

GENERAL MECHANICAL NOTES

1. THE CONTRACTOR SHALL FURNISH ALL LABOR, MATERIALS, AND EQUIPMENT NECESSARY FOR THE INSTALLATION OF A COMPLETE SYSTEM IN ACCORDANCE WITH THESE DRAWINGS, THE APPLICABLE BUILDING CODE AND ALL OTHER APPLICABLE STATE, COUNTY AND LOCAL ORDINANCES AND THE LATEST ADDITION OF THE FOLLOWING PUBLICATIONS: SMACNA, ASHRAE, NFPA 90A, 90B, 91 & ANSI B-9.1. ALL DUCTWORK SHALL BE FABRICATED, INSTALLED AND SUPPORTED AS PER SMACNA STANDARDS.

2. THE CONTRACTOR SHALL PAY ALL COSTS OF PERMIT, INSPECTIONS AND ALL OTHER COSTS INCIDENTAL TO THE COMPLETION AND TESTING OF THIS WORK.

3. THE CONTRACTOR SHALL VISIT THE SITE AND COORDINATE WORK WITH OTHER TRADES. TO INSURE AN ORDERLY PROGRESS OF THIS WORK.

4. THE CONTRACTOR SHALL SUPPLY THE OWNER WITH ONE SET OF "AS-BUILT" DRAWINGS UPON COMPLETION OF THIS PROJECT. CONTRACTOR SHALL ALSO LEAVE FOR ONE AT LEAST ONE SET OF THE MANUFACTURER'S INSTALLATION AND OPERATIONS MANUALS FOR ALL EQUIPMENT PROVIDED ON THE PROJECT.

5. ALL PROVIDED MATERIALS SHALL BE NEW OF GOOD QUALITY. ALL WORK SHALL BE PERFORMED IN A WORKMANLIKE MANNER BY SKILLED WORKMAN.

6. CONTRACTOR SHALL SUBMIT, FOR APPROVAL, FIVE (5) COPIES OF MANUFACTURER'S DRAWINGS FOR EACH PIECE OF EQUIPMENT AND CONTROLS INCLUDED IN CONTRACT. IT IS STRONGLY PREFERRED THAT THE SUBMITTALS BE MADE IN THE FORM OF AN ELECTRONIC SUBMITTAL IN A PDF TYPE FORMAT.

7. ALL SUPPLY AND RETURN AIR DUCTWORK SHALL BE GALVANIZED SHEET STEEL EXTERNALLY WRAPPED WITH WITH A MIN. OF R5 INSULATION OR R8 IF DUCTWORK IS LOCATED EXTERIOR TO BLDG INSULATION ENVELOPE. ALL FLEX DUCT SHALL BE "THERMOFLEX" WITH A MINIMUM 4.2 R VALUE. OR APPROVED EQUAL AND SHALL HAVE EQUIVALENT INSULATION.

8. ALL EXHAUST DUCTS AND OUTSIDE AIR DUCTS SHALL BE GALVANIZED SHEET METAL WITH SEALED SEAMS AND JOINTS.

9. DUCT SIZES SHOWN ARE INSIDE DIMENSIONS.

10. ALL AIR DEVICES (DIFFUSERS, REGISTERS AND GRILLES) SHALL BE ALL ALUMINUM CONSTRUCTION WITH EXPOSED SURFACE OFF WHITE BAKED ENAMEL FINISH OR AS SPECIFIED BY ARCHITECT. DEVICES SHALL BE TITUS, METALAIR, AIRQUE, PROVIDE OPPOSED BLADE DAMPERS AT ALL DIFFUSERS AND REGISTERS.

11. THERMOSTAT SHALL BE COMBINATION COOLING/HEATING, WITH SYSTEM "COOL-AUTO-HEAT-OFF" AND FAN "ON-AUTO" SELECTOR SWITCHES. PROVIDE PROGRAMMABLE TYPE THERMOSTAT. * CONTRACTOR SHALL FULLY INSTRUCT OWNER ON HOW TO PROPERLY PROGRAM INSTALLED THERMOSTATS. * PROGRAMMABLE THERMOSTAT SHALL BE BY MANUFACTURER OF INSTALLED AIR HANDLING UNIT. IT IS RECOMMENDED THAT DURING OCCUPIED HOURS, THE FANS BE SET TO "ON" IN LIEU OF "AUTO". * THERMOSTATS SHALL BE MOUNTED A MAX. OF 48" A.F.F.

12. REFRIGERANT LINES SHALL BE COPPER, TYPE "L" HARD DRAWN WITH WROUGHT COPPER SOLDER-JOINT TYPE FITTINGS. USE 95/5 SOLDER. REFRIGERANT LINES SHALL SIZED AS PER MANUFACTURER RECOMMENDATIONS.

13. SPLIT SYSTEMS (IF APPLICABLE) SHALL HAVE A MINIMUM OF 1-1/2" ARMAFLEX INSULATION (OR APPROVED EQUAL) USED FOR SUCTION LINES. INSTALLATION SHALL BE AS PER MANUFACTURERS INSTRUCTIONS. PRE-INSULATED LINES SETS ARE ACCEPTABLE.

14. ALL BRANCH TAKE-OFFS TO BE PROVIDED W/MANUAL VOLUME DAMPERS AND TAPS AS PER PLANS REQUIREMENTS.

15. PROVIDE NEW FILTERS FOR ALL AIR CONDITIONING EQUIPMENT BEFORE STARTING THEM. REPLACE THEM PRIOR TO FINAL ACCEPTANCE BY OWNER.

16. PROVIDE SMOKE DETECTORS WITH ACCESS DOORS IN ALL SUPPLY AIR DUCTS FOR FANS AND AHU'S SERVING A COMMON DESIGN SUPPLY OR RETURN PLENUM OF ABOVE 2000 CFM. ALL SMOKE DETECTORS SHALL BE BY ONE MANUFACTURER. COORDINATE VOLTAGE ETC. WITH ELECTRICAL CONTRACTOR AND FIRE ALARM SYSTEM BEFORE ORDERING. UPON DETECTION, SMOKE DETECTORS SHUT DOWN ASSOCIATED AIR MOVING EQUIPMENT AND ALL AIR MOVING EQUIPMENT SERVING THAT COMMON PLENUM.

17. HVAC CONTRACTOR SHALL PROVIDE A TEST AND BALANCE REPORT FOR ALL MECHANICAL EQUIPMENT, AIR DEVICES, DAMPERS, AHU'S AND FANS. THE T & B SHALL BE IN ACCORDANCE WITH THE AIR BALANCE COUNCIL STANDARDS, AND SHALL INCLUDE AIR QUANTITIES FOR ALL SUPPLY GRILLS, RETURN GRILLS, AND EXHAUST GRILLS, AND THE LEAVING AND ENTERING AIR TEMPERATURE (°F) FROM SUPPLY GRILLS AND EVAPORATORS.

18. THERMOSTAT LOCATION SHALL BE APPROVED BY OWNER BEFORE INSTALLATION.

19. ALL INSULATION SHALL HAVE FIRE/SMOKE RATING LESS THAN 25/50.

20. MECHANICAL PLANS IN GENERAL, ARE DIAGRAMMATIC IN NATURE, AND ARE TO BE READ IN CONJUNCTION WITH ARCH. PLUMBING, ELECTRICAL, AND STRUCTURAL PLANS AND SHALL BE CONSIDERED AS ONE SET OF DOCUMENTS. DUCT AND PIPING OFFSETS, BENDS AND TRANSITIONS WILL BE REQUIRED TO PROVIDE AND INSTALL A COMPLETE FUNCTIONAL SYSTEM AND SHALL BE PROVIDED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER.

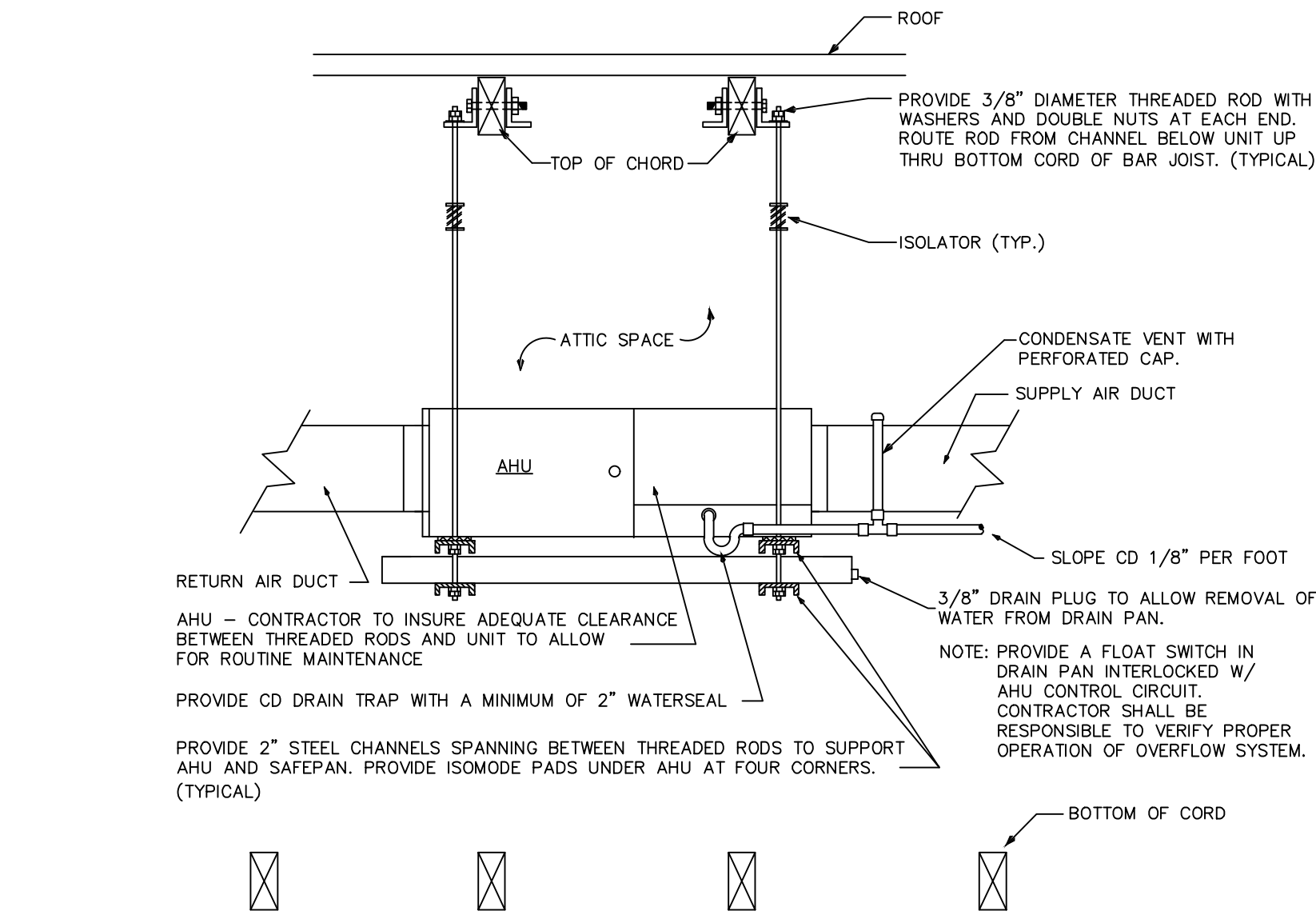
21. CONTRACTOR SHALL INSTALL ALL OUTDOOR EQUIPMENT TO WITHSTAND WIND LOADING FORCES AS REQUIRED BY LOCAL CODES. REFER TO STRUCTURAL PLANS BY OTHERS FOR STRUCTURAL DETAILS.

22. PROVIDE ALL NECESSARY CONTACTORS, RELAYS, ETC., FOR A COMPLETE OPERATING SYSTEM.

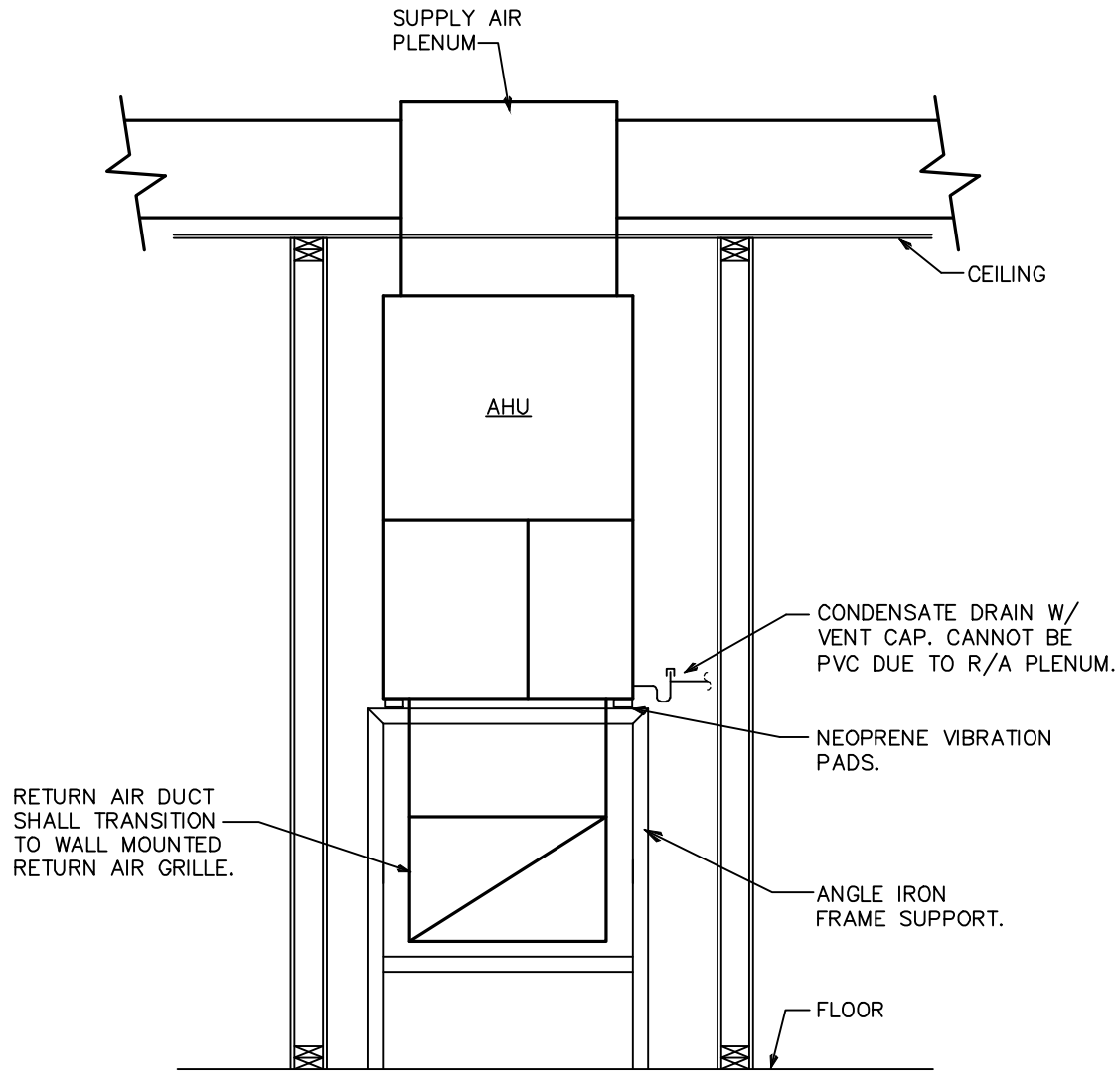
23. THROUGHOUT THE COURSE OF THE WORK, MINOR CHANGES AND ADJUSTMENTS TO THE PLANS AND SPECIFICATIONS MAY BE REQUESTED BY THE TENANT. THE CONTRACTOR SHALL MAKE SUCH ADJUSTMENTS WITHOUT ADDITIONAL COST TO THE TENANT, WHERE SUCH ADJUSTMENTS ARE NECESSARY FOR THE PROPER INSTALLATION AND OPERATION OF THE SYSTEMS, AND WITHIN THE INTENT OF THE CONTRACT DOCUMENTS.

24. NOTWITHSTANDING ANY OTHER PROVISIONS OF THE CONTRACT DOCUMENTS, THE CONTRACTOR BEARS ULTIMATE RESPONSIBILITY FOR COMPLIANCE OF THE INSTALLATION WITH THE REQUIREMENTS OF THE LOCAL AUTHORITY HAVING JURISDICTION.

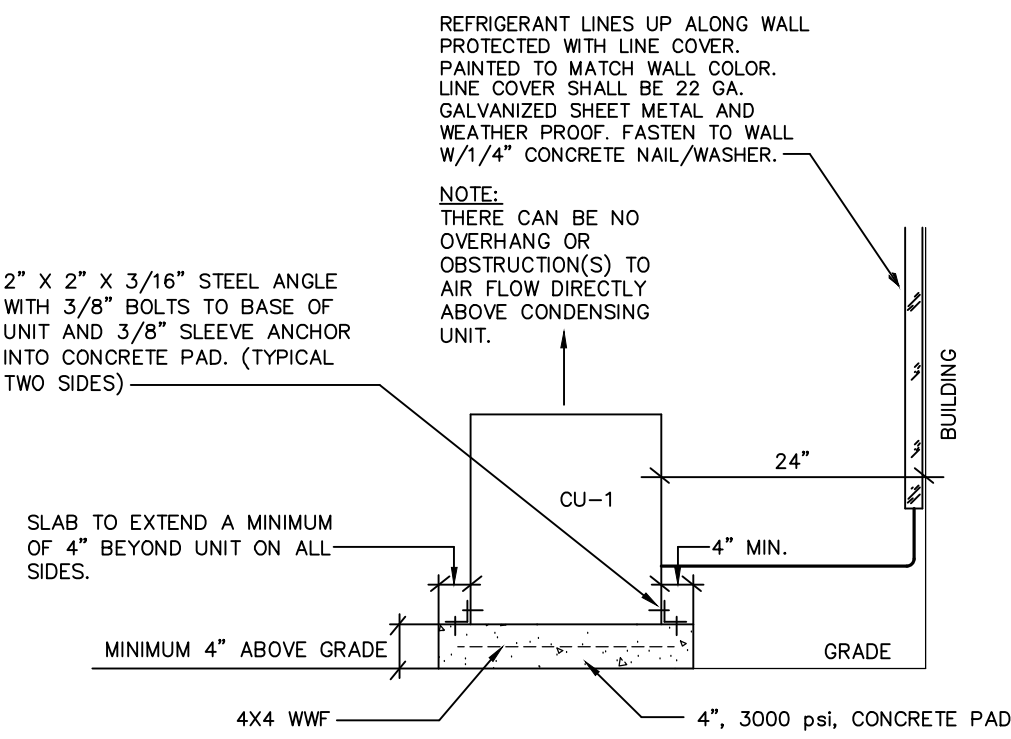
25. IF ANY ERRORS, DISCREPANCIES OR OMISSIONS APPEAR IN THE DRAWINGS, SPECIFICATIONS OR OTHER CONTRACT DOCUMENTS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING OF SUCH ERROR OR OMISSION. IN THE EVENT OF THE CONTRACTOR FAILING TO GIVE SUCH NOTICE BEFORE CONSTRUCTION AND/OR FABRICATION OF THE WORK, HE WILL BE HELD RESPONSIBLE FOR THE RESULTS OF ANY SUCH ERRORS, DISCREPANCIES OR OMISSIONS AND THE COST OF RECTIFYING SAME.



1 AHU MOUNTING DETAIL
NO SCALE



2 AHU MOUNTING DETAIL
NO SCALE



3 COND. UNIT MTG. DETAIL
NO SCALE

OUTSIDE AIR CALCULATIONS						
THE FOLLOWING IS BASED ON ASHRAE STANDARD 62.1-2010 FOR OUTSIDE AIR REQUIREMENTS						
UNIT LABEL	OCCUPANCY CATEGORY	AREA	ESTIMATED MAX. OCCUPANCY	OUTSIDE AIR REQUIRED (CFM)	E _z	TOTAL
AHU #1 (CLUB ROOM)	MEETING ROOM	800	67 AS PER ARCHITECTURAL PLAN (5 CFM/PERSON) + .06 CFM/S.F.	(67 X 5) + (800 X .06) = 383 PEOPLE AREA TOTAL	0.8	383/0.8 = 478
AHU #2 (FOYER)	MAIN ENTRY LOBBY	135	10 PEOPLE PER 1,000 S.F./5 CFM PER PERSON	(2 X 5) + (135 X .06) = 18 PEOPLE AREA TOTAL		
AHU #2 (WARMING KITCHEN)	KITCHEN	185	.7 CFM PER S.F.	(N/A) + (185 X .7) = 130 PEOPLE AREA TOTAL		
				AHU #2 TOTAL = 148	0.8	148/0.8 = 185

* E_z (SYSTEM VENTILATION EFFICIENCY) AS PER 2012 NCMC TABLE 403.3.2.3.2

FAN SCHEDULE										
LABEL	TYPE OF UNIT - AREA SERVED	MANUFACTURER & MODEL NO.	CFM	SP	MOUNTING ARRANGEMENT	MOTOR H.P.	ENCLOSURE TYPE	RPM	VOLTAGE	NOTES
EF-1,2	CABINET FAN - REFER TO PLANS	PENN ZEPHYR Z8H	190	.125"	CEILING MOUNTED	108 WATTS	OPEN DRIP PROOF	1550	115V/1ø	1,2
EF-3	CABINET FAN - REFER TO PLANS	PENN ZEPHYR Z8S	250	.125"	CEILING MOUNTED	77 WATTS	OPEN DRIP PROOF	1050	115V/1ø	1,2
EF-4	CABINET FAN - REFER TO PLANS	PENN ZEPHYR Z8H	400	.125"	CEILING MOUNTED	130 WATTS	OPEN DRIP PROOF	1550	115V/1ø	1,2
EF-5	CABINET FAN - REFER TO PLANS	PENN ZEPHYR Z8H	200	.125"	CEILING MOUNTED	108 WATTS	OPEN DRIP PROOF	1550	115V/1ø	1,2
EF-6	CABINET FAN - REFER TO PLANS	PENN ZEPHYR Z10H	700	.125"	CEILING MOUNTED	390 WATTS	OPEN DRIP PROOF	1550	115V/1ø	1,2

NOTES: 1.) REFER TO ELECTRICAL PLANS FOR CONTROL.
2.) FAN TO BE PROVIDED WITH BACKDRAFT DAMPER.

APPENDIX B BUILDING CODE SUMMARY (MECHANICAL SUMMARY)

MECHANICAL SYSTEMS, SERVICE SYSTEMS, AND EQUIPMENT

METHOD OF COMPLIANCE:
Prescriptive ☒ Energy Cost Budget ☐

Thermal Zone Zone 3A

Exterior Design Conditions
winter dry bulb 20° F
summer dry bulb 97° F

Interior Design Conditions
winter dry bulb 68° F
summer dry bulb 74° F
relative humidity 52.9%

Building Heating Load 65,460 BTU
Building Cooling Load 44,369 BTU

Mechanical Spacing Conditioning System
Unitary
Description of unit REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
heating efficiency REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
cooling efficiency REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
heat output of unit REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
cooling output of unit REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.

Boiler N/A
total boiler output. If oversized, state reason.

Chiller N/A
total chiller capacity. If oversized, state reason.

List equipment efficiencies
Equipment schedules with motors (mechanical systems)
motor horsepower REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
number of phases REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
minimum efficiency REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
motor type REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.
of poles REFER TO EQUIPMENT SCHEDULES ON THIS SHEET.

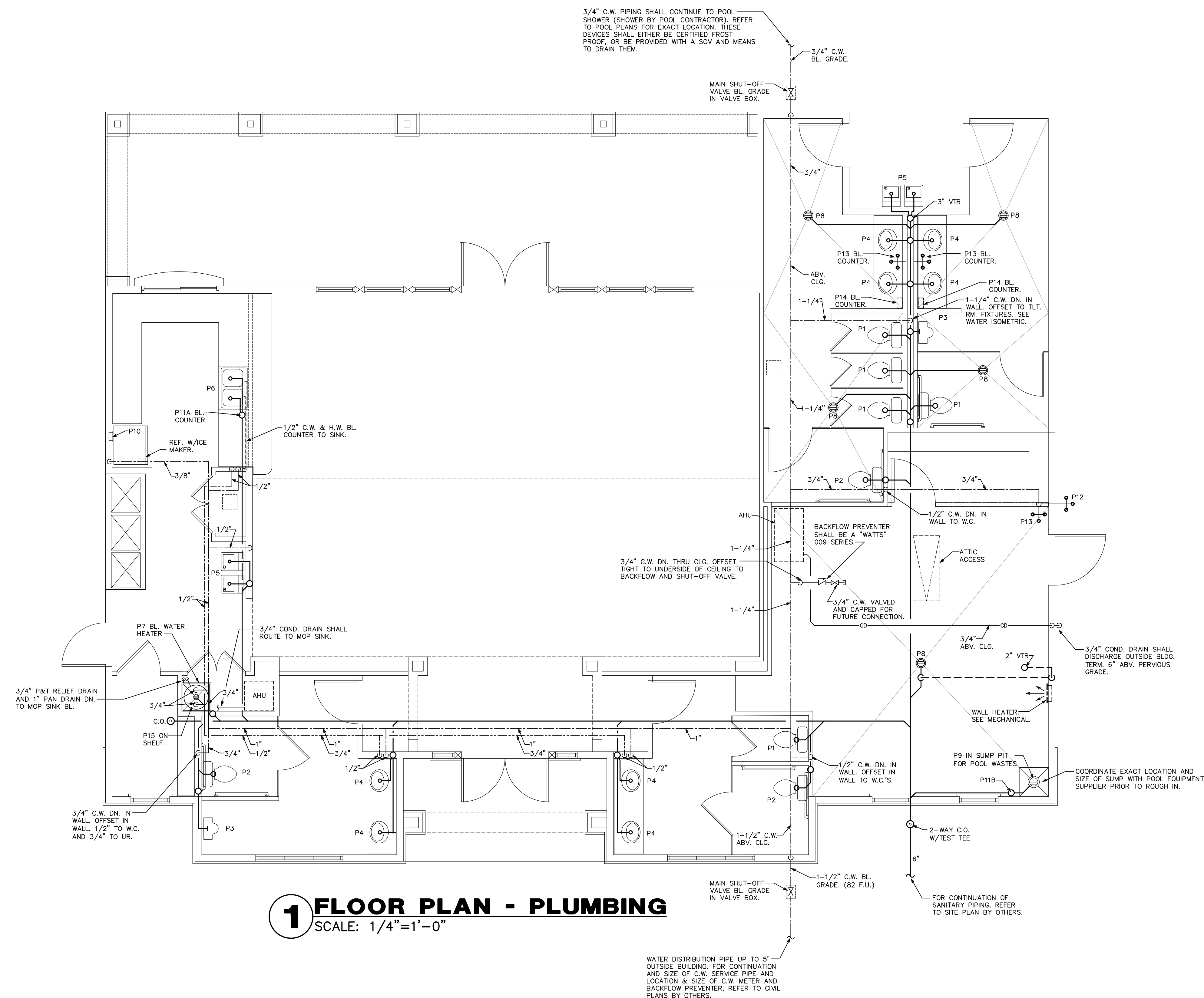
DESIGNER STATEMENT: 1
To the best of my knowledge and belief, the design of this building complies with the mechanical systems, service systems and equipment requirements of the North Carolina Energy Code 2012.
SIGNED: _____
NAME: _____
TITLE: _____

NOTE:
COMPLIANCE TO NC ENERGY SECTION 506 IS MADE BY LIGHTING LEVEL REDUCTION.

AIR COOLED HEAT PUMP SCHEDULE																		
HEAT PUMP									AIR HANDLING UNIT						INTEGRATED ELECTRIC HEATING			
CU LABEL(S)	MANUFACTURER & MODEL NO.	TOTAL CAPACITY COOLING	SENSIBLE CAPACITY COOLING	TOTAL CAPACITY HEATING	COMP. RLA	FAN FLA	VOLTAGE	MOCP	EER/SEER	WEIGHT	AHU LABEL(S)	MANUFACTURER & MODEL NO.	TOTAL CFM	O/A CFM	E.S.P.	BLOWER SPEED	FAN HP	VOLTAGE
CU #1	CARRIER 25HBC530A003	28,800	21,980	29,400	14.1	0.5	240V/1ø	30A	15.0	196 lbs.	AHU #1	CARRIER FX4DNF031L00	950	SEE SCH	0.5"	HIGH	1/2 HP	240V/1ø
CU #2	CARRIER 25HBC560A003	57,490	43,480	57,400	26.4	1.2	240V/1ø	50A	15.0	294 lbs.	AHU #2	CARRIER FX4DNF081L00	1,900	SEE SCH	0.4"	HIGH	3/4 HP	240V/1ø
GENERAL NOTES: * ALL RATINGS ARE AT ARI ENTERING CONDITIONS UNLESS OTHERWISE NOTED. * PROVIDE VIBRATION ISOLATION FOR UNITS. * EXTERNAL STATIC PRESSURE DOES NOT INCLUDE COIL OR FILTER PRESSURE DROP. * CONTRACTOR MAY SUBSTITUTE MANUFACTURER FOR APPROVED EQUAL. IT SHALL BE THE CONTRACTORS RESPONSIBILITY TO VERIFY THAT ANY CLEARANCE REQUIREMENTS ARE MET FOR ANY SUBSTITUTIONS.					ABBREVIATION LEGEND: O/A - OUTSIDE AIR HP - HORSE POWER RLA - RUNNING LOAD AMPS FLA - FULL LOAD AMPS MOCP - MAX. OVERCURRENT PROTECTION (DUAL ELEMENT TYPE FUSE) E.S.P. - EXTERNAL STATIC PRESSURE EER - ENERGY EFFICIENCY RATIO SEER - SEASONAL ENERGY EFF. RATIO					SPECIFIC NOTES: 1) SIZE AND RUN REFRIGERANT PIPING AS PER MANUFACTURERS PUBLISHED RECOMMENDATIONS. 2) INSULATE REFRIGERANT SUCTION LINE WITH 3/4" ARMAFLEX OR APPROVED EQUAL. 3) INSTALL FILTER DRYER AND STRAINER IN REFRIGERANT LIQUID LINE. 4) PROVIDE FIELD INSTALLED ACCESSORIES, AND 5 MINUTE TIME DELAY SWITCH. 5) PROVIDE 5 YEAR WARRANTY ON COMPRESSOR AND 1 YEAR WARRANTY ON ALL PARTS AND LABOR. 6) PROVIDE SINGLE POINT POWER CONNECTION WITH INTEGRAL OVERCURRENT PROTECTION DEVICE. SEQUENCE OF OPERATION FOR HEATING FIRST STAGE WHEN THE THERMOSTAT CALLS FOR HEATING, THE INDOOR FAN MOTOR, OUTDOOR FAN MOTORS AND THE COMPRESSOR (FULLY LOADED) ARE ENERGIZED. THE REVERSING VALVE SOLENOID IS ENERGIZED IN THE HEATING MODE. SECOND STAGE IF ADDITIONAL HEAT IS REQUIRED, THE ELECTRIC HEAT SHALL BE ENERGIZED.								

	FLOOR DRAIN
	HOSE BIBB
	CLEANOUT
	RELIEF VALVE
	AIR CHAMBER
	UNION
	SOIL OR WASTE LINE
	SANITARY VENT LINE
	DOMESTIC COLD WATER
	DOMESTIC HOT WATER
	DOMESTIC WATER RECIRCULATION
	PRESSURE & TEMP. RELIEF LINE
	CONDENSATE DRAIN LINE
	RAIN WATER LEADER
	GAS LINE
	SAFEWASTE LINE
	FIRE PROTECTION
	SHUT OFF VALVE
	SAFEPAN LINE
	FIRE SPRINKLER HEAD
	PIPE TURN UP
	PIPE TURN DOWN
	P-TRAP

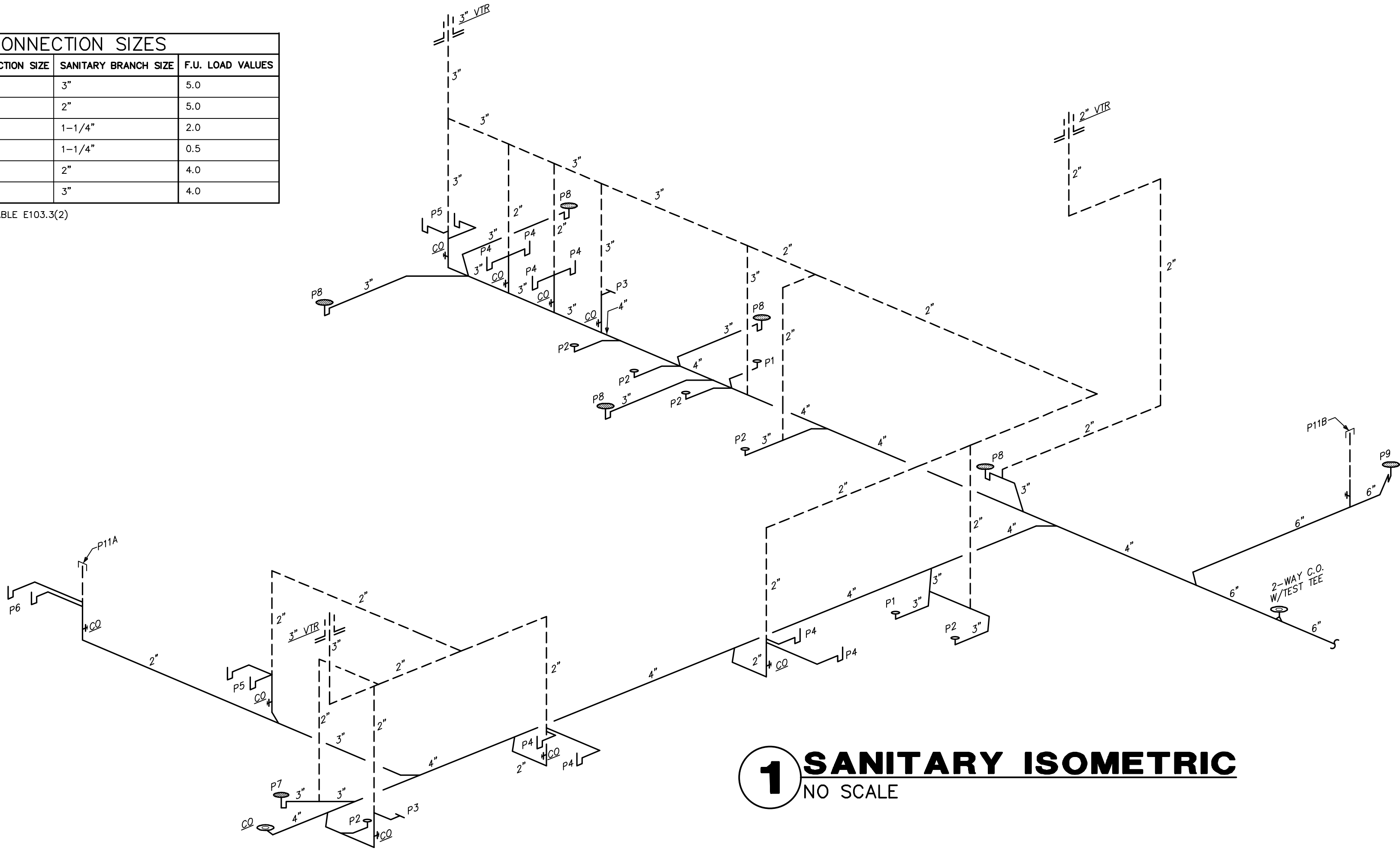
PLUMBING ABBREVIATION LEGEND					
DN.	DOWN	C.C.	CENTER TO CENTER	F.U.	FIXTURE UNITS
EXT.	EXTERIOR	N.T.S.	NOT TO SCALE	H.B.	HOSE BIBBS
F.D.	FLOOR DRAIN	M.F.R.	MANUFACTURER	H.C.	CLEANOUT
F.F.	FINISH FLOOR	S.O.V.	SHUT OFF VALVE	E.W.H.	ELECTRIC WATER HEATER
A.F.	ABOVE FINISH FLOOR	L.A.V.	LABORATORY SINK	P & T	PRESSURE & TEMPERATURE
V.T.R.	VENT THRU ROOF	L.V.	LABORATORY	R.W.L.	RAIN WATER LEADER
TYP.	TYPICAL	SINK	SINK		
R.D.	ROOF DRAIN	D.W.	DISH WASHER		
REV.	REVISION	E.D.F.	ELECTRIC DRINKING FOUNTAIN		
ON CENTER	ON CENTER	U.R.	URINAL		



PLUMBING FIXTURE SCHEDULE
P-1 (FLOOR MOUNTED FLUSH TANK WATER CLOSET) SHALL BE AN AMERICAN STANDARD MODEL CADET MODEL 2333.100 ELONGATED 1.6 GPF, VITREOUS CHINA, PRESSURE-ASSISTED SIPHON ACTION BOWL, CLOSE-COUPLED TANK, FLOOR MOUNTED, FLOOR OUTLET, SPEED CONNECT TANK/BOWL COUPLING SYSTEM, WITH AMERICAN STANDARD OPEN FRONT SEAT WITH COVER MODEL 5325.024. * http://www.americanstandard-us.com/assets/documents/amstd/spec/SpecSheet_722.pdf
P-2 (HANDICAPPED FLOOR MOUNTED FLUSH TANK WATER CLOSET) SHALL BE AN AMERICAN STANDARD MODEL CADET RIGHT HEIGHT 16-1/2" 2377.100 ELONGATED 1.6 GPF, VITREOUS CHINA, PRESSURE-ASSISTED SIPHON ACTION BOWL, CLOSE-COUPLED TANK, FLOOR MOUNTED, FLOOR OUTLET, SPEED CONNECT TANK/BOWL COUPLING SYSTEM, WITH AMERICAN STANDARD OPEN FRONT SEAT WITH COVER MODEL 5325.024. * http://www.americanstandard-us.com/assets/documents/amstd/spec/SpecSheet_1006.pdf
P-3 (HANDICAPPED URINAL AND FLUSH VALVE) SHALL BE AN AMERICAN STANDARD WASHBROOK MODEL 6501.511 3/4" TOP SPUD, 1.0 GPF, URINAL INCLUDES AMERICAN STANDARD MANUAL FLUSH VALVE MODEL 6045.102 FOR 3/4" TOP SPUD URINAL. * http://www.americanstandard-us.com/assets/documents/amstd/spec/SpecSheet_4875.pdf * http://www.americanstandard-us.com/assets/documents/amstd/spec/SpecSheet_4085.pdf
P-4 (HANDICAPPED COUNTER TOP LAVATORY W/METERED FAUCET) SHALL BE AN AMERICAN STANDARD MODEL RONALYN MODEL 0480.011 VITREOUS CHINA SELF-RIMMING, FAUCET SHALL BE A "CHICAGO" MODEL 3300-ABCP METERING FAUCET WITH 4" CENTERS AND BUILT-IN THERMOSTATIC MIXING VALVE TO DELIVER TEMPERED WATER AT A TEMPERATURE NOT TO EXCEED 105 DEGREES. UNIT IS ADA COMPLIANT, 0.5 GPM WITH AN ADJUSTABLE 2-15 SECOND OPERATING CYCLE PROVIDING UNDER .25 GALLONS PER CYCLE WATER PIPING AND P-TRAP SHALL BE COVERED WITH AN UNDER-SINK PROTECTIVE PIPE COVER KIT BY TRUEBRO (HTTP://WWW.TRUEBRO.COM) OR APPROVED EQUAL. * http://www.americanstandard-us.com/assets/documents/amstd/spec/SpecSheet_90.pdf * http://www.chicagofaucets.com/catalog/catalog.php?part_number=3400-CP
P-5 (HANDICAPPED ELECTRIC WATER COOLER COMBINATION H/L/O & WALL CARRIER) SHALL BE AN ELKAY MODEL EMABFTL6C, SPLIT LEVEL TWO STATION WATER COOLER WITH BARRIER FREE ACCESS, MODEL EMABFTL6C, 8.8 GPH, 4.0 FLA AT 120 VOLT, WITH ACCESSORY IN-WALL CARRIER ELKAY MODEL MLP200. H/L/O WATER COOLER: * http://www.elkaypro.com/emabftl6c IN-WALL CARRIER SYSTEM: * http://www.elkaypro.com/mlp200 WALL CARRIER INSTALLATION: * http://goo.gl/Bldkzk
P-6 (DOUBLE BOWL STAINLESS STEEL SINK) SHALL BE A "JUST" MODEL DL-2133-A-GR, 22"X33"X8" DOUBLE BOWL, SEAMLESS DIE-DRAWN CONSTRUCTION OF TYPE 304, 18-8 STAINLESS STEEL, INTERIOR AND TOP SURFACES POLISHED TO A NON-POROUS HAND-BLENDED JUST FINISH WITH HIGHLIGHTED BOWL RIM, FULLY COATED UNDERSIDE INSULATES FOR SOUND, AND REDUCES CONDENSATION, STRAIGHT-SIDED COMPARTMENT WITH 1 3/4" RADIUS CORNERS PROVIDES GREATER CAPACITY, SELF-RIMMING TOP MOUNT GRIP-RIM PLUS WITH 300 SERIES STAINLESS STEEL MOUNTING CHANNELS, DRAIN PUNCH #35 CENTERED FOR JUST J-35 UNLESS OTHERWISE SPECIFIED, PROVIDE 4TH HOLE IN SINK FOR SPRAY ASSEMBLY, FAUCET SHALL BE A "JUST" MODEL JWF-201. * http://www.justmfg.com/PDF/1-50.pdf * http://www.justmfg.com/PDF/7-119.pdf
P-7 (FLOOR MOUNTED MOP RECEPTOR) SHALL BE A FLORESTONE #MR-2424 24X24X10" MOLDED MOP BASIN WITH 3" OUTLET, PROVIDE WITH MR-371 FAUCET WITH WALL BRACE, PAIL HOOK AND APPROVED VACUUM BREAKER, MR-370 HOSE & HOSE BRACKET, MR-372 MOP HANGER, MR-373 BUMBER GUARDS AND MR-377 STAINLESS TEEL WALL GUARD. * http://www.florestone.com/mop-sinks/model_50-70.html * http://www.florestone.com/mop-sinks/ms_accessories.html
P-8 (FLOOR DRAIN WITH TRAP SEAL) SHALL BE A JOSAM 30000-WT-A-49 SERIES COATED CAST IRON FLOOR DRAIN, TWO PIECE BODY WITH DOUBLE DRAINAGE FLANGE, WEJLOC INVERTIBLE NON- PUNCTURING FLASHING COLLAR, WEEPHOLES, BOTTOM OUTLET, INSIDE CAULK CONNECTION AND ADJUSTABLE SATIN NIKALOY ROUND SUPER-FLO STRAINER. * http://www.josam.com/images/josammkmt/sbmt/s06_30000-WT-A.pdf FLOOR DRAIN TRAP SEAL SHALL BE A "SURE SEAL" MODEL SS3000 PREASSEMBLED INLINE FLOOR DRAIN TRAP SEALER, 5 PIECES: COMMERCIAL GRADE ABS PLASTIC HOUSING AND KEEPER PIN, PROPRIETARY NEOPRENE RUBBER DIAPHRAGM, WITH 2 SOFT RUBBER SEALING GASKETS, FLOOR RATING ASSE-1072 AF-GW. * http://www.thesuresseal.com/Portals/49321/docs/pitch_sheet_ss3000.pdf
P-9 (12" FLOOR DRAIN WITH 6" DISCHARGE PIPE CONNECTION) SHALL BE A JOSAM 32200 SERIES COATED CAST IRON FLOOR DRAIN, SHALLOW TWO-PIECE BODY WITH DOUBLE DRAINAGE FLANGE, WEJLOC NON-PUNCTURING FLASHING CLAMP COLLAR, WEEPHOLES, BOTTOM OUTLET, ROUND TOP, AND MEDIUM-DUTY LOOSE-SET ANTI-TILTING SUPER-FLO GRATE DRAINAGE SLOTS. * http://www.josam.com/images/josammkmt/zother/j08_p128-30.pdf
P-10 (WATER CONNECTION BOX) SHALL BE A HIGH QUALITY CONNECTION BOX AS SPECIFIED ON PLUMBINGSUPPLY.COM LOCATED ON THIS PAGE "http://www.plumbingsupply.com/icemaker-outlet-boxes.html" SHALL INCLUDE 2 SUPPORT BRACKETS, HIGH IMPACT POLYSTYRENE, 1/4" BRASS BALL VALVE WITH 1/2" SWEAT CONNECTION, OR APPROVED EQUAL.
P-11A (2" STUDOR VENT - AIR ADMITTANCE VALVE) SHALL BE A IPS CORPORATION "STUDOR MINI-VENT", 2" VENT. * http://www.ipscorp.com/plumbing/studor/minivent
P-11B (3" STUDOR VENT - AIR ADMITTANCE VALVE) SHALL BE A IPS CORPORATION "STUDOR MAXI-VENT", 3" VENT. * http://www.ipscorp.com/plumbing/studor/maxivent
P-12 (HOSE BIBB - NON-FREEZE HYDRANT WITH LOCK COVER) SHALL BE A "ZURN" Z1300 ENCASED ECOTROL, ANTI-SIPHON, AUTOMATIC DRAINING, NON-FREEZE WALL HYDRANT COMPLETE WITH INTEGRAL BACKFLOW PREVENTOR, COPPER CASING, ALL BRONZE INTERIOR PARTS, NON-COMBINATION 3/4 MALE PIPE THREAD INLET CONNECTION STANDARD, REGULARLY FURNISHED WITH 3/4 HOSE CONNECTION, CHROME-PLATED ROUGH CAST BRONZE BOX AND HINGED COVER, INCLUDES OPERATING KEY. * http://content.zurn.com/web_documents/pdfs/specsheets/58867.pdf
P-13 (HOSE BIBB INTERIOR W/HANDWHEEL) SHALL BE A "WOODFORD" MODEL 101 ANTI-SIPHON WALL FAUCET. * http://www.wcmind.com/woodford/Wall_Faucet_Pages/Model-101.html
P-14 (INSTA-HOT WATER HEATER BELOW LAVATORY) WATER HEATER SHALL BE A "EEMAX" MODEL EX-65, 4.8 KW TANKLESS WATER HEATER @ 208V/14, 27 AMPS. * http://www.eemaxinc.com/assets/files/flaco.pdf
P-15 (WATER HEATER) SHALL BE A LOCHINVAR MODEL LSA040K, 40 GALLON GLASSLINED STORAGE TANK, TALL TANK TYPE WATER HEATER WITH (2) - 4.5 KW ELECTRIC ELEMENTS WIRED FOR NON-CONCURRENT INDEPENDENT OPERATION AT 208 VOLTS, SINGLE PHASE INCOMING POWER, 3 YEAR LIMITED WARRANTY ON STORAGE TANK AGAINST TANK FAILURE, WATER HEATER SHALL MEET OR EXCEED ALL APPLICABLE SECTIONS OF ASHRAE STANDARD 90-80A AND NAECA REQUIREMENTS FOR ENERGY CONSERVATION. * http://lochinvar.com/_linefiles/RE.pdf
NOTES: 1.) ALL PLUMBING FIXTURES SHALL BE AS SPECIFIED OR APPROVED EQUAL. 2.) PROVIDE ANGLE STOPS ON ALL WATER SERVICE LINES TO FIXTURES FOR INDIVIDUAL SHUT-OFF.

PLUMBING FIXTURE CONNECTION SIZES				
FIXTURE	C.W. CONN. SIZE	H.W. CONNECTION SIZE	SANITARY BRANCH SIZE	F.U. LOAD VALUES
WATER CLOSET (P1,P2)	1/2"	-	3"	5.0
URINAL (P3)	3/4"	-	2"	5.0
LAVATORY (P4)	1/2"	1/2"	1-1/4"	2.0
ELECTRIC WATER COOLER (P5)	1/2"	-	1-1/4"	0.5
SINK (P6)	1/2"	1/2"	2"	4.0
UTILITY SINK (P7)	1/2"	1/2"	3"	4.0

NOTE: F.U. LOAD VALUES BASED ON IPC 2012 - APPENDIX E TABLE 103.3(2)



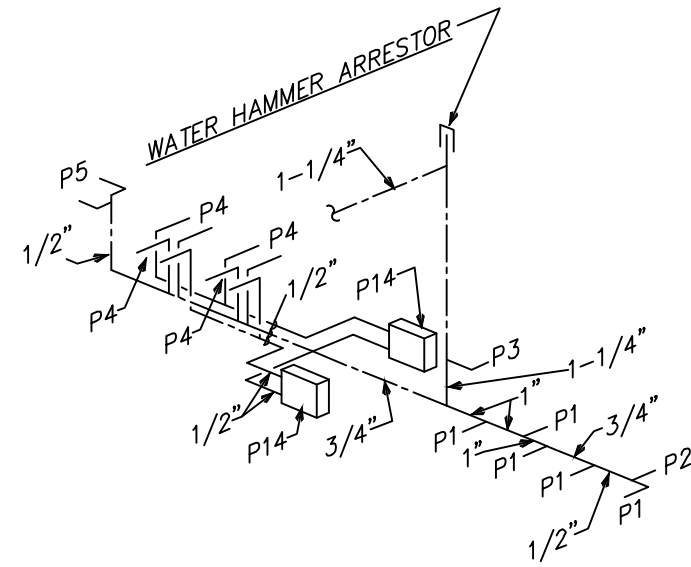
1 SANITARY ISOMETRIC

NO SCALE

- ### GENERAL PLUMBING NOTES
- DRAWINGS ARE DIAGRAMMATIC AND SHALL NOT BE SCALED. REFER TO ARCHITECTURAL PLANS AND ELEVATIONS FOR EXACT LOCATION OF ALL PLUMBING FIXTURES, EQUIPMENT, ETC.. PLUMBING CONTRACTOR SHALL FURNISH AND INSTALL ALL ITEMS REQUIRED FOR A COMPLETE AND ACCEPTABLE WORKING INSTALLATION. CONTRACTOR IS RESPONSIBLE TO INSTALL ALL FIXTURES AND EQUIPMENT IN STRICT COMPLIANCE WITH THE MANUFACTURES INSTALLATION INSTRUCTIONS. THIS REQUIREMENT IS TO SUPERSEDE ANY DETAILS OR INFORMATION CONTAINED ON THESE DRAWINGS.
 - ALL WORK AND MATERIALS SHALL COMPLY WITH THE LATEST EDITION OF THE NATIONAL, STATE, AND ALL LOCAL CODES AND ORDINANCES HAVING JURISDICTION.
 - THE PLUMBING CONTRACTOR SHALL VISIT THE SITE AND THOROUGHLY FAMILIARIZE HIMSELF WITH ALL EXISTING CONDITIONS. ALL EXECUTION AND BACKFILL AS REQUIRED FOR THIS PHASE OF CONSTRUCTION SHALL BE A PART OF THIS CONTRACT.
 - ALL MATERIAL SHALL BE NEW.
 - ALL WORK SHALL BE PERFORMED BY A LICENSED PLUMBING CONTRACTOR IN A FIRST CLASS WORKMANLIKE MANNER. THE COMPLETED SYSTEM SHALL BE FULLY OPERATIVE AND ACCEPTED BY ENGINEER/ARCHITECT.
 - ALL REQUIRED INSURANCE SHALL BE PROVIDED FOR PROTECTION AGAINST PUBLIC LIABILITY OR PROPERTY DAMAGE FOR THE DURATION OF THE WORK.
 - THE PLUMBING CONTRACTOR SHALL SECURE AND PAY ALL PERMIT FEES, INSPECTIONS, AND TESTS.
 - ALL WORK SHALL BE COORDINATED WITH OTHER TRADES TO AVOID INTERFERENCE WITH THE PROGRESS OF CONSTRUCTION.
 - THE PLUMBING CONTRACTOR SHALL GUARANTEE ALL MATERIALS AND WORKMANSHIP FREE FROM DEFECTS FOR A PERIOD OF NOT LESS THAN (1) ONE YEAR FROM DATE OF ACCEPTANCE. CORRECTION OF ANY DEFECTS SHALL BE COMPLETED WITHOUT ADDITIONAL CHARGE AND SHALL INCLUDE REPLACEMENT OR REPAIR OF ANY OTHER PHASE OF THE INSTALLATION WHICH MAY HAVE BEEN DAMAGED THEREBY.
 - VERIFY LOCATION, SIZE AND INVERTS OF ALL EXISTING UTILITIES PRIOR TO START OF CONSTRUCTION. ADVISE ARCHITECT/ENGINEER OF ANY DISCREPANCIES.
 - ALL FIXTURES SHALL BE PROVIDED WITH READILY ACCESSIBLE STOPS.
 - ALL BELOW FLOOR SLAB WATER PIPING SHALL BE FLEXIBLE "TEMPRITE PEX (CROSS-LINKED POLYETHYLENE)" INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS FOUND HERE: WWW.LUBRIZOL.COM. ALL ABOVE SLAB WATER PIPING SHALL BE "FLOWGUARD GOLD CPVC" INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS FOUND HERE: WWW.FLOWGUARDGOLD.COM. ALL WATER PIPING AS SPECIFIED OR APPROVED EQUAL.
 - SOIL, WASTES AND VENT PIPING SHALL BE PVC #40 DMV. WASTE AND VENT PIPING ABOVE SLAB SHALL BE PVC, IF APPROVED BY LOCAL AUTHORITIES HAVING JURISDICTION, OTHERWISE CAST IRON. PVC SHALL NOT BE INSTALLED IN A/C RETURN AIR PLENUM OR PENETRATE FIRE RATED WALLS OR FLOORS.
 - AIR CONDITIONING CONDENSATE DRAIN PIPING SHALL BE PVC #40 OR COPPER DRAIN WASTE AND BENT PIPE AND FITTINGS. INSULATE ALL CONDENSATE PIPING EXCEPT EXTERIOR PIPING. INSTALL ALL CONDENSATE PIPING FOR AIR CONDITIONING UNITS AS REQUIRED PER LOCAL CODES.
 - FURNISH AND INSTALL APPROVED WATER HAMMER ARRESTORS AT EACH GROUP OF FIXTURES. INSTALLATION OF WATER HAMMER ARRESTORS SHALL CONFORM TO THE MANUFACTURER'S RECOMMENDATIONS. PROVIDE AND INSTALL AN APPROVED WATER HAMMER ARRESTOR AT EACH FIXTURE OR DEVICE THAT HAS A SOLENOID WATER CONTROL VALVE.
 - PROVIDE CHROME PLATED COMBINATION COVERED PLATE AND CLEANOUT PLUG FOR ALL WALL CLEANOUTS, JOSAM 58890.
 - INSULATE LINES AS FOLLOWS:
A.) 1" THICK ARMAFLEX PREFORMED INSULATION SHALL BE PROVIDED ON BOTH C.W. & H.W. WHEN PIPING IS LOCATED OUTSIDE OF THE INSULATED BUILDING ENVELOPE.
B.) CONDENSATE PIPING: 1/2" THICK ARMAFLEX PREFORMED OR APPROVED EQUAL.

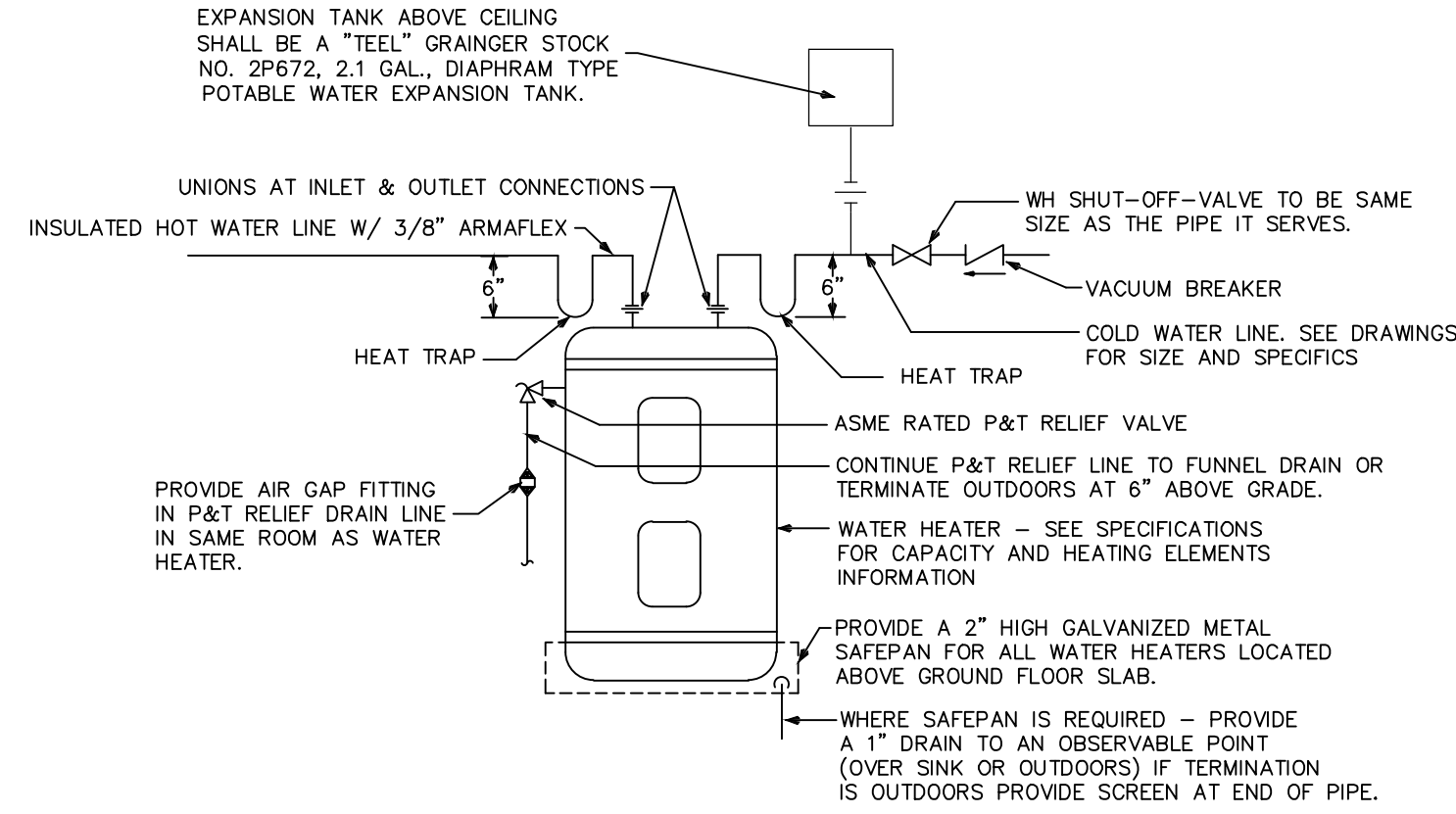
2 WATER ISOMETRIC

NO SCALE



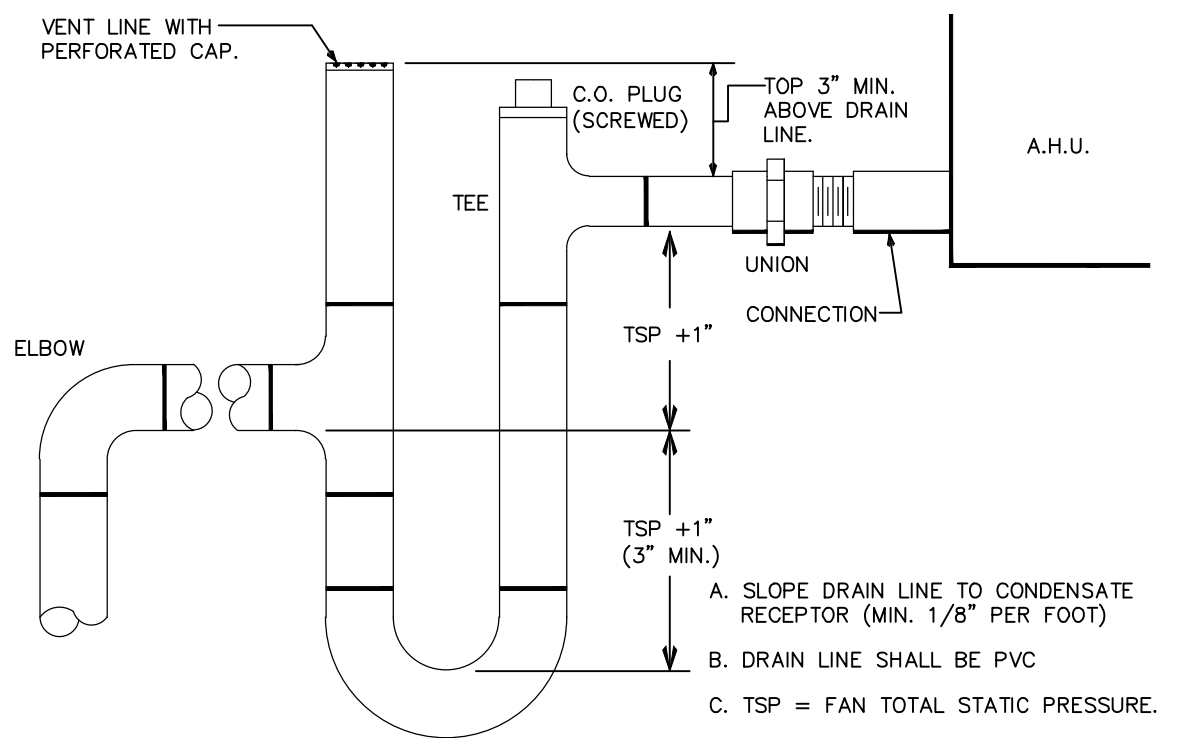
3 WATER HEATER DETAIL

NO SCALE



4 CONDENSATE P-TRAP DETAIL

NOT TO SCALE



LIGHTING FIXTURE SCHEDULE						
LABEL	TYPE OF FIXTURE	FINISH	LENS TYPE	VOLTAGE	LAMP	MANUFACTURER & MODEL NO.
A	SURFACE MOUNTED	WHITE	PRISMATIC	120	(2) 32W T8	LITHONIA SB-232-MVOLT
B	DOWNLIGHT	WHITE		120	(1) 32 TRT	LITHONIA LP6FN-26-42TRT-MVOLT
C	DOWNLIGHT EXTERIOR	WHITE		120	(1) 32 TRT	LITHONIA LP6FN-26-42TRT-6LR4-MVOLT
D	WALL SCONGE			120	100W MAX	OWNER SELECTED
F	PENDANT			120	100W MAX	OWNER SELECTED
G	VANITY			120	50W MAX	OWNER SELECTED
EM1	EMERG COMBO w/ REM HEAD	WHITE		120	INCLUDED	LITHONIA LHQM-HO
EX	EXIT	WHITE		120	INCLUDED	LITHONIA EXR LED EL M6
					REMARKS	
					PROVIDE SLOPED CEILING ADAPTER	
					CONTRACTOR TO ALLOW \$100 ALLOWANCE PER FIXTURE	
					W/ MODEL NX DUAL REMOTE HEAD, 90 MIN BATTERY	
					W/90 MIN BATTERY	

