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AIR HANDLING UNIT W/DESICCANT WHEEL SCHEDULE

EQUIPMENT TAG	SERVICE	ESP SUPPLY FAN (IN WG)	ESP REACTIVATION FAN (IN WG)	SUMMER CONDITIONS																		WINTER CONDITIONS														
				OUTSIDE AIR			DX COOLING COIL						DESICCANT WHEEL			CHILLED WATER COIL						OUTSIDE AIR			SUPPLY AIR											
				AIRFLOW (CFM)	DB (°F)	WB (°F)	AIRFLOW (CFM)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	AIRFLOW (CFM)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	AIRFLOW (CFM)	EAT DB (°F)	EAT WB (°F)	LAT DB (°F)	LAT WB (°F)	TOTAL CAPACITY (MBH)	SENSIBLE CAPACITY (MBH)	MAXIMUM UNIT LENGTH	MAXIMUM UNIT WIDTH	MANUFACTURER
AHU-CS	COMPACT SHELVING	1.6	1.1	220	81.0	77.4	1940	66.0	55.1	50.0	48.2	32.4	32.4	32.4	1151/160	NO	GREENHECK	SC-190-VG	1	996	81.0	122.0	81.9	220	28.0	1640	57.9	77.0	38.1	180.0	150.0	161"	96"	MUNTERS	HOU24C300D	ALL

- NOTES:
1. HEAT FROM DX COOLING COIL SHALL BE UTILIZED FOR THE REACTIVATION COIL. NO REMOTE CONDENSING UNIT WILL BE REQUIRED.
2. UNIT MUST BE SHIPPED IN SECTIONS. SECTIONS NOT TO EXCEED 60" X 62".

COMBUSTION AIR CALCULATION FOR BOILERS AND WATER HEATER

3 BOILERS @ 2,000,000 BTU/H EACH = 6,000,000
1 WATER HEATER @ 40,000 BTU/H = 40,000
TOTAL = 6,040,000

@ 0.35 CFM / 1000 BTU/H = 6,040,000 / 1000 * 0.35 = 2114 CFM REQUIRED

INLINE FAN SCHEDULE

EQUIPMENT TAG	SERVICE	MAXIMUM AIRFLOW (CFM)	MINIMUM AIRFLOW (CFM)	ESP (IN WG)	MOTOR HP	VPHHZ	VFD	MANUFACTURER	MODEL	NOTES
IF-01	BOILER ENCLOSURE	2115	2115	0.15	3/4	208/160	NO	GREENHECK	SC-190-VG	1
IF-02	FIRST FLOOR MECHANICAL ROOM	4470	4005	0.5	2	208/160	YES	GREENHECK	SC-190-VG	1

NOTES:
1. HEAT FROM DX COOLING COIL SHALL BE UTILIZED FOR THE REACTIVATION COIL. NO REMOTE CONDENSING UNIT WILL BE REQUIRED.
2. UNIT MUST BE SHIPPED IN SECTIONS. SECTIONS NOT TO EXCEED 60" X 62".

EXHAUST FAN SCHEDULE

EQUIPMENT TAG	SERVICE	AIRFLOW (CFM)	ESP (IN WG)	MOTOR HP	VPHHZ	MANUFACTURER	MODEL	NOTES
EF-01	RELIEF AIR	4000	0.30	2.0	208/160	GREENHECK	SC-190-VG	1
EF-02	RELIEF AIR	4000	0.30	2.0	208/160	GREENHECK	SC-190-VG	1

NOTES:
1. PROVIDE WITH VARIABLE FREQUENCY DRIVE.

HYDRONIC UNIT HEATER SCHEDULE

EQUIPMENT TAG	OUTPUT CAPACITY (BTU/H)	ENTERING WATER TEMPERATURE (°F)	FLUID FLOW (GPM)	AIRFLOW (CFM)	VPHHZ	MANUFACTURER	MODEL	NOTES
UH-01	29,200	180	2.7	550	115/160	BEACON MORRIS	HB-36	
UH-02	6,800	180	0.8	210	115/160	BEACON MORRIS	HB-108A	

VAV TERMINAL UNIT SCHEDULE

EQUIPMENT TAG	INLET SIZE	MAXIMUM AIRFLOW (CFM)	MINIMUM AIRFLOW (CFM)	VPHHZ	MANUFACTURER	MODEL	NOTES
VAV-01	16	3250	2785	24/160	TITUS	DESV	
VAV-02	06	220	220	24/160	TITUS	DESV	
VAV-03	10	1000	1000	24/160	TITUS	DESV	

AIR MEASURING DAMPER SCHEDULE

EQUIPMENT TAG	DUCT SIZE	MAXIMUM AIRFLOW (CFM)	MINIMUM AIRFLOW (CFM)	MANUFACTURER	MODEL	NOTES
AMD-01	20"X20"	3050	2650	GREENHECK	AMD-33	
AMD-02	22"X20"	3160	3010	GREENHECK	AMD-33	
AMD-03	26"X26"	6450	5925	GREENHECK	AMD-33	
AMD-04	26"X26"	6450	5340	GREENHECK	AMD-33	
AMD-05	14"X12"	670	170	GREENHECK	AMD-33	

DUCT MATERIAL SCHEDULE

SYSTEM OR SERVICE	APPLICATION	MATERIAL	CONSTRUCTION STANDARDS	INSULATION
SUPPLY DUCT, 2" CLASS, EXTERIOR WRAP INTERIOR DUTY, CONCEALED	FAN COIL UNIT SUPPLY DUCTWORK, SINGLE ZONE OR MULTIZONE AHU SUPPLY, DUCTWORK DOWNSTREAM OF TERMINAL UNITS. SEE BELOW FOR WHERE LINER IS REQUIRED.	GALVANIZED SHEET METAL, 2" PRESSURE CLASS PER SMACNA DUCT CONSTRUCTION STANDARDS	ANSI/SMACNA 006-2006, UL 181, SMACNA AIR DUCT LEAKAGE TEST MANUAL, NFPA 90A	FLEXIBLE GLASS FIBER WRAP, K FACTOR 0.25 AT 75° F, 1.5 LB/CU FT, MINIMUM DENSITY, 2" THICKNESS, WITH FSK FACING, JOHNS MANVILLE MICROLITE EO OR EQUAL. PROVIDE MINIMUM R-6 INSULATION VALUE.
SUPPLY DUCT, 4" CLASS, EXTERIOR WRAP INTERIOR DUTY, CONCEALED	VAV AHU SUPPLY DUCTWORK UPSTREAM OF TERMINAL UNITS. SEE BELOW FOR WHERE LINER IS REQUIRED.	GALVANIZED SHEET METAL, 4" PRESSURE CLASS PER SMACNA DUCT CONSTRUCTION STANDARDS	ANSI/SMACNA 006-2006, UL 181, SMACNA AIR DUCT LEAKAGE TEST MANUAL, NFPA 90A	FLEXIBLE GLASS FIBER WRAP, K FACTOR 0.25 AT 75° F, 1.5 LB/CU FT, MINIMUM DENSITY, 2" THICKNESS, WITH FSK FACING, JOHNS MANVILLE MICROLITE EO OR EQUAL. PROVIDE MINIMUM R-6 INSULATION VALUE.
RETURN DUCT, 4" CLASS, EXTERIOR WRAP INTERIOR DUTY, CONCEALED	FAN COIL UNIT RETURN DUCTWORK, AHU RETURN AIR PLENUMS, RETURN DUCTWORK UPSTREAM OR DOWNSTREAM OF RETURN AIR FANS. SEE BELOW FOR WHERE LINER IS REQUIRED.	GALVANIZED SHEET METAL, 4" PRESSURE CLASS PER SMACNA DUCT CONSTRUCTION STANDARDS	ANSI/SMACNA 006-2006, UL 181, SMACNA AIR DUCT LEAKAGE TEST MANUAL, NFPA 90A	FLEXIBLE GLASS FIBER WRAP, K FACTOR 0.25 AT 75° F, 1.5 LB/CU FT, MINIMUM DENSITY, 2" THICKNESS, WITH FSK FACING, JOHNS MANVILLE MICROLITE EO OR EQUAL. PROVIDE MINIMUM R-6 INSULATION VALUE.
OUTSIDE AIR DUCT, 2" CLASS, EXTERIOR WRAP INTERIOR DUTY, CONCEALED	CONNECTION BETWEEN OUTSIDE AIR INTAKE AND AHU OR FCU RETURN PLENUMS/DUCTWORK, DUCTWORK UPSTREAM OR DOWNSTREAM OF OUTSIDE AIR MAKEUP FANS.	GALVANIZED SHEET METAL, 2" PRESSURE CLASS PER SMACNA DUCT CONSTRUCTION STANDARDS	ANSI/SMACNA 006-2006, UL 181, SMACNA AIR DUCT LEAKAGE TEST MANUAL, NFPA 90A	FLEXIBLE GLASS FIBER WRAP, K FACTOR 0.25 AT 75° F, 1.5 LB/CU FT, MINIMUM DENSITY, 2" THICKNESS, WITH FSK FACING, JOHNS MANVILLE MICROLITE EO OR EQUAL. PROVIDE MINIMUM R-6 INSULATION VALUE.
GENERAL EXHAUST DUCT, 4" CLASS INTERIOR DUTY, CONCEALED	EXHAUST DUCTWORK UPSTREAM OR DOWNSTREAM OF FANS, FOR ALL TYPES OF EXHAUST NOT SPECIFIED BELOW, AND RELIEF AIR DUCTWORK.	GALVANIZED SHEET METAL, 4" PRESSURE CLASS PER SMACNA DUCT CONSTRUCTION STANDARDS	ANSI/SMACNA 006-2006, UL 181, SMACNA AIR DUCT LEAKAGE TEST MANUAL, NFPA 90A	NONE
FLEXIBLE SUPPLY DUCT INTERIOR DUTY, CONCEALED	ALL FLEXIBLE CONNECTIONS TO CEILING SUPPLY AIR DEVICES AS INDICATED ON PLANS.	INTERLOCKING SPIRAL WIRE FRAME WITH PE FABRIC INTERIOR, FIBERGLASS INSULATION AND REINFORCED METALLIZED VAPOR BARRIER, MINIMUM INSTALLED R-VALUE OF 6.0, VAPOR BARRIER SHALL NOT EXCEED 0.5 PERM. PROVIDE FLEXMASTER 1M OR EQUAL.	UL 181, NFPA 90A	NONE

PIPING MATERIAL SCHEDULE

SYSTEM OR SERVICE	APPLICATION	MATERIAL	CONSTRUCTION STANDARDS	INSULATION
CHILLED WATER-STEEL PIPE-INTERIOR DUTY	125 PSI AND BELOW SYSTEMS, BASIS OF DESIGN	SCHEDULE 40 STEEL PIPE, CLASS E, GRADE B (ALL SIZES) CLASS 125 CAST IRON FITTINGS AND THREADED JOINTS (2" AND BELOW) CLASS 150 WROUGHT STEEL FITTINGS WITH FLANGE OR WELDED JOINTS (2 1/2" AND LARGER)	ASME B31.9 (BUILDING SERVICE PIPING), ASTM A53 (PIPE), ASME B16.4 (THREADED FITTINGS), ASTM A234 (WROUGHT FITTINGS), ASME B16.5 (FLANGES), AWS D10.12 (WELDING), ASME B1.20.1 (THREADING)	ASTM C552 CELLULAR GLASS, K-FACTOR OF 0.30 BTU-INHR-DEG-FT ² , 1 1/2" THICK FOR PIPES 2" AND SMALLER, 2" THICK FOR PIPES 2 1/2" AND LARGER
CHILLED WATER-COPPER PIPE-INTERIOR DUTY	125 PSI AND BELOW SYSTEMS, ACCEPTABLE ALTERNATIVE	TYPE 1L COPPER PIPE WITH WROUGHT COPPER FITTINGS AND JOINTS	ASTM B88 (PIPE), ASME B16.22 AND B16.18 (FITTINGS), ASME B31.9 (BUILDING SERVICE PIPING), AWS A5.8 (BRAZING)	ASTM C552 CELLULAR GLASS, K-FACTOR OF 0.30 BTU-INHR-DEG-FT ² , 1 1/2" THICK FOR PIPES 2" AND SMALLER, 2" THICK FOR PIPES 2 1/2" AND LARGER
HYDRONIC HOT WATER-STEEL PIPE-INTERIOR DUTY	125 PSI AND BELOW SYSTEMS, BASIS OF DESIGN	SCHEDULE 40 STEEL PIPE, CLASS F, GRADE B (ALL SIZES) CLASS 125 CAST IRON FITTINGS AND THREADED JOINTS (2" AND BELOW) CLASS 150 WROUGHT STEEL FITTINGS WITH FLANGE OR WELDED JOINTS (2 1/2" AND LARGER)	ASME B31.9 (BUILDING SERVICE PIPING), ASTM A53 (PIPE), ASME B16.4 (THREADED FITTINGS), ASTM A234 (WROUGHT FITTINGS), ASME B16.5 (FLANGES), AWS D10.12 (WELDING), ASME B1.20.1 (THREADING)	ASTM C547 TYPE I GRADE A PREFORMED MINERAL FIBER PIPE INSULATION, K-FACTOR OF 0.27 BTU-INHR-DEG-FT ² , 1 1/2" THICK FOR PIPES 1" AND SMALLER, 2" THICK FOR PIPES 1 1/4" TO 8"
HYDRONIC HOT WATER-COPPER PIPE-INTERIOR DUTY	125 PSI AND BELOW SYSTEMS, BASIS OF DESIGN	TYPE 1L COPPER PIPE WITH WROUGHT COPPER FITTINGS AND JOINTS	ASTM B88 (PIPE), ASME B16.22 AND B16.18 (FITTINGS), ASME B31.9 (BUILDING SERVICE PIPING), AWS A5.8 (BRAZING)	ASTM C547 TYPE I GRADE A PREFORMED MINERAL FIBER PIPE INSULATION, K-FACTOR OF 0.27 BTU-INHR-DEG-FT ² , 1 1/2" THICK FOR PIPES 1" AND SMALLER, 2" THICK FOR PIPES 1 1/4" TO 8"
CONDENSATE DRAIN-STEEL PIPE-INTERIOR DUTY	BASIS OF DESIGN	SCHEDULE 40 STEEL PIPE, CLASS E, GRADE B, WITH CLASS 125 CAST IRON FITTINGS AND THREADED JOINTS	ASME B31.9 (BUILDING SERVICE PIPING), ASTM A53 (PIPING), ASME B16.4 (THREADED FITTINGS), ASME B1.20.1 (THREADING)	ASTM E96 CLOSED CELL ELASTOMERIC, FLEXIBLE PREFORMED, K-FACTOR OF 0.25 BTU-INHR-DEG-FT ² , 3/4" THICKNESS, 25/50 FLAME/SMOKE SPREAD
CONDENSATE DRAIN-COPPER PIPE-INTERIOR DUTY	ACCEPTABLE ALTERNATIVE	TYPE 1L COPPER PIPE WITH WROUGHT COPPER FITTINGS AND 95-5 TIN-ANTIMONY SOLDER	ASTM B88 (PIPING), ASME B16.22 AND B16.18 (FITTINGS), ASME B31.9 (BUILDING SERVICE PIPING), ASTM B32 (SOLDERING)	ASTM E96 CLOSED CELL ELASTOMERIC, FLEXIBLE PREFORMED, K-FACTOR OF 0.25 BTU-INHR-DEG-FT ² , 3/4" THICKNESS, 25/50 FLAME/SMOKE SPREAD

GRILLE - REGISTER - DIFFUSER

DIFFUSER TYPE	SIZE	TYPE	MANUFACTURER & MODEL	FINISH	DESCRIPTION	NOTES
A	24"X24"	CEILING SUPPLY	TITUS OMIN-AA	WHITE	SQUARE PLAQUE HIGH CAPACITY, NECK SIZE PER PLANS, T-BAR MOUNTING, INSULATED BACKPAN	
B	24"X24"	CEILING RETURN	TITUS PAR	WHITE	PERFORATED FACE RETURN, 22"X22" NECK SIZE, ALUMINUM CONSTRUCTION, T-BAR MOUNTING	
C	PER PLANS	CEILING EXHAUST	TITUS PAR	WHITE	PERFORATED FACE RETURN, NECK SIZE PER PLANS, ALUMINUM CONSTRUCTION, SURFACE MOUNT BORDER.	
D	PER PLANS	CEILING EXHAUST	TITUS 272 RS	RE ARCHITECT	DOUBLE DEFLECTION, 3/4" SPACING, ALUMINUM CONSTRUCTION	
G	PER PLANS	CEILING SUPPLY	TITUS OMIN-AA	WHITE	SQUARE PLAQUE HIGH CAPACITY, NECK SIZE PER PLANS, SURFACE MOUNTED, INSULATED BACKPAN	
L1	4'-0"	SUPPLY PLENUM	TITUS FBPI	ALUMINUM	EXTERNALLY INSULATED PLENUM FOR USE WITH TYPE "M" & "N" DIFFUSER. PLENUM SHALL BE 4'-0" LONG UNLESS OTHERWISE NOTED. INLET DIAMETER PER PLANS	
L2	2'-0"	SUPPLY PLENUM	TITUS FBPI	ALUMINUM	EXTERNALLY INSULATED PLENUM FOR USE WITH TYPE "M" & "N" DIFFUSER. PLENUM SHALL BE 4'-0" LONG UNLESS OTHERWISE NOTED. INLET DIAMETER PER PLANS	
L3	4'-0"	LINEAR RETURN	TITUS ML-39	RE ARCHITECT	CONTINUOUS SLOT DIFFUSER WITH (2) - 1" SLOTS	
M1	PER PLANS	LINEAR BLANK	TITUS ML-39	RE ARCHITECT	CONTINUOUS SLOT DIFFUSER WITH (2) - 1" SLOTS, BLANK OFF SECTIONS WITHOUT SUPPLY PLENUM	

DOUBLE DUCT TERMINAL BOX SCHEDULE

EQUIPMENT TAG	MANUFACTURER & MODEL	MAXIMUM COOLING CFM	MINIMUM COOLING CFM	MAXIMUM HEATING CFM	MINIMUM HEATING CFM	MINIMUM TOTAL CFM	COLD INLET SIZE	HOT INLET SIZE	NOTES
DOB-100	TITUS DEDV-A	285	0	100	0	100	06	06	
DOB-101	TITUS DEDV-A	510	0	330	0	330	08	08	
DOB-102	TITUS DEDV-A	340	0	230	0	230	06	06	
DOB-103	TITUS DEDV-A	1,000	0	925	0	925	10	10	
DOB-104	TITUS DEDV-A	210	0	110	0	110	06	06	
DOB-105	TITUS DEDV-A	170	0	170	0	170	06	06	
DOB-106	TITUS DEDV-A	170	0	100	0	100	06	06	
DOB-107	TITUS DEDV-A	250	0	100	0	100	06	06	
DOB-108	TITUS DEDV-A	980	0	980	0	980	10	10	
DOB-109	TITUS DEDV-A	1,140	0	915	0	915	14	14	
DOB-110	TITUS DEDV-A	1,100	0	875	0	875	14	14	
DOB-111	TITUS DEDV-A	735	0	450	0	450	10	10	
DOB-112	TITUS DEDV-A	1,365	0	1,075	0	1,075	14	14	
DOB-113	TITUS DEDV-A	600	0	555	0	555	12	12	
DOB-114	TITUS DEDV-A	340	0	170	0	170	06	06	
DOB-115	TITUS DEDV-A	170	0	100	0	100	06	06	
DOB-116	TITUS DEDV-A	1,145	0	1,000	0	1,000	12	12	
DOB-117	TITUS DEDV-A	770	0	230	0	230	10	10	
DOB-118	TITUS DEDV-A	1,275	0	1,185	0	1,185	14	14	
DOB-119	TITUS DEDV-A	1,220	0	980	0	980	12	12	
DOB-120	TITUS DEDV-A	330	0	330	0	330	06	06	
DOB-121	TITUS DEDV-A	100	0	100	0	100	06	06	
DOB-122	TITUS DEDV-A	2,320	0	1,905	0	1,905	14	14	
DOB-123	TITUS DEDV-A	350	0	205	0	205	06	06	
DOB-124	TITUS DEDV-A	1,680	0	1,145	0	1,145	14	14	
DOB-125	TITUS DEDV-A	2,250	0	1,450	0	1,450	14	14	
DOB-126	TITUS DEDV-A	780	0	415	0	415	10	10	
DOB-127	TITUS DEDV-A	615	0	310	0	310	08	08	
DOB-128	TITUS DEDV-A	540	0	310	0	310	08	08	
DOB-129	TITUS DEDV-A	580	0	305	0	305	08	08	
DOB-130	TITUS DEDV-A	540	0	310	0	310	08	08	
DOB-131	TITUS DEDV-A	1,780	0	1,540	0	1,540	14	14	
DOB-201	TITUS DEDV-A	1,000	0	440	0	440	10	10	
DOB-202	TITUS DEDV-A	1,170	0	445	0	445	10	10	
DOB-203	TITUS DEDV-A	570	0	180	0	180	08	08	
DOB-204	TITUS DEDV-A	3,440	0	1,035	0	1,035	16	16	
DOB-205	TITUS DEDV-A	3,320	0	995	0	995	16	16	
DOB-206	TITUS DEDV-A	285	0	180	0	180	06	06	
DOB-207	TITUS DEDV-A	290	0	115	0	115	06	06	
DOB-208	TITUS DEDV-A	470	0	145	0	145	08	08	
DOB-209	TITUS DEDV-A	365	0	180	0	180	08	08	
DOB-210	TITUS DEDV-A	485	0	300	0	300	08	08	
DOB-211	TITUS DEDV-A	500	0	165	0	165	08	08	
DOB-212	TITUS DEDV-A	500	0	165	0	165	08	08	
DOB-213	TITUS DEDV-A	255	0	100	0	100	06	06	
DOB-214	TITUS DEDV-A	675	0	675	0	675	10	10	
DOB-215	TITUS DEDV-A	200	0	100	0	100	06	06	
DOB-216	TITUS DEDV-A	130	0	100	0	100	06	06	
DOB-217	TITUS DEDV-A	1,850	0	555	0	555	14	14	
DOB-218									