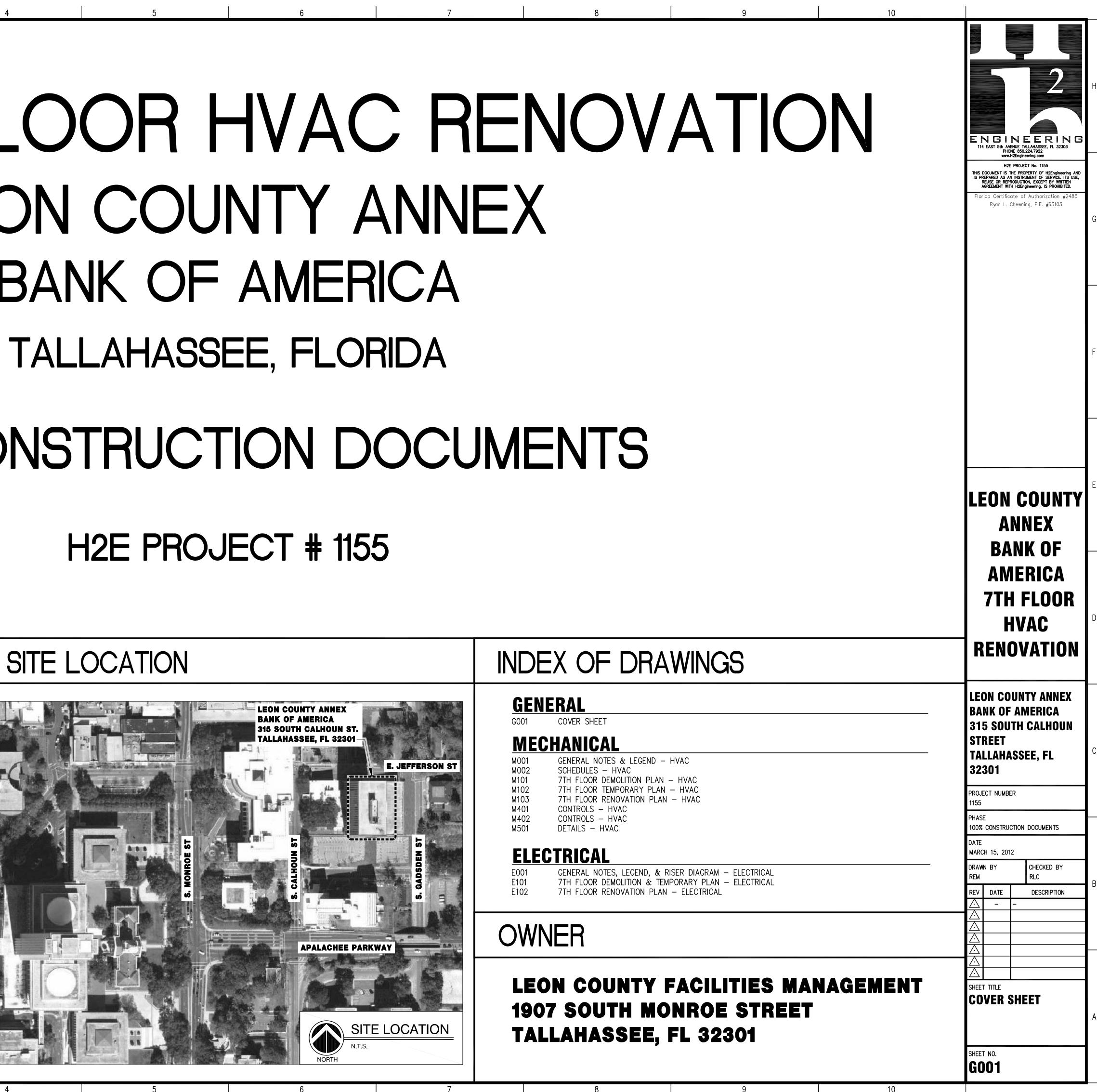
SEVENTH FLOOR HVAC RENOVATION LEON COUNTY ANNEX BANK OF AMERICA TALLAHASSEE, FLORIDA 100% CONSTRUCTION DOCUMENTS

APPLICABLE CODES

1. ASHRAE: STANDARD 55 - THERMAL ENVIRONMENTAL CONDITIONS FOR HUMAN OCCUPANCY STANDARD 62 - VENTILATION STANDARD FOR ACCEPTABLE INDOOR AIR QUALITY STANDARD 90.1 - ENERGY STANDARD FOR BUILDINGS EXCEPT LOW RISE RESIDENTIAL BUILDINGS 2. FLORIDA BUILDING CODES: FLORIDA BUILDING CODE (FBC-B) 2010 EDITION 2010 EDITION FLORIDA EXISTING BUILDING CODE (FBC-EB) FLORIDA MECHANICAL CODE (FBC-M) 2010 EDITION FLORIDA PLUMBING CODE (FBC-P) 2010 EDITION FLORIDA FIRE PREVENTION CODE (FFPC) 2010 EDITION FLORIDA ACCESSIBILITY CODE 2010 EDITION 3. NATIONAL ELECTRICAL CODE (NEC) 2008 EDITION 4. FLORIDA STATUTES: CHAPTER 553.80 - BUILDING CONSTRUCTION STANDARDS; FLORIDA BUILDING CODE - ENFORCEMENT 5. FLORIDA ADMINISTRATIVE CODE: CHAPTER 61G15-33 - RESPONSIBILITY RULES OF PROFESSIONAL ENGINEERS CONCERNING THE DESIGN OF ELECTRICAL SYSTEMS CHAPTER 61G15-34 - RESPONSIBILITY RULES OF PROFESSIONAL ENGINEERS CONCERNING THE DESIGN OF MECHANICAL SYSTEMS CHAPTER 69A-60 - THE FLORIDA FIRE PREVENTION CODE 6. NATIONAL FIRE CODES: NFPA 1 - UNIFORM FIRE CODE NFPA 70 - NATIONAL ELECTRICAL CODE NFPA 72 - NATIONAL FIRE ALARM CODE NFPA 101 - LIFE SAFETY CODE THE NFPA STANDARDS IN EFFECT SHALL BE AS LISTED OR ADOPTED BY THE APPROPRIATE AUTHORITY HAVING JURISDICTION. 7. OCCUPATIONAL SAFETY AND HEALTH REGULATIONS (OSHA).





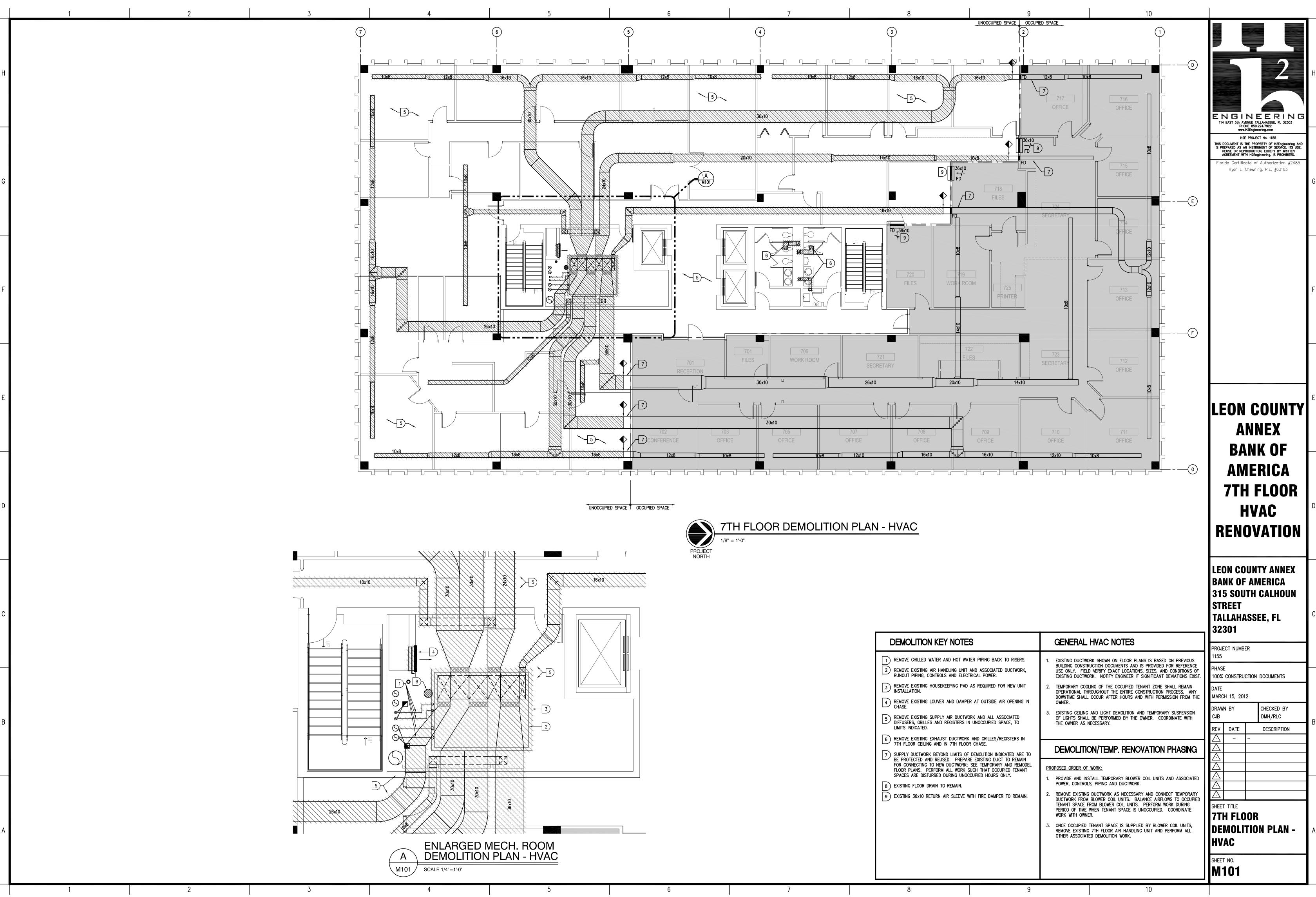
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	MEASUREMENTS AND CONTROLS	AIR DISTRIBUTION	HVAC NOTES
	- ☐ THERMOMETER — ₲- ⊘ PRESSURE GAUGE AND ISOLATION BALL VALVE	AxB RECTANGULAR SHEET METAL DUCT	1. PRESSURE TEST HVAC PIPING SYSTEMS AT 150% OF NORMAL WORKING PRESSURE, OR 15
	FCV FLOW CONTROL VALVE	CØ S ROUND SHEET METAL DUCT	MINIMUM. 2. TRAP AIR CONDITIONING CONDENSATE AND RUN TO SAFEWASTE AT LOCATION SHOWN ON
н	PT PRESSURE & TEMPERATURE TEST STATION VVT BOX THERMOSTAT/TEMPERATURE SENSOR	Image: transmission of the second	 COMPLETELY FLUSH AND CLEAN SECTIONS OF NEW CHILLED WATER AND HEATING HOT WATER TO CONNECTING TO EXISTING SYSTEMS.
	ADJUSTABLE FREQUENCY DRIVE	ROUND OR RECTANGULAR TAKE-OFF FITTING WITH CONTRACTOR DAMPER - SEE DETAIL G/M501	 PROVIDE AUTOMATIC AIR VENTS AT HIGH POINTS OF CHILLED WATER AND HEATING HOT V SYSTEMS.
	DDC DIRECT DIGITAL CONTROLLER SP STATIC PRESSURE SENSOR	SUPPLY AIR DUCTWORK SECTION	5. INSTALL DUCTWORK, PIPING, ETC. AS HIGH AS POSSIBLE ABOVE CEILING.
		RETURN OR OUTSIDE AIR DUCTWORK SECTION	6. COORDINATE LOCATION OF ALL EQUIPMENT, DUCTWORK AND PIPING INSTALLATIONS WITH PROVIDE THE REQUIRED CLEARANCES AROUND ALL ELECTRICAL PANELS, SWITCHGEAR, ET
		EXHAUST AIR DUCTWORK SECTION	7. INSTALLATION OF EQUIPMENT, DUCTWORK AND PIPING SHALL PROVIDE CONVENIENT ACCES REMOVAL OF FILTERS AND FOR MAINTENANCE.
	MISCELLANEOUS	AIR BALANCING DAMPER (MANUAL)	 B. DUCT SIZES GIVEN ARE SHEET METAL SIZES. 9. COORDINATE EXACT LOCATIONS OF AIR DISTRIBUTION EQUIPMENT WITH THE CEILING AND
	POINT OF CONNECTION, NEW TO EXISTING POINT INDICATES LIMIT OF DEMOLITION	FD FD FIRE DAMPER IN DUCT - SEE DETAIL H/M501	10. THE RETURN AIR FROM INDIVIDUAL ROOMS IS THRU AN ABOVE-CEILING RETURN AIR PLET
G	1 HOUR FIRE RATED WALL		11. THE CEILING DIFFUSERS SHALL BE 4-WAY THROW UNLESS OTHERWISE NOTED.
		DUCT ELBOW WITH SINGLE THICKNESS TURNING VANES	12. PROVIDE NEW AIR FILTERS IN EACH UNIT REQUIRING FILTERS WHEN THE PROJECT IS REAL AND BALANCE. DO NOT OPERATE UNITS WITHOUT FILTERS DURING CONSTRUCTION. REP DURING CONSTRUCTION ACCORDING TO FILTER MANUFACTURER'S RECOMMENDATIONS. SEAL
		SQUARE CEILING SA DIFFUSER AND AIR FLOW (CFM) (SEE SCHEDULE FOR SIZES UNLESS NOTED OTHERWISE)	ENDS OF DUCT WORK DURING CONSTRUCTION. 13. VACUUM CLEAN THE INTERIOR OF ALL HVAC EQUIPMENT PRIOR TO SUBSTANTIAL COMPLET
	CEILING SUPPLY DIFFUSERS	RECTANGULAR UNDUCTED RA GRILLE (22x22 FOR 2'x2'	13. VACCOM CLEAN THE INTERIOR OF ALL HVAC EQUIPMENT PRIOR TO SUBSTANTIAL COMPLE 14. WHEREVER THE DEPTH OF THE TRUNK DUCT IS LESS THAN THE ROUND RUNOUT DUCT DI PROVIDE TRANSITION FITTING OF EQUIVALENT AREA TO THE RUNOUT DUCT.
	SYMBOL CFM NECK MINIMUM – MAXIMUM HARD LAY-IN SIZE 1/2 SPACING CFM NO DAY		15. PROVIDE 3 DIAMETERS OF STRAIGHT DUCT AT INLET TO VVT BOXES. DUCT SIZE SHALL
	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	120 (SEE SCHEDULE FOR SIZES UNLESS NOTED OTHERWISE) SEE DETAIL F/M501	BOX INLET. IF INLET DUCT LENGTH EXCEEDS 5 FEET, INCREASE INLET DUCT SIZE BY 4" FROM BOX INLET.
	85 - 180 8"ø 4' - 8' 12x12 24x24		 PROVIDE FLEXIBLE DUCT CONNECTIONS AT EACH EQUIPMENT CONNECTION. PROVIDE FIRE DAMPER AT EVERY DUCT PENETRATION OF 1 HOUR OR MORE FIRE RATED
F	$\begin{array}{ c c c c c c c c c c c c c c c c c c c$	EXISTING DUCT TO REMAIN	WHETHER SHOWN ON THE DRAWINGS OR NOT. 18. INSTALL DUCT MOUNTED SMOKE DETECTOR (FURNISHED BY DIV. 26) IN SUPPLY AIR TRUN
	\bigcirc $345 - 500$ $12'' \emptyset$ $9' - 10'$ $24x24$ $24x24$ \bigcirc $505 - 600$ $14'' \emptyset$ $10' - 12'$ $24x24$ $24x24$	EXISTING MATERIALS TO BE REMOVED	BEFORE ANY TAKE-OFFS FOR AIR HANDLING UNITS WITH SUPPLY AIR CAPACITY GREATER CFM AND WHERE INDICATED ON PLANS.
	NOTE:	SINGLE DUCT VARIABLE AIR VOLUME TERMINAL UNIT – SEE DETAIL E/M501	19. WHERE FIRE DAMPERS ARE REQUIRED, PROVIDE DUCT ACCESS DOORS TO ALLOW RE-LINK DAMPER FUSIBLE LINKS. PROVIDE CEILING/WALL ACCESS PANELS WHERE INSTALLED IN II LOCATIONS; ACCESS PANELS IN RATED CONSTRUCTION SHALL BEAR UL LABEL.
	1. RUNOUT DUCTS TO DIFFUSERS SHALL BE THE SAME SIZE AS THE INDICATED NECK SIZE.	DUCT MOUNTED SMOKE DETECTOR (PROVIDED BY ELECTRICAL, INSTALLED BY MECHANICAL CONTRACTOR)	20. WHERE DUCT MOUNTED SMOKE DETECTORS ARE REQUIRED, PROVIDE DUCT ACCESS DOORS
		DOOR GRILLE (24"x16", UNO)	VIEWING AND SERVICING. PROVIDE CEILING/WALL ACCESS PANELS WHERE INSTALLED IN I LOCATIONS; ACCESS PANELS IN RATED CONSTRUCTION SHALL BEAR UL LABEL.
	CEILING RETURN OR EXHAUST REGISTERS AND GRILLES		21. WHERE CONTROL DAMPERS OR COILS ARE INSTALLED IN DUCTWORK, PROVIDE DUCT ACCE ALLOW INSPECTION OF DEVICE. PROVIDE CEILING/WALL ACCESS PANELS WHERE INSTALLE INACCESSIBLE LOCATIONS; PANELS IN RATED CONSTRUCTION SHALL BEAR UL LABEL.
	SYMBOL CFM SIZE RUNOUT DUCT (NOTE 3) OR 0 95 8x8 6x6		22. IT IS RECOMMENDED THAT DUCTWORK BE FABRICATED FROM FIELD MEASUREMENTS TAKEN SPACE COMPETING SYSTEMS ARE PROGRESSIVELY INSTALLED. THE DUCTWORK AS SHOWN
	OR A 100 - 195 10x10 8x8		CONSTRUCTION DOCUMENTS IS DIAGRAMMATIC AND DOES NOT NECESSARILY INCLUDE ALL MODIFICATIONS REQUIRED TO AVOID THESE INTERFERENCES. BEFORE FABRICATING ANY D CHECK THE PHYSICAL CONDITIONS AT THE JOB SITE AND MAKE CHANGES IN CROSS SEC
	OR 200 - 295 12x12 10x8 OR 300 - 595 18x18 (NOTE 2) 12x12	Condensate drain piping from cooling coil Chilled water supply piping	ROUTING, OFFSETS AND SIMILAR ITEMS WHETHER SPECIFICALLY INDICATED OR NOT. VERI SUFFICIENT CLEARANCES ARE AVAILABLE FOR INSTALLING DUCTWORK, PIPING, LIGHT FIXTU SYSTEMS AND TO PROVIDE EQUIPMENT SERVICE. COSTS REQUIRED TO CHANGE DUCTWORK
	OR 📈 600 - 695 22x22 (NOTE 1) 12x12	CHWR — CHILLED WATER RETURN PIPING HEATING HOT WATER SUPPLY PIPING	SPACE AVAILABLE AND AVOID INTERFERENCES CAUSED BY SPACE COMPETING SYSTEMS S BORNE BY THE CONTRACTOR. NO ADDITIONAL REMUNERATION WILL BE PAID BY THE OWN
	OR 700 - 795 24x24 14x12 OR 800 - 1500 48x24 18x14	HEATING HOT WATER RETURN PIPING	23. APPLY EXTERNAL INSULATION TO SINGLE WALL SUPPLY DUCTS, RETURN DUCTS AND OUT DUCTS PER SPECIFICATIONS.
	NOTES:	Image: strainer Image: strainer Image: strainer Image: strainer Image: strainer Image: strainer	24. PROVIDE VOLUME CONTROL DAMPERS IN SIDE TAKE-OFF FITTINGS TO SUPPLY AIR DIFFUS EXHAUST AIR AND RETURN AIR GRILLES AND AT EACH DUCT BRANCH SERVING TWO OR I TERMINALS, WHETHER SHOWN ON THE DRAWINGS OR NOT.
	 USE FOR ALL LAY-IN CEILING APPLICATIONS. USE FOR HARD CEILING APPLICATIONS WHERE SIZE OR AIRFLOW IS NOT INDICATED. WHERE DUCT CONNECTION IS SHOWN, RUNOUT DUCT SHALL BE SIZE SHOWN IN SCHEDULE U.N.O. 	FLEXIBLE PIPE CONNECTION FLEXIBLE PIPE CONNECTION AUTOMATIC AIR VENT AND ISOLATION BALL VALVE	25. MINIMUM PIPE SIZE FOR CHILLED WATER, HEATING HOT WATER, AND COOLING COIL CONDE BE 3/4". REFER TO SCHEDULE FOR RUNOUT PIPE SIZE TO INDIVIDUAL EQUIPMENT.
			26. SECTIONS OF PIPE STORED ON SITE SHALL HAVE EACH OPEN END COVERED AT ALL TIME WHILE MAKING CONNECTIONS. IF DEBRIS IS FOUND INSIDE PIPE, IT SHALL BE COMPLETEL
	VENTILATION RATE	NEW PIPE	PRIOR TO ASSEMBLY. 27. PROVIDE ACCESS PANEL AT EACH LOCATION WHERE A VALVE, DAMPER OR OTHER DEVICE
D	EXHAUST OUTSIDE AIR (NOTE 1)	EXISTING PIPE TO BE REMOVED	SERVICE IS LOCATED ABOVE AN INACCESSIBLE CEILING OR INSIDE A WALL. ACCESS PANE CONSTRUCTION SHALL BEAR UL LABEL. COORDINATE ACCESS PANEL LOCATION WITH OWN INSTALLATION.
	TYPE OF SPACE CFM/FT ² CFM/PERSON CFM/FT ² BREAK ROOMS - 5 0.06		28. COORDINATE ALL DUCT TEST WITNESSING WITH LOCAL MECHANICAL INSPECTOR.
	CONFERENCE/MEETING - 5 0.06		29. PRIOR TO FINAL INSPECTION, PROVIDE CERTIFIED TEST & BALANCE REPORT AND OPERATI MAINTENANCE MANUALS TO THE OWNER.
	COPY/PRINT ROOM 0.5 - - CORRIDORS - 0 0.06	VALVES	
	ELECTRICAL ROOMS - 0 0.06 JANITOR/TRASH 1.0 - -	N.O. ⊣◯⊢ ⊣●⊢ N.C. BALL VALVE	
	OFFICE SPACE – 5 0.06	N.ONIII- N.C. BUTTERFLY VALVE VALVE ACTUATORS:	
	STORAGE ROOMS - 0 0.12 TOILET - PUBLIC (NOTE 2) 50/70 - -	VALVE ACTORTORS: Image: Constraint of the second constraints Image: Constraints Image: Constraint of the second constraints Image: Constraints	
С			
	 VENTILATION RATES CALCULATED PER REQUIREMENTS OF ASHRAE STANDARD 62.1–2004. EXHAUST RATE IS PER WATER CLOSET AND/OR URINAL. HIGHER RATE IS FOR HIGHER USE FACILITIES. 		
			ABBREVIATIONS
	UNION REMOVABLE CLEANOUT CAPS		
		-1/2" DIA. HANGER RODS WITH 36" MAX. SPACING	AFDADJUSTABLE FREQUENCY DRIVEGPMGALLONS PER MINUTEAHUAIR HANDLING UNITHHWHEATING HOT WATERBTUHBRITISH THERMAL UNITS PER HOURHPHORSEPOWERDUBBRITISH THERMAL UNITS PER HOURHPHORSEPOWER
		ON EACH CHANNEL.	CCONDENSATEININCHESCFMCUBIC FEET PER MINUTEN/ANOT APPLICABLECHWCHILLED WATEROAOUTSIDE AIR
В		BAND	CPCONDENSATE PUMPPPUMPDDCDIRECT DIGITAL CONTROL PANELRARETURN AIRDGDOOR GRILLE (24"x16", UNO)RPMREVOLUTIONS PER MINU
		INSULATION (VAPOR BARRIER TYPE IS	"Fdb DEGREES FAHRENHEIT DRY BULB SA SUPPLY AIR "Fwb DEGREES FAHRENHEIT WET BULB TYP TYPICAL FCV FLOW CONTROL VALVE V VALVE
		BARRIER TYPE IS REQUIRED FOR LOW TEMPERATURE PIPE)	FD FIRE DAMPER VVT VARIABLE VOLUME TERM FT FEET WG WATER GAUGE GPH GALLONS PER HOUR ZCV ZONE CONTROL VALVE
	TO SANITARY DRAIN SYSTEM	INSULATION SHIELD OR 2" X 2" X 1/4" ANGLE	
		ADJUSTABLE CLEVIS HANGER SIDE VIEW	
	NOTES: 1. DRAIN LINE SHALL BE AT LEAST THE SAME SIZE UNIT TYPE A B	TRAPEZE HANGER FOR UP TO 1000 LB. UNIFORM LOAD	
A	AS THE CONNECTION ON THE DRAIN PAN (1" MIN.) 2. DRAIN LINE SHALL SLOPE 1/8" PER FOOT (MIN.) DRAW-THRU X PLUS 2" X	NOTES:	
	3. SEE SPECIFICATIONS FOR PIPE AND INSULATION MATERIALS. BLOW-THRU 1" MIN. 2X	1. SEE SPECIFICATIONS FOR SPACING OF HANGERS.	
	A CONDENSATE DRAIN	B TYPICAL PIPE HANGERS	
1 2	3 4	5 6	7 8

3	9	10		
	GENERAL NOTES			
re, or 150 psig	1. DRAWINGS ARE DIAGRAMMATIC, INDICATIVE OF WOR	(to be furnished and installed under this		
HOWN ON PLANS. IG HOT WATER SYSTEMS	2. FIELD VERIFY DIMENSIONS AND CONDITIONS. IF THE DOCUMENTS, HE IS RESPONSIBLE TO REQUEST CLAI PROCEEDS WITH ANY WORK BEFORE OBTAINING CLA	RIFICATION IN WRITING TO THE ENGINEER. IF HE		Н
ING HOT WATER PIPING	 DEFICIENCIES ASSOCIATED THEREWITH. BEFORE SUBMITTING FOR THE WORK, EACH BIDDER SATISFY HIMSELF AS TO THE EXISTING CONDITIONS COMPLETE THE WORK UNDER THIS CONTRACT. NO 	UNDER WHICH HE WILL BE OBLIGATED TO OPERAT ALLOWANCE WILL SUBSEQUENTLY BE MADE IN THI	E AND	
INS WITH ELECTRICAL TO IGEAR, ETC. INT ACCESS FOR	 CONNECTION ON BEHALF OF THE CONTRACTOR FOR 4. THE CONTRACTOR SHALL PAY FOR INSPECTION PER CHARGES AND LICENSE FEES IN CONNECTION WITH 	MITS, CERTIFICATES, CONNECTION FEES, SYSTEM D HIS WORK.	EMAND ENGINEERING 114 EAST 5th AVENUE TALLAHASSEE, FL 32303 PHONE 850.224.7922 www.H2Engineering.com	
ING AND THE LIGHTING	 WORK SHALL COMPLY WITH APPLICABLE O.S.H.A. AI ERECT AND MAINTAIN REASONABLE PRECAUTIONS F SIGNS AND OTHER WARNINGS AGAINST HAZARDS IN SAFETY PRECAUTIONS AND BARRICADES FOR PEDES LOCATIONS. 	OR SAFETY AND HEALTH INCLUDING POSTING DAN CLUDING PROMULGATING SAFETY REGULATIONS. F	PROVIDE IS PREPARED AS AN INSTRUMENT OF SERVICE. ITS USE,	
I AIR PLENUM.	7. COORDINATE AND SEQUENCE DEMOLITION, CLEANING DETAILED CONSTRUCTION SCHEDULE TO THE OWNER		Florida Certificate of Authorization #2485 Ryan L. Chewning, P.E. #63103	
T IS READY FOR TEST	8. THE CONTRACTOR SHALL STRICTLY BE HELD TO TH MANPOWER AND EQUIPMENT TO FULLY MOBILIZE, PI		CIENT	G
ION. REPLACE FILTERS IONS. SEAL ALL OPEN	9. THE CONTRACTOR SHALL BE RESTRICTED TO AREAS CONSTRUCTION MATERIALS. THE CONTRACTOR IS F EQUIPMENT AND MATERIALS.			
L COMPLETION. T DUCT DIAMETER,	10. THE CONTRACTOR SHALL MAINTAIN A CLEAN WORK CONSTRUCTION SITE OF DEBRIS AT COMPLETION OF	THE JOB AND BEFORE FINAL PAYMENT IS MADE.		
e shall be same as ze by 4" up to 3 feet	 THE CONTRACTOR SHALL FURNISH "AS-BUILT" DRA CONTRACTOR'S USE OF AN APPROVAL STAMP ON I DATA, SAMPLES AND SIMILAR SUBMITTALS CERTIFIE CONTRACT DOCUMENT REQUIREMENTS RELATED TO 	Documents submitted as shop drawings, prod s that the contractor has complied with th	UCT IE	
E RATED CONSTRUCTION,	13. THE CONTRACTOR SHALL NOT BE RELIEVED OF RES CONTRACT DOCUMENTS BY THE ENGINEER'S APPRO SIMILAR SUBMITTALS UNLESS THE CONTRACTOR HA SUCH DEVIATION AT THE TIME OF SUBMITTAL AND	VAL OF SHOP DRAWINGS, PRODUCT DATA, SAMPLE S SPECIFICALLY INFORMED THE ENGINEER IN WRITH	S OR NG OF	
AIR TRUNK DUCT GREATER THAN 2000	SPECIFIC DEVIATION. THE CONTRACTOR SHALL NOT OMISSIONS IN SHOP DRAWINGS, PRODUCT DATA, SA APPROVAL THEREOF.	BE RELIEVED OF RESPONSIBILITY FOR ERRORS O	र	F
N RE-LINKING OF ILLED IN INACCESSIBLE	14. PRIOR TO INSTALLATION, COORDINATE AND ADJUST EQUIPMENT WITH ALL CASEWORK, SHELVING, OR OT		AND	
ESS DOORS TO ALLOW ALLED IN INACCESSIBLE	15. NOTE ANY SPECIAL REQUIREMENTS INVOLVED IN INS AND REASSEMBLING OF ANY EQUIPMENT SHALL BE EQUIPMENT ROOMS.	DONE AS REQUIRED FOR ENTRY INTO THE BUILDIN		
UCT ACCESS DOORS TO INSTALLED IN	 SUPPORTS AND HANGERS SHALL PRESENT A NEAT, CONTRACTOR SHALL MAINTAIN THE INTEGRITY OF F 			
ABEL. NTS TAKEN AS THE	18. BEAM AND FLOOR PENETRATIONS SHALL BE APPRO REINFORCING APPROVED BY ENGINEER SHALL BE FU		М	
AS SHOWN ON THE LUDE ALL NG ANY DUCTWORK,	19. CONTRACTOR SHALL FURNISH U.L. APPROVED DRAW PENETRATION BY DUCTS, PIPES OR CONDUITS. THI ALL TIMES DURING CONSTRUCTION. SEE SPECIFICA	ESE DRAWINGS SHALL BE DISPLAYED ON THE JOB	SITE AT	
ROSS SECTIONS, OT. VERIFY THAT IGHT FIXTURES, CEILING DUCTWORK TO FIT THE	20. CONTRACTOR SHALL GUARANTEE THE WORK AND M FINAL ACCEPTANCE. THIS GUARANTEE SHALL BE I SUPPLIERS AND MANUFACTURERS.			E
AND OUTSIDE AIR	21. THE BUILDING WILL REMAIN OCCUPIED DURING CONS TO ASSIST THE CONTRACTOR IN COMPLETING THE V		EFFORTS	
AIR DIFFUSERS AND	REPRESENTATIVE. 22. EXIT WAYS SHALL BE KEPT CLEAR. IF AN EXIT MU BARRICADE AND DIRECTIONAL SIGNS FOR TEMPORAL		UIRED	
TWO OR MORE AIR	23. REMOVE AND RE-INSTALL EXISTING CEILING TILE AS DURING CONSTRUCTION.			
oil condensate shall Ent. 7 All Times except	24. PROVIDE PROPER PROTECTIVE MEASURES TO PROTE THE COURSE OF CONSTRUCTION. TAKE CARE NOT EXISTING CONDITIONS AS REQUIRED.			
COMPLETELY REMOVED	 SEAL HOLES IN WALLS, CEILINGS, FLOORS, ETC. TO CONDUIT AND/OR PIPING ARE REMOVED. 	MATCH EXISTING ADJACENT SURFACES WHERE EQ	UIPMENT, 7TH FLOOR	
ER DEVICE REQUIRING ESS PANELS IN RATED WITH OWNER PRIOR TO	26. EXISTING EQUIPMENT IS THE PROPERTY OF THE OW OWNER. DISPOSE OF ALL MATERIALS AND EQUIPME REGULATIONS.			D
D OPERATIONS &	27. ITEMS REMOVED AND SAVED FOR REUSE SHALL BE CONTRACTOR SHALL IDENTIFY ANY DEFECTIVE MATE RESPONSIBLE FOR ALL DAMAGE TO MATERIALS AT DEMOLITION.	RIALS PRIOR TO DEMOLITION. CONTRACTOR SHAL		
	28. RELOCATE, AS REQUIRED, ANY EXISTING WIRE AND NEW WORK.	CONDUIT WHICH INTERFERES WITH INSTALLATION O	F THE	
	29. REMOVE ELECTRICAL EQUIPMENT (CONDUIT, POWER ETC.) RELATED TO EQUIPMENT BEING REMOVED OR30. THE OWNER WILL BE ACTING AS GENERAL CONTRACT	REPLACED.		
	SCHEDULE OF WORK WITH OWNER'S REPRESENTATIV	Ε.	315 SOUTH CALHOUN	
			STREET TALLAHASSEE, FL	С
			32301	
			PROJECT NUMBER	
	DESIGN CONDITIONS		1155 PHASE	
MINUTE		Fdb-Fwb 95-7	100% CONSTRUCTION DOCUMENTS 7 DATE	
WATER	DEHUMIDIFICATION TEMPERATURES WINTER TEMPERATURE	Fdb-Fwb 88-7 Fdb 25	^{/9} MARCH 15, 2012	
BLE	INDOORS OCCUPANCY USAGE	ALL	DRAWN BY CHECKED BY REM RLC	В
Per minute	SUMMER TEMPERATURES	Fdb-Fwb 75-6 Fdb 70	REV DATE DESCRIPTION	
UME TERMINAL UNIT		100 70		
L VALVE				
	DRAWING INDEX			
	M001 GENERAL NOTES & LEGEND – HVAC M002 SCHEDULES – HVAC			
	M101 7TH FLOOR DEMOLITION PLAN – HVAC M102 7TH FLOOR TEMPORARY PLAN – HVAC M103 7TH FLOOR RENOVATION PLAN – HVAC M401 CONTROLS – HVAC M402 CONTROLS – HVAC M501 DETAILS – HVAC		GENERAL NOTES & LEGEND - HVAC	A
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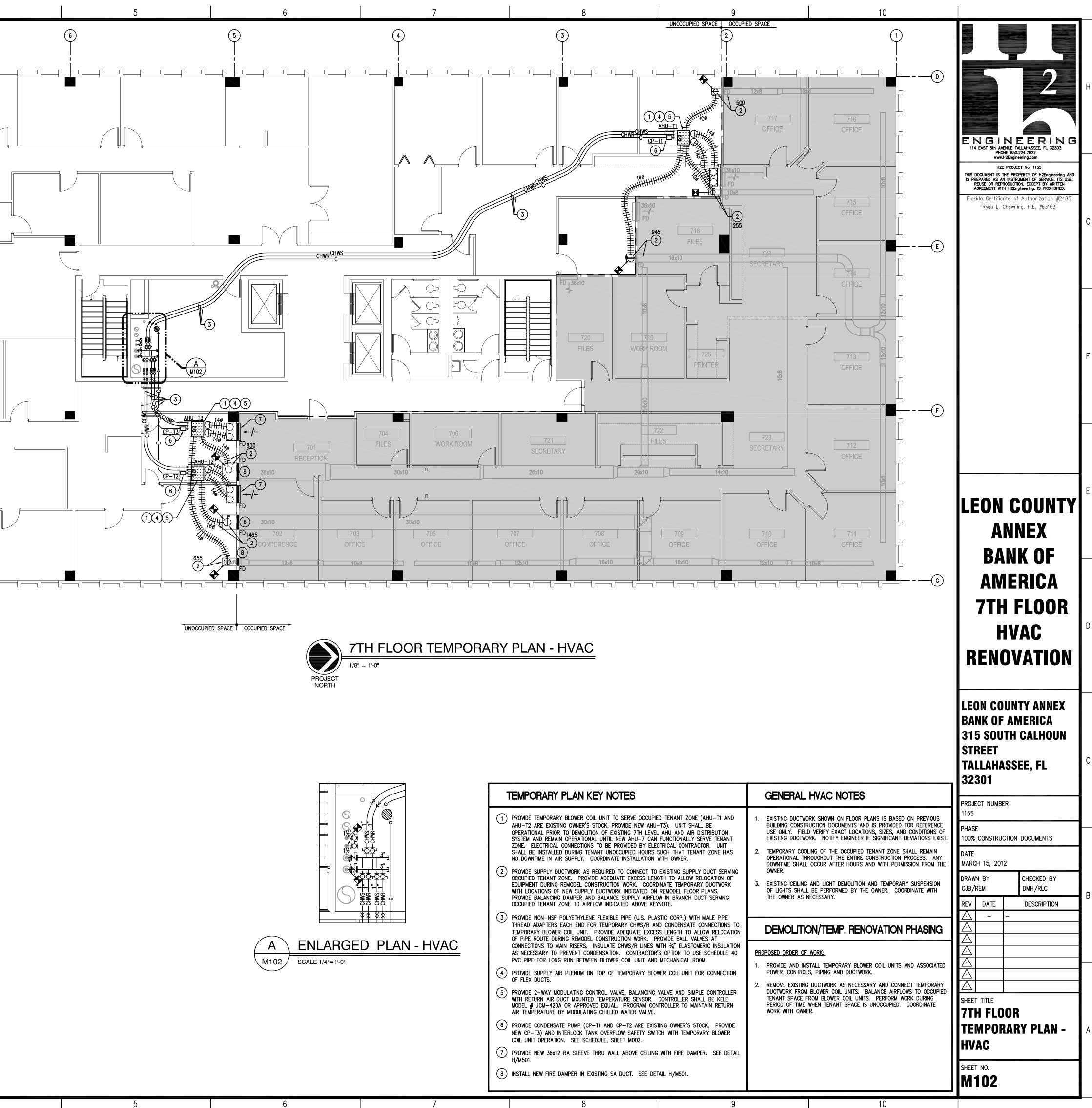
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			SINGLE DUCT TERMINAL UNIT SCHEDULE - HOT WATER COIL	
			TYPE	
			PRIMARY AIR VALVE	
Н			NOMINAL AIR VALVE DIAMETER	
			AIR VALVE MAXIMUM AIR FLOW CAPACITY	
			MAXIMUM TOTAL UNIT PRESSURE DROP	
			MAX. RADIATED SOUND RATING @ 1" INLET PRESSURE	
			HEATING COIL DATA COIL ENTERING AIR TEMPERATURE	
			ENTERING AND LEAVING WATER TEMPERATURE	
			COIL MAXIMUM PRESSURE DROP	
			WATER PIPING RUNOUT SIZE	
G			CONTROL VALVE (TYPE)	
G			CONTROL VALVE CONFIGURATION	
			DETAIL REFERENCE	
			TERMINAL BOX DESIGNATION AND BALANCE CHART	
			TERMINAL UNIT DESIGNATION (VVT-)	
			SCHEDULED TYPE	
F			MAXIMUM DESIGN AIRFLOW	CFM
1			MINIMUM DESIGN AIRFLOW	CFM
			HEATING DESIGN AIRFLOW COIL DESIGN WATER FLOW	CFM GPM
			COIL DESIGN WATER FLOW	GPM
			TERMINAL BOX DESIGNATION AND BALANCE CHART	
			TERMINAL UNIT DESIGNATION (VVT-)	
			SCHEDULED TYPE MAXIMUM DESIGN AIRFLOW	CFM
E			MINIMUM DESIGN AIRFLOW	CFM
L			HEATING DESIGN AIRFLOW	CFM
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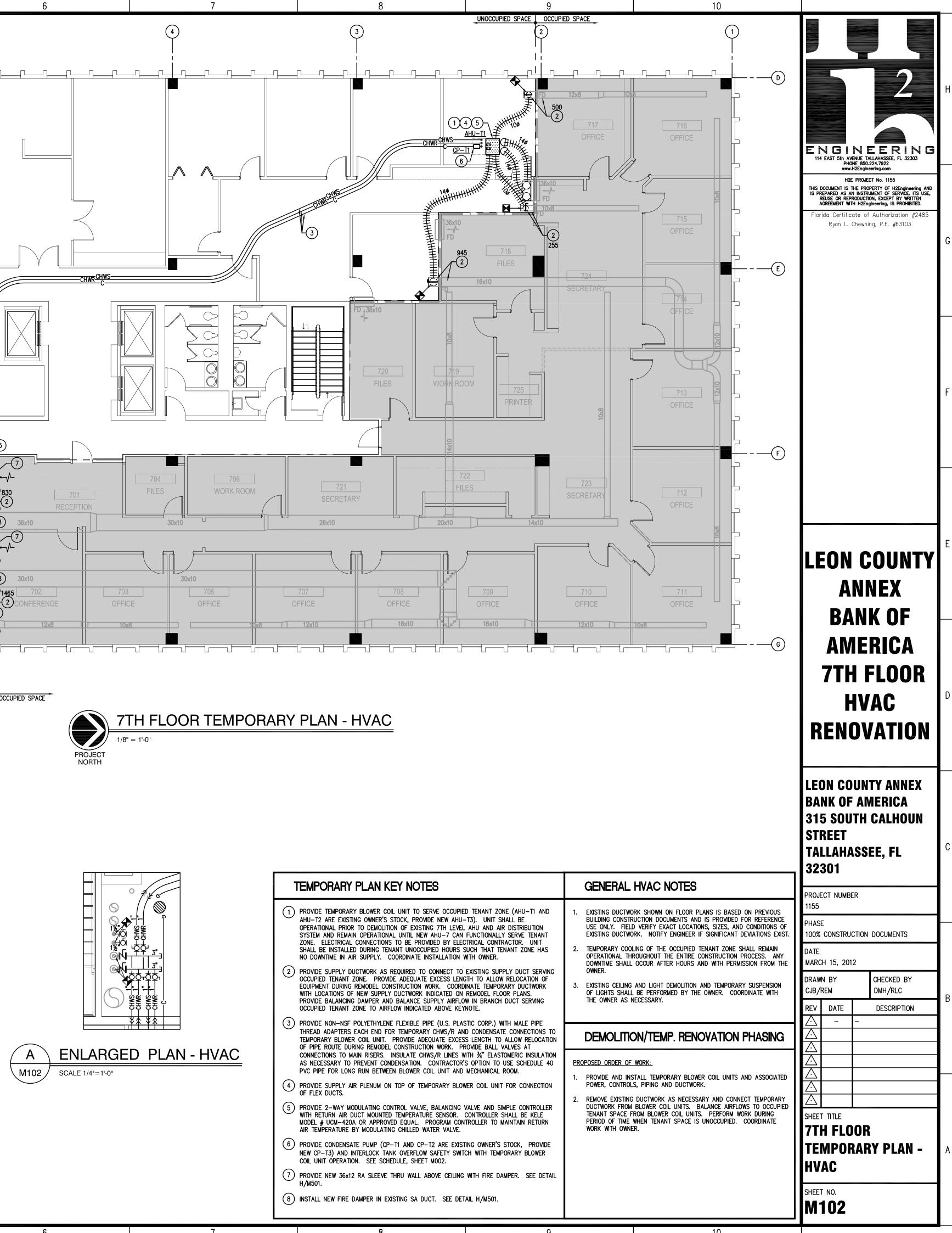
			5					6				7			8		9	
WATER COIL	ł											MODULAR AIR HANDLIN	IG UNIT SC	HEDULE				
						A	В	с		D	AIR HA	NDLING UNIT NUMBER						_
				i							AIR HA	NDLING UNIT DATA						_
				IN. CFM		6 500	8	10		12 1,600		TOTAL SUPPLY AIR OUTSIDE AIR						С С
				IN. H20		0.25	0.25	0.2		0.25	FILTER	OR COMBINATION FILTER MIXING BOX SEC	TION					_
				NC		25	25	30)	30		DAMPERS						_
				İ								FILTER ORIENTATION						
				۴ ۴ – ۴		42.0 - 150	42.0 180 - 150	42. 180 -		42.0 180 - 150	COOLIN	TYPE OF FILTER	VITH A MAXIMUM O	F 144 FPF AND A	MAXIMUM FLUID	PRESSURE DROP (DF 10 FT.	
				FT. H₂O		5.0	5.0	5.0		5.0		TOTAL COOLING CAPACITY						M
				IN.		3/4	3/4	3/	4	1		SENSIBLE COOLING CAPACITY						М
				-			PICV	PIC		PICV								۴
						-WAY /M501 /M501	2-WAY C/M501 E/M501	2-W C/M E/M		2-WAY C/M501 E/M501		AIR ENTERING COOLING COIL						ጉ — የ
					E/		E/MOUI	<u> </u>		E/MOUI		AIR LEAVING COOLING COIL						۴
												WATER FLOW						G
ART												CHILLED WATER ENTERING TEMP. CHILLED WATER LEAVING TEMP.						۴
		VVT-701	VVT-702	VVT-703	VVT-704	VVT-705	VVT-706	VVT-707	VVT-708	VVT-709		MINIMUM FACE AREA						۲
		A	С	D	В	С	A	В	A	A		PERCENT ETHYLENE GLYCOL						%
	CFM	255	830	1,465	655	945	255	500	380	210		RUNOUT PIPE SIZE						1
	CFM	200	325	440	200	285 880	110	180	135	100		CONTROL VALVE (TYPE)						
	CFM GPM	200 0.5	325 1.0	870 3.0	285 1.0	3.0	0.5	295 1.0	135 0.5	100 0.5		CONTROL VALVE CONFIGURATION						G
				I		I				1		CONDENSATE DRAIN SIZE						IN
ART											FAN SE	í						_
		VVT-710	VVT-711	VVT-712	VVT-713	VVT-714	VVT-715	VVT-716	VVT-717	VVT-718		FAN TYPE EXTERNAL STATIC PRESSURE (INCLUDI						
		C	A	C	B	C	A	A	D	B		MAXIMUM TOTAL STATIC PRESSURE						
	CFM	850	390	910	510	1,170	290	300	1,230	530		FAN MOTOR HORSEPOWER						Н
	CFM	280	120	290	180	400	100	115	400	180		ELECTRICAL CHARACTERISTICS						V
	CFM GPM	435 1.5	365 1.5	455 1.5	180 1.0	575 2.0	100 0.5	115 0.5	510 2.0	370 1.5		VARIABLE SPEED DRIVE DETAIL REFERENCE						
		1.0	1.0	1.0		2.0	0.0	0.0	2.0		ŀ	IOTES:						
												1. DESIGN AND MANUFACTURE AIR HAN	NDLING UNIT IN SH	IPPING SPLITS TO	FIT THROUGH STA	NDARD 3 FT. DOO	DR.	
		CONDE	NSATE	PUMPS								BLOWER COIL SCHEDU	ILE				AIR HANDLING UNIT LAYOUTS	_
	DESIGN	ATION					CP-T1 (EXISTING)	CP- (EXIST	T2 ING)	CP-T3 (NEW)	DESIGN	ATION		AHU-T1 (EXISTING)	AHU-T2 (EXISTING)	AHU-T3 (NEW)		-
		SERVICE					AHU-T1 CONDENSATE	AHU- CONDEN	-T2 NSATE (AHU-T3 Condensate	FAN DA	TA		I				
					GPH		25	25		25 1/2			CFM	1,700	1,800	1,900	\rightarrow	
		TANK SIZE			GAL. FT.		1/2	1/:		172		OUTSIDE AIR EXTERNAL STATIC PRESSURE	CFM IN. WG	0.5	0	0		
			AMIC HEAD				20	20)	20			IN. WG	1.2	1.4	1.4	PLAN 68x	đ
		SHUT-OFF			FT.							TOTAL STATIC PRESSURE						
		SHUT-OFF MOTOR HO	HEAD RSEPOWER		HP		1/30	1/3		1/30		MOTOR POWER	HP	1	1	1	RETURN AIR OPENING WITH OPPOSED BLADE DAMPER	
		SHUT-OFF MOTOR HOI ELECTRICAL	HEAD RSEPOWER . CHARACTE	RISTICS			120/1	120	/1	120/1		MOTOR POWER FAN POWER	BHP	1 0.57 929	0.69	1 0.69	OPPOSED BLADE DAMPER	PF
		SHUT-OFF MOTOR HO	HEAD RSEPOWER . CHARACTE JRER	RISTICS	HP		•		/1 GIANT L	•		MOTOR POWER		1 0.57 929 208/3	1 0.69 995 208/3	1 0.69 995 208/3	OPPOSED BLADE DAMPER	PF
		SHUT-OFF MOTOR HOI ELECTRICAL MANUFACTI MODEL NUM IOTES: 1. SCHEDUL	HEAD RSEPOWER . CHARACTE JRER IBER ES FOR EXIS	sting units	HP V/PH	EFERENCE O	120/1 LITTLE GIANT VCMA-20ULS NLY.	120 LITTLE VCMA-:	/1 GIANT L	120/1 ITTLE GIANT		MOTOR POWER FAN POWER FAN SPEED	BHP	929 208/3 2.9	995 208/3 2.9	995 208/3 2.9	OPPOSED BLADE DAMPER OUTSIDE AIR DUCT CONNECTION WITH OPPOSED BLADE DAMPER AND AIRFLOW STATION	B
		SHUT-OFF MOTOR HOI ELECTRICAL MANUFACTI MODEL NUM IOTES: 1. SCHEDUL	HEAD RSEPOWER . CHARACTE JRER IBER ES FOR EXIS	sting units	HP V/PH	EFERENCE O	120/1 LITTLE GIANT VCMA-20ULS	120 LITTLE VCMA-:	/1 GIANT L	120/1 ITTLE GIANT	000110	MOTOR POWER FAN POWER FAN SPEED ELECTRICAL CHARACTERISTICS FULL LOAD AMPS FILTERS	BHP RPM V/PH AMPS	929 208/3 2.9 2" THICK PLEATED	995 208/3	995 208/3	OPPOSED BLADE DAMPER OUTSIDE AIR DUCT CONNECTION WITH OPPOSED BLADE DAMPER AND AIRFLOW STATION	B B US RN
		SHUT-OFF MOTOR HOI ELECTRICAL MANUFACTI MODEL NUM IOTES: 1. SCHEDUL	HEAD RSEPOWER . CHARACTE JRER IBER ES FOR EXIS	sting units	HP V/PH	EFERENCE O	120/1 LITTLE GIANT VCMA-20ULS NLY.	120 LITTLE VCMA-:	/1 GIANT L	120/1 ITTLE GIANT	COOLIN	MOTOR POWER FAN POWER FAN SPEED ELECTRICAL CHARACTERISTICS FULL LOAD AMPS	BHP RPM V/PH AMPS	929 208/3 2.9 2" THICK PLEATED	995 208/3 2.9 2" THICK	995 208/3 2.9 2" THICK	OPPOSED BLADE DAMPER OUTSIDE AIR DUCT CONNECTION WITH OPPOSED BLADE DAMPER AND AIRFLOW STATION ELEVATION MAN MAN	B B US RN IN
		SHUT-OFF MOTOR HOI ELECTRICAL MANUFACTI MODEL NUM IOTES: 1. SCHEDUL	HEAD RSEPOWER . CHARACTE JRER IBER ES FOR EXIS	sting units	HP V/PH	EFERENCE O	120/1 LITTLE GIANT VCMA-20ULS NLY.	120 LITTLE VCMA-:	/1 GIANT L	120/1 ITTLE GIANT	COOLIN	MOTOR POWER FAN POWER FAN SPEED ELECTRICAL CHARACTERISTICS FULL LOAD AMPS FILTERS G COIL DATA - SELECT COOLING COILS W	BHP RPM V/PH AMPS	929 208/3 2.9 2" THICK PLEATED	995 208/3 2.9 2" THICK PLEATED	995 208/3 2.9 2" THICK PLEATED	OPPOSED BLADE DAMPER OUTSIDE AIR DUCT CONNECTION WITH OPPOSED BLADE DAMPER AND AIRFLOW STATION ELEVATION MAX	B B US RN
		SHUT-OFF MOTOR HOI ELECTRICAL MANUFACTI MODEL NUM IOTES: 1. SCHEDUL	HEAD RSEPOWER . CHARACTE JRER IBER ES FOR EXIS	sting units	HP V/PH	EFERENCE O	120/1 LITTLE GIANT VCMA-20ULS NLY.	120 LITTLE VCMA-:	/1 GIANT L	120/1 ITTLE GIANT	COOLIN	MOTOR POWER FAN POWER FAN SPEED ELECTRICAL CHARACTERISTICS FULL LOAD AMPS FILTERS G COIL DATA – SELECT COOLING COILS W ROWS TOTAL COOLING CAPACITY SENSIBLE COOLING CAPACITY	BHP RPM V/PH AMPS MTH A MAXIMUM O # MBTUH MBTUH	929 208/3 2.9 2" THICK PLEATED F 144 FPF 6 48.0 44.0	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6	OPPOSED BLADE DAMPER OUTSIDE AIR DUCT CONNECTION WITH OPPOSED BLADE DAMPER AND AIRFLOW STATION AIRFLOW	B B US RN
		SHUT-OFF MOTOR HOI ELECTRICAL MANUFACTI MODEL NUM IOTES: 1. SCHEDUL	HEAD RSEPOWER . CHARACTE JRER IBER ES FOR EXIS	sting units	HP V/PH	EFERENCE O	120/1 LITTLE GIANT VCMA-20ULS NLY.	120 LITTLE VCMA-:	/1 GIANT L	120/1 ITTLE GIANT	COOLIN	MOTOR POWER FAN POWER FAN SPEED ELECTRICAL CHARACTERISTICS FULL LOAD AMPS FILTERS G COIL DATA – SELECT COOLING COILS W ROWS TOTAL COOLING CAPACITY SENSIBLE COOLING CAPACITY AIR ENTERING COOLING COIL	BHP RPM V/PH AMPS MTH A MAXIMUM O # MBTUH MBTUH MBTUH TFdb - TFwb	929 208/3 2.9 2" THICK PLEATED F 144 FPF 6 48.0 44.0 77.0 - 63.0	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6 77.0 - 63.3	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6 77.0 - 63.5	OPPOSED BLADE DAMPER OUTSIDE AIR DUCT CONNECTION WITH OPPOSED BLADE DAMPER AND AIRFLOW STATION AIRFLOW STATION	B B US RN
		SHUT-OFF MOTOR HOI ELECTRICAL MANUFACTI MODEL NUM IOTES: 1. SCHEDUL	HEAD RSEPOWER . CHARACTE JRER IBER ES FOR EXIS	sting units	HP V/PH	EFERENCE O	120/1 LITTLE GIANT VCMA-20ULS NLY.	120 LITTLE VCMA-:	/1 GIANT L	120/1 ITTLE GIANT	COOLIN	MOTOR POWER FAN POWER FAN SPEED ELECTRICAL CHARACTERISTICS FULL LOAD AMPS FILTERS G COIL DATA – SELECT COOLING COILS W ROWS TOTAL COOLING CAPACITY SENSIBLE COOLING CAPACITY	BHP RPM V/PH AMPS MTH A MAXIMUM O # MBTUH MBTUH	929 208/3 2.9 2" THICK PLEATED F 144 FPF 6 48.0 44.0	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6	OPPOSED BLADE DAMPER OUTSIDE AIR DUCT CONNECTION WITH OPPOSED BLADE DAMPER AND AIRFLOW STATION AIRFLOW STATION AIRFLOW TATION AIRFLOW TATION	B B US RN
		SHUT-OFF MOTOR HOI ELECTRICAL MANUFACTI MODEL NUM IOTES: 1. SCHEDUL	HEAD RSEPOWER . CHARACTE JRER IBER ES FOR EXIS	sting units	HP V/PH	EFERENCE O	120/1 LITTLE GIANT VCMA-20ULS NLY.	120 LITTLE VCMA-:	/1 GIANT L	120/1 ITTLE GIANT	COOLIN	MOTOR POWER FAN POWER FAN SPEED ELECTRICAL CHARACTERISTICS FULL LOAD AMPS FILTERS G COIL DATA – SELECT COOLING COILS W ROWS TOTAL COOLING CAPACITY SENSIBLE COOLING CAPACITY AIR ENTERING COOLING COIL AIR LEAVING COOLING COIL	BHP RPM V/PH AMPS MTH A MAXIMUM O # MBTUH MBTUH MBTUH Fdb - Fwb	929 208/3 2.9 2" THICK PLEATED F 144 FPF 6 48.0 44.0 77.0 - 63.0 53.5 - 53.3	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6 77.0 - 63.3 53.5 - 53.3	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6 77.0 - 63.5 53.50 - 53.3	OPPOSED BLADE DAMPER OUTSIDE AIR DUCT CONNECTION WITH OPPOSED BLADE DAMPER AND AIRFLOW STATION AIRFLOW	B B US RN
		SHUT-OFF MOTOR HOI ELECTRICAL MANUFACTI MODEL NUM IOTES: 1. SCHEDUL	HEAD RSEPOWER . CHARACTE JRER IBER ES FOR EXIS	sting units	HP V/PH	EFERENCE O	120/1 LITTLE GIANT VCMA-20ULS NLY.	120 LITTLE VCMA-:	/1 GIANT L	120/1 ITTLE GIANT	COOLIN	MOTOR POWER FAN POWER FAN SPEED ELECTRICAL CHARACTERISTICS FULL LOAD AMPS FILTERS G COIL DATA - SELECT COOLING COILS W ROWS TOTAL COOLING CAPACITY SENSIBLE COOLING CAPACITY AIR ENTERING COOLING COIL AIR LEAVING COOLING COIL WATER FLOW RATE CHILLED WATER ENTERING TEMP. CHILLED WATER LEAVING TEMP.	BHP RPM V/PH AMPS MTH A MAXIMUM O # MBTUH MBTUH Fdb - Fwb Fdb - Fwb GPM F F	929 208/3 2.9 2" THICK PLEATED F 144 FPF 6 48.0 44.0 77.0 - 63.0 53.5 - 53.3 7.0 45.0 58.7	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6 77.0 - 63.3 53.5 - 53.3 8.0 45.0 58.1	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6 77.0 - 63.5 53.50 - 53.3 8.0 45.0 58.1	OPPOSED BLADE DAMPER OUTSIDE AIR DUCT CONNECTION WITH OPPOSED BLADE DAMPER AND AIRFLOW STATION AIRFLOW	B B US RN
		SHUT-OFF MOTOR HOI ELECTRICAL MANUFACTI MODEL NUM IOTES: 1. SCHEDUL	HEAD RSEPOWER . CHARACTE JRER IBER ES FOR EXIS	sting units	HP V/PH	EFERENCE O	120/1 LITTLE GIANT VCMA-20ULS NLY.	120 LITTLE VCMA-:	/1 GIANT L	120/1 ITTLE GIANT	COOLIN	MOTOR POWER FAN POWER FAN SPEED ELECTRICAL CHARACTERISTICS FULL LOAD AMPS FILTERS G COIL DATA - SELECT COOLING COILS W ROWS TOTAL COOLING CAPACITY SENSIBLE COOLING CAPACITY AIR ENTERING COOLING COIL AIR LEAVING COOLING COIL WATER FLOW RATE CHILLED WATER ENTERING TEMP. CHILLED WATER LEAVING TEMP. MAXIMUM FLUID PRESSURE DROP	BHP RPM V/PH AMPS MTH A MAXIMUM O # MBTUH MBTUH Tdb - Twb GPM TF GPM TF FT. H20	929 208/3 2.9 2" THICK PLEATED F 144 FPF 6 48.0 44.0 77.0 - 63.0 53.5 - 53.3 7.0 45.0	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6 77.0 - 63.3 53.5 - 53.3 8.0 45.0	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6 77.0 - 63.5 53.50 - 53.3 8.0 45.0	OPPOSED BLADE DAMPER OUTSIDE AIR DUCT CONNECTION WITH OPPOSED BLADE DAMPER AND AIRFLOW STATION AIRFLOW	B B US RN
		SHUT-OFF MOTOR HOI ELECTRICAL MANUFACTI MODEL NUM IOTES: 1. SCHEDUL	HEAD RSEPOWER . CHARACTE JRER IBER ES FOR EXIS	sting units	HP V/PH	EFERENCE O	120/1 LITTLE GIANT VCMA-20ULS NLY.	120 LITTLE VCMA-:	/1 GIANT L	120/1 ITTLE GIANT	COOLIN	MOTOR POWER FAN POWER FAN SPEED ELECTRICAL CHARACTERISTICS FULL LOAD AMPS FILTERS G COIL DATA - SELECT COOLING COILS W ROWS TOTAL COOLING CAPACITY SENSIBLE COOLING CAPACITY AIR ENTERING COOLING COIL AIR LEAVING COOLING COIL WATER FLOW RATE CHILLED WATER ENTERING TEMP. CHILLED WATER LEAVING TEMP.	BHP RPM V/PH AMPS MTH A MAXIMUM O # MBTUH MBTUH Fdb - Fwb Fdb - Fwb GPM F F	929 208/3 2.9 2" THICK PLEATED F 144 FPF 6 48.0 44.0 77.0 - 63.0 53.5 - 53.3 7.0 45.0 58.7 10	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6 77.0 - 63.3 53.5 - 53.3 8.0 45.0 58.1 10	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6 77.0 - 63.5 53.50 - 53.3 8.0 45.0 58.1 10	OPPOSED BLADE DAMPER OUTSIDE AIR DUCT CONNECTION WITH OPPOSED BLADE DAMPER AND AIRFLOW STATION AIRFLOW STATION AIRFLOW STATION AIRFLOW STATION AIRFLOW STATION AIRFLOW STATION ELEVATION MAN AHU-T3 ELEVATION ABBREVIATIONS: AS ACCESS SECTION CC COOLING COL FMB FILTER MIXING BOX	B B US RN
		SHUT-OFF MOTOR HOI ELECTRICAL MANUFACTI MODEL NUM IOTES: 1. SCHEDUL	HEAD RSEPOWER . CHARACTE JRER IBER ES FOR EXIS	sting units	HP V/PH	EFERENCE O	120/1 LITTLE GIANT VCMA-20ULS NLY.	120 LITTLE VCMA-:	/1 GIANT L	120/1 ITTLE GIANT		MOTOR POWER FAN POWER FAN SPEED ELECTRICAL CHARACTERISTICS FULL LOAD AMPS FILTERS G COIL DATA - SELECT COOLING COILS W ROWS TOTAL COOLING CAPACITY SENSIBLE COOLING CAPACITY AIR ENTERING COOLING COIL AIR LEAVING COOLING COIL WATER FLOW RATE CHILLED WATER ENTERING TEMP. CHILLED WATER LEAVING TEMP. MAXIMUM FLUID PRESSURE DROP PERCENT ETHYLENE GLYCOL	BHP RPM V/PH AMPS MTH A MAXIMUM O # MBTUH MBTUH Fdb - Fwb GPM F FDH FF FT FT FT MBTUH	929 208/3 2.9 2" THICK PLEATED F 144 FPF 6 48.0 44.0 77.0 - 63.0 53.5 - 53.3 7.0 45.0 58.7 10	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6 77.0 - 63.3 53.5 - 53.3 8.0 45.0 58.1 10	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6 77.0 - 63.5 53.50 - 53.3 8.0 45.0 58.1 10	OPPOSED BLADE DAMPER OUTSIDE AIR DUCT CONNECTION WITH OPPOSED BLADE DAMPER AND AIRFLOW STATION AIRFLOW STATION AIRFLOW STATION AIRFLOW STATION AIRFLOW STATION AIRFLOW STATION ELEVATION MAN AHU-T3 U DOL SF DOL SF DOL SF DOL SF DOL SF DOL SF SUPPLY FAN DOL SF SUPPLY FAN DOL SF DOL SF DOL SF SUPPLY FAN DOL SF DOL SF DOL SF SUPPLY FAN DOL SF SUPPLY FAN	B B US RN
		SHUT-OFF MOTOR HOI ELECTRICAL MANUFACTI MODEL NUM IOTES: 1. SCHEDUL	HEAD RSEPOWER . CHARACTE JRER IBER ES FOR EXIS	sting units	HP V/PH	EFERENCE O	120/1 LITTLE GIANT VCMA-20ULS NLY.	120 LITTLE VCMA-:	/1 GIANT L	120/1 ITTLE GIANT		MOTOR POWER FAN POWER FAN SPEED ELECTRICAL CHARACTERISTICS FULL LOAD AMPS FILTERS G COIL DATA - SELECT COOLING COILS W ROWS TOTAL COOLING CAPACITY SENSIBLE COOLING CAPACITY AIR ENTERING COOLING COIL AIR LEAVING COOLING COIL WATER FLOW RATE CHILLED WATER ENTERING TEMP. CHILLED WATER LEAVING TEMP. MAXIMUM FLUID PRESSURE DROP PERCENT ETHYLENE GLYCOL RUNOUT PIPE SIZE L VALVE DATA COOLING CONTROL VALVE TYPE	BHP RPM V/PH AMPS MTH A MAXIMUM O # MBTUH MBTUH Fdb - Fwb GPM F FDH FF FT FT FT MBTUH	929 208/3 2.9 2"THICK PLEATED F 144 FPF 6 48.0 44.0 77.0 - 63.0 53.5 - 53.3 7.0 45.0 58.7 10 0 1 1 ZCV	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6 77.0 - 63.3 53.5 - 53.3 8.0 45.0 58.1 10 0 1	995 208/3 2.9 2"THICK PLEATED 6 52.5 46.6 77.0 - 63.5 53.50 - 53.3 8.0 45.0 58.1 10 58.1 10 0 1	OPPOSED BLADE DAMPER OUTSIDE AIR DUCT CONNECTION WITH OPPOSED BLADE DAMPER AND AIRFLOW STATION AIRFLOW STATION AIRFLOW STATION AIRFLOW STATION AIRFLOW STATION AIRFLOW STATION AIRFLOW STATION AIRFLOW STATION AIRFLOW STATION AIRFLOW STATION ELEVATION MAN MAN MAN MAN MAN MAN MAN MA	B B US RN
		SHUT-OFF MOTOR HOI ELECTRICAL MANUFACTI MODEL NUM IOTES: 1. SCHEDUL	HEAD RSEPOWER . CHARACTE JRER IBER ES FOR EXIS	sting units	HP V/PH	EFERENCE O	120/1 LITTLE GIANT VCMA-20ULS NLY.	120 LITTLE VCMA-:	/1 GIANT L	120/1 ITTLE GIANT		MOTOR POWER FAN POWER FAN SPEED ELECTRICAL CHARACTERISTICS FULL LOAD AMPS FILTERS G COIL DATA - SELECT COOLING COILS W ROWS TOTAL COOLING CAPACITY SENSIBLE COOLING CAPACITY AIR ENTERING COOLING COIL AIR LEAVING COOLING COIL WATER FLOW RATE CHILLED WATER ENTERING TEMP. CHILLED WATER LEAVING TEMP. MAXIMUM FLUID PRESSURE DROP PERCENT ETHYLENE GLYCOL RUNOUT PIPE SIZE L VALVE DATA	BHP RPM V/PH AMPS MTH A MAXIMUM O # MBTUH MBTUH Fdb - Fwb GPM F FDH FF FT FT FT MBTUH	929 208/3 2.9 2" THICK PLEATED F 144 FPF 6 48.0 44.0 77.0 - 63.0 53.5 - 53.3 7.0 45.0 58.7 10 0 1	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6 77.0 - 63.3 53.5 - 53.3 8.0 45.0 58.1 10 0 1	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6 77.0 - 63.5 53.50 - 53.3 8.0 45.0 58.1 10 0 1	OPPOSED BLADE DAMPER OUTSIDE AIR DUCT CONNECTION WITH OPPOSED BLADE DAMPER AND AIRFLOW STATION AIRFLOW STATION AHU-T3 40° 10°-6° ELEVATION MAN MAN AHU-T3 ELEVATION ABBREVIATIONS: AS ACCESS SECTION CC COOLING COIL FMB FILTER MIXING BOX SF SUPPLY FAN VCC VERTICAL COOLING COIL BLOWER COIL UNIT NOTES SCHEDULES FOR EXISTING UNITS ARE FOR REFERENCE ONLY. PROVIDE UNITS WITH THE FOLLOWING OPTIONS:	
		SHUT-OFF MOTOR HOI ELECTRICAL MANUFACTI MODEL NUM IOTES: 1. SCHEDUL	HEAD RSEPOWER . CHARACTE JRER IBER ES FOR EXIS	sting units	HP V/PH	EFERENCE O	120/1 LITTLE GIANT VCMA-20ULS NLY.	120 LITTLE VCMA-:	/1 GIANT L	120/1 ITTLE GIANT		MOTOR POWER FAN POWER FAN SPEED ELECTRICAL CHARACTERISTICS FULL LOAD AMPS FILTERS G COIL DATA – SELECT COOLING COILS W ROWS TOTAL COOLING CAPACITY SENSIBLE COOLING CAPACITY AIR ENTERING COOLING COIL AIR LEAVING COOLING COIL WATER FLOW RATE CHILLED WATER ENTERING TEMP. CHILLED WATER LEAVING TEMP. CHILLED WATER LEAVING TEMP. MAXIMUM FLUID PRESSURE DROP PERCENT ETHYLENE GLYCOL RUNOUT PIPE SIZE L VALVE DATA COOLING CONTROL VALVE TYPE VALVE CONFIGURATION	BHP RPM V/PH AMPS MTH A MAXIMUM O # MBTUH Fdb - Fwb Fdb - Fwb GPM F F F. MBTUH In.	929 208/3 2.9 2"THICK PLEATED F 144 FPF 6 48.0 44.0 77.0 - 63.0 53.5 - 53.3 7.0 45.0 58.7 10 0 58.7 10 0 1	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6 77.0 - 63.3 53.5 - 53.3 8.0 45.0 58.1 10 0 1 1 2CV 2-WAY	995 208/3 2.9 2"THICK PLEATED 6 52.5 46.6 77.0 - 63.5 53.50 - 53.3 8.0 45.0 58.1 10 58.1 10 0 1 1	OPPOSED BLADE DAMPER OUTSIDE AIR DUCT CONNECTION WITH OPPOSED BLADE DAMPER AND AIRFLOW STATION AIRFLOW STATION AHU-I3 U HU HU HU HU HU HU HU HU HU	
		SHUT-OFF MOTOR HOI ELECTRICAL MANUFACTI MODEL NUM IOTES: 1. SCHEDUL	HEAD RSEPOWER . CHARACTE JRER IBER ES FOR EXIS	sting units	HP V/PH	EFERENCE O	120/1 LITTLE GIANT VCMA-20ULS NLY.	120 LITTLE VCMA-:	/1 GIANT L	120/1 ITTLE GIANT	CONTRO	MOTOR POWER FAN POWER FAN SPEED ELECTRICAL CHARACTERISTICS FULL LOAD AMPS FILTERS G COIL DATA - SELECT COOLING COILS W ROWS TOTAL COOLING CAPACITY SENSIBLE COOLING CAPACITY AIR ENTERING COOLING COIL AIR LEAVING COOLING COIL WATER FLOW RATE CHILLED WATER ENTERING TEMP. CHILLED WATER ENTERING TEMP. CHILLED WATER LEAVING TEMP. MAXIMUM FLUID PRESSURE DROP PERCENT ETHYLENE GLYCOL RUNOUT PIPE SIZE L VALVE DATA COOLING CONTROL VALVE TYPE VALVE CONFIGURATION VALVE SIZE CONTROL VALVE FLOW COEFFICIENT ATION	BHP RPM V/PH AMPS MTH A MAXIMUM O # MBTUH Fdb - Twb GPM F F F F MIN.	929 208/3 2.9 2" THICK PLEATED F 144 FPF 6 48.0 44.0 77.0 - 63.0 53.5 - 53.3 7.0 45.0 58.7 10 58.7 10 0 58.7 10 2 58.7 10 2 58.7 10 45.0 58.7 10 1 2 58.7 10 4 5 7 2 1 2 1 2 2 4.7 VERTICAL	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6 77.0 - 63.3 53.5 - 53.3 8.0 45.0 58.1 10 0 58.1 10 0 1 1 ZCV 2-WAY 1/2 4.7 VERTICAL	995 208/3 2.9 2"THICK PLEATED 6 52.5 46.6 77.0 - 63.5 53.50 - 53.3 8.0 45.0 58.1 10 58.1 10 58.1 10 2 58.1 10 2 58.1 10 2 58.1 10 2 58.1 10 10 2 58.1	OPPOSED BLADE DAMPER OUTSIDE AIR DUCT CONNECTION WITH OPPOSED BLADE DAMPER AND AIRFLOW STATION AIRFLOW STATION AIRFLOW STATION AIRFLOW STATION AIRFLOW STATION CONTENTION AIRFLOW STATION AIRFLOW STATI	
		SHUT-OFF MOTOR HOI ELECTRICAL MANUFACTI MODEL NUM IOTES: 1. SCHEDUL	HEAD RSEPOWER . CHARACTE JRER IBER ES FOR EXIS	sting units	HP V/PH	EFERENCE O	120/1 LITTLE GIANT VCMA-20ULS NLY.	120 LITTLE VCMA-:	/1 GIANT L	120/1 ITTLE GIANT	CONTRC ORIENT/ MANUF/	MOTOR POWER FAN POWER FAN SPEED ELECTRICAL CHARACTERISTICS FULL LOAD AMPS FILTERS G COIL DATA - SELECT COOLING COILS W ROWS TOTAL COOLING CAPACITY SENSIBLE COOLING CAPACITY AIR ENTERING COOLING COIL AIR LEAVING COOLING COIL WATER FLOW RATE CHILLED WATER ENTERING TEMP. CHILLED WATER ENTERING TEMP. CHILLED WATER LEAVING TEMP. MAXIMUM FLUID PRESSURE DROP PERCENT ETHYLENE GLYCOL RUNOUT PIPE SIZE L VALVE DATA COOLING CONTROL VALVE TYPE VALVE CONFIGURATION VALVE SIZE CONTROL VALVE FLOW COEFFICIENT ATION	BHP RPM V/PH AMPS MTH A MAXIMUM O # MBTUH Fdb - Twb GPM F F F F MIN.	929 208/3 2.9 2"THICK PLEATED F 144 FPF 6 48.0 44.0 77.0 - 63.0 53.5 - 53.3 7.0 45.0 53.7 10 58.7 10 58.7 10 58.7 10 2 2 2 4.7 2 2 2 4.7 2 2 2 4.7	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6 77.0 - 63.3 53.5 - 53.3 8.0 45.0 58.1 10 0 58.1 10 0 1 2CV 2-WAY 1/2 4.7 VERTICAL TRANE	995 208/3 2.9 2," THICK PLEATED 6 52.5 46.6 77.0 - 63.5 53.50 - 53.3 8.0 45.0 58.1 3 58.1 10 58.1 10 58.1 10 2 58.1 10 2 58.1 10 2 58.1 10 10 2 58.1 10 2 58.1 10 10 2 5 8.0 4 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	OPPOSED BLADE DAMPER OUTSIDE AIR DUCT CONNECTION WITH OPPOSED BLADE DAMPER AND AIRFLOW STATION AIRFLOW br>AIRFLOW STATION AIRFLOW AI	PP B. USRNIN NURNIN NU
		SHUT-OFF MOTOR HOI ELECTRICAL MANUFACTI MODEL NUM IOTES: 1. SCHEDUL	HEAD RSEPOWER . CHARACTE JRER IBER ES FOR EXIS	sting units	HP V/PH	EFERENCE O	120/1 LITTLE GIANT VCMA-20ULS NLY.	120 LITTLE VCMA-:	/1 GIANT L	120/1 ITTLE GIANT	CONTRO ORIENT/ MANUF/ MODEL	MOTOR POWER FAN POWER FAN SPEED ELECTRICAL CHARACTERISTICS FULL LOAD AMPS FILTERS G COIL DATA - SELECT COOLING COILS W ROWS TOTAL COOLING CAPACITY SENSIBLE COOLING CAPACITY AIR ENTERING COOLING COIL AIR LEAVING COOLING COIL WATER FLOW RATE CHILLED WATER ENTERING TEMP. CHILLED WATER ENTERING TEMP. CHILLED WATER LEAVING TEMP. MAXIMUM FLUID PRESSURE DROP PERCENT ETHYLENE GLYCOL RUNOUT PIPE SIZE L VALVE DATA COOLING CONTROL VALVE TYPE VALVE CONFIGURATION VALVE SIZE CONTROL VALVE FLOW COEFFICIENT ATION	BHP RPM V/PH AMPS MTH A MAXIMUM O # MBTUH Fdb - Twb GPM F F F F MIN.	929 208/3 2.9 2" THICK PLEATED F 144 FPF 6 48.0 44.0 777.0 - 63.0 77.0 - 63.0 53.5 - 53.3 7.0 45.0 58.7 10 45.0 58.7 10 0 58.7 10 0 1 2 2 2 WAY 1/2 4.7 VERTICAL TRANE BCVC054E2 B/M501	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6 77.0 - 63.3 53.5 - 53.3 8.0 45.0 58.1 10 0 58.1 10 0 58.1 10 0 1 1 2 2 2 - WAY 1/2 4.7 VERTICAL TRANE BCVC054E2 B/M501	995 208/3 2.9 2.9 2* THICK PLEATED 6 52.5 46.6 77.0 - 63.5 53.50 - 53.3 8.0 45.0 53.50 - 53.3 8.0 45.0 58.1 10 58.1 10 58.1 10 2 58.1 10 2 58.1 10 2 5 8.0 4 5 7 7 2 4.7 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2	OPPOSED BLADE DAMPER Jorden Subject OUTSIDE AR DUCT SF CONNECTION WITH OPPOSED Jorden Subject BLADE DAMPER AND AIRCLOW STATION AIRCLOW STATION Image: Station Station AIRCLOW STATION Image: Station Station ABBREVIATIONS: As AS ACCESS SECTION CC COOLING COLL FMB FLITER MIXING BOX SF SUPPLY FAN VC VERTICAL COOLING COLL BLOWER COLL UNIT NOTES SCHEDULES FOR EXISTING UNITS ARE FOR REFERENCE ONLY. PROVIDE UNITS WITH THE FOLLOWING OPTIONS: 1 UNIT CASING: G00 GALVANIZED STEEL; SINGLE WALL CONSTRUCTION WITH FOLL-FACED INSULATION. 2. EAN ASSEMBLY, DWOI FORWARD CURVED CENTRIFUGAL BLOWER 3. WATER COLL: 0.0075" THICK ALUMINUM FINS AND STANDARD TUBE WAL OPTION TO PROVIDE BASIC PIPING PARAMEGEMENT 4. ELLTER RACK: PROVIDE 2" NOMINAL, STANDARD SIZED, PLEATED FILTEI 5. VIBRATION ISOLATION: PROVIDE RUBBER- IN-SHEAR TYPE MOUNTING INTERPROVIDE 10001 FOR PROVIDE RUBBER- IN-SHEAR TYPE MOUNTING INTERPROVIDE INFORMED RUBBER- IN-SHEAR TYPE MOUNTING INTERPROVIDE INSERTING INTERPROVIDE INFORMED RUBBER- IN-SHEAR TYPE MOUNTING INTERPROVIDE INFORMED RUBBER- IN-SHEAR TYPE MOUNTING INTERPROVIDE INFORMED RUBBER- IN-SHEAR TYPE MOUNT	PP B. USRNIN NURNIN NURNIN ALSI SI SI
		SHUT-OFF MOTOR HOI ELECTRICAL MANUFACTI MODEL NUM IOTES: 1. SCHEDUL	HEAD RSEPOWER . CHARACTE JRER IBER ES FOR EXIS	sting units	HP V/PH	EFERENCE O	120/1 LITTLE GIANT VCMA-20ULS NLY.	120 LITTLE VCMA-:	/1 GIANT L	120/1 ITTLE GIANT	CONTRO ORIENT/ MANUF/ MODEL DETAIL <u>NOTES:</u> 1. S	MOTOR POWER FAN POWER FAN SPEED ELECTRICAL CHARACTERISTICS FULL LOAD AMPS FILTERS G COIL DATA - SELECT COOLING COILS W ROWS TOTAL COOLING CAPACITY SENSIBLE COOLING CAPACITY AIR ENTERING COOLING COIL AIR LEAVING COOLING COIL WATER FLOW RATE CHILLED WATER ENTERING TEMP. CHILLED WATER LEAVING TEMP. MAXIMUM FLUID PRESSURE DROP PERCENT ETHYLENE GLYCOL RUNOUT PIPE SIZE L VALVE DATA COOLING CONTROL VALVE TYPE VALVE CONFIGURATION VALVE SIZE CONTROL VALVE FLOW COEFFICIENT ATION CTURER REFERENCE CHEDULES FOR EXISTING UNITS ARE FOR	BHP RPM V/PH AMPS MTH A MAXIMUM O # MBTUH MBTUH Fdb - Twb GPM TF F FT. H20 % IN. Cv IN. REFERENCE ONLY.	929 208/3 2.9 2"THICK PLEATED F 144 FPF 6 48.0 44.0 77.0 - 63.0 53.5 - 53.3 7.0 53.5 - 53.3 7.0 45.0 58.7 10 58.7 10 0 58.7 10 0 1 2 2 2 WAY 1/2 4.7 VERTICAL TRANE BCVC054E2 B/M501 D/M501	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6 77.0 - 63.3 53.5 - 53.3 8.0 45.0 58.1 10 58.1 10 0 58.1 10 0 1 1 2 2 2 WAY 1/2 4.7 VERTICAL TRANE BCVC054E2 B/M501 D/M501	995 208/3 2.9 2," THICK PLEATED 6 52.5 46.6 77.0 - 63.5 53.50 - 53.3 8.0 45.0 58.1 3 58.1 10 58.1 10 58.1 10 2 58.1 10 2 58.1 10 2 58.1 10 10 2 58.1 10 2 58.1 10 10 2 5 8.0 4 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	OPPOSED BLADE DAMPER Joint of the opposed blade damper and arrelow station OUTSIDE AR DUCT Image: Station of the opposed blade damper and arrelow station AIRLOW STATION Image: Station of the opposed blade damper and opposed mper and opposed damper and opposed damper	PP B. USRNIN NURNIN NURNIN ALSI SI SI
		SHUT-OFF MOTOR HOI ELECTRICAL MANUFACTI MODEL NUM IOTES: 1. SCHEDUL	HEAD RSEPOWER . CHARACTE JRER IBER ES FOR EXIS	sting units	HP V/PH	EFERENCE O	120/1 LITTLE GIANT VCMA-20ULS NLY.	120 LITTLE VCMA-:	/1 GIANT L	120/1 ITTLE GIANT	CONTRO ORIENT/ MANUF/ MODEL DETAIL <u>NOTES:</u> 1. S	MOTOR POWER FAN POWER FAN SPEED ELECTRICAL CHARACTERISTICS FULL LOAD AMPS FULL LOAD AMPS FULTERS G COIL DATA - SELECT COOLING COILS W ROWS TOTAL COOLING CAPACITY SENSIBLE COOLING CAPACITY AIR ENTERING COOLING COIL AIR LEAVING COOLING COIL WATER FLOW RATE CHILLED WATER ENTERING TEMP. CHILLED WATER LEAVING TEMP. MAXIMUM FLUID PRESSURE DROP PERCENT ETHYLENE GLYCOL RUNOUT PIPE SIZE L VALVE DATA COOLING CONTROL VALVE TYPE VALVE CONFIGURATION VALVE SIZE CONTROL VALVE FLOW COEFFICIENT ATION ACTURER REFERENCE	BHP RPM V/PH AMPS MTH A MAXIMUM O # MBTUH MBTUH Fdb - Twb GPM TF F FT. H20 % IN. Cv IN. REFERENCE ONLY.	929 208/3 2.9 2"THICK PLEATED F 144 FPF 6 48.0 44.0 77.0 - 63.0 53.5 - 53.3 7.0 53.5 - 53.3 7.0 45.0 58.7 10 58.7 10 0 58.7 10 0 1 2 2 2 WAY 1/2 4.7 VERTICAL TRANE BCVC054E2 B/M501 D/M501	995 208/3 2.9 2" THICK PLEATED 6 52.5 46.6 77.0 - 63.3 53.5 - 53.3 8.0 45.0 58.1 10 58.1 10 0 58.1 10 0 1 1 2 2 2 WAY 1/2 4.7 VERTICAL TRANE BCVC054E2 B/M501 D/M501	995 208/3 2.9 2.9 2* THICK PLEATED 6 52.5 46.6 77.0 - 63.5 53.50 - 53.3 8.0 45.0 53.50 - 53.3 8.0 45.0 58.1 10 58.1 10 58.1 10 2 58.1 10 2 58.1 10 2 58.1 10 2 5 8.0 4 5 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	OPPOSED BLADE DAMPER OUTSIDE AIR DUCT CONNECTION WITH OPPOSED BLADE DAMPER AND AIRFLOW STATION AIRE	PP B. USRNIN NURNIN NURNIN ALSI SI SI

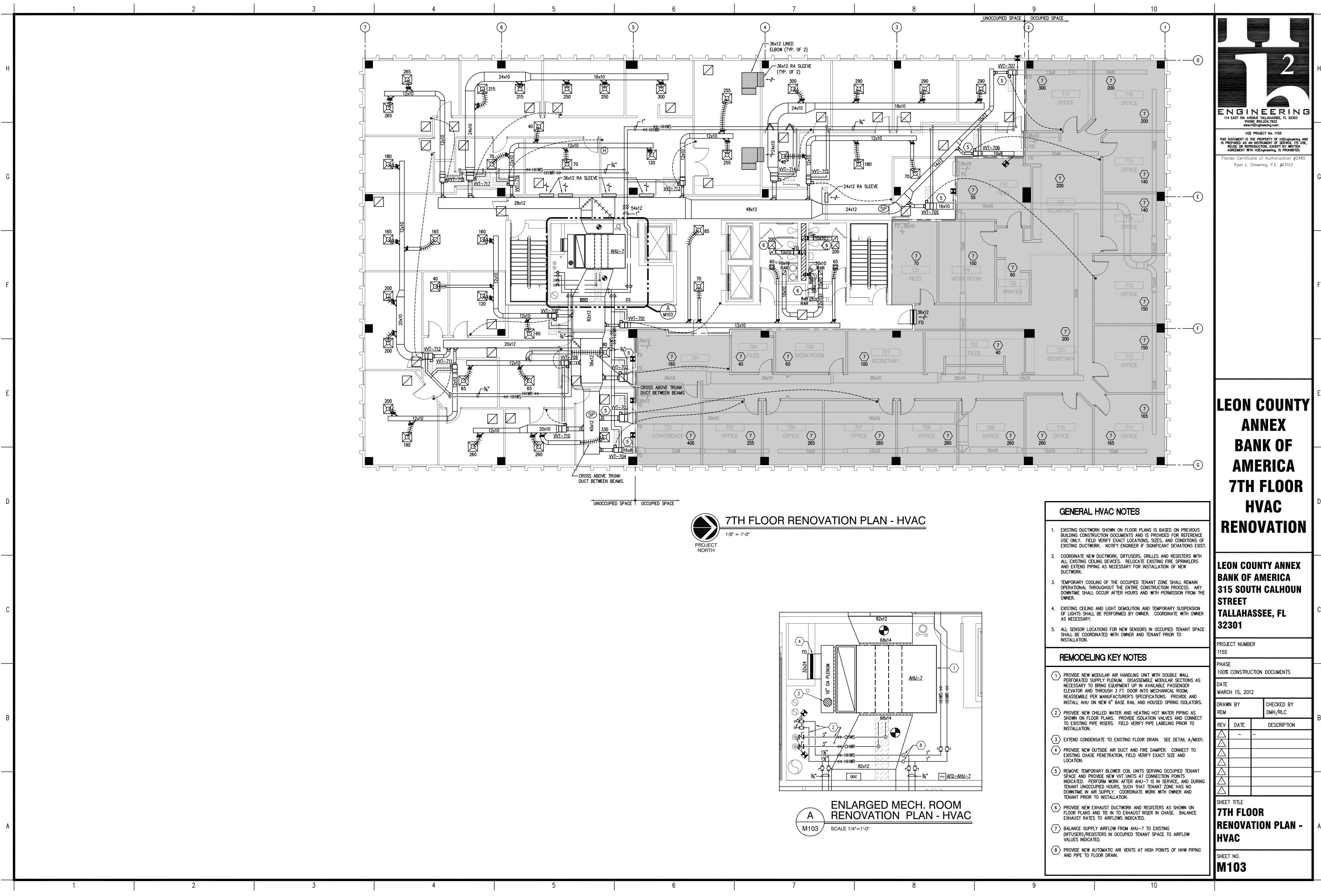
3		9	10			
				AHU-7		
			CFM	11,000		Н
			CFM	2,700		
				OPPOSED BLADE		
				ANGLED	ENGINEERING	
	_			2"THICK PLEATED MERV 13	114 EAST 5th AVENUE TALLAHASSEE, FL 32303 PHONE 850.224.7922 www.H2Engineering.com	⊢
XIMUM FLUID	PRESSURE DROP	OF 10 FT.			H2E PROJECT No. 1155 THIS DOCUMENT IS THE PROPERTY OF H2Engineering AND	1
			мвтин	482	THIS DOCUMENT IS THE PROPERTY OF H2Engineering AND IS PREPARED AS AN INSTRUMENT OF SERVICE. ITS USE, REUSE OR REPRODUCTION, EXCEPT BY WRITTEN AGREEMENT WITH H2Engineering, IS PROHIBITED.	
			мвтин	316	Florida Certificate of Authorization #2485	1
			Fdb	78.2	Ryan L. Chewning, P.E. #63103	
			۴wb	66.4		G
			۴db	52.0		
			Fwb	51.5		
			GPM	69		
			۴	45		
			۴	59		
			SF	25		
			%	0		
			IN.	3		
				PICV		F
				2-WAY		
			GPM	80		
			IN.	1-1/4		
				PLENUM		
			IN. WG	2.5		
			IN. WG	4.0		1
			НР	15 208/3		E
			V/PH		LEON COUNTY	
				YES A/M501		
				A7M301	ANNEX	
THROUGH STA	NDARD 3 FT. DO	DR.				
					BANK OF	⊢
		AIR HANDLING UNIT LAYOUTS				
AHU-T2	AŅU—T3			A101 -	AMERICA	
AHU-T2 (EXISTING)	AHU-T3 (NEW)			<u>AHU-7</u>	7TH FLOOR	
1 000	1.000					
1,800	1,900		7'-2"		HVAC	D
0	0					
0.6	0.6	PLAN	✓── 68x14 SA DUCT (BOT	H SIDES)	RENOVATION	
1.4	1.4		UUXIA DA DOCI (ROI	- JULJ		
1	1	RETURN AIR OPENING WITH OPPOSED BLADE DAMPER				
0.69	0.69			RATED	LEON COUNTY ANNEX	
995	995		SF 9'−6" MAX.		BANK OF AMERICA	
208/3	208/3	CONNECTION WITH OPPOSED	8" BASERAIL		315 SOUTH CALHOUN	
2.9 2" THICK	2.9 2" THICK	AIRFLOW STATION $$	HOUSED SPRING ISOLA		STREET	
PLEATED	PLEATED	<u>ELEVATION</u>	CORNERS, MID SPAN POINTS IDENTIFIED BY MANUFACTURER'S INS		TALLAHASSEE, FL	С
£	C		MANUAL.		32301	
6 52.5	6 52.5	<u>AHU-T3</u>				
46.6	52.5 46.6				PROJECT NUMBER	
					1155	ł
7.0 - 63.3	77.0 - 63.5				PHASE 100% CONSTRUCTION DOCUMENTS	
3.5 - 53.3	53.50 - 53.3				DATE	1
8.0 45.0	8.0 45.0	PLAN ELEVATION			MARCH 15, 2012	J
45.0	45.0 58.1	ABBREVIATIONS:			DRAWN BY CHECKED BY	
58.1		AS ACCESS SECTION CC COOLING COIL			REM RLC	в
10	10	FMB FILTER MIXING BOX SF SUPPLY FAN			REV DATE DESCRIPTION	-
0	0	SF SUPPLY FAN VCC VERTICAL COOLING COIL			<u> </u>	
1	1	BLOWER COIL UNIT NOTES				1
701/	701					1
ZCV	ZCV	SCHEDULES FOR EXISTING UNITS ARE FOR REFERENCE ONLY.				┢
2-WAY	2-WAY	Provide Units with the following options: 1. <u>Unit Casing:</u> G90 Galvanized Steel; Single Wal	LL CONSTRUCTION WITH 1 IN., 1.5 LB	DENSITY,		1
1/2	1/2	FOIL-FACED INSULATION.			SHEET TITLE	1
4.7	4.7	2. <u>FAN ASSEMBLY:</u> DWDI FORWARD CURVED CENTRIFU			SCHEDULES - HVAC	
VERTICAL	VERTICAL	3. <u>Water Coil:</u> 0.0075" Thick Aluminum Fins and S Option to provide basic piping package or pipi			SAUFARFAFRA - UAVA	٨
TRANE	TRANE	4. <u>Filter Rack</u> : provide 2" nominal, standard siz	zed, pleated filters.			A
BCVC054E2	BCVC054E2 B /M501	5. <u>VIBRATION ISOLATION:</u> PROVIDE RUBBER- IN-SHEA	r type mounting isolators.			
B/M501 D/M501	B/M501 D/M501	6. <u>ELECTRICAL:</u> PROVIDE SINGLE POINT POWER CONNE VOLTAGE TO 24V TRANSFORMER, FAN CONTACTOR, I	CTION, THERMOSTAT CONTROL INTERF	ACE WITH LINE WITH OVERIOAD	SHEET NO.	1
		PROTECTION, AND DISCONNECT SWITCH.			M002	
						a
		9	10			



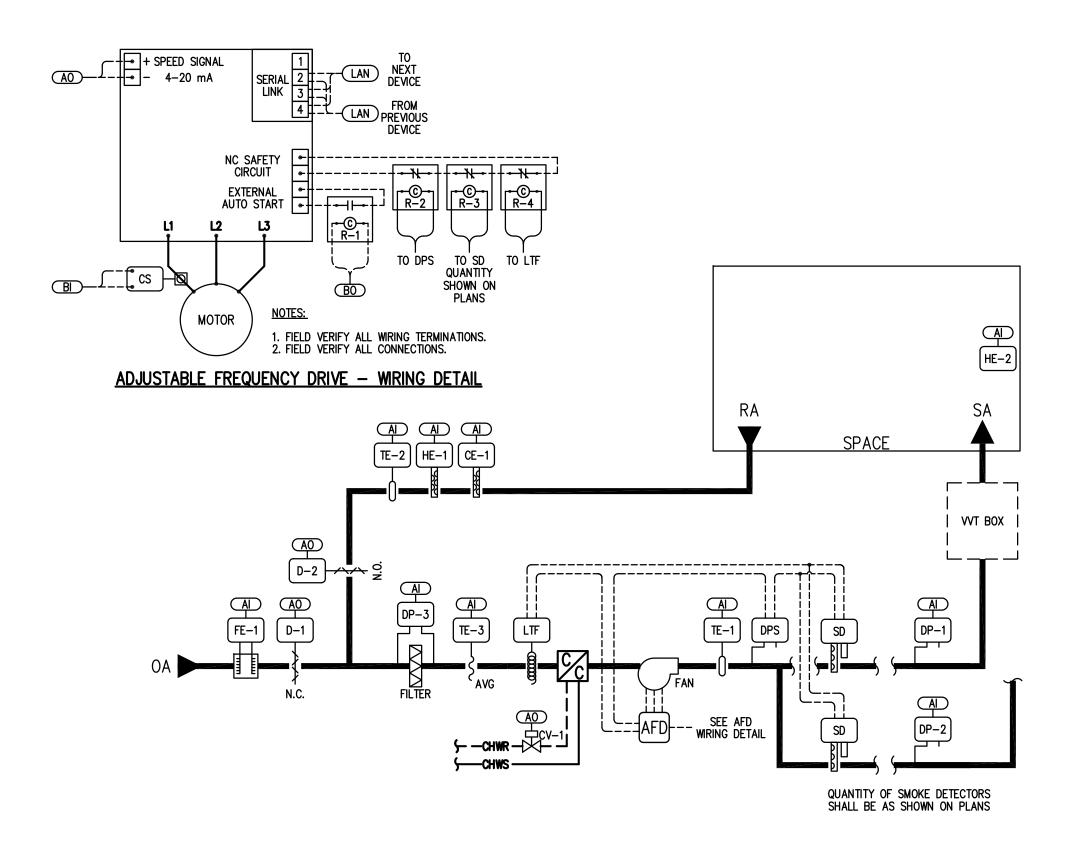
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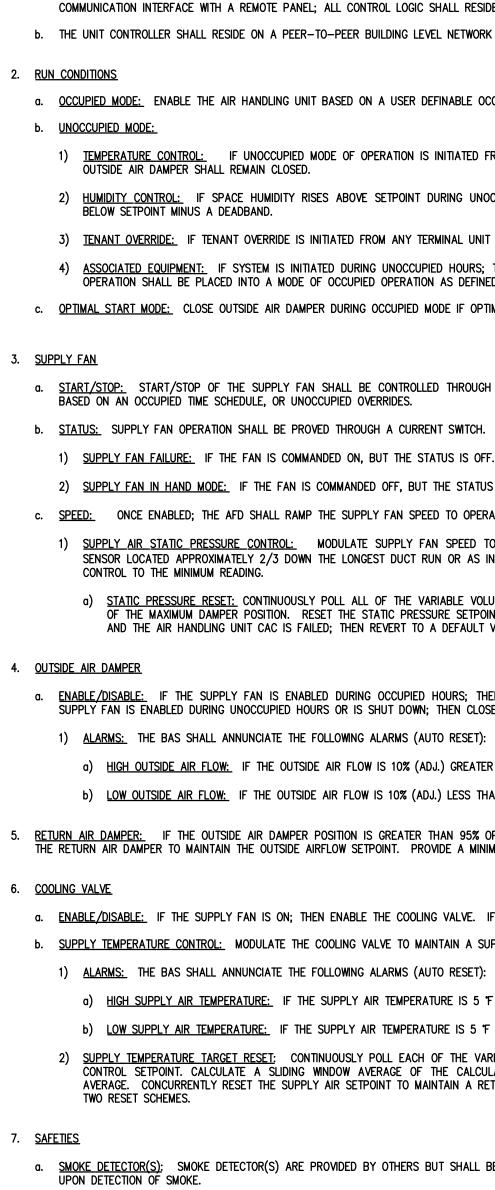
				PO	INTS												AF	PPLICATI	ONS													о / мг					
		PHYSI	CAL	VIR	TUAL					ALARMS			TF	RENDS					PR	OGRAM	s					CC	ontroi	L LOOP			REPORT	5 / ME	.SSAG	ES	GRA	PHIC SCR	(EEN
		INPUT					VALUE						of value) Interval)	TERVAL						ЕИПАL	z			RIDE PROGRAM			ROL		(-/+)	DAILY)				ы			
	VARIABLE VOLUME AIR HANDLING UNIT	BINARY ANALOG	BINARY ANALOG		CALCULATED	JSER ADJUSTABLE	NITIAL OR DEFAULT	BINARY ALARM	HIGH LEVEL ALARM LOW LEVEL ALARM	HIGH LEVEL ALARM -OW LEVEL ALARM	auto reset	L RESET	TREND (CHANGE OF V TREND (SAMPLE INTE	or SAMPL	SCHEDULING	OPTIMAL START/STOP	SEQUENCING EAD/LAG_ROTATION	auto fail to lag soft start	DEMAND LIMITING	staggered start on/off with differe	RUNTIME TOTALIZATIO	ANTI-SHORT CYCLE	DIFF PRES CONTROL	OPERATOR OVERRIDE SETPOINT RESET PRO	DIRECT ACTING	REVERSE ACTING FLOATING CONTROL	PROPORTIONAL CONTR	NTEGRAL CONTROL DERIVATIVE CONTROL	Setpoint deviation	ALARM LOG (REPORT	Report (Daily) Report (Weekly)	REPORT (MONTHLY)	REPORT (ANNUAL)	ALARM INSTRUCTION MAINTENANCE MESSA	-LOOR PLAN	air handling unit VVT Boxes	DYNAMIC CHARTING DYNAMIC CHARTING DYNAMIC
	AHU-7																																_		X		COMMUNICATION CONNECTION AT AFD
Í	OCCUPIED / UNOCCUPIED MODE												x		x									x											x	x	INITIAL SCHED: M-F: START 7:00 / STOP 6:00. S-S: OFF
	SUPPLY FAN START / STOP		1	+	+	+		+				+	x		T x	x	+	++	++			+	+		+					+		+	+			x	<u> </u>
	SUPPLY FAN STATUS	1				+		x				 x	x						++		x	+	+		+					x		+	+	x	x	x	"AHU-7 SUPPLY FAN FAILED/HAND"
	SUPPLY FAN SPEED		1			+		+								$\left \right $		$\left \right $	++			+	+			x	x	x				+	-+			x	PROGRAM MIN. SPEED AT 40%
	START-UP RAMP DELAY					+	60 s	\uparrow				\uparrow							++						\uparrow					\uparrow							SET AT AFD
	BROKEN BELT INDICATION			t x t		+					T x					$\left \right $	+	$\left \right $	++				+		+	+						+	+	+ x		x	SET ADJUSTMENT AT AFD / "AHU-7 SUPPLY FAN BROK
	DUCT STATIC PRESSURE (DP-1,2)	2		+	+	+		+			\neg	+	15M			$\left \right $	+	++	++		$\left \right $	+	+		+	+						+	-+	+	+	x	BELT"
	STATIC PRESSURE SETPOINT				x x	x	1.0" W.G.												++					x			x	x				+				x	MAX: 1.2" W.G. / MIN: 0.7" W.G.
	MAX VAV DAMPER POSITION				x		1.0 11.0.											\vdash	++																	x	SLIDING AVERAGE (5 MINUTES)
	MAX VAV DAMPER SETPOINT				x		98%											\vdash	++																	x	
	OUTSIDE AIR FLOW (FE-1)	1							x x	SP + 15% SP - 1	5% X		15M						+++											x			;	x	x	x	"OA FLOW HIGH/LOW"
	OUTSIDE AIR FLOW SETPOINT				x	x	SCHEDULE												++																	x	
	OUTSIDE AIR DAMPER (D-1)		1																+++							x	X	x								x	NORMALLY CLOSED
	RETURN AIR DAMPER (D-2)		1																++						x		x	x								x	NORMALLY OPEN
	RA MIN POSITION SETPOINT				x	x	20%	+										\vdash	++				++									+				x	
	SUPPLY AIR TEMPERATURE (TE-1)	1				+			x x	SP +5°F SP - 5	5°F X		15M						+++											x			\neg	x	x	x	"SA TEMP HIGH/LOW"
	SUPPLY AIR TEMPERATURE SETPOINT				x x	x	52 ° F										_	\vdash	++					x			x	x								x	MIN: 50°F / MAX: 70°F
	COOLING VALVE (CV-1)		1																++						x		x	x								x	2-WAY PICCV
ł	OUTSIDE AIR TEMPERATURE			x		+		+				+				$\left \right $	+	$\left \right $	++			+	+							+		+			x	x	FROM BAS
	RETURN AIR TEMPERATURE (TE-2)	1				+		+				+	15M			$\left \right $	+	$\left \right $	++			+	+		+ +					+		+			x		+ +
	RETURN AIR HUMIDITY (HE-1)					+		+	x	65%	x		15M						++				+		+	++				x			+,		x		"HIGH RA HUMIDITY"
	RETURN AIR HUMIDITY SETPOINT				x	X	55%	+				+					+		++						\uparrow					+					x		1 1
	MIXED AIR TEMPERATURE (TE-3)	1				+		+	x	35°F	x								++											x			\neg	x		x	"FREEZE WARNING"
ł	FILTER DIFFERENTIAL PRESSURE (DP-3)	1				\uparrow			x	1.2" W.G.	x								$\uparrow \uparrow$				11							x				x		x	"CHANGE FILTER"
	CO ₂ SENSOR (CE-1)	1				$\uparrow \uparrow$							15M																							x	
ĺ	SPACE HUMIDITY (HE-2)	1							x	70%	X		15M																	X					X	x	
	UNOCCUPIED HUMIDITY SETPOINT				X	X	65%																												X	Х	
	SUB-TOTAL	1 10	1 4																				i			•		.									



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AIR HANDLING UNIT CONTROL: (AHU-7)

1. <u>GENERAL</u>

- b. <u>HIGH PRESSURE LIMIT</u>: PROVIDE A PRESSURE SWITCH AT THE SUPPLY FAN DISCHARGE, WRED TO AN AUXILIARY CONTACT ON THE AFD. IF STATIC PRESSURE EXCEEDS 3.0 IN. W.G, THE SWITCH SHALL OVERRIDE ALL CONTROLS AND SHUT DOWN THE UNIT.
- 8. <u>MISCELLANEOUS ALARMS:</u> THE BAS SHALL ANNUNCIATE THE FOLLOWING ALARMS:
- c. <u>HIGH HUMIDITY:</u> IF THE RETURN AIR HUMIDITY IS ABOVE 65% FOR A MINIMUM TIME DELAY.
- d. BROKEN BELT INDICATION: UPON RECEIVING BROKEN BELT INDICATION FROM AFD.

AFDADJUSTABLE FREQUENCY DRIVEAHUAIR HANDLING UNITAIANALOG INPUTAOANALOG OUTPUTAVGAVERAGING SENSORBIBINARY INPUTBOBINARY OUTPUTCRELAY COILC/CCOOLING COILCHWRCHILLED WATER RETURNCHWSCHILLED WATER SUPPLYCECARBON DIOXIDE SENSOR / TRANSMITTERCSCURRENT SWITCHCVCOOLING VALVEDDAMPERDPDIFF. PRESSURE SENSOR / TRANSMITTERDSDIFFERENTIAL PRESSURE SWITCHFLSFLOAT SWITCHFEFLOW SENSOR / TRANSMITTER
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8 9 10	
SEQUENCE OF OPERATION (AHU-7)	
ANDLING UNIT CONTROL: (AHU-7) . <u>GENERAL</u>	
a. THE AIR HANDLING UNIT SHALL BE CONTROLLED BY A STAND-ALONE BUILDING OR ADVANCED APPLICATION CONTROLLER. SEQUENCE OF OPERATION SHALL NOT RE	
COMMUNICATION INTERFACE WITH A REMOTE PANEL; ALL CONTROL LOGIC SHALL RESIDE IN CONTROL PANEL SERVING EQUIPMENT.	
a. Occupied mode: enable the air handling unit based on a user definable occupied time schedule.	
b. <u>UNOCCUPIED MODE:</u>	ENGINEERING 114 EAST 5th AVENUE TALLAHASSEE, FL 32303 PHONE 850.224.7922
1) TEMPERATURE CONTROL: IF UNOCCUPIED MODE OF OPERATION IS INITIATED FROM ANY TERMINAL UNIT ASC; THEN ENABLE THE SUPPLY FAN AND TEMPERATURE CONTR OUTSIDE AIR DAMPER SHALL REMAIN CLOSED.	www.H2Engineering.com
2) HUMIDITY CONTROL: IF SPACE HUMIDITY RISES ABOVE SETPOINT DURING UNOCCUPIED HOURS; THEN INITIATE AN UNOCCUPIED MODE OF OPERATION UNTIL SPACE HU	THIS DOCUMENT IS THE PROPERTY OF HZEngineering AND
BELOW SETPOINT MINUS A DEADBAND.	AGREEMENT WITH H2Engineering, IS PROHIBITED. Florida Certificate of Authorization #2485
3) <u>TENANT OVERRIDE:</u> IF TENANT OVERRIDE IS INITIATED FROM ANY TERMINAL UNIT ASC; THEN PLACE THE AIR HANDLER INTO AN OCCUPIED MODE OF OPERATION.	Ryan L. Chewning, P.E. #63103
4) ASSOCIATED EQUIPMENT: IF SYSTEM IS INITIATED DURING UNOCCUPIED HOURS; THEN ALL OTHER EQUIPMENT (PUMPS, BOILERS, CHILLERS, ETC.) THAT IS REQUIRED FOR OPERATION SHALL BE PLACED INTO A MODE OF OCCUPIED OPERATION AS DEFINED IN THEIR RESPECTIVE SEQUENCES OF OPERATION.	G
c. <u>OPTIMAL START MODE:</u> CLOSE OUTSIDE AIR DAMPER DURING OCCUPIED MODE IF OPTIMAL START IS ENABLED.	
. <u>SUPPLY FAN</u>	
a. <u>Start/Stop:</u> Start/Stop of the supply fan shall be controlled through the H—O—A switch on the adjustable frequency drive (AFD). Enable the su based on an occupied time schedule, or unoccupied overrides.	PPLY FAN
b. <u>STATUS:</u> SUPPLY FAN OPERATION SHALL BE PROVED THROUGH A CURRENT SWITCH. UPON FAILURE, THE BAS SHALL ANNUNCIATE ONE OF THE FOLLOWING ALARMS (MANUAL	RESET):
1) <u>SUPPLY FAN FAILURE:</u> IF THE FAN IS COMMANDED ON, BUT THE STATUS IS OFF.	
2) SUPPLY FAN IN HAND MODE: IF THE FAN IS COMMANDED OFF, BUT THE STATUS IS ON.	
c. <u>SPEED:</u> ONCE ENABLED; THE AFD SHALL RAMP THE SUPPLY FAN SPEED TO OPERATING SETPOINT OVER A TIME DELAY (PROGRAM RAMP TIME IN AFD).	
1) <u>SUPPLY AIR STATIC PRESSURE CONTROL:</u> MODULATE SUPPLY FAN SPEED TO MAINTAIN A DUCT STATIC PRESSURE SETPOINT. STATIC PRESSURE SHALL BE MEASUF SENSOR LOCATED APPROXIMATELY 2/3 DOWN THE LONGEST DUCT RUN OR AS INDICATED ON THE DRAWINGS. WHERE MULTIPLE SENSORS ARE INDICATED, POLE ALL SENS CONTROL TO THE MINIMUM READING.	
a) <u>Static pressure reset</u> : continuously poll all of the variable volume terminals served by the air handling unit and calculate a sliding window of the maximum damper position. Reset the static pressure setpoint based on maximum damper position. If communication between the terminal u and the air handling unit cac is failed; then revert to a default value.	' AVERAGE JNIT ASCS
. <u>OUTSIDE AIR DAMPER</u>	
a. <u>Enable/Disable:</u> if the supply fan is enabled during occupied hours; then modulate the outside air damper to maintain an outside air flow setpoint. Supply fan is enabled during unoccupied hours or is shut down; then close the outside air damper.	. IF THE
1) <u>ALARMS:</u> THE BAS SHALL ANNUNCIATE THE FOLLOWING ALARMS (AUTO RESET):	
a) HIGH OUTSIDE AIR FLOW: IF THE OUTSIDE AIR FLOW IS 10% (ADJ.) GREATER THAN SETPOINT FOR A MINIMUM TIME DELAY.	
b) LOW OUTSIDE AIR FLOW: IF THE OUTSIDE AIR FLOW IS 10% (ADJ.) LESS THAN SETPOINT FOR A MINIMUM TIME DELAY.	
. Return air Damper: If the outside air damper position is greater than 95% open for a minimum time delay and if outside air flow is below setpoint; then i The return air damper to maintain the outside airflow setpoint. Provide a minimum damper position setpoint.	
	LEON COUNTY
a. <u>ENABLE/DISABLE:</u> IF THE SUPPLY FAN IS ON; THEN ENABLE THE COOLING VALVE. IF THE SUPPLY FAN IS OFF; THEN CLOSE THE COOLING VALVE.	
b. <u>SUPPLY TEMPERATURE CONTROL:</u> MODULATE THE COOLING VALVE TO MAINTAIN A SUPPLY AIR TEMPERATURE TARGET.	
1) <u>ALARMS:</u> THE BAS SHALL ANNUNCIATE THE FOLLOWING ALARMS (AUTO RESET):	I BANK OF

a) HIGH SUPPLY AIR TEMPERATURE: IF THE SUPPLY AIR TEMPERATURE IS 5 F (ADJ.) GREATER THAN SETPOINT FOR A MINIMUM TIME DELAY.

b) LOW SUPPLY AIR TEMPERATURE: IF THE SUPPLY AIR TEMPERATURE IS 5 F (ADJ.) LESS THAN SETPOINT FOR A MINIMUM TIME DELAY.

2) <u>SUPPLY TEMPERATURE TARGET RESET</u>: CONTINUOUSLY POLL EACH OF THE VARIABLE VOLUME TERMINALS AND CALCULATE THE DIFFERENTIAL BETWEEN SPACE TEMPERATURE AND CONTROL SETPOINT. CALCULATE A SLIDING WINDOW AVERAGE OF THE CALCULATED DIFFERENTIALS AND RESET THE SUPPLY AIR DISCHARGE SETPOINT TO MAINTAIN A ZERO AVERAGE. CONCURRENTLY RESET THE SUPPLY AIR SETPOINT TO MAINTAIN A RETURN AIR HUMIDITY SETPOINT. RESET THE SUPPLY AIR SETPOINT TO THE MINIMUM OUTPUT OF THE

a. <u>Smoke detector(s)</u>: Smoke detector(s) are provided by others but shall be wired to an auxiliary contact on the AFD to shut down the Air Handling Unit FAN(s) UPON detection of Smoke.

C. LOW TEMPERATURE LIMIT THERMOSTAT: IF THE CHILLED WATER COIL ENTERING AIR TEMPERATURE IS LESS THAN 32°F; THEN SHUT DOWN THE SUPPLY FAN. THE LOW LIMIT THERMOSTAT SHALL BE HARD WIRED TO AN AUXILIARY CONTACT ON THE AFD TO OVERRIDE ALL CONTROLS.

a. DIRTY FILTER: IF THE DIFFERENTIAL PRESSURE ACROSS THE FILTER IS GREATER THAN 1.2" W.G. (ADJ.) FOR A MINIMUM TIME DELAY.

b. LOW MIXED AIR TEMPERATURE: IF THE MIXED AIR TEMPERATURE IS LESS THAN 35 'F (ADJ.) FOR A MINIMUM TIME DELAY.

EVIATIONS

HEATING COIL HUMIDITY SENSOR / TRANSMITTER HEATING HOT WATER RETURN HEATING HOT WATER SUPPLY HEATING VALVE H/C HE HHWR HHWS HV LAN LOCAL AREA NETWORK LOW TEMPERATURE FREEZESTAT NORMALLY CLOSED N.C. NORMALLY OPEN N.O. OUTSIDE AIR 0A RELAY RETURN AIR RETURN AIR SUPPLY AIR SMOKE DETECTOR TEMPERATURE SENSOR / TRANSMITTER VARIABLE VOLUME TERMINAL UNIT VVT ----- 24V CONTROL WIRING

9

LEON COUNTY ANNEX BANK OF AMERICA 315 SOUTH CALHOUN STREET **TALLAHASSEE, FL**

AMERICA

7TH FLOOR

HVAC

RENOVATION

32301 PROJECT NUMBER

PHASE 100% CONSTRUCTION DOCUMENTS

DATE MARCH 15, 2012

CHECKED BY DRAWN BY DMH/REM DMH/RLC REV DATE DESCRIPTION

CONTROLS - HVAC

SHEET TITLE

SHEET NO.

M401

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BAS OBJECT	LR	51						113)																	
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VARIABLE VOLUME TERMINAL UNIT	BINARY	ANALOG	BINARY	ANALOG	INTEROPERABLE	CALCULATED	SETPOINT	USER ADJUSTABLE	INITIAL OR DEFAULT VALUE	BINARY ALARM	HIGH LEVEL ALARM	LOW LEVEL ALARM	HIGH LEVEL ALARM	LOW LEVEL ALARM	auto reset	MANUAL RESET	TREND (CHANGE OF VALUE)	trend (sample interval)	C.O.V. or SAMPLE INTERVAL	SCHEDULING	OPTIMAL START/STOP	SEQUENCING	LEAD/LAG ROTATION	auto fail to lag	SOFT START	DEMAND LIMITING	STAGGERED START	on/off with differential	RUNTIME TOTALIZATION START TOTALIZATION	ANTI-SHORT CYCLF
VVT- OCCUPIED / UNOCCUPIED MODE				4							<u> </u>				-	2			0						5			-		, 4
UNOCCUPIED TIME DELAY		$\left \right $					x x	x	2 HR								X			X	X			-						╈
HEATING / COOLING MODE						x											x													
PRIMARY AIR TEMPERATURE PRIMARY AIRFLOW (FE-1)	+											_						15M					-	-					_	-
MAXIMUM AIRFLOW SETPOINT		·					x	x	SCHED																					
MINIMUM AIRFLOW SETPOINT							Х	x	SCHED																					
HEATING AIRFLOW SETPOINT PRIMARY AIR VALVE POSITION (D-1)				1			Х	X	SCHED			_																		
SUPPLY TEMPERATURE (TE-2)		1																15M												
SPACE TEMPERATURE (TE-1)		1									х	x	+3 ° F	-3 ° F	x			15M												
SPACE TEMPERATURE SETPOINT HEATING DEADBAND	_						X X		76°F 6°F																					
UNOCCUPIED COOLING SETPOINT							x		85 ° F																					
UNOCCUPIED HEATING SETPOINT							х	x	68°F																					
HEATING VALVE (HV-1) UB-TOTAL	0	3	0	1																										
TAL W/ SPARE	0	-	0	2																										
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ANTI-SHORT CYCLE	CONDENSER PRES CONTROL	DIFF PRES CONTROL	OPERATOR OVERRIDE	SETPOINT RESET PROGRAM	DIRECT ACTING	REVERSE ACTING	FLOATING CONTROL	PROPORTIONAL CONTROL	INTEGRAL CONTROL	DERIVATIVE CONTROL	setpoint deviation (+/-)	ALARM LOG (REPORT DAILY)	REPORT (DAILY)	REPORT (WEEKLY)	REPORT (MONTHLY)	REPORT (ANNUAL)	ALARM INSTRUCTION	MAINTENANCE MESSAGE	FLOOR PLAN	AIR HANDLING UNIT	WT BOXES	DYNAMIC CHARTING	NOTES	
			x																х		х		INITIAL SCHED: M-F: START 7:00 / STOP 6:00. S-S: OFF	
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<u>GLE DUCT VARIABLE VOLUME TERMINAL WITH HEAT (VVT):</u>

- 1. <u>GENERAL:</u>

- 2. <u>SPACE TEMPERATURE CONTROL</u>

- e. HEATING MODE: MODULATE INLET DAMPER TO MAINTAIN HEATING AIRFLOW SETPOINT AND MODULATE THE HEATING VALVE TO MAINTAIN SPACE HEATING SETPOINT.
- f. UNOCCUPIED OPERATION:
- INITIATE UNOCCUPIED OPERATION.

Al TE-2 _ _ _ _ ____ SA SPACE

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CONTROL LOOP	REPORTS / MESSAGES	GRAPHIC SCREEN
ANTISHORT CYCLE CONDENSER PRES CONTROL DIFF PRES CONTROL OPERATOR OVERRIDE SETPOINT RESET PROGRAM DIRECT ACTING SETPOINT RESET PROGRAM DIRECT ACTING SETPOINT RESET PROGRAM DIRECT ACTING PROGRAM PROPORTIONAL CONTROL PROPORTIONAL CONTROL DERIVATIVE CONTROL DERIVATIVE CONTROL SETPOINT DEVIATION (+/-)	ALARM LOG (REPORT DAILY) REPORT (DAILY) REPORT (WEEKLY) REPORT (MONTHLY) REPORT (ANNUAL) ALARM INSTRUCTION MAINTENANCE MESSAGE	FLOOR PLAN AIR HANDLING UNIT WT BOXES DYNAMIC CHARTING SELON
		X
		XXX
		X SEVENTH FLOOR
5		6

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SEQUENCE OF OPERATION (VVT UNITS)

a. THE TERMINAL UNIT SHALL BE CONTROLLED BY A STANDALONE ASC. THE ASC SHALL MONITOR AND CONTROL THE UNIT IN A STAND-ALONE MODE OR AS DIRECTED BY THE BAS. b. THE ASC RESIDE ON A SUB-NETWORK AS DEFINED IN ARTICLE 2.2 "COMMUNICATIONS" OF SPECIFICATION 230900.

a. <u>Space setpoints</u>: provide a space temperature cooling setpoint. Heating setpoint shall be equal to the cooling setpoint minus a deadband. Provide unoccupied Heating and cooling setpoint.

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1) ALARMS: THE BAS SHALL ANNUNCIATE THE FOLLOWING ALARMS (AUTO RESET):

a) <u>HIGH SPACE TEMPERATURE:</u> IF THE SPACE TEMPERATURE IS 3 °F (ADJ.) GREATER THAN SETPOINT FOR A MINIMUM TIME DELAY.

b) LOW SPACE TEMPERATURE: IF THE SPACE TEMPERATURE IS 3 'F (ADJ.) LESS THAN SETPOINT FOR A MINIMUM TIME DELAY.

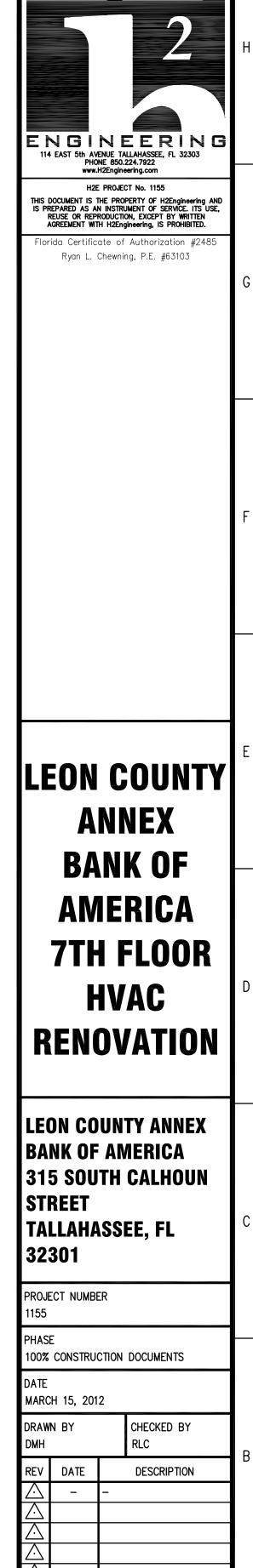
b. INLET DAMPER: PROVIDE MINIMUM AND MAXIMUM AIRFLOW SETPOINTS (INITIAL VALUE: SEE TERMINAL BOX SCHEDULE).

c. <u>Cooling / Heating Changeover</u>: IF primary Airflow is less than the minimum Airflow Setpoint plus a deadband and space temperature is below heating setpoint; Then change to heating mode. If space temperature is above cooling setpoint then change to cooling mode.

d. <u>COOLING MODE</u>: MODULATE INLET DAMPER BETWEEN MINIMUM AND MAXIMUM AIRFLOW SETPOINTS TO MAINTAIN SPACE COOLING SETPOINT.

1) <u>TEMPERATURE CONTROL</u>: DURING UNOCCUPIED HOURS RESET THE HEATING AND COOLING SETPOINTS EQUAL TO THE RESPECTIVE UNOCCUPIED SETPOINTS. ENABLE HEATING AND COOLING MODES OF OPERATION TO MAINTAIN THE UNOCCUPIED SETPOINTS. IF COOLING MODE IS ENABLED; THEN SEND SIGNAL TO RESPECTIVE AIR HANDLER CONTROLLER TO

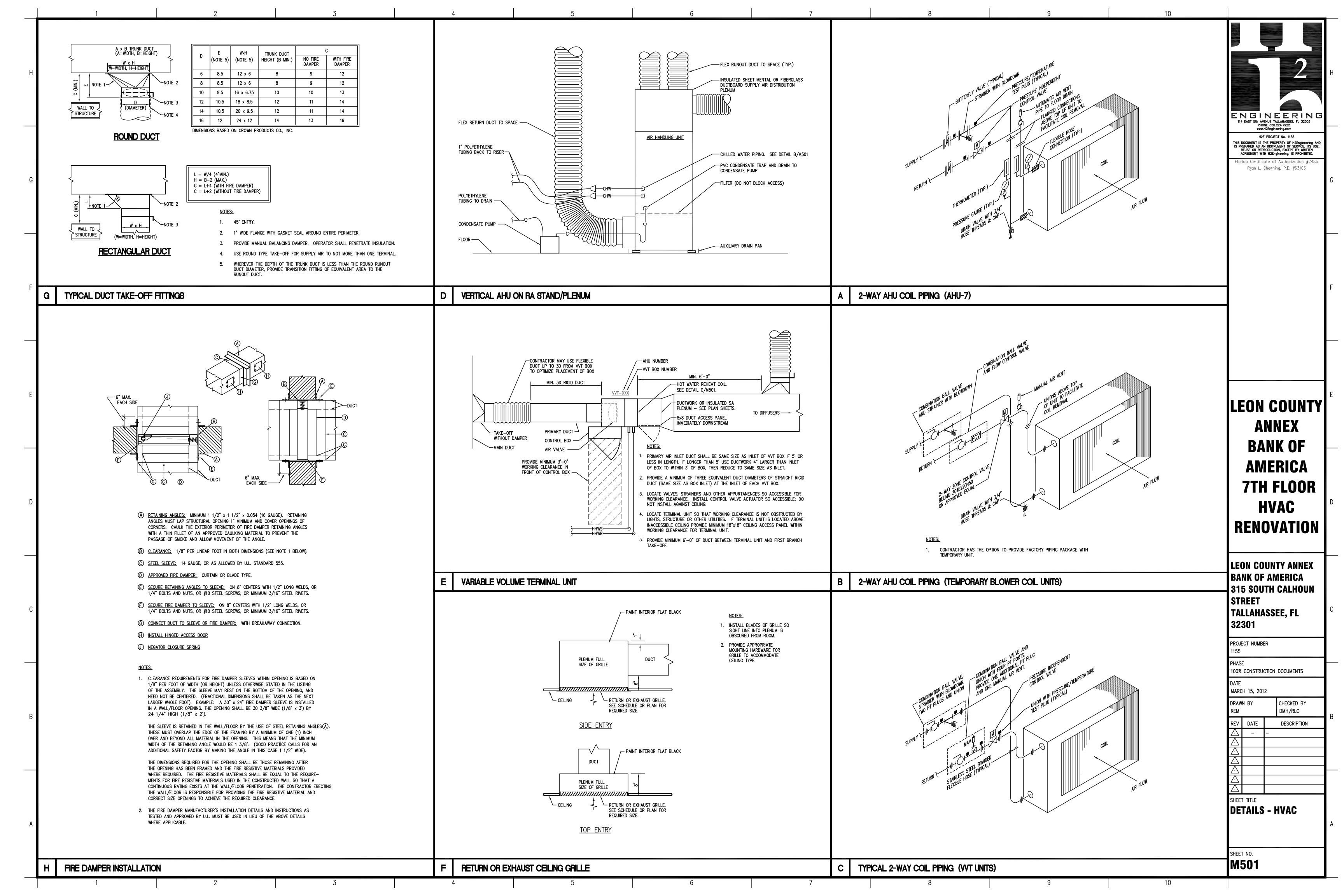
2) TENNANT OVERRIDE: IF THE OVERRIDE BUTTON IS ACTIVATED AT THE SPACE SENSOR; THEN INITIATE AN OCCUPIED MODE OF OPERATION FOR A MINIMUM TIME DELAY. IF TENANT OVERRIDE IS ENABLED; THEN SEND SIGNAL TO RESPECTIVE AIR HANDLER CAC TO INITIATE OCCUPIED OPERATION.

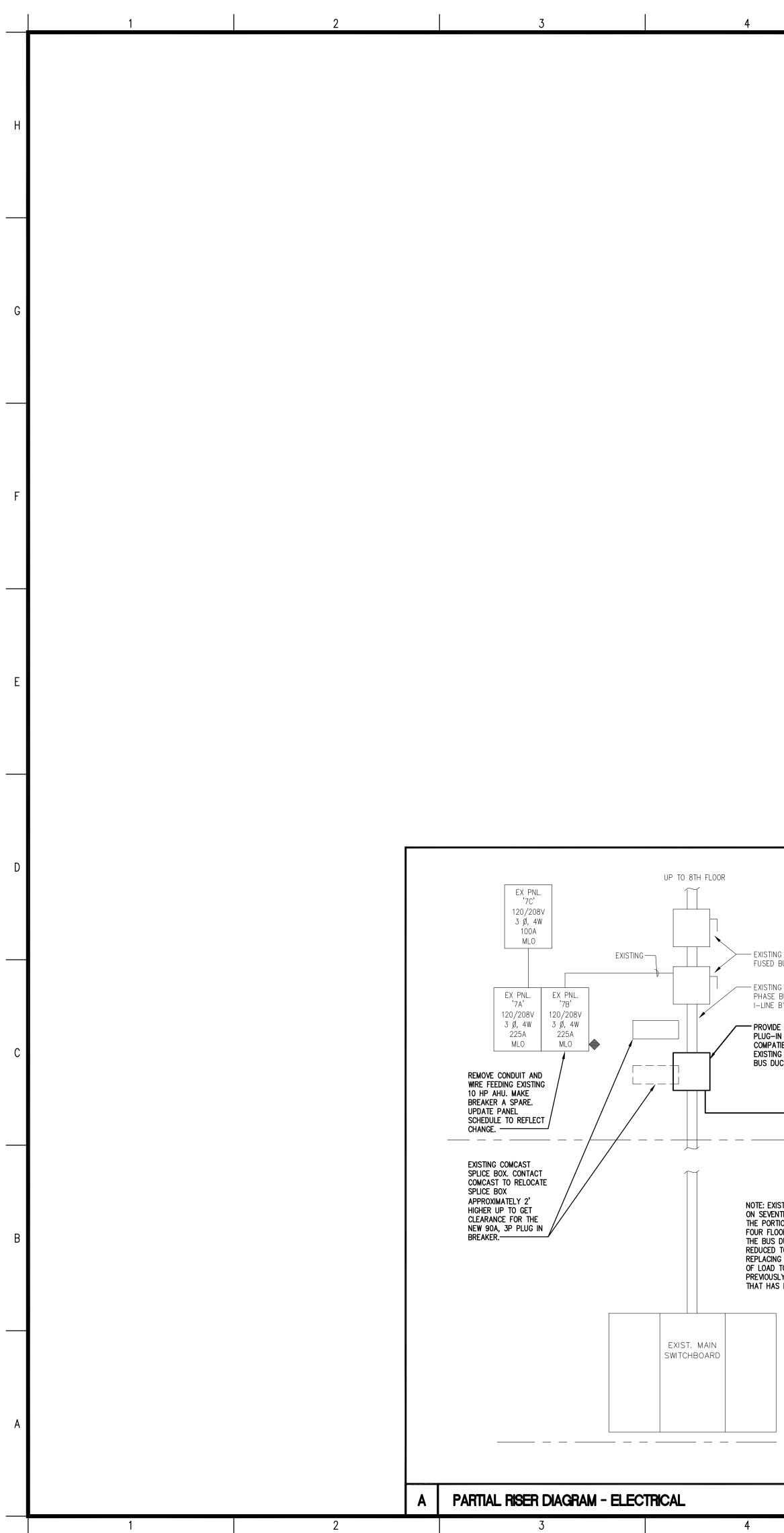


SHEET TITLE **CONTROLS - HVAC**

sheet no. **M402**

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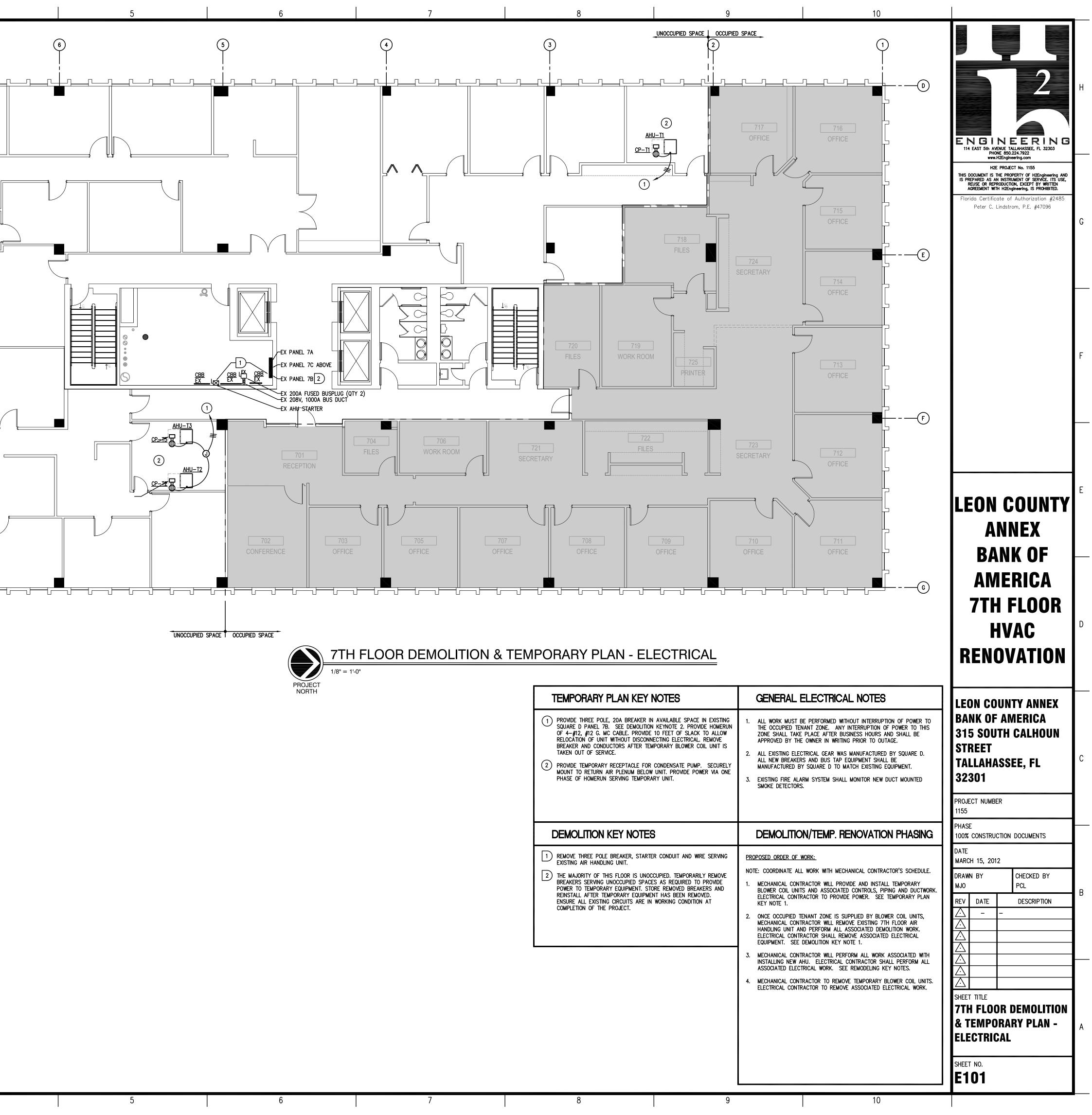


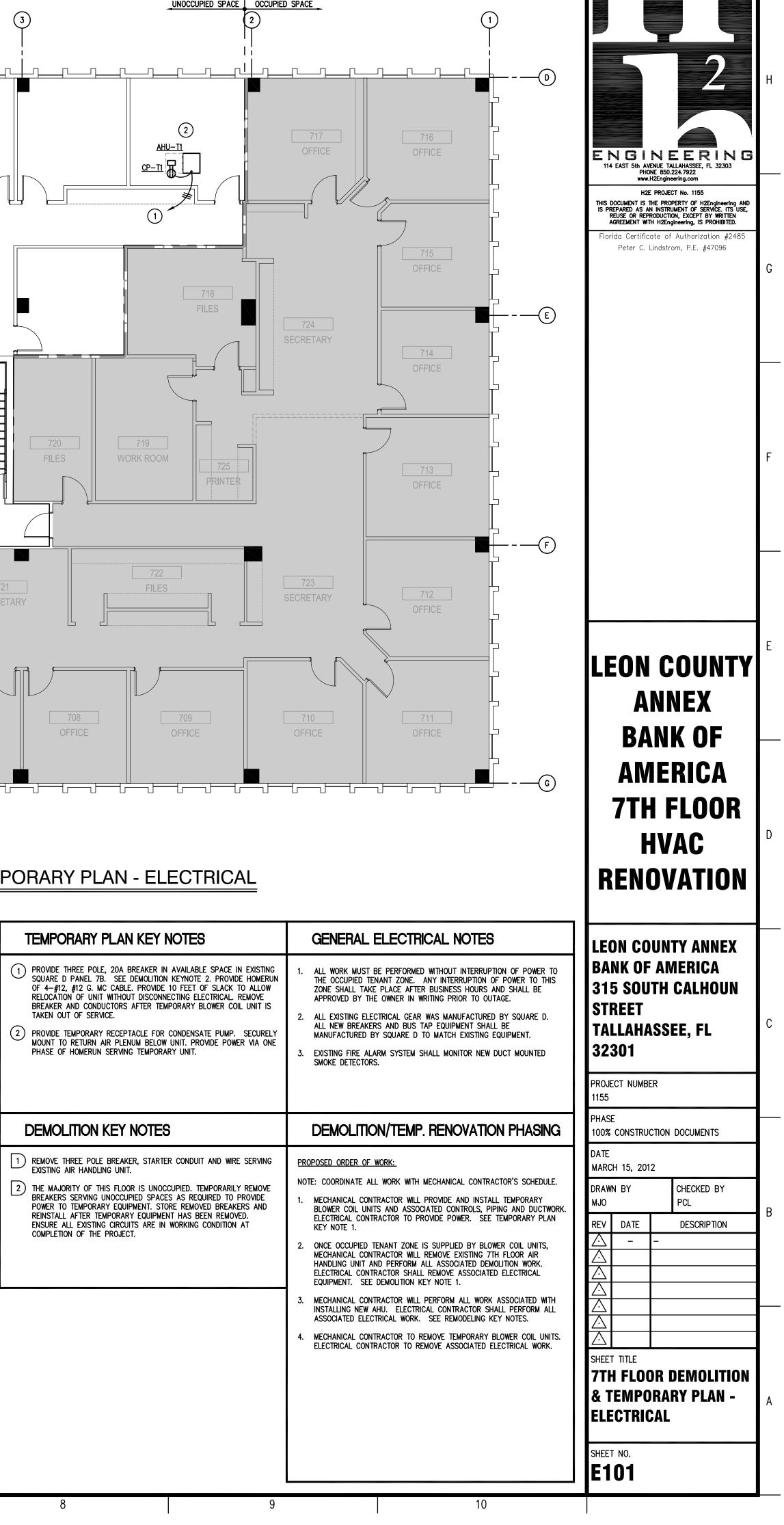


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	ELECTRICAL	GENERAL NOTES				
NSTALLED UNDER THIS CONTRACT.	PREVENTION CODE, TH	ACCORDANCE WITH THE FLORIDA BUILDING CODE 2010 EDITION, THE FLORIDA FIRE IE NATIONAL ELECTRICAL CODE 2008 EDITION, AND ALL CODES, ORDINANCES, RULES AND				
UNABLE TO INTERPRET THE RITING TO THE ENGINEER. IF HE HELD RESPONSIBLE FOR ALL	AND THE CONSTRUCT 2. CONTRACTOR SHALL	HORITIES HAVING JURISDICTION AT THIS SITE. WHERE CONFLICTS OCCUR BETWEEN CODES ON DOCUMENTS, THE MOST RESTRICTIVE REQUIREMENTS SHALL GOVERN. GUARANTEE THE WORK AND MATERIALS FOR A PERIOD OF ONE YEAR FROM DATE OF	2	Н		
EXAMINE THE PREMISES AND OBLIGED TO OPERATE AND ENTLY BE MADE IN THIS	SUPPLIERS AND MANU 3. ENTRY AND REMOVAL	OF EQUIPMENT FROM THE BUILDING SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.				
on his part. DNNECTION FEES, SYSTEM DEMAND	REPAIRED TO MATCH	REPAIR ANY DAMAGED MATERIALS TO THEIR ORIGINAL CONDITION. SURFACES SHALL BE THE EXISTING ADJACENT UNDAMAGED SURFACES. SHALL BE COPPER CONDUCTORS IN METALLIC CONDUIT, UNLESS NOTED OTHERWISE. WRE				
COORDINATING WORK OF ALL	AND CONDUIT SIZES S CONDUIT AND EMT CO CONDUIT SHALL BE S	SHOWN ARE BASED ON THHN COPPER, UNLESS NOTED OTHERWISE. INTERMEDIATE GRADE ONDUIT MAY BE USED WHERE APPROVED BY N.E.C. AND LOCAL CODES. FLEXIBLE METAL TEEL AND USED TO CONNECT EQUIPMENT WHERE INDICATED AND WHERE REQUIRED DUE	114 EAST 5th AVENUE TALLAHASSEE, FL 32303 PHONE 850.224.7922 www.H2Engineering.com	-		
and Guidelines. Th including posting danger		ONNECTION ACCESSIBILITY. BE STRAPPED IN ACCORDANCE WITH REQUIREMENTS OF N.E.C.	H2E PROJECT No. 1155 THIS DOCUMENT IS THE PROPERTY OF H2Engineering AND IS PREPARED AS AN INSTRUMENT OF SERVICE. ITS USE, REUSE OR REPRODUCTION, EXCEPT BY WRITTEN AGREEMENT WITH H2Engineering, IS PROHIBITED.			
FETY REGULATIONS. PROVIDE VEHICLE ACCESS AND EGRESS		BOND AND GROUND SYSTEMS AND EQUIPMENT PER ARTICLE 250 OF N.E.C. PROVIDE A OR SIZED IN ACCORDANCE WITH ARTICLE 250–122 N.E.C. ON ALL RECEPTACLES AND JITS.	Florida Certificate of Authorization #2485 Peter C. Lindstrom, P.E. #47096			
VORK. SUBMIT A COMPLETELY E.	EQUIPMENT FURNISHE	ALL COORDINATE THE CIRCUIT REQUIREMENTS WITH THE MANUFACTURER OF THE ACTUAL O UNDER OTHER DIVISIONS OF WORK. THE CIRCUIT BREAKER, WIRE AND CONDUIT SHALL IENDED BY THE EQUIPMENT MANUFACTURER.		G		
SHALL PROVIDE SUFFICIENT E THE WORK. FOR ON-SITE STORAGE OF	WITH DIVISION 23. IN	DRS SHALL BE FURNISHED AND WIRED UNDER DIVISION 26. COORDINATE INSTALLATION ISTALL DUCT SMOKE DETECTORS IN STRICT ACCORDANCE WITH THE MANUFACTURER'S HVAC DRAWINGS FOR LOCATIONS OR INSTALL WHERE DIRECTED BY THE ENGINEER. EXACT				
ECTION AND SECURITY OF ALL	9. THE CONTRACTOR SH	OR PLACEMENTS SHALL BE APPROVED BY THE FIRE ALARM SYSTEM SUPPLIER. ALL SUBMIT FOR APPROVAL TO ENGINEER PRODUCT DATA FOR ALL ITEMS TO BE ROJECT. ITEMS TO BE SUBMITTED FOR APPROVAL INCLUDE CIRCUIT BREAKERS, FIRE				
COMPLETION OF CONSTRUCTION.	ALARM DEVICES, STAI THE EXISTING BUS DU	RETERS, DISCONNECT SWITCHES AND ALL NEW EQUIPMENT REQUIRED TO PERFORM WORK ON ICT AS INDICATED ON THE DRAWINGS. THE CONTRACTOR SHALL OBTAIN APPROVAL OF SINEER PRIOR TO ORDERING ANY EQUIPMENT.				
SHOP DRAWINGS, PRODUCT DATA, MPLIED WITH THE CONTRACT O SAMPLES".	LETTERING SHALL BE) PLASTIC NAMEPLATE IDENTIFYING EACH NEW MOTOR STARTER AND DISCONNECT SWITCH. χ " MINIMUM AND SHALL IDENTIFY EQUIPMENT SERVED, FEEDER ORIGINATION AND CIRCUIT MEPLATE WITH SCREWS TO EQUIPMENT TO BE IDENTIFIED. PLASTIC TAPE IS NOT				
S FROM REQUIREMENTS OF THE RODUCT DATA, SAMPLES OR THE ENGINEER IN WRITING OF SUCH N APPROVAL TO THE SPECIFIC OR ERRORS OR OMISSIONS IN SHOP ER'S APPROVAL THEREOF.				F		
i The Building. Dismantling NTRY INTO THE BUILDING AND						
ASSEMBLIES AND ACOUSTICAL	ELECTRICAL	DEMOLITION NOTES		-		
Engineer. Beam sleeves and D and installed by this	VISIBLE ABOVE THE F INTERFERE WITH THE	DUIT TO THE EXTENT NECESSARY TO ACCOMMODATE NEW WORK AND WHERE CONDUIT IS LOOR LINE. EXISTING UNUSED CONDUIT WHICH IS CONCEALED, AND WHICH DOES NOT WORK, MAY REMAIN IN PLACE. SEAL ABANDONED LINES THAT REMAIN IN PLACE BEHIND				
IRE RATED ASSEMBLY SPLAYED ON THE JOB SITE AT	WALLS OR FLOOR SUI 2. WIRING AND CONDUIT	RFACES. REMOVE EXISTING UNUSED WIRES. TO ELECTRICAL DEVICES BEING REMOVED SHALL BE REMOVED BACK TO NEAREST DEVICES DOWNSTREAM FROM THESE POINTS SHALL REMAIN OPERABLE.				
LL MAKE ALL REASONABLE TE ALL WORK WITH THE OWNER'S		UPON COMPLETION OF WORK, ENSURE ALL EXISTING CIRCUITS ARE IN PROPER WORKING	LEON COUNTY	E		
ED, PROVIDE THE REQUIRED	4. CONTRACTOR SHALL I NEW WALLS AND CEIL	MAKE ALL NECESSARY ADJUSTMENTS TO ELECTRICAL DEVICES REQUIRED TO ACCOMMODATE INGS. BECAUSE OF THE NATURE OF THE JOB, UNFORESEEN INTERFERENCES MAY OCCUR.				
TILE DAMAGED OR SOILED	CLOSE COORDINATION ROUGH-IN.	BETWEEN TRADES IS REQUIRED. VERIFY ALL CONNECTION REQUIREMENTS BEFORE	BANK OF			
ARPET AND FINISHES DURING THE C. REPAIR TO MATCH EXISTING			AMERICA			
CENT SURFACES WHERE		SYMBOLS LEGEND	7TH FLOOR			
SPOSED OF AS DIRECTED BY THE D IN ACCORDANCE WITH LOCAL	POWER	12"x12"x4" DEEP PULL/JUNCTION BOX W/SCREW COVER (UNO)		D		
DURING CONSTRUCTION. N. CONTRACTOR SHALL BE	 	JUNCTION BOX - 4" SQUARE UNLESS NOTED OTHERWISE				
IDENTIFIED PRIOR TO DEMOLITION. 5 WITH INSTALLATION OF THE NEW		WIRE IN CONDUIT - CONCEALED IN WALL OR CEILING	RENOVATION			
SCONNECT SWITCHES, STARTERS,	~~~~~	FLEXIBLE STEEL CONDUIT	-			
Smitted to an approved Ng station as defined in NFPA	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~	CONDUIT - STUB OUT AND CAP HOMERUN TO PANEL - ARROWS INDICATE NUMBER OF CIRCUITS. SLASH	LEON COUNTY ANNEX			
LE SIGNAL AT A CONSTANTLY D.		MARKS INDICATE NUMBER OF PHASE CONDUCTORS, NO SLASH MARKS INDICATE 2 CURRENT CARRYING CONDUCTORS, LONG SLASH MARK(S) INDICATE NEUTRAL CONDUCTOR(S). (NOTE THAT THE GREEN GROUND WIRE	BANK OF AMERICA 315 South Calhoun			
	H	IS NOT SHOWN BUT IS REQUIRED IN EACH FEEDER, LIGHTING, RECEPTACLE, AND POWER BRANCH CIRCUIT. [PROVIDE A GREEN WITH YELLOW- STRIPE GROUNDING CONDUCTOR FOR EACH COMPUTER RECEPTACLE CIRCUIT. BOND	STREET			
		THIS COMPUTER GROUNDING CONDUCTOR TO THE ISOLATED GROUND BUS IN THE PANEL.] THERE SHALL BE NO SHARED NEUTRALS BETWEEN MULTIPLE CIRCUITS.	TALLAHASSEE, FL 32301	С		
			PROJECT NUMBER			
		ELECTRIC PANEL - 120/208 VOLT MOTOR - NUMBER INDICATES HORSEPOWER	1155			
	 ~	ADJUSTABLE FREQUENCY DRIVE (AFD)- FURNISHED BY DIV. 23 INSTALLED & WIRED BY DIV. 26	PHASE 100% CONSTRUCTION DOCUMENTS			
		RELOCATE EXISTING DEVICE TO POSITION SHOWN	– DATE MARCH 15, 2012			
	*	EQUIPMENT SIZES WILL BE INDICATED AS FOLLOWS:	DRAWN BY CHECKED BY MJO PCL			
		AMP RATING & POLE QTY.	REV DATE DESCRIPTION	В		
	STARTER N (NO # SHO'					
	DISC "SWITC		$\begin{array}{c c} \triangle \\ \hline \Delta \\ \hline \end{array}$			
		1				
	•	DUCT MOUNTED SMOKE DETECTOR - CONTRACTOR SHALL PROVIDE AND INSTALL ALL EQUIPMENT NECESSARY FOR EXISTING FIRE ALARM SYSTEM TO MONITOR DETECTOR.				
	DRAWING IND) EX	SHEET TITLE GENERAL NOTES LEGEND			
	E001 GENERAL	NOTES, LEGENDS AND RISER DIAGRAM — ELECTRICAL R DEMOLITION / TEMPORARY PLAN — ELECTRICAL				
		R REMODEL PLAN - ELECTRICAL R REMODEL PLAN - ELECTRICAL				
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