SELF-CONTAINED AIR CONDITIONING UNIT SCHEDULE (FURNISHED BY TRANE CO.)

TAG	AREA	QTY	MODEL	AIRSIDE					EVAPORATOR		CONDENSER (85° F. EWT)				WATER SIDE ECON. @ 60°F.			ELECTRICAL		ACCESSORIES
				CFM	MBH T	MBH S	ESP	BHP	HP	EAT	LAT	GPM	MIN. GPM	LWT	WPD	MBH	GPM	EDB/EWB	VOLTAGE	MCA/MFS	REMARKS
SC-G-1	GARDEN	(1)	TRANE SCWFP584	15100	626.09	425.78	1.75"	7.81	15	84.0/68.2	56.74/54.54	107	84	98.30	13.86	131.54	114	72/55	460/3/60	80.8/100	1-9
SC-1-1	FIRST	(1)	TRANE SCWFP464	13310	479.67	402.80	1.75"	10.24	15	81.3/64.8	54.37/52.15	87	64	98.90	11.37	108.2	87	72/55	460/3/60	75.8/90	1-9
SC-1-2	FIRST	(1)	TRANE SCWFPC14	25920	1213	821.76	1.75"	30.54	40	82.2/67.5	54.17/51.43	227	168	98.61	22.19	171.3	227	72/55	460/3/60	189.3/225	1-9
SC-1-3	FIRST	(1)	TRANE SCWFP254	6765	305.73	213.72	1.75"	4.9	7.5	84.90/70.20	56.60/56.50	60	44	97.08	14.92	154.71	60	84.9/70.2	460/3/60	43.2/50	1-9
SC-2-1	SECOND	(1)	TRANE SCWFNC04	25235	1037.98	838.47	1.75"	27.38	40	82.20/64.60	52.80/49.72	209	155	97.67	21.93	172.29	209	72/55	460/3/60	177.3/225	1-9
SC-2-2	SECOND	(1)	TRANE SCWFN804	18764	789.96	635.51	1.75"	16.1	20	83.40/65.60	53.34/50.86	151	112	97.92	17.59	149.68	151	72/55	460/3/60	116.5/125	1-9
SC-3-1	THIRD	(1)	TRANE SCWFN654	21000	636.57	529.80	1.75"	20.18	30	77.5/62.0	55.02/50.63	138	100	96.96	18.29	151.39	138	72/55	460/3/60	127.3/150	1-9
SC-3-2	THIRD	(1)	TRANE SCWFN584	20000	569.94	515.53	1.75"	19.5	30	77.5/62.0	54.54/51.32	114	84	97.77	15.54	141.30	114	72/55	460/3/60	112.8/150	1-9

EXTERNAL STATIC PRESSURE (ESP) DOES NOT INCLUDE COIL, CASING, OR FILTER LOSSES.

ACCESSORIES:
1. SINGLE POINT POWER CONNECTION.
2. WATERSIDE ECONOMIZER COIL WITH MODULATING ENERGY SAVING CONTROLS
3. INTERNAL VIBRATION ISOLATION
4. EXTERNAL MOLDED NEOPRENE ISOLATION MOUNTING PADS
5. VARIABLE AIR VOLUME, VARIABLE FREQUENCY DRIVE WITH SUPPLY AIR TEMPERATURE CONTROL & STATIC PRESSURE CONTROL
6. TWO- INCH THICK 30% EFFICIENCY PLEATED FILTERS
7. MECHANICALLY CLEANABLE CONDENSER AND ECONOMIZER COILS
8. EPACT EFFICIENCY MOTORS
9. DISCONNECT AND WIRING NOT IN CONTRACT, FURNISHED AND INSTALLED BY OTHERS.

SUPPLY/EXHAUST/ELEVATOR FAN SCHEDULE (FURNISHED BY TRANE CO.)

TAG	MANUF.	MODEL	LOCATION	QTY	VOLUME (CFM)	S.P.	MOTOR HP	FAN RPM	SONES	POWER	REMARKS
EF-G-1	COOK	SQND 90	ELEV EQ. RM.	(1)	150	.5"	1/6	1054	5.3	115/1/60	1,3,4,6,8,9,10
EF-G-2	COOK	SQND 100	RESTROOMS	(1)	675	.5"	1/4	989	9.0	115/1/60	1,3,4,6,8,9
EF-G-3	COOK	SQNB 80	ELEC EQ. RM.	(1)	525	.5"	1/4	1121	10	115/1/60	1,3,4,5,6,8,9
SF-G-1	COOK	SQND HP402	MECH EQ. RM.	(1)	4506	.75"	1.5	1275	10.9	460/3/60	1,3,4,6,8,9
SF-G-2	COOK	SQND 210	MECH EQ. RM.	(1)	2730	.75"	1	1132	11	460/3/60	1,3,4,6,8,9
EF-1-1	COOK	SQND 90	RESTROOMS	(1)	150	.5"	1/6	1054	5.3	115/1/60	1,3,4,5,6,8,9
EF-1-2	COOK	SQ-120-B	RESTROOMS	(1)	600	.5"	1/6	1140	5.8	115/1/60	1,3,4,5,6,8,9,10
EF-1-3	COOK	SQND 90	ELEV EQ. RM.	(1)	150	.5"	1/6	1054	5.3	115/1/60	1,3,4,6,8,9,10
EF-2-1	COOK	SQNB 135	RESTROOMS	(1)	1050	.5"	1/2	1012	9.8	115/1/60	1 THRU 9
EF-3-1	COOK	SQ-120-B	RESTROOMS	(1)	600	.5"	1/6	1140	5.8	115/1/60	1 THRU 9
EF-3-2	COOK	SQ-120-B	RESTROOMS	(1)	600	.5"	1/6	1140	5.8	115/1/60	1 THRU 9
SF-3-1	COOK	SQND HP402	MECH EQ. RM.	(1)	7098	.75"	2	1383	11.0	460/3/60	1,3,4,6,8,9
SF-3-2	COOK	SQND HP402	MECH EQ. RM.	(1)	4830	.75"	1.5	1275	11.1	460/3/60	1,3,4,6,8,9
SF-3-3	COOK	SQND HP402	MECH EQ. RM.	(1)	6255	.75"	2	1345	11.9	460/3/60	1,3,4,6,8,9

REMARKS/ACCESSORIES:
1. FILTERS
2. ROOF CURB
3. BACKDRAFT DAMPER
4. DISCONNECT AND WIRING NOT IN CONTRACT, FURNISHED AND INSTALLED BY OTHERS.
5. BELT DRIVE, BELT GUARD.
6. ODP MOTOR ENCLOSURE
7. HINGE KIT
8. PREWIRED SPEED CONTROLLER
9. VIBRATION ISOLATION
10. ELEVATOR FANS SUPPLY AIR TO ELEVATOR EQUIPMENT.

H.V.A.C. PUMP SCHEDULE (FURNISHED BY TRANE CO.)

TAG	MANUFACTURER	MODEL	TYPE/FRAME	GPM	TDH (FT.)	POWER	MOTOR BHP	MOTOR HP	TDV	DESCP.	REMARKS
P-1	BELL & GOSSETT	6x6x9.5	256JP	660	80	460/3/60	19.68	20	-	1750RPM, TEFC	1,2,3,4,5
P-2	BELL & GOSSETT	6x6x9.5	256JP	660	80	460/3/60	19.68	20	-	1750RPM, TEFC	1,2,3,4,5

REMARKS/ACCESSORIES:
1. PARALLEL PUMP, IN-LINE.
2. HIGH EFFICIENCY MOTOR.
3. TRIPLE DUTY VALVES (TDV) ON DISCHARGE, ARE REQUIRED. MAX. TDV P.D. = 5'.
4. STARTERS FOR PUMPS CP-1,2 FURNISHED AND MOUNTED BY M.C. & WIRED BY E.C.
5. DISCONNECT AND WIRING NOT IN CONTRACT, FURNISHED AND INSTALLED BY OTHERS.

COOLING TOWER SCHEDULE (FURNISHED BY TRANE CO.)

TAG	MANUFACTURER	MODEL	GPM	EWT	LWT	POWER	MOTOR (HP)	BASIN HEATER (KW)	SHIPPING WEIGHT (LBS.)	OPERATING WEIGHT (LBS.)	REMARKS
CT-1	B.A.C.	3240A-2	1320	98.1	85	460/3/60	2 @ 10	2 @ 12kW	13580	29540	1-11

REMARKS/ACCESSORIES:
1. 6"ø SIDE OUTLET SUMP WITH TRASH SCREEN.
2. (2) 6"ø BASIN INLET CONNECTIONS.
3. 4"ø DRAIN WITH PLUG.
4. 2"ø WATER MAKE-UP FLOAT VALVE.
5. EXTERNAL LUBE LINE WITH DIPSTICK.
6. LADDER AND EXTENSION.
7. VARIABLE FREQUENCY DRIVE. FURNISHED BY M.C. INSTALLED & WIRED BY E.C.
8. (2) 6"ø HORIZONTAL FLOW CONTROL VALVES.
9. SELECTION INCLUDES SPARE CAPACITY FOR "BASEMENT".
10. COOLING TOWER BASED ON 77°F. WET BULB.
11. DISCONNECT AND WIRING NOT IN CONTRACT, FURNISHED AND INSTALLED BY OTHERS.

Outdoor Air Requirements

Tag	Location	Serves	Square Feet	OCC/1000 sq ft	OA/person	CFM/SqFt	OA, CFM
SC-G-1	Garden	Garden					
		Offices	8,750	7	20	0.14	1225
		Entry Lobby/Corrd.	984	7	20	0.14	138
		Meet Rms.	3050	50	20	1.00	3050
		RR/Coord.	759	7	20	0.14	106
	Sub-Total		13,543				4,519
SC-1-1	Garden	First					
		Corridor	4,408	7	15	0.11	463
		Offices Main	12,700	7	20	0.14	1778
		Spa	3225	7	20	0.14	452
	Sub-Total		20,333				2,692
SC-1-2	Third	First					
		Athletic Club	34,500	7	20	0.14	4830
	Sub-Total		34,500				4,830
SC-1-3	Garden	First					
		Kitchen	1,950	70	20	1.40	2730
		Corridor w/Fnt	1,640	7	15	0.11	172
	Sub-Total		3,590				2,902
WSHP-1-4	Lobby	1ST/2ND					
		Corridor S.	850	7	15	0.11	89
	Sub-Total		850				89
SC-2-1	Third	Second					
		N Coord.	5,206	7	15	0.11	547
		E. Gen Surg. Wing	7,200	7	20	0.14	1008
		NE Office	10750	7	20	0.14	1505
		NW Office	8,620	7	20	0.14	1207
	Sub-Total		31,776				4,266
SC-2-2	Third	Second					
		S. Coord.	4,100	7	15	0.11	431
		Med/Lib/ConfC	725	60	10	0.60	435
		SE Dental Health	9,900	7	20	0.14	1386
		SE Lab	5,000	7	15	0.11	525
		SE Radiology	7,200	7	20	0.14	1008
		Coord. S. Small	625	7	15	0.11	66
		W. Holistic & Pod	4,450	7	20	0.14	623
	Sub-Total		32,000				4,473
SC-3-1	Third	Third					
		(2) All	18,700	7	20	0.14	2618
	Sub-Total		18,700				2,618
SC-3-2	Third	Third					
		(2) All	18,700	7	20	0.14	2618
	Sub-Total		18,700				2,618
PU-1	Pool Unit	Roof/Pool					

** Provide CO2 air quality sensors.

Required outdoor ventilation air is generally calculated based on and provided or "office" requirements, except where conference rooms and corridors are located on shell plans. Outdoor air is furnished ad appropriate quantities for spaces in accordance with table 403.3 of the NCSBC-Mechanical. Where occupancies other than those shown on shell plans are incorporated during upfits, outdoor ventilation air flow will require recalculation and possibly adjustment.

SINGLE DUCT VAV BOXES (FURNISHED BY TRANE CO.)

TAG	QTY	UNIT MODEL	PRIMARY INLET	DESIGN COOLING AIRFLOW CFM	MIN. COOLING AIRFLOW CFM	APD @ COOLING AIRFLOW in H2O	VALVE HEATING AIRFLOW CFM	UNIT EAT F°	UNIT LAT F°	ELECTRIC HEATER VOLTAGE	ELECTRIC HEATER KW	ELECTRIC HEATER STAGES	FULL LOAD AMPS A	MIN. CIRCUIT AMPACITY A	MAX. FUSE SIZE A	REMARKS/ ACCESSORIES
SB-G-1	(1)	VCEF08	8"ø	480	240	.03	480	55	81.23	277/1ø	4.0	2	14.44	18.05	20	
SB-G-2	(1)	VCEF08	8"ø	440	220	.03	440	55	94.34	277/1ø	5.5	2	19.86	24.82	25	
SB-1-1	(1)	VCEF05	5"ø	180	90	.01	180	55	81.23	277/1ø	1.5	1	5.42	6.77	15	
SB-1-2	(1)	VCEF08	8"ø	440	220	.03	440	55	94.34	277/1ø	5.5	2	19.86	24.82	25	
SB-1-3	(1)	VCEF10	10"ø	820	410	.02	820	55	97.22	277/1ø	11.0	2	39.71	49.64	50	
SB-1-4	(1)	VCEF08	8"ø	425	212	.02	425	55	95.73	277/1ø	5.5	2	19.86	24.82	25	
SB-2-1	(1)	VCEF10	10"ø	600	300	.01	600	55	91.72	277/1ø	7.0	2	25.27	31.59	35	
SB-2-2	(1)	VCEF10	10"ø	890	445	.02	890	55	93.90	277/1ø	11.0	2	39.71	49.64	50	
SB-2-3	(1)	VCEF10	10"ø	665	333	.01	665	55	90.50	277/1ø	7.5	2	27.08	33.84	35	
SB-2-4	(1)	VCEF10	10"ø	775	390	.02	775	55	95.61	277/1ø	10.0	2	36.10	45.13	50	
SB-3-1	(1)	VCEF05	5"ø	240	120	.01	240	55	87.79	277/1ø	22.5	2	9.03	11.28	15	
SB-3-2	(1)	VCEF10	5"ø	250	445	.02	890	55	93.90	277/1ø	2.5	2	39.71	49.64	50	
SB-3-3	(1)	VCEF10	10"ø	845	425	.02	845	55	95.97	277/1ø	11.0	2	39.71	49.64	50	

REMARKS/ACCESSORIES:
1. MAXIMUM INLET S.P.=1.25"
2. FACTORY MOUNTED DDC CONTROLLER WITH SLOW PULSE WIDTH MODULATION
3. RADIATED AND DISCHARGE NC VALUE, LESS THAN 30 (per ARI 885)
4. DISCONNECT AND WIRING NOT IN CONTRACT, FURNISHED AND INSTALLED BY OTHERS.

BUILDING AUTOMATION CONTROL PANEL SCHEDULE (FURNISHED BY TRANE CO.)

TAG	LOCATION	VOLTAGE	AMPS	REMARKS
BCU-1	LL MECH ROOM	120/1/60	8	TRANE, CONTROL PANELS FURNISHED AND MOUNTED BY M.C. & WIRED BY E.C.
BCU-2	UL MECH ROOM	120/1/60	8	TRANE, CONTROL PANELS FURNISHED AND MOUNTED BY M.C. & WIRED BY E.C.
MP-581	UL MECH ROOM	120/1/60	8	TRANE, CONTROL PANELS FURNISHED AND MOUNTED BY M.C. & WIRED BY E.C.

RECESSED CEILING MTD. UNIT HEATER SCHEDULE (FURNISHED BY TRANE CO.)

BLDG./FLOOR	TAG	MANUFACTURER	QTY	BTUH	CFM	SPEED	HEAT (KW)	AMPS	OPERATING WEIGHT (LBS)	POWER	REMARKS
GARDEN	CH-G-1	TRANE UHCA051C8A	(1)	17,000	175	MEDIUM	4.8	18.1	35	277/1/60	1,2,3
GARDEN	CH-G-2	TRANE UHCA051C8A	(1)	17,000	175	MEDIUM	4.8	18.1	35	277/1/60	1,2,3
FIRST	CH-1-1	TRANE UHCA051C8A	(1)	17,000	175	MEDIUM	4.8	18.1	35	277/1/60	1,2,3
FIRST	CH-1-2	TRANE UHCA051C8A	(1)	17,000	175	MEDIUM	4.8	18.1	35	277/1/60	1,2,3
THIRD	CH-3-1	TRANE UHCA051C8A	(1)	17,000	175	MEDIUM	4.8	18.1	35	277/1/60	1,2,3

REMARKS/ACCESSORIES:
1. RECESSED MOUNTED (SERIES 80)
2. WALL MOUNTED THERMOSTAT, DPST, TAMPER RESISTANT
3. UNIT MOUNTED DISCONNECT SWITCH.

MECHANICAL SYSTEMS, SERVICE SYSTEMS AND EQUIPMENT

METHOD OF COMPLIANCE: PRESCRIPTIVE

Thermal Zone: VIIA

Exterior design conditions
- Winter dry bulb: 14° F.
- Summer dry bulb: 91° F.

Interior design conditions
- Winter dry bulb: 72° F.
- Summer dry bulb: 75° F.
- Relative humidity: 50%

Building heating load: 1767.5 MBH

Building cooling load: 512 TONS

Mechanical Spacing Conditioning System

Unitary
- Description of unit: SELF-CONTAINED A/C UNITS, FAN-POWERED VAV BOXES WITH ELECTRIC HEAT.
- Heating efficiency (100%): SEE H.V.AC. EQUIPMENT SCHEDULES
- Heating efficiency (%AFUE): SEE H.V.AC. EQUIPMENT SCHEDULES
- Cooling efficiency (EER OR SEER): SEE H.V.AC. EQUIPMENT SCHEDULES
- Cooling efficiency (IPLV): SEE H.V.AC. EQUIPMENT SCHEDULES
- Heat output of unit (MBH): SEE H.V.AC. EQUIPMENT SCHEDULES
- Cooling output of unit (TONS): SEE H.V.AC. EQUIPMENT SCHEDULES

Boiler
- Total boiler output. If oversized, state reason.: N/A

Chiller
- Total chiller capacity. If oversized, state reason.: N/A

List equipment efficiencies: N/A

Equipment schedules with motors (mechanical systems)
- Motor horsepower: ALL MOTORS TO MEET EPACT (CODE) REQUIREMENTS.
- Number of phases: SEE ABOVE
- Minimum efficiency: SEE ABOVE
- Motor type: SEE ABOVE
- # of poles: SEE ABOVE

DESIGNER STATEMENT:
To the best of my knowledge and belief, the design of this building complies with the mechanical systems, service systems and equipment requirements of the North Carolina State Building Code, Volume X-Energy.

SIGNED:

NAME: Robert K. Bouknight

TITLE: Mechanical Engineer

NORTH CAROLINA PROFESSIONAL SEAL 14846 ENGINEER ROBERT K. BOUKNIGHT

RECORD "AS-BUILT" DRAWINGS

These record drawings have been prepared, in part, on the basis of information complied and furnished by others. The architect or engineer will not be responsible for any errors or omissions which have been incorported into this document as a result.

DATE: MAY 16, 2006

SHAFT SMOKE DETECTORS SHALL SHUT DOWN FAN OPERATION FOR ALL AIR HANDLING UNITS IS ASSOCIATED MECHANICAL ROOMS AND SHALL CLOSE ALL SMOKE FIRE DAMPERS IN THE ASSOCIATED SHAFT UPON ALARM (DETECTION OF SMOKE).

ALL HVAC EQUIPMENT SHALL SHUT DOWN UPON ACTIVATION OF THE BUILDING FIRE ALARM SYSTEM.

NORTH CAROLINA PROFESSIONAL SEAL 14846 ENGINEER ROBERT K. BOUKNIGHT

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American Institute of Health & Fitness
Raleigh, North Carolina

Mechanical
Schedules, Legend and Notes

REVISION
MARCH 16, 2005

SHEET #
M1.0