



DESIGN WEATHER PARAMETERS									
Design Parameters:									
City Name	Oklahoma City, AP								
Location	Oklahoma								
Latitude	35.4 Deg.								
Longitude	97.6 Deg.								
Elevation	1302.0 ft								
Summer Design Dry-Bulb	99.0 °F								
Summer Coincident Wet-Bulb	74.0 °F								
Summer Daily Range	21.0 °F								
Winter Design Dry-Bulb	9.0 °F								
Winter Design Wet-Bulb	6.7 °F								
Atmospheric Clearness Number	0.95								
Average Ground Reflectance	0.20								
Soil Conductivity	0.800 BTU/(hr-ft-F)								
Local Time Zone (GMT +/- N hours)	6.0 hours								
Consider Daylight Savings Time	No								
Simulation Weather Data	Cincinnati (TMY)								
Current Data is	User Modified								
Design Cooling Months	July to August								
HVAC LOAD CALCULATIONS									
Air System Information									
Air System Name	Total System	Number of zones			1				
Equipment Class	TERM	Floor Area			8900.0				
Air System Type	PKG-FC	Location			Oklahoma City, Oklahoma				
Sizing Calculation Information									
Zone and Space Sizing Method:									
Calculation Months	Jul to Aug			Zone CFM			Sum of space airflow rates		
Sizing Data	User - Modified			Space CFM			Individual peak space loads		
Air Sizing Data									
	Maximum Cooling Sensible (MBH)	DESIGN Air Flow (CFM)	Minimum Air Flow (CFM)	Time of Peak Load	Maximum Heating Load (MBH)	Zone Floor Area (FT)	Zone CFM/ft		
Zone 1	136.0	8900	8900	Jul 1200	0	8900.0	1.00		
Terminal Unit Sizing Data - Cooling									
	Total Coil Load (MBH)	Sens Coil Load (MBH)	Coil Entering DB/WB (°F)	Coil Leaving DB/WB (°F)	Water Flow @10.0°F (GPM)	Time of Peak Load			
Zone 1	284.7	209.9	82.6/67.9	59.7/56.3	-	Jul 1500			
Terminal Unit Sizing Data - Heating, Fan, Ventilation									
	Heating Coil Load (MBH)	Heating Coil Est/Avg DB (°F)	Heating Water Flow @20.0°F (GPM)	Fan Design Airflow (CFM)	Fan Motor (BHP)	Fan Motor (KW)	OA Vent Design Airflow (CFM)		
Zone 1	157.7	52.8/70.0	-	8900	0.000	0.000	2509		
DESIGN COOLING									
COOLING DATA AT Jul 1500									
DESIGN HEATING									
HEATING DATA AT DES HTG									
COOLING OA DB / WB 100.0 °F / 76.0 °F									
HEATING OA DB / WB 9.0 °F / 6.7 °F									
ZONE LOADS	Details	Sensible (BTU/hr)	Latent (BTU/hr)	Details	Sensible (BTU/hr)	Latent (BTU/hr)			
Window & Skylight Solar Loads	0 SF	0	-	0 SF	-	-			
Wall Transmission	0 SF	0	-	0 SF	0	-			
Roof Transmission	0 SF	0	-	0 SF	0	-			
Window Transmission	0 SF	0	-	0 SF	0	-			
Skylight Transmission	0 SF	0	-	0 SF	0	-			
Door Loads	0 SF	0	-	0 SF	0	-			
Floor Transmission	8900 SF	0	-	8900 SF	0	-			
Partitions	0 SF	0	-	0 SF	0	-			
Ceiling	0 SF	0	-	0 SF	0	-			
Overhead Lighting	1600 W	4815	-	0	0	-			
Task Lighting	23750 W	71745	-	0	0	-			
Electric Equipment	8675 W	27370	-	0	0	-			
People	129	26627	34946	0	0	0			
Infiltration	-	0	0	-	0	0			
Miscellaneous	-	0	0	-	0	0			
Safety Factor	0% / 0%	0	0	0%	0	0			
>> Total Zone Loads	-	130287	34946	-	0	0			
Zone Conditioning	-	150726	34946	-	0	0			
Plenum Wall Load	0%	0	-	0	0	-			
Plenum Roof Load	0%	0	-	0	0	-			
Plenum Lighting Load	0%	0	-	0	0	-			
Return Fan Load	0 CFM	0	-	0 CFM	0	-			
Ventilation Load	2509 CFM	59161	19531	2509 CFM	157656	0			
Space Fan Coil Fans	-	0	-	-	0	-			
Duct Heat Gain / Loss	0%	0	-	0%	0	-			
>> Total System Loads	-	209867	54477	-	157656	0			
Central Cooling Coil	-	209867	54504	-	0	0			
Central Heating Coil	-	0	-	-	157656	0			
>> Total Conditioning	-	209867	54504	-	157656	0			
Key:	Positive values are ckg loads Negative values are hkg loads								

HVAC LOAD CALCULATIONS

NTS

OOD-M0401-J00-LOAD

08/18/2025

EXISTING VARIABLE AIR VOLUME TERMINAL UNITS NETWORK WIRING AND SEQUENCE									
NOTES:									
(1) ALL WIRE SHALL BE 18/3 UNLESS OTHERWISE INDICATED.									
(2) NUMBER OF CABLES FURNISHED BY HVAC MANUFACTURER IS INDICATED BY NUMBER OF TICK MARKS ACROSS THE LINE.									
(3) PURPLE 22/2 WIRE IS PROVIDED BY HVAC SUPPLIER AND IS PLENUM RATED.									
(4) SCHEMATIC IS FOR REFERENCE ONLY. AT TIME OF CONSTRUCTION, THE HVAC SUPPLIER WILL PROVIDE A COMPLETE DIAGRAM FOR INSTALLATION. SEE RESPONSIBILITY SCHEDULES, THIS SHEET, FOR A LIST OF ALL COMPONENTS AND SENSORS REQUIRING FIELD INSTALLATION.									
EXISTING VAV SEQUENCE OF OPERATIONS									
MANUFACTURER SHALL FURNISH AND/OR INSTALL ALL NECESSARY CONTROL DEVICES TO ACCOMPLISH THE FOLLOWING SEQUENCE OF OPERATION (REFER TO RESPONSIBILITY SCHEDULE FOR FIELD INSTALLATION REQUIREMENTS):									
DURING OCCUPIED HOURS THE VARIABLE AIR VOLUME TERMINAL UNIT FAN SHALL BE ENERGIZED AND DAMPER SHALL MODULATE TO MAINTAIN THE SPACE TEMPERATURE.									
IF THE SPACE TEMPERATURE DROPS ONE DEGREE BELOW SETPOINT AND THE DAMPER IS AT MINIMUM POSITION, THE UNIT'S ELECTRIC HEAT SHALL ENERGIZE. THE HEAT WILL REMAIN ON UNTIL THE SPACE TEMPERATURE IS SATISFIED.									
THE TERMINAL UNIT DAMPER SHALL FULLY (CLOSE/OPEN) AND THE FAN SHALL (ENERGIZE/DEENERGIZE) UPON A SIGNAL FROM THE FIRE ALARM SYSTEM.									
DURING THE UNOCCUPIED SCHEDULE, THE DAMPER SHALL CLOSE AND FAN/HEATER WILL DEENERGIZE. THE DAMPER SHALL OPEN AND THE FAN SHALL ENERGIZE IF UNOCCUPIED COOLING SETPOINT IS REACHED. THE FAN AND HEATER SHALL ENABLE IF UNOCCUPIED TEMPERATURE IS 2°F BELOW UNOCCUPIED SETPOINT. FAN AND HEATER SHALL STOP WHEN SETPOINT IS REACHED.									
SETPOINTS:									
OCCUPIED HEATING: 70°F COOLING: 74°F									
UNOCCUPIED HEATING: 60°F COOLING: 85°F									
NETWORK WIRING AND SEQUENCE									
NTS									
00D-M0401-E03-SCHD									
02/18/14									

NOTE TO CONTRACTOR									
ITEM(S) NOT SHOWN ON ANY OF THE RESPONSIBILITY SCHEDULES ARE THE RESPONSIBILITY OF THE CONTRACTOR.									
LOCAL AREA REQUIREMENTS									
YES	NO					YES	NO		
<input type="checkbox"/>	<input checked="" type="checkbox"/>	1.	SMOKE EVACUATION		<input type="checkbox"/>	<input checked="" type="checkbox"/>	5.	SPECIAL CURB HEIGHT REQUIREMENTS	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	2.	CARBON DIOXIDE MONITORING		<input type="checkbox"/>	<input checked="" type="checkbox"/>	6.	FIVE MILE COASTAL PROXIMITY	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	3.	HURRICANE ZONE		<input type="checkbox"/>	<input checked="" type="checkbox"/>	7.	OTHERS, I.E. METHANE, CARBON MONOXIDE, SOUND SENSITIVE, ETC. DESCRIPTION. . .	
<input type="checkbox"/>	<input checked="" type="checkbox"/>	4.	SEISMIC ZONE						
ABBREVIATIONS, RESPONSIBILITY SCHEDULES									
AC	HVAC EQUIPMENT SUPPLIER				GC	GENERAL CONTRACTOR			
AHJ	AUTHORITY HAVING JURISDICTION				LC	LANDLORD CONTRACTOR			
BAS	BUILDING AUTOMATION SYSTEM				LD	LIGHTING PACKAGE DISTRIBUTOR			
EC	ELECTRICAL CONTRACTOR				LL	LANDLORD			
FAC	FIRE ALARM CONTRACTOR				LSO&C	LIMITED STORE DESIGN & CONSTRUCTION			
					MC	MECHANICAL CONTRACTOR			
HVAC RESPONSIBILITY SCHEDULE									
ITEM	FURNISHED BY			INSTALLED OR PERFORMED BY		RE-USE EXISTING	N/A	REMARKS	
	LSO&C	LANDLORD	CONTR.	LANDLORD	CONTR.				
ROOFING CUT & PATCH, INSULATED TOE KICK & CURB LEVELING.			MC	MC			●	HIRE LANDLORD APPROVED ROOFING CONTRACTOR	
DUCT SMOKE DETECTOR			FAC	MC				IF NO FIRE ALARM, FURNISHED & INSTALLED BY AC	
SMOKE SYSTEM ACCESSORIES, ETC.			MC	MC			●	UNLESS FACTORY INSTALLED	
DIFFUSERS AND GRILLES		LD		MC					
DIFFUSERS/GRILLES FIRE DAMPERS			MC	MC					
WALL FIRE DAMPERS			MC	MC			●		
COMBINATION FIRE/SMOKE DAMPERS			MC	MC			●		
LOW PRESSURE DUCTWORK			MC	MC					
RECTANGULAR TO ROUND DUCT ADAPTER			MC	MC					
HIGH/MEDIUM PRESSURE DUCTWORK			MC	MC			●		
DUCT SUPPORTS			MC	MC					
SEISMIC BRACING			MC	MC			●		
DUCT HEATER(S)			MC	MC			●		
UNIT HEATER(S)			MC	MC			●		
TOILET EXHAUST FAN(S) WITH TOGGLE DISCONNECT SWITCH	LD			MC			●		
TOILET EXHAUST DUCTWORK WALL OR ROOF CAP			MC	MC			●		
PIPING AND PIPING APPURTENANCES (CIRCUIT SETTERS, ETC.)			MC	MC					
BALANCE CONTRACTOR REPORT			GC					AABC OR NEBB CERTIFIED	
AS-BUILT DRAWINGS			MC						
TEMPERATURE CONTROL SYSTEM COMPONENTS	AC			MC					
TEMPERATURE CONTROL SYSTEM WIRE	AC			MC				FINAL CONN. BY MC	
YOUNG REGULATOR W// BOWDEN CABLE			MC	MC					
LOCKING QUADRANT VOLUME DAMPER			MC	MC				ROUND DAMPERS PROVIDED THROUGH GRAINGER NATIONAL ACCOUNT.	
PNEUMATIC TUBING			MC	MC					
FIRE ALARM SHUTDOWN RELAY			FAC	FAC				WHERE APPLICABLE FOR FIRE ALARM SYSTEMS	
RELIEF AIR DAMPER AND ACTUATOR			MC						
RELIEF AIR FAN OR RETURN AIR FAN			MC	MC					
SMOKE EVACUATION			MC	MC			●		
OUTSIDE AIR INTAKE HOOD/LOUVER WITH DAMPER			MC	MC			●		
OUTSIDE AIR INTAKE DAMPER ACTUATOR			MC	MC			●		
RELIEF AIR HOOD OR LOUVER WITH COUNTER-BALANCED BACKDRAFT DAMPER			MC	MC			●		
ECONOMIZER DAMPER			MC	MC			●		
ECONOMIZER DAMPER ACTUATOR	AC			MC			●		
OUTSIDE AIR DAMPER			MC	MC			●		
OUTSIDE AIR DAMPER ACTUATOR			MC	MC			●		

HVAC RESPONSIBILITY SCHEDULES	NTS		A 03/13/2010
	00D-M0401-A00-SCHD		