMITS, & FEES REQUIRED FOR THE COMPLETE INSTALLATION OF ALL SYSTEMS IN THIS SECTION OF WORK.
2. ALL WORK IS TO BE PERFORMED IN ACCORDANCE W/ 2018 NCPC & ALL OTHER APPLICABLE CODES. P.C. IS TO COORDINATE W/ G.C. IN REGARDS TO PROJECT TIMELINE, WORK HOURS, AS WELL AS ANY BONDING OR INSURANCE REQUIREMENTS.
3. ALL PLUMBING FIXTURES & PLUMBING SYSTEM EQUIPMENT SHALL BE PROVIDED COMPLETE W/ ALL ACCESSORIES, HANGERS, VALVES, STOPS, TAILPIECES, TRAPS, FAUCETS, STRAINERS, ETC. REGARDLESS OF PRESENCE ON PLANS. SEE FIXTURE SCHEDULE.
4. ALL EQUIPMENT, MATERIALS, & INSTALLATION SHALL BE GUARANTEED TO BE FREE OF DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER FINAL ACCEPTANCE OF WORK OR IN ACCORDANCE W/ THE MANUFACTURER'S STANDARD GUARANTEE, IF LONGER. EXISTING EQUIPMENT IS EXCLUDED FROM WARRANTY REQUIREMENT.
5. THESE DRAWINGS ARE DIAGRAMMATIC & SHOW GENERAL LOCATION & ARRANGEMENT OF ALL MATERIALS & EQUIPMENT. THE DRAWINGS SHALL BE FOLLOWED AS CLOSELY AS BUILDING CONSTRUCTION & ALL OTHER WORK WILL PERMIT.
6. DO NOT SCALE DRAWINGS FOR MEASUREMENT.
7. INFORMATION GIVEN IN SCHEDULES INCLUDES BOTH DESCRIPTION OF PRODUCT & MANUFACTURER'S MODEL NUMBER. IF CONFLICT IS PRESENT BETWEEN DESCRIPTION & MODEL NUMBER, EQUIPMENT DESCRIPTION SHALL TAKE PRECEDENT. IN CASE OF CONFLICT BETWEEN THE PLANS & NOTES/ SPECIFICATIONS OR CONFLICT BETWEEN INFORMATION PRESENTED ON THE PLANS OR IN THE NOTES/SPECIFICATIONS, THEN THE MOST RESTRICTIVE SHALL TAKE PRECEDENT.
8. BEFORE BID P.C. IS RESPONSIBLE FOR CLARIFYING W/ G.C. ANY CONFUSION IN REGARDS TO RESPONSIBILITY OF WORK TO BE PERFORMED OR MATERIALS TO BE PROVIDED. THE SUBMITTAL OF THE BID BY THE CONTRACTOR WILL BE HELD AS PROOF THAT THE CONTRACTOR UNDERSTANDS THOROUGHLY & COMPLETELY THE SCOPE OF THE WORK INVOLVED, & HAS INCLUDED ON THE BID ALL THE NECESSARY ITEMS TO CARRY OUT THIS SECTION OF WORK.
9. AS SOON AS POSSIBLE (& NOT MORE THAN 30 DAYS) AFTER CONTRACT IS SIGNED, THE P.C. SHALL PROVIDE SUBMITTALS OF PLUMBING EQUIPMENT HE/SHE INTENDS TO PURCHASE FOR REVIEW & COMMENT BY THE ENGINEER. ENGINEER IS TO APPROVE SUBMITTALS BEFORE EQUIPMENT IS ORDERED.
10. ALL QUESTIONS MUST BE SUBMITTED IN RFI FORMAT TO THE ARCHITECT & MUST BE ADDRESSED BY THE APPROPRIATE DESIGNER OF RECORD PRIOR TO BECOMING A PROPOSED CHANGE ORDER.
11. P.C. IS TO REVIEW COMPLETE DRAWING SET. P.C. IS RESPONSIBLE FOR WORK EXPLICITLY SHOWN & WORK IMPLIED. UNLESS OTHERWISE NOTED, FINAL PLUMBING CONNECTION TO ALL EQUIPMENT, FIXTURES, ETC. IS THE RESPONSIBILITY OF THE P.C..

II. DIVISION OF WORK:

1. ALL ROOF PENETRATIONS, FLASHING, ETC. ARE TO BE PERFORMED BY ROOFING CONTRACTOR.
2. ALL LOW VOLTAGE WIRING RELATED TO PLUMBING EQUIPMENT & SYSTEMS IS THE RESPONSIBILITY OF THE PLUMBING CONTRACTOR. ALL HIGH VOLTAGE CONNECTIONS TO PLUMBING EQUIPMENT, INCLUDING DISCONNECTS, TO BE PROVIDED & INSTALLED BY E.C.
3. G.C. TO BE RESPONSIBLE FOR PROVIDING & INSTALLING ANY ACCESS DOORS RELATED TO PLUMBING SYSTEM (W/ EXCEPTION OF CLEANOUT COVERS, BY P.C.). P.C. RESPONSIBLE FOR COMMUNICATING TO G.C. SIZE & LOCATION OF REQUIRED ACCESS DOOR(S).
4. PLUMBING CONTRACTOR IS TO EMPLOY THE SERVICES OF THE G.C. FOR CUTTING & PATCHING OF WALLS, FLOORS, & CEILINGS RELATED TO THE INSTALLATION OF PLUMBING EQUIPMENT & SYSTEMS.
5. G.C. TO BE RESPONSIBLE FOR PROVIDING & INSTALLING ANY WATER HEATER PLATFORMS, EITHER FLOOR/WALL MOUNTED OR SUSPENDED. P.C. TO COMMUNICATE REQUIREMENTS TO G.C.
6. ALL GAS PIPING IS BY MECHANICAL CONTRACTOR.
7. WATER HEATER VENT BY PLUMBING CONTRACTOR.

III. MATERIALS:

1. ALL MATERIALS SHALL BE NEW UNLESS OTHERWISE SHOWN OR SPECIFIED.
2. ALL MATERIALS INSTALLED IN RETURN PLENUM ARE TO BE PLENUM RATED.
3. ALL EXTERIOR EQUIPMENT, DEVICES, & MATERIALS SHALL BE RATED FOR USED IN A 150 MPH WIND ZONE.
4. PIPING MATERIALS & FITTINGS SHALL BE AS FOLLOWS:
   WASTE & VENT (ABOVE & BELOW SLAB):
      PVC PIPE, PVC SOCKET FITTINGS, & SOLVENT-CEMENTED FITTINGS. PROVIDE CAST IRON, PLENUM WRAPPED PVC OR OTHER APPROVED MATERIALS IN RETURN PLENUM.
   DOMESTIC WATER (BELOW SLAB):
      TYPE 'K' COPPER.
      OR
      CONTINUOUS PEX.
   DOMESTIC WATER (ABOVE SLAB):
      TYPE 'L' COPPER W/ SWEATED SOCKET FITTINGS. THREADED FITTINGS MAY BE USED AT VALVES, FIXTURES, & SIMILAR.
      OR
      CPVC PIPING W/ SOLVENT-CEMENTED FITTINGS. THREADED FITTINGS MAY BE USED AT VALVES, FIXTURES, & SIMILAR. PROVIDE PLENUM-RATED CPVC OR PLENUM WRAP IF USED IN RETURN PLENUM.
      OR
      PEX PIPING W/ FLARED OR MECHANICAL JOINTS/FITTINGS. DO NOT USE IN RETURN PLENUMS. DO NOT USE IN EXPOSED AREAS.
   STORM PIPING (BELOW SLAB):
      PVC PIPE, PVC SOCKET FITTINGS, & SOLVENT-CEMENTED FITTINGS.
   STORM PIPING (ABOVE SLAB):
      SERVICE WEIGHT NO-HUB CAST IRON PIPE & FITTINGS W/ NO-HUB COUPLINGS.
5. FOR AUTOMATIC-CIRCULATING HOT WATER SYSTEMS, PIPING SHALL BE INSULATED W/ 1" OF INSULATION HAVING A CONDUCTIVITY NOT EXCEEDING 0.27 BTU•IN/HR x FT² x °F. THE FIRST 8' OF PIPING IN NON-CIRCULATING SYSTEMS SERVED BY EQUIPMENT W/OUT INTEGRAL HEAT TRAPS SHALL BE INSULATED W/ 0.5" OF MATERIAL HAVING A CONDUCTIVITY NOT EXCEEDING 0.27 BTU•IN/HR x FT² x °F. (2018 NCECC C404.4)
6. INSULATION IS REQUIRED ON ALL ROOF DRAIN BODIES & PIPING (ABOVE SLAB). 1/2" THICK RIGID MOLDED FIBERGLASS W/ FITTINGS INSERTS, PVC COVERS, & VAPOR BARRIER JACKET.
7. PROVIDE HANGERS & SUPPORTS APPROVED FOR USE PER NCPC.
8. ANY PLUMBING FIXTURES W/ A COMMON SHUT-OFF VALVE (I.E. PRE-RINSE, KITCHEN SINK, MOP SINK) ARE TO INCLUDE A CHECK VALVE ON THE HOT & COLD WATER VALVES TO PREVENT INTERCONNECTION OF HOT & COLD WATER LINES.

IV. COORDINATION:

1. BEFORE BEGINNING WORK, INVERT ELEVATIONS SHALL BE ESTABLISHED. P.C. IS TO ENSURE PROPER SLOPES OF ALL WASTE & STORM PIPING CAN BE MAINTAINED. CONTACT ENGINEER IMMEDIATELY IF PROBLEM/ISSUE IS DISCOVERED.
2. P.C. TO COORDINATE LOCATION OF ALL ROOF PENETRATIONS W/ ROOFING CONTRACTOR & MECHANICAL CONTRACTOR. P.C. & M.C. TO COORDINATE TO ENSURE NO PLUMBING VENTS ARE LOCATED WITHIN 10' OF ANY OUTSIDE AIR INTAKES.
3. P.C. TO COORDINATE W/ G.C. & ARCH PLANS TO ENSURE NECESSARY BACKING/SUPPORTS ARE INSTALLED TO ALLOW INSTALLATION OF PLUMBING FIXTURES.
4. THE PLUMBING CONTRACTOR SHALL COORDINATE CLOSELY W/ ALL OTHER TRADES TO AVOID CONFLICT & ENSURE OTHER TRADES PROVIDE MEASURES TO ACCOMMODATE PLUMBING WORK (I.E. ACCESS DOORS, SLAB/WALL/ROOF OPENINGS, ELECTRICAL CONNECTIONS, ETC.)
5. PIPING SHOULD BE COORDINATED W/ ALL STRUCTURAL FOOTINGS & FOUNDATIONS. PIPE SHOULD BE OFFSET TO AVOID CONTACT W/ FOOTINGS & FOUNDATION WALLS. IF PIPING MUST RUN UNDER A FOOTING OR THROUGH A FOUNDATION WALL, THE PIPE MUST BE INSTALLED W/ A RELIEVING ARCH OR IN A PIPE SLEEVE PER SCPC 305.3.
6. P.C. TO REFER TO ARCHITECTURAL DRAWINGS FOR MOUNTING HEIGHTS OF PLUMBING FIXTURES.

V. EXECUTION:

1. P.C. TO FOLLOW MANUFACTURER'S INSTRUCTIONS WHEN INSTALLING PLUMBING EQUIPMENT. ENSURE REQUIRED MAINTENANCE ACCESS & CLEARANCES ARE MAINTAINED. IF CONFLICT EXISTS BETWEEN THESE PLANS & MANUFACTURER'S INSTRUCTIONS, CONTACT ENGINEER.
2. P.C. RESPONSIBLE FOR EXECUTING ALL CODE REQUIRED TESTS & INSPECTIONS, INCLUDING BUT NOT LIMITED TO, LEAK & PRESSURE TESTING OF WASTE, VENT, & WATER PIPING, & SANITIZING OF WATER PIPING.
3. WATER SERVICE & BUILDING SEWER PIPING MUST BE SEPARATED PER NCPC 603.2.
4. ENSURE PIPING LOCATED ON EXTERIOR WALLS (OR OTHER WALLS EXPOSED TO FREEZING CONDITIONS) IS INSTALLED ON WARM-SIDE OF WALL INSULATION PER NCPC 305.4.
5. ALL WATER PIPING INSTALLED BELOW GRADE TO BE PROTECTED AGAINST FREEZING BY BURYING NOT LESS THAN 6" BELOW THE FROST LINE OR NOT LESS THAN 12" BELOW FINISHED GRADE, WHICHEVER IS GREATER PER SCPC 305.4.
6. ANY NOTCHING, DRILLING, BORING, OR OTHER ALTERATION TO BUILDING STRUCTURE SHALL BE PERFORMED IN A CODE APPROVED METHOD & NOT THREATEN THE INTEGRITY OF THE BUILDING STRUCTURE.
7. SUPPORT ALL PIPING IN ACCORDANCE W/ NCPC. ANY SUSPENDED MATERIALS SHALL BE DIRECTLY SUPPORTED BY THE BUILDING STRUCTURE. DO NOT ATTACH ANYTHING TO THE ROOF DECK.
8. PROVIDE A U.L. LISTED ASSEMBLY FOR ALL PENETRATIONS THRU FIRE RATED WALLS, FLOORS, & CEILINGS.
9. PENETRATIONS OF ALL EXTERIOR WALLS, FLOORS, & CEILINGS SHALL BE SEALED IN AN AIR TIGHT MANNER & IN ACCORDANCE W/ 2018 NCECC.
10. CLEANOUT PLUGS SHALL BE INSTALLED IN ACCORDANCE W/ PLUMBING CODE REQUIREMENTS. PROVIDE CLEANOUTS AS PLANS INDICATED & AT THE BASE OF ALL WASTE STACKS, AT EVERY FOUR 45 DEGREE TURNS IN SERIES (W/ ONE 90° ELBOW COUNTING AS TWO 45° BENDS), AT EVERY 100 FEET, & AT THE BASE OF ALL ROOF LEADERS. CLEANOUTS SHALL BE PLACED IN READILY ACCESSIBLE LOCATIONS.
11. ANY PIPE INVERTS ARE MEASURED TO THE BOTTOM OF THE PIPE.
12. SUPPLY BRANCH LINES SERVING MORE THAN ONE (1) FIXTURE SHALL INCLUDE SHUT-OFF VALVE. LABEL VALVE & LOCATE AS CLOSE TO RISER/MAIN AS POSSIBLE. (NCPC 606.2.1)
13. VALVES NOT DIRECTLY AT EQUIPMENT SHALL BE LABELED INDICATING THE FIXTURE OR AREA SERVED. (NCPC 606.4)
14. PROVIDE SHUT-OFF VALVES ON THE FIXTURE SUPPLY TO EACH PLUMBING FIXTURE, APPLIANCE, OR MECHANICAL EQUIPMENT.
15. WATER HEATER SHALL BE FILLED W/ WATER & PURGED AS SOON AS INSTALLED OR IN NO EVENT LATER THAN GAS/ELECTRIC HOOK-UP.
16. COPPER PIPING SHALL BE PROTECTED AGAINST CONTACT W/ MASONRY OR DISSIMILAR METALS. ALL HANGERS, SUPPORTS, ANCHORS, & CLIPS SHALL BE COPPER OR COPPER PLATED. WHERE COPPER PIPING IS CARRIED ON IRON TRAPEZE HANGERS W/ OTHER PIPING, SATISFACTORY & PERMANENT ELECTROLYTIC ISOLATION MATERIAL SHALL PROTECT THE COPPER AGAINST CONTACT W/ OTHER METALS.
17. WHERE COPPER PIPING IS SLEEVED THROUGH MASONRY, SLEEVES SHALL BE COPPER OR RED BRASS. WHERE COPPER MUST BE CONCEALED IN A MASONRY PARTITION OR AGAINST MASONRY, CONTACT SHALL BE PREVENTED BY COATING THE COPPER HEAVILY W/ ASPHALTIC ENAMEL & PROVIDING 15# ASPHALT SATURATED FELT BETWEEN THE PIPE & MASONRY.
18. ALL PIPE INSULATION SHALL RUN CONTINUOUSLY THROUGH FLOORS, WALLS, & PARTITIONS. PIPE INSULATION SHALL BE MITERED AT ELBOWS & TEES TO ENSURE COMPLETE COVERAGE OF PIPING.
19. VACUUM BREAKERS SHALL BE PROVIDED FOR ALL FIXTURES TO WHICH HOSES MAY BE ATTACHED. VACUUM BREAKERS SHALL BE PERMANENTLY ATTACHED.
20. THE PLUMBING CONTRACTOR SHALL PROVIDE WATER HAMMER PROTECTION ON ALL WATER DISTRIBUTION PIPING SERVING EQUIPMENT W/ QUICK CLOSING VALVES (ICE MAKERS, DISHWASHERS, FLUSH VALVES, WASHING MACHINES, WATER COOLERS, ETC.) SEE SHOCK ARRESTOR SCHEDULE.
21. ACCESS DOORS TO BE PROVIDED FOR ALL VALVES & DEVICES REQUIRING ACCESS WHEN LOCATED IN WALLS OR ABOVE INACCESSIBLE CEILING CONSTRUCTION. ACCESS DOORS TO BE RATED WHERE INSTALLED IN RATED ASSEMBLIES.
22. P.C. IS TO ENSURE THAT THEIR INSTALLATION OF NEW CONDUITS, PIPES, DUCTWORK, & SIMILAR DOES NOT BLOCK ACCESS TO NEW OR EXISTING AREA EQUIPMENT & THAT THE FORE MENTIONED DOES NOT INTERFERE W/ THE REQUIRED SERVICE CLEARANCE OF NEW OR EXISTING EQUIPMENT. COORDINATE W/ OTHER TRADE CONTRACTORS & CONTACT ENGINEER IF UNCERTAINTY EXISTS REGARDING EQUIPMENT SERVICE CLEARANCE REQUIREMENTS.
23. THE PLUMBING CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL PLUMBING EQUIPMENT FROM FOREIGN MATERIAL DURING CONSTRUCTION (PAINT, SPACKLE, ETC.). UPON COMPLETION OF WORK, THE PLUMBING CONTRACTOR SHALL CLEAN, WASH, ETC. ALL ITEMS & EQUIPMENT WITHIN HIS SCOPE OF WORK & LEAVE ALL ITEMS BRIGHT & CLEAN.
24. NO INSULATION PERMITTED ON BACKFLOW PREVENTER ASSEMBLY.
25. PROVIDE PRESSURE REDUCING VALVE IF INCOMING WATER PRESSURE EXCEEDS 80 PSI.

NOTE:
ALL WATER HEATER VENT LOCATIONS ON ROOF TO BE 10' AWAY FROM OUTSIDE AIR.

PLUMBING FIXTURE SPECIFICATIONS AND CONNECTION SCHEDULE(CONTINUED ON SHEET P002)

MARK	FIXTURE	TYPE	MANUFACTURER	MODEL NO.	MATERIAL	STYLE	FAUCET/VALVE				DRAIN		SUPPLIES AND STOPS	PIPE SIZES				MOUNTING	REMARKS
							MANUFACT. MODEL NO.	SPOUT	HANDLES	CENTERS	TYPE	SIZE		WASTE	VENT	CW	HW		
P-1A	WATER CLOSET	FLUSH VALVE	AMERICAN STANDARD	3043.001	VITREOUS CHINA	ADA ELONGATED	AMER. STD. 6067.221	-	-	-	-	-	-	3"	2"	1"	—	FLOOR	PROVIDE OPEN FRONT SEAT WITH NO LID. RIM HEIGHT = 16.5" AUTO FLUSH VALVE (AC. PWR)
P-1B	WATER CLOSET	FLUSH VALVE	AMERICAN STANDARD	3461.001	VITREOUS CHINA	ADA ELONGATED	AMER. STD. 6047.161	-	-	-	-	-	-	3"	2"	1"	—	FLOOR	PROVIDE CLOSED FRONT SEAT WITH LID. RIM HEIGHT = 16.5"
P-1C	WATER CLOSET	FLUSH VALVE	AMERICAN STANDARD	3351.101	VITREOUS CHINA	ADA ELONGATED	AMER. STD. 6067.161	-	-	-	-	-	-	3"	2"	1"	—	WALL	PROVIDE OPEN FRONT SEAT WITH NO LID. W/ WC CARRIER. AUTO FLUSH VALVE (AC. PWR)
P-2	URINAL	WALL HUNG	AMERICAN STANDARD	6590.001	VITREOUS CHINA	ADA TOP-SPUD	AMER. STD. 6062.310	-	-	-	-	-	-	2"	1½"	¾"	—	WALL	SEE ARCH PLAN FOR MTG. HEIGHT. 1.0 GPF. AUTO VALVE (A.C POWERED).
P-3A	LAVATORY	UNDER MOUNT	AMERICAN STANDARD	0497.221	VITREOUS CHINA	ADA COUNTER TOP	AMER. STD. 6055.205 (W/ TV-1)	CENTER	AUTO	4" 3-HOLE	GRID	1½"	BRASSCRAFT OCR1912A	2"	1½"	½"	½"	COUNTER	1.5 GPM. AC PWR. BARRIER FREE. W/ TV-1, SET TO 100°F.
P-3B	LAVATORY	UNDER MOUNT	AMERICAN STANDARD	0497.221	VITREOUS CHINA	ADA COUNTER TOP	CFG 40717	CENTER	LEVER	4" 3-HOLE	POP -UP	1½"	BRASSCRAFT OCR1912A	2"	1½"	½"	½"	COUNTER	0.5 GPM. BARRIER FREE.
P-4	LAVATORY	WALL MOUNT	AMERICAN STANDARD	0355.012	VITREOUS CHINA	ADA D-SHAPE	AMER. STD. 6055.205 (W/ TV-1)	CENTER	AUTO	4" 3-HOLE	GRID	1½"	BRASSCRAFT OCR1912A	2"	1½"	½"	½"	WALL	W/ WALL BRACKET. 0.5 GPM. MOUNT AT ADA HEIGHT. AC PWR. W/ TV-1, SET TO 100°F.
P-4A	SERVICE SINK	WALL MOUNT	ELKAY	ESSB2520C	STAINLESS STEEL	SINGLE BOWL	LK907BR03L2H	CENTER	LEVER	4" 2-HOLE	GRID	1½"	BRASSCRAFT OCR1912A	2"	1½"	½"	½"	WALL	2.2 GPM. 12" HIGH FULL-LENGTH BACKSPLASH
P-5	MOP SINK	FLOOR MOUNT	FIAT	MSB2424	MOLDED STONE	ONE-PIECE 24x24	FIAT 830AA (W/ CHECK VALVES)	CENTER	2	8" 2-HOLE	DOME	3"	-	3"	1½"	½"	½"	FLOOR	W/ WALL BRACKET. W/ MOP HANG. W/ HOSE & HOSE BRACKET. W/ VACUUM BREAKER.
P-7	SINK (30.75" x 18.5")	UNDER MOUNT	ELKAY	ELUHAD311855	STAINLESS STEEL	ADA 2-BOWL	CFG 40513	CENTER	LEVER	4" O.C. 4-HOLE	CRUMB CUP	1½"	BRASSCRAFT OCR1912A	2"	1½"	½"	½"	COUNTER	W/ OFFSET DRAIN, REAR CENTER. BOWL DEPTH = 5-3/8" W/ SPRAYER.
P-8	SINK (21" x 15.75")	UNDER MOUNT	ELKAY	ELUH211510	STAINLESS STEEL	SINGLE BOWL	CFG 40511	CENTER	LEVER	4" O.C. 3-HOLE	CRUMB CUP	1½"	BRASSCRAFT OCR1912A	2"	1½"	½"	½"	COUNTER	BOWL DEPTH = 10"
P-9	SINK (12" x 9")	UNDER MOUNT	ELKAY	ELUH129	STAINLESS STEEL	SINGLE BOWL	CFG 40511	CENTER	LEVER	4" O.C. 3-HOLE	CRUMB CUP	1½"	BRASSCRAFT OCR1912A	2"	1½"	½"	½"	COUNTER	BOWL DEPTH = 7"
P-9A	SINK (12" x 9")	UNDER MOUNT	ELKAY	ELUH129	STAINLESS STEEL	SINGLE BOWL	AMER. STD. 6409.170	CENTER	WRIST BLADE	4" O.C. 3-HOLE	CRUMB CUP	1½"	BRASSCRAFT OCR1912A	2"	1½"	½"	½"	COUNTER	BOWL DEPTH = 7"
P-10	WATER COOLER (HANDS FREE)	HI-LO	ELKAY	LZOOTL8WSLK	STAINLESS, VINYL	ADA	-	-	-	-	-	-	BRASSCRAFT G2CR19	1½"	1½"	½"	-	WALL	120V, 6.0 AMPS. HFC-134A. MOUNT AT ADA HEIGHT. W/ HANGER BRACKET. INCLUDES FILL STATION.
P-11	SHOWER HEAD	-	-	-	-	STANDARD	SYMMONS 9601-PLR	-	LEVER	-	FLOOR	2"	-	2"	1½"	½"	½"	FLOOR	TILED SHOWER BY G.C. W/ 2.0 GPM SHOWER HEAD. SHOWER VALVE LIMITED TO 120°F.
P-11A	SHOWER	TRANSFER SHOWER	LIBERTY LINE	1138382 RSADA	GEL-COATED FIBERGLASS	ADA	-	-	LEVER	_	FLOOR	2"	-	2"	1½"	½"	½"	FLOOR	PROVIDE W/ GRAB BARS, SEAT, & SHOWER VALVE, LIMITED TO 120°F. COORD. SEAT & BARS W/ ARCH.
P-12	SHOWER	STANDARD	AQUATIC	16030STT	GEL-COATED GELCOAT	ONE-PIECE	SYMMONS 9601-PLR	CENTER	LEVER	-	GRID	2"	-	2"	1½"	½"	½"	FLOOR	W/ 2.0 GPM SHOWER HEAD. SHOWER VALVE LIMITED TO 120°F.
P-13	WASHER BOX	SUPPLY BOX	OATEY	-	PVC	PLASTIC, RECESSED	-	-	-	-	-	-	-	2" IND. 3" BR.	1½"	½"	½"	WALL	MATCH PIPING MATERIALS. W/ QTR TURN VALVE & SHOCK ARRESTORS. W/ FACEPLATE. W/ TAIL PIECE.
P-14	VALVE BOX	SUPPLY BOX	OATEY	-	POLYSTYRENE	PLASTIC, RECESSED	-	-	-	-	-	-	-	-	-	½"	—	WALL	MATCH PIPING MATERIALS. W/ QTR TURN VALVE & SHOCK ARRESTOR. W/ FACEPLATE.
P-15	WATER COOLER (HANDS FREE)	HI	ELKAY	LZO8S	STAINLESS, VINYL	STANDARD	-	-	-	-	-	-	BRASSCRAFT G2CR19	1½"	1½"	½"	-	WALL	120V, 6.0 AMPS. HFC-134A. MOUNT AT ADA HEIGHT. W/ HANGER BRACKET.
BFP-1	BACK FLOW PREVENTER	RED. PRESS. ZONE	WATTS	LF909	LEAD-FREE, BRONZE	HORIZONTAL	-	-	-	-	-	-	-	-	-	2"	—	WALL	W/ STRAINER. PROVIDE REQ'D CLEARANCES. W/ TEST PORTS & ISO VALVES. DRAIN W/ AIR GAP.
BW-1	BACKWATER VALVE	IN-LINE	ZURN	BW2930	PVC BODY	PVC FLAPPER	-	-	-	-	-	-	-	-	SEE PLN	-	—	GRADE	AUTOMATIC PVC FLAPPER.
FCO	FLOOR CLEANOUT	ADJUSTABLE	ZURN	CO-2450	PVC BODY, NICKEL CVR.	FINISHED FLOOR	-	-	-	-	-	-	-	SEE PLAN	-	-	—	FLOOR	
FD-1	FLOOR DRAIN	FINISHED FLOOR	ZURN	FD	PVC	ADJUSTABLE	-	-	-	-	-	-	-	SEE PLAN	-	-	—	FLOOR	W/ DEEP SEAL TRAP. W/ TRAP SEAL.
FD-2	FLOOR DRAIN	FINISHED FLOOR	ZURN	FD	PVC	ADJUSTABLE	-	-	-	-	-	-	-	SEE PLAN	-	-	—	FLOOR	W/ DEEP SEAL TRAP. W/ TRAP SEAL. PROVIDE W/TRAP PRIMER.
WHD	WALL HYDRANT	ENCASED, ANTI-SIPHON	WOODFORD	MODEL B65	BRASS	FREEZELESS	-	-	-	-	-	-	-	-	-	¾"	-	WALL	VERIFY WALL DEPTH. AUTOMATIC DRAINING. LOOSE KEY.
FS	FLOOR SINK	6" DEEP	ZURN	FD-2375	CAST-IRON, PORCELAIN ENAMEL	ANTI-SPLASH	-	-	-	-	-	-	-	SEE PLAN	-	-	—	FLOOR	W/ DOME STRAINER. W/ DEEP SEAL TRAP.
GCO-1	GRADE CLEANOUT	ADJUSTABLE	ZURN	CO-2450	PVC BODY, NICKEL CVR.	-	-	-	-	-	-	-	-	SEE PLAN	-	-	—	GRADE	W/ CONCRETE PAD.
HB-1	HOSE BIB	ANGLE	ZURN	Z1341	BRONZE	-	-	-	-	-	-	-	-	-	-	½"	-	WALL	W/ VACUUM BREAKER. LOOSE KEY TYPE.
HB-2	HOSE BIB	ANGLE	ZURN	Z1341	BRONZE	-	-	-	-	-	-	-	-	-	-	½"	-	WALL	W/ VACUUM BREAKER.
RD-1	ROOF DRAIN	GRAVITY	ZURN	Z121	CAST-IRON	-	-	-	-	-	-	-	-	SEE PLAN	-	-	—	ROOF	W/ C.I. DOME STRAINER. COORD. REQ'D CLAMPS, FITTINGS, ETC. W/ ROOF CONSTRUCTION.
RD-2	ROOF DRAIN	GRAVITY	ZURN	Z121	CAST-IRON	-	-	-	-	-	-	-	-	SEE PLAN	-	-	—	ROOF	W/ C.I. DOME STRAINER & 2" DAM. COORD. REQ'D CLAMPS, FITTINGS, ETC. W/ ROOF CONSTRUCTION.
RP-1	RECIRC. PUMP	DIRECT DRIVE	TACO	MODEL 006	BRONZE OR STAINLESS STEEL	MAINT. FREE	-	-	-	-	-	-	-	-	-	-	½"	IN-LINE	MAX 3.0 GPM @ 9FT TDH. 115V/1Ø, 50W, 0.43 F.L.A. W/ TIMER.

NOTES:
1. ALL FIXTURE COLORS & FINISHES TO BE APPROVED BY OWNER & ARCHITECT BEFORE PURCHASING.
2. PROVIDE P-TRAP AND SUPPLY LINE SAFETY COVERS FOR ALL ADA SINK AND LAVATORY INSTALLATIONS.
3. WATER CLOSET HANDLES TO BE LOCATED ON "WIDE SIDE" OF STALL FOR ADA FIXTURES.
4. SEE DETAIL SHEET FOR ADDITIONAL ITEMS TO BE PROVIDED/INSTALLED W/ FIXTURES LISTED ABOVE.

SHOCK ARRESTOR SCHEDULE

FIXTURE UNITS	UNIT SIZE (CONN. SIZE)	MFG & MODEL (OR EQUAL)
1-4	AA (1/2")	SIOUX CHIEF "MINI-RESTER"
5-11	A (1/2")	SIOUX CHIEF "HYDRA-RESTER"
12 - 32	B (3/4")	SIOUX CHIEF "HYDRA-RESTER"
33-60	C (1")	SIOUX CHIEF "HYDRA-RESTER"

NOTES:
1. LOCATE SHOCK ARRESTORS IN ACCESSIBLE LOCATION OR PROVIDE SIOUX CHIEF BRAND ARRESTORS ONLY.
2. SEE PLAN, RISERS, SCHEDULES FOR ARRESTER LOCATIONS. IF LOCATION NOT INDICATED INSTALL IN ACCORDNCE W/ MFG GUIDELINES.

VALVE SCHEDULE

TAG	DESCRIPTION	MFG & MODEL (OR EQUAL)
BV-1	FULL-PORT BALL VALVE	WATTS LFB6081 (1/2" TO 2")
BV-2	BALANCING VALVE	WATTS LFCSM-61-S (1/2" TO 2")
CV-1	DUAL CHECK VALVE	WATTS SD-2 (ASSE 1032; <1/2") WATTS 9D (ASSE 1012; 1/2" & 3/4")
CV-2	BRASS CHECK VALVE	WATTS LFWCV (1/2" TO 1")
PRV-1	PRESS. RED. VALVE	WATTS LF223-S (SET TO 50 PSI; ASSE 1003; 1/2" TO 2-1/2")
DTV-1	DRAIN TEMPERING VALVE	THERMOMEGATECH DTV 325-000000-140 (1/2")
TV-1	IND. THERMO. MIX. VALVE	WATTS LFUSG-B (0.25 TO 2.5 GPM; 3/8") (SET TO 100°F DISCHARGE; ASSE 1070)
TV-2	THERMO. MIX. VALVE	WATTS LFMMV (0.5 TO 20 GPM; 1/2" TO 1") (SET TO 110°F DISCHARGE)

NOTES:
1. SEE PLAN FOR SIZE. VALVE SIZE TO EQUAL LINE SIZE.
2. BALL VALVES TO INCLUDE REMOVABLE HANDLES.
3. IF AVAILABLE, VALVES MAY BE THREADED OR SWEATED CONNECTIONS. USE EXTREME CARE AND LOW TEMP SOLDER TO PROTECT VALVE SEATS IF SWEATED CONNECTIONS ARE USED.

PLUMBING LEGEND

——— - ———	DOMESTIC COLD WATER PIPING
——— - - ———	DOMESTIC HOT WATER PIPING
———140°F———	DOMESTIC 140°F HOT WATER PIPING
——— HWR ———	DOMESTIC HOT WATER RETURN
- - - - - - - -	VENT PIPING
—————————	WASTE (SANITARY SEWER)
——— GW ———	WASTE (GREASE)
——— SD ———	STORM PIPING UNDERSLAB
—|●|—	VALVE
—⋈—	VALVE
—|/|—	CHECK VALVE
—(	PIPE UP
—⊃	PIPE DOWN
▣	FLOOR DRAIN
◧	FLOOR SINK
◎	CLEANOUT
⟨###⟩	KITCHEN EQUIPMENT TAG

ABV	ABOVE
AHJ	AUTHORITY HAVING JURISDICTION
AFF	ABOVE FINISHED FLOOR
BFP	BACK FLOW PREVENTER
BV	BALL OR BALANCING VALVE (SEE SCHED)
CV	CHECK VALVE
CW	COLD WATER
DN	DOWN
E.C.	ELECTRICAL SUB-CONTRACTOR
FCO	FLOOR CLEAN OUT
FD	FLOOR DRAIN
FR	FROM
FS	FLOOR SINK
G.C.	GENERAL CONTRACTOR
HB	HOSE BIBB
HD	HUB DRAIN
HW	HOT WATER
M.C.	MECHANICAL SUB-CONTRACTOR
P.C.	PLUMBING SUB-CONTRACTOR
PRV	PRESSURE REDUCING VALVE
SS	SANITARY SEWER
TV	TEMPERING VALVE
V	VENT
W	WASTE
WH	WATER HEATER
WHD	WALL HYDRANT

PLUMBING FIXTURE REQUIREMENTS

WASTE			WATER			
BUILDING DRAIN SIZE	NUMBER OF BUILDING DRAINS	TOTAL FIXTURE UNIT LOAD	WATER SERVICE SIZE	NUMBER OF WATER SERVICES	TOTAL FIXTURE UNIT LOAD	NOTES
4"	1	95	2-1/2"	1	155	ADMIN BLDG
6"	1	220	3"	1	390	DINING BLDG
4"	1	120	2-1/2"	1	285	RESIDENTIAL BLDG'S
4"	1	60	2"	1	100	DETOX BLDG

isdesign
ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.isdesignpa.com

MAPLE
ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

Project
THE HEALING PLACE OF NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

Client
NEW HANOVER COUNTY, NORTH CAROLINA

All reproduction & intellectual property rights reserved © 2020

SITE PLAN

Professional Seals
SEAL 044528
DUSTIN M. METAYER
9/2/20

No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

Sheet Title
PLUMBING SCHEDULES AND NOTES

Sheet Number
P001

© 2020 MAPLE ENGINEERING, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MAPLE ENGINEERING, PLLC.

TRENCH DRAIN (TD-4) SPEC

1. TRENCH DRAIN SHALL BE EQUAL TO ROCKFORD SEPARATORS RTD-10 TRENCH DRAIN.
2. END DRAIN WITH 4" OUTLET.
3. LENGTH OF TRENCH DRAIN SHALL BE 3'-4".
4. WITH OUTLET STRAINER.
5. GRATE SELECTED BY OWNER.

TRENCH DRAIN (TD-1) SPEC

1. TRENCH DRAIN SHALL BE EQUAL TO ZURN Z886 PERMA-TRENCH LINEAR TRENCH DRAIN.
2. CENTER DRAIN WITH ONE 2" NO-HUB BOTTOM OUTLET. PROVIDE WITH CLOSED END CAPS.
3. LENGTH OF TRENCH DRAIN SHALL BE 4'-3". CUT TO LENGTH.
4. STAINLESS STEEL GRATE.

TRENCH DRAIN (TD-3) SPEC

1. TRENCH DRAIN SHALL BE EQUAL TO ROCKFORD SEPARATORS RTD-10 TRENCH DRAIN.
2. END DRAIN WITH 4" OUTLET.
3. LENGTH OF TRENCH DRAIN SHALL BE 6'-0".
4. WITH OUTLET STRAINER.
5. STAINLESS STEEL GRATE.

LINT SEPARATOR (LS-1) SPEC

1. LINT SEPARATOR TO BE EQUAL TO STRIEM AA-M.
2. 4" INLET AND OUTLET.
3. LIQUID CAPACITY = 38 GALLONS (HIGH LEVEL).
4. SOLIDS CAPACITY = 6 GALLONS.
5. INSTALL PER MANUFACTURER'S INSTRUCTIONS.

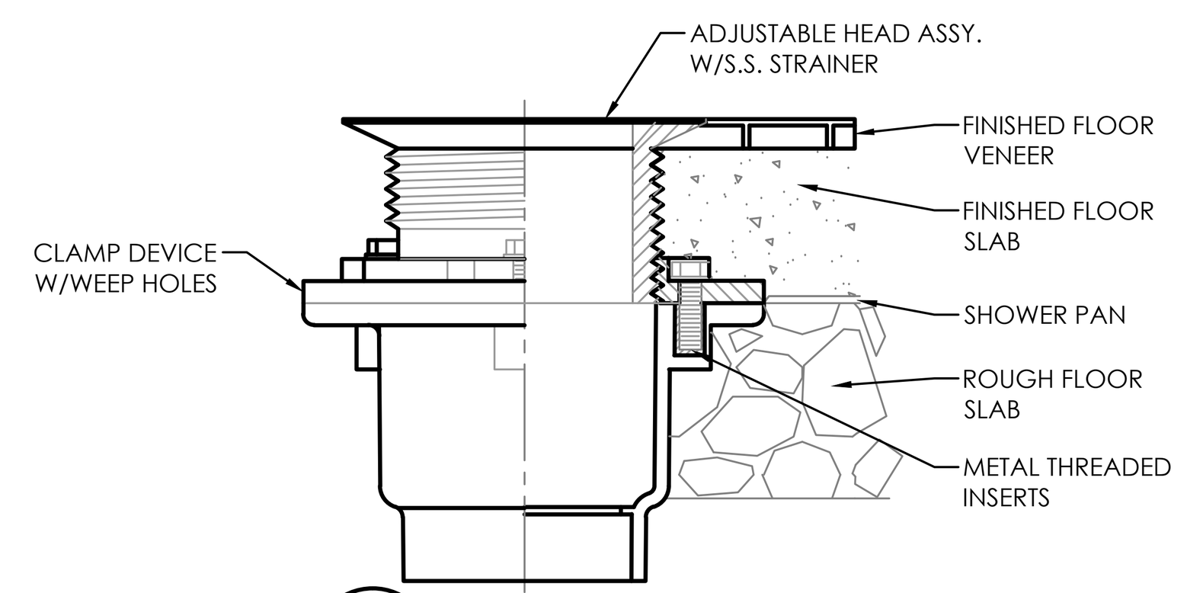
LINT SEPARATOR (LS-2) SPEC

1. LINT SEPARATOR TO BE EQUAL TO STRIEM AA-S.
2. 3" INLET AND OUTLET.
3. LIQUID CAPACITY = 16 GALLONS (HIGH LEVEL).
4. SOLIDS CAPACITY = 2 GALLONS.
5. INSTALL PER MANUFACTURER'S INSTRUCTIONS.

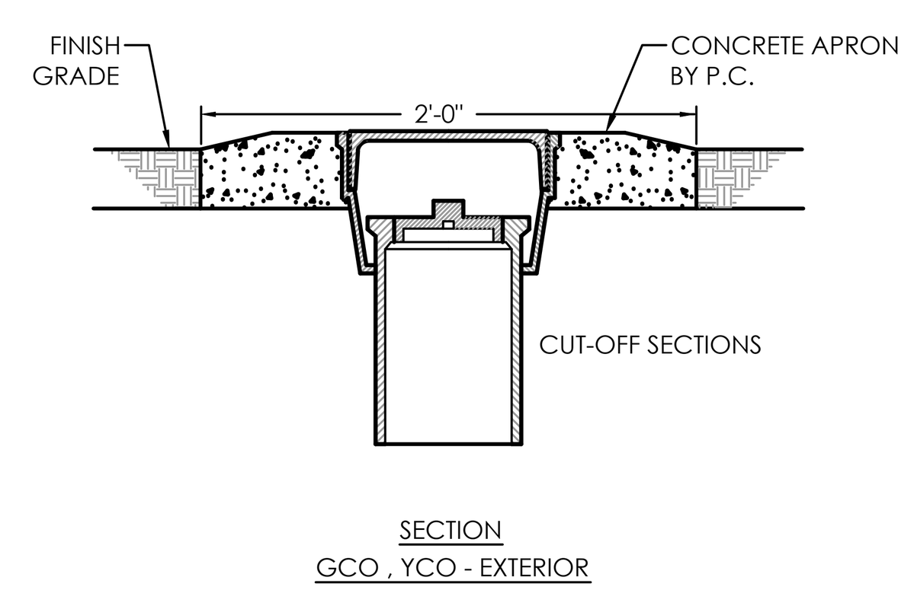
PLUMBING FIXTURE SPECIFICATIONS AND CONNECTION SCHEDULE (CONTINUED FROM SHEET "P001")

MARK	FIXTURE	TYPE	MANUFACTURER	MODEL NO.	MATERIAL	STYLE	FAUCET/VALVE MANUFACT. MODEL NO.	FAUCET/VALVE SPOUT	FAUCET/VALVE HANDLES	FAUCET/VALVE CENTERS	DRAIN TYPE	DRAIN SIZE	SUPPLIES AND STOPS	PIPE SIZES WASTE	PIPE SIZES VENT	PIPE SIZES CW	PIPE SIZES HW	MOUNTING	REMARKS
RP-2	RECIRC. PUMP	DIRECT DRIVE	TACO	MODEL 003	BRONZE OR STAINLESS STEEL	MAINT. FREE	-	-	-	-	-	-	-	-	-	-	1/2"	IN-LINE	MAX 3.8 GPM @ 3FT TDH. 115V/1Ø, 50W, 0.43 F.L.A. W/ TIMER.
SD	SHOWER DRAIN	FINISHED FLOOR	ZURN	FD1	PVC	ADJUSTABLE	-	-	-	-	-	-	-	SEE PLAN	-	-	—	FLOOR	W/ S/S GRATE & DEEP SEAL TRAP. W/ CLAMPING COLLAR & WEEP HOLES.
WCO	WALL CLEANOUT	TEE	CHARLOTTE PIPE	PVC-445	PVC	FLUSH PLUG	-	-	-	-	-	-	-	SEE PLAN	-	-	—	WALL	W/ ZURN CO-2530 WALL COVER. W/ PVC PLUG W/ THREADED TAP.
WCO-2	WALL CLEANOUT	TEE	ZURN	Z1445	CAST IRON, ABS PLUG	-	-	-	-	-	-	-	-	SEE PLAN	-	-	—	WALL	W/ ZURN CO-2530 WALL COVER.
WH-1	WATER HEATER	ELECTRIC	STATE WATER HEATERS	EN6 30 DOMBS	GLASS LINED	LOWBOY SIDE CONN.	-	-	-	-	-	-	-	-	-	3/4"	3/4"	PLATFORM	28 GALLON, 4.5KW, 208V/1Ø. 23GPH @ 80°F RISE. SET TO 140°F, W/ TV-2. SEE DETAIL.
WH-2	WATER HEATER	ELEC. INST.	EEMAX	SPEX8208T	-	UNDERSINK	-	-	-	-	-	-	3/8" FLEX	-	-	1/2"	-	WALL	W/ 1.0 GPM FLOW RESTRICTOR. 57°F RISE. 8.3 KW, 208V/1Ø. SET TO 110°F.
WH-3	WATER HEATER	GAS PWR. VENT	AO SMITH	BTH-199(A)	GLASS LINED	UPRIGHT	-	-	-	-	-	-	-	-	-	1 1/2"	1 1/2"	FLOOR	100 GALLON, 199 MBH INPUT. 115V. 235GPH @ 100°F RISE. PWR VENT. SET TO 140°F. SEE DETAIL. PROVIDE W/ CONDENSATE NEUTRALIZING KIT.
WH-4	WATER HEATER	GAS PWR. VENT	AO SMITH	BTH-199(A)	GLASS LINED	UPRIGHT	-	-	-	-	-	-	-	-	-	1 1/2"	1 1/2"	FLOOR	100 GALLON, 199 MBH INPUT. 115V. 294GPH @ 80°F RISE. PWR VENT. SET TO 140°F. SEE DETAIL. PROVIDE W/ CONDENSATE NEUTRALIZING KIT.
WH-5A	WATER HEATER	DIR. VENT GAS	RINNAI WATER HEATERS	CU199i (W/ CONDENSATE NEUTRALIZER KIT)	TANKLESS GAS	WALL MTD.	-	-	-	-	-	-	-	-	-	3/4"	3/4"	WALL	199 MBH INPUT. 115V. 3.8GPM @ 100°F RISE. SET TO 140°F. SEE DETAIL.
WH-5B	WATER HEATER	DIR. VENT GAS	RINNAI WATER HEATERS	CU199i (W/ CONDENSATE NEUTRALIZER KIT)	TANKLESS GAS	WALL MTD.	-	-	-	-	-	-	-	-	-	3/4"	3/4"	WALL	199 MBH INPUT. 115V. 3.8GPM @ 100°F RISE. SET TO 140°F. SEE DETAIL.
WH-6	WATER HEATER	ELEC. INST.	EEMAX	SPEX4208T ML	-	UNDERSINK	-	-	-	-	-	-	3/8" FLEX	-	-	1/2"	-	WALL	MULTIPLE LAV. W/ TWO 0.5 GPM FLOW RESTRICTORS. 56°F RISE. MAX TEMP 110°F. 4.1 KW, 208V/1Ø.
WH-7	WATER HEATER	DIR. VENT GAS	RINNAI WATER HEATERS	CU199i (W/ CONDENSATE NEUTRALIZER KIT)	TANKLESS GAS	WALL MTD.	-	-	-	-	-	-	-	-	-	3/4"	3/4"	WALL	199 MBH INPUT. 115V. 3.8GPM @ 100°F RISE. SET TO 140°F. SEE DETAIL.

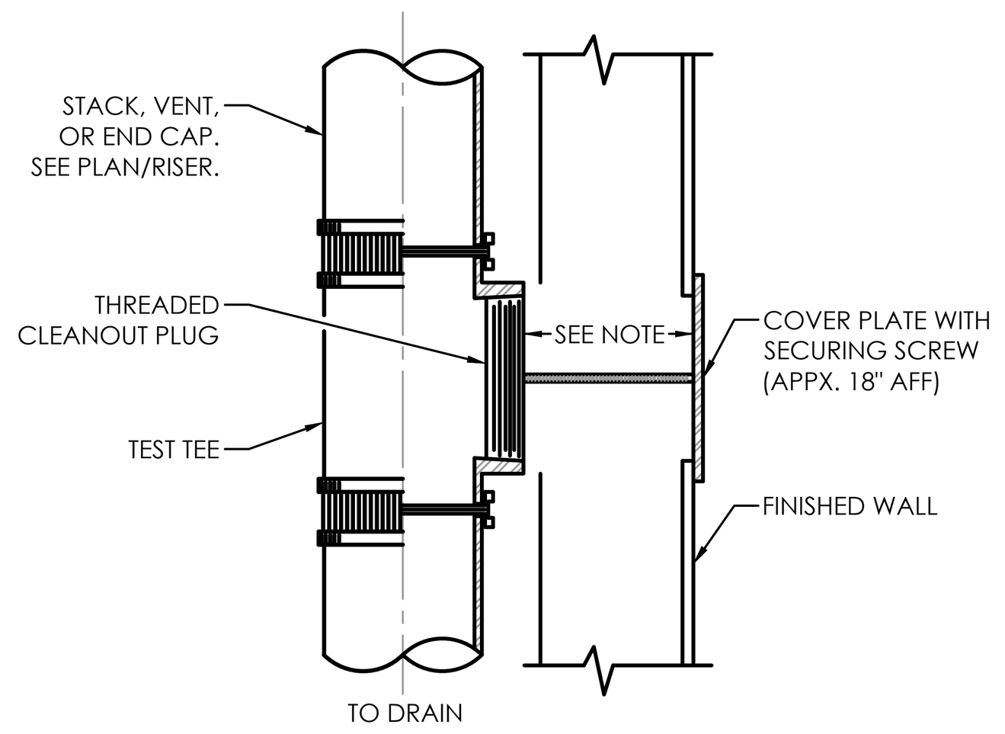
NOTES:
1. SEE DETAILS FOR ADDITIONAL ITEMS TO BE PROVIDED/INSTALLED W/ FIXTURES LISTED ABOVE.



15 SHOWER DRAIN DETAIL
NO SCALE

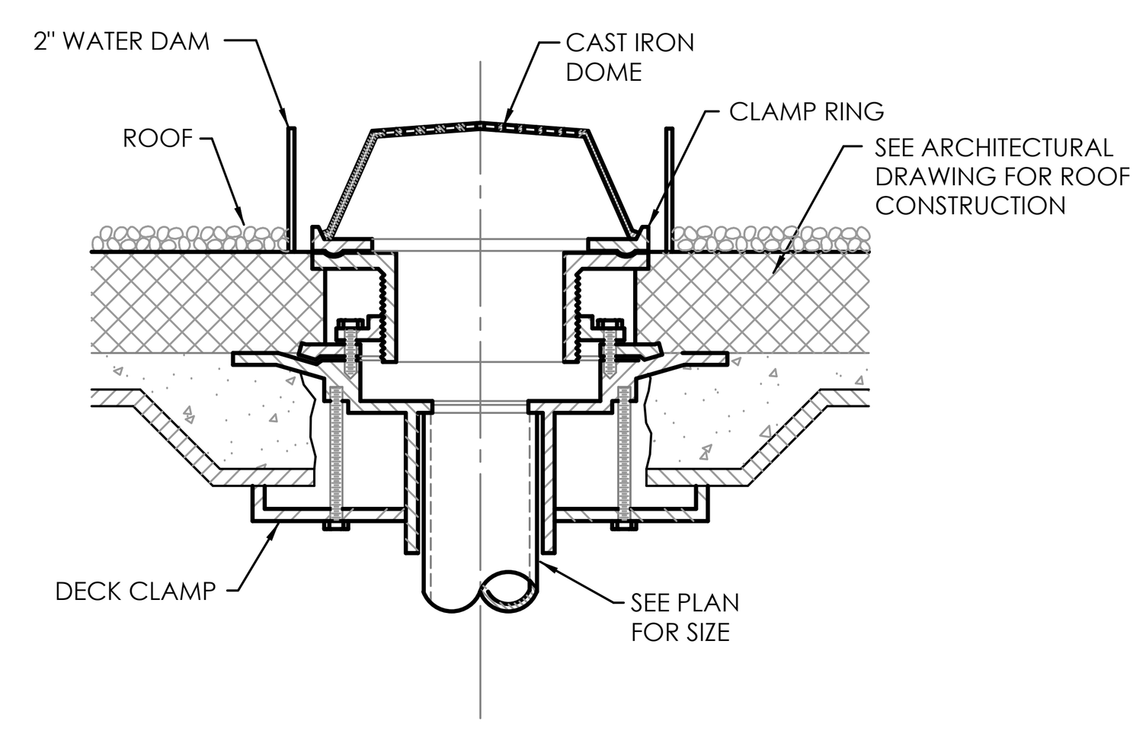


14 EXTERIOR CLEANOUT DETAIL
NO SCALE

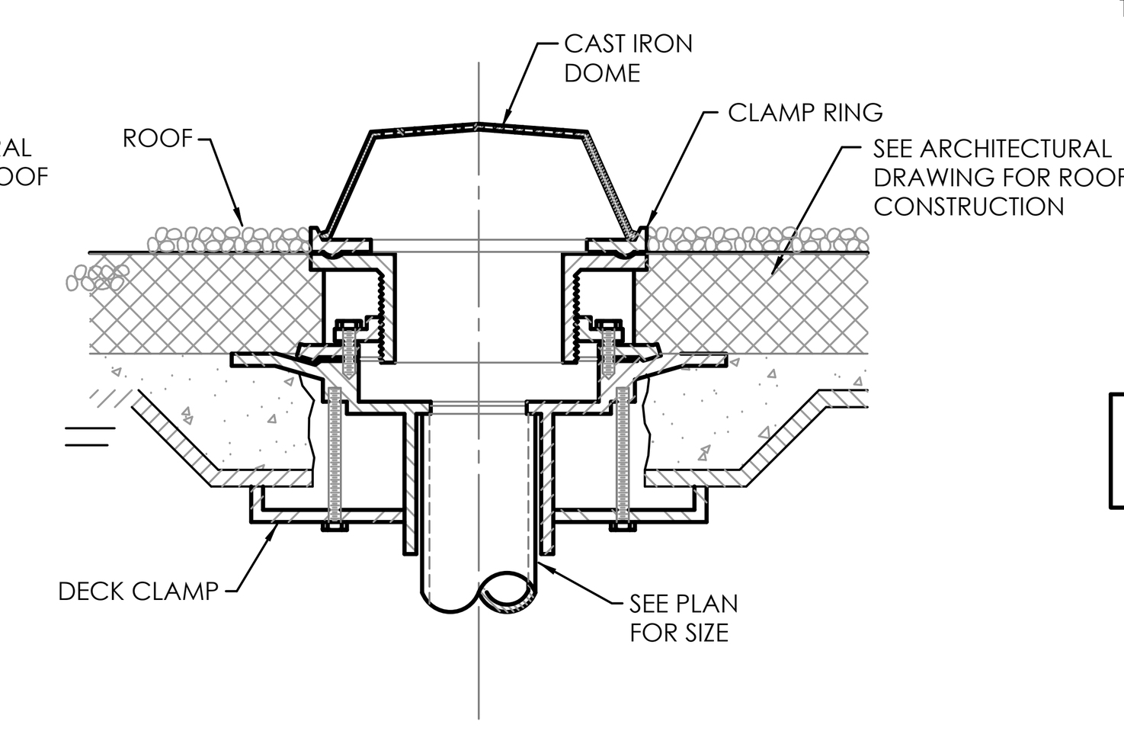


NOTE:
EXTEND TEST TEE OPENING IF PLUG IS GREATER THAN 8" FROM FINISHED WALL.

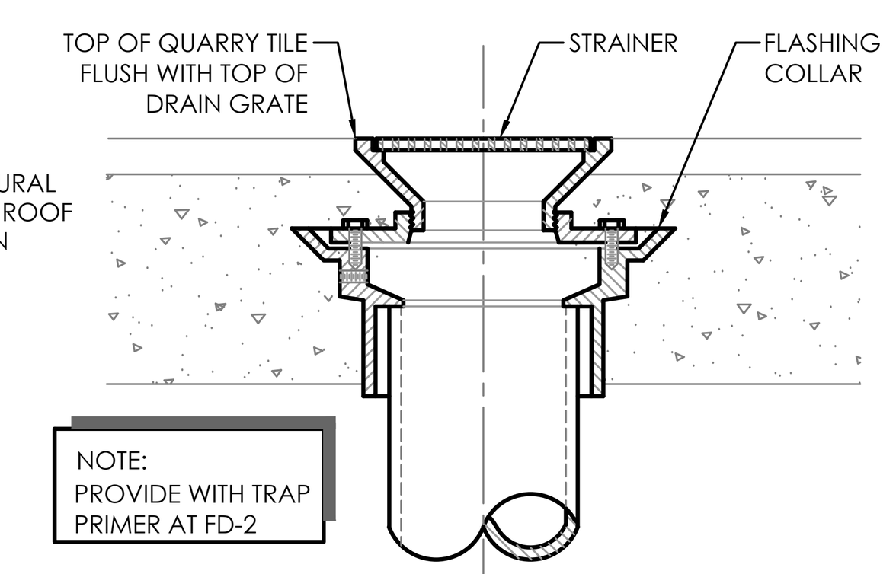
13 WALL CLEANOUT DETAIL
NO SCALE



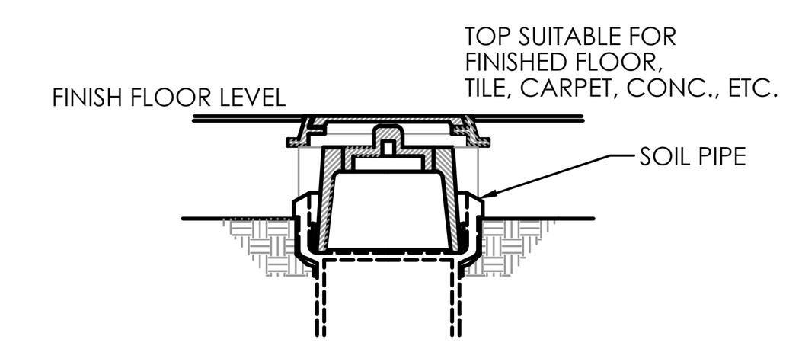
12 SECONDARY ROOF DRAIN DETAIL
NO SCALE



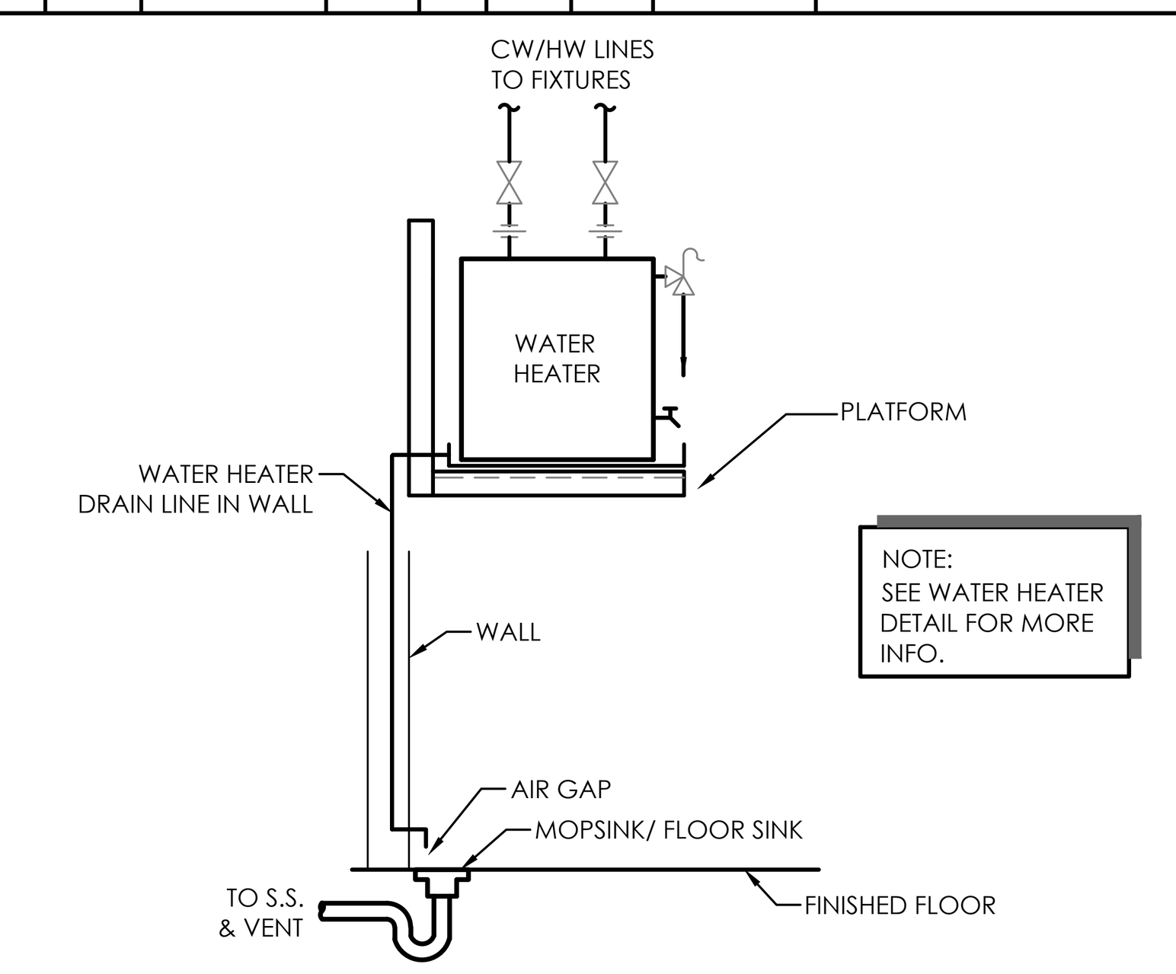
11 ROOF DRAIN DETAIL
NO SCALE



10 FLOOR DRAIN DETAIL
NO SCALE

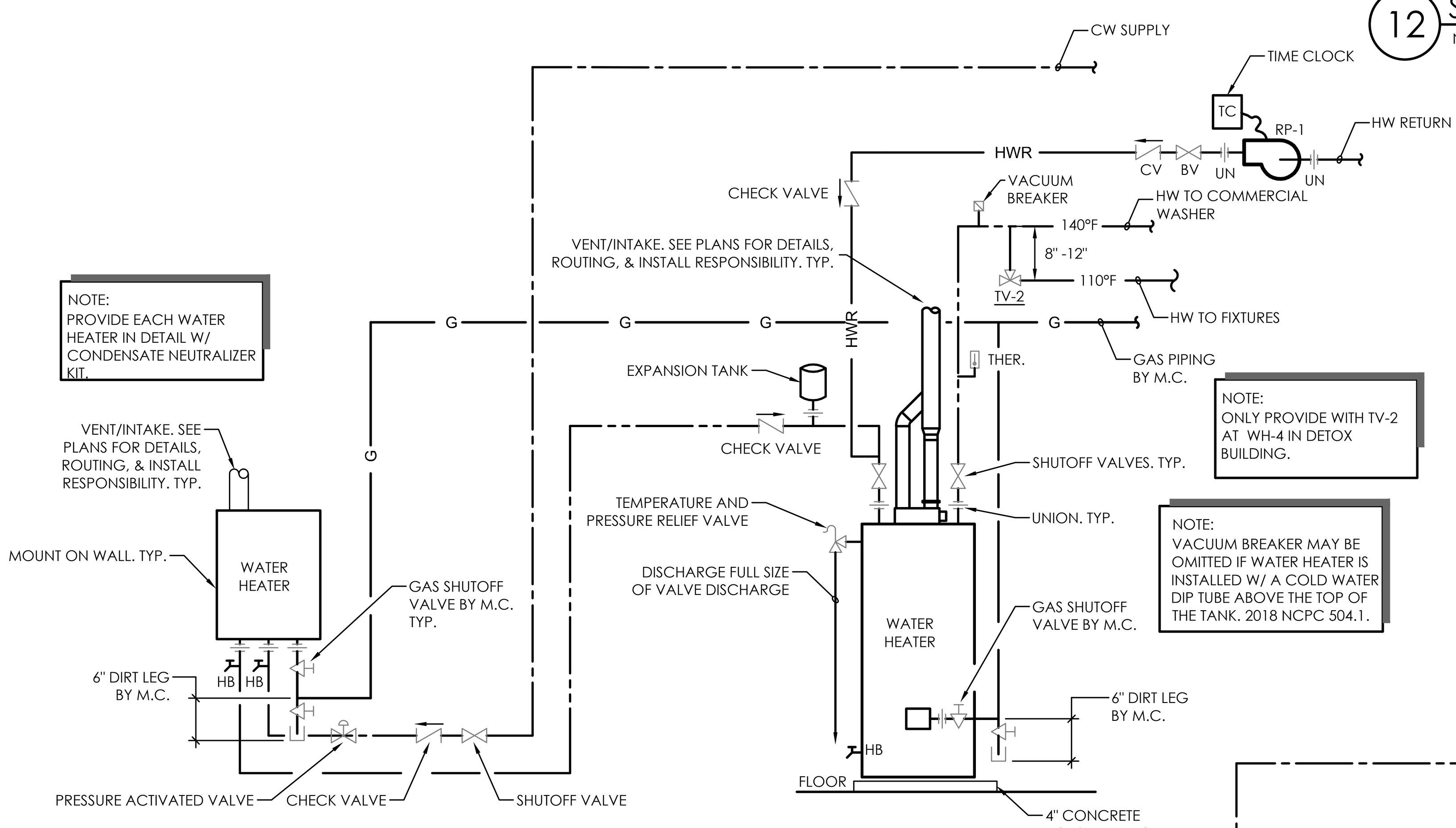


9 FLOOR CLEANOUT DETAIL
NO SCALE



NOTE:
1. SEE PLAN AND SCHEDULES FOR ABSENCE/PRESENCE OF TRAP PRIMER.
2. FLOOR DRAIN TO BE TIGHT TO WALL.
3. MINIMIZE AMOUNT OF EXPOSED DRAIN PIPING. EXIT LOW ON WALL AND EXTEND NO MORE THAN 3" FROM WALL.

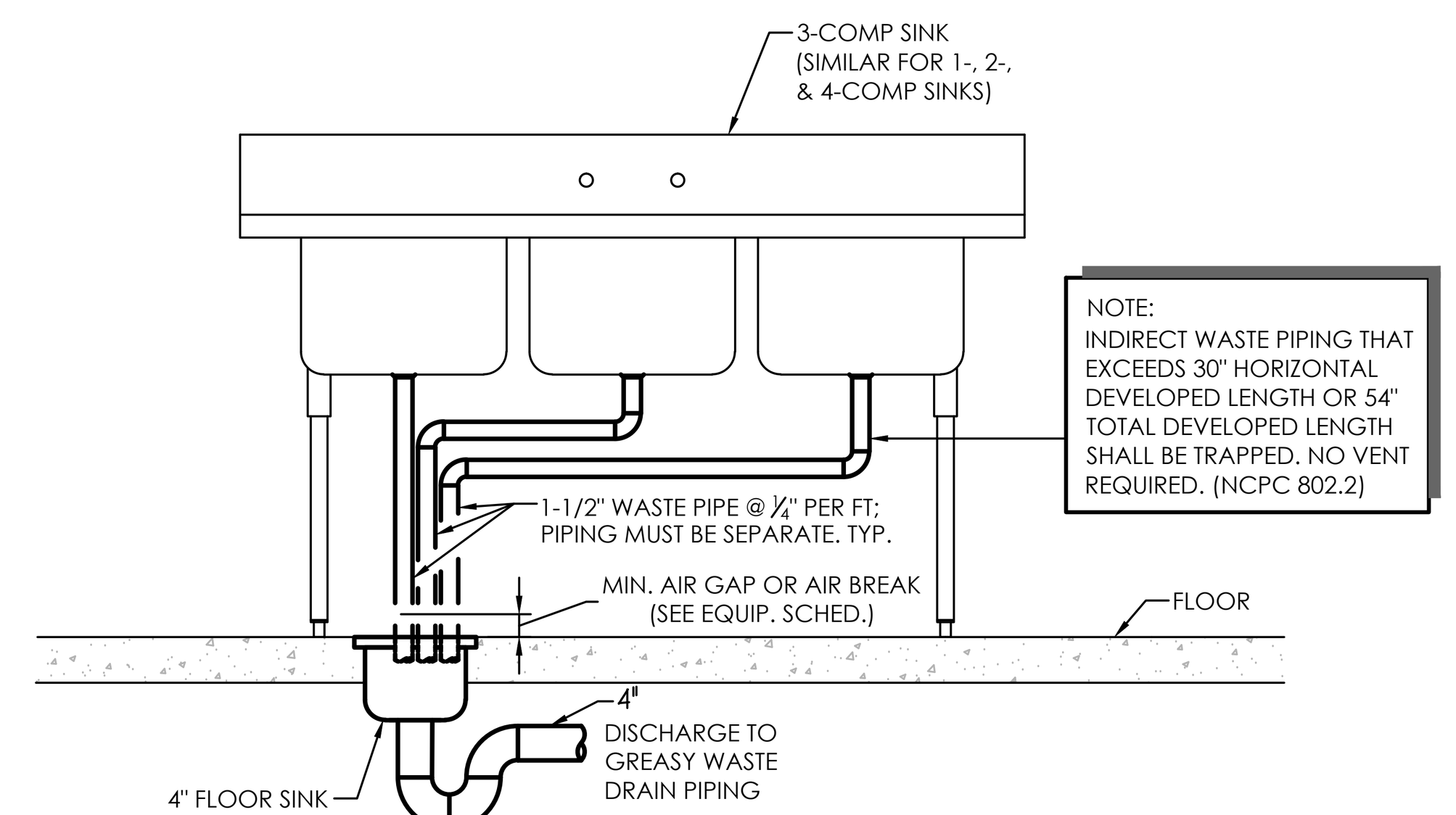
8 WATER HEATER DRAIN DETAIL (WH-1)
NO SCALE



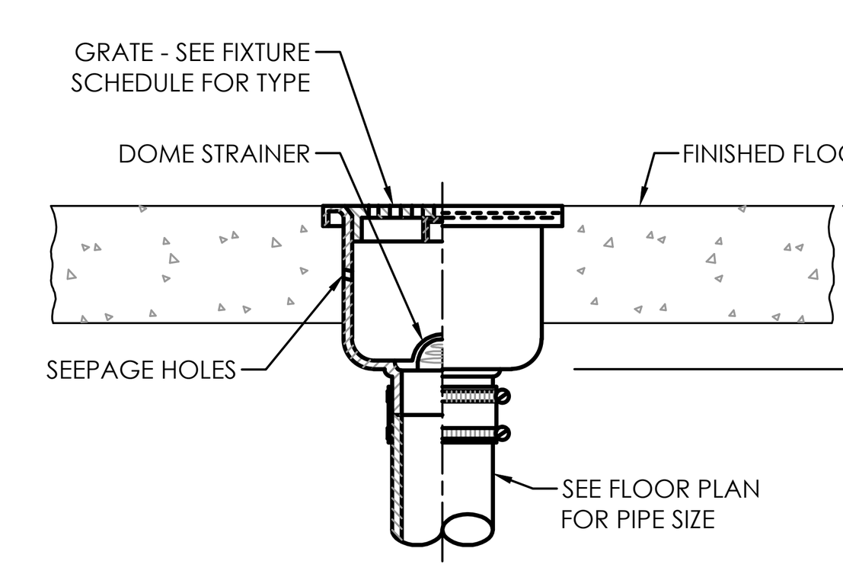
NOTE:
1. INSTALL H.W. HEATER AND MIXING VALVE PER MANUFACTURER RECOMMENDATION.
2. PROVIDE HEAT TRAP ON CW AND HW LINES PER ENERGY CODE.
3. ELEVATE WATER HEATER & DRAIN PAN AS NECESSARY TO ENSURE FLOW TO FLOOR DRAIN

7 TANK & INSTANT. WATER HEATER DETAIL
NO SCALE

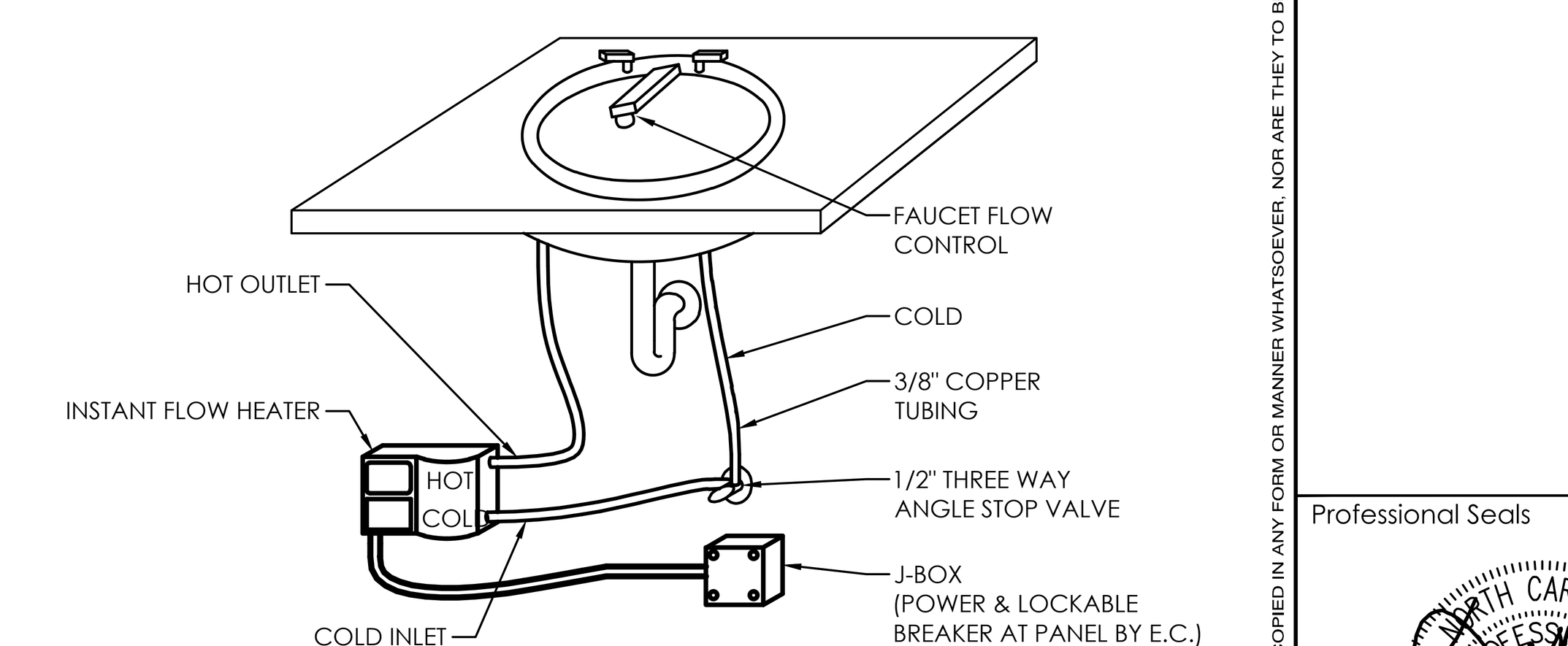
NOTE:
KITCHEN SERVED BY WH-3 AND WH7. DETOX BLDG. SERVED BY WH-4 AND WH-5A



6 PREP/UTENSIL WASH/ DETAIL
NO SCALE



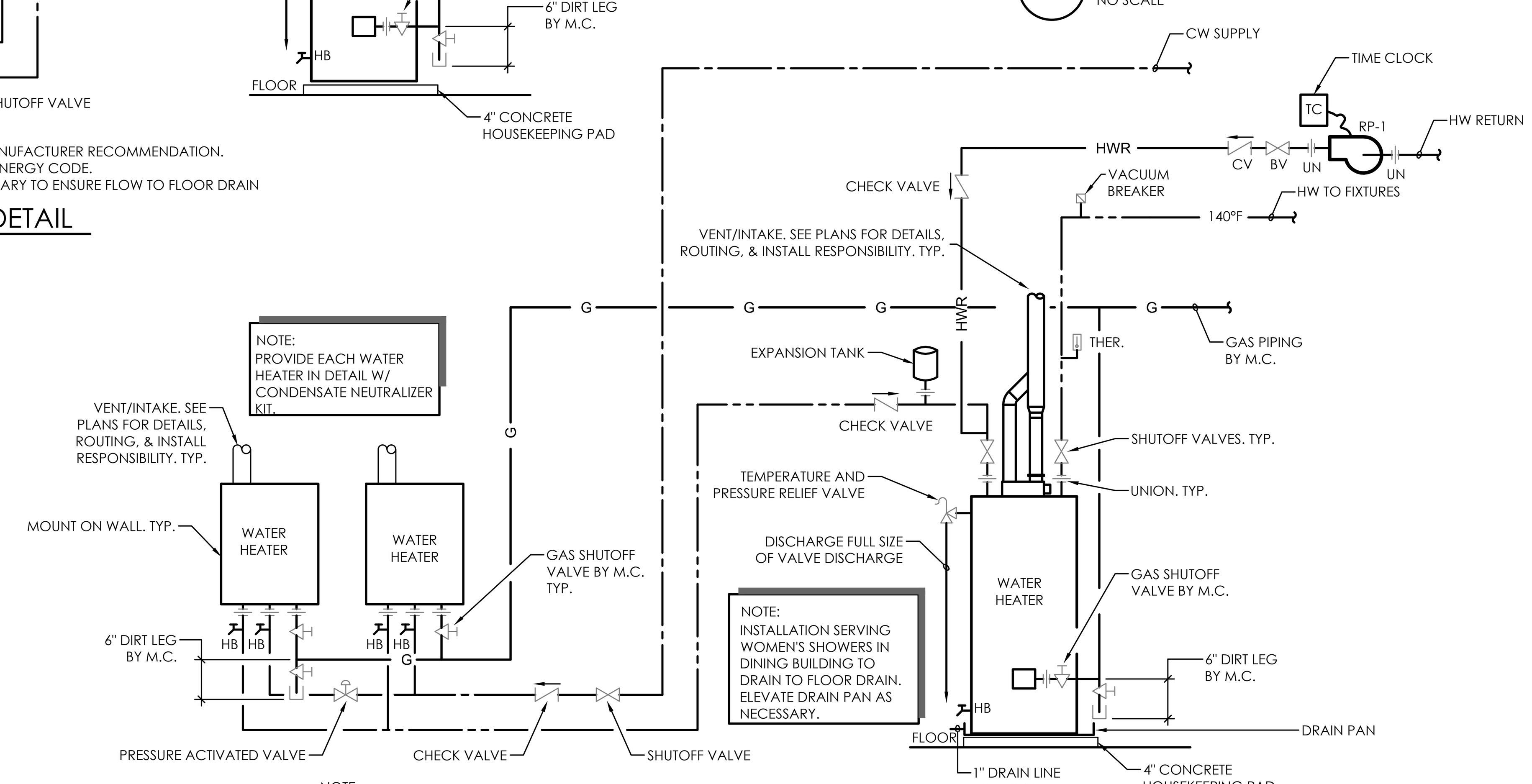
5 FLOOR SINK DETAIL
NO SCALE



NOTE:
1. INSTALL WATER HEATER PER MANUFACTURER INSTRUCTIONS.
2. WHEN MOUNTED BELOW AN ADA FIXTURES, ALL LINES TO BE INSULATED AND ALL HEIGHTS TO BE PER ADA REGULATIONS.
3. ENSURE WATER HEATER PLACEMENT DOES NOT INTERFERE WITH ADA CLEARANCES.

4 INSTANT. WATER HEATER DETAIL (WH-2, WH-6)
NO SCALE

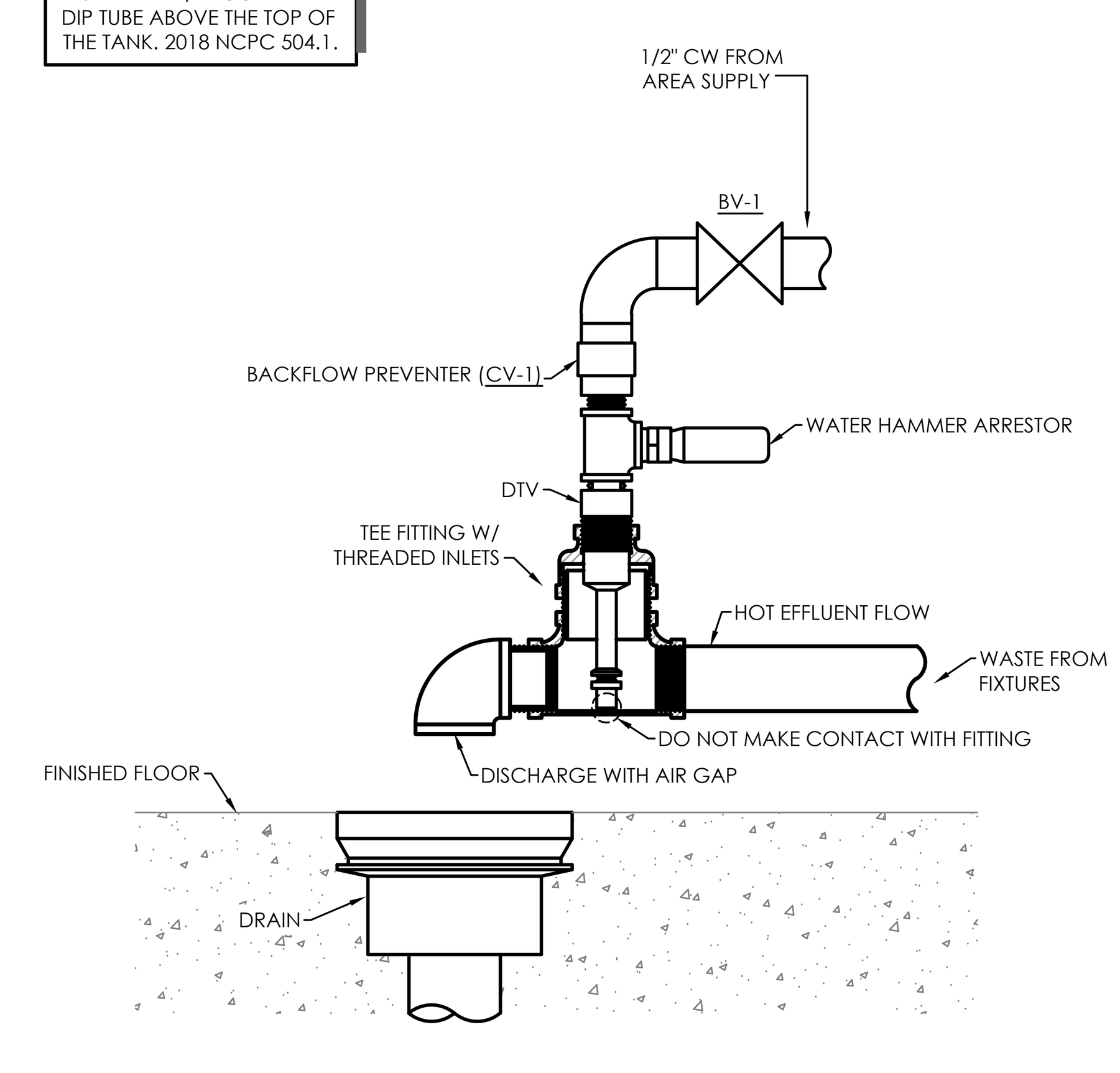
NOTE:
VACUUM BREAKER MAY BE OMITTED IF WATER HEATER IS INSTALLED W/ A COLD WATER DIP TUBE ABOVE THE TOP OF THE TANK. 2018 NCPC 504.1.



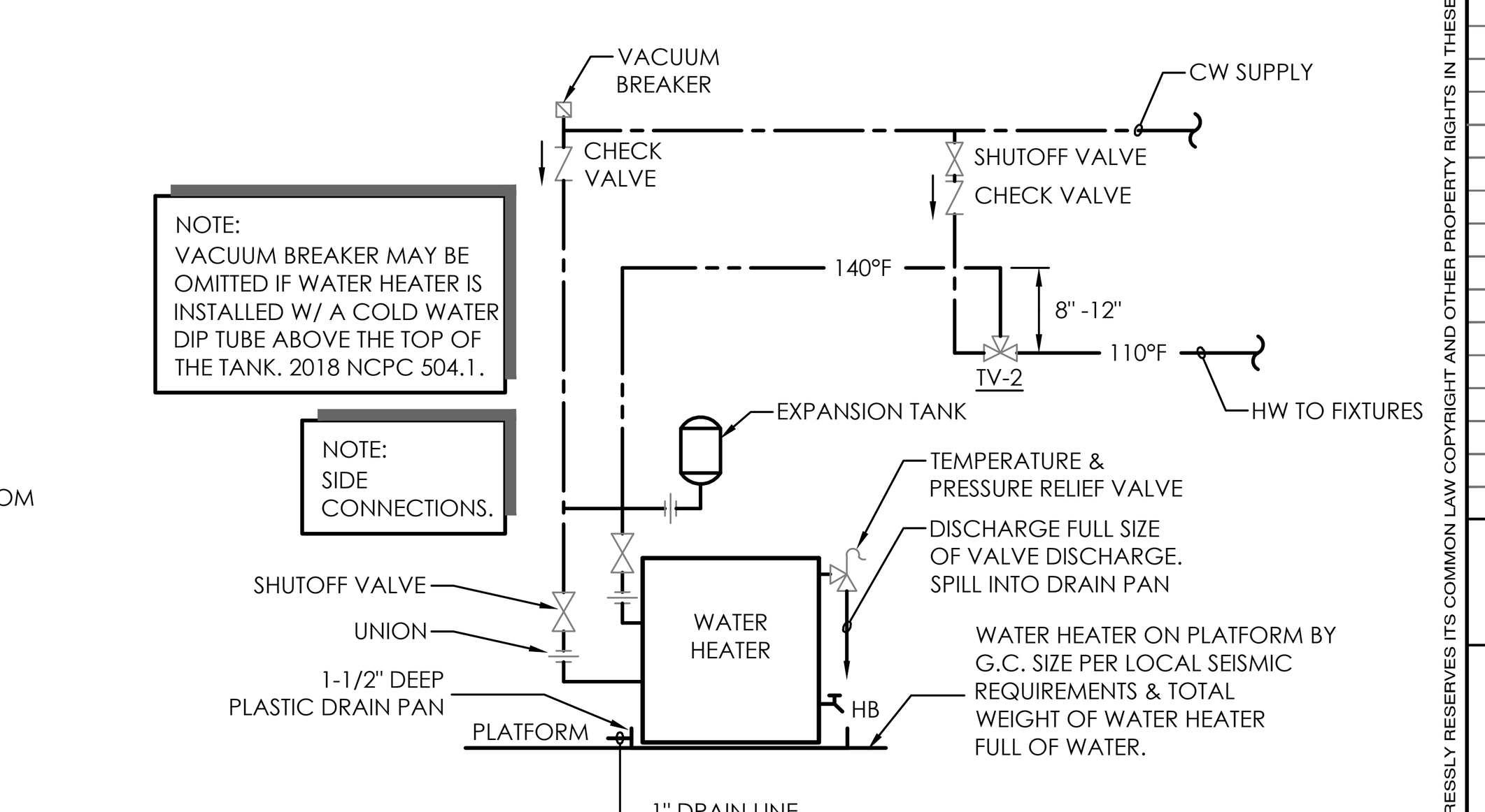
NOTE:
1. INSTALL H.W. HEATER AND MIXING VALVE PER MANUFACTURER RECOMMENDATION.
2. PROVIDE HEAT TRAP ON CW AND HW LINES PER ENERGY CODE.
3. ELEVATE WATER HEATER & DRAIN PAN AS NECESSARY TO ENSURE FLOW TO MOP SINK.

NOTE:
RESID. BLDGS. AND DINNING BLDG. SHOWERS SERVED BY WH-4, WH-5A AND WH5B.

3 TANK & INSTANT. WATER HEATER DETAIL
NO SCALE



2 DRAIN WATER TEMPERING VALVE DETAIL
NO SCALE



NOTE:
1. INSTALL WATER HEATER PER MFG'S INSTRUCTIONS
2. PROVIDE HEAT TRAP ON HW/CW LINES PER ENERGY CODE
3. ELEVATE DRAIN PAN AS NECESSARY TO ALLOW PROPER FLOW TO MOP SINK

1 WATER HEATER DETAIL(WH-1)
NO SCALE

isdesign
ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.isdesignpa.com

MAPLE
ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

Project
THE HEALING PLACE OF NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

Client
NEW HANOVER COUNTY, NORTH CAROLINA

All reproduction & intellectual property rights reserved. © 2020

SITE PLAN

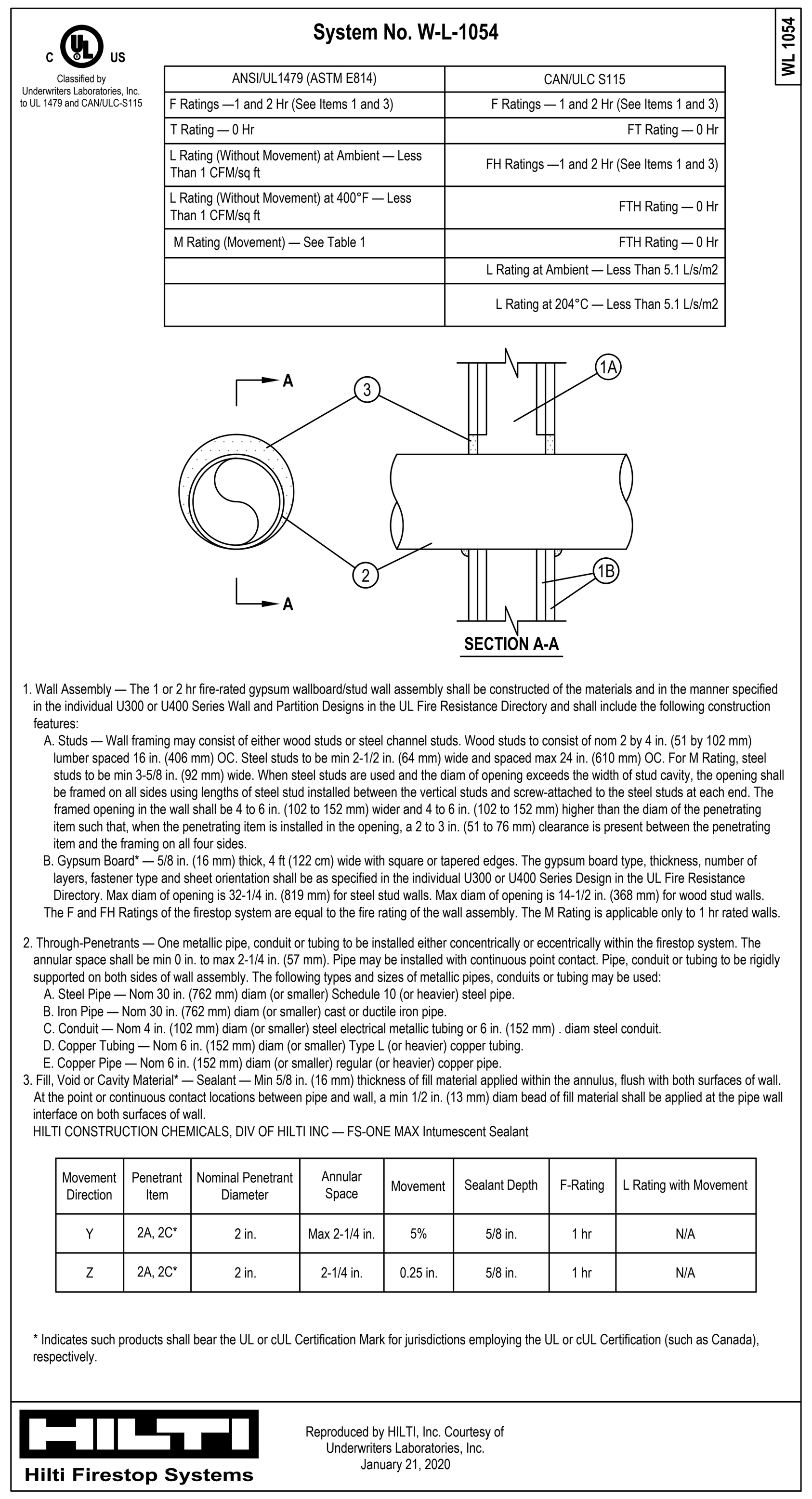
Professional Seals
9/2/20

No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

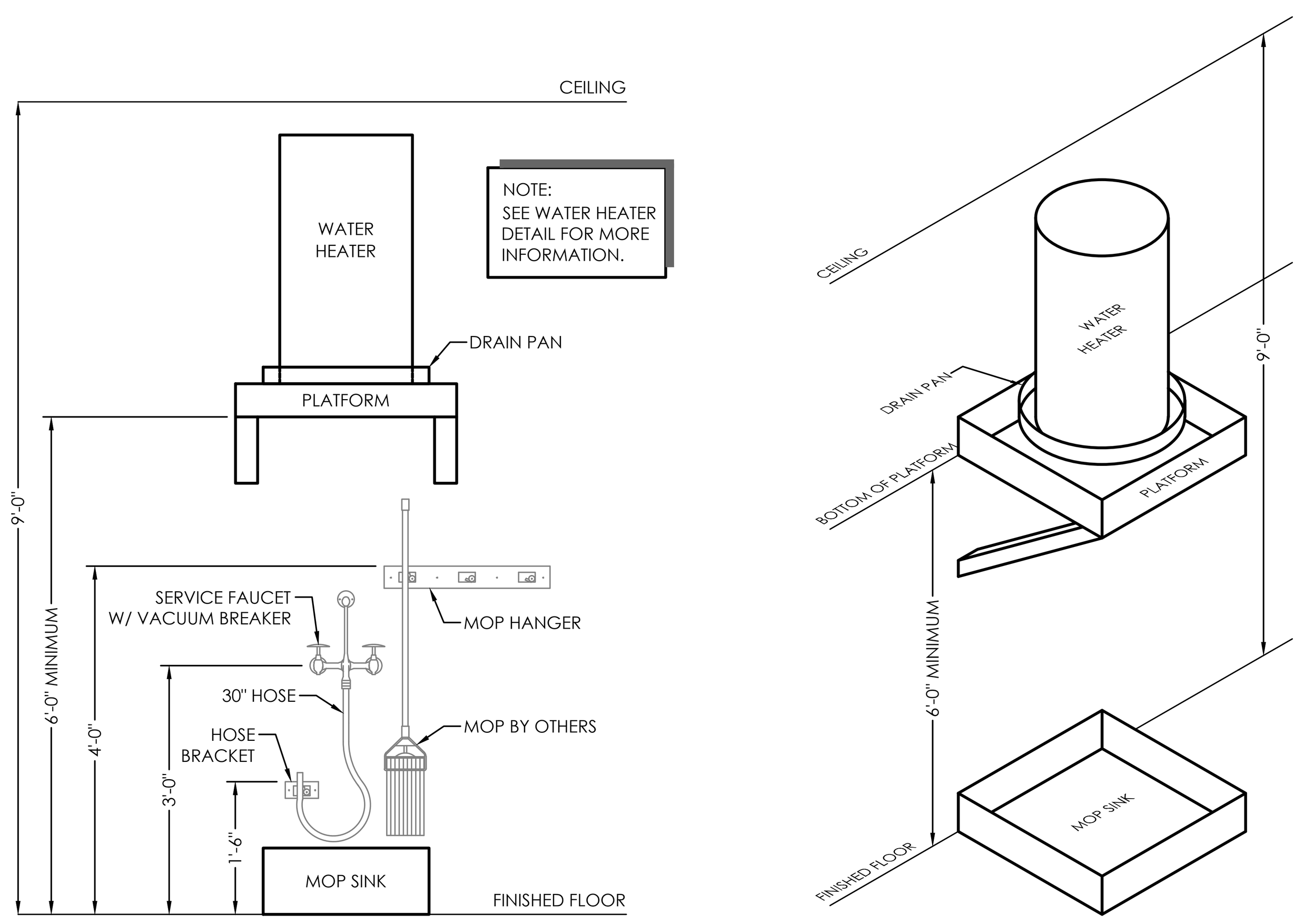
Sheet Title
PLUMBING SCHEDULES AND DETAILS

Sheet Number
P002

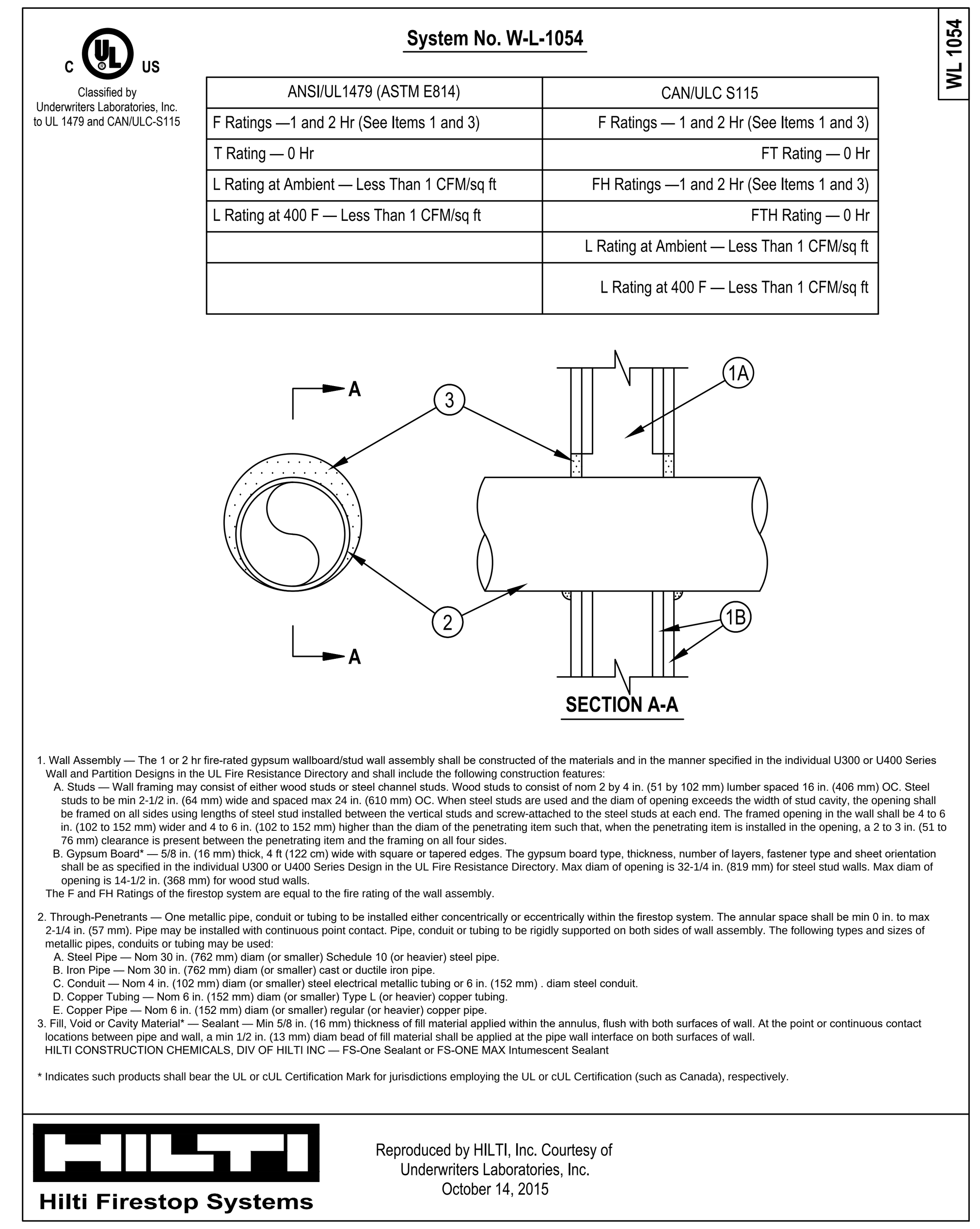
9/2/2020 2:21 PM
ISD-1801-P002.DWG



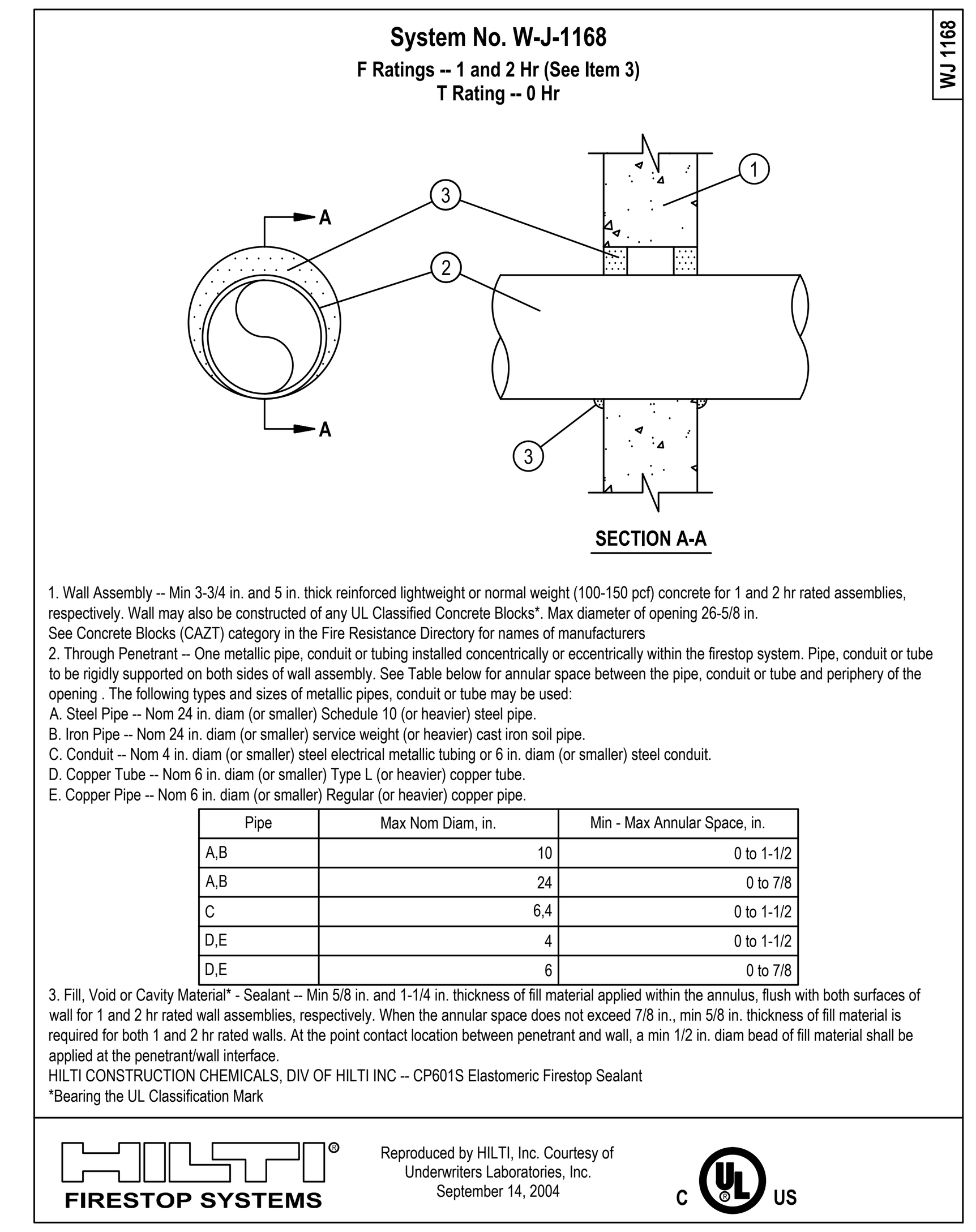
8 METALLIC PIPE (GYPSUM WALL) DETAIL
NO SCALE



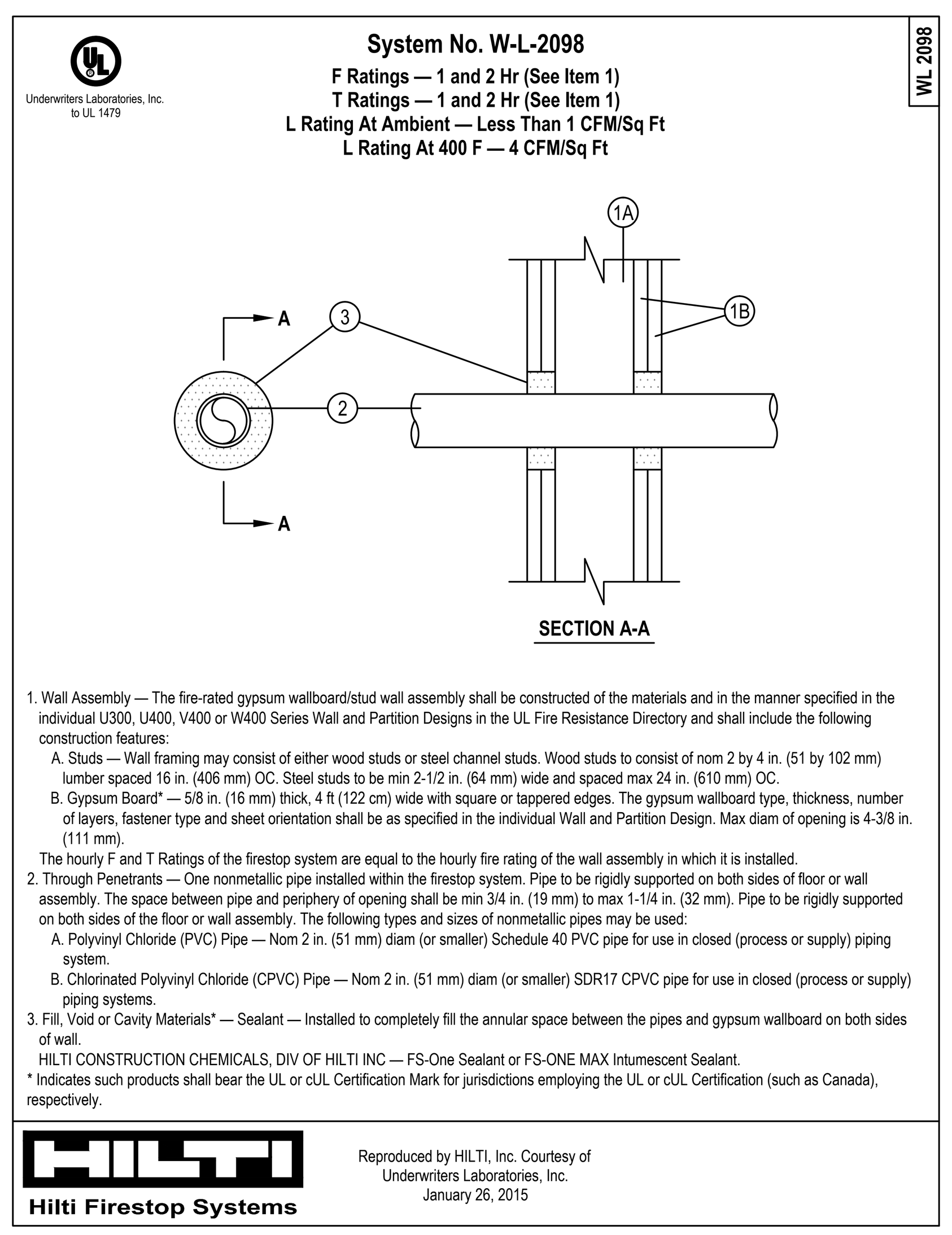
7 WATER HEATER ABOVE MOP SINK DETAIL
NO SCALE



6 METALLIC PIPE (GYPSUM WALL) DETAIL
NO SCALE



5 METALLIC PIPE (CONCRETE WALL) DETAIL
NO SCALE



4 NON-METALLIC PIPE (GYPSUM WALL) DETAIL
NO SCALE

NOTE:
TOTAL WATER HEATER CAPACITY (WH-3 + WH-7) CALCULATED AS TANK (WH-3) STORAGE (235GPH) + TANKLESS (WH-7) OUTPUT (3.8GPM X 60 MIN) = 463 GPH. 285 REQUIRED.

Storage Tank Water Heater Sizing Calculator

Developed by the Plan Review Unit of the Environmental Health Services Section
NC Division of Environmental Health

Facility Name:	The Healing Place - Kitchen
Address:	1000 Medical Center Dr. Wilmington, NC

EQUIPMENT						**GPH CALCULATED**
Enter the description, and number and size of compartments for each sink below	**Description**	**Number of compartments**	**(inches) Length**	**Width**	**Depth**	**Gallons Per Hour (GPH)**
Largest Sink #1	4-Comp	4	24	24	14	105
Sink #2						0
Sink #3						0
Bar sink						0
Sinks are calculated at 75% capacity					**Total**	105

Enter type of prep sink and number of sink compartments for each sink below	**Type of prep sink (vegetable, meat, seafood)**	**Number of compartments**		**Gallons Per Hour (GPH)**
Prep sink #1	(2) Vegetable	2		10
Prep sink #2	Meat	1		5
Prep sink#3	Seafood	1		5
Prep sinks are calculated at 5 gallons per compartment			**Total**	20

Enter the quantity of equipment below	**Quantity**		**Gallons Per Hour (GPH)**
Hand sinks	6		30
Can wash			0
Mop sink	1		5
Hose reel	2		10
Clothes washer			0

Enter a description and estimated gallon per hour (GPH) usage for other equipment below	**Description**	**Estimated gallons per hour (GPH) usage**		
Other Equipment		0		0
Other Equipment				0
Other Equipment				0
Other Equipment				0
Hand sinks and mop sinks are calculated at 5 GPH each, can washes at 10 GPH each. Hose reels are calculated at 5 GPH, clothes washers at 15 GPH, other equipment at the usage entered			**Total**	45

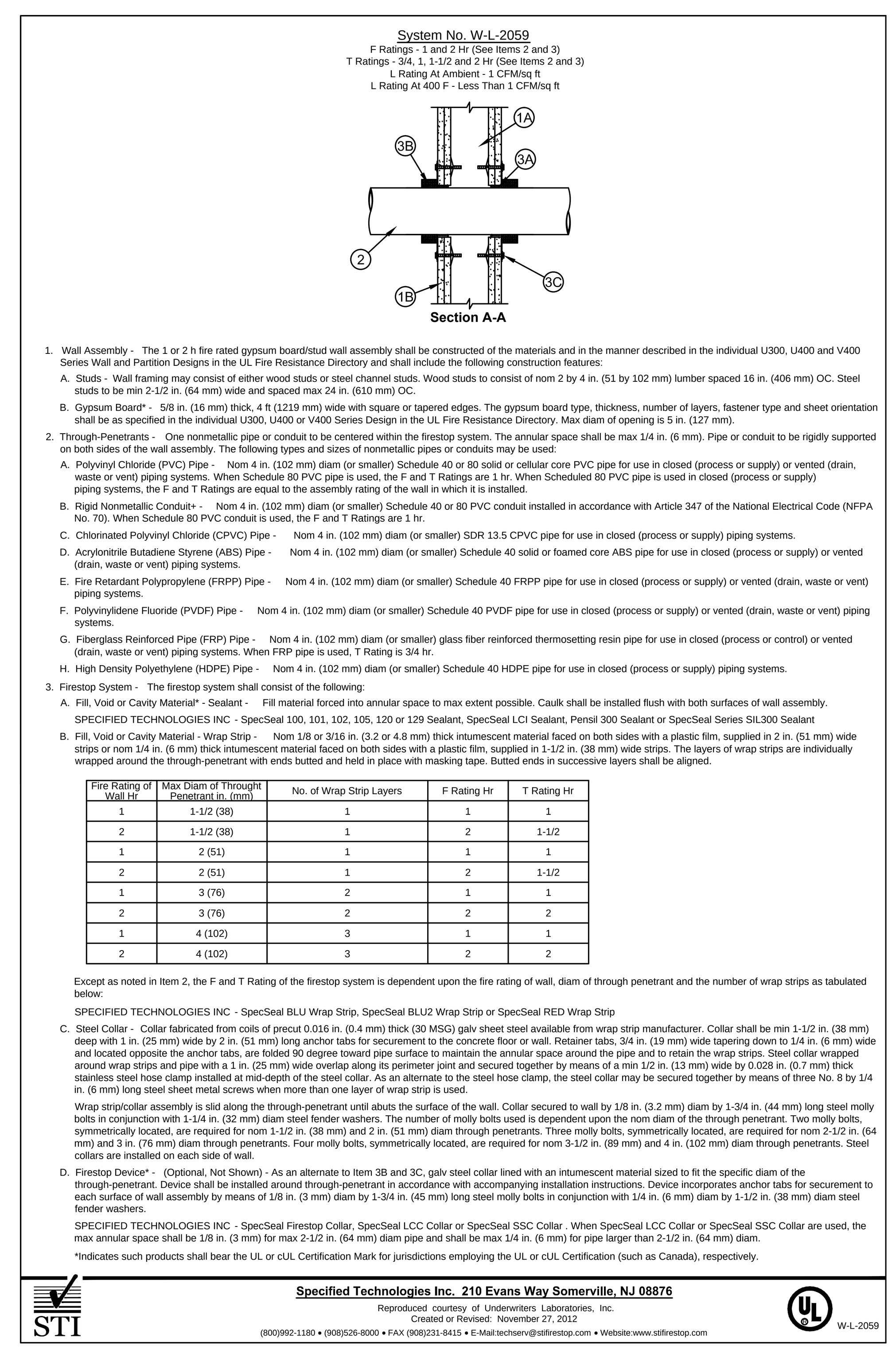
Enter the make, model and Final Rinse Usage in gallons per hour (GPH) for dishmachines	**Make**	**Model**	**Final Rinse Usage (GPH)** Found in "Dishmachine Specs" sheet below or on manufacturer's spec sheet	**Gallons Per Hour (GPH)**
Dishmachine #1	CHAMPION	44 Pro VHR	100	70
Dishmachine #2				0
Enter the quantity of pre-rinse units	**Quantity**			**Gallons Per Hour (GPH)**
Pre-rinse	1			45
Dishmachines are calculated at 70% of the final rinse usage specified by the manufacturer. Pre-rinses are calculated at 45 GPH			**Total**	115

Recovery Rate Needed (GPH):	**285**

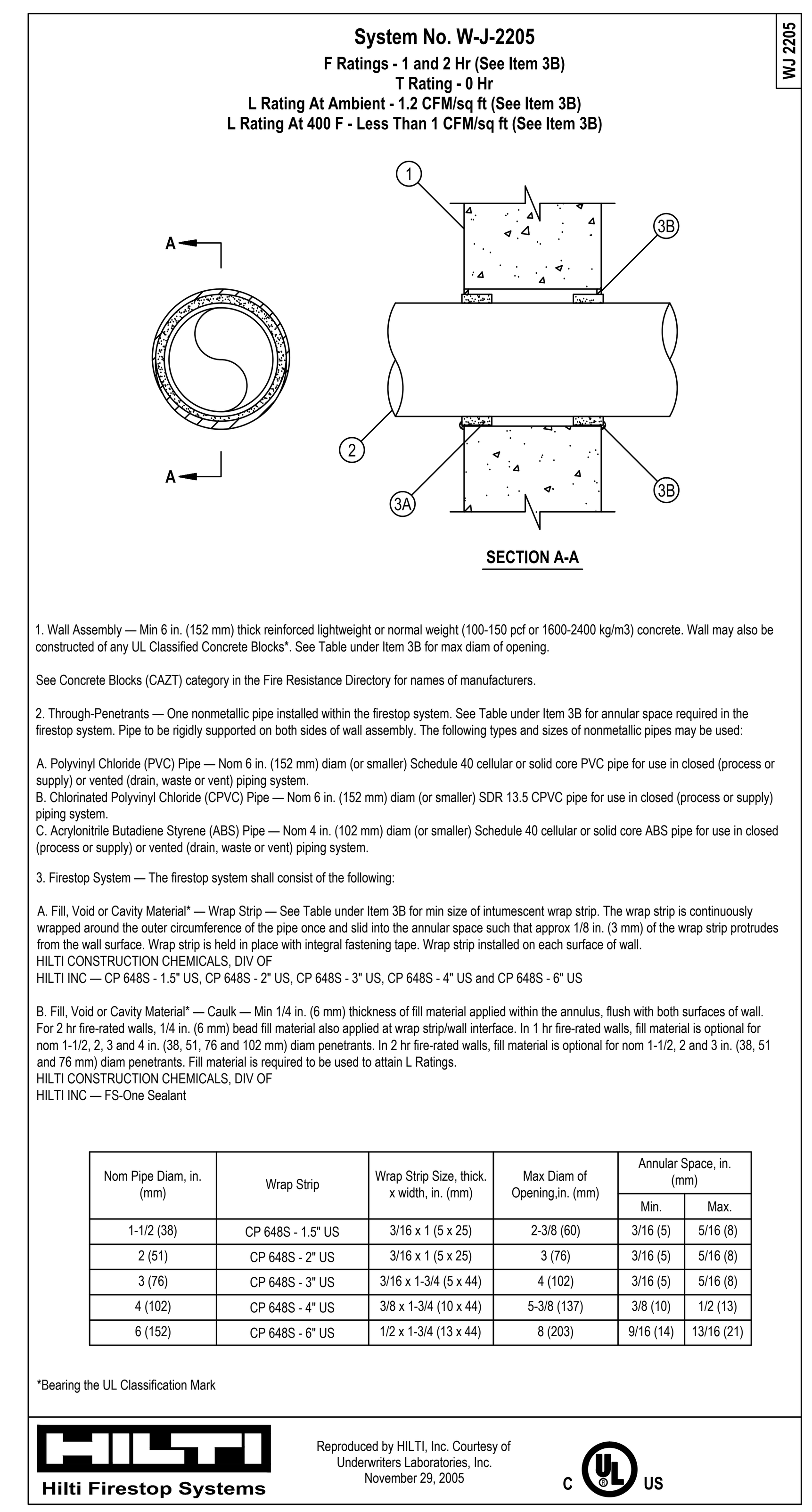
Water Heater Input (BTU or kW) Needed:

Gas Water Heater	Electric Water Heater
250 ,000 BTU at 80°F rise	56 kW at 80°F rise
281 ,000 BTU at 90°F rise	63 kW at 90°F rise
312 ,000 BTU at 100°F rise	70 kW at 100°F rise

3 KITCHEN HOT WATER CALCULATION (WH-3 + WH-7)
NO SCALE



2 NON-METALLIC PIPE (GYPSUM WALL) DETAIL
NO SCALE



1 NON-METALLIC PIPE (CONCRETE WALL) DETAIL
NO SCALE

isdesign
ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.isdesignpa.com

MAPLE
ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

Project
THE HEALING PLACE OF NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

Client
NEW HANOVER COUNTY, NORTH CAROLINA

All reproduction & intellectual property rights reserved. © 2020

SITE PLAN

Professional Seals
9/2/20

No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

Sheet Title
PLUMBING DETAILS

Sheet Number
P003

© 2020 MAPLE ENGINEERING, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MAPLE ENGINEERING, PLLC.

9/2/2020 2:22 PM
ISD-1801-P003.DWG

GENERAL NOTES - THIS SHEET

1. WATER SERVICE & BUILDING SEWER PIPING MUST BE SEPARATED PER 2018 NCPC 603.2.
2. SEE SHEETS P101.1 & P101.2 FOR CONTINUATION OF PIPING.
3. ALL ABOVE SLAB INTERIOR STORM PIPING TO BE CAST IRON.
4. SPACE IS SERVED BY A CEILING RETURN PLENUM. ALL MATERIALS IN PLENUM ARE TO BE PLENUM RATED OR WRAPPED W/ PLENUM WRAP.

TAGGED NOTES - THIS SHEET

(1) NOT USED.

(2) CW DOWN IN WALL TO WALL HYDRANT. ENSURE PIPING IS ON WARM SIDE OF INSULATION. PROVIDE BV-1 OVERHEAD ABOVE LAY-IN CEILING.

(3) PRIMARY ROOF DRAIN DOWN IN WALL FROM ABOVE. TO CONTINUE TO BELOW SLAB TO STORM DRAIN.

(4) SECONDARY DRAIN DOWN IN WALL FROM ABOVE. TO DISCHARGE JUST ABOVE GRADE TO DAYLIGHT W/ WATTS RD-940 COW-TONGUE.

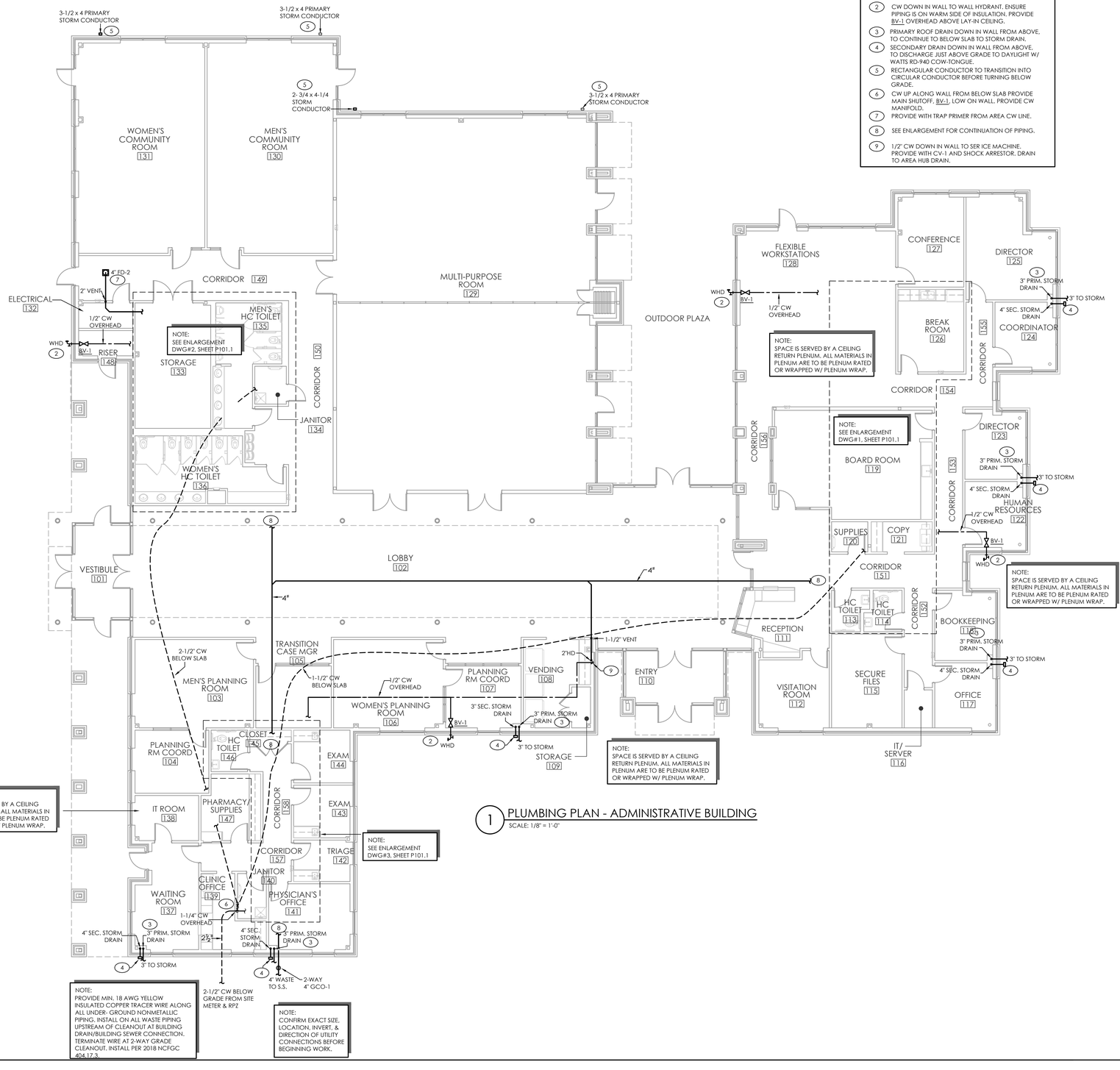
(5) RECTANGULAR CONDUCTOR TO TRANSITION INTO CIRCULAR CONDUCTOR BEFORE TURNING BELOW GRADE.

(6) CW UP ALONG WALL FROM BELOW SLAB PROVIDE MAIN SHUTOFF, BV-1, LOW ON WALL. PROVIDE CW MANIFOLD.

(7) PROVIDE WITH TRAP PRIMER FROM AREA CW LINE.

(8) SEE ENLARGEMENT FOR CONTINUATION OF PIPING.

(9) 1/2" CW DOWN IN WALL TO SER ICE MACHINE. PROVIDE WITH CV-1 AND SHOCK ARRESTOR. DRAIN TO AREA HUB DRAIN.



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

is-design
ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.isdesignpa.com

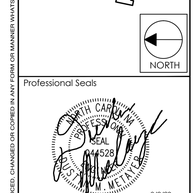
MAPLE ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

Project
THE HEALING PLACE OF NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

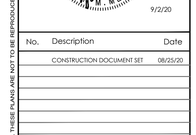
Client
NEW HANOVER COUNTY, NORTH CAROLINA

All reproduction & intellectual property rights reserved © 2020

SITE PLAN



Professional Seals



9/2/20

No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

Sheet Title
PLUMBING ADMIN BUILDING OVERALL PLAN

Sheet Number
P101.0

© 2020 MAPLE ENGINEERING, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MAPLE ENGINEERING, PLLC.

9/2/2020 2:22 PM
ISD-1801-P101.0.DWG

NOTE:
DWG#1 & DWG3 ARE SERVED BY A CEILING RETURN PLENUMS. ALL MATERIALS IN PLENUM ARE TO BE PLENUM RATED OR WRAPPED W/ PLENUM WRAP.

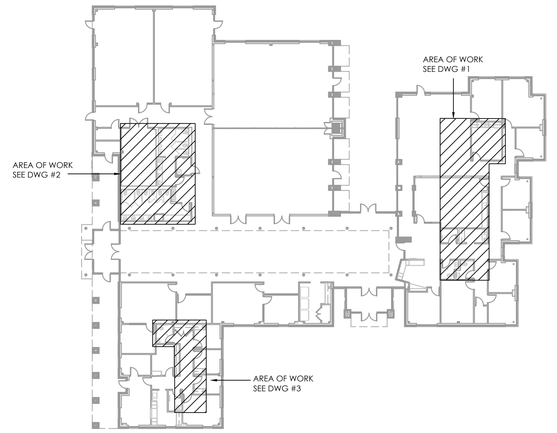
NOTE:
SEE RISER FOR SHOCK ARRESTORS.

GENERAL NOTES - THIS SHEET

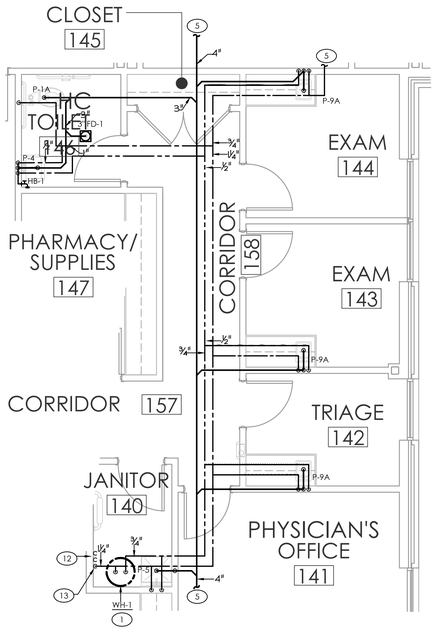
1. SEE SHEET P101.0 FOR CONTINUATION OF PIPING.

TAGGED NOTES - THIS SHEET

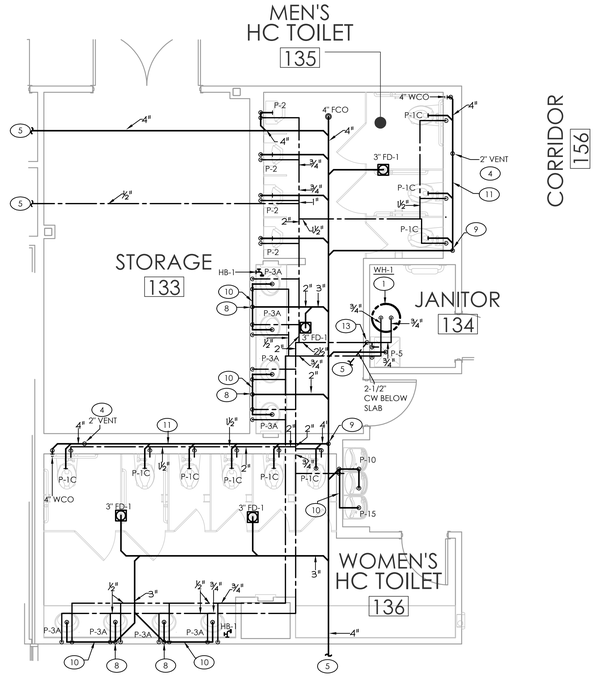
1. WATER HEATER HIGH IN SPACE ON PLATFORM ABOVE MOP SINK. SHOWN OFFSET FOR CLARITY. DRAIN TO MOP SINK. REMOVE CEILING TILES IF NEEDED.
2. TANKLESS WATER HEATER LOCATED BELOW SINK. ENSURE ADA CLEARANCES ARE MAINTAINED.
3. PROVIDE DISHWASHER CONNECTIONS.
4. PORTION OF BRANCH LINE IS PART OF CIRCUIT VENT SYSTEM. MAXIMUM SLOPE 8%. TURN DOWN AS NECESSARY AFTER MOST DOWNSTREAM FIXTURE. IF SLOPE REQUIREMENTS CANNOT BE MAINTAINED, ADDITIONAL VENTS WILL BE REQUIRED.
5. SEE SHEET P101.0 FOR CONTINUATION OF PIPE ROUTING.
6. CW UP IN WALL FROM BELOW SLAB TO OVER HEAD.PROVIDE WITH BV-1 AND ACCESS PANEL LOW ON WALL.
7. 1/2" HW RUNNING HORIZONTALLY IN WALL.
8. 2" WASTE DOWN IN WALL.
9. WASTE DOWN IN CHASE TO BELOW SLAB.
10. 2" WASTE RUNNING HORIZONTALLY IN WALL.
11. WASTE RUNNING HORIZONTALLY IN CHASE.
12. C.W MANIFOLD ALONG WALL. SEE P101.1. ENSURE ACCESS IS MAINTAINED.
13. C.W UP ALONG WALL TO OVERHEAD. PROVIDE BV-1 LOW ON WALL. COORDINATE PROTECTIVE CHASE WITH G.C.



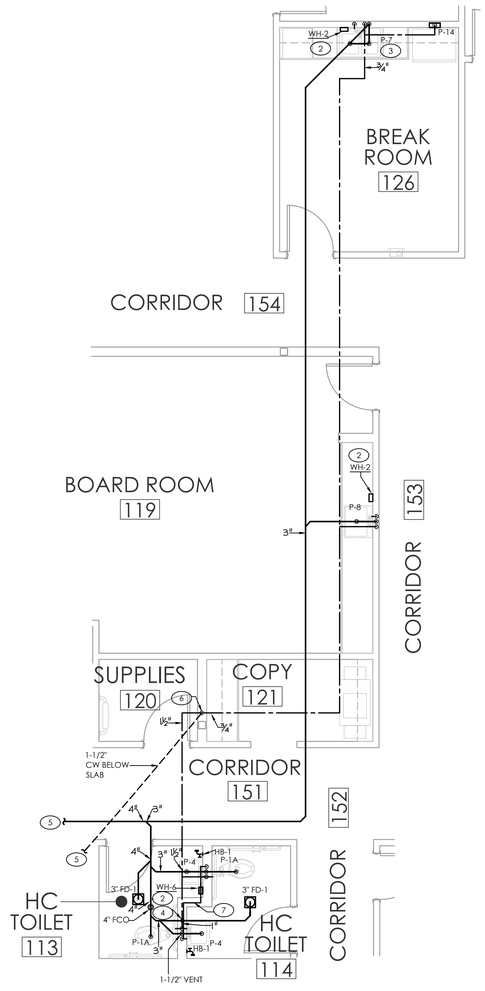
K KEY PLAN
NO SCALE



3 PLUMBING PLAN - BATHROOM ENLARGEMENT
SCALE: 1/4" = 1'-0"



2 PLUMBING PLAN - BATHROOM ENLARGEMENT
SCALE: 1/4" = 1'-0"



1 PLUMBING PLAN - BREAKROOM ENLARGEMENT
SCALE: 1/4" = 1'-0"

9/2/2020 2:22 PM
IES-1801-P101.1.DWG

i-s design
ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.isdesignpa.com

MAPLE
ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

Project
THE HEALING PLACE OF NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

Client
NEW HANOVER COUNTY, NORTH CAROLINA

All reproduction & intellectual property rights reserved © 2020

SITE PLAN

NORTH

Professional Seals

No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

Sheet Title
PLUMBING
ADMIN BUILDING
ENLARGEMENT
PLANS

Sheet Number
P101.1

© 2020 MAPLE ENGINEERING, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MAPLE ENGINEERING, PLLC.

PRIMARY SCUPPER CALCs (AREA 1)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1880
PARAPET 1 (OR SIMILAR) LENGTH (FT)	105.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	23.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	14.0
1/2 PROJECTED AREA 8	719
ROOF AREA + ½ VERT. AREAS (SQFT)	2865
60 MIN. RAINFALL RATE (IN/HR)	4.25
60 MIN. RAINFALL RATE (GPM)	126
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	126
SCUPPER DIMENSIONS (WxH, IN)	18 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	149.4

SECONDARY SCUPPER CALCs (AREA 1)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1880
PARAPET 1 (OR SIMILAR) LENGTH (FT)	105.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	23.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	14.0
1/2 PROJECTED AREA 8	719.0
ROOF AREA + ½ VERT. AREAS (SQFT)	2865
15 MIN. RAINFALL RATE (IN/HR)	7.25
15 MIN. RAINFALL RATE (GPM)	216
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	216
SCUPPER DIMENSIONS (WxH, IN)	18 x 6
SELECTED HEAD (IN)	3
SCUPPER RATED GPM (FIG 1106.5)	271.4

GENERAL NOTES - THIS SHEET

1. SEE SHEET P101.0 FOR CONTINUATION OF PIPING.
2. ALL ABOVE SLAB INTERIOR STORM PIPING TO BE CAST IRON.

TAGGED NOTES - THIS SHEET

1. UPPER ROOF AREA TO SPILL ONTO LOWER ROOF AREA.
2. PRIMARY STORM DRAIN DOWN TO BELOW.
3. SECONDARY STORM DRAIN DOWN TO BELOW.

SECONDARY CONDUCTORS (VERT.)

PIPE SIZE (IN)	PROJECTED ROOF AREA DRAINED (SQFT) RAINFALL RATE = 7.4 IN/HR
3	1,228 SQFT
4	2,564 SQFT
6	7,522 SQFT
8	16,156 SQFT

BASED UPON CHAPTER 11 OF THE 2018 NC PLUMBING CODE.

PRIMARY CONDUCTORS (VERT.)

PIPE SIZE (IN)	PROJECTED ROOF AREA DRAINED (SQFT) RAINFALL RATE = 4.25 IN/HR
3	2,200 SQFT
4	4,600 SQFT
6	13,500 SQFT
8	29,000 SQFT

BASED UPON CHAPTER 11 OF THE 2018 NC PLUMBING CODE.

RECTANGULAR CONDUCTORS (VERT.)

DIMENSIONS (IN)	PROJECTED ROOF AREA DRAINED (SQFT) RAINFALL RATE = 4.25 IN/HR
2 x 3	1,380 SQFT
2-3/4 x 4-1/4	3,200 SQFT
3 x 4	3,300 SQFT
3-1/2 x 4	3,970 SQFT
3-1/2 x 5	5,320 SQFT

BASED UPON CHAPTER 11 OF THE 2018 NC PLUMBING CODE.

SCUPPERS

DIMENSIONS (IN)	HEAD (IN)	CAPACITY (GPM)
4 x 6	3	52.9 GPM
6 x 6	3	84.1 GPM
8 x 6	3	115.2 GPM
10 x 6	3	146.3 GPM
12 x 6	3	177.8 GPM
18 x 6	3	271.4 GPM
24 x 6	3	364.9 GPM

BASED UPON CHAPTER 11 OF THE 2018 NC PLUMBING CODE.

SCUPPERS

DIMENSIONS (IN)	HEAD (IN)	CAPACITY (GPM)
4 x 4	2	30.5 GPM
6 x 4	2	47.5 GPM
8 x 4	2	64.4 GPM
10 x 4	2	81.4 GPM
12 x 4	2	98.5 GPM
18 x 4	2	149.4 GPM
24 x 4	2	200.3 GPM

BASED UPON CHAPTER 11 OF THE 2018 NC PLUMBING CODE.

PRIMARY SCUPPER CALCs (AREA 2)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1614
PARAPET 1 (OR SIMILAR) LENGTH (FT)	101.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	35.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	14.0
PROJECTED AREA 8	1438.0
ROOF AREA + ½ VERT. AREAS (SQFT)	3398
60 MIN. RAINFALL RATE (IN/HR)	4.25
60 MIN. RAINFALL RATE (GPM)	150
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	150
SCUPPER DIMENSIONS (WxH, IN)	18 x 6
SELECTED HEAD (IN)	3
SCUPPER RATED GPM (FIG 1106.5)	271.4

SECONDARY SCUPPER CALCs (AREA 2)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1614
PARAPET 1 (OR SIMILAR) LENGTH (FT)	101.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	35.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	14.0
PROJECTED AREA 8	1438.0
ROOF AREA + ½ VERT. AREAS (SQFT)	3398
15 MIN. RAINFALL RATE (IN/HR)	7.25
15 MIN. RAINFALL RATE (GPM)	256
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	256
SCUPPER DIMENSIONS (WxH, IN)	18 x 6
SELECTED HEAD (IN)	3
SCUPPER RATED GPM (FIG 1106.5)	271.4

ROOF CALCs (AREA 3)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1614
PARAPET 1 (OR SIMILAR) LENGTH (FT)	129.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
ROOF AREA + ½ VERT. AREAS (SQFT)	1743

ROOF CALCs (AREA 4)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1376
PARAPET 1 (OR SIMILAR) LENGTH (FT)	130.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
ROOF AREA + ½ VERT. AREAS (SQFT)	1506

ROOF CALCs (AREA 5)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1364
PARAPET 1 (OR SIMILAR) LENGTH (FT)	80.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	24.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	14.0
ROOF AREA + ½ VERT. AREAS (SQFT)	1612

ROOF CALCs (AREA 6)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1557
PARAPET 1 (OR SIMILAR) LENGTH (FT)	74.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	35.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	14.0
ROOF AREA + ½ VERT. AREAS (SQFT)	1876

ROOF CALCs (AREA 7)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	663
PARAPET 1 (OR SIMILAR) LENGTH (FT)	74.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	46.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	14.0
ROOF AREA + ½ VERT. AREAS (SQFT)	1059

PRIMARY SCUPPER CALCs (AREA 8)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1271
PARAPET 1 (OR SIMILAR) LENGTH (FT)	141.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	21.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	14.0
ROOF AREA + ½ VERT. AREAS (SQFT)	1559
60 MIN. RAINFALL RATE (IN/HR)	4.25
60 MIN. RAINFALL RATE (GPM)	69
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	69
SCUPPER DIMENSIONS (WxH, IN)	10 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	81.4

SECONDARY SCUPPER CALCs (AREA 8)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1271
PARAPET 1 (OR SIMILAR) LENGTH (FT)	141.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	21.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	14.0
ROOF AREA + ½ VERT. AREAS (SQFT)	1559
15 MIN. RAINFALL RATE (IN/HR)	7.25
15 MIN. RAINFALL RATE (GPM)	117
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	117
SCUPPER DIMENSIONS (WxH, IN)	18 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	149.4

PRIMARY SCUPPER CALCs (AREA 9)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1535
PARAPET 1 (OR SIMILAR) LENGTH (FT)	21.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	21.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	14.0
ROOF AREA + ½ VERT. AREAS (SQFT)	1703
60 MIN. RAINFALL RATE (IN/HR)	4.25
60 MIN. RAINFALL RATE (GPM)	75
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	75
SCUPPER DIMENSIONS (WxH, IN)	10 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	81.4

SECONDARY SCUPPER CALCs (AREA 9)

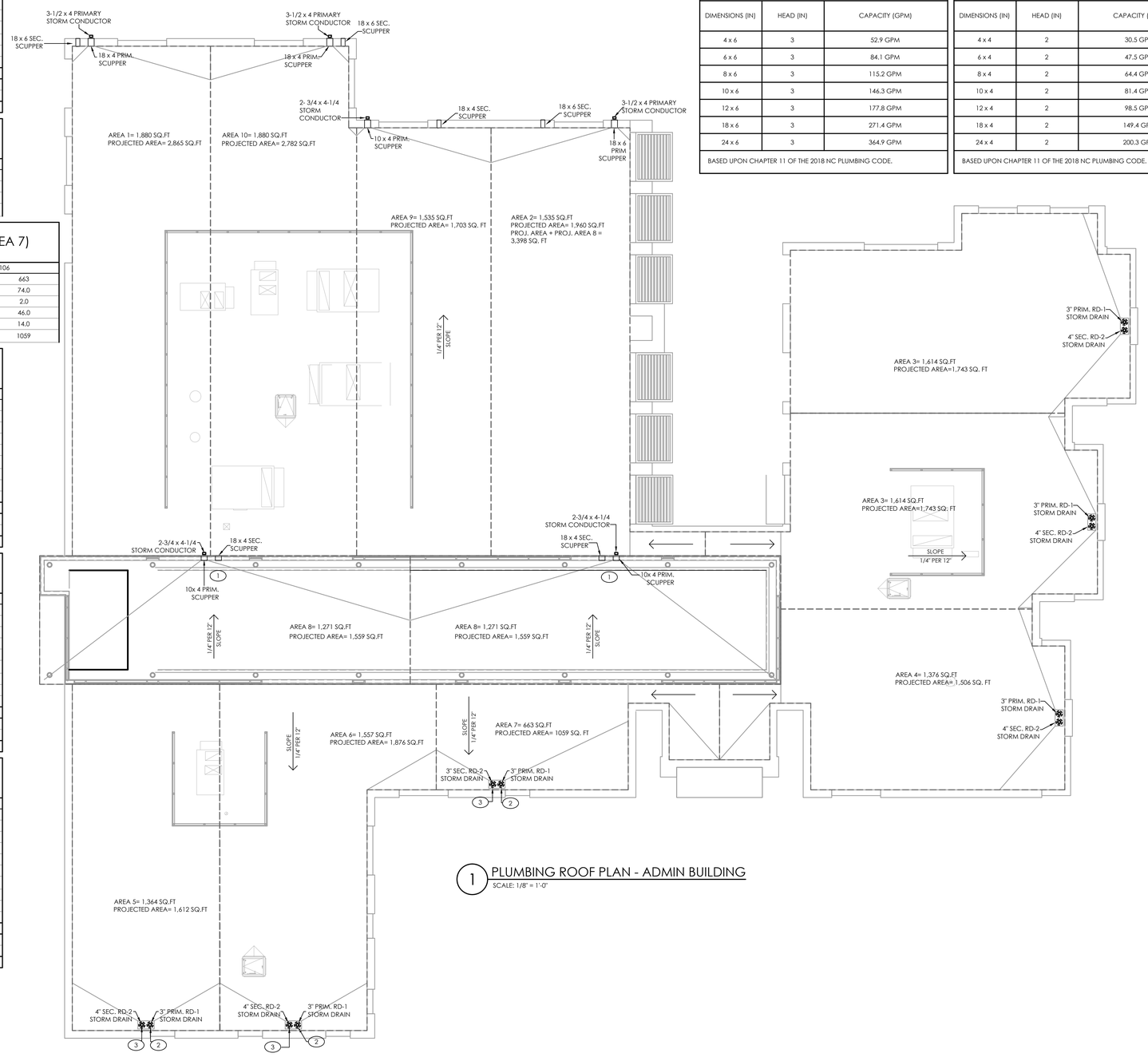
BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1535
PARAPET 1 (OR SIMILAR) LENGTH (FT)	21.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	21.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	14.0
ROOF AREA + ½ VERT. AREAS (SQFT)	1703
15 MIN. RAINFALL RATE (IN/HR)	7.25
15 MIN. RAINFALL RATE (GPM)	128
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	128
SCUPPER DIMENSIONS (WxH, IN)	18 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	149.4

PRIMARY SCUPPER CALCs (AREA 10)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1880
PARAPET 1 (OR SIMILAR) LENGTH (FT)	22.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	23.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	14.0
1/2 PROJECTED ROOF AREA 8	719.0
ROOF AREA + ½ VERT. AREAS (SQFT)	2782
60 MIN. RAINFALL RATE (IN/HR)	4.25
60 MIN. RAINFALL RATE (GPM)	123
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	123
SCUPPER DIMENSIONS (WxH, IN)	18x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	149.4

SECONDARY SCUPPER CALCs (AREA10)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1880
PARAPET 1 (OR SIMILAR) LENGTH (FT)	22.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	23.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	14.0
1/2 PROJECTED ROOF AREA 8	719.0
ROOF AREA + ½ VERT. AREAS (SQFT)	2782
15 MIN. RAINFALL RATE (IN/HR)	7.25
15 MIN. RAINFALL RATE (GPM)	210
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	210
SCUPPER DIMENSIONS (WxH, IN)	18 x 6
SELECTED HEAD (IN)	3
SCUPPER RATED GPM (FIG 1106.5)	271.4



1 PLUMBING ROOF PLAN - ADMIN BUILDING
SCALE: 1/8" = 1'-0"

i-s design
ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.isdesignpa.com

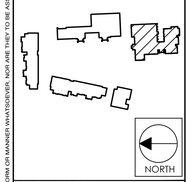
MAPLE ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

Project
THE HEALING PLACE OF NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

Client
NEW HANOVER COUNTY, NORTH CAROLINA

All reproduction & intellectual property rights reserved. © 2020

SITE PLAN



Professional Seals

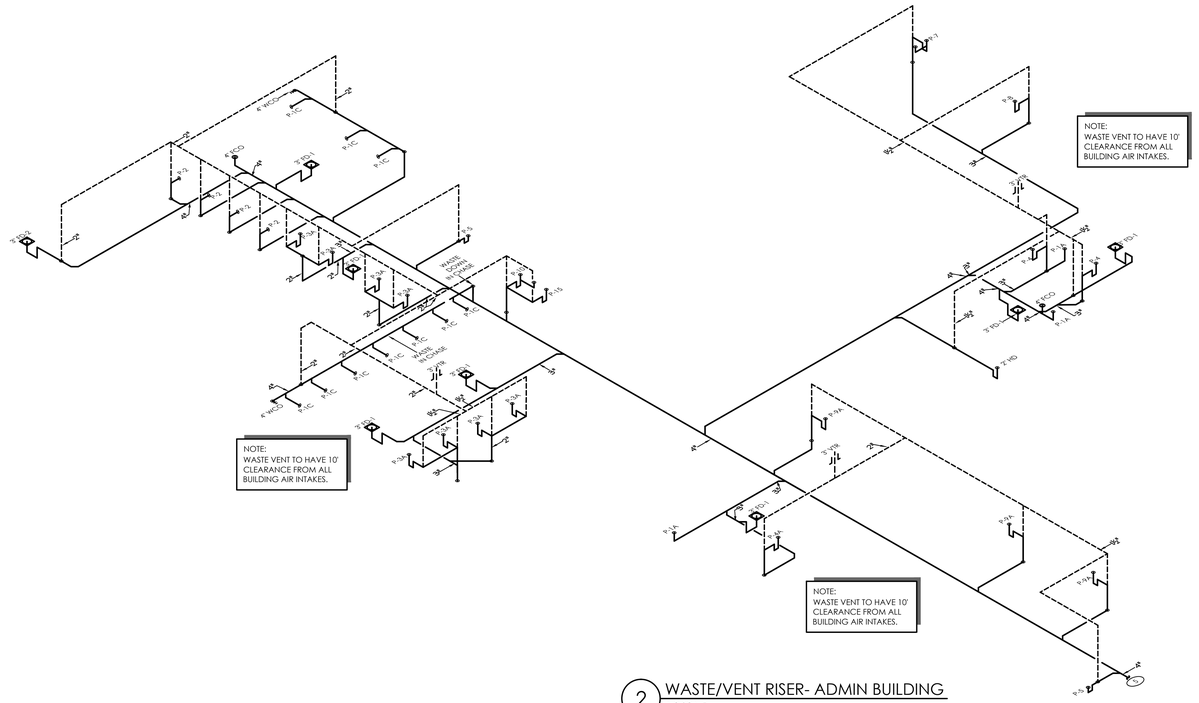
No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

Sheet Title
PLUMBING ADMIN BUILDING ROOF PLAN

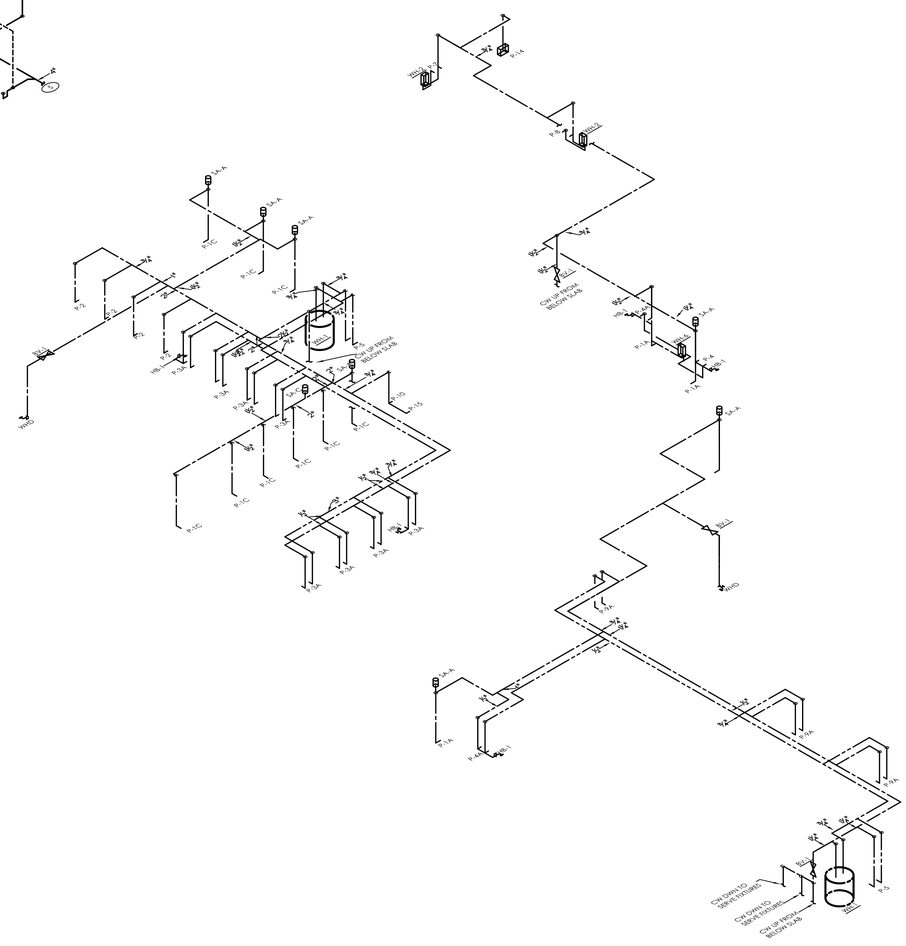
Sheet Number
P101.2

© 2020 MAPLE ENGINEERING, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MAPLE ENGINEERING, PLLC.

9/2/2020 2:22 PM
IES-1801-P101.2.DWG



2 WASTE/VENT RISER- ADMIN BUILDING
NO SCALE



1 WATER RISER- ADMIN BUIDLING
NO SCALE

i-s design
ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.isdesignpa.com

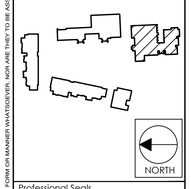
MAPLE
ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

Project
THE HEALING PLACE OF NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

Client
NEW HANOVER COUNTY, NORTH CAROLINA

All reproduction & intellectual property rights reserved © 2020

SITE PLAN



Professional Seals

No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

Sheet Title
PLUMBING
ADMIN BUILDING
RISERS

Sheet Number
P101.3

© 2020 MAPLE ENGINEERING, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MAPLE ENGINEERING, PLLC.

9/2/2020 2:22 PM
IES-1801-P101.3.DWG

FIRE RATING LEGEND

- 1-HR WALL
- 1-HR WALL/ SMOKE WALL
- SMOKE PARTITION

GENERAL NOTES - THIS SHEET

1. WATER SERVICE & BUILDING SEWER PIPING MUST BE SEPARATED PER 2018 NCPC 603.2.
2. SEE SHEETS P102.1 & P102.2 FOR CONTINUATION OF PIPING.
3. ALL ABOVE SLAB INTERIOR STORM PIPING TO BE CAST IRON.
4. SEE KITCHEN EQUIPMENT SCHEDULE FOR ADDITIONAL EQUIPMENT INFORMATION & REQUIRED ACCESSORIES (I.E. SHOCK ARRESTORS, CHECK VALVES).

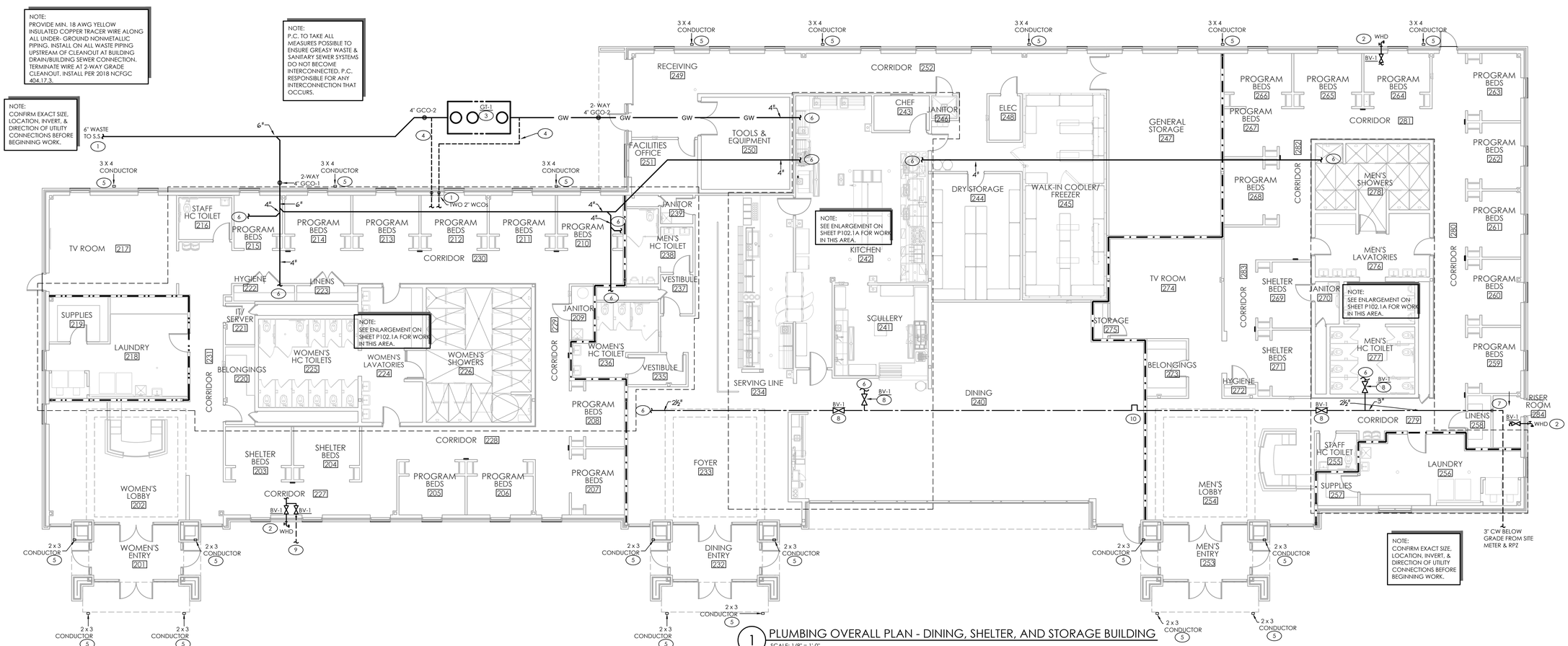
TAGGED NOTES - THIS SHEET

1. TWO (2) 2" VENT LINES UP IN WALL. VENTS TO TIE INTO BUILDING VENT SYSTEM. SEE RISERS.
2. CW DOWN IN WALL TO WALL HYDRANT. ENSURE PIPING IS ON WARM SIDE OF INSULATION. PROVIDE BV-1 OVERHEAD ABOVE LAY-IN CEILING.
3. 1,500 GALLON GREASE TRAP BY CIVIL TO BE INSTALLED BELOW GRADE IN AREA. COORDINATE WITH CIVIL.
4. 2" VENT BELOW SLAB. VENT TO RISE 6" VERTICALLY BEFORE TURNING HORIZONTAL. ENSURE MINIMUM OF 2% SLOPE.
5. RECTANGULAR CONDUCTOR TO TRANSITION INTO CIRCULAR CONDUCTOR BEFORE TURNING BELOW GRADE. COORDINATE WITH CIVIL.
6. SEE ENLARGEMENT FOR CONTINUATION OF PIPING.
7. 3" CW UP ALONG WALL FROM BELOW SLAB TO OVERHEAD. PROVIDE WITH MAIN SHUTOFF LOW ON WALL
8. PROVIDE BV-1 ON C.W. LINE ABOVE CEILING ACCESS VIA LAY IN.
9. 1/2" CW BELOW GRADE TO YHD. COORDINATE EXACT LOCATION WITH CIVIL.
10. PROVIDE EXPANSION LOOPS EVERY 50' TO 75' FOR ALL STRAIGHT RUNS OF WATER PIPE.

NOTE:
PROVIDE MIN. 18 AWG YELLOW INSULATED COPPER TRACER WIRE ALONG ALL UNDER- GROUND NONMETALLIC PIPING. INSTALL ON ALL WASTE PIPING UPSTREAM OF CLEANOUT AT BUILDING DRAIN/BUILDING SEWER CONNECTION. TERMINATE WIRE AT 2-WAY GRADE CLEANOUT. INSTALL PER 2018 NCFGC 404.17.3.

NOTE:
P.C. TO TAKE ALL MEASURES POSSIBLE TO ENSURE GREASY WASTE & SANITARY SEWER SYSTEMS DO NOT BECOME INTERCONNECTED. P.C. RESPONSIBLE FOR ANY INTERCONNECTION THAT OCCURS.

NOTE:
CONFIRM EXACT SIZE, LOCATION, INVERT, & DIRECTION OF UTILITY CONNECTIONS BEFORE BEGINNING WORK.



1 PLUMBING OVERALL PLAN - DINING, SHELTER, AND STORAGE BUILDING
SCALE: 1/8" = 1'-0"

9/2/2020 2:40 P.M.
I:\SD-1801-P102.0.DWG

i-sdesign
ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.isdesignpa.com

MAPLE ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

Project
THE HEALING PLACE OF NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

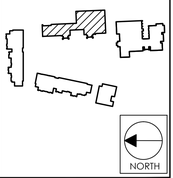
Client
NEW HANOVER COUNTY, NORTH CAROLINA

All reproduction & intellectual property rights reserved © 2020

THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MAPLE ENGINEERING, PLLC.

© 2020 MAPLE ENGINEERING, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MAPLE ENGINEERING, PLLC.

SITE PLAN



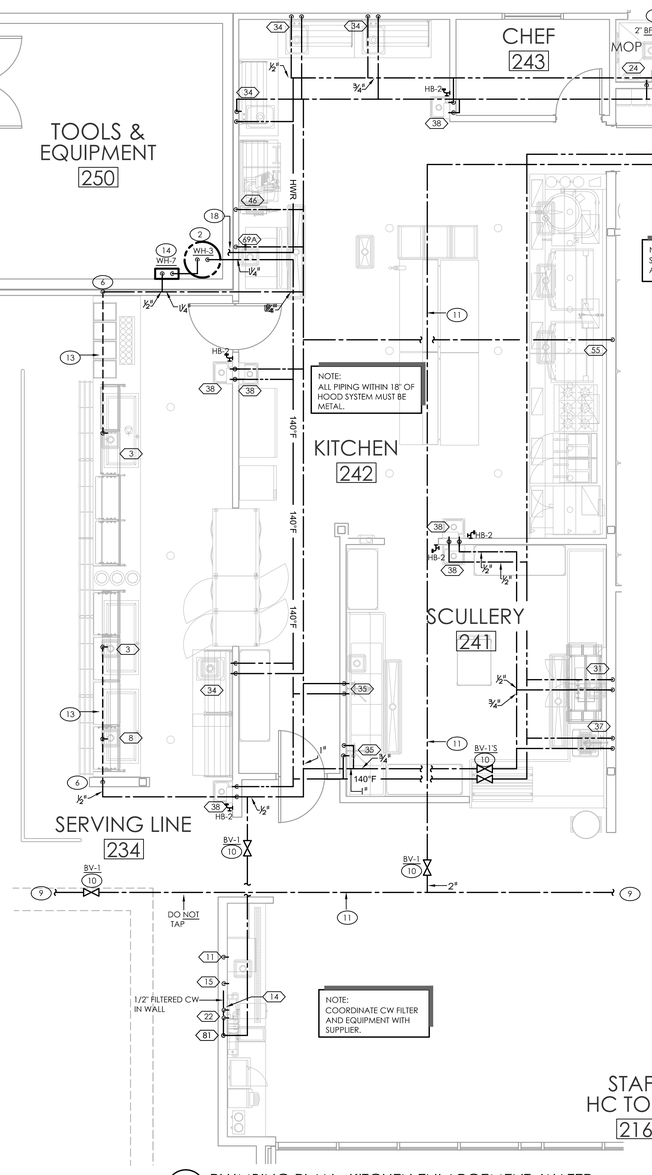
Professional Seals

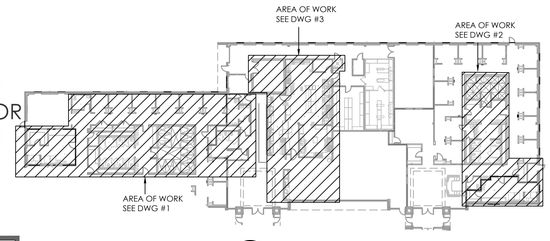
9/2/20

No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

Sheet Title
PLUMBING DINING BUILDING OVERALL PLAN

Sheet Number
P102.0

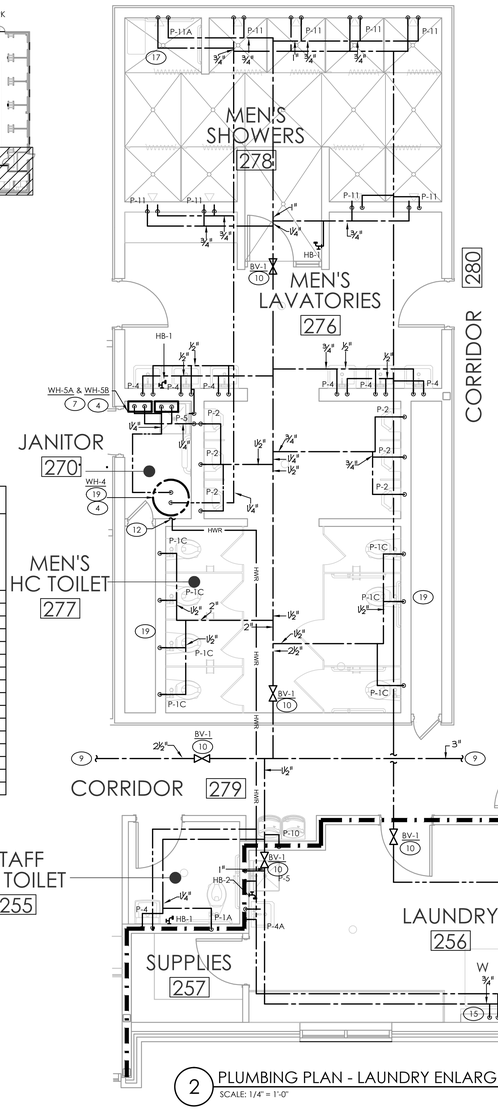




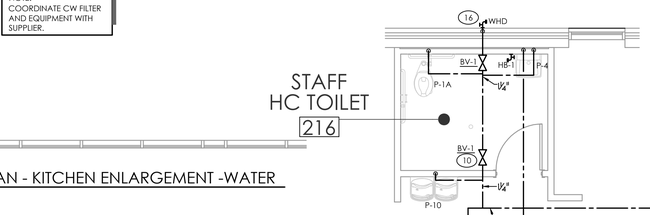
K KEY PLAN
NO SCALE

KITCHEN EQUIPMENT SCHEDULE						
ITEM #	DESCRIPTION	HOT WATER SIZE (IN.)	COLD WATER SIZE (IN.)	INDIR. DRAIN SIZE (IN)	DIRECT DRAIN SIZE (IN)	PLUMBING NOTES
3	DROP-IN, HOT/COLD WELLS	-	0.75	0.75	-	PROVIDE W SHOCK ARRESTOR & CV-1
8	DROP-IN, HOT/COLD WELLS	-	0.5	0.75	-	PROVIDE W SHOCK ARRESTOR & CV-1
11	ICE MAKER/ DISPENSER	-	0.5	0.75	-	PROVIDE W SHOCK ARRESTOR & CV-1; FILTERED WATER
14	ICED TEA BREWER	-	0.5	0.5	-	PROVIDE W SHOCK ARRESTOR & CV-1; FILTERED WATER
15	COFFEE MAKER, INSULATED SERVER, AUTOMATIC	-	0.5	0.5	-	PROVIDE W SHOCK ARRESTOR & CV-1; FILTERED WATER
22	H20 FILTRATION, COFFEE AND TEA BREWING	-	0.5	-	-	PROVIDE W SHOCK ARRESTOR & CV-1
24	FAUCET, SERVICE SINK	0.5	0.5	-	-	-
31	WAREWASHER, RACK CONVEYER	0.5	0.5	1.5	-	PROVIDE W SHOCK ARRESTOR & CV-1 & DV-1
34	FACUET, DECK MOUNT	0.5	0.5	-	-	-
35	4-COMP SINK FAUCET	0.5	0.5	-	-	-
37	PRE-RINSE FAUCET, BACKSPLASH MOUNT	0.5	0.5	-	-	PROVIDE W SHOCK ARRESTOR & CV-1
38	HAND SINK, WALL MOUNT	0.5	0.5	-	1.5	-
46	HOSE REEL WITH GUN	0.5	-	-	-	PROVIDE W SHOCK ARRESTOR & CV-1
55	FILLER, KETTLE AND POT	0.5	0.5	-	-	PROVIDE W SHOCK ARRESTOR & CV-1
69A	ICE MAKER W/O BIN	-	0.5	0.5	-	PROVIDE W SHOCK ARRESTOR & CV-1
81	FILTER, WATER	-	0.75	0.75	-	FILTERED WATER TO FEED EQUIPMENT #11 & #14

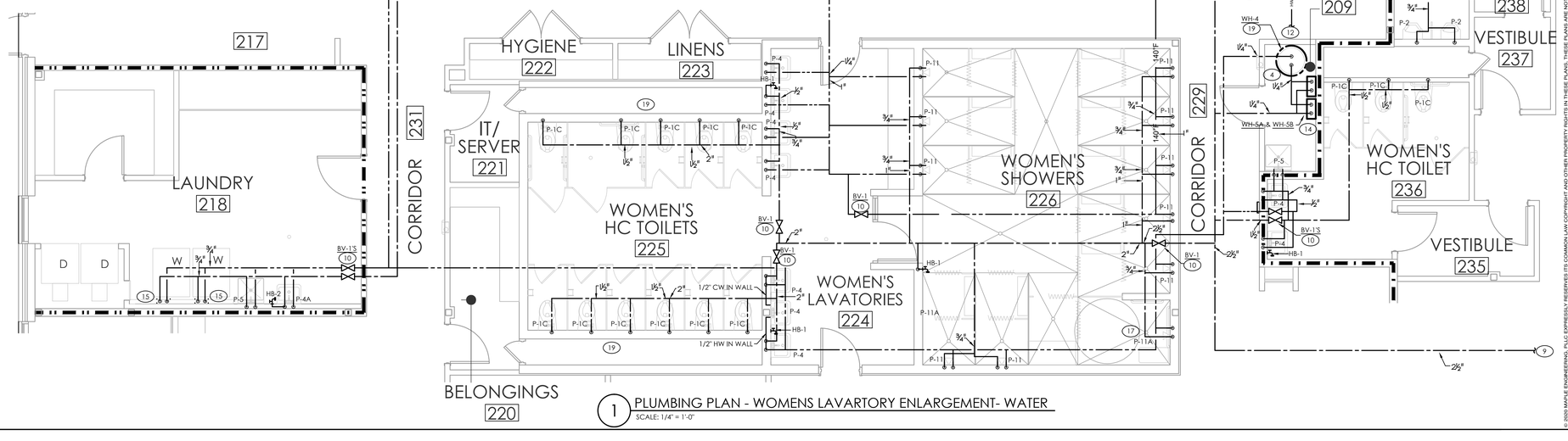
NOTE:
P.C. TO VERIFY EXACT TYPE, QTY, LOCATION OF EQUIPMENT PLUMBING CONNECTIONS BEFORE BEGINNING WORK. P.C. RESPONSIBLE FOR PROVIDING AND INSTALLING ALL REQUIRED FITTINGS, ACCESSORIES AND SIMILAR. FINAL CONNECTION TO EQUIPMENT BY P.C.



2 PLUMBING PLAN - LAUNDRY ENLARGEMENT- WATER
SCALE: 1/4" = 1'-0"



3 PLUMBING PLAN - KITCHEN ENLARGEMENT -WATER
SCALE: 1/4" = 1'-0"



1 PLUMBING PLAN - WOMENS LAVARTORY ENLARGEMENT- WATER
SCALE: 1/4" = 1'-0"

FIRE RATING LEGEND
- 1-HR WALL
- 1-HR WALL/ SMOKE WALL
- SMOKE PARTITION

GENERAL NOTES - THIS SHEET

1. P.C. TO VERIFY THAT NO FIXTURES ARE CONNECTED UPSTREAM OF BACKFLOW PREVENTER.
2. SEE KITCHEN EQUIPMENT SCHEDULE FOR ADDITIONAL EQUIPMENT INFORMATION & REQUIRED ACCESSORIES (I.E. SHOCK ARRESTORS, CHECK VALVES).
3. SEE P102.0 FOR OVERALL PLANS AND AREAS OF WORK.
4. SEE P102.1B FOR WASTE IN AREA.
5. ALL SHOWERS, P-11 AND P-11A, TO INCLUDE SHOWER VALVE LIMITED TO 120°F.
6. ALL SINKS, P-4, TO INCLUDE TV-1. SET AT 100°F. SEE SCHEDULE.

TAGGED NOTES - THIS SHEET

1. BACKFLOW PREVENTER (FOR KITCHEN ISOLATION) LOCATED ALONG WALL. DRAIN TO SERVICE SINK. ENSURE REQ'D CLEARANCES CAN BE MAINTAINED.
2. WATER HEATER ON FLOOR. PROVIDE HOUSEKEEPING PAD. DRAIN TO FLOOR DRAIN IN AREA.
3. WATER HEATER ON FLOOR. PROVIDE HOUSEKEEPING PAD. ELEVATE DRAIN PAN AS NECESSARY. DRAIN TO MOP SINK.
4. P.C. TO PROVIDE PVC TWIN PIPE FLUE VENT & INTAKE TO ROOF. ENSURE VENT HAS 10' HORIZONTAL OR 3' VERTICAL CLEARANCE FROM ALL BUILDING AIR INTAKES/EXHAUSTS. INSTALL PER MFG. INSTRUCTIONS.
5. NOT USED.
6. CW DOWN IN WALL TO SERVE FOOD WELL. PROVIDE WITH BV-1 IN ACCESSES PANEL LOW ON WALL.
7. TWO TANKLESS WATER HEATERS ON WALL ABOVE MOP SINK. DRAIN TO MOP SINK.
8. CW UP ALONG WALL FROM BFP-1. PROVIDE WITH BV-1. SEE RISER.
9. SEE SHEET P102.0 FOR CONTINUATION.
10. PROVIDE BV-1 ON C.W. LINE ABOVE CEILING ACCESS VIA LAY IN.
11. LABEL KITCHEN PORTION OF C.W LINE "DO NOT TAP". ALL KITCHEN WATER TO BE DOWNSTREAM OF BFP-1.
12. 1/2" HOT WATER RETURN TO RP-1 AT WH-4.
13. 1/2" CW RUNNING TIGHTLY BENEATH CASEWORK/ EQUIPMENT TO SERVE HOT FOOD WELL(S). SEE RISER
14. TANKLESS WATER HEATER(S) ON WALL. DRAIN TO FLOOR DRAIN IN AREA.
15. 3/4" HW/CW TO COMMERCIAL LAUNDRY EQUIPMENT. PROVIDE W/ CV-1 & SHOCK ARRESTORS.
16. CW DOWN IN WALL TO WALL HYDRANT. ENSURE PIPING IS ON WARM SIDE OF INSULATION. PROVIDE BV-1 OVERHEAD ABOVE LAY-IN CEILING.
17. CONFIRM SEAT SIDE OF ADA SHOWER WITH OWNER AND G.C..
18. 1/2" HOT WATER RETURN TO RP-2 AT WH-4.
19. WATER HEATER ON FLOOR. PROVIDE HOUSEKEEPING PAD. ELEVATE DRAIN PAN AS NECESSARY. DRAIN TO FLOOR DRAIN.

is-design
ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.isdesignpa.com

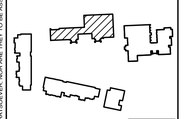
MAPLE
ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

Project
THE HEALING PLACE OF NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

Client
NEW HANOVER COUNTY, NORTH CAROLINA

All reproduction & intellectual property rights reserved. © 2020
© 2020 MAPLE ENGINEERING, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MAPLE ENGINEERING, PLLC.

SITE PLAN



Professional Seals

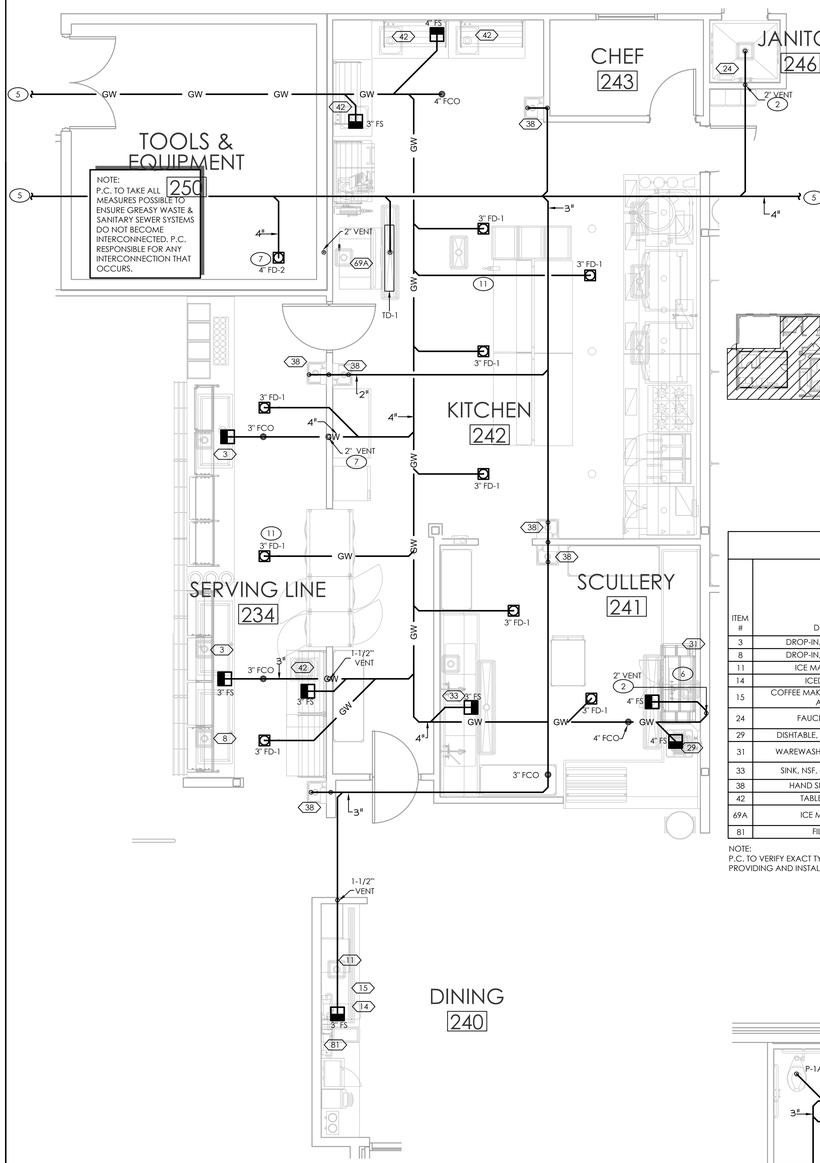
9/2/20

No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

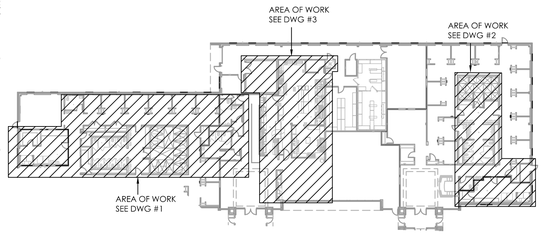
Sheet Title
PLUMBING
DINING BUILDING
ENLARGEMENT PLANS
WATER

Sheet Number
P102.1A

9/2/2020 2:22 PM
ISD-1801-P102.1A.DWG



3 PLUMBING PLAN - KITCHEN ENLARGEMENT-WASTE
SCALE: 1/4" = 1'-0"

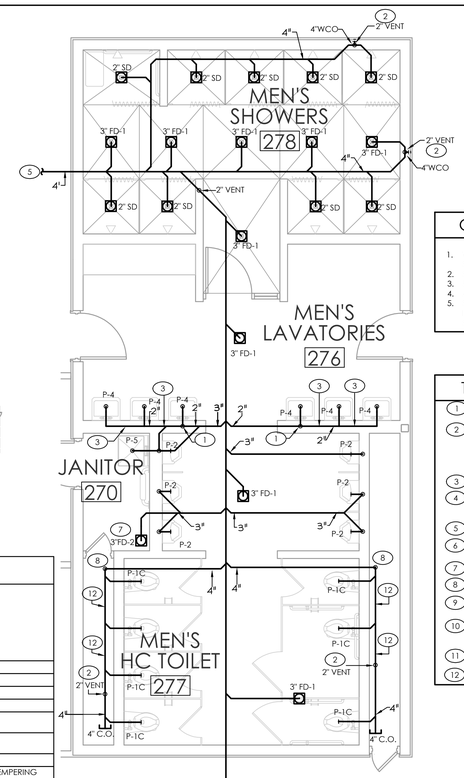


K KEY PLAN
NO SCALE

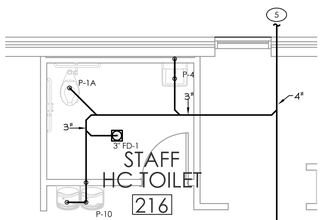
KITCHEN EQUIPMENT SCHEDULE

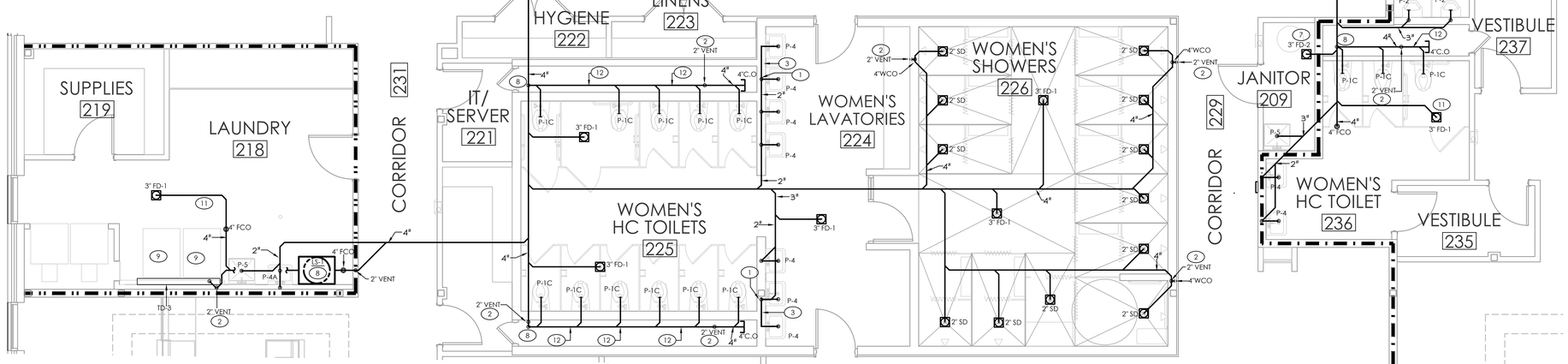
ITEM #	DESCRIPTION	HOT WATER SIZE (IN.)	COLD WATER SIZE (IN.)	INDIR. DRAIN SIZE (IN)	DIRECT DRAIN SIZE (IN)	PLUMBING NOTES
3	DROP-IN, HOT/COLD WELLS	-	0.75	0.75	-	DRAIN TO FLOOR SINK W/ AIR BREAK
8	DROP-IN, HOT/COLD WELLS	-	0.25	0.75	-	DRAIN TO FLOOR SINK W/ AIR BREAK
11	ICE MAKER/ DISPENSER	-	0.25	0.75	-	DRAIN TO FLOOR SINK W/ AIR BREAK
14	ICED TEA BREWER	-	0.25	0.5	-	DRAIN TO FLOOR SINK W/ AIR BREAK
15	COFFEE MAKER, INSULATED SERVER, AUTOMATIC	-	0.25	0.5	-	DRAIN TO FLOOR SINK W/ AIR BREAK
24	FAUCET/SERVICE SINK	0.50	0.50		2	-
29	DISHTABLE, "L" SHAPE, 14 GAUGE	-	-	1.50	-	DRAIN TO FLOOR SINK W/ AIR BREAK
31	WAREWASHER, RACK CONVEYER	0.50	0.50	1.50	-	DRAIN TO FLOOR SINK W/ 3" AIR GAP; PROVIDE W/ DRAIN TEMPERING VALVE.
33	SINK, NSF, 3 COMP, 16 GAUGE	-	-	1.50	-	DRAIN TO FLOOR SINK W/ AIR BREAK; W/(3) INDIVIDUAL 1.5" DRAIN LINES
38	HAND SINK, WALL MOUNT	0.50	0.50	-	1.50	-
42	TABLE, PREP W/ SINK	-	-	1.50	-	DRAIN TO FLOOR SINK W/ AIR BREAK
69A	ICE MAKER W/O BIN	-	0.25	0.50	-	DRAIN TO TRENCH DRAIN W/ 1.5" AIR GAP
81	FILTER, WATER	0.8	0.75	0.75	-	DRAIN TO FLOOR SINK W/ AIR BREAK

NOTE:
P.C. TO VERIFY EXACT TYPE, QTY, LOCATION OF EQUIPMENT PLUMBING CONNECTIONS BEFORE BEGINNING WORK. P.C. RESPONSIBLE FOR PROVIDING AND INSTALLING ALL REQUIRED FITTINGS, ACCESSORIES AND SIMILAR. FINAL CONNECTION TO EQUIPMENT BY P.C.



2 PLUMBING PLAN - LAUNDRY ENLARGEMENT-WASTE
SCALE: 1/4" = 1'-0"





1 PLUMBING PLAN - WOMENS LAVARTORY ENLARGEMENT-WASTE
SCALE: 1/4" = 1'-0"

FIRE RATING LEGEND
- 1-HR WALL
- 1-HR WALL/ SMOKE WALL
- SMOKE PARTITION

GENERAL NOTES - THIS SHEET

1. WATER SERVICE & BUILDING SEWER PIPING MUST BE SEPARATED PER 2018 NCPC 603.2.
2. SEE SHEET P102.0 FOR CONTINUATION OF PIPING.
3. SEE SHEET P102.1A FOR WATER IN AREA.
4. ALL ABOVE SLAB INTERIOR STORM PIPING TO BE CAST IRON.
5. SEE KITCHEN EQUIPMENT SCHEDULE FOR ADDITIONAL EQUIPMENT INFORMATION & REQUIRED ACCESSORIES (I.E. SHOCK ARRESTORS, CHECK VALVES).

TAGGED NOTES - THIS SHEET

1. 2" WASTE DOWN IN WALL.
2. PORTION OF BRANCH LINE IS PART OF CIRCUIT VENT SYSTEM, MAXIMUM SLOPE 8%. TURN DOWN AS NECESSARY AFTER MOST DOWNSTREAM FIXTURE. IF SLOPE REQUIREMENTS CANNOT BE MAINTAINED, ADDITIONAL VENTS WILL BE REQUIRED.
3. 2" WASTE RUNNING HORIZONTALLY IN WALL.
4. LINT SEPARATOR INSTALLED BELOW SLAB IN AREA. MAINTAIN CLEARANCE AND ACCESS FOR MAINTENANCE.
5. SEE SHEET P102.0 FOR CONTINUATION.
6. PROVIDE DRAIN TEMPERING VALVE, DTV-1, AT FIXTURE. SEE VALVE SCHEDULE.
7. PROVIDE WITH TRAP PRIMER FROM AREA CW LINE.
8. WASTE DOWN IN CHASE ALONG WALL.
9. COMMERCIAL LAUNDRY EQUIPMENT TO DRAIN TO TRENCH DRAIN WITH 3" AIR GAP.
10. 2" VENT BELOW SLAB. VENT TO RISE 6" VERTICALLY BEFORE TURNING HORIZONTAL. ENSURE MINIMUM OF 2% SLOPE.
11. ENSURE DISTANCE FROM TRAP TO VENT DOES NOT EXCEED 12 FT.
12. WASTE RUNNING HORIZONTALLY IN CHASE.

i3design
ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.i3designpa.com

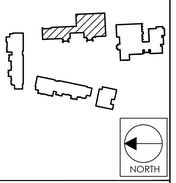
MAPLE ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

Project
THE HEALING PLACE OF NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

Client
NEW HANOVER COUNTY, NORTH CAROLINA

All reproduction & intellectual property rights reserved © 2020

SITE PLAN



Professional Seals

9/2/20

No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

Sheet Title
PLUMBING
DINING BUILDING
ENLARGEMENT PLANS
WASTE

Sheet Number
P102.1B

© 2020 MAPLE ENGINEERING, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MAPLE ENGINEERING, PLLC.

9/2/2020 2:22 PM
I:\13-1801.4 P102.1B.DWG

ROOF CALCs (AREA8)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	527
ROOF AREA + ½ VERT. AREAS (SQFT)	527

ROOF CALCs (AREA9)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	297
ROOF AREA + ½ VERT. AREAS (SQFT)	297

RECTANGULAR CONDUCTORS (VERT.)

DIMENSIONS (IN)	PROJECTED ROOF AREA DRAINED (SQFT) RAINFALL RATE = 4.25 IN/HR
2 x 3	1,380 SQFT
3 x 4	3,300 SQFT
3-1/2 x 4	3,970 SQFT
3-1/2 x 5	5,320 SQFT

BASED UPON CHAPTER 11 OF THE 2018 NC PLUMBING CODE.

GUTTERS (HORIZ.)

DIAMETER (IN)	PROJECTED ROOF AREA DRAINED (SQFT) RAINFALL RATE = 4.25 IN/HR
3	240 SQFT
4	510 SQFT
5	880 SQFT
6	1,360 SQFT
7	1,950 SQFT
8	2,800 SQFT
10	5,100 SQFT

BASED UPON CHAPTER 11 OF THE 2018 NC PLUMBING CODE.
STORM DRAINAGE CALCULATED ASSUMING A 1% SLOPE.

SCUPPERS

DIMENSIONS (IN)	HEAD (IN)	CAPACITY (GPM)
4 x 4	2	30.5 GPM
6 x 4	2	47.5 GPM
8 x 4	2	64.4 GPM
10 x 4	2	81.4 GPM
12 x 4	2	98.5 GPM
18 x 4	2	149.4 GPM
24 x 4	2	200.3 GPM

BASED UPON CHAPTER 11 OF THE 2018 NC PLUMBING CODE.

SCUPPERS

DIMENSIONS (IN)	HEAD (IN)	CAPACITY (GPM)
4 x 6	3	52.9 GPM
6 x 6	3	84.1 GPM
8 x 6	3	115.2 GPM
10 x 6	3	146.3 GPM
12 x 6	3	177.8 GPM
18 x 6	3	271.4 GPM
24 x 6	3	364.9 GPM

BASED UPON CHAPTER 11 OF THE 2018 NC PLUMBING CODE.

SECONDARY SCUPPER CALCs (AREA 1)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1403
PARAPET 1 (OR SIMILAR) LENGTH (FT)	94.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	65.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	8.0
ROOF AREA + ½ VERT. AREAS (SQFT)	1757
15 MIN. RAINFALL RATE (IN/HR)	7.4
15 MIN. RAINFALL RATE (GPM)	135
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	135
SCUPPER DIMENSIONS (WxH, IN)	18 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	149.4

SECONDARY SCUPPER CALCs (AREA 2)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	2320
PARAPET 1 (OR SIMILAR) LENGTH (FT)	80.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
ROOF AREA + ½ VERT. AREAS (SQFT)	2400
15 MIN. RAINFALL RATE (IN/HR)	7.4
15 MIN. RAINFALL RATE (GPM)	185
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	185
SCUPPER DIMENSIONS (WxH, IN)	18 x 6
SELECTED HEAD (IN)	3
SCUPPER RATED GPM (FIG 1106.5)	200.3

SECONDARY SCUPPER CALCs (AREA 3)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1470
PARAPET 1 (OR SIMILAR) LENGTH (FT)	50.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
ROOF AREA + ½ VERT. AREAS (SQFT)	1520
15 MIN. RAINFALL RATE (IN/HR)	7.4
15 MIN. RAINFALL RATE (GPM)	117
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	117
SCUPPER DIMENSIONS (WxH, IN)	18 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	149.4

SECONDARY SCUPPER CALCs (AREA 4)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	2081
PARAPET 1 (OR SIMILAR) LENGTH (FT)	60.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	38.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	8.0
ROOF AREA + ½ VERT. AREAS (SQFT)	2293
15 MIN. RAINFALL RATE (IN/HR)	7.4
15 MIN. RAINFALL RATE (GPM)	176
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	176
SCUPPER DIMENSIONS (WxH, IN)	24x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	200.3

SECONDARY SCUPPER CALCs (AREA 5)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	2427
PARAPET 1 (OR SIMILAR) LENGTH (FT)	55.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	24.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	8.0
ROOF AREA + ½ VERT. AREAS (SQFT)	2578
15 MIN. RAINFALL RATE (IN/HR)	7.4
15 MIN. RAINFALL RATE (GPM)	198
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	198
SCUPPER DIMENSIONS (WxH, IN)	24 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	200.3

SECONDARY SCUPPER CALCs (AREA 6)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	3141
PARAPET 1 (OR SIMILAR) LENGTH (FT)	74.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
ROOF AREA + ½ VERT. AREAS (SQFT)	3215
15 MIN. RAINFALL RATE (IN/HR)	7.4
15 MIN. RAINFALL RATE (GPM)	247
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	247
SCUPPER DIMENSIONS (WxH, IN)	18 x 6
SELECTED HEAD (IN)	3
SCUPPER RATED GPM (FIG 1106.5)	271.4

SECONDARY SCUPPER CALCs (AREA 7)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	2503
PARAPET 1 (OR SIMILAR) LENGTH (FT)	55.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	65.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	8.0
ROOF AREA + ½ VERT. AREAS (SQFT)	2818
15 MIN. RAINFALL RATE (IN/HR)	7.4
15 MIN. RAINFALL RATE (GPM)	217
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	217
SCUPPER DIMENSIONS (WxH, IN)	18 x 6
SELECTED HEAD (IN)	3
SCUPPER RATED GPM (FIG 1106.5)	271.4

PRIMARY SCUPPER CALCs (AREA 1)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1403
PARAPET 1 (OR SIMILAR) LENGTH (FT)	94.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	65.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	8.0
ROOF AREA + ½ VERT. AREAS (SQFT)	1757
60 MIN. RAINFALL RATE (IN/HR)	4.25
60 MIN. RAINFALL RATE (GPM)	78
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	78
SCUPPER DIMENSIONS (WxH, IN)	10 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	81.4

PRIMARY SCUPPER CALCs (AREA 2)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	2320
PARAPET 1 (OR SIMILAR) LENGTH (FT)	80.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
ROOF AREA + ½ VERT. AREAS (SQFT)	2400
60 MIN. RAINFALL RATE (IN/HR)	4.25
60 MIN. RAINFALL RATE (GPM)	106
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	106
SCUPPER DIMENSIONS (WxH, IN)	18 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	149.4

PRIMARY SCUPPER CALCs (AREA 3)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1470
PARAPET 1 (OR SIMILAR) LENGTH (FT)	50.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
ROOF AREA + ½ VERT. AREAS (SQFT)	1520
60 MIN. RAINFALL RATE (IN/HR)	4.25
60 MIN. RAINFALL RATE (GPM)	67
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	67
SCUPPER DIMENSIONS (WxH, IN)	10 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	81.4

PRIMARY SCUPPER CALCs (AREA 4)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	2081
PARAPET 1 (OR SIMILAR) LENGTH (FT)	60.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	38.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	8.0
ROOF AREA + ½ VERT. AREAS (SQFT)	2293
60 MIN. RAINFALL RATE (IN/HR)	4.25
60 MIN. RAINFALL RATE (GPM)	101
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	101
SCUPPER DIMENSIONS (WxH, IN)	18 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	149.4

PRIMARY SCUPPER CALCs (AREA 5)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	2427
PARAPET 1 (OR SIMILAR) LENGTH (FT)	55.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	24.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	8.0
ROOF AREA + ½ VERT. AREAS (SQFT)	2578
60 MIN. RAINFALL RATE (IN/HR)	4.25
60 MIN. RAINFALL RATE (GPM)	114
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	114
SCUPPER DIMENSIONS (WxH, IN)	18 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	149.4

PRIMARY SCUPPER CALCs (AREA 6)

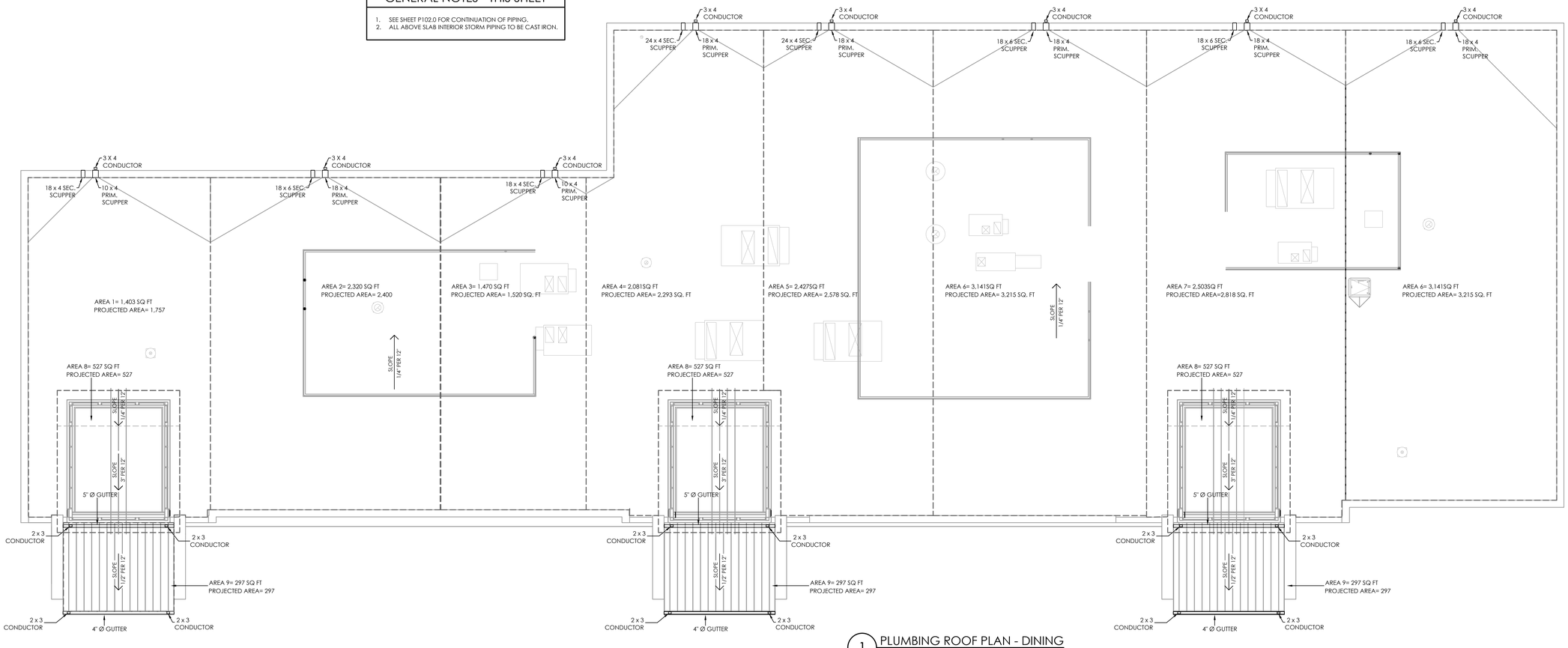
BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	3141
PARAPET 1 (OR SIMILAR) LENGTH (FT)	74.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
ROOF AREA + ½ VERT. AREAS (SQFT)	3215
60 MIN. RAINFALL RATE (IN/HR)	4.25
60 MIN. RAINFALL RATE (GPM)	142
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	142
SCUPPER DIMENSIONS (WxH, IN)	18 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	149.4

PRIMARY SCUPPER CALCs (AREA7)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	2503
PARAPET 1 (OR SIMILAR) LENGTH (FT)	55.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	65.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	8.0
ROOF AREA + ½ VERT. AREAS (SQFT)	2818
60 MIN. RAINFALL RATE (IN/HR)	4.25
60 MIN. RAINFALL RATE (GPM)	124
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	124
SCUPPER DIMENSIONS (WxH, IN)	18 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	149.4

GENERAL NOTES - THIS SHEET

1. SEE SHEET P102.0 FOR CONTINUATION OF PIPING.
2. ALL ABOVE SLAB INTERIOR STORM PIPING TO BE CAST IRON.



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

9/2/2020 2:22 PM
ISD-1801-P102.2.DWG

i-s design
ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.isdesignpa.com

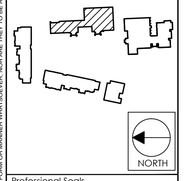
MAPLE ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

Project
THE HEALING PLACE OF NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

Client
NEW HANOVER COUNTY, NORTH CAROLINA

All reproduction & intellectual property rights reserved © 2020

SITE PLAN



Professional Seals

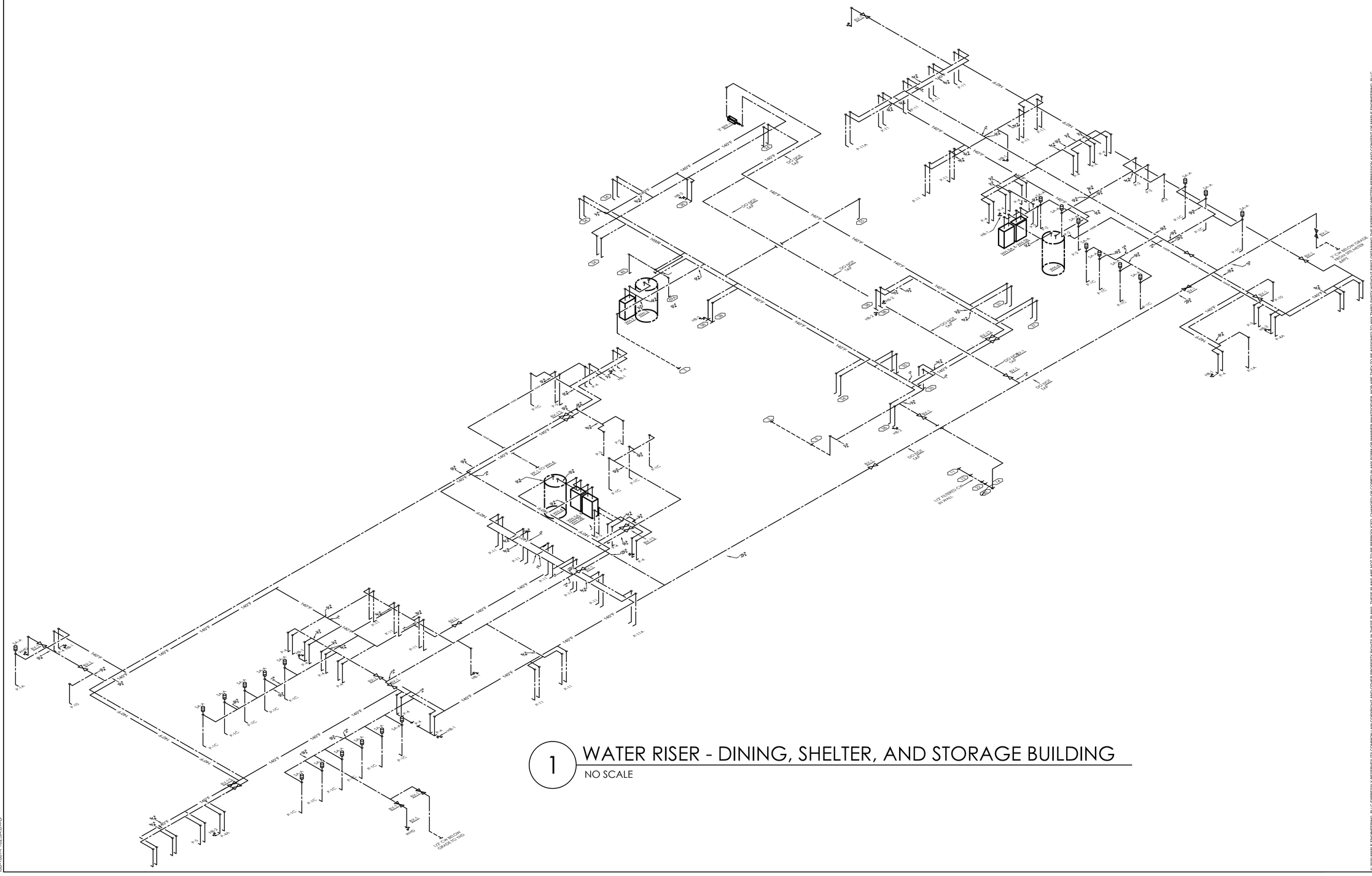
9/2/20

No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

Sheet Title
PLUMBING DINING BUILDING ROOF PLAN

Sheet Number
P102.2

© 2020 MAPLE ENGINEERING, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MAPLE ENGINEERING, PLLC



1 WATER RISER - DINING, SHELTER, AND STORAGE BUILDING

NO SCALE

isdesign
ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.isdesignpa.com

MAPLE
ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

Project

THE HEALING PLACE OF
NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

Client

NEW HANOVER COUNTY,
NORTH CAROLINA

All reproduction & intellectual property rights reserved © 2020

SITE PLAN

Professional Seals

SEAL 044528
DUSTIN M. METAYER
9/2/20

No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

Sheet Title

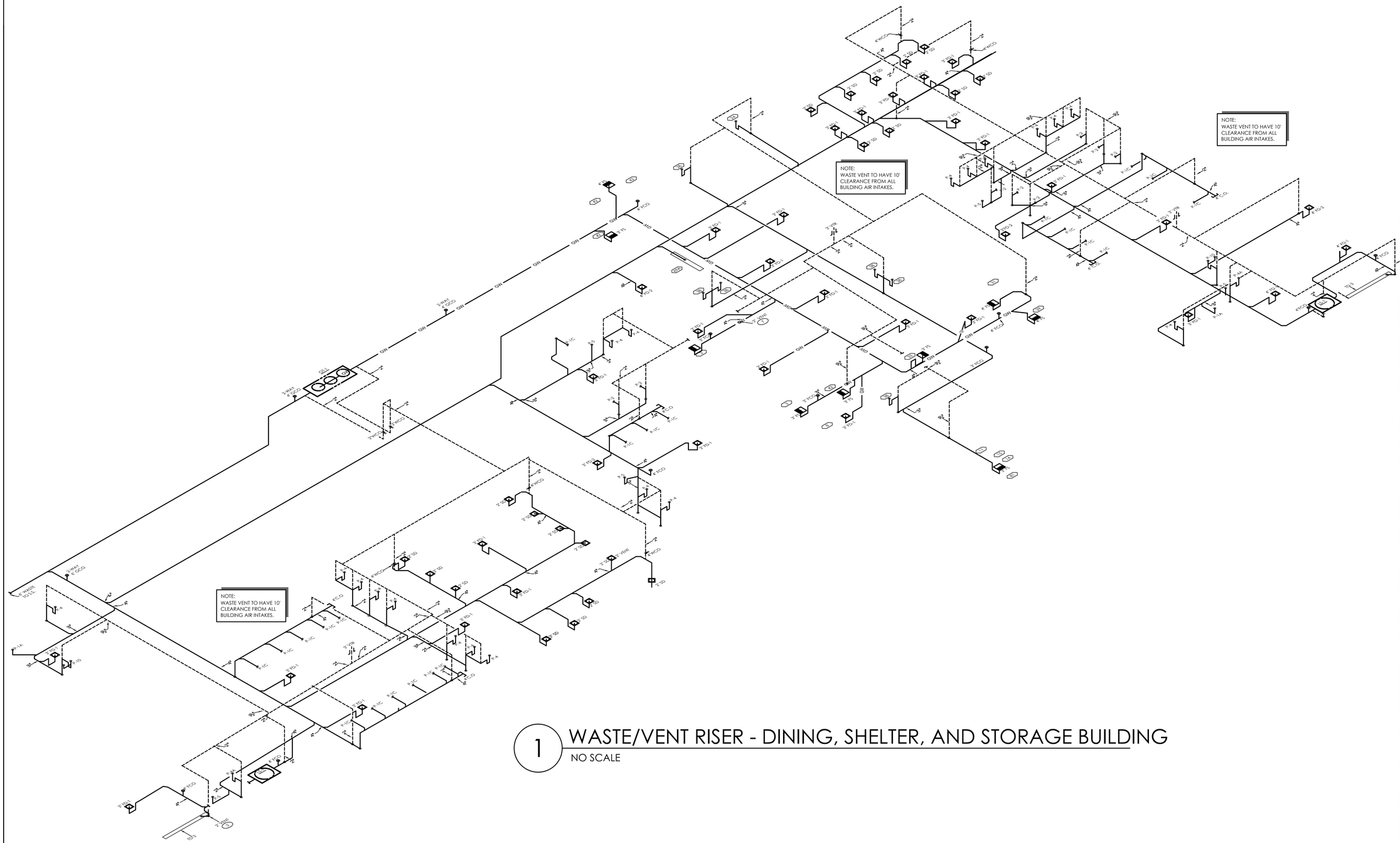
PLUMBING
DINING BUILDING
WATER RISERS

Sheet Number

P102.3A

© 2020 MAPLE ENGINEERING, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MAPLE ENGINEERING, PLLC.

9/2/2020 2:22 PM
ISD-1801-P102.3A.DWG



1 WASTE/VENT RISER - DINING, SHELTER, AND STORAGE BUILDING

NO SCALE

9/2/2020 2:22 PM
ISD-1801-P102.3B.DWG

i-sdesign
ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.isdesignpa.com

MAPLE
ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

Project
THE HEALING PLACE OF NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

Client
NEW HANOVER COUNTY, NORTH CAROLINA

All reproduction & intellectual property rights reserved © 2020

SITE PLAN

NORTH

Professional Seals

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 044528 PAUL M. METIVIER
9/2/20

No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

Sheet Title
PLUMBING
DINING BUILDING
WASTE/VENT RISERS

Sheet Number
P102.3B

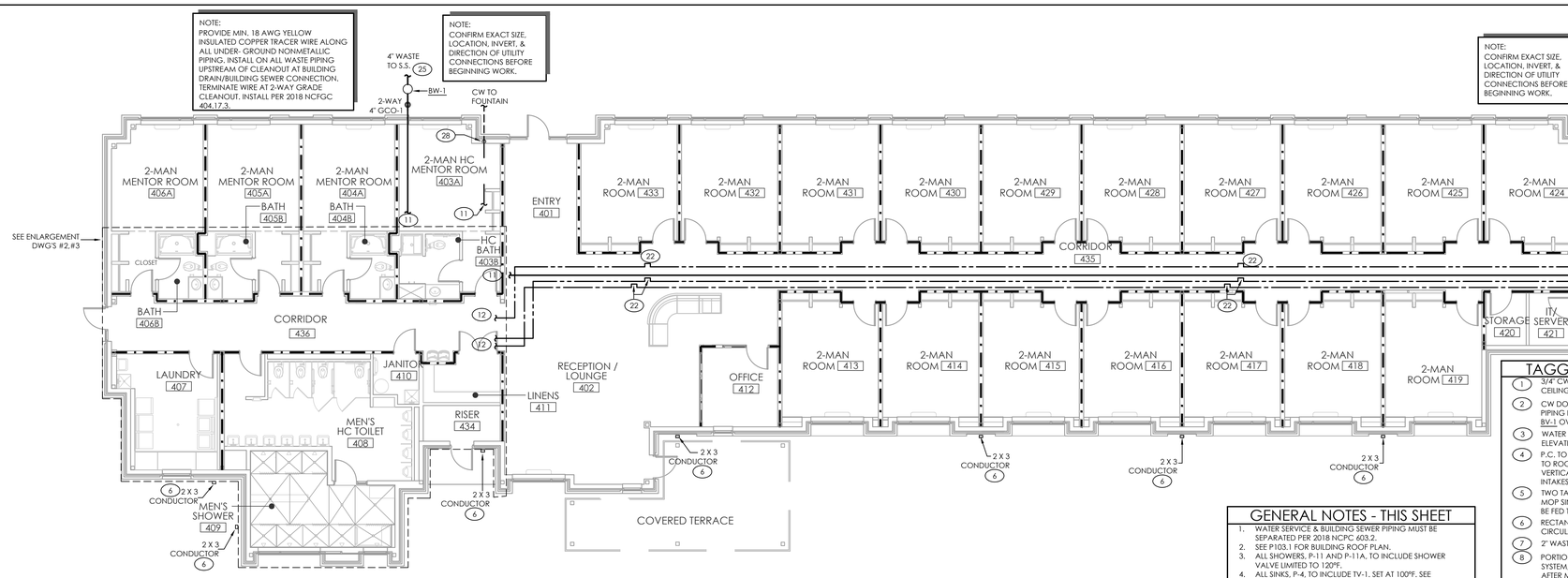
© 2020 MAPLE ENGINEERING, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MAPLE ENGINEERING, PLLC.

NOTE:
PROVIDE MIN. 18 AWG YELLOW INSULATED COPPER TRACER WIRE ALONG ALL UNDER- GROUND NONMETALLIC PIPING. INSTALL ON ALL WASTE PIPING UPSTREAM OF CLEANOUT AT BUILDING DRAIN/BUILDING SEWER CONNECTION. TERMINATE WIRE AT 2-WAY GRADE CLEANOUT. INSTALL PER 2018 NCFGC 404.17.3.

NOTE:
CONFIRM EXACT SIZE, LOCATION, INVERT, & DIRECTION OF UTILITY CONNECTIONS BEFORE BEGINNING WORK.

NOTE:
CONFIRM EXACT SIZE, LOCATION, INVERT, & DIRECTION OF UTILITY CONNECTIONS BEFORE BEGINNING WORK.

FIRE RATING LEGEND
- 1-HR WALL
- 1-HR WALL/ SMOKE WALL
- SMOKE PARTITION



4 PLUMBING PLAN - OVERALL MEN'S RESIDENTIAL BUILDING.
SCALE: 1/8" = 1'-0"

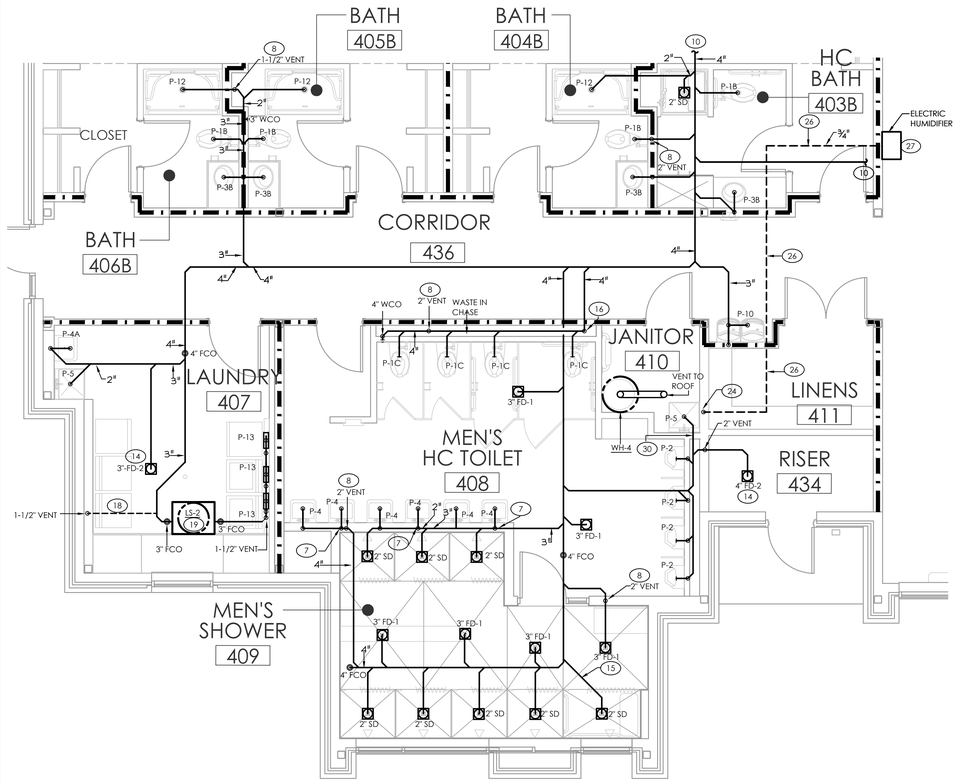
NOTE:
ALL EXPOSED PIPING AND TRAPS IN RESTROOM TO BE COVERED WITH FLEXIBLE PVC COVER. COORDINATE EXACT SELECTION AND COVER WITH ARCHITECT.

GENERAL NOTES - THIS SHEET

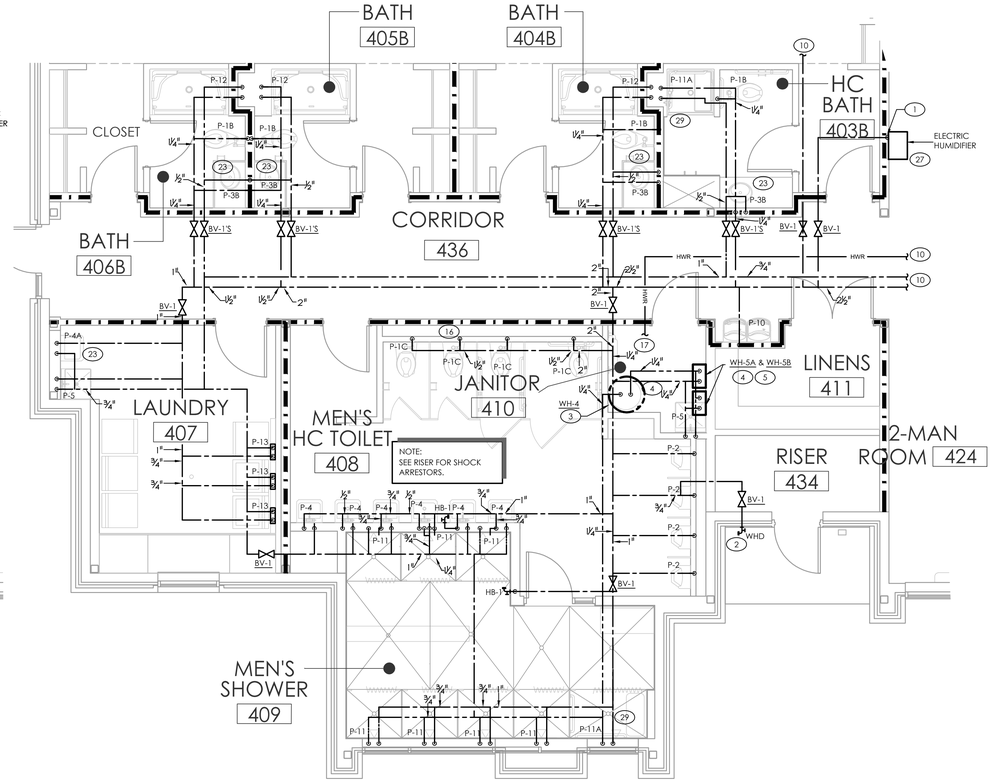
1. WATER SERVICE & BUILDING SEWER PIPING MUST BE SEPARATED PER 2018 NCPC 603.2.
2. SEE P103.1 FOR BUILDING ROOF PLAN.
3. ALL SHOWERS, P-11 AND P-11A, TO INCLUDE SHOWER VALVE LIMITED TO 120°F.
4. ALL SINKS, P-4, TO INCLUDE TV-1, SET AT 100°F, SEE SCHEDULE.

TAGGED NOTES - THIS SHEET

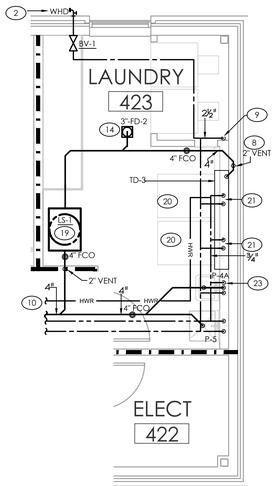
1. 3/4" CW TO ELECTRIC HUMIDIFIER ABOVE CEILING.PROVIDE WITH CV-1 AND SHUTOFF.
2. CW DOWN IN WALL TO WALL HYDRANT. ENSURE PIPING IS ON WARM SIDE OF INSULATION. PROVIDE BV-1 OVERHEAD ABOVE LAY-IN CEILING.
3. WATER HEATER ON FLOOR. PROVIDE HOUSEKEEPING PAD, ELEVATE DRAIN PAN AS NECESSARY. DRAIN TO MOP SINK.
4. P.C. TO PROVIDE PVC TWIN PIPE FLUE VENT & INTAKE TO ROOF. ENSURE VENT HAS 10' HORIZONTAL OR 3' VERTICAL CLEARANCE FROM ALL BUILDING AIR INTAKES/EXHAUSTS. INSTALL PER MFG. INSTRUCTIONS.
5. TWO TANKLESS WATER HEATERS ON WALL ABOVE MOP SINK. DRAIN TO MOP SINK. HOT WATER LINES TO BE FED TO TANK, SEE DETAIL.
6. RECTANGULAR CONDUCTOR TO TRANSITION INTO CIRCULAR CONDUCTOR BEFORE TURNING BELOW GRADE.
7. 2" WASTE DOWN IN WALL.
8. PORTION OF BRANCH LINE IS PART OF CIRCUIT VENT SYSTEM, MAXIMUM SLOPE 8%. TURN DOWN AS NECESSARY AFTER MOST DOWNSTREAM FIXTURE. IF SLOPE REQUIREMENTS CANNOT BE MAINTAINED, ADDITIONAL VENTS WILL BE REQUIRED.
9. 2-1/2" CW UP ALONG WALL FROM BELOW SLAB. PROVIDE WITH BV-1, LOW ON WALL. COORDINATE WITH G.C. TO PROVIDE PROTECTIVE CHASE UP TO CEILING BEHIND DRYERS.
10. SEE DWG#4 FOR CONTINUATION.
11. SEE DWG#3 FOR CONTINUATION.
12. SEE DWG#2 FOR CONTINUATION.
13. SEE DWG#1 FOR CONTINUATION.
14. PROVIDE WITH TRAP PRIMER FROM AREA CW LINE.
15. ENSURE DISTANCE FROM TRAP TO VENT DOES NOT EXCEED MORE THAN 12 FEET.
16. WASTE DOWN IN CHASE TO BELOW SLAB
17. 1/2" HOT WATER RETURN TO RP-1 AT WH-4.
18. 2" VENT BELOW SLAB. VENT TO RISE 6" VERTICALLY BEFORE TURNING HORIZONTAL. ENSURE MINIMUM OF 2% SLOPE.
19. LINT SEPARATOR BELOW SLAB.
20. COMMERCIAL LAUNDRY EQUIPMENT TO DRAIN TO TRENCH DRAIN WITH 3" AIR GAP.
21. 3/4" HW/CW TO COMMERCIAL LAUNDRY EQUIPMENT. PROVIDE W/ CV-1 & SHOCK ARRESTORS.
22. PROVIDE EXPANSION LOOPS EVERY 50' TO 75' FOR ALL STRAIGHT RUNS OF WATER PIPE.
23. PROVIDE WITH TV-1, SET TO 110°F.
24. 3/4" DRAIN LINE DOWN IN WALL FROM ELECTRIC HUMIDIFIER.DRAIN TO AREA MOP SINK WITH 1.5" AIR GAP.
25. RIM ELEVATION OF NEXT UPSTREAM SEWER MANHOLE IS HIGHER THAN BUILDING FINISHED FLOOR ELEVATION. P.C. TO INSTALL BACKWATER VALVE, BW-1, INSTALL PER MANUFACTURER'S INSTRUCTIONS. SEE SCHEDULE. PROVIDE ACCESS PER NCPC 715.5.
26. HUMIDIFIER WASTE OVERHEAD. PIPE TO BE COPPER. ENSURE SLOPE IS MAINTAINED.
27. ELECTRIC HUMIDIFIER OVERHEAD IN CEILING. COORDINATE EXACT LOCATION WITH M.C..
28. 3/4" CW DOWN ALONG WALL TO BELOW GRADE. PROVIDE WITH BV-1 AND CV-1. CW LINE TO CONTINUE BELOW GRADE TO SERVE WATER FOUNTAIN. COORDINATE WITH CIVIL.
29. CONFIRM SEAT SIDE OF ADA SHOWER WITH OWNER AND G.C..
30. BRANCH DRAIN FROM MOP SINK RECEIVING DISCHARGE OVER 140°F TO BE CAST IRON A MINIMUM OF 10' DOWNSTREAM FROM THE OUTLET PRODUCING DISCHARGE & RATED FOR 180°F.
14. WATER PIPING TO BE RUN IN MECH CHASE. TYPICAL FOR ALL SITUATIONS IN ALL BUILDINGS.



3 PLUMBING PLAN - BATHROOM ENLARGEMENT MEN'S (WASTE)
SCALE: 1/4" = 1'-0"



2 PLUMBING PLAN - BATHROOM ENLARGEMENT MEN'S(WATER)
SCALE: 1/4" = 1'-0"



1 PLUMBING PLAN - LAUNDRY ROOM ENLARGEMENT MEN'S
SCALE: 1/4" = 1'-0"

i-s design
ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.isdesignpa.com

MAPLE ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

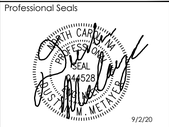
Project
THE HEALING PLACE OF NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

Client
NEW HANOVER COUNTY, NORTH CAROLINA

© 2020 MAPLE ENGINEERING, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MAPLE ENGINEERING, PLLC
All reproduction & intellectual property rights reserved © 2020

SITE PLAN

Professional Seals



9/2/20

No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

Sheet Title
PLUMBING
MEN'S RESIDENT
BUILDING OVERALL
& ENLARGEMENT PLANS

Sheet Number
P103.0

9/2/2020 2:42 PM
I:\DS-1801-P-103.0.DWG

SECONDARY SCUPPER CALCs (AREA 1)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	827
PARAPET 1 (OR SIMILAR) LENGTH (FT)	84.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.5
ROOF AREA + ½ VERT. AREAS (SQFT)	932
15 MIN. RAINFALL RATE (IN/HR)	7.4
15 MIN. RAINFALL RATE (GPM)	72
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	72
SCUPPER DIMENSIONS (WxH, IN)	10 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	81.4

SECONDARY SCUPPER CALCs (AREA 2)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	674
PARAPET 1 (OR SIMILAR) LENGTH (FT)	34.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.5
ROOF AREA + ½ VERT. AREAS (SQFT)	717
15 MIN. RAINFALL RATE (IN/HR)	7.4
15 MIN. RAINFALL RATE (GPM)	55
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	55
SCUPPER DIMENSIONS (WxH, IN)	8 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	64.4

SECONDARY SCUPPER CALCs (AREA 3)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	775
PARAPET 1 (OR SIMILAR) LENGTH (FT)	42.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.5
ROOF AREA + ½ VERT. AREAS (SQFT)	828
15 MIN. RAINFALL RATE (IN/HR)	7.4
15 MIN. RAINFALL RATE (GPM)	64
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	64
SCUPPER DIMENSIONS (WxH, IN)	8 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	64.4

GUTTERS (HORIZ.)

DIAMETER (IN)	PROJECTED ROOF AREA DRAINED (SQFT) RAINFALL RATE = 4.0 IN/HR
3	240 SQFT
4	510 SQFT
5	880 SQFT
6	1,360 SQFT
7	1,950 SQFT
8	2,800 SQFT

BASED UPON CHAPTER 11 OF THE 2018 NC PLUMBING CODE.
STORM DRAINAGE CALCULATED ASSUMING A 1% SLOPE.

RECTANGULAR CONDUCTORS (VERT.)

DIMENSIONS (IN)	PROJECTED ROOF AREA DRAINED (SQFT) RAINFALL RATE = 4.0 IN/HR
2 x 3	1,380 SQFT
2-3/4 x 4-1/4	3,200 SQFT
3 x 4	3,300 SQFT
3-1/2 x 4	3,970 SQFT
3-1/2 x 5	5,320 SQFT

BASED UPON CHAPTER 11 OF THE 2018 NC PLUMBING CODE.

NOTE:
MEN'S RESIDENTIAL AND WOMEN'S RESIDENTIAL BUILDINGS ARE SIMILAR. PLAN IS TYPICAL. COORDINATE WITH CIVIL.

SCUPPERS

DIMENSIONS (IN)	HEAD (IN)	CAPACITY (GPM)
4 x 4	2	30.5 GPM
6 x 4	2	47.5 GPM
8 x 4	2	64.4 GPM
10 x 4	2	81.4 GPM
12 x 4	2	98.5 GPM
18 x 4	2	149.4 GPM
24 x 4	2	200.3 GPM

BASED UPON CHAPTER 11 OF THE 2018 NC PLUMBING CODE.

SECONDARY SCUPPER CALCs (AREA 6)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	683
PARAPET 1 (OR SIMILAR) LENGTH (FT)	77.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.5
ROOF AREA + ½ VERT. AREAS (SQFT)	779
15 MIN. RAINFALL RATE (IN/HR)	7.4
15 MIN. RAINFALL RATE (GPM)	60
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	60
SCUPPER DIMENSIONS (WxH, IN)	8 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	64.4

PRIMARY SCUPPER CALCs (AREA 1)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	827
PARAPET 1 (OR SIMILAR) LENGTH (FT)	84.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.5
ROOF AREA + ½ VERT. AREAS (SQFT)	932
60 MIN. RAINFALL RATE (IN/HR)	4.25
60 MIN. RAINFALL RATE (GPM)	41
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	41
SCUPPER DIMENSIONS (WxH, IN)	6 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	47.5

PRIMARY SCUPPER CALCs (AREA 2)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	674
PARAPET 1 (OR SIMILAR) LENGTH (FT)	34.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.5
ROOF AREA + ½ VERT. AREAS (SQFT)	717
60 MIN. RAINFALL RATE (IN/HR)	4.25
60 MIN. RAINFALL RATE (GPM)	32
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	32
SCUPPER DIMENSIONS (WxH, IN)	6 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	47.5

PRIMARY SCUPPER CALCs (AREA 3)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	775
PARAPET 1 (OR SIMILAR) LENGTH (FT)	42.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.5
ROOF AREA + ½ VERT. AREAS (SQFT)	828
60 MIN. RAINFALL RATE (IN/HR)	4.25
60 MIN. RAINFALL RATE (GPM)	37
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	37
SCUPPER DIMENSIONS (WxH, IN)	6 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	47.5

ROOF CALCs (AREA 4)

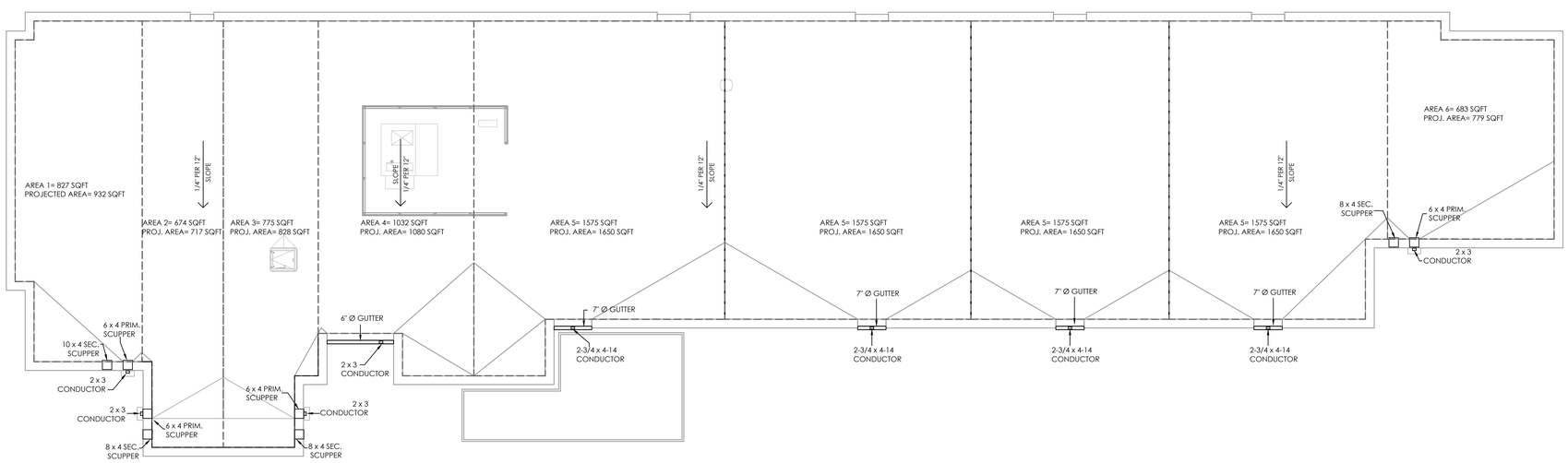
BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1032
PARAPET 1 (OR SIMILAR) LENGTH (FT)	38.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.5
ROOF AREA + ½ VERT. AREAS (SQFT)	1080

ROOF CALCs (AREA 5)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1575
PARAPET 1 (OR SIMILAR) LENGTH (FT)	60.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.5
ROOF AREA + ½ VERT. AREAS (SQFT)	1650

PRIMARY SCUPPER CALCs (AREA 6)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	683
PARAPET 1 (OR SIMILAR) LENGTH (FT)	77.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.5
ROOF AREA + ½ VERT. AREAS (SQFT)	779
60 MIN. RAINFALL RATE (IN/HR)	4.25
60 MIN. RAINFALL RATE (GPM)	34
# OF SCUPPERS	1
REQ'D GPM PER SCUPPER	34
SCUPPER DIMENSIONS (WxH, IN)	6 x 4
SELECTED HEAD (IN)	2
SCUPPER RATED GPM (FIG 1106.5)	47.5



1 PLUMBING ROOF PLAN - RESIDENTIAL BUILDING
SCALE: 1/8" = 1'-0"

9/2/2020 2:23 PM
ISDS-1801-P1103.1.DWG

is-design
ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.isdesignpa.com

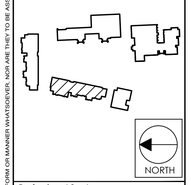
MAPLE ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

Project
THE HEALING PLACE OF NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

Client
NEW HANOVER COUNTY, NORTH CAROLINA

All reproduction & intellectual property rights reserved © 2020

SITE PLAN



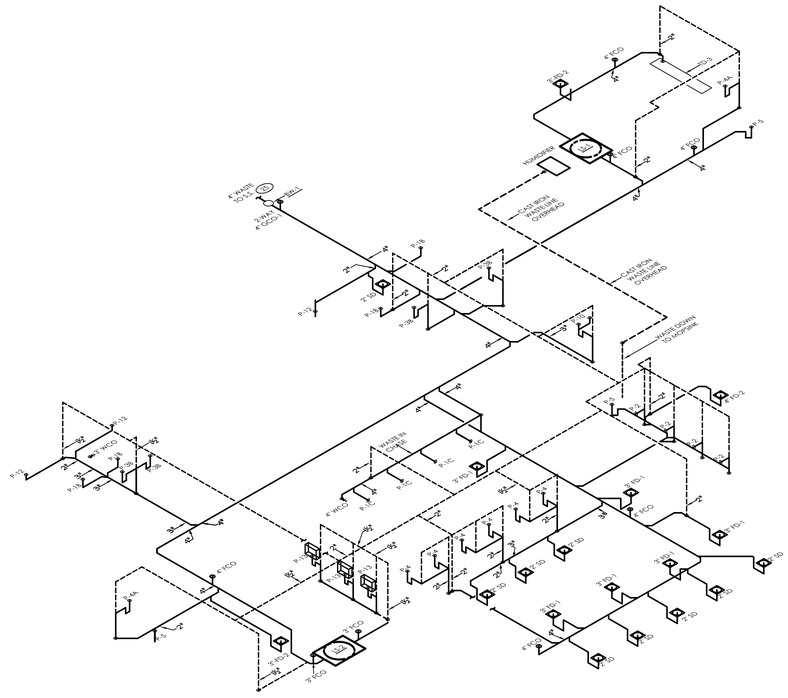
Professional Seals

No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

Sheet Title
PLUMBING RESIDENT MEN'S & WOMEN'S ROOF PLAN

Sheet Number
P103.1

© 2020 MAPLE ENGINEERING, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MAPLE ENGINEERING, PLLC.



2 WASTE/VENT RISER- MEN'S RESIDENTIAL BUILDING.

NO SCALE

1 WATER RISER- MEN'S RESIDENTIAL BUILDING.

NO SCALE

isdesign
ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.isdesignpa.com

MAPLE
ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

Project
THE HEALING PLACE OF
NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

Client

NEW HANOVER COUNTY,
NORTH CAROLINA

All reproduction & intellectual property rights reserved. © 2020

SITE PLAN

Professional Seals

044528
DUSTIN M. METAYER

9/2/20

No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

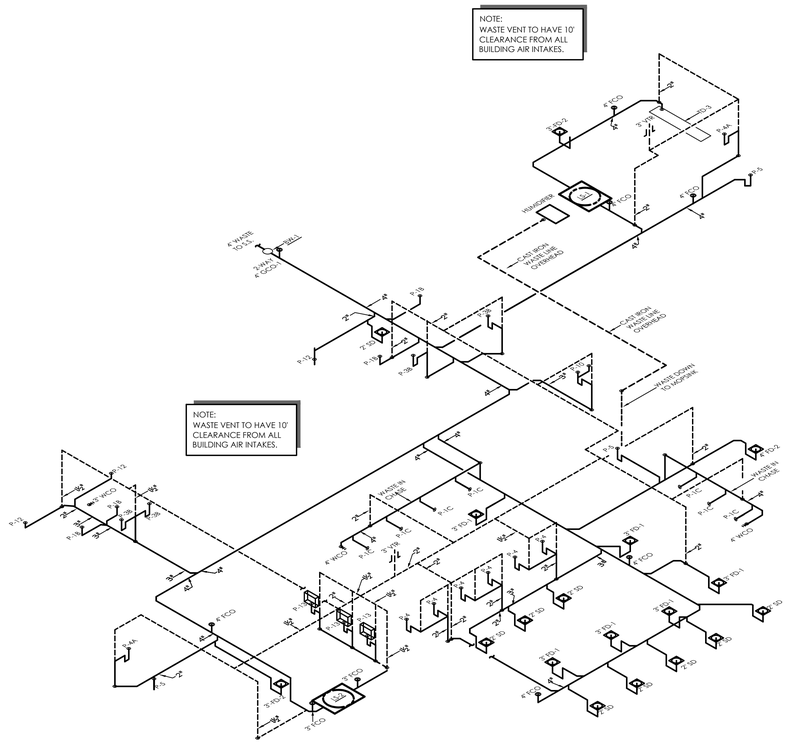
Sheet Title

PLUMBING
MEN'S RESIDENTIAL
RISERS

Sheet Number

P103.2

© 2020 MAPLE ENGINEERING, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MAPLE ENGINEERING, PLLC.



NOTE:
WASTE VENT TO HAVE 10'
CLEARANCE FROM ALL
BUILDING AIR INTAKES.

NOTE:
WASTE VENT TO HAVE 10'
CLEARANCE FROM ALL
BUILDING AIR INTAKES.

2 WASTE/VENT RISER- WOMEN'S RESIDENTIAL BUILDING.
NO SCALE

1 WATER RISER- WOMEN'S RESIDENTIAL BUILDING.
NO SCALE

ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.isdesignpa.com

MAPLE
ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

Project
THE HEALING PLACE OF
NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

Client
NEW HANOVER COUNTY,
NORTH CAROLINA

All reproduction & intellectual property rights reserved. © 2020

SITE PLAN

NORTH

Professional Seals
DUSTIN M. METAYER
044528
9/2/20

No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

Sheet Title
PLUMBING
WOMEN'S RESIDENTAL
RISERS

Sheet Number
P103.2

© 2020 MAPLE ENGINEERING, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MAPLE ENGINEERING, PLLC.

9/2/2020 2:23 PM
ISD-1801-P105.1.DWG

GENERAL NOTES - THIS SHEET

1. WATER SERVICE & BUILDING SEWER PIPING MUST BE SEPARATED PER 2018 NCPC 603.2.
2. SEE SHEET P104.0B FOR WATER PIPING PLAN.

TAGGED NOTES - THIS SHEET

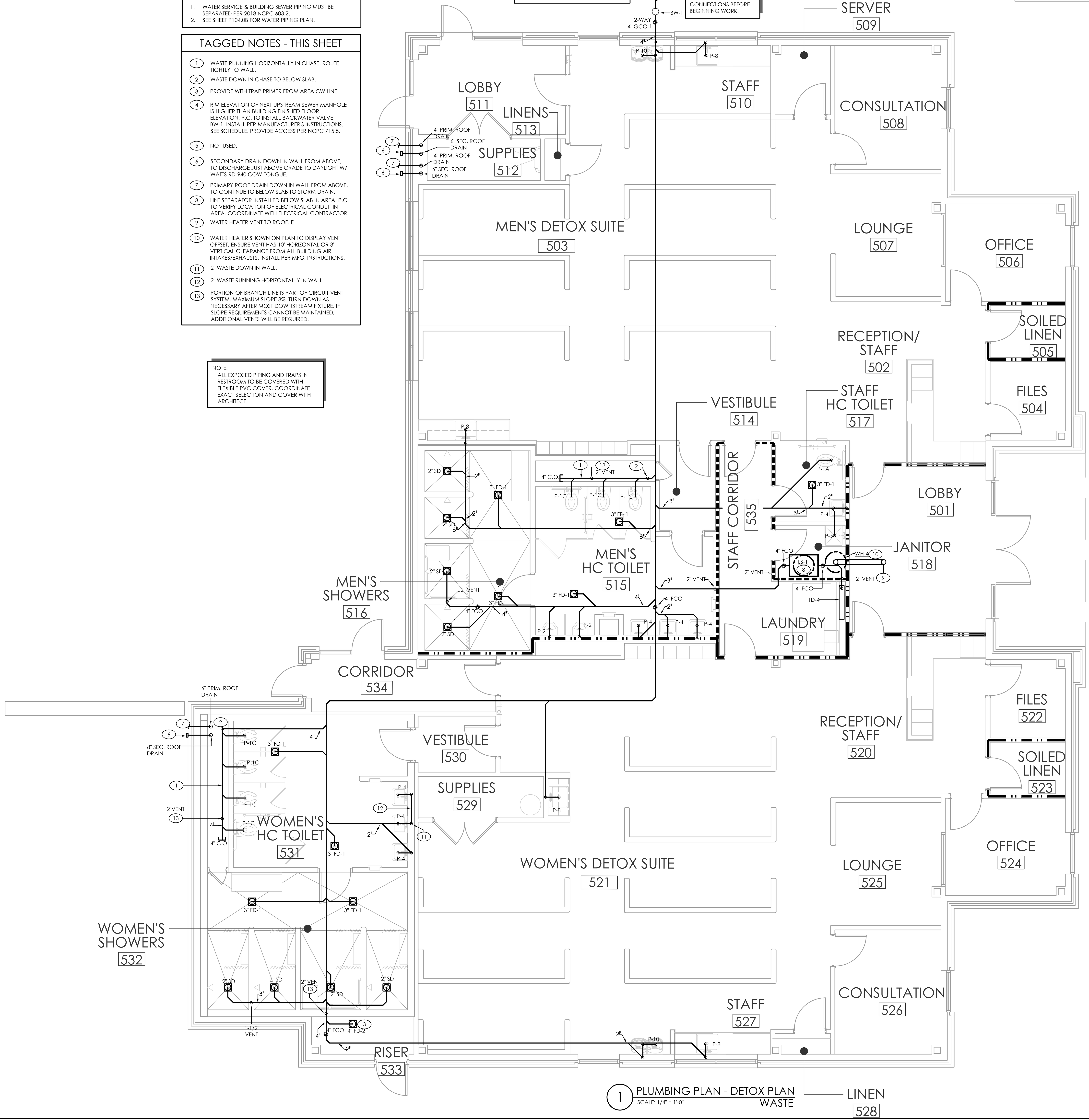
1	WASTE RUNNING HORIZONTALLY IN CHASE. ROUTE TIGHTLY TO WALL.
2	WASTE DOWN IN CHASE TO BELOW SLAB.
3	PROVIDE WITH TRAP PRIMER FROM AREA CW LINE.
4	RIM ELEVATION OF NEXT UPSTREAM SEWER MANHOLE IS HIGHER THAN BUILDING FINISHED FLOOR ELEVATION, P.C. TO INSTALL BACKWATER VALVE, BW-1. INSTALL PER MANUFACTURER'S INSTRUCTIONS. SEE SCHEDULE. PROVIDE ACCESS PER NCPC 715.5.
5	NOT USED.
6	SECONDARY DRAIN DOWN IN WALL FROM ABOVE, TO DISCHARGE JUST ABOVE GRADE TO DAYLIGHT W/ WATTS RD-940 COW-TONGUE.
7	PRIMARY ROOF DRAIN DOWN IN WALL FROM ABOVE, TO CONTINUE TO BELOW SLAB TO STORM DRAIN.
8	LINT SEPARATOR INSTALLED BELOW SLAB IN AREA. P.C. TO VERIFY LOCATION OF ELECTRICAL CONDUIT IN AREA. COORDINATE WITH ELECTRICAL CONTRACTOR.
9	WATER HEATER VENT TO ROOF. E
10	WATER HEATER SHOWN ON PLAN TO DISPLAY VENT OFFSET. ENSURE VENT HAS 10' HORIZONTAL OR 3' VERTICAL CLEARANCE FROM ALL BUILDING AIR INTAKES/EXHAUSTS. INSTALL PER MFG. INSTRUCTIONS.
11	2" WASTE DOWN IN WALL.
12	2" WASTE RUNNING HORIZONTALLY IN WALL.
13	PORTION OF BRANCH LINE IS PART OF CIRCUIT VENT SYSTEM, MAXIMUM SLOPE 8%. TURN DOWN AS NECESSARY AFTER MOST DOWNSTREAM FIXTURE. IF SLOPE REQUIREMENTS CANNOT BE MAINTAINED, ADDITIONAL VENTS WILL BE REQUIRED.

NOTE:
ALL EXPOSED PIPING AND TRAPS IN RESTROOM TO BE COVERED WITH FLEXIBLE PVC COVER. COORDINATE EXACT SELECTION AND COVER WITH ARCHITECT.

NOTE:
PROVIDE MIN. 18 AWG YELLOW INSULATED COPPER TRACER WIRE ALONG ALL UNDER-GROUND NONMETALLIC PIPING. INSTALL ON ALL WASTE PIPING UPSTREAM OF CLEANOUT AT BUILDING DRAIN/BUILDING SEWER CONNECTION. TERMINATE WIRE AT 2-WAY GRADE CLEANOUT. INSTALL PER 2018 SCFGC 404.17.3.

NOTE:
CONFIRM EXACT SIZE, LOCATION, INVERT, & DIRECTION OF UTILITY CONNECTIONS BEFORE BEGINNING WORK.

FIRE RATING LEGEND
1-HR WALL
1-HR WALL/ SMOKE WALL
SMOKE PARTITION



1 PLUMBING PLAN - DETOX PLAN WASTE
SCALE: 1/4" = 1'-0"

ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.isdesignpa.com

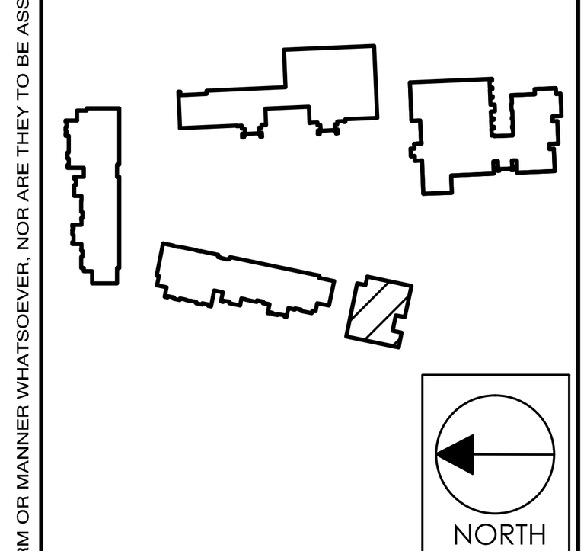
MAPLE ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

Project
THE HEALING PLACE OF NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

Client
NEW HANOVER COUNTY, NORTH CAROLINA

All reproduction & intellectual property rights reserved © 2020

SITE PLAN



Professional Seals

9/2/20

No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

Sheet Title
PLUMBING DETOX BUILDING PLAN WASTE

Sheet Number
P104.0A

9/2/2020 2:23 PM
ISD-1801-P104.0A.DWG

GENERAL NOTES - THIS SHEET

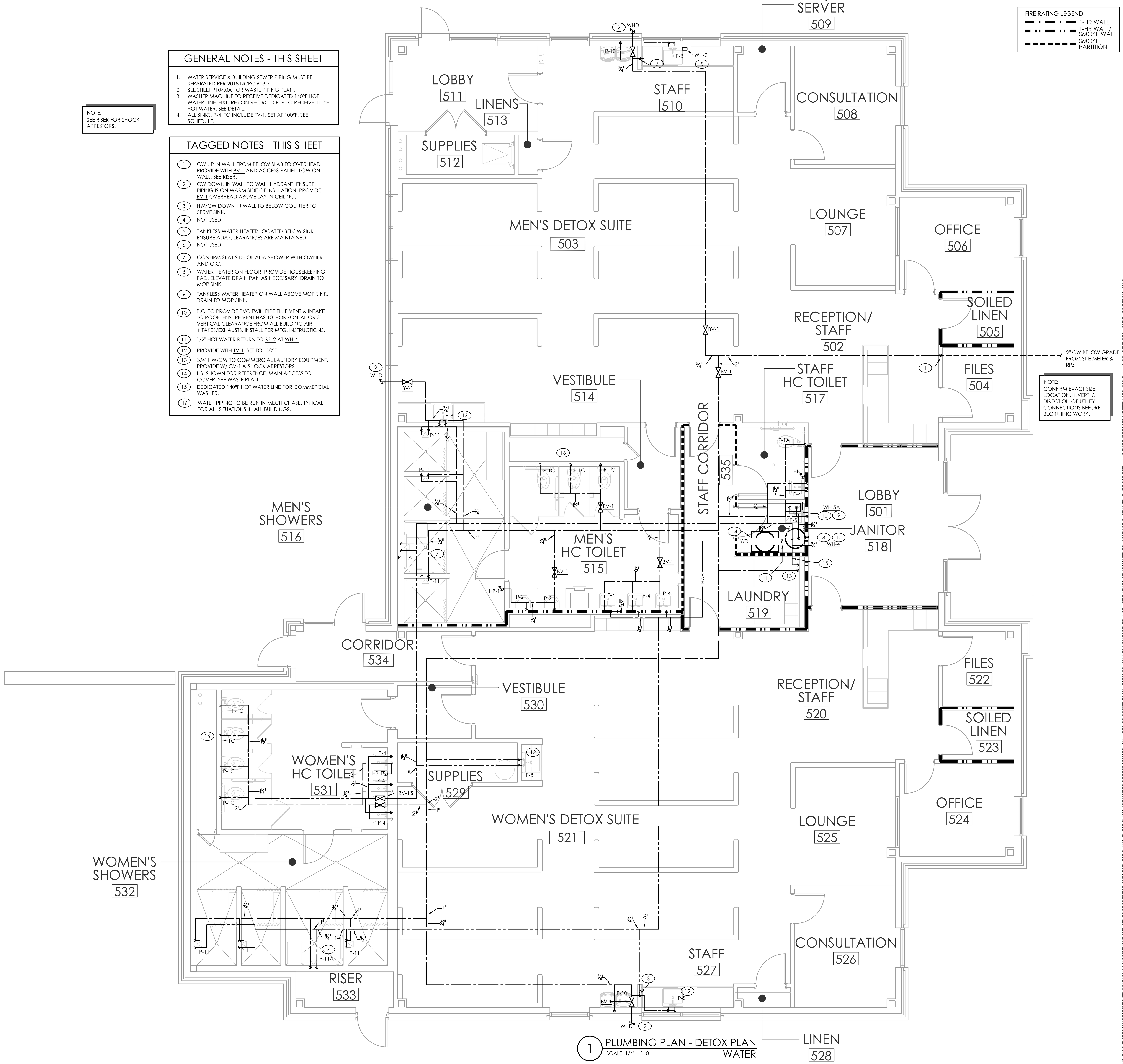
1. WATER SERVICE & BUILDING SEWER PIPING MUST BE SEPARATED PER 2018 NCPC 603.2.
2. SEE SHEET P104.0A FOR WASTE PIPING PLAN.
3. WASHER MACHINE TO RECEIVE DEDICATED 140°F HOT WATER LINE. FIXTURES ON RECIRC LOOP TO RECEIVE 110°F HOT WATER. SEE DETAIL.
4. ALL SINKS, P-4, TO INCLUDE TV-1. SET AT 100°F. SEE SCHEDULE.

NOTE: SEE RISER FOR SHOCK ARRESTORS.

TAGGED NOTES - THIS SHEET

1. CW UP IN WALL FROM BELOW SLAB TO OVERHEAD. PROVIDE WITH BV-1 AND ACCESS PANEL LOW ON WALL. SEE RISER.
2. CW DOWN IN WALL TO WALL HYDRANT. ENSURE PIPING IS ON WARM SIDE OF INSULATION. PROVIDE BV-1 OVERHEAD ABOVE LAY-IN CEILING.
3. HW/CW DOWN IN WALL TO BELOW COUNTER TO SERVE SINK.
4. NOT USED.
5. TANKLESS WATER HEATER LOCATED BELOW SINK. ENSURE ADA CLEARANCES ARE MAINTAINED.
6. NOT USED.
7. CONFIRM SEAT SIDE OF ADA SHOWER WITH OWNER AND G.C..
8. WATER HEATER ON FLOOR. PROVIDE HOUSEKEEPING PAD, ELEVATE DRAIN PAN AS NECESSARY. DRAIN TO MOP SINK.
9. TANKLESS WATER HEATER ON WALL ABOVE MOP SINK. DRAIN TO MOP SINK.
10. P.C. TO PROVIDE PVC TWIN PIPE FLUE VENT & INTAKE TO ROOF. ENSURE VENT HAS 10' HORIZONTAL OR 3' VERTICAL CLEARANCE FROM ALL BUILDING AIR INTAKES/EXHAUSTS. INSTALL PER MFG. INSTRUCTIONS.
11. 1/2" HOT WATER RETURN TO RP-2 AT WH-4.
12. PROVIDE WITH TV-1. SET TO 100°F.
13. 3/4" HW/CW TO COMMERCIAL LAUNDRY EQUIPMENT. PROVIDE W/ CV-1 & SHOCK ARRESTORS.
14. L.S. SHOWN FOR REFERENCE. MAIN ACCESS TO COVER. SEE WASTE PLAN.
15. DEDICATED 140°F HOT WATER LINE FOR COMMERCIAL WASHER.
16. WATER PIPING TO BE RUN IN MECH CHASE. TYPICAL FOR ALL SITUATIONS IN ALL BUILDINGS.

FIRE RATING LEGEND
1-HR WALL
1-HR WALL/ SMOKE WALL
SMOKE PARTITION



1 PLUMBING PLAN - DETOX PLAN WATER
SCALE: 1/4" = 1'-0"

isdesign ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.isdesignpa.com

MAPLE ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

Project
THE HEALING PLACE OF NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

Client
NEW HANOVER COUNTY, NORTH CAROLINA

All reproduction & intellectual property rights reserved © 2020

SITE PLAN

NORTH

Professional Seals

9/2/20

No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

Sheet Title
PLUMBING DETOX BUILDING PLAN WATER

Sheet Number
P104.0B

9/2/2020 2:23 PM
ISD-1801-P104.0B.DWG

PRIMARY CONDUCTORS (HORIZ.)

PIPE SIZE (IN)	PROJECTED ROOF AREA DRAINED (SQFT) RAINFALL RATE = 4.25 IN/HR
3	822 SQFT
4	1,800 SQFT
6	5,350 SQFT

BASED UPON CHAPTER 11 OF THE 2018 NC PLUMBING CODE.
STORM DRAINAGE CALCULATED ASSUMING A 1% SLOPE.

PRIMARY CONDUCTORS (VERT.)

PIPE SIZE (IN)	PROJECTED ROOF AREA DRAINED (SQFT) RAINFALL RATE = 4.25 IN/HR
3	2,200 SQFT
4	4,600 SQFT
6	13,500 SQFT

BASED UPON CHAPTER 11 OF THE 2018 NC PLUMBING CODE.

SECONDARY CONDUCTORS (HORIZ.)

PIPE SIZE (IN)	PROJECTED ROOF AREA DRAINED (SQFT) RAINFALL RATE = 7.4 IN/HR
3	456 SQFT
4	1,044 SQFT
6	2,971 SQFT
8	6,333 SQFT

BASED UPON CHAPTER 11 OF THE 2018 NC PLUMBING CODE.
STORM DRAINAGE CALCULATED ASSUMING A 1% SLOPE.

SECONDARY CONDUCTORS (VERT.)

PIPE SIZE (IN)	PROJECTED ROOF AREA DRAINED (SQFT) RAINFALL RATE = 7.4 IN/HR
3	1,228 SQFT
4	2,564 SQFT
6	7,522 SQFT

BASED UPON CHAPTER 11 OF THE 2018 NC PLUMBING CODE.

GENERAL NOTES - THIS SHEET

1. SEE SHEET P104.0A FOR CONTINUATION OF PIPING.
2. ALL ABOVE SLAB INTERIOR STORM PIPING TO BE CAST IRON.

TAGGED NOTES - THIS SHEET

1. NOT USED.
2. PRIMARY STORM DRAIN DOWN IN CHASE TO BELOW.
3. SECONDARY STORM DRAIN DOWN IN CHASE TO BELOW.

PRIMARY ROOF CALCs (AREA 1)

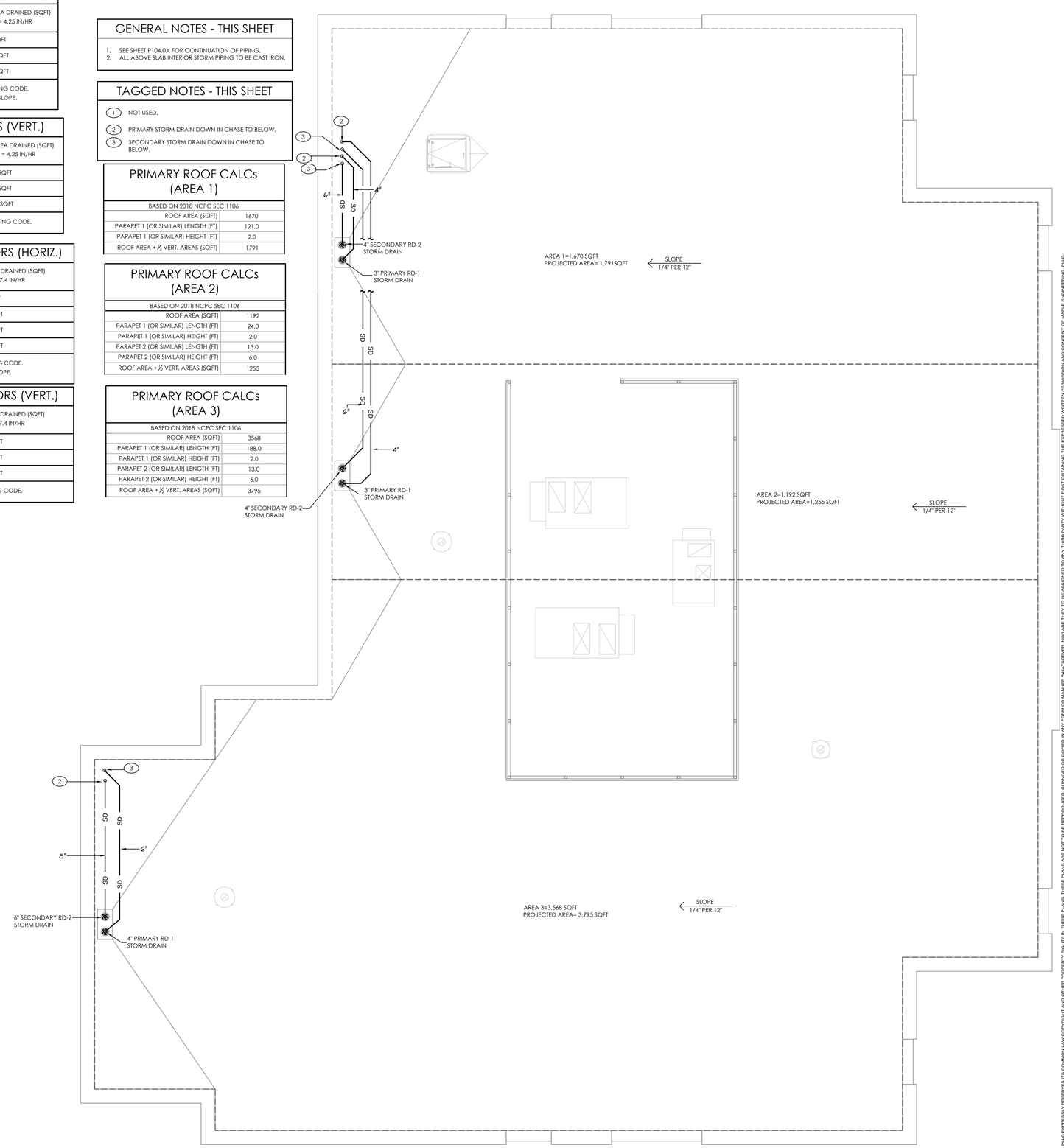
BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1670
PARAPET 1 (OR SIMILAR) LENGTH (FT)	121.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
ROOF AREA + ½ VERT. AREAS (SQFT)	1791

PRIMARY ROOF CALCs (AREA 2)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	1192
PARAPET 1 (OR SIMILAR) LENGTH (FT)	24.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	13.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	6.0
ROOF AREA + ½ VERT. AREAS (SQFT)	1255

PRIMARY ROOF CALCs (AREA 3)

BASED ON 2018 NCPC SEC 1106	
ROOF AREA (SQFT)	3568
PARAPET 1 (OR SIMILAR) LENGTH (FT)	188.0
PARAPET 1 (OR SIMILAR) HEIGHT (FT)	2.0
PARAPET 2 (OR SIMILAR) LENGTH (FT)	13.0
PARAPET 2 (OR SIMILAR) HEIGHT (FT)	6.0
ROOF AREA + ½ VERT. AREAS (SQFT)	3795



1 PLUMBING ROOF PLAN - DETOX PLAN
SCALE: 1/4" = 1'-0"

i-s design
ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.isdesignpa.com

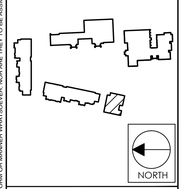
MAPLE ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

Project
THE HEALING PLACE OF NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

Client
NEW HANOVER COUNTY, NORTH CAROLINA

All reproduction & intellectual property rights reserved © 2020

SITE PLAN



Professional Seals

9/2/20

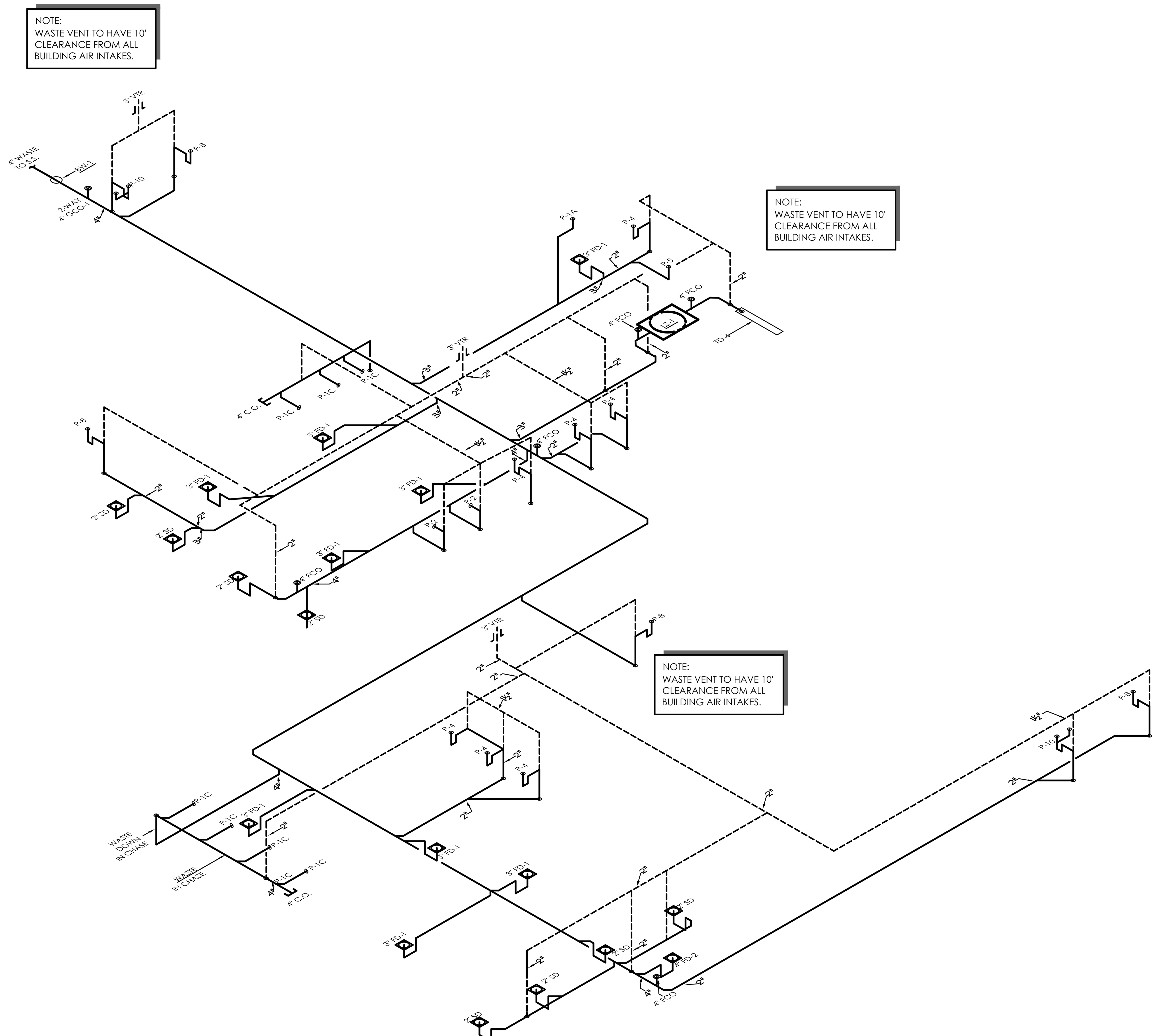
No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

Sheet Title
PLUMBING DETOX BUILDING ROOF PLAN

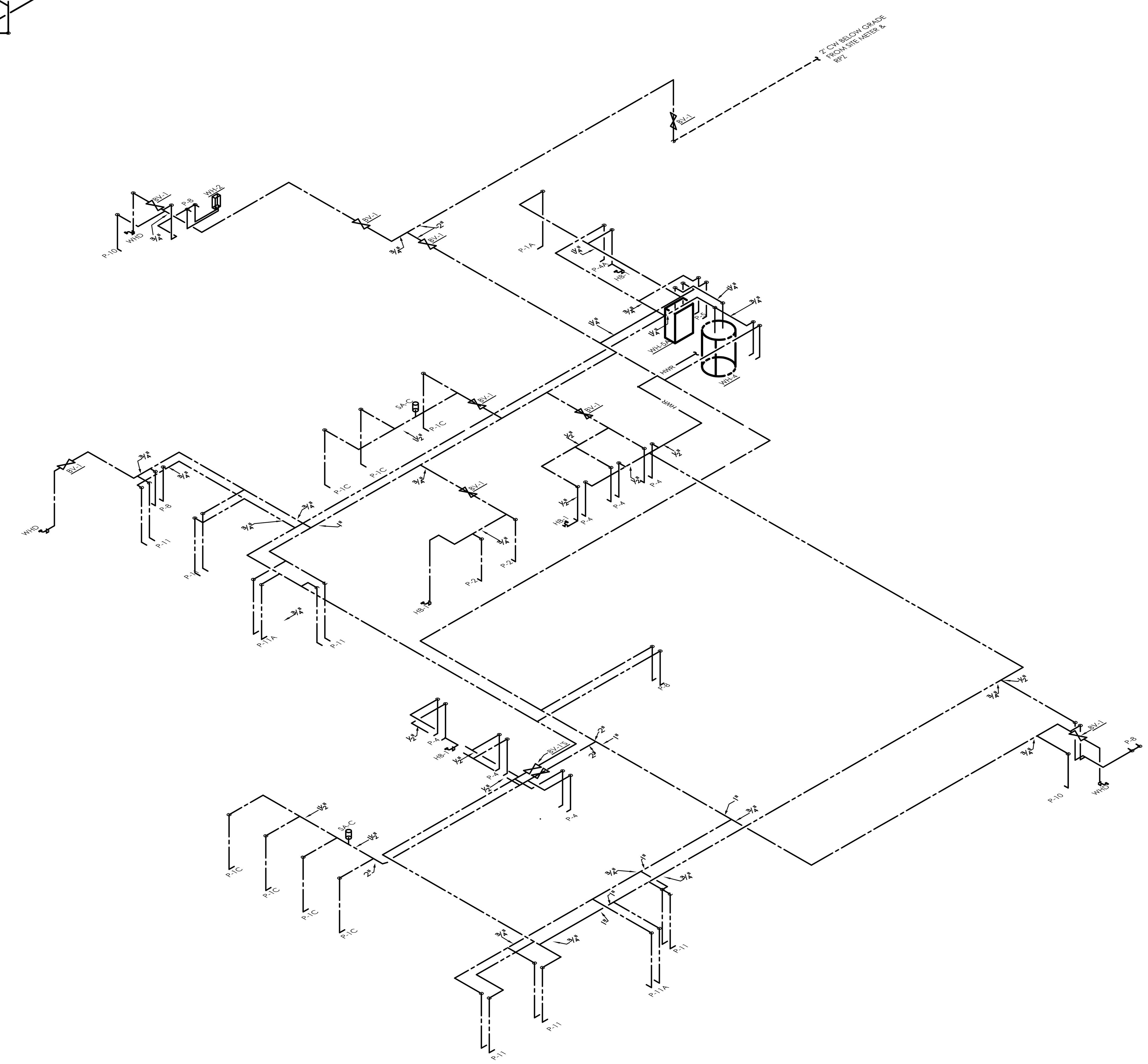
Sheet Number
P104.2

© 2020 MAPLE ENGINEERING, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MAPLE ENGINEERING, PLLC.

9/2/2020 2:23 P.M.
IES-1801-P104.2.DWG



2 WASTE/VENT RISER-DETOX BUILDING
NO SCALE



1 WATER RISER-DETOX BUILDING.
NO SCALE

isdesign
ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.isdesignpa.com

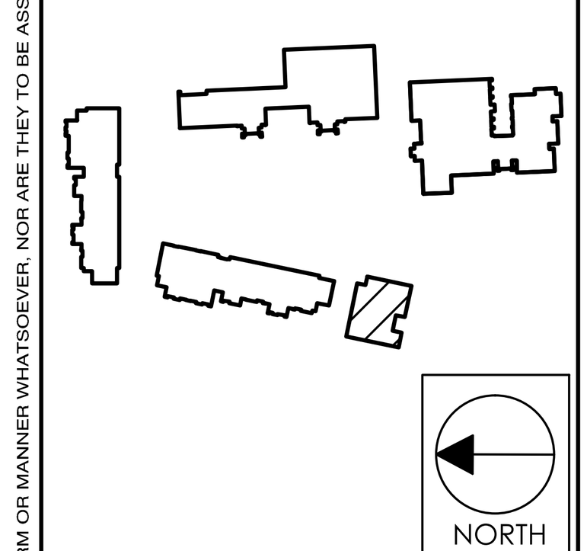
MAPLE
ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

Project
THE HEALING PLACE OF NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

Client
NEW HANOVER COUNTY, NORTH CAROLINA

All reproduction & intellectual property rights reserved. © 2020

SITE PLAN



Professional Seals
NORTH CAROLINA PROFESSIONAL SEAL 044528 ENGINEER DUSTIN M. METAYER
9/2/20

No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

Sheet Title
PLUMBING
DETOX BUILDING
RISER

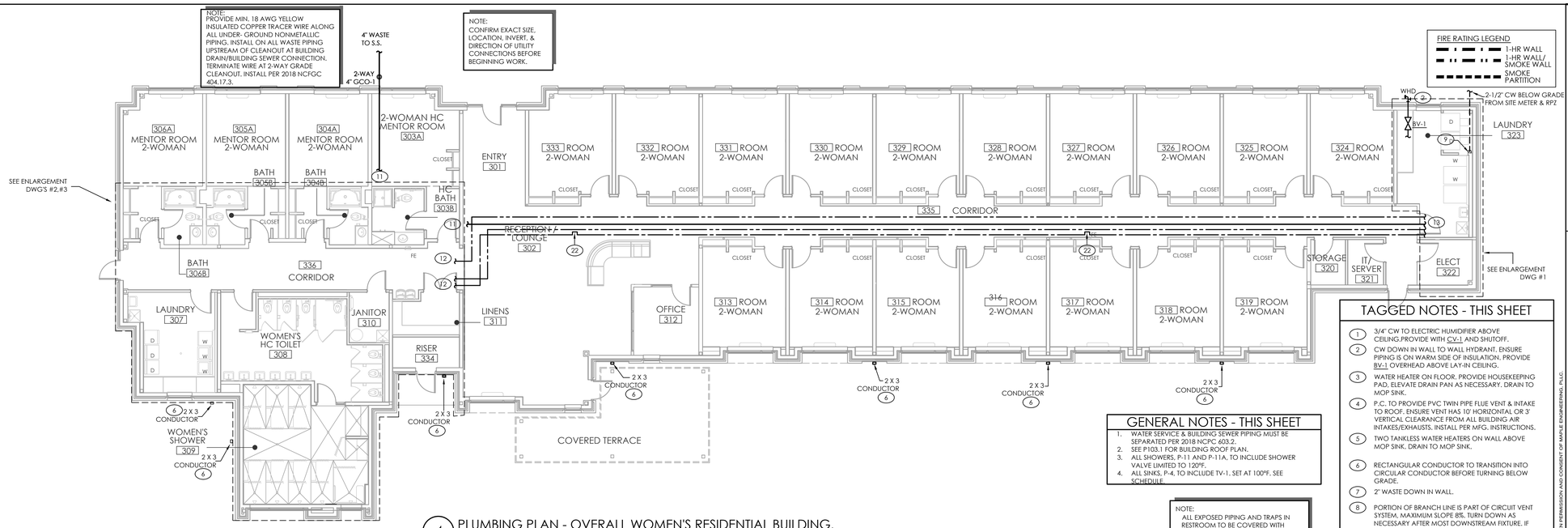
Sheet Number
P104.3

© 2020 MAPLE ENGINEERING, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MAPLE ENGINEERING, PLLC.

9/2/2020 2:23 PM
ISD-1801-P104.3.DWG

NOTE:
PROVIDE MIN. 18 AWG YELLOW INSULATED COPPER TRACER WIRE ALONG ALL UNDER- GROUND NONMETALLIC PIPING. INSTALL ON ALL WASTE PIPING UPSTREAM OF CLEANOUT AT BUILDING DRAIN/BUILDING SEWER CONNECTION. TERMINATE WIRE AT 2-WAY GRADE CLEANOUT. INSTALL PER 2018 NCFGC 404.17.3.

NOTE:
CONFIRM EXACT SIZE, LOCATION, INVERT, & DIRECTION OF UTILITY CONNECTIONS BEFORE BEGINNING WORK.



4 PLUMBING PLAN - OVERALL WOMEN'S RESIDENTIAL BUILDING.
SCALE: 1/8" = 1'-0"

FIRE RATING LEGEND
- 1-HR WALL
- 1-HR WALL/ SMOKE WALL
- SMOKE PARTITION

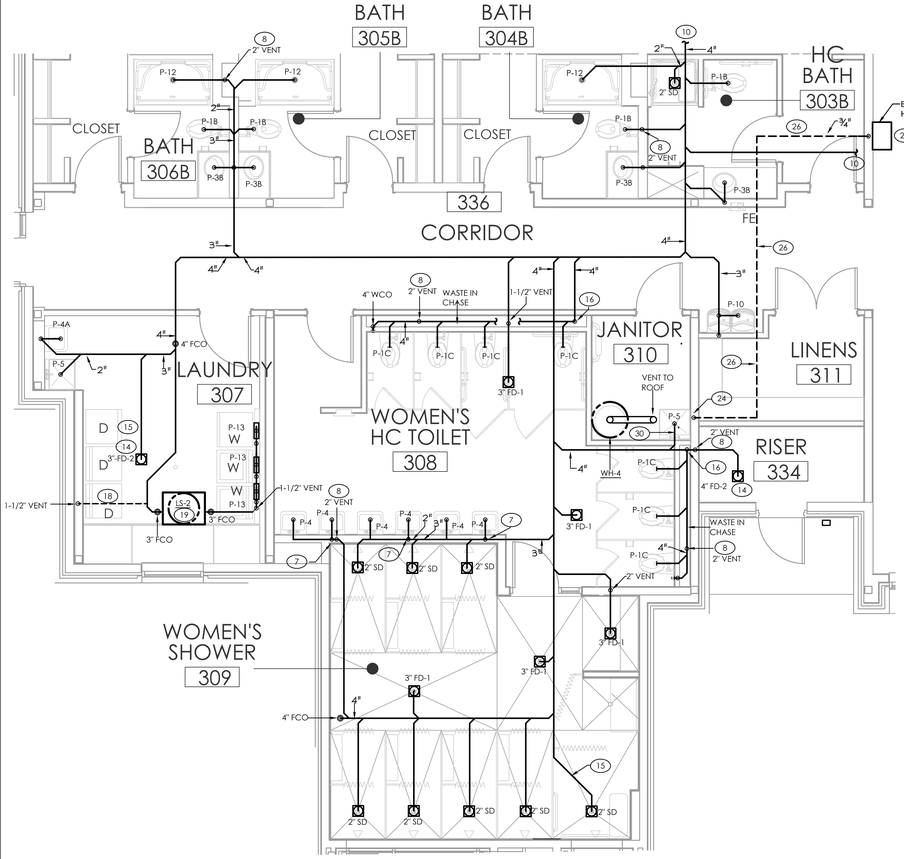
GENERAL NOTES - THIS SHEET

1. WATER SERVICE & BUILDING SEWER PIPING MUST BE SEPARATED PER 2018 NCPC 603.2.
2. SEE P103.1 FOR BUILDING ROOF PLAN.
3. ALL SHOWERS, P-11 AND P-11A, TO INCLUDE SHOWER VALVE LIMITED TO 120°F.
4. ALL SINKS, P-4, TO INCLUDE TV-1, SET AT 100°F. SEE SCHEDULE

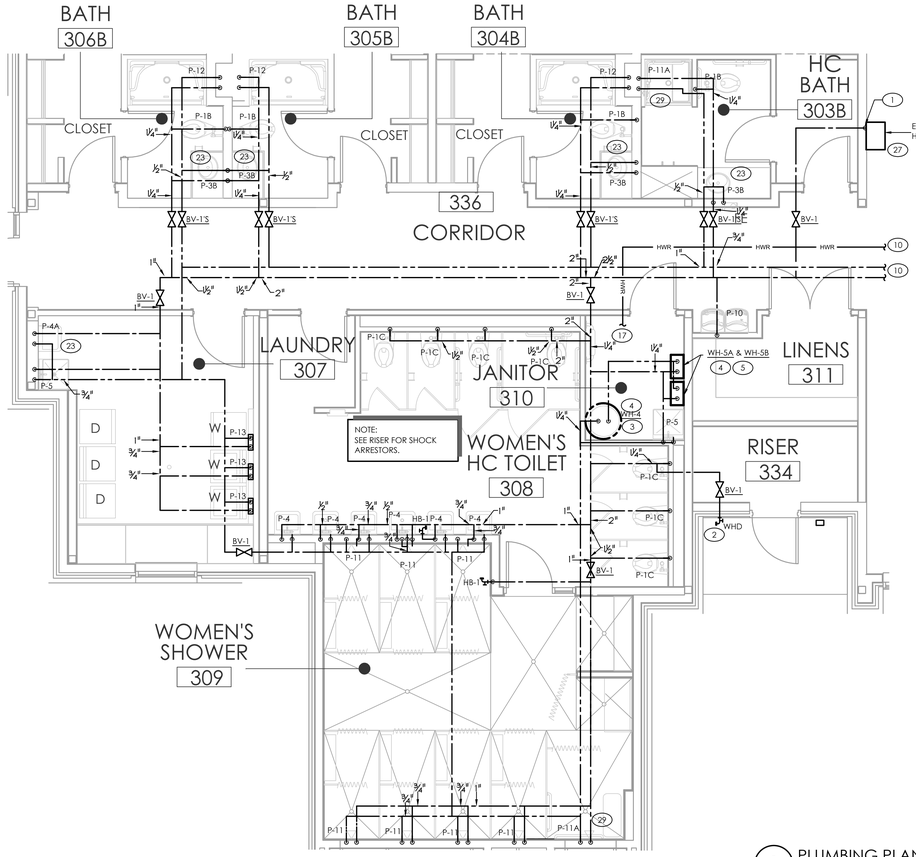
NOTE:
ALL EXPOSED PIPING AND TRAPS IN RESTROOM TO BE COVERED WITH FLEXIBLE PVC COVER. COORDINATE EXACT SELECTION AND COVER WITH ARCHITECT.

TAGGED NOTES - THIS SHEET

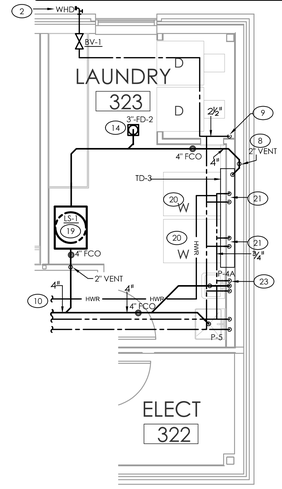
1. 3/4" CW TO ELECTRIC HUMIDIFIER ABOVE CEILING.PROVIDE WITH CV-1 AND SHUTOFF.
2. CW DOWN IN WALL TO WALL HYDRANT. ENSURE PIPING IS ON WARM SIDE OF INSULATION. PROVIDE BV-1 OVERHEAD ABOVE LAY-IN CEILING.
3. WATER HEATER ON FLOOR, PROVIDE HOUSEKEEPING PAD, ELEVATE DRAIN PAN AS NECESSARY. DRAIN TO MOP SINK.
4. P.C. TO PROVIDE PVC TWIN PIPE FLUE VENT & INTAKE TO ROOF. ENSURE VENT HAS 10' HORIZONTAL OR 3' VERTICAL CLEARANCE FROM ALL BUILDING AIR INTAKES/EXHAUSTS. INSTALL PER MFG. INSTRUCTIONS.
5. TWO TANKLESS WATER HEATERS ON WALL ABOVE MOP SINK. DRAIN TO MOP SINK.
6. RECTANGULAR CONDUCTOR TO TRANSITION INTO CIRCULAR CONDUCTOR BEFORE TURNING BELOW GRADE.
7. 2" WASTE DOWN IN WALL.
8. PORTION OF BRANCH LINE IS PART OF CIRCUIT VENT SYSTEM, MAXIMUM SLOPE 8%. TURN DOWN AS NECESSARY AFTER MOST DOWNSTREAM FIXTURE. IF SLOPE REQUIREMENTS CANNOT BE MAINTAINED, ADDITIONAL VENTS WILL BE REQUIRED.
9. 2-1/2" CW UP IN WALL FROM BELOW SLAB. PROVIDE WITH BV-1, LOW ON WALL.
10. SEE DWG#4 FOR CONTINUATION.
11. SEE DWG#3 FOR CONTINUATION.
12. SEE DWG#2 FOR CONTINUATION.
13. SEE DWG#1 FOR CONTINUATION.
14. PROVIDE WITH TRAP PRIMER FROM AREA CW LINE.
15. ENSURE DISTANCE FROM TRAP TO VENT DOES NOT EXCEED MORE THAN 12 FEET.
16. WASTE DOWN IN CHASE TO BELOW SLAB
17. 1/2" HOT WATER RETURN TO RP-1 AT WH-4.
18. 2" VENT BELOW SLAB. VENT TO RISE 6" VERTICALLY BEFORE TURNING HORIZONTAL. ENSURE MINIMUM OF 2% SLOPE.
19. LINT SEPARATOR BELOW SLAB.
20. COMMERCIAL LAUNDRY EQUIPMENT TO DRAIN TO TRENCH DRAIN WITH 1" AIR GAP.
21. 3/4" HW/CW TO COMMERCIAL LAUNDRY EQUIPMENT. PROVIDE W/ CV-1 & SHOCK ARRESTORS.
22. PROVIDE EXPANSION LOOPS EVERY 50' TO 75' FOR ALL STRAIGHT RUNS OF WATER PIPE.
23. PROVIDE WITH TV-1, SET TO 100°F.
24. 3/4" DRAIN LINE DOWN IN WALL FROM ELECTRIC HUMIDIFIER.DRAIN TO AREA FLOOR DRAIN WITH 1.5" AIR GAP.
25. NOT USED.
26. HUMIDIFIER WASTE OVERHEAD. PIPE TO BE COPPER. ENSURE SLOPE IS MAINTAINED.
27. ELECTRIC HUMIDIFIER OVERHEAD IN CEILING. COORDINATE EXACT LOCATION WITH M.C..
28. NOT USED.
29. CONFIRM SEAT SIDE OF ADA SHOWER WITH OWNER AND G.C..
30. BRANCH DRAIN FROM MOP SINK RECEIVING DISCHARGE OVER 140°F TO BE CAST IRON A MINIMUM OF 10' DOWNSTREAM FROM THE OUTLET PRODUCING DISCHARGE & RATED FOR 180°F.



3 PLUMBING PLAN - BATHROOM ENLARGEMENT WOMEN'S (WASTE)
SCALE: 1/4" = 1'-0"



2 PLUMBING PLAN - BATHROOM ENLARGEMENT WOMEN'S(WATER)
SCALE: 1/4" = 1'-0"



1 PLUMBING PLAN - LAUNDRY ROOM ENLARGEMENT WOMEN'S
SCALE: 1/4" = 1'-0"

i-s design
ARCHITECTURE + INTERIORS
1111 Haynes Street, Suite 103
Raleigh, North Carolina 27604
t. 919.833.5400
www.isdesignpa.com

MAPLE ENGINEERING, PLLC
708 ST. MARYS ST
RALEIGH, NC 27605 LIC.#: P-0990
P:919-341-4247 F:919-890-3797
PLUMBING MECHANICAL ELECTRICAL

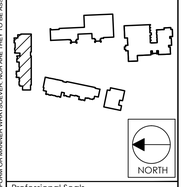
Project
THE HEALING PLACE OF NEW HANOVER COUNTY
1000 MEDICAL CENTER DRIVE
WILMINGTON, NORTH CAROLINA

Client
NEW HANOVER COUNTY, NORTH CAROLINA

All reproduction & intellectual property rights reserved © 2020

© 2020 MAPLE ENGINEERING, PLLC EXPRESSLY RESERVES ITS COMMON LAW COPYRIGHT AND OTHER PROPERTY RIGHTS IN THESE PLANS. THESE PLANS ARE NOT TO BE REPRODUCED, CHANGED OR COPIED IN ANY FORM OR MANNER WHATSOEVER, NOR ARE THEY TO BE ASSIGNED TO ANY THIRD PARTY WITHOUT FIRST OBTAINING THE EXPRESSED WRITTEN PERMISSION AND CONSENT OF MAPLE ENGINEERING, PLLC

SITE PLAN



Professional Seals

9/2/20

No.	Description	Date
	CONSTRUCTION DOCUMENT SET	08/25/20

Sheet Title
PLUMBING WOMEN'S RESIDENT BUILDING OVERALL & ENLARGEMENT PLANS

Sheet Number
P105.0

9/2/2020 2:23 PM
ISD-1801-P105.0.DWG