PU	IMBING FIXTURE SCHEDULE						EQUIPMENT SCHEDULE
		MINIMUM	MINIMUM	MINIMUM	MINIMUM	MINIMUM	PROVIDE SHOP DRAWING/SUBMITTAL AND OPERATIONS MANUAL FOR ALL ITEMS LISTED BELOW. PROVIDE EQUIPMENT TAGS PER SPECIFICATIONS FOR ALL ITEMS LISTED IN THIS SCHEDULE.
TAG	DESCRIPTION WATER CLOSETS:	<u>MINIMUM</u> <u>CW</u>	HW	<u>MINIMUM</u> <u>TRAP</u>	<u>Minimum</u> <u>Soil Or</u> <u>Waste</u>	MINIMUM VENT	WH1 WATER HEATER - EQUAL TO A.O. SMITH MODEL NO. BTH-120 NATURAL GAS FIRED ASME WATER HEATER WITH GLASS TANK LINING AND CONDENSATE NEUTRILIZING KIT. HEATER TO HAVE 100 GALLON NOMINAL STORAGE
<u>P10</u>	(RESIDENT UNIT) KOHLER "ELLISTON" MODEL K-43202 ELONGATED BOWL, FLOOR MOUNTED, WHITE, TANK TYPE, 1.28 GPF BOLT CAPS WITH SOFT CLOSE WHITE CLOSED FRONT SEAT WITH COVER, AND ANGLE SUPPLY WITH WHEEL HANDLE STOPS. PROVIDE MATTE BLACK FINISH TRIP LEVER.	1/2"	-	-	3"	1-1/2"	ET1 CAPACITY WITH RECOVERY CAPACITY OF 138 GPH AT 100°F TEMPERATURE RISE. 120 CFH INPUT RATING; 120V ET1 THERMAL EXPANSION COMPENSATOR - EQUAL TO AMTROL ST-25V-C, ASME RATED, 10.3 GALLON CAPACITY.
<u>P11</u>	KOHLER "ELLISTON" MODEL K-43202 ELONGATED BOWL, FLOOR MOUNTED, WHITE, TANK TYPE, 1.28 GPF BOLT CAPS. PROVIDE WHITE OPEN FRONT SEAT WITHOUT COVER, WITH SLOW CLOSE STAINLESS STEEL CHECK HINGES AND ANGLE SUPPLY WITH WHEEL HANDLE STOPS. PROVIDE MATTE BLACK FINISH TRIP LEVER.	1/2"	-	-	3"	1-1/2"	TMV1 THERMOSTATIC MIXING VALVE - EQUAL TO LEONARD "NUCLEUS" MODEL NO. NV-15-LF-IF-RTS, DIGITAL MIXING VALVE WITH 1-1/4" INLET AND 1-1/2" OUTLET CONNECTIONS, INLET, OUTLET AND RETURN TEMPERATURE
	LAVATORIES: PROVIDE COMPLETE UNDER LAVATORY ANTI-MICROBIAL WASTE AND WATER PIPING PROTECTION INSULATION KITS AS MANUFACTURERED BY PLUMBEREX SPECIALTY PRODUCTS, INC., OR TRUEBRO, INC. ON ALL HANDICAPPED LAVATORIES WHERE PIPING IS EXPOSED AND NO APRON/REMOVABLE PANEL IS PROVIDED.						SENSORS, 200 PSI MAXIMUM OPERATING PRESSURE, VALVE TO HAVE MAXIMUM PRESSURE DROP OF 5 PSI AT 50 GPM FLOW RATE. PROVIDE WALL MOUNTING BRACKET AND ALL REQUIRED ACCESSORIES FOR A COMPLETE OPERATIONAL SYSTEM. 120V ELECTRICAL CONNECTION.
<u>P30</u>	(RESIDENT UNIT) LAVATORY BOWL: KOHLER "CAXTON" MODEL K-2210-N, VITREOUS CHINA, UNDERMOUNT, 19-1/4" WIDE X 16-1/4" LONG, WHITE FINISH. FAUCET: MOEN ¼LINDOR" MODEL 84505SRS, SINGLE LEVER HANDLE, 1.2 GPM, SPOT RESIST STAINLESS FINISH. ACCESSORIES: POP UP DRAIN.	1/2"	1/2"	1-1/4"	1-1/2"	1-1/2"	SP1 ELEVATOR SUMP PUMP - EQUAL TO STANCOR SE-50 ELEVATOR SUMP PUMP, 1/2 HP, 120V, 1 PHASE. PROVIDE WITH WATER LEVEL PROBE AND CONTROL PANEL. WITH WATER LEVEL PROBE AND CONTROL PANEL.
<u>P31</u>	ACCESSORIES. POP OF DRAIN. LAVATORY BOWL: KOHLER "VERTICYL" MODEL K-2882, VITREOUS CHINA, UNDERMOUNT, RECTANGULAR 19-3/4" WIDE X 15-5/8" LONG, FRONT OVERFLOW, WHITE FINISH. FAUCET: MOEN "AVRI" MODEL 84154 FAUCET, LEVER HANDLES, 1.2 GPM, MATTE BLACK FINISH.						BFP1, BFP2 BACKFLOW PREVENTER - EQUAL TO ZURN WILKINS MODEL NO. 975XL-S-TCU. PROVIDE WITH AIR GAP ASSEMBLY, QUARTER TURN BALL VALVES, TEST VALVES AND WYE STRAINER ON INLET SIDE OF VALVE.
	ACCESSORIES: GRID STRAINER DRAIN, WATTS MODEL LFUSG-B-M2 POINT OF USE THERMOSTATIC MIXING VALVE CONFORMING TO ASSE 1070, WITH INTEGRAL CHECK VALVES. SET MAXIMUM OUTLET TEMPERATURE TO 110 DEGREES.	1/2"	1/2"	1-1/4"	1-1/2"	1-1/2"	CP1 HOT WATER RECIRCULATION PUMP - EQUAL TO BELL AND GOSSETT "ECOCIRC" PUMP MODEL NO. XL-N-36-45 WITH CAPACITY OF 14 GPM @ XX FT/HEAD, 1/6 HP, 115V, 1 PHASE, WITH STAINLESS STEEL CONSTRUCTION. BP1 DOMESTIC WATER BOOSTER PUMP - EQUAL TO TOWLE WHITNEY PUMP MODEL NO. TW2018-80W-40 DUPLEX
	SINKS: PROVIDE COMPLETE UNDER SINK ANTI-MICROBIAL WASTE AND WATER PIPING PROTECTION INSULATION KITS AS MANUFACTURERED BY PLUMBEREX SPECIALTY PRODUCTS, INC., OR TRUEBRO, INC. ON ALL HANDICAPPED SINKS WHERE PIPING IS EXPOSED AND NO APRON/REMOVABLE PANEL IS PROVIDED.						PUMP SYSTEM WITH 1-1/2 HP, 208V, 3 PHASE MOTORS, VFD'S ON PUMPS, 20 GALLON HYDRO ACCUMULATOR TANK, CONTROL PANEL, 2" COPPER HEADERS, AND ALL REQUIRED ACCESSORIES FOR A COMPLETE OPERATIONAL SYSTEM, SYSTEM CAPACITY OF 80 GPM TOTAL 40 GPM EACH PUMP. OUTLET PRESSURE TO BE
<u>P40</u>	(RESIDENT UNIT) KITCHEN SINK BASIN: ELKAY "CROSSTOWN" MODEL ECTRU30179RT, STAINLESS STEEL, SINGLE BOWL, UNDERMOUNT SINK. 31-1/2" WIDE X 18-1/2" LONG X 9" DEEP. (RESIDENT UNIT) KITCHEN SINK BASIN: UPGRADE OPTION: ELKAY "CROSSTOWN" MODEL ECTRU31179T, STAINLESS STEEL, DOUBLE BOWL, UNDERMOUNT SINK. 31-1/2" WIDE X 18-1/2" LONG X 9" DEEP. DEEP.						SET AT 70 PSI.
	FAUCET: MOEN "GEORGENE" MODEL 87912SRS, SINGLE HOLE, SINGLE LEVER HANDLE, HIGH ARC SPOUT, PULLDOWN SPRAY, 1.5 GPM, SPOT RESIST STAINLESS FINISH. ACCESSORIES: BASKET STRAINER DRAIN ASSEMBLY. DO NOT INSTALL INCLUDED DECKPLATE. PLUMBING CONTRACTOR TO INSTALL GARBAGE DISPOSAL AT KITCHEN SINK. GENERAL CONTRACTOR TO FURNISH GARBAGE DISPOSAL. REFER TO ARCHITECTURAL PLANS AND SPECIFICATIONS	1/2"	1/2"	1-1/2"	1-1/2"	1-1/2"	
<u>P41</u>	FOR GARBAGE DISPOSAL INFORMATION. COORDINATE INSTALLATION WITH GENERAL CONTRACTOR. (RESIDENT UNIT) LAUNDRY SINK BASIN: JUST MANUFACTURING MODEL USF1818A-J, STAINLESS STEEL, SINGLE BOWL, UNDERMOUNT SINK. 18-1/2" WIDE X 18-1/2" LONG X 7-7/8" DEEP WITH OVERFLOW DRAIN. PROVIDE WITH MANUFACTURER RECOMMENDED OVERFLOW ASSEMBLY.						PLUMBING DRAINS/CLEANOUT SCHEDULE
	FAUCET: MOEN "GEORGENE" MODEL 87912SRS, SINGLE HOLE, SINGLE LEVER HANDLE, HIGH ARC SPOUT, PULLDOWN SPRAY, 1.5 GPM, SPOT RESIST STAINLESS FINISH. ACCESSORIES: BASKET STRAINER DRAIN ASSEMBLY. DO NOT INSTALL INCLUDED DECKPLATE.	1/2"	1/2"	1-1/2"	1-1/2"	1-1/2"	PROVIDE SHOP DRAWING/SUBMITTAL AND OPERATIONS MANUAL FOR ALL ITEMS LISTED BELOW.
_ <u>P42</u> _	MOP SINK: FIAT MODEL MSB-2424, MOLDED STONE, 3" QUICK DRAIN CONNECTOR. 24" WIDE X 24" LONG X 10" DEEP. FAUCET: CHICAGO MODEL 897-CRCF SERVICE SINK FAUCET WITH VACUUM BREAKER AND INTEGRAL CHECK VALVES AND INTEGRAL STOPS. ACCESSORIES: HOSE AND HOSE BRACKET, MOP HANGER, ADJUSTABLE WALL BRACE, PAIL HOOK, STAINLESS STEEL BUMPERGUARDS ON ALL CURBS AND STAINLESS STEEL WALL GUARDS ON ALL	1/2"	1/2"	3"	3"	1-1/2"	CLEANOUTS: CLEANOUTS SHALL BE LINE SIZE UP TO 4". FOR PIPE SIZES LARGER THAN 4" PROVIDE A 4" CLEANOUT, WHERE ALLOWED BY CODE AND AUTHORITY HAVING JURISDICTION. ALL EXTERIOR AND INLINE CLEANOUTS SHALL BE TWO-WAY.
<u>P43</u>	ADJACENT WALLS. (COMMUNITY ROOM) SINK BASIN: ELKAY "CROSSTOWN" MODEL ECTRU1719T, STAINLESS STEEL, SINGLE BOWL, UNDERMOUNT SINK. 18-1/2" WIDE X 18-1/2" LONG X 9" DEEP. FAUCET: MOEN "ADLER" MODEL 87233 FAUCET, SINGLE HOLE, SINGLE LEVER HANDLE, HIGH ARC SPOUT, PULLDOWN SPRAY, 1.5 GPM, MATTE BLACK FINISH.	1/2"	1/2"	1-1/2"	2"	1-1/2"	CO EXPOSED HORIZONTAL OR VERTICAL CLEANOUT IN PIPING EXPOSED OR CONCEALED ABOVE ACCESSIBLE CEILINGS. FCO (REFER TO ARCHITECTURAL DRAWINGS FOR FLOOR FINISH INFORMATION. PROVIDE CLEANOUTS AS DESCRIBED BELOW.)
	ACCESSORIES: BASKET STRAINER DRAIN ASSEMBLY. DO NOT INSTALL INCLUDED DECKPLATE.	1/2	1/2	1-1/2	2	1-1/2	 FOR AREAS WHERE CARPET WILL BE INSTALLED PROVIDE ROUND ADJUSTABLE CLEANOUT WITH CARPET MARKER. BACK OF HOUSE AREAS (I.E. KITCHEN, UTILITY ROOMS, LAUNDRY ROOMS AND SIMILAR SPACES) WHERE TILE FLOORS ARE TO BE INSTALLED, PROVIDE SQUARE ADJUSTABLE CLEANOUT WITH STAINLESS STEEL COVER. IN PUBLIC AREAS (I.E. DINING ROOMS, CORRIDORS, OFFICES, CONFERENCE ROOMS AND SIMILAR SPACES) WHERE TILE
<u>P50</u>	ELKAY MODEL LZSTL8WSSK BI-LEVEL, ADA COMPLIANT, ELECTRIC WATER COOLER WITH BUBBLER AND ELKAY EZH20 BOTTLE FILLING STATION. CAPACITY TO CHILL 8 GALLONS PER HOUR OF 50F DRINKING WATER, BASED ON 80F INLET WATER AND 90F AMBIENT TEMPERATURE. PROVIDE ANGLE STOP WITH WHEEL HANDLE. 115V POWER CONNECTION.	1/2"	-	1-1/4"	2"	1-1/2"	 IN POBLIC AREAS (I.E. DINING ROOMS, CORRIDORS, OFFICES, CONPERENCE ROOMS AND SIMILAR SPACES) WHERE TILE FLOORS ARE TO BE INSTALLED, PROVIDE SQUARE ADJUSTABLE CLEANOUT WITH RECESS TILE COVER. IN AREAS SUBJECT TO TRAFFIC (I.E. PARKING GARAGES, PARKING SPACES AND SIMILAR SPACES) PROVIDE HEAVY DUTY/TRAFFIC RATED CLEANOUT COVER.
<u>P51</u>	ELKAY MODEL EZWS8K, EZH20 IN-WALL BOTTLE FILLING STATION. CAPACITY TO CHILL 8 GALLONS PER HOUR OF 50F DRINKING WATER, BASED ON 80F INLET WATER AND 90F AMBIENT TEMPERATURE. PROVIDE ANGLE STOP WITH WHEEL HANDLE. CHILLER UNIT MOUNTED IN WALL BEHIND UNIT. 115V POWER CONNECTION.	1/2"	-	1-1/4"	2"	1-1/2"	GCO CLEANOUT TO GRADE WITH HEAVY DUTY ACCESS COVER CAST IN A 12" X 12" X 4" THICK CONCRETE PAD. (PAD MAY BE ELIMINATED IN POURED CONCRETE SIDEWALKS, DRIVEWAYS, PATIOS, ETC.)
	SHOWERS/TUB/BATHING UNITS: SHOWERS SHALL HAVE A MAXIMUM FLOW RATE OF 2.5 GALLONS PER MINUTE. UNITS SHALL BE CONFIGURED LEFT-HAND AND RIGHT-HAND UNITS AS REQUIRED BY FLOOR PLAN LAYOUT. PROVIDE INLET CHECK STOPS ON ALL SHOWER VALVES THAT ARE CONNECTED TO HAND-HELD SHOWER WANDS WITH ON/OFF CAPABILITY.						WCO PROVIDE CLEANOUT IN VERTICAL PIPE WITH STAINLESS STEEL ACCESS COVER. (WHERE PIPES ARE CONCEALED IN WALLS OR CHASES.)
<u>P60</u>	(RESIDENT UNIT) SURROUND: WALLS AND FLOOR TO BE TILE. SEE ARCHTECTURAL FINISH SPECIFICATIONS. SHOWER TRIM: MOEN "BELFIELD" MODEL T2310 PRESSURE-BALANCED MIXING DIVERTER VALVE WITH FIELD INSTALLED CHECK STOPS, MOEN MODEL 52710EP, 2.5 GPM HAND HELD SHOWER WITH 72" METAL HOSE, VACUUM BREAKER, AND 30" SLIDE BAR, AND MOEN "VERSO" MODEL 220R5, 2.5 GPM SHOWER HEAD, BRUSHED NICKEL FINISH. PROVIDE ALL REQUIRED MATCHING	1/2"	1/2"	0"	2"	1-1/2"	ROOF/OVERFLOW DRAINS: ACCEPTABLE MANUFACTURERS: ZURN, WATTS, JOSAM, JAY R. SMITH, FROET INDUSTRIES. RD ROOF DRAIN - EQUAL TO ZURN 100. DRAIN SHALL HAVE DURA-COATED CAST IRON BODY WITH POLY-DOME, COMBINATION
	MANUFACTURER ACCESSORIES. DRAIN: PROVIDE 2" OUTLET SQUARE BRUSHED NICKEL FINISH SHOWER DRAIN.	1/2	1/2	2	2	1-1/2	MEMBRANE FLASHING CLAMP/GRAVEL GUARDS, SUMP RECEIVER, UNDERDECK CLAMPING DEVICE, EXTENSION COLLAR TO SUIT THICKNESS OF INSULATION. OD OVERFLOW DRAIN - EQUAL TO ZURN Z100-W2. DRAIN SHALL HAVE DURA-COATED CAST IRON BODY WITH POLY-DOME,
<u>P61</u>	(RESIDENT UNIT D DELUXE) BATHTUB: KOHLER STERLING "SPECTACLE" MODEL K-95337, 60-1/8" X 34-1/4" FREESTANDING BATH WITH ACRYLIC FINISH. TRIM: MOEN "VOSS" MODEL T694, 1.75 GPM, TWO HANDLE ROMAN TUB FAUCET TRIM WITH DIVERTER VALVE AND SINGLE FUNCTION HANDSHOWER WITH CHECK VALVES, BRUSHED NICKEL FINISH. PROVIDE ALL REQUIRED MATCHING MANUFACTURER ACCESSORIES.	1/2"	1/2"	1-1/2"	2"	1-1/2"	OD OVERFLOW DRAIN - EQUAL TO ZURN Z100-W2. DRAIN SHALL HAVE DURA-COATED CAST IRON BODY WITH POLY-DOME, INTERNAL OVERFLOW WATER DAM, COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARDS, SUMP RECEIVER, UNDERDECK CLAMPING DEVICE, EXTENSION COLLAR TO SUIT THICKNESS OF INSULATION.
P70	MISCELLANEOUS: WASHING MACHINE CONNECTION BOX: UNIT SHALL BE RECESSED TYPE, BOX AND FACE PLATE SHALL BE CONSTRUCTED OF MINIMUM 20 GAUGE STEEL WITH EPOXY FINISH, OR HEAVY-DUTY						ODS OVERFLOW DISCHARGE SPOUT - EQUAL TO ZURN ZF199, OVERFLOW DISCHARGE SPOUT, ALUMINUM BODY WITH FLAPPER. FIELD VERIFY EXACT LOCATION. FINAL COLOR OPTION TO BE SELECTED BY ARCHITECT.
	PLASTIC ABS. UNIT SHALL BE FITTED WITH 2-INCH DRAIN CONNECTION, SUPPLY HOSE CONNECTIONS AS REQUIRED, WATER HAMMER ARRESTORS CONFORMING TO ASSE 1010. BOXES LOCATED ON RATED CORRIDOR OR RATED UNIT SEPARATION WALL SHALL BE A FIRE-RATED BOX ASSEMBLY APPROVED FOR FIRE-RATED INSTALLATION. EXACT CONFIGURATION OF WATER SUPPLIES AND DRAIN LOCATION SHALL BE VERIFIED IN FIELD TO SUIT FIELD CONDITIONS. AVOID CONFLICT WITH DRYER EXHAUST, ELECTRICAL COMPONENTS, WALL FRAMING, ETC.	1/2"	1/2"	2"	2"	1-1/2"	FLOOR DRAINS AND FLOOR SINKS: ACCEPTABLE MANUFACTURERS: ZURN, WATTS, JOSAM, JAY R. SMITH. NOTES: 1. PROVIDE P-TRAPS, SEAL DEPTH AS REQUIRED BY PLUMBING CODE, WITH ALL FLOOR DRAINS AND FLOOR SINKS,
<u>P71</u>	ICE MAKER CONNECTION BOX: UNIT SHALL BE RECESSED TYPE, BOX AND FACE PLATE SHALL BE CONSTRUCTED OF MINIMUM 20 GAUGE STEEL WITH EPOXY FINISH, OR HEAVY-DUTY PLASTIC ABS. UNIT SHALL BE FITTED WITH SUPPLY VALVE AND WATER HAMMER ARRESTOR. BOXES LOCATED ON RATED CORRIDOR OR RATED UNIT SEPARATION WALL SHALL BE A FIRE-RATED BOX ASSEMBLY	1/2"	-	-		-	 PROVIDE F-TRAPS, SEAL DEPTH AS REQUIRED BY PLOMBING CODE, WITH ALL PLOOR DRAINS AND PLOOR SINKS, UNLESS NOTED OTHERWISE. DRAINS SHALL BE INSTALLED WITH TOP OF DRAIN FLUSH WITH FINISHED FLOOR, UNLESS NOTED OTHERWISE, AND IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS.
<u>FPWH</u>	APPROVED FOR FIRE-RATED INSTALLATION. MOUNT BOTTOM OF BOX ABOVE TRIM/BASEBOARD. FIELD VERIFY EXACT LOCATION. FREEZEPROOF WALL HYDRANT: EQUAL TO WOODFORD MODEL #65, AUTOMATIC DRAINING CHROME-PLATED WALL HYDRANT. MOUNT 24" ABOVE FINISHED GRADE, UNLESS WALL CONSTRUCTION/MATERIALS DICTATE ALTERNATE MOUNTING HEIGHT. FIELD VERIFY EXACT LOCATION.	3/4"	-	-	_	-	3. ALL DRAINS INSTALLED IN SLABS OR PATIOS NOT IN SLABS ON GRADE TO BE PROVIDED WITH MEMBRANE/LEAD FLASHINGS 3'-0" SQUARE. VERIFY EXACT SIZE ON SITE.
<u>TP</u>	PROVIDE BRONZE TRAP PRIMER VALVE WITH AUTOMATIC VACUUM BREAKER COMPLYING WITH ASSE 1018 WITH 1/2" CONNECTIONS MATCHING PIPING SYSTEM. PROVIDE TRAP PRIMERS BY PRECISION PLUMBING PRODUCTS, INC.; JOSAM, MFG. CO.; ZURN INDUSTRIES INC.; SMITH MFG. CO; OR WATTS DRAINAGE.	1/2"	-	-	-	-	FD1 (MECHANICAL/PLUMBING ROOMS, SIMILAR SPACES) - FLOOR DRAIN - EQUAL TO ZURN Z550-Y. DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET, 9" DIAMETER STRAINER, AND SEDIMENT BUCKET. PROVIDE WITH TRAP PRIMER CONNECTION WHERE INDICATED ON DRAWINGS.
ETP	PRECISION PLUMBING PRODUCTS (PPP) ELECTRONIC TRAP PRIMER, MINI-PRIME MODEL MPB-500-115V. 115 VOLT ELECTRICAL POWER CONNECTION REQUIRED. UNIT PROVIDED WITH SHUT-OFF VALVE AT INLET OF PRIMER ASSEMBLY. PROVIDE WITH OPTIONAL DISTRIBUTION UNIT WHERE REQUIRED.	1/2"	-	-	-	-	<u>FS1</u> (CONCRETE FLOORS) - FLOOR SINK - EQUAL TO ZURN ZN1900. 4" BOTTOM OUTLET, CAST-IRON BODY, ANTI-SPLASH INTERIOR AND SEDIMENT BUCKET, NICKEL BRONZE 1/2 GRATE, 12" SQUARE BY 6" DEEP.
<u>НВ</u>	HOSE BIBB: EQUAL TO WOODFORD MODEL NO. 26, ROUGH BRASS FINISH, WITH 3/4" HOSE CONNECTION, VACUUM BREAKER, AND LOOSE KEY HANDLE. ROOF POST HYDRANT: EQUAL TO ZURN Z1395, NON-FREEZE, WITH VACUUM BREAKER, 3/4" HOSE CONNECTION. DEPTH OF BURY TO BE BASED UPON 4 FEET SO THAT DRAIN PORT IS LOCATED	1/2" 3/4"	-	-	-	-	
1. FIXT	BELOW ATTIC INSULATION IN CEILING SPACE OF ROOM BELOW. FIELD VERIFY DEPTH OF BURY PRIOR TO ORDERING. JRES SHALL BE PROVIDED WITH ALL ITEMS, ARTICLES, MATERIALS AND INCIDENTALS, AS REQUIRED, INCLUDING ALL LABOR NECESSARY FOR A COMPLETE PLUMBING INSTALLATION.	5/4	-	-	-	-	
	PLUMBING CONTRACTOR SHALL CLEAN ALL FIXTURES, POLISH ALL METAL PARTS, CHECK AND ADJUST ALL FITTINGS, FAUCETS AND VALVES. ALL OPERATING INSTRUCTIONS SHALL BE TURNED OVER TO /IDE INDIVIDUAL STOPS ON ALL PLUMBING FIXTURES.) THE GENERA	AL CONTRACTOR	FOR PRESENTA	TION TO THE O	WNER.	
	AVATORY, SINK, LAUNDRY TUB, WATER COOLER AND SIMILAR FIXTURE TRAPS, INCLUDING THOSE MOUNTED IN CASEWORK, SHALL BE CHROME PLATED, CAST BRASS, MINIMUM 17-GAUGE, ADJUSTABLE	TYPE WITH C	LEANOUT PLUG.				
6. ALL	XPOSED SUPPLY PIPES, STOPS, FLEXIBLE RISERS, INCLUDING THOSE MOUNTED IN CASEWORK, SHALL HAVE A POLISHED CHROME PLATED FINISH AND BE OF THE SAME MANUFACTURER THROUGHOUT	THE JOB.					PIPING INSULATION SCHEDULE
	/IDE CHROME PLATED ESCUTCHEONS AT ALL FIXTURE SUPPLY AND WASTE PIPE PENETRATIONS THROUGH WALLS, INCLUDING THOSE MOUNTED IN CASEWORK. VATER CLOSET FLUSHING MECHANISMS ON HANDICAP WATER CLOSETS SHALL BE INSTALLED ON THE "WIDE SIDE" OF EACH WATER CLOSET TO MAINTAIN ADA ACCESSIBILITY.						PIPING SYSTEM TYPE (OPERATING TEMPERATURE RANGE) PIPING SIZE RANGE INSULATION THICKNESS INSULATION JACKET VAPOR BARRIER REMARKS DOMESTIC COLD WATER RIPING 1/2" TO 1-1/4" 1/2" 1/2" 1/2"
	/IDE INLET CHECK STOPS ON ALL FIXTURES (I.E. MOP SINKS, KITCHEN PRE-RINSE SPRAY UNITS, SHOWER VALVES, SPA BATHING UNITS AND SIMILAR FIXTURE(S) SUSCEPTIBLE TO BACKFLOW/CROSS CO /IDE CONCEALED FIXTURE CARRIERS AND SUPPORTS OF PROPER TYPE AND DESIGN TO SUIT JOB CONDITIONS. PROVIDE CARRIERS BY J.R. SMITH MFG. CO.; ZURN INDUSTRIES, INC.; JOSAM MFG. CO.; W						DOMESTIC COLD WATER PIPING 1/2" TO 1-1/4" 1/2" (40°F - 60°F) 1-1/2" AND LARGER 1" ASJ YES 1, 2, 3, 4
	IBING FIXTURE COLORS SHALL BE SELECTED BY ARCHITECT/OWNER AT A LATER DATE FROM STANDARD FACTORY COLORS, UNLESS OTHERWISE NOTED TO BE DESIGNER COLOR IN SCHEDULE.	ΜΔΝΙΙΕΔΩΤΙΙΕ					DOMESTIC HOT WATER SUPPLY AND RETURN PIPING (105°F - 140°F) 1/2" TO 1-1/4" 1" ASJ NO 1, 2, 3, 4
LIST	DING FACTORES AND TRIM SPECIFIED IN THIS SCHEDULE ARE TO ESTABLISH A STANDARD LEVEL OF QUALITY. OTHER MANOLACTORERS MAY BE CONSIDERED EQUAL: SEE LISTINGS BELOW FOR SOME D BELOW MAY ALSO BE CONSIDERED WITH WRITTEN APPROVALS OBTAINED FROM ARCHITECT AND/OR ENGINEER PRIOR TO TEN DAYS BEFORE BIDS ARE DUE.			D EQUALS. UTI			ROOF AND OVERFLOW DRAIN STORM PIPING ALL PIPE SIZES 1/2" ASJ YES 1, 2, 4, 5
	<u>MOP SINKS:</u> FIAT, E.L. MUSTEE, PROFLO STAINLESS STEEL SINKS: ELKAY, DAYTON, JUST						REMARKS
D.	AUCETS, SHOWER VALVES AND TRIM, FLUSH VALVES: AMERICAN STANDARD, KOHLER, SLOAN, ELKAY, MOEN, T&S BRASS, DELTA, CHICAGO						 REFER TO PLUMBING INSULATION SPECIFICATIONS FOR ADDITIONAL INFORMATION. PIPING MATERIAL TO BE GLASS FIBER, PREFORMED PIPE INSULATION. INSTALL PER MANUFACTURERS RECOMMENDATIONS. INSULATION THICKNESS LISTED IS MINIMUM REQUIRED. INSULATION THICKNESS SHALL BE IN ACCORDANCE WITH ALL APPLICABLE STATE
	<u>VATER COOLERS, DRINKING FOUNTAINS:</u> ELKAY, SLOAN, OASIS, SUNROC, HALSEY TAYLOR /IDE SHOP DRAWING/SUBMITTAL AND OPERATIONS MANUAL FOR ALL ITEMS LISTED ABOVE IN PLUMBING FIXTURE SCHEDULE.						 AND LOCAL ENERGY CODES. ASJ = ALL SERVICE JACKET ALL ROOF AND OVERFLOW DRAIN BODIES AND PIPING FROM THE DRAIN TO THE FIRST VERTICAL RISER DROP.
	IUM SIZES IN SCHEDULE ABOVE REPRESENT MINIMUM PLUMBING FIXTURE CONNECTIONS ALLOWED AND DOES NOT REFLECT SPECIAL SITUATIONS SUCH AS WET VENTING, WASTE STACK VENTS, COME RAMS FOR PIPE SIZES AND ADDITIONAL INFORMATION.	BINATION WAS	STE AND VENT SY	STEMS, ETC. RE	EFER TO PLANS	AND/OR RISER	
-							

	DRAWING/SUBMITTAL AND OPERATIONS MANUAL FOR ALL ITEMS LISTED BELOW. PROVIDE EQUIPMENT TAGS PER S FOR ALL ITEMS LISTED IN THIS SCHEDULE.
<u>WH1</u>	WATER HEATER - EQUAL TO A.O. SMITH MODEL NO. BTH-120 NATURAL GAS FIRED ASME WATER HEATER WITH GLASS TANK LINING AND CONDENSATE NEUTRILIZING KIT. HEATER TO HAVE 100 GALLON NOMINAL STORAGE CAPACITY WITH RECOVERY CAPACITY OF 138 GPH AT 100°F TEMPERATURE RISE. 120 CFH INPUT RATING; 120V ELECTRICAL CONNECTION.
<u>ET1</u>	THERMAL EXPANSION COMPENSATOR - EQUAL TO AMTROL ST-25V-C, ASME RATED, 10.3 GALLON CAPACITY.
<u>TMV1</u>	THERMOSTATIC MIXING VALVE - EQUAL TO LEONARD "NUCLEUS" MODEL NO. NV-15-LF-IF-RTS, DIGITAL MIXING VALVE WITH 1-1/4" INLET AND 1-1/2" OUTLET CONNECTIONS, INLET, OUTLET AND RETURN TEMPERATURE SENSORS, 200 PSI MAXIMUM OPERATING PRESSURE, VALVE TO HAVE MAXIMUM PRESSURE DROP OF 5 PSI AT 50 GPM FLOW RATE. PROVIDE WALL MOUNTING BRACKET AND ALL REQUIRED ACCESSORIES FOR A COMPLETE OPERATIONAL SYSTEM. 120V ELECTRICAL CONNECTION.
<u>SP1</u>	ELEVATOR SUMP PUMP - EQUAL TO STANCOR SE-50 ELEVATOR SUMP PUMP, 1/2 HP, 120V, 1 PHASE. PROVIDE WITH WATER LEVEL PROBE AND CONTROL PANEL.
<u>BFP1,</u> <u>BFP2</u>	BACKFLOW PREVENTER - EQUAL TO ZURN WILKINS MODEL NO. 975XL-S-TCU. PROVIDE WITH AIR GAP ASSEMBLY, QUARTER TURN BALL VALVES, TEST VALVES AND WYE STRAINER ON INLET SIDE OF VALVE.
<u>CP1</u>	HOT WATER RECIRCULATION PUMP - EQUAL TO BELL AND GOSSETT "ECOCIRC" PUMP MODEL NO. XL-N-36-45 WITH CAPACITY OF 14 GPM @ XX FT/HEAD, 1/6 HP, 115V, 1 PHASE, WITH STAINLESS STEEL CONSTRUCTION.
<u>BP1</u>	DOMESTIC WATER BOOSTER PUMP - EQUAL TO TOWLE WHITNEY PUMP MODEL NO. TW2018-80W-40 DUPLEX PUMP SYSTEM WITH 1-1/2 HP, 208V, 3 PHASE MOTORS, VFD'S ON PUMPS, 20 GALLON HYDRO ACCUMULATOR TANK, CONTROL PANEL, 2" COPPER HEADERS, AND ALL REQUIRED ACCESSORIES FOR A COMPLETE OPERATIONAL SYSTEM, SYSTEM CAPACITY OF 80 GPM TOTAL 40 GPM EACH PUMP. OUTLET PRESSURE TO BE SET AT 70 PSI.

PROVIDE SI	HOP DRAWING/SUBMITTAL AND OPERATIONS MANUAL FOR ALL ITEMS LISTED BELOW.
	<u>CLEANOUTS:</u> CLEANOUTS SHALL BE LINE SIZE UP TO 4". FOR PIPE SIZES LARGER THAN 4" PROVIDE A 4" CLEANOUT, WHERE ALLOWED BY CODE AND AUTHORITY HAVING JURISDICTION. ALL EXTERIOR AND INLINE CLEANOUTS SHALL BE TWO-WAY.
<u>00</u>	EXPOSED HORIZONTAL OR VERTICAL CLEANOUT IN PIPING EXPOSED OR CONCEALED ABOVE ACCESSIBLE CEILINGS.
= <u>CO</u>	 (REFER TO ARCHITECTURAL DRAWINGS FOR FLOOR FINISH INFORMATION. PROVIDE CLEANOUTS AS DESCRIBED BELOW.) 1. FOR AREAS WHERE CARPET WILL BE INSTALLED PROVIDE ROUND ADJUSTABLE CLEANOUT WITH CARPET MARKER. 2. BACK OF HOUSE AREAS (I.E. KITCHEN, UTILITY ROOMS, LAUNDRY ROOMS AND SIMILAR SPACES) WHERE TILE FLOORS ARE TO BE INSTALLED, PROVIDE SQUARE ADJUSTABLE CLEANOUT WITH STAINLESS STEEL COVER. 3. IN PUBLIC AREAS (I.E. DINING ROOMS, CORRIDORS, OFFICES, CONFERENCE ROOMS AND SIMILAR SPACES) WHERE TILE FLOORS ARE TO BE INSTALLED, PROVIDE SQUARE ADJUSTABLE CLEANOUT WITH RECESS TILE COVER. 4. IN AREAS SUBJECT TO TRAFFIC (I.E. PARKING GARAGES, PARKING SPACES AND SIMILAR SPACES) PROVIDE HEAVY DUTY/TRAFFIC RATED CLEANOUT COVER.
<u>3CO</u>	CLEANOUT TO GRADE WITH HEAVY DUTY ACCESS COVER CAST IN A 12" X 12" X 4" THICK CONCRETE PAD. (PAD MAY BE ELIMINATED IN POURED CONCRETE SIDEWALKS, DRIVEWAYS, PATIOS, ETC.)
<u>NCO</u>	PROVIDE CLEANOUT IN VERTICAL PIPE WITH STAINLESS STEEL ACCESS COVER. (WHERE PIPES ARE CONCEALED IN WALLS OR CHASES.)
	ROOF/OVERFLOW DRAINS: ACCEPTABLE MANUFACTURERS: ZURN, WATTS, JOSAM, JAY R. SMITH, FROET INDUSTRIES.
<u>RD</u>	ROOF DRAIN - EQUAL TO ZURN 100. DRAIN SHALL HAVE DURA-COATED CAST IRON BODY WITH POLY-DOME, COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARDS, SUMP RECEIVER, UNDERDECK CLAMPING DEVICE, EXTENSION COLLAR TO SUIT THICKNESS OF INSULATION.
<u> </u>	OVERFLOW DRAIN - EQUAL TO ZURN Z100-W2. DRAIN SHALL HAVE DURA-COATED CAST IRON BODY WITH POLY-DOME, INTERNAL OVERFLOW WATER DAM, COMBINATION MEMBRANE FLASHING CLAMP/GRAVEL GUARDS, SUMP RECEIVER, UNDERDECK CLAMPING DEVICE, EXTENSION COLLAR TO SUIT THICKNESS OF INSULATION.
<u>DDS</u>	OVERFLOW DISCHARGE SPOUT - EQUAL TO ZURN ZF199, OVERFLOW DISCHARGE SPOUT, ALUMINUM BODY WITH FLAPPER. FIELD VERIFY EXACT LOCATION. FINAL COLOR OPTION TO BE SELECTED BY ARCHITECT.
	FLOOR DRAINS AND FLOOR SINKS: ACCEPTABLE MANUFACTURERS: ZURN, WATTS, JOSAM, JAY R. SMITH.
	 NOTES: PROVIDE P-TRAPS, SEAL DEPTH AS REQUIRED BY PLUMBING CODE, WITH ALL FLOOR DRAINS AND FLOOR SINKS, UNLESS NOTED OTHERWISE. DRAINS SHALL BE INSTALLED WITH TOP OF DRAIN FLUSH WITH FINISHED FLOOR, UNLESS NOTED OTHERWISE, AND IN ACCORDANCE WITH MANUFACTURERS RECOMMENDATIONS. ALL DRAINS INSTALLED IN SLABS OR PATIOS NOT IN SLABS ON GRADE TO BE PROVIDED WITH MEMBRANE/LEAD FLASHINGS 3'-0" SQUARE. VERIFY EXACT SIZE ON SITE.
<u>-D1</u>	(MECHANICAL/PLUMBING ROOMS, SIMILAR SPACES) - FLOOR DRAIN - EQUAL TO ZURN Z550-Y. DURA-COATED CAST IRON BODY WITH BOTTOM OUTLET, 9" DIAMETER STRAINER, AND SEDIMENT BUCKET. PROVIDE WITH TRAP PRIMER CONNECTION WHERE INDICATED ON DRAWINGS.
<u>-S1</u>	(CONCRETE FLOORS) - FLOOR SINK - EQUAL TO ZURN ZN1900. 4" BOTTOM OUTLET, CAST-IRON BODY, ANTI-SPLASH INTERIOR AND SEDIMENT BUCKET, NICKEL BRONZE 1/2 GRATE, 12" SQUARE BY 6" DEEP.

ORDINANCES.

- PENETRATED.

- OVER ELECTRICAL PANELS, SWITCHGEAR, ETC.
- AIR PLENUMS.

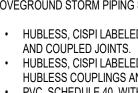
- MINIMUM. VERIFY SITE FROST DEPTH.
- TO AVOID CONFLICT.
- INFORMATION.

DOMESTIC WATER PIPING

SHALL BE ONE OF THE FOLLOWING:

SANITARY WASTE AND STORM PIPING

AND COUPLED JOINTS.



VENT PIPING

NATURAL GAS PIPING

• POLYETHYLENE PIPING WITH HEAT FUSION JOINTS. • POLYETHYLENE PIPING WITH MECHANICAL JOINTS WHERE ALLOWED BY CODE.

ABOVEGROUND NATURAL GAS PIPING 2" AND SMALLER TO BE THE FOLLOWING: • SCHEDULE 40 BLACK STEEL PIPING AND FITTINGS WITH THREADED JOINTS.

GENERAL PLUMBING NOTES

ALL PLUMBING WORK SHALL BE INSTALLED IN COMPLIANCE WITH ALL STATE AND LOCAL CODES, AMENDMENTS AND

2. THE PLUMBING CONTRACTOR SHALL DETERMINE NECESSARY INVERT ELEVATIONS FOR PROPER DRAINAGE AND CONNECTION INTO SEWERS. ALL INVERT ELEVATIONS SHALL BE SET PRIOR TO INSTALLATION. 3. ALL PIPING PASSING THROUGH FIRE RATED OR FIRE AND SMOKE RATED ASSEMBLIES SHALL BE SLEEVED AND FIRESTOPPED. FIRESTOPPING SHALL COMPLY WITH U.L. LISTING AND REQUIREMENTS FOR ASSEMBLY TYPE BEING

I. PLUMBING CONTRACTOR SHALL NOT CORE DRILL OR DISTURB ANY STRUCTURAL MEMBERS WITHOUT WRITTEN AUTHORIZATION BY THE ARCHITECT AND/OR STRUCTURAL ENGINEER.

2. PLUMBING CONTRACTOR SHALL COORDINATE PIPING LOCATIONS AND ROUTING WITH OTHER PIPING DUCTWORK AND ELECTRICAL CONDUIT INSTALLATIONS. PLUMBING CONTRACTOR SHALL REVIEW ARCHITECTURAL DRAWINGS TO ESTABLISH WHERE FURR-DOWNS AND SOFFITS OCCUR AND DIMENSIONS OF SAME SO THAT DISTANCES AND PIPING ROUTING CAN BE PROPERLY COORDINATED. ALL PIPING SHALL BE ROUTED IN A CONCEALED MANNER. 6. PLUMBING CONTRACTOR SHALL AVOID LOCATING HW/CW PIPING IN LOCATIONS WHERE POSSIBILITY OF FREEZING OF SAME

EXISTS. CONTRACTOR SHALL ADVISE ENGINEER WHERE THIS CONDITION MAY OCCUR PRIOR TO ROUGH-IN. 7. ALL ADA ACCESSIBLE LAVATORIES AND SINKS WITH EXPOSED WATER AND DRAIN PIPES SHALL BE INSULATED TO PROTECT AGAINST CONTACT PER ADA REQUIREMENTS. THERE SHALL BE NO SHARP OR ABRASIVE SURFACES. 8. COORDINATE ROUTING OF ALL PIPING WITH THE ELECTRICAL CONTRACTOR SO AS NOT TO ROUTE ANY PLUMBING LINES

9. ACCESS DOORS TO VALVES, CLEANOUTS AND ETC. TO BE EQUAL TO "ACUDOR" DW OR FW SERIES, ACCESS DOORS FOR DRYWALL INSERTS. PROVIDE FIRE RATED ACCESS DOORS WHERE REQUIRED. COORDINATE WITH GENERAL CONTRACTOR AND VERIFY EXACT LOCATIONS AND SIZES ON SITE. PAINT TO MATCH CEILING OR WALL.

10. PLASTIC PIPING SHALL NOT BE INSTALLED IN ANY SPACE THAT IS A RETURN AIR PLENUM. COORDINATE WITH MECHANICAL CONTRACTOR FOR PLENUM LOCATIONS PRIOR TO INSTALLATION OF ANY PIPING. ONLY PLASTIC PIPING THAT IS APPROVED FOR PLENUM SPACES AND IS APPROVED BY THE LOCAL AUTHORITY HAVING JURISDICTION MAY BE INSTALLED IN RETURN

1. PIPING AND EQUIPMENT HANGERS SHALL BE SPACED IN A SYSTEMATIC RANDOM PATTERN AS REQUIRED TO ELIMINATE OVERLOADING INDIVIDUAL STRUCTURAL MEMBERS. THE ESTIMATED WEIGHT ASSIGNED TO PIPE AND EQUIPMENT HANGERS SHALL BE DETERMINED BY THE PLUMBING CONTRACTOR AND SUBMITTED TO THE GENERAL CONTRACTOR FOR REVIEW, COORDINATION AND APPROVAL PRIOR TO INSTALLATION. THIS REQUIREMENT APPLIES TO ALL PLUMBING PIPING.

12. INSTALL PLUMBING VENTS THROUGH ROOF A MINIMUM OF 24" FROM EDGE OF ROOF AND/OR PARAPET WALLS. LOCATE ALL VENTS THROUGH ROOF A MINIMUM OF 10'-0" FROM ALL OUTSIDE AIR INTAKES. 13. ALL UNDERGROUND PLUMBING PIPING SUBJECT TO FREEZING SHALL BE INSTALLED BELOW LOCAL AREA FROST LINE

14. COORDINATE LOCATION OF ALL BELOW GRADE PIPING WITH STRUCTURAL FOUNDATIONS, FOOTINGS, GRADE BEAMS, ETC.

5. REFER TO SPECIFICATION SECTION 231123 FACILITY NATURAL-GAS PIPING FOR GAS PIPING AND INSTALLATION

PLUMBING PIPING MATERIALS

BELOW IS A LIST OF PLUMBING PIPING MATERIALS TO BE UTILIZED. REFER TO SPECIFICATIONS FOR ADDITIONAL INFORMATION REGARDING PIPING MATERIAL STANDARDS COMPLIANCE, COMPONENTS AND INSTALLATION OF PIPING MATERIALS.

UNDER BUILDING SLAB DOMESTIC WATER PIPING TO BE ONE OF THE FOLLOWING:

 ANNEALED COPPER TUBE, TYPE "K", WROUGHT COPPER. COPPER PIPING ROUTED BELOW SLAB SHALL BE CONTINUOUS RUN WITH NO FITTINGS OR JOINTS. • PEX TUBING; PEX PIPING ROUTED BELOW SLAB SHALL BE CONTINUOUS RUN WITH NO FITTINGS OR JOINTS.

ABOVEGROUND DOMESTIC WATER PIPING 3" AND SMALLER SHALL BE ONE OF THE FOLLOWING:

 DRAWN TEMPERED COPPER TUBE, TYPE "L", WROUGHT COPPER, SOLDERED JOINT FITTNGS AND SOLDERED JOINTS. ALL DOMESTIC WATER PIPING WITHIN "PLUMBING ROOM" SHALL BE COPPER. ABOVEGROUND DOMESTIC WATER PIPING 1" AND SMALLER WITHIN RESIDENT UNITS DOWNSTREAM OF UNIT SHUT-OFF VALVE

 PEX TUBING, WITH METAL INSERT FITTINGS AND COPPER CRIMP RINGS. • PEX TUBING, WITH COLD EXPANSION FITTINGS AND REINFORCING RINGS.

UNDERGROUND WASTE AND STORM PIPNG SHALL BE ONE OF THE FOLLOWING:

PVC, SCHEDULE 40, WITH DWV PATTERN SOCKET FITTINGS AND SOLVENT CEMENTED JOINTS.

ABOVEGROUND WASTE PIPING SHALL BE ONE OF THE FOLLOWING:

 HUBLESS, CISPI LABELED, CAST IRON SOIL PIPE AND DWV PATTERN FITTINGS WITH CISPI LABELED HUBLESS COUPLINGS • PVC, SCHEDULE 40, WITH DWV PATTERN SOCKET FITTINGS AND SOLVENT CEMENTED JOINTS. ABOVEGROUND STORM PIPING SHALL BE ONE OF THE FOLLOWING:

 HUBLESS, CISPI LABELED, CAST IRON SOIL PIPE AND DWV PATTERN FITTINGS WITH CISPI LABELED HUBLESS COUPLINGS HUBLESS, CISPI LABELED, CAST IRON SOIL PIPE AND DWV PATTERN FITTINGS WITH CISPI LABELED HEAVY-DUTY HUBLESS COUPLINGS AND COUPLED JOINTS. • PVC, SCHEDULE 40, WITH DWV PATTERN SOCKET FITTINGS AND SOLVENT CEMENTED JOINTS.

UNDERGROUND AND ABOVEGROUND VENT PIPING SHALL BE THE FOLLOWING:

• PVC, SCHEDULE 40, WITH DWV PATTERN SOCKET FITTINGS AND SOLVENT CEMENTED JOINTS.

UNDERGROUND NATURAL GAS PIPNG SHALL BE ONE OF THE FOLLOWING:

ABOVEGROUND NATURAL GAS PIPING 2-1/2" AND LARGER TO BE THE FOLLOWING: SCHEDULE 40 BLACK STEEL PIPING AND FITTINGS WITH WELDED JOINTS.

PLUMBING SYMBOLS AND ABBREVIATIONS LEGEND

DIRECTION OF FLOW		AA\ AHJ
PIPE TURNING UP	o	CFH CW
PIPE TURNING DOWN	ə	DFL
BRANCH CONNECTION - TOP	Ų	DW EA
BRANCH CONNECTION - BOTTOM	<u> </u>	EX
BRANCH CONNECTION - SIDE		F FFE FT
SERVICE VALVE (BALL OR GATE)		FU
SERVICE VALVE (BUTTERFLY)		GPI GPI
CHECK VALVE		HP HW
PRESSURE REDUCING VALVE / PRESSURE REGULATOR		HW
GAS SHUT-OFF VALVE		IE
GAS SOLENOID VALVE	X	KW NC
CONNECT NEW TO EXISTING	Ð	NO
POINT OF DISCONNECTION	$\overline{\mathbf{\Theta}}$	PD PR\
COLD WATER PIPING		PSI PVC
HOT WATER SUPPLY		SF
HOT WATER RETURN		V VTF
SANITARY SEWER PIPING		W
VENT PIPING	====	WC
ROOF DRAIN STORM PIPING	RD	
OVERFLOW DRAIN STORM PIPING	OD	
GREASE WASTE PIPING	GW	
NATURAL GAS PIPING	G	
RISER TAG REFERENCE	G - GAS D - DWV W - WATER 8 S- STORM	

AIR ADMITTANCE VALVE AUTHORITY HAVING JURISDICTION CUBIC FEET PER HOUR COLD WATER DRAINAGE FIXTURE UNITS DRAINAGE, WASTE AND VENT EACH EXISTING FAHRENHEIT FINISHED FLOOR ELEVATION FEE1 FIXTURE UNITS (WATER) GALLONS PER HOUR GALLONS PER MINUTE HORSEPOWER HOT WATER HOT WATER RETURN INVERT ELEVATION KILOWATT NORMALLY CLOSED NORMALLY OPEN PUMP DISCHARGE

PRESSURE REDUCING VALVE POUNDS PER SQUARE INCH POLYVINYL CHLORIDE

SQUARE FEET

VENT VENT THRU ROOF

WASTE WATER COLUMN

SYMBOLS WILL BE NOTED ON PLANS WHERE APPLICABLE. THESE SYMBOLS AND ABBREVIATIONS ARE PLUMBING DEPARTMENT STANDARDS AND MAY NOT NECESSARILY BE APPLICABLE TO, OR APPEAR ON THESE DRAWINGS. HOWEVER, WHERE THESE SYMBOLS DO OCCUR ON THE DRAWINGS, THE ITEM SHALL BE PROVIDED AND

SOME SYMBOLS ABOVE MAY BE SHOWN WITH DOUBLE LINE PIPING IN LIEU OF

INSTALLED. SEE ARCHITECTURAL DRAWINGS FOR ADDITIONAL ABBREVIATIONS.

SINGLE LINE PIPING AND MAY NOT APPEAR AS INDICATED ABOVE. THESE

PLUMBING SYSTEMS DESIGN SUMMARY

SANITARY SEWER

THE NEW BUILDINGS WILL BE PROVIDED WITH A COMPLETE SOIL, WASTE AND VENT SYSTEM. THE SANITARY SEWER LINES WILL BE EXTENDED OUT OF THE BUILDINGS AND CONNECT TO THE SITE SANITARY SEWER SYSTEM. AREA DRAINS ARE ANTICIPATED TO BE PROVIDED IN THE DRIVING/PARKING AREAS ON THE FIRST FLOOR AND CONNECTED TO AN OIL/SAND INTERCEPTOR. THESE DRAINS CONNECT TO THE SANITARY SEWER SYSTEM. STORM DRAINAGE

A COMPLETE ROOF DRAINAGE SYSTEM UTILIZING BOTH SLOPED ROOFS WITH GUTTERS AND EXTERIOR DOWNSPOUTS, AND FLAT ROOF AREAS WITH ROOF DRAINS AND INTERIOR RAIN CONDUCTORS WILL BE PROVIDED. A COMPLETE SECONDARY EMERGENCY OVERFLOW ROOF DRAINAGE SYSTEM FOR FLAT ROOF AREAS WILL ALSO BE PROVIDED. THE PRIMARY ROOF DRAIN LINES SHALL BE EXTENDED ON

SITE TO THE STORM DRAINAGE SYSTEM. OVERFLOW ROOF DRAIN LINES WILL TERMINATE ABOVE GRADE AT THE EXTERIOR WALLS OR SOFFITS

ALL PRIMARY AND OVERFLOW ROOF DRAIN LINES WILL BE PROVIDED WITH 1/2" OF FIBERGLASS INSULATION TO FIRST VERTICAL DROP FROM THE ROOF AND OVERFLOW DRAINS.

RESIDENT UNIT BALCONIES WILL BE SLOPED TO SHED WATER AND NO DRAINS WILL BE PROVIDED.

A 3" DOMESTIC COLD-WATER SERVICE LINE WILL BE EXTENDED INTO THE MECHANICAL ROOM ON THE FIRST FLOOR. THE SERVICE WILL BE PROVIDED WITH REDUCED PRESSURE-TYPE BACKFLOW PREVENTERS. COLD WATER EXTENDS THROUGHOUT THE BUILDINGS TO ALI PLUMBING FIXTURES AND EQUIPMENT REQUIRING COLD WATER FOR OPERATION.

A DUPLEX DOMESTIC WATER BOOSTER PUMP SYSTEM IS PROVIDED TO BOOST INCOMING WATER PRESSURE.

DOMESTIC HOT WATER IS PROVIDED BY TWO TANK TYPE, NATURAL GAS FIRED, WATER HEATERS. THESE WILL BE LOCATED IN A MECHANICAL/PLUMBING ROOMS ON THE GARAGE LEVEL. THE SYSTEM WILL BE EQUIPPED WITH THERMAL EXPANSION TANK, HOT WATER RETURN CIRCULATING PUMP, THERMOSTATIC MIXING VALVE, ISOLATION VALVES, THERMOMETERS AND ALL REQUIRED EQUIPMENT/ACCESSORIES. DOMESTIC HOT WATER PIPING EXTENDS FROM THE WATER HEATERS AND CONNECTS TO PLUMBING FIXTURES AND EQUIPMENT REQUIRING HOT WATER FOR OPERATION.

COLD AND HOT WATER MAINS ARE TO BE ROUTED ABOVE THE CORRIDOR CEILINGS. EACH RESIDENT UNIT WILL BE PROVIDED WITH COL WATER, HOT WATER SHUT-OFF VALVES AND A HOT WATER RETURN CIRCUIT SOLVER ASSEMBLY LOCATED IN THE CORRIDOR CEILING. EACH RESIDENT UNIT WILL BE FULLY RECIRCULATED WITH HOT WATER RETURN LOOPS TO LIMIT THE TIME IT TAKES TO DELIVER HOT WATER TO EACH FIXTURE IN THE RESIDENT UNITS.

A NATURAL GAS SYSTEM AND METER WILL BE PROVIDED FOR EACH BUILDING TO ACCOMMODATE THE CONNECTED GAS LOADS. THE GAS METERS WILL BE PROVIDED ON THE EXTERIOR OF THE BUILDINGS. GAS PIPING WILL BE EXTENDED THROUGHOUT THE BUILDINGS AND BE CONNECTED TO THE GAS FIRED EQUIPMENT AND FIREPLACES IN EACH RESIDENT UNIT. GAS VALVES, UNIONS AND DIRT LEGS WILL BE PROVIDED AT EACH CONNECTION TO GAS FIRED EQUIPMENT.

PLUMBING SYSTEMS SOUND ATTENUATION

POTABLE WATER SYSTEM

NATURAL GAS SYSTEM

ALL PORTIONS OF THE PLUMBING PIPING AND EQUIPMENT SHALL BE PROVIDED WITH SOUND ATTENUATION MEASURES AS INDICATED BELOW. A SOUND ATTENUATION SYSTEM SIMILAR TO "HOLDRITE SILENCER SYSTEM" WOULD BE AN EXAMPLE OF AN APPROVED SYSTEM ALL PIPING SYSTEMS AND/OR EQUIPMENT SHALL BE COMPLETELY ISOLATED FROM THE BUILDING STRUCTURES. NO PIPING WILL BE ALLOWED TO BE IN DIRECT CONTACT WITH THE BUILDING STRUCTURES.

MATERIALS AND INSTALLATION SHALL COMPLY WITH THE APPLICABLE PLUMBING CODE AND BE INSTALLED IN STRICT ACCORDANCE WITH THE SOUND ATTENUATION SYSTEM MANUFACTURER'S REQUIREMENTS.

THE CONTRACTOR SHALL SUBMIT THE PRODUCT CUT SHEETS ALONG WITH A WRITTEN DESCRIPTION OF EACH STATING HOW THEY ARE PROPOSED TO BE USED FOR EACH APPLICATION. ALL EQUIPMENT THAT HAVE ELECTRIC MOTORS OR DEVICES THAT CAN CAUSE NOISE OR VIBRATION SHALL BE EQUIPPED WITH

VIBRATION ISOLATION SPRINGS OR VIBRATION ISOLATION PADS INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S REQUIREMENTS. ALL NON-INSULATED PIPING INSTALLED IN HANGERS SUPPORTED FROM THE BUILDING STRUCTURES SHALL BE PROVIDED WITH

ACOUSTIC INSULATION LINERS/ISOLATION PADS ON THE HANGERS. ALL NON-INSULATED PIPING INSTALLED ON TRAPEZE/UNISTRUT TYPE SUPPORTS SHALL BE PROVIDED WITH ACOUSTIC INSULATION LINERS/ISOLATION PADS ON THE HANGER OR PROVIDED WITH CLAMP ASSEMBLY THAT PROVIDES ACOUSTIC ISOLATION FROM THE

HANGER SUPPORT. ALL VERTICAL PIPING INSTALLED SHALL BE PROVIDED WITH RUBBER ISOLATION PADS ON THE RISER CLAMPS BETWEEN THE RISER CLAMP ASSEMBLY AND THE FLOOR.

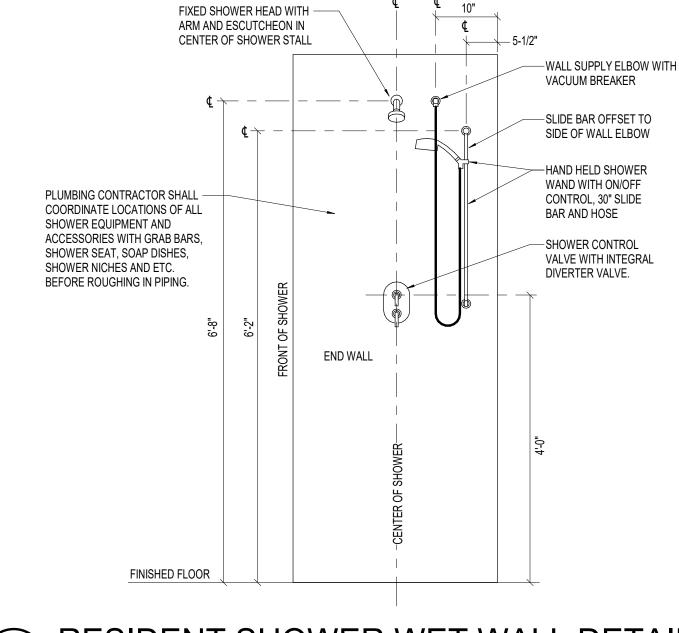
INSULATED PIPING WITH HANGER SHIELDS WILL NOT BE REQUIRED TO BE PROVIDED WITH ACOUSTIC INSULATION LINERS/ISOLATION PADS ON THE HANGERS AS LONG AS THE INSULATION IS CONTINUOUS THROUGH THE HANGER OR SUPPORT.

ALL FLOOR, CEILING OR WALL PENETRATIONS SHALL HAVE ADEQUATE CLEARANCE AROUND PIPING TO ENSURE THERE IS NO DIRECT CONTACT WITH THE STRUCTURE. ALL PIPING ROUTED IN WALLS SHALL HAVE ADEQUATE SPACE AROUND PIPING AND SHALL BE PROVIDED WITH ACOUSTIC THROUGH STU

ISOLATORS/SUSPENSION CLAMPS DESIGNED FOR THE SPECIFIC APPLICATION. ALL FIXTURE STUB OUTS SUCH AS SINKS, LAVATORIES, WATER CLOSETS, SHOWER VALVES, SHOWER HEADS AND ETC. SHALL BE PROVIDED WITH ACOUSTIC ISOLATORS/SUSPENSION CLAMPS DESIGNED FOR THE SPECIFIC APPLICATION.

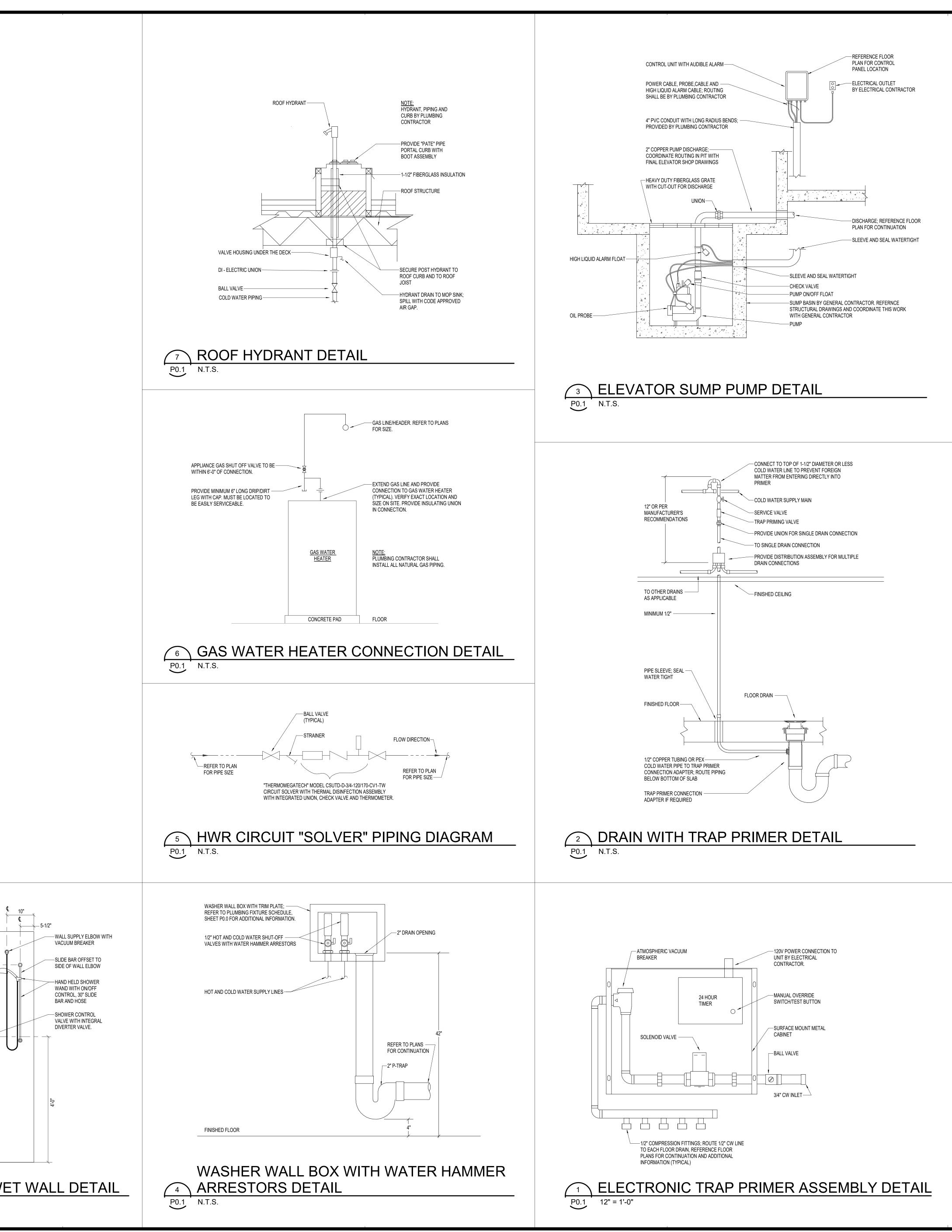
PLUMBING SHEET LIST
NUMBER SHEET NAME P0.0 PLUMBING - LEGENDS, ABBREVIATIONS AND SCHEDULES P0.1 DETAILS - PLUMBING P1.0 FOUNDATION PLAN - WASTE, VENT AND STORM
P1.1 FIRST FLOOR PLAN - WASTE, VENT AND STORM P1.2 SECOND FLOOR PLAN - WASTE, VENT AND STORM P1.3 THIRD FLOOR PLAN - WASTE, VENT AND STORM
P2.1 FIRST FLOOR PLAN - WATER AND GAS P2.2 SECOND FLOOR PLAN - WATER AND GAS P2.3 THIRD FLOOR PLAN - WATER AND GAS - REDBUD
P2.4 THIRD FLOOR PLAN - WATER AND GAS - MOUNTAIN LAUREL P3.1 ROOF PLAN - PLUMBING P4.1 ENLARGED PLANS - WATER P4.2 ENLARGED PLUMBING ROOM PLAN - WATER AND GAS
P4.2 ENLARGED FLUMIDING ROUM FLAN - WATER AND GAS
100% DESIGN
DEVELOPMENT
NOT FOR CONSTRUCTION
BRANDON
CARS
<i>In the heart of it all</i> THE PINES EXPANSION
C C C C Architecture Engineering
SFCS Inc. • 305 South Jefferson Street
Roanoke, Virginia 24011.2003 540.344.6664 ■ Fax 540.343.6925
www.sfcs.com
DESIGNER : KAD DRAWN : DPW/MAH ARCHITECT : NSD CHECKED : DPW/MAH/AJM ENGINEER : AJM APPROVED : AJM
ENGINEER : AJM APPROVED : AJM NO. REVISION DESCRIPTION DATE
DRAWING TITLE PLUMBING - LEGENDS,
ABBREVIATIONS AND
SCHEDULES
DATE: APRIL 29, 2025
COMM. NO. 22119.00 PO.O

4/29/2025 6:51:47 AM



P0.1 N.T.S.

Autodesk Docs://22119.00 - Brandon Oaks/22119.00 - Brandon Oaks - The Pines Expansion - PLUMB Central.rvt



RESIDENT SHOWER WET WALL DETAIL

	DAKS neart of it all EXPANSION			
SFCS Inc. • 305 South Jefferson Street Roanoke, Virginia 24011.2003 540.344.6664 • Fax 540.343.6925 www.sfcs.com				
DESIGNER : KAD	DRAWN : DPW/MAH			
ARCHITECT : NSD	CHECKED : DPW/MAH/AJM			
ENGINEER : AJM	APPROVED ; AJM			
NO. REVISION DESCRIPTION DATE				
DATE: APRIL 29, 2025 COMM. NO. 22119.00	DRAWING P0.1			

NOT FOR CONSTRUCTION

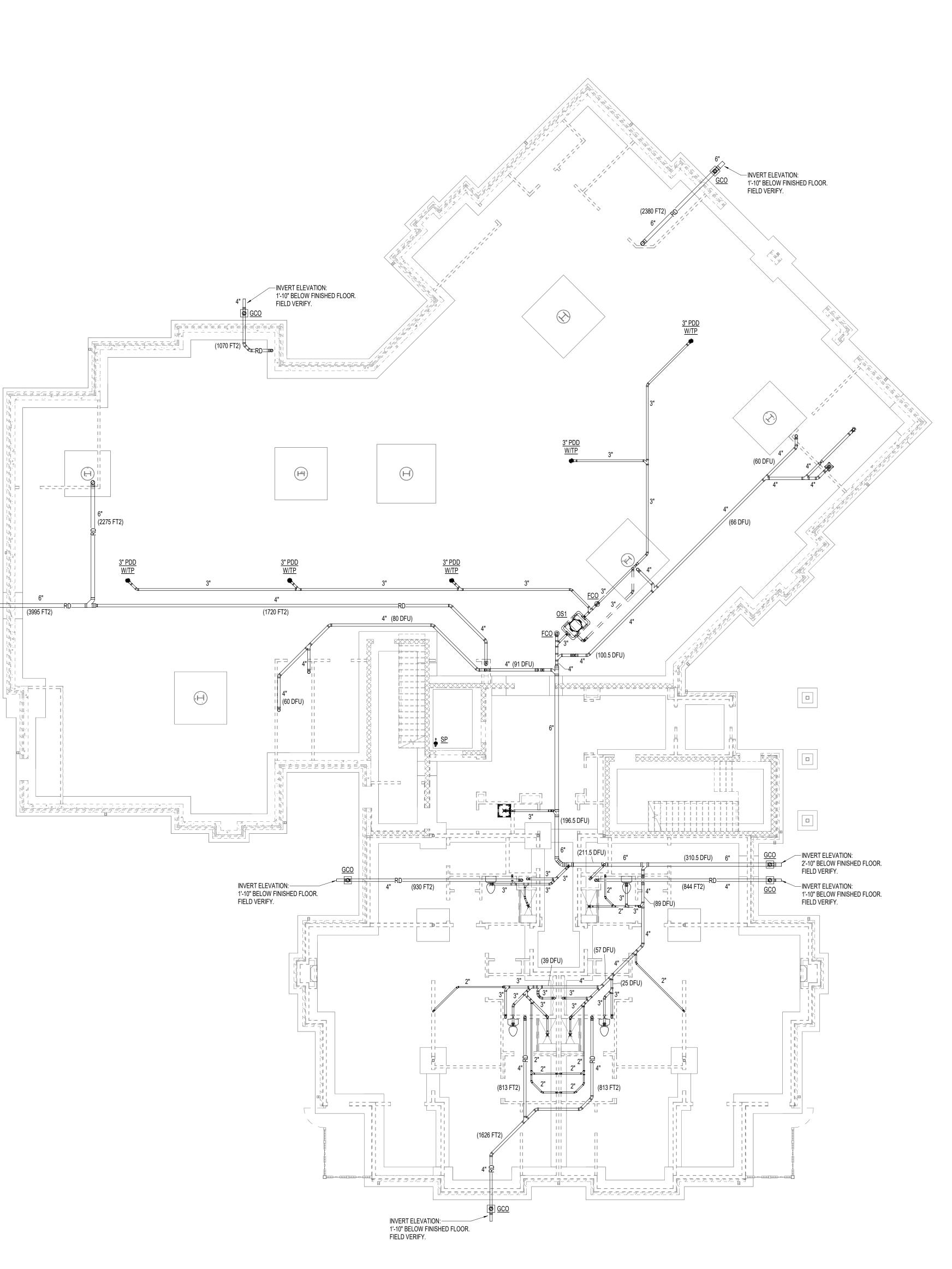
100% DESIGN DEVELOPMENT



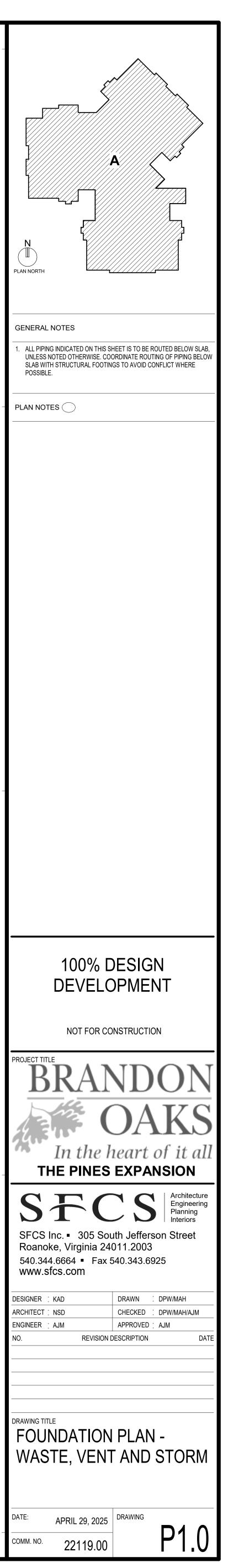


INVERT ELEVATION: 2'-4" BELOW FINISHED FLOOR. FIELD VERIFY.

<u>GCO</u>



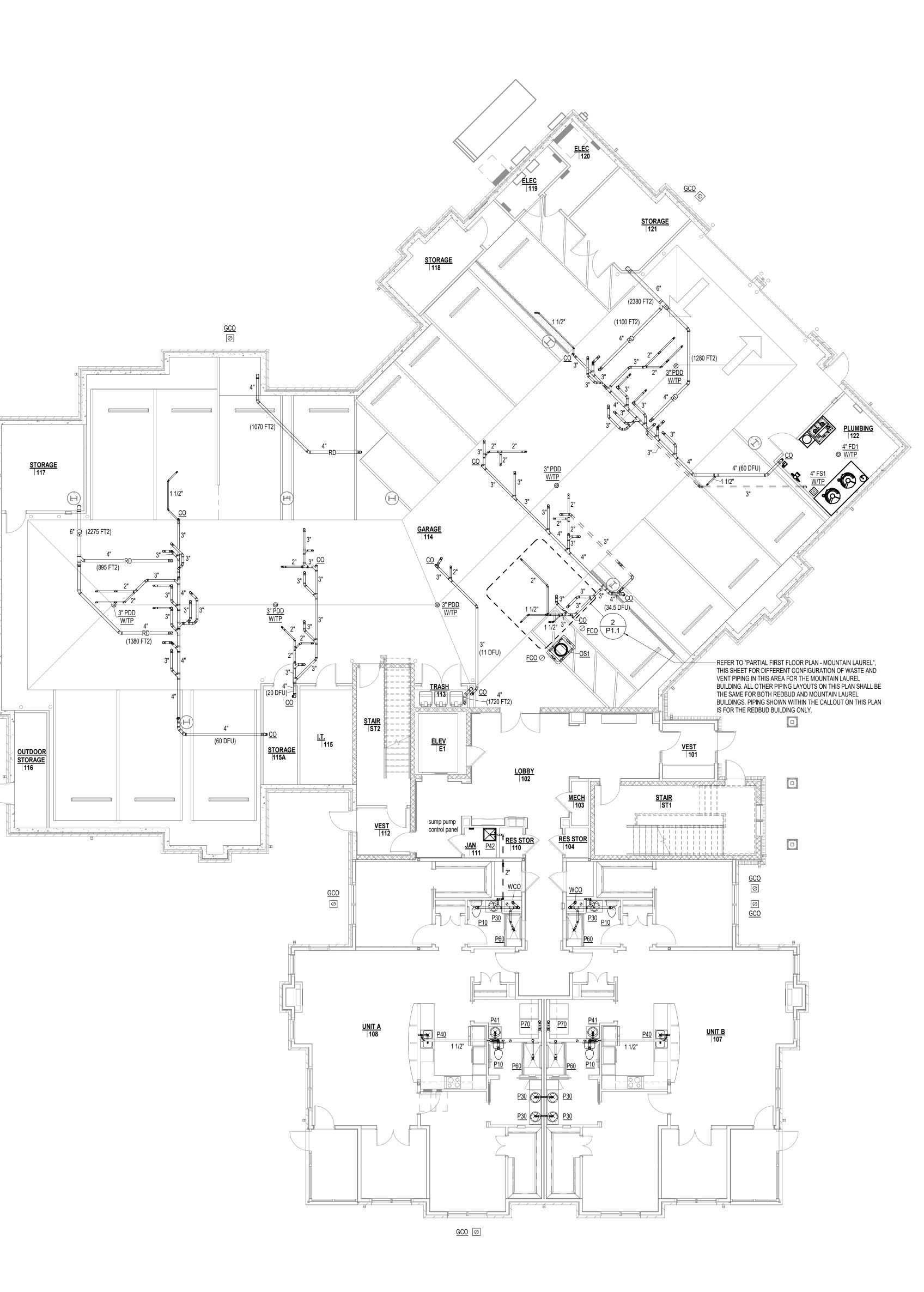


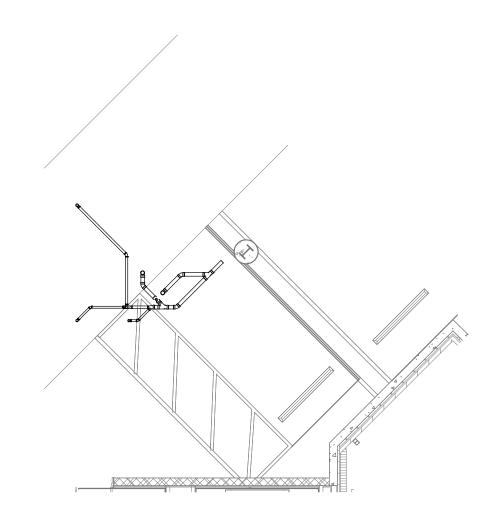




<u>GCO</u>

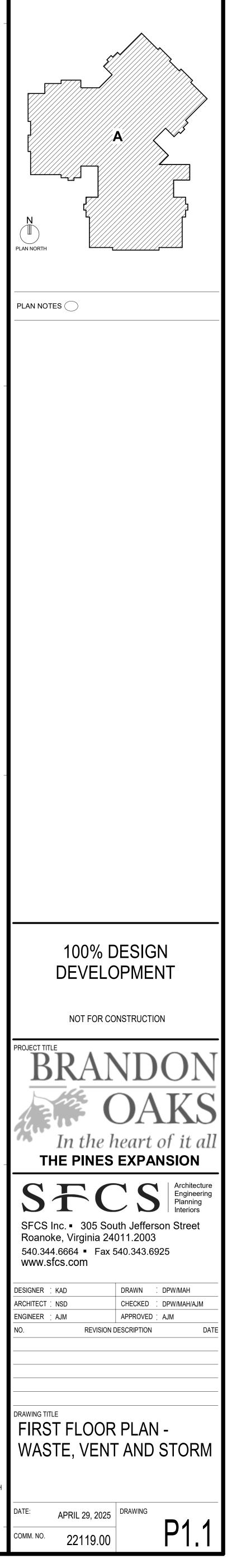
Autodesk Docs://22119.00 - Brandon Oaks/22119.00 - Brandon Oaks - The Pines Expansion - PLUMB Central.rvt





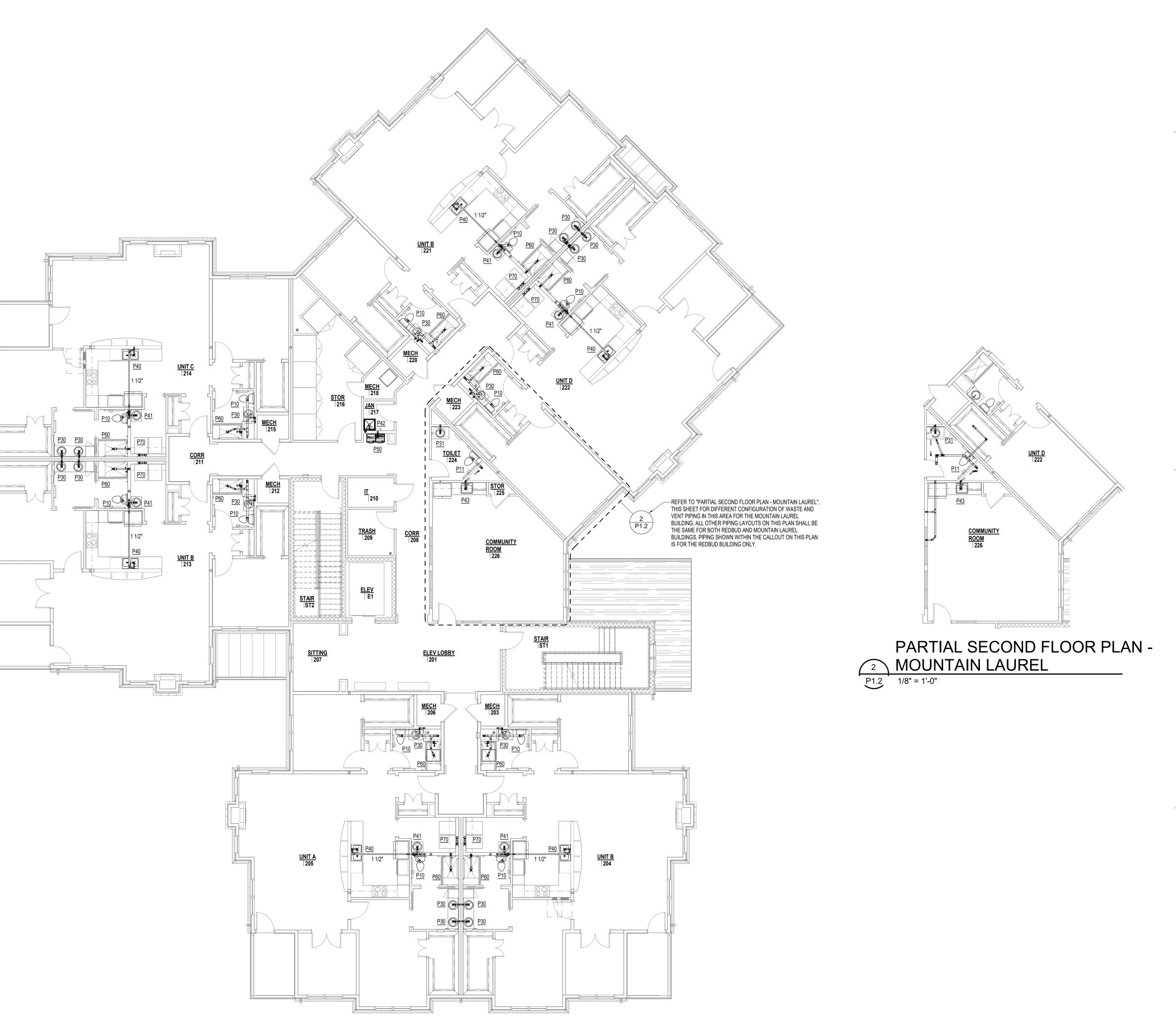
PARTIAL FIRST FLOOR PLAN -² MOUNTAIN LAUREL P1.1 1/8" = 1'-0"



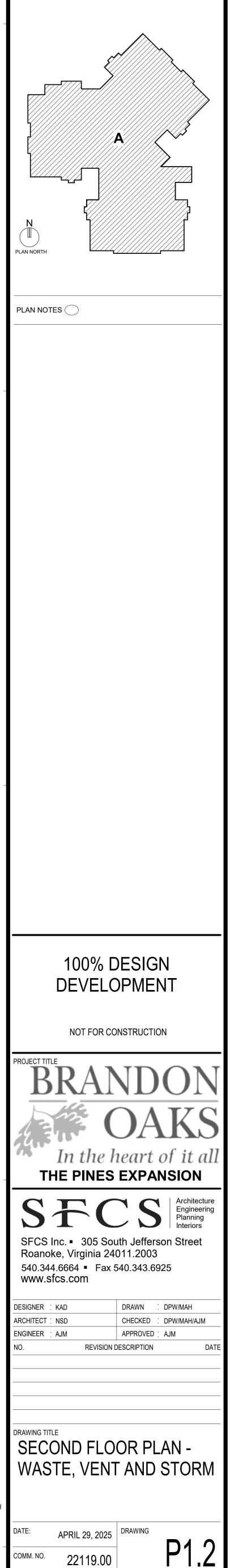




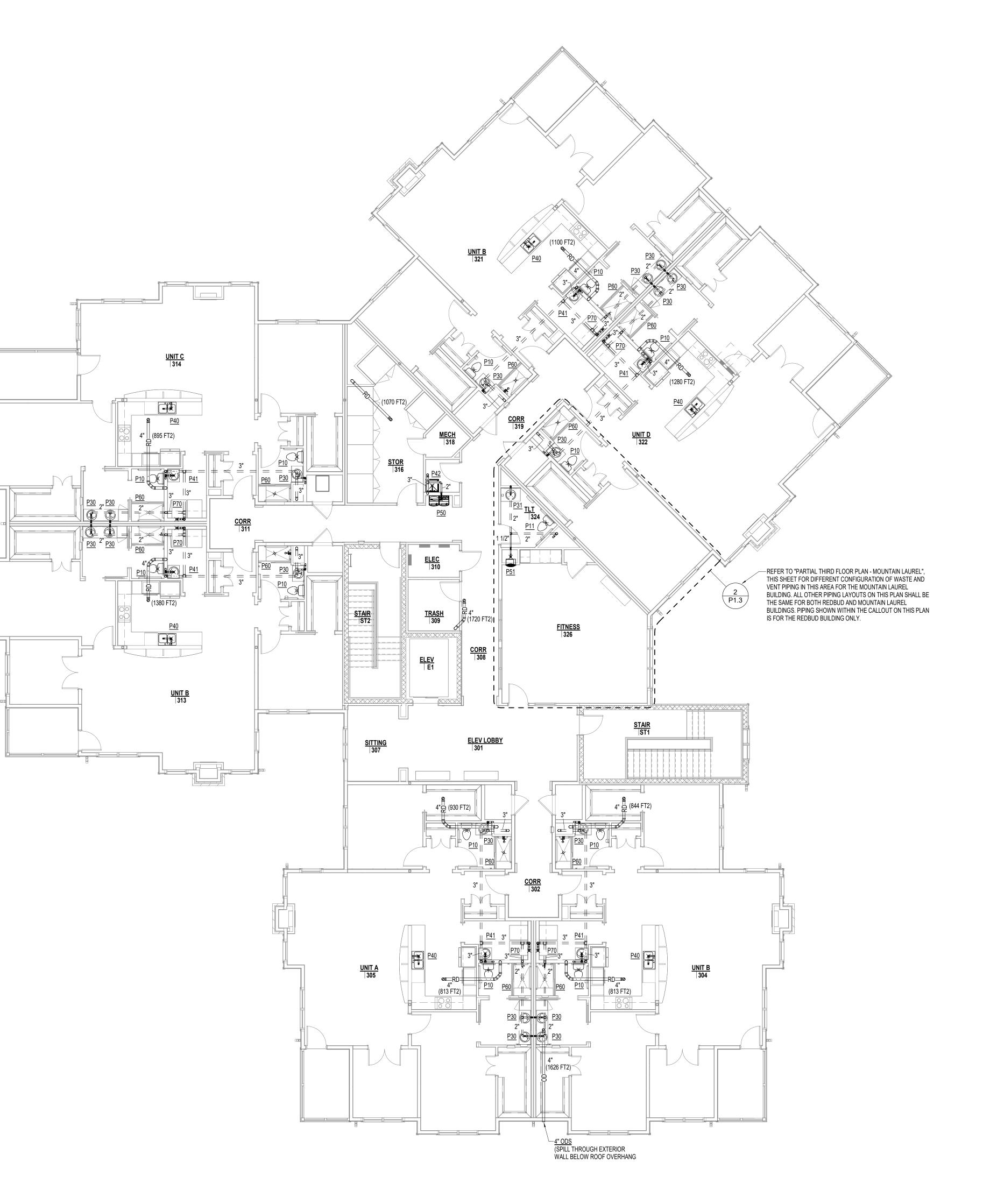
Autodesk Docs://22119.00 - Brandon Oaks/22119.00 - Brandon Oaks - The Pines Expansion - PLUMB Central.rvt

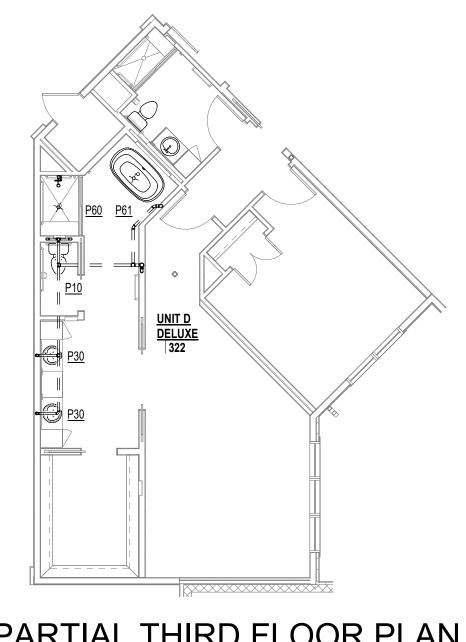






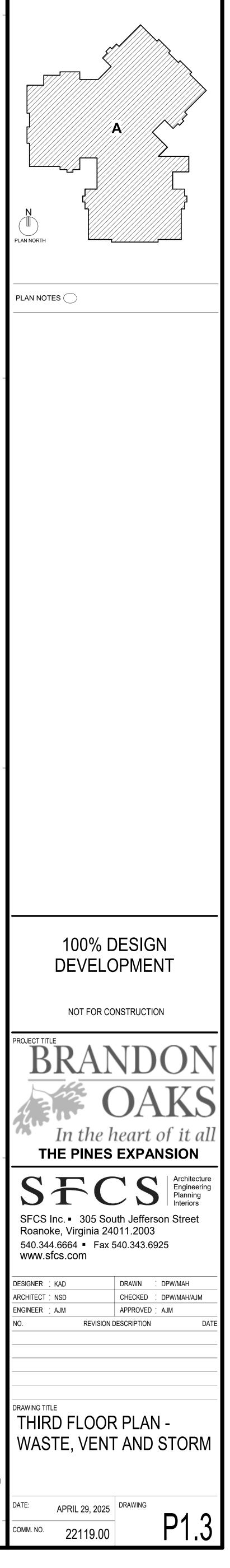




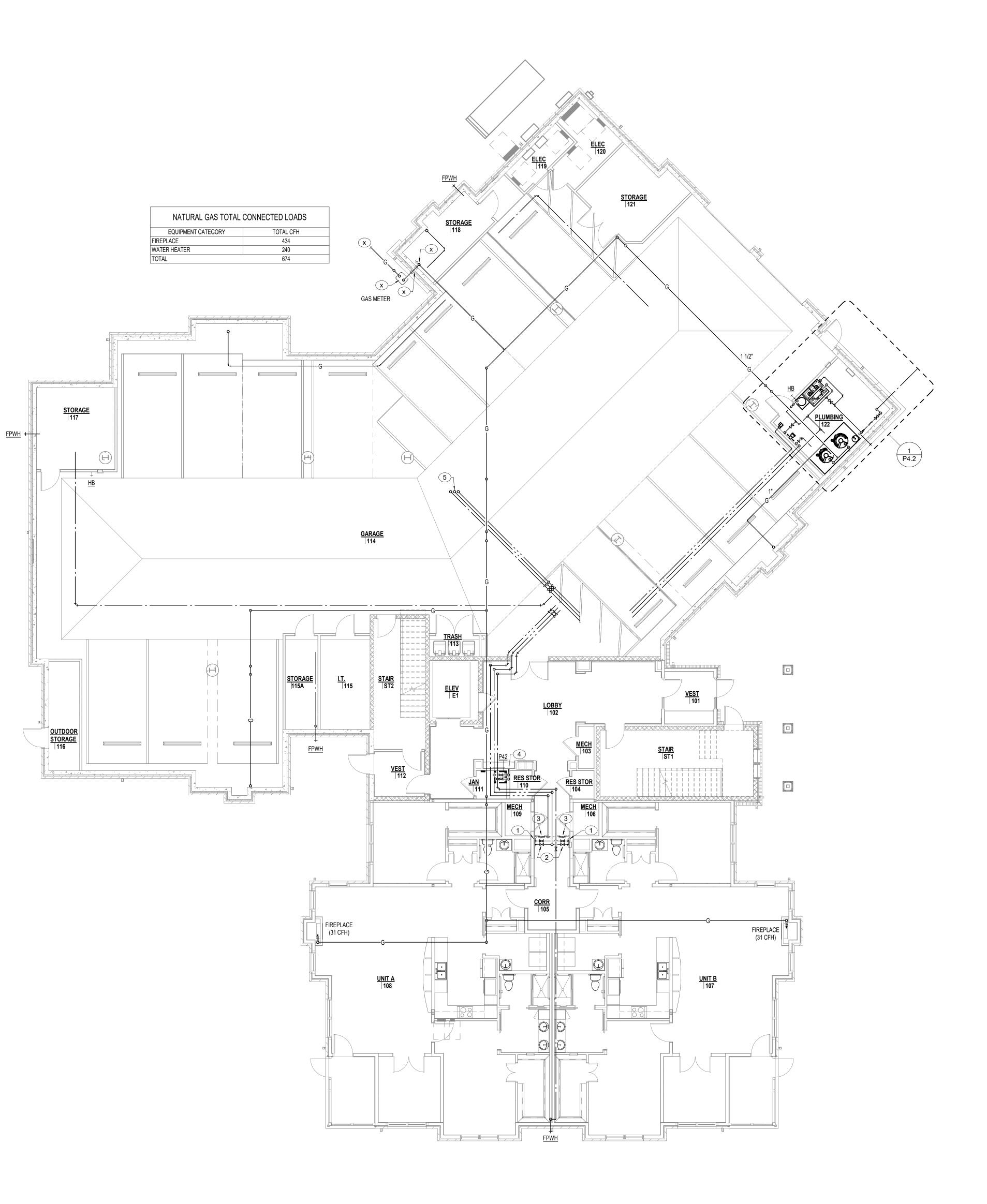


PARTIAL THIRD FLOOR PLAN -2 **MOUNTAIN LAUREL** P1.3 1/8" = 1'-0"

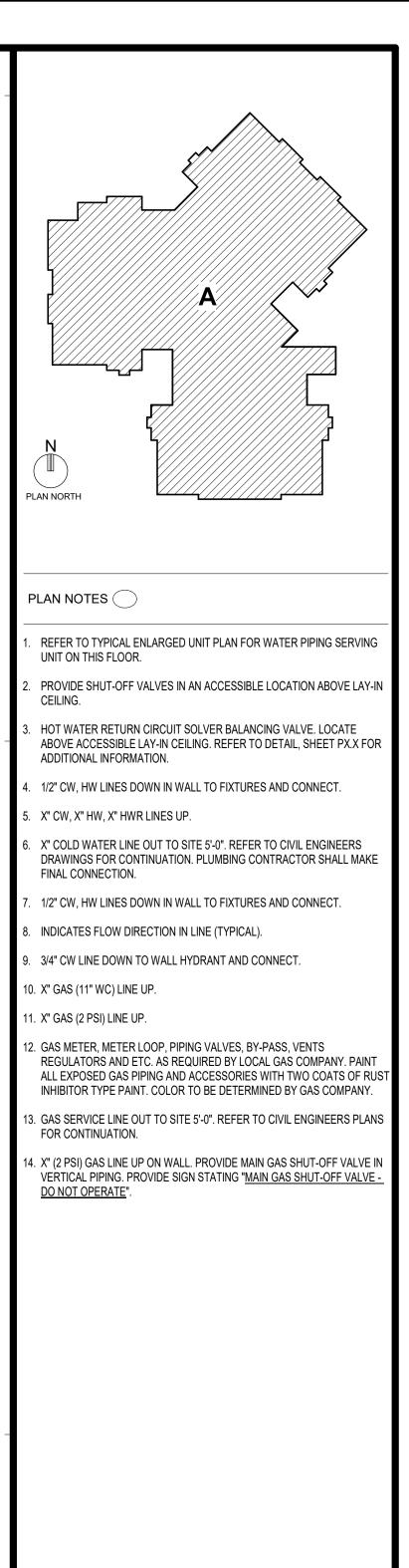










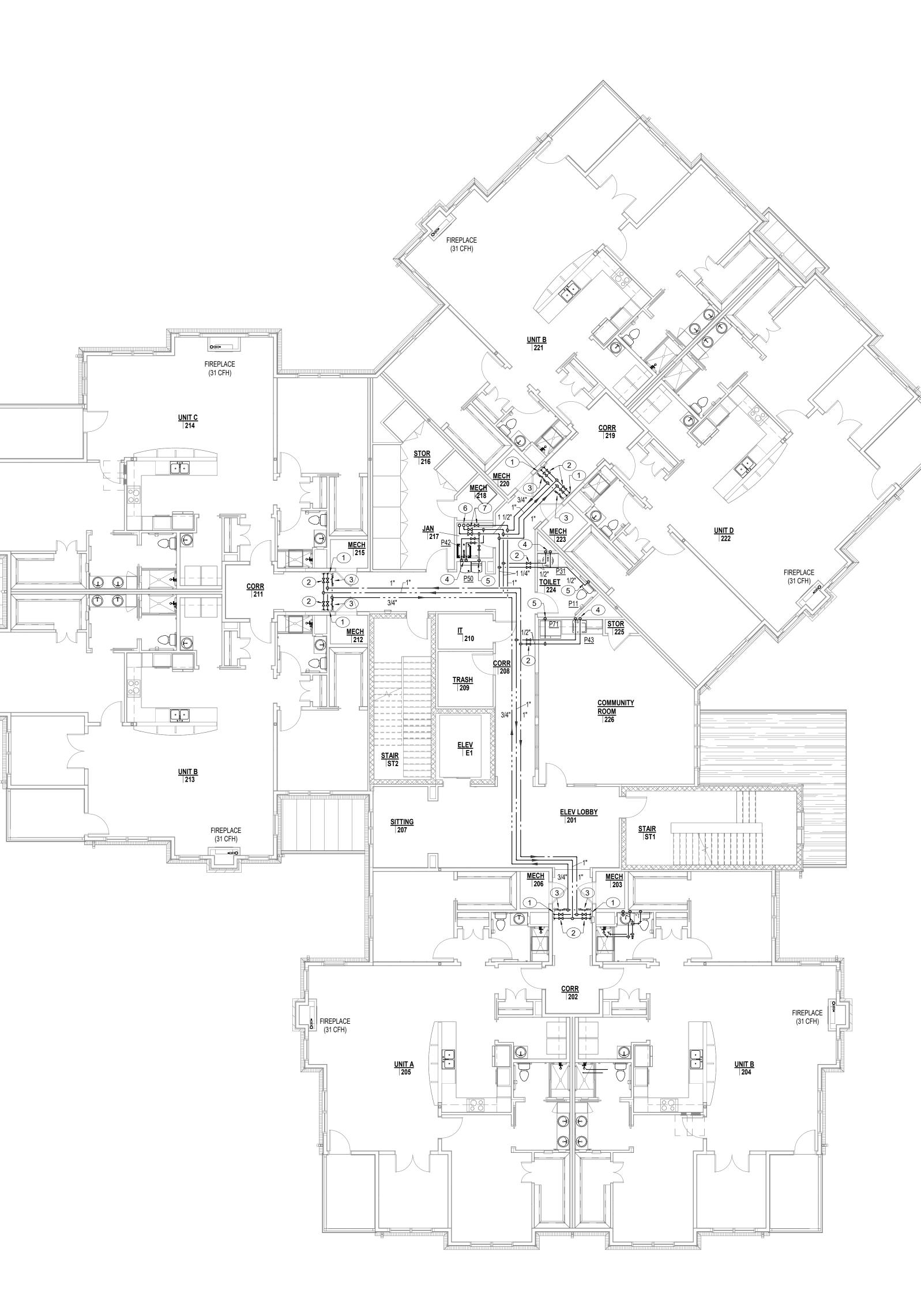


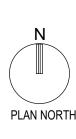
100% DESIGN DEVELOPMENT

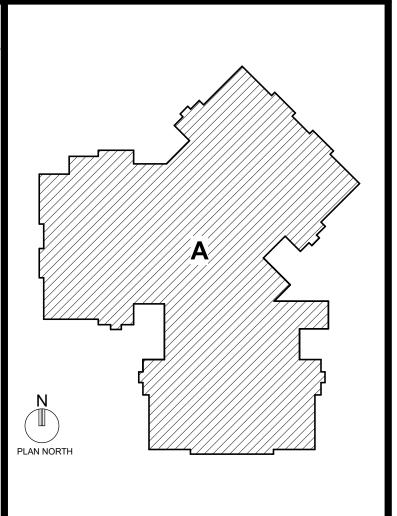
PROJECT TIT	RAN In the h		
Roano 540.34	Inc. • 305 Sou ke, Virginia 24 4.6664 • Fax 8 ofcs.com	011.2003	
DESIGNER	: Kad	DRAWN .	DPW/MAH
ARCHITECT	NSD	CHECKED :	DPW/MAH/AJM
ENGINEER	AJM	APPROVED :	AJM
NO.		DESCRIPTION	DATE
	T FLOOR		-
DATE:	APRIL 29, 2025	DRAWING	
COMM. NO.	22119.00		PZ.1



Autodesk Docs://22119.00 - Brandon Oaks/22119.00 - Brandon Oaks - The Pines Expansion - PLUMB Central.rvt





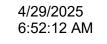


PLAN NOTES

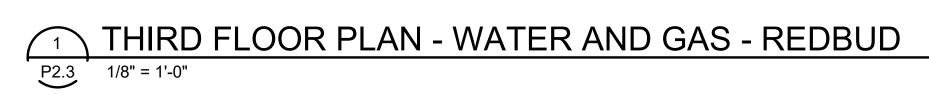
- 1. REFER TO TYPICAL ENLARGED UNIT PLAN FOR WATER PIPING SERVING UNIT ON THIS FLOOR.
- 2. PROVIDE SHUT-OFF VALVES IN AN ACCESSIBLE LOCATION ABOVE LAY-IN CEILING.
- 3. HOT WATER RETURN CIRCUIT SOLVER BALANCING VALVE. LOCATE ABOVE ACCESSIBLE LAY-IN CEILING. REFER TO DETAIL, SHEET PX.X FOR ADDITIONAL INFORMATION.
- 4. 1/2" CW, HW LINES DOWN IN WALL TO FIXTURES AND CONNECT.
- 5. 1/2" CW LINE DOWN IN WALL TO FIXTURE AND CONNECT. 6. X" CW, X" HW, X" HWR LINES UP FROM BELOW. PROVIDE TEE AND EXTEND X" CW, X" HW, X" HWR LINES TO THIS FLOOR. CONTINUE X" CW, X" HW, X" HWR LINES UP TO THIRD FLOOR.
- PROVIDE SHUT-OFF VALVE ON CW, HW AND HWR LINES TO ISOLATE ENTIRE SECOND FLOOR PIPING. VALVES TO BE LOCATED IN AN ACCESSIBLE LOCATION BELOW CEILING.

100% DESIGN DEVELOPMENT

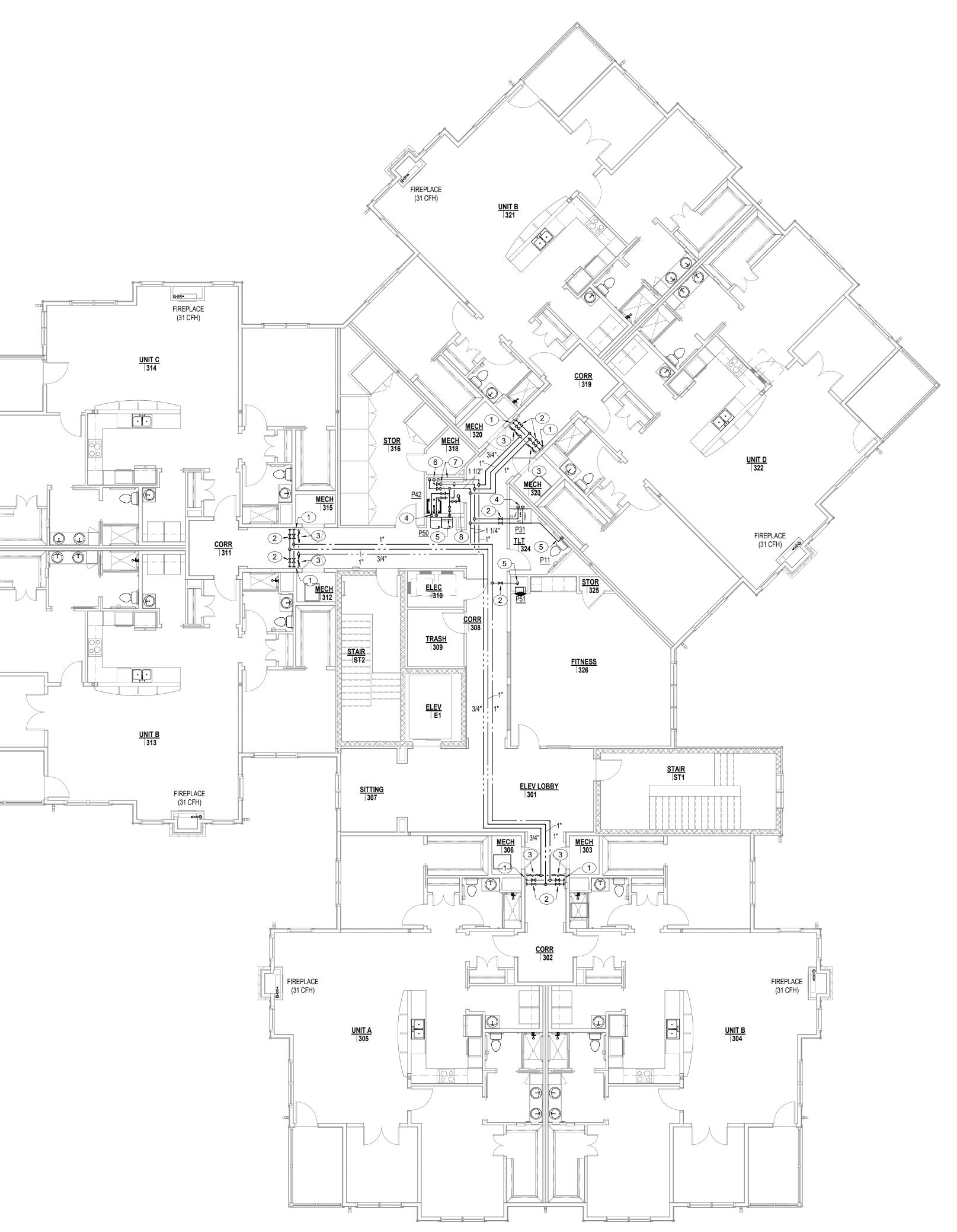
	NDON DAKS neart of it all EXPANSION
SFCS Inc. • 305 Sou Roanoke, Virginia 24 540.344.6664 • Fax 8 www.sfcs.com	011.2003
DESIGNER ; KAD	DRAWN : DPW/MAH
ARCHITECT : NSD	CHECKED : DPW/MAH/AJM
ENGINEER : AJM	APPROVED : AJM DESCRIPTION DATE
DRAWING TITLE SECOND FLO	OR PI AN -
WATER AND (DATE: APRIL 29, 2025	GAS DRAWING P2.2



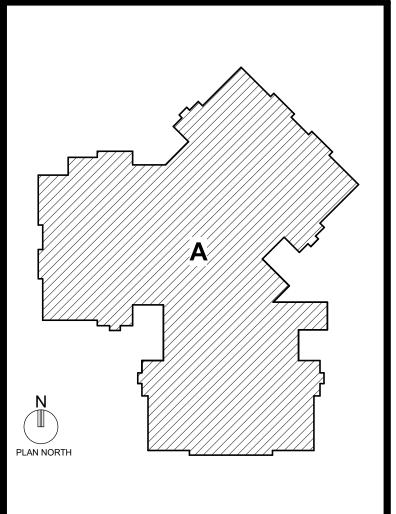
Autodesk Docs://22119.00 - Brandon Oaks/22119.00 - Brandon Oaks - The Pines Expansion - PLUMB Central.rvt











PLAN NOTES

- 1. REFER TO TYPICAL ENLARGED UNIT PLAN FOR WATER PIPING SERVING UNIT ON THIS FLOOR.
- 2. PROVIDE SHUT-OFF VALVES IN AN ACCESSIBLE LOCATION ABOVE LAY-IN CEILING.
- 3. HOT WATER RETURN CIRCUIT SOLVER BALANCING VALVE. LOCATE ABOVE ACCESSIBLE LAY-IN CEILING. REFER TO DETAIL, SHEET PX.X FOR ADDITIONAL INFORMATION.
- 4. 1/2" CW, HW LINES DOWN IN WALL TO FIXTURES AND CONNECT.
- 5. 1/2" CW LINE DOWN IN WALL TO FIXTURE AND CONNECT.
- 6. X" CW, X" HW, X" HWR LINES DOWN. 7. PROVIDE SHUT-OFF VALVE ON CW, HW AND HWR LINES TO ISOLATE ENTIRE THIRD FLOOR PIPING. VALVES TO BE LOCATED IN AN ACCESSIBLE LOCATION BELOW CEILING.
- 8. 3/4" CW LINE UP TO ROOF HYDRANT.

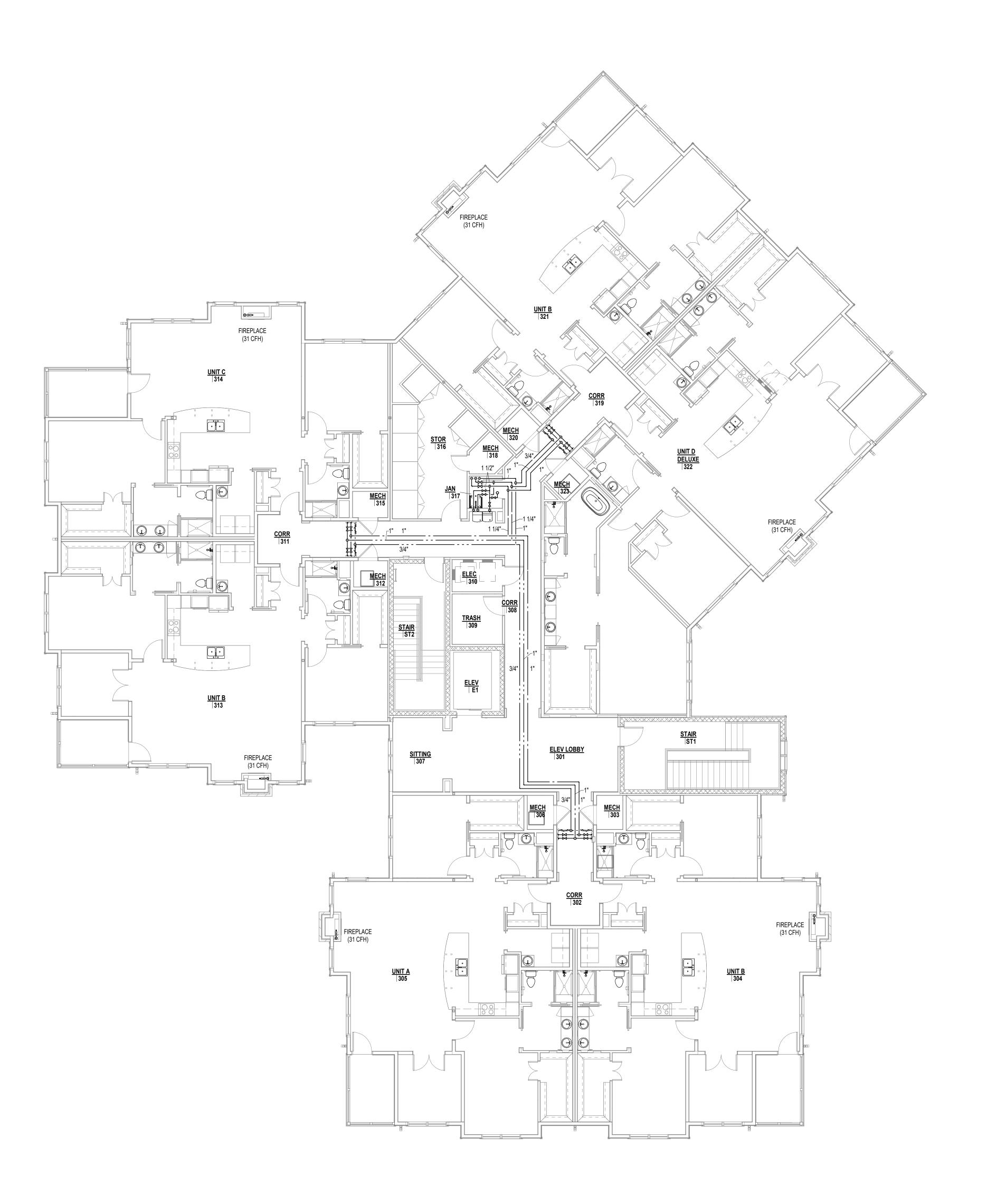
100% DESIGN DEVELOPMENT

PROJECT TIT					
BRANDON					
		DA	KS		
т	In the h				
S	ŦC	CS	Architecture Engineering Planning Interiors		
Roano 540.34	Inc. • 305 Sou ke, Virginia 24 4.6664 • Fax 5 fcs.com	011.2003			
DESIGNER	KAD	DRAWN :	DPW/MAH		
ARCHITECT	NSD	CHECKED :	DPW/MAH/AJM		
ENGINEER	AJM	APPROVED :	AJM		
NO.	REVISION [DESCRIPTION	DATE		
DRAWING TIT	1F				
THIR	D FLOOF ER AND (-		
DATE:	APRIL 29, 2025	DRAWING			
COMM. NO.	22119.00		P2.3		

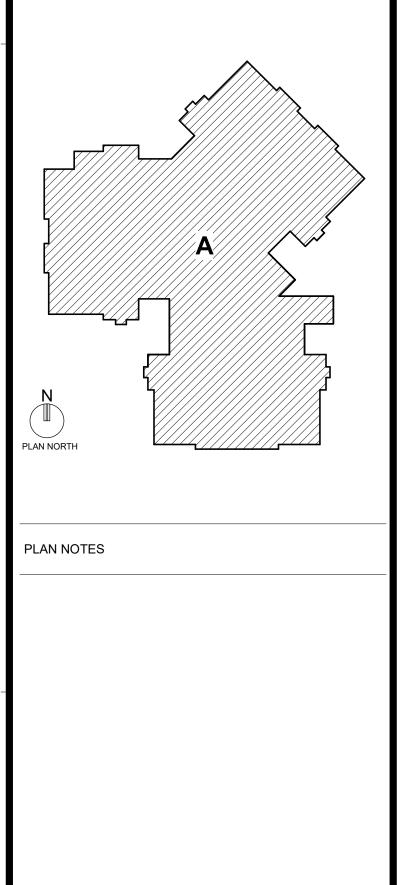
4/29/2025 6:52:14 AM

Autodesk Docs://22119.00 - Brandon Oaks/22119.00 - Brandon Oaks - The Pines Expansion - PLUMB Central.rvt







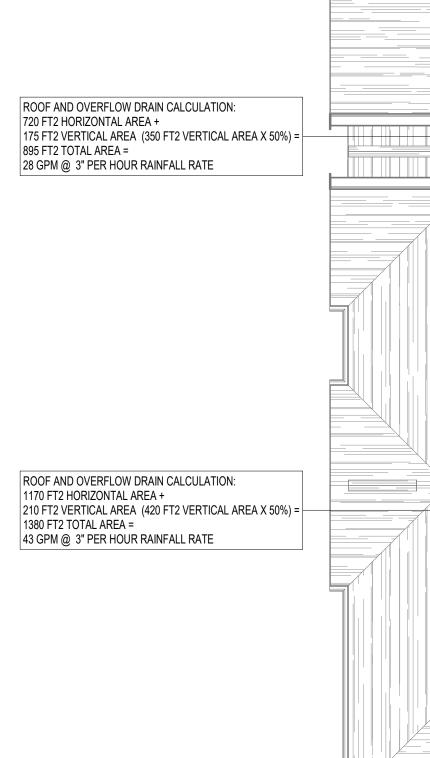


100% DESIGN DEVELOPMENT

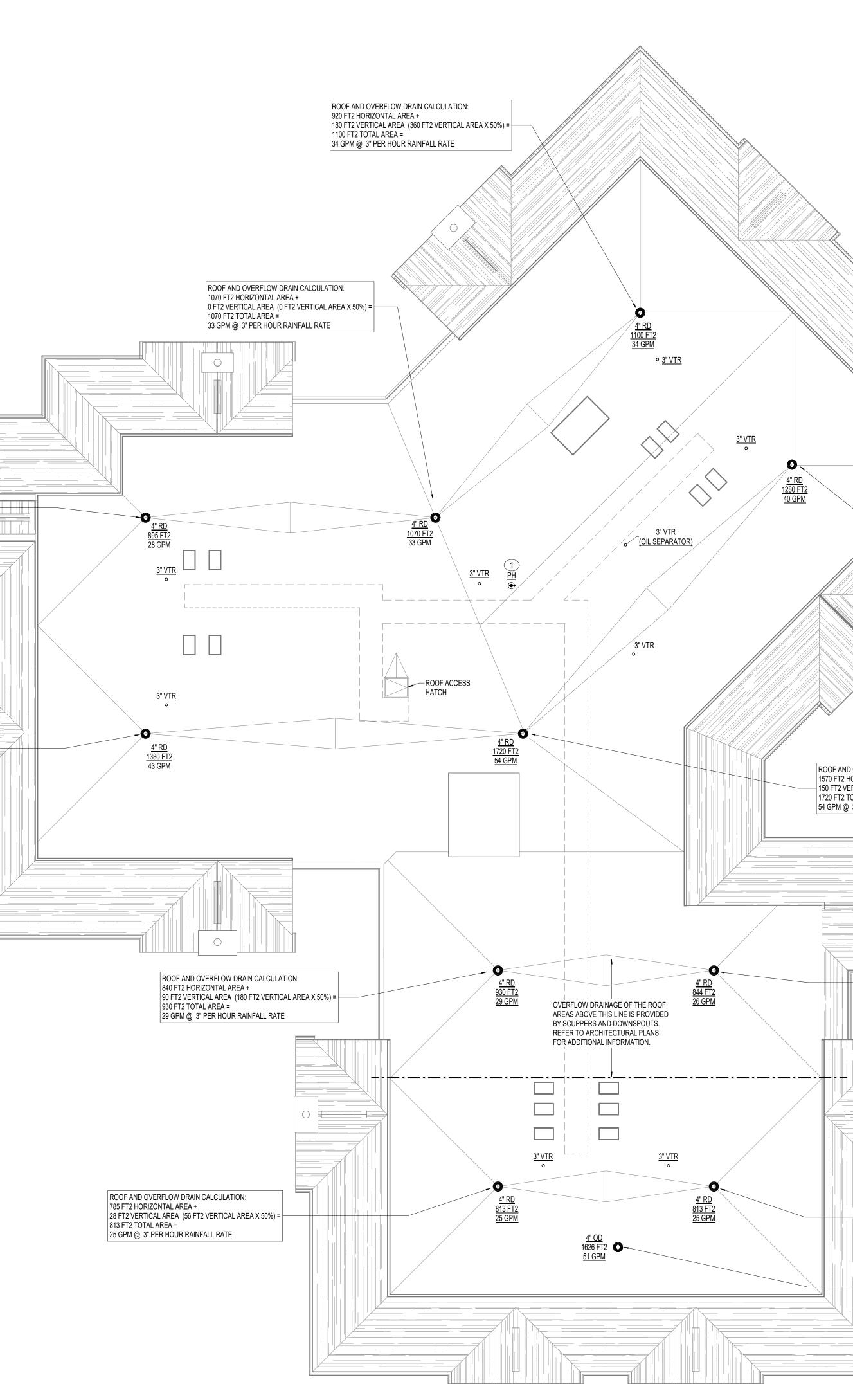
PROJECT TIT		TT	~ * *	
BRANDON				
T	In the h			
S	ŦC	CS	Architecture Engineering Planning Interiors	
Roano 540.34	Inc. • 305 Sou ke, Virginia 24 4.6664 • Fax 5 fcs.com	011.2003		
DESIGNER	KAD	DRAWN .	DPW/MAH	
ARCHITECT	NSD	CHECKED :	DPW/MAH/AJM	
ENGINEER	AJM	APPROVED :	AJM	
NO.	REVISION [DESCRIPTION	DATE	
WAT	D FLOOF ER AND (NTAIN LA	GAS -		
	APRIL 29, 2025	UKAWING		
COMM. NO.	22119.00		P2.4	

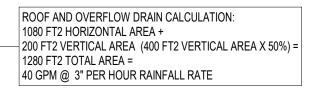


4/29/2025 6:52:15 AM

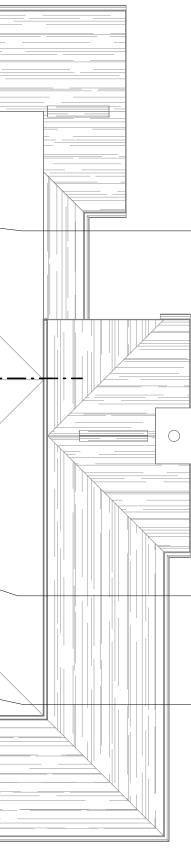








ROOF AND OVERFLOW DRAIN CALCULATION: 1570 FT2 HORIZONTAL AREA + 150 FT2 VERTICAL AREA (300 FT2 VERTICAL AREA X 50%) = 1720 FT2 TOTAL AREA = 54 GPM @ 3" PER HOUR RAINFALL RATE

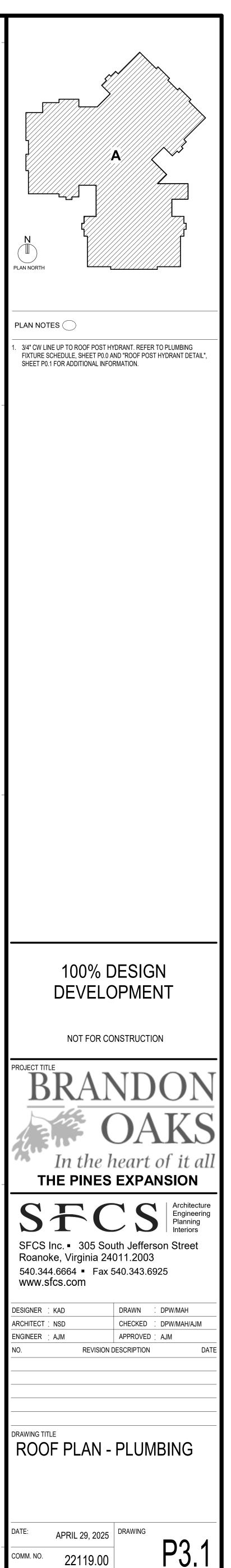


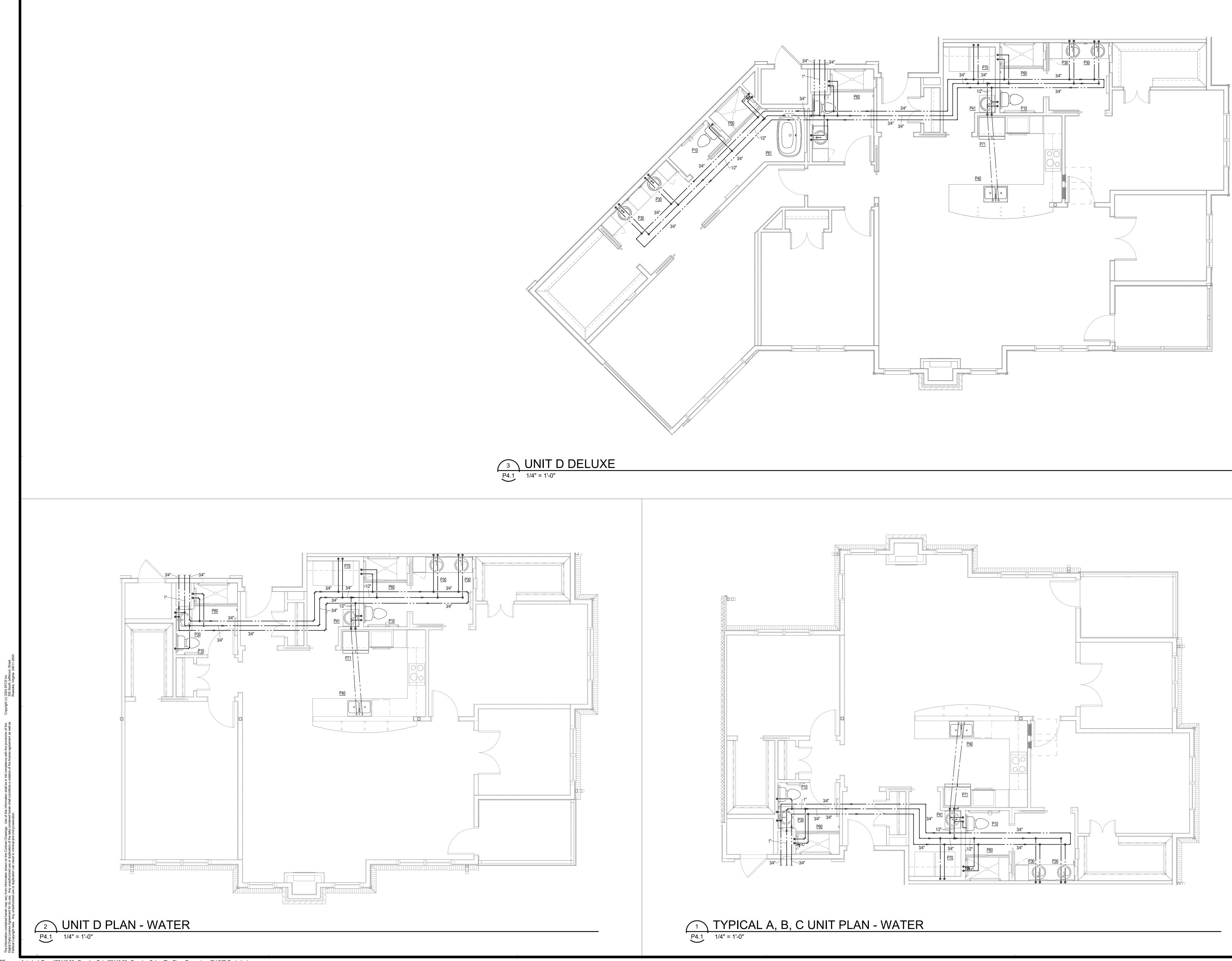
ROOF AND OVERFLOW DRAIN CALCULATION: 700 FT2 HORIZONTAL AREA + 144 FT2 VERTICAL AREA (288 FT2 VERTICAL AREA X 50%) = 844 FT2 TOTAL AREA = 26 GPM @ 3" PER HOUR RAINFALL RATE

ROOF AND OVERFLOW DRAIN CALCULATION: 785 FT2 HORIZONTAL AREA + 28 FT2 VERTICAL AREA (56 FT2 VERTICAL AREA X 50%) = 813 FT2 TOTAL AREA = 25 GPM @ 3" PER HOUR RAINFALL RATE

ROOF AND OVERFLOW DRAIN CALCULATION: 1570 FT2 HORIZONTAL AREA + 56 FT2 VERTICAL AREA (112 FT2 VERTICAL AREA X 50%) = 1626 FT2 TOTAL AREA = 51 GPM @ 3" PER HOUR RAINFALL RATE







1. REFER TO FLOOR PLANS FOR ORIENTATION OF UNIT PLANS. UNIT PIPING MAY BE MIRRORED AND/OR OPPOSITE HAND BASED ON THE LOCATION AND CONFIGURATION OF THE UNIT IN THE BUILDING. 2. PIPING ROUTED IN JOIST SPACE AND THROUGH JOISTS SHALL BE INSTALLED AND LOCATED IN ACCORDANCE WITH JOIST MANUFACTURERS RECOMMENDATIONS. COORDINATE PIPE ROUTING WITH GENERAL CONTRACTOR PRIOR TO ROUGH-IN. PIPING SHOWN IS SCHEMATIC AND INDICATED FOR DESIGN INTENT.

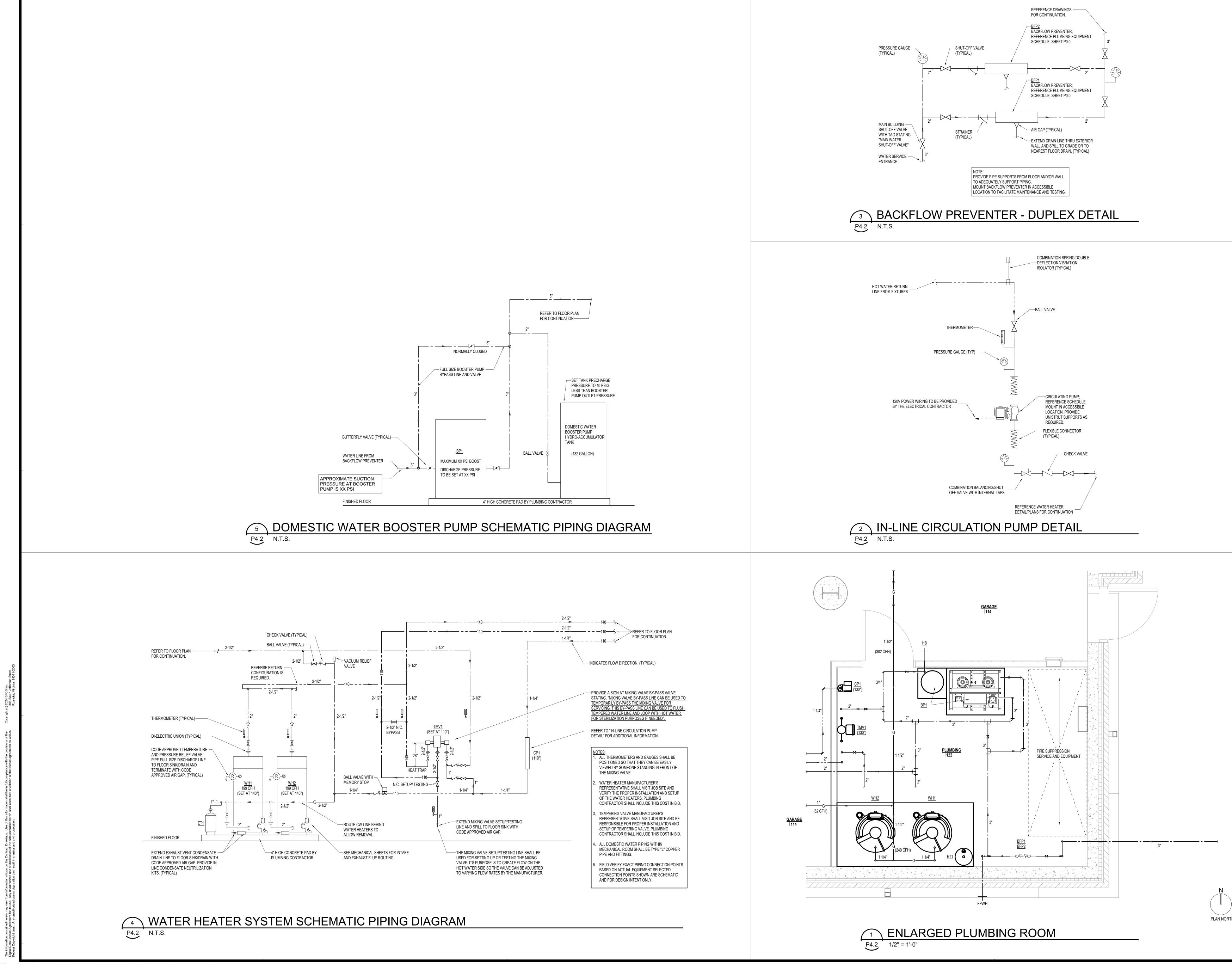
3. ALL PIPE SIZES NOT INDICATED ON PIPING ON THIS SHEET SHALL BE 1/2" PIPE SIZE, UNLESS INDICATED OTHERWISE.

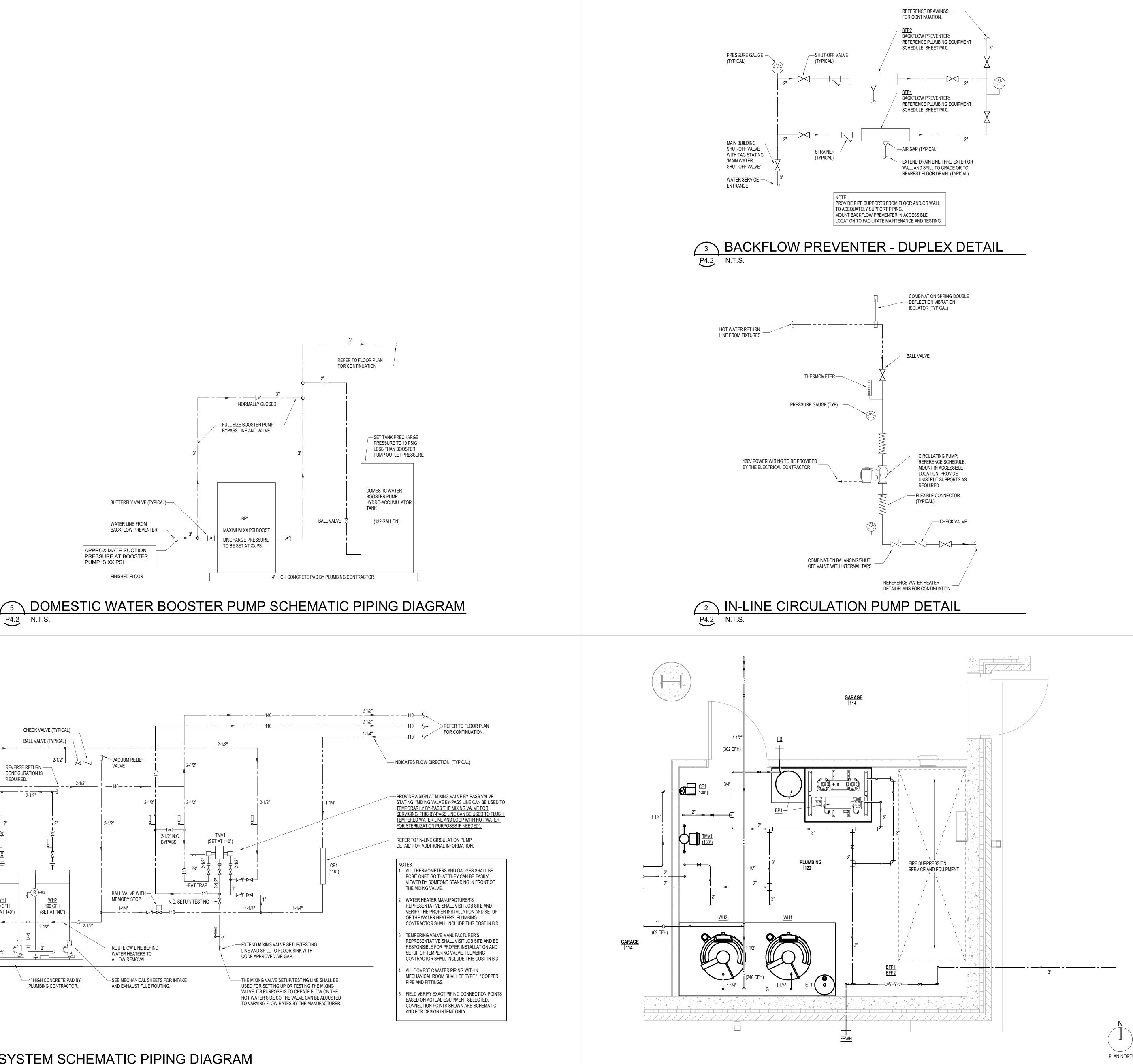
PLAN NOTES

100% DESIGN DEVELOPMENT

PROJECT TITLE				
BRANDON				
	DAKS			
	<i>leart of it all</i> EXPANSION			
SŦC	CS Architecture Engineering Planning Interiors			
SFCS Inc. • 305 South Jefferson Street Roanoke, Virginia 24011.2003 540.344.6664 • Fax 540.343.6925 www.sfcs.com				
DESIGNER : KAD	DRAWN . DPW/MAH			
ARCHITECT : NSD	CHECKED : DPW/MAH/AJM			
ENGINEER : AJM	APPROVED ; AJM			
NO. REVISION I	DESCRIPTION DATE			
DRAWING TITLE ENLARGED PLANS - WATER				
DATE: APRIL 29, 2025	DRAWING			
сомм. NO. 22119.00	P4.1			







NOT FOR CONSTRUCTION	
BRANDON	
In the heart of it all THE PINES EXPANSION	
Architecture Engineering Planning Interiors SFCS Inc. • 305 South Jefferson Street Roanoke, Virginia 24011.2003 540.344.6664 • Fax 540.343.6925 www.sfcs.com	
DESIGNER : KAD	DRAWN : DPW/MAH
ARCHITECT : NSD	CHECKED : DPW/MAH/AJM
ENGINEER : AJM	APPROVED : AJM
DRAWING TITLE ENLARGED PLUMBING	
ROOM PLAN - WATER AND GAS	
APRIL 29, 2025	
COMM. NO. 22119.00	P4.2

100% DESIGN DEVELOPMENT

PLAN NOTES