

LEGEND/SYMBOLS

- AIR CONDITIONING UNIT
- EXHAUST FAN
- GRAVITY VENTILATOR
- SMOKE DETECTOR IN SUPPLY AND RETURN DUCTS (TYP. ALL UNITS)
- CEILING SUPPLY AIR DIFFUSER
- CEILING RETURN AIR GRILLE
- CEILING EXHAUST AIR GRILLE
- MIDWALL SUPPLY RETURN/EXHAUST GRILLE
- SUPPLY AIR DUCT RISER (LINED)
- RETURN AIR DUCT RISER (LINED)
- EXHAUST AIR DUCT RISER (LINED)
- RIGID ROUND OR RECTANGULAR DUCT
- FIBERGLASS FLEXIBLE DUCT
- ZONE SEPARATION LINE (EQUIDISTANT BETWEEN SUPPLY REGISTERS OF ADJACENT UNITS TO CALCULATE AREA OF ZONE)
- BALANCE DAMPER
- 24-HR LINE VOLTAGE THERMOSTAT (BY MECHANICAL WIRE BY ELEC.)
- TEMPERATURE SENSOR (FIELD LOCATE PER ETS PLAN)
- EXHAUST FAN OR SUPPLY AIR RISER
- TINS THERMA-MOUNTED 3' BELOW LIGHTS
- ACCOMMODATE THERMA-RISER TYPE I-H-C VARIABLE DIFFUSER (CASH OFFICE LOCKER ROOM, MEN'S FITTING, AND FITTING POTTER ONLY)
- DOOR LOUVER SEE DOOR SCHEDULE FOR MORE INFORMATION
- THREE-WAY SUPPLY AIR THROW PATTERN FOR RTU-2 & RTU-4

1. THIS PLAN IS PRESENTED AS A CONCEPTUAL ILLUSTRATION OF THE DESIGN REQUIREMENTS. ACTUAL DESIGN MUST USE DD'S SITE SPECIFIC PLAN.
2. STRICT ADHERENCE TO THE DESIGN CONCEPT AND INCORPORATION OF ALL DD'S CRITERIA AND SPECIFICATIONS IS MANDATORY.
3. ZONING, UNIT NUMBERING, DISTRIBUTION LAYOUT RELATIVE TO AREA SERVED, UNIT TYPE, UNIT SIZING AND SPECIFICATION OF OPTIONS, MUST MATCH THE INTENT OF THIS PROTOTYPE. IN THE EVENT THAT THE SITE SPECIFIC PLAN DIFFERS FROM THIS EXAMPLE, FOLLOW THE RELATIVE ZONING AS INDICATED. AC-1 STOCKROOM, AC-2 NOT USED, AC-3 LEFT SALES AREA (IN REFERENCE TO THE STOREFRONT SALES ENTRY), AC-4 FITTING ROOMS, FOYER, REAR SALES, RESTROOMS, AND OFFICES, AC-5 INTERIOR SALES, AC-6 RIGHT SALES AREA (IN REFERENCE TO THE STOREFRONT SALES ENTRY), AND AC-7 SALES ENTRY AREA. IF FURTHER CLARIFICATION IS REQUIRED, PLEASE EMAIL A PREZONED HVAC LAYOUT (IN AUTOCAD FORMAT) FOR REVIEW TO: ENG@CCB.COM
4. NO EXCEPTIONS TO THE DD'S CRITERIA, INCLUDING AMENDMENTS ISSUED BY DD'S, SHALL BE CONSIDERED UNLESS ACCEPTED IN ADVANCE IN WRITING BY THE DD'S CONSTRUCTION REPRESENTATIVE.
5. SHEET M2.0 IS AN ESSENTIAL COMPANION TO THIS DRAWING.
6. FINAL LOCATION OF TEMPERATURE SENSORS SHALL BE DICTATED BY THE EMS PLANS.

INSTRUCTIONS FOR MECHANICAL ENGINEER

1. LACK OF CORRECT PROTOTYPE MATERIALS AT DESIGN TIME IS UNACCEPTABLE. DESIGNERS MUST VERIFY CORRECT AND CURRENT PROTOTYPE MATERIALS ARE IN USE FOR EVERY PROJECT.
2. MECHANICAL ZONING IS CRITICAL TO THE DESIGN. ALL STORES MUST BE SIMILARLY ZONED. WHEN THE FLOORPLAN DOES NOT MATCH THE EXAMPLE USED HERE, FOLLOW THE SAME RELATIVE ZONING, I.E. AC1 STOCKROOM, AC7 SALES ENTRY.
3. ANY DEVIATION FROM THE PROTOTYPICAL ZONING MUST BE SEPARATELY ACCEPTED BY THE DD'S CONSTRUCTION REPRESENTATIVE, INCURRING EXTRA REVIEW TIME.
4. REFER TO PROTOTYPE SHEET M2.0 FOR FURTHER CRITERIA AND SPECIFICATIONS THAT MUST BE FOLLOWED AND INCORPORATED INTO THE PLANS.
5. PLOT OUTSIDE AIR CONDITIONS FOR SITE FROM ASHRAE 1% TABLE. READ OFF CORRESPONDING CHART LETTERS AND INTERPOLATE BETWEEN LINES.
6. LOCATE ZONE IN TABLE 1 AND OBTAIN SOFT/TON FIGURES FROM CORRESPONDING LINE/COLUMN.
7. USE TABLE 2 TO VERIFY MECHANICAL SELECTION AGAINST PROTOTYPE GUIDELINES (SEE EXAMPLE 1 USED).
8. ANY AND ALL ASSUMPTIONS OR CORRECTIONS FOR LOCAL CONDITIONS (I.E. EXTREME AMBIENT CONDITIONS, ALTITUDE, 0.3 CFM/SQ.FT. VENTILATION, SENSIBLE LOAD SIZING OR OTHER FACTORS) MUST BE EXPRESSLY BROUGHT TO THE REVIEWER'S ATTENTION PRIOR TO THE DESIGN REVIEW.
9. LOAD CALCULATIONS (USING TRACE, CHWAC, ELITE, ETC.) FOR EACH ZONE MUST BE SUBMITTED FOR REVIEW WITH THE MECHANICAL PLANS. DATA INPUT MUST MATCH.
10. ANY DISCREPANCY BETWEEN UNIT SELECTION OR MECHANICAL PLANS AGAINST PROTOTYPE MUST BE FULLY EXPLAINED. ALL ISSUES MUST BE RESOLVED TO THE SATISFACTION OF THE DD'S CONSTRUCTION REPRESENTATIVE PRIOR TO UNITS BEING ORDERED. DESIGN TEAM IS RESPONSIBLE TO COMPLETE THIS PROCESS WITH SUFFICIENT REVIEW TIME TO MEET THE CONSTRUCTION SCHEDULE.
11. UNTIL UNIT SIZES HAVE BEEN REVIEWED AND DEEMED TO MEET THE DD'S REQUIREMENTS, THE MANUFACTURER SHALL NOT RELEASE ANY ORDERS PLACED, ANY AND ALL DELAYS RESULTING ARE THE DESIGN TEAM'S RESPONSIBILITY.

PROTOTYPICAL HVAC DESIGN LAYOUT PLAN

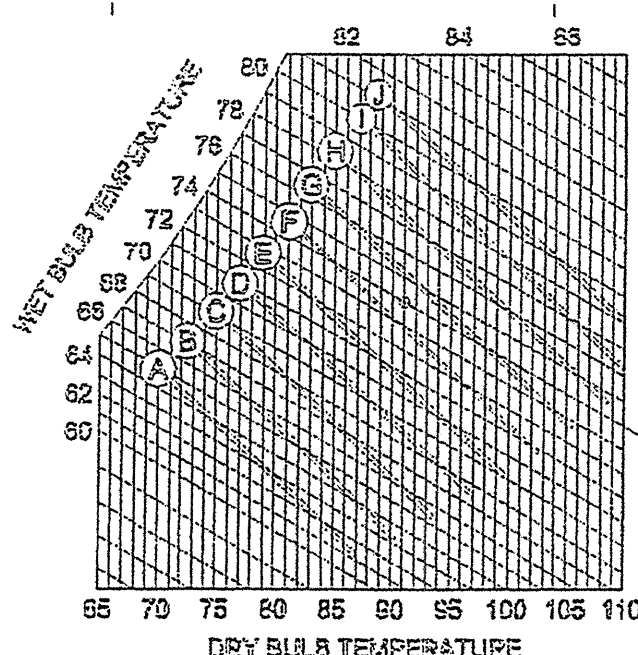


CHART 1

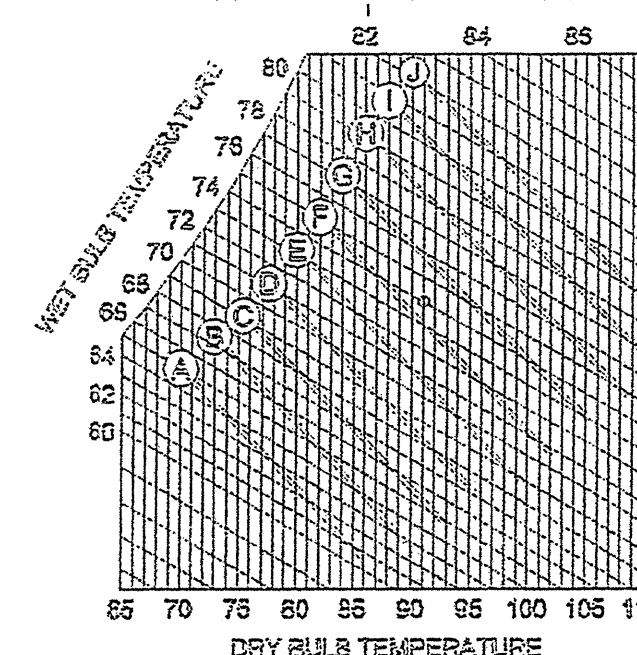


CHART 2

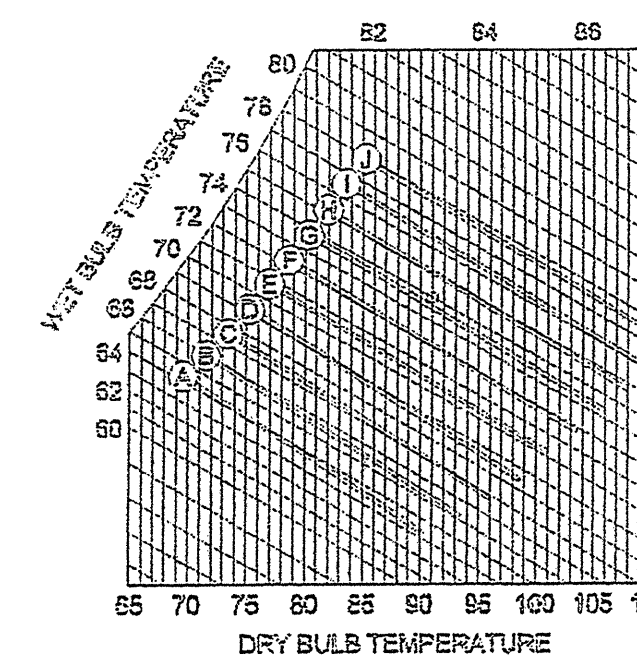


CHART 3

EXAMPLE ASHRAE DATA SHOWN FOR COOLING 1% DBWB OF 81/74. ENTER SITE SPECIFIC ASHRAE DATA FOR GIVEN PROJECT.

EXAMPLE 1 DATA IS SHOWN BY NODE ON CHARTS

AC	AREA SERVED	CHART	A	20%	40%	60%	80%	B	20%	40%	60%	80%	C	20%	40%	60%	80%	D	20%	40%	60%	80%	E	20%	40%	60%	80%	F	20%	40%	60%	80%	G	20%	40%	60%	80%	H	20%	40%	60%	80%	I	20%	40%	60%	80%	J			
1	STOCK ROOM	1	874	924	874	824	774	724	684	665	635	606	576	557	537	516	498	479	465	451	436	422	408	398	388	377	367	357	349	341	333	325	317	311	304	298	291	285	280	275	269	264	259	255	250	246	241	237			
2(A)	OFFICES/RR/REAR SLS	2	869	855	840	826	811	797	785	774	762	751	739	730	720	711	701	692	684	676	667	659	651	643	635	627	620	613	606	599	592	585	578	571	564	557	550	543	536	529	522	515	508	501	494	487	480	473	466	459	
2(B)	REAR SALES	2	877	853	829	806	782	758	740	722	703	685	667	653	639	624	610	596	584	573	561	550	538	529	519	510	500	491	483	475	467	459	451	444	438	431	425	418	412	406	401	395	389	384	379	373	368	363			
2(C)	SALES EXTERIOR AREA	2	877	853	829	806	782	758	740	722	703	685	667	653	639	624	610	596	584	573	561	550	538	529	519	510	500	491	483	475	467	459	451	444	438	431	425	418	412	406	401	395	389	384	379	373	368	363			
2(D)	FITTING ROOMS AND FOYER	2	869	855	840	826	811	797	785	774	762	751	739	730	720	711	701	692	684	676	667	659	651	643	635	627	620	613	606	599	592	585	578	571	564	557	550	543	536	529	522	515	508	501	494	487	480	473	466	459	
2(E)	REAR SALES / FOYER ENTRY	2	877	853	829	806	782	758	740	722	703	685	667	653	639	624	610	596	584	573	561	550	538	529	519	510	500	491	483	475	467	459	451	444	438	431	425	418	412	406	401	395	389	384	379	373	368	363			
2(F)	SALES INTERIOR AREA	2	1023	996	968	941	913	886	865	844	824	803	782	766	749	733	718	700	687	674	660	647	634	623	612	601	590	579	570	561	551	542	533	525	517	509	501	493	489	485	481	477	473	469	465	461	457	454	450	446	442
2(G)	SALES ENTRY AREA (NORTH)	2	603	577	551	526	500	474	457	441	424	408	391	379	368	356	345	333	324	316	307	299	290	283	276	270	263	256	251	246	240	235	230	226	221	217	212	208	205	201	198	194	191	188	185	182	179	176			
2(H)	SALES ENTRY AREA	2	371	360	350	339	329	318	310	302	294	286	278	272	266	260	254	248	243	238	233	228	223	219	215	211	207	203	200	196	193	189	186	183	180	178	175	172	169	167	164	162	159	157	155	153	151	149			

** AC-7 NORTH EXPOSURE
** AC-7 NORTHEAST, SOUTH, WEST EXPOSURE AND A GLASS SHADING OF 50%.

TABLE 1: AC UNIT SQ. FT./TON

SECH	PROTO	Zone	Zone	Unit	Block	Chart	Column	Prototype	Difference	Summary		
AC UNIT	AC UNIT	Description	Total Area	ASH	Tons			SQ. FT./Ton	SQ. FT./Ton		Tons	
1	1	Stockroom	1272	60	5.0	254	1	F + 40%	341	3.7	1.2 HIGH	OK - LG4060H
2	2	Offices/RR/Rear Sls	1910	60	5.0	382	2	F + 30%	408	4.3	0	OK - LG4060H
3	3	Sales Ext. Wall LHS	4510	120	10.0	451	2	F + 30%	479	9.4	0.5	OK - LG4120H
4	4	Fitting Rms/Ftr/Rear Sls	2007	60	5.0	401	2	F + 30%	408	4.4	0.6 HIGH	OK - LG4060H
5	5	Interior Sales	2472	72	6.0	579	2	F + 30%	565	6.1	0.1	OK - LG4072H
6	6	Sales Ext. Wall RHS	4500	120	10.0	450	2	F + 30%	479	9.4	0.6	OK - LG4120H
7	7	Sales Entry	4118	248	20.7	199	3	G + 30%	182	22.6	1.9	OK - LG4248H

TABLE 2: COMPARISON TABLE DESIGN VS. PROTOTYPE

NOTES

1. THIS TABLE IS A WORKED EXAMPLE AND MAY BE USED FOR REFERENCE ONLY. SITE SPECIFIC DATA MAY DIFFER FROM THIS EXAMPLE.
2. USE OF THE INFORMATION CONTAINED IN THIS SHEET DOES NOT RELIEVE THE ENGINEER OF RECORD FROM ANY RESPONSIBILITY IN MEETING THE DESIGN REQUIREMENTS BY LOCAL CODES, CONDITIONS, AND BEST ENGINEERING PRACTICES.
3. ROOFTOP UNIT MODELS REFLECT EXAMPLE FLOOR PLAN ZONING AND EXAMPLE TONNAGE ONLY.
4. ENGINEER MUST SELECT APPLICABLE SITE SPECIFIC UNITS.
5. THE MINIMUM AC UNIT SIZE WHICH MAY BE SELECTED FOR THE STOCKROOM IS A HIGH EFFICIENCY 5 TON MODEL. THIS APPLIES TO ALL PROJECTS.