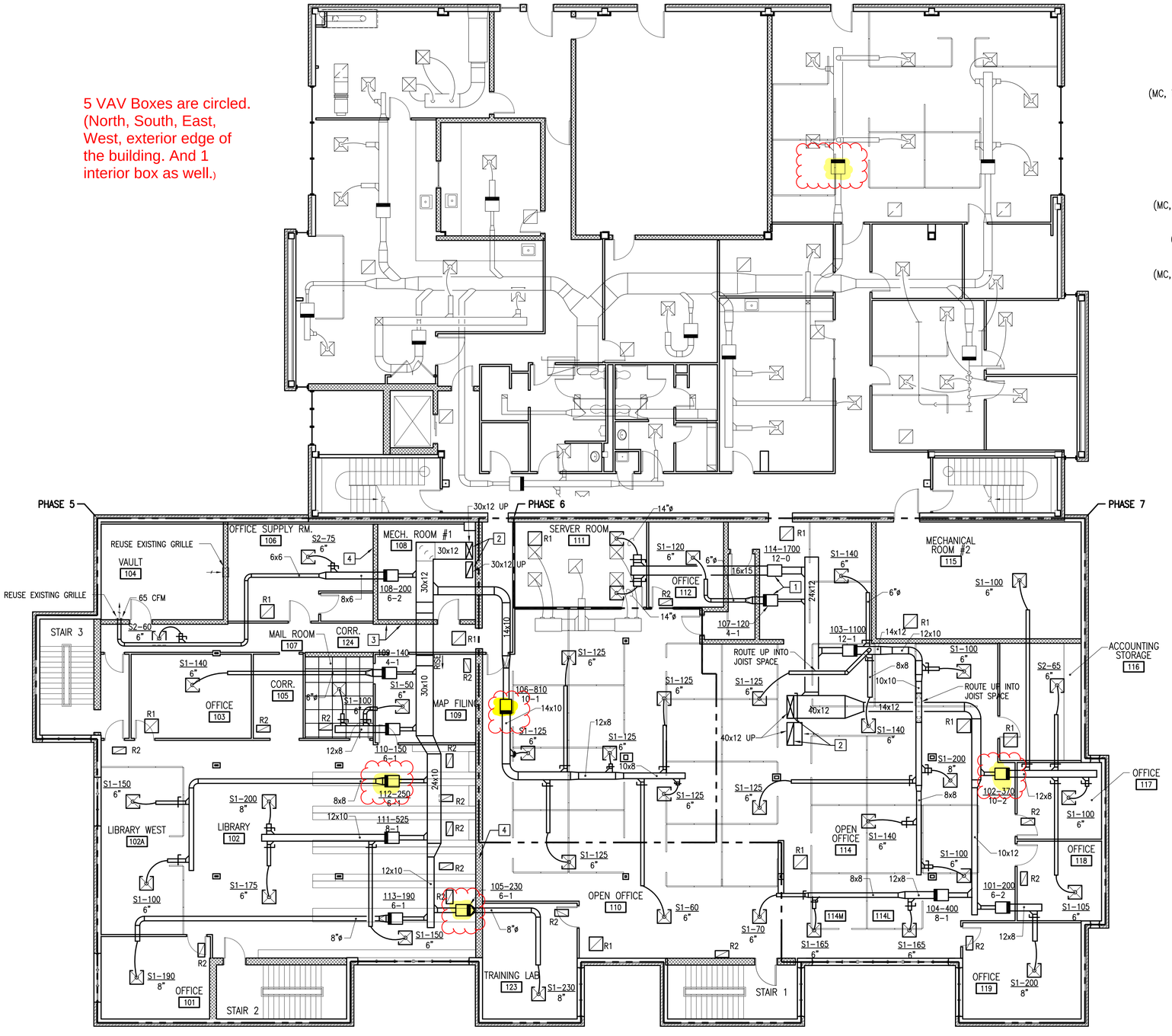
5 VAV Boxes are circled. (North, South, East, West, exterior edge of the building. And 1 interior box as well.)



N

FIRST FLOOR PLAN – NEW WORK

SCALE 1/8"=1'-0"

4 0 8 16 FEET

GENERAL NOTES:

(MC, TC) 1. SEE PHASING SCHEDULE ON SHEET M5.2.

2. AVOID RUNNING DUCTWORK OVER LIGHTS IN TIGHT SPACES.

KEYED NOTES (VENTILATION):

(MC, TC) [1] NEW WALL PENETRATIONS. DUCT LAYOUT HAS UTILIZED EXISTING HOLES. HOWEVER, SOME HOLES MAY NEED RESIZED.

(MC) [2] CONTRACTOR IS RESPONSIBLE FOR FIELD VERIFICATION OF DUCT ROUTING COMING FROM SECOND FLOOR. JOISTS AND/OR CONDUIT WILL NEED TO BE AVOIDED.

(MC, TC) [3] KEEP CLEAR HOLES IN WALL FOR RETURN AIR PATH.

AIR DEVICE
24x24 DIFFUSERS

MARK – S3-200 – CFM
8" – NECK SIZE

NOTE: FOR 24x24 AIR DEVICES PROVIDE 4-WAY PATTERN UNLESS OTHERWISE SPECIFIED.

AIR DEVICE
SLOT DIFFUSERS

MARK – S3-200 – CFM
4S-8" – # OF SLOTS FOR LINEAR DIFFUSERS – NECK SIZE

HW REHEAT COIL
VAV BOX # – 105-750 – CFM
8-2.5 – BOX SIZE – HW GPM

ALL COILS SHALL HAVE 3-WAY VALVES

R1 RETURN AIR DEVICE WITHOUT RETURN DUCT ELBOW

R1 RETURN AIR DEVICE WITH RETURN DUCT ELBOW

REVISION	DATE

HANSON

Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Phone: (217) 788-2450
Fax: (217) 788-2503
www.hanson-inc.com
Offices Nationwide

Hanson No.	02S1363	LAYOUT	MLZ
Filename	M-101NW.DWG	DRAWN	MLZ
Scale	1/8"=1'-0"	REVIEWED	DAH
Date	4/30/2007		

HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886

FIRST FLOOR VENTILATION
NEW WORK

2007 REMODEL
HANSON OFFICE BUILDING
SPRINGFIELD, ILLINOIS

M1.2V

X of XX sheets

GENERAL NOTES:

(MC, TC) 1. SEE PHASING SCHEDULE ON SHEET M5.2.

2. AVOID RUNNING DUCTWORK OVER LIGHTS IN TIGHT SPACES.

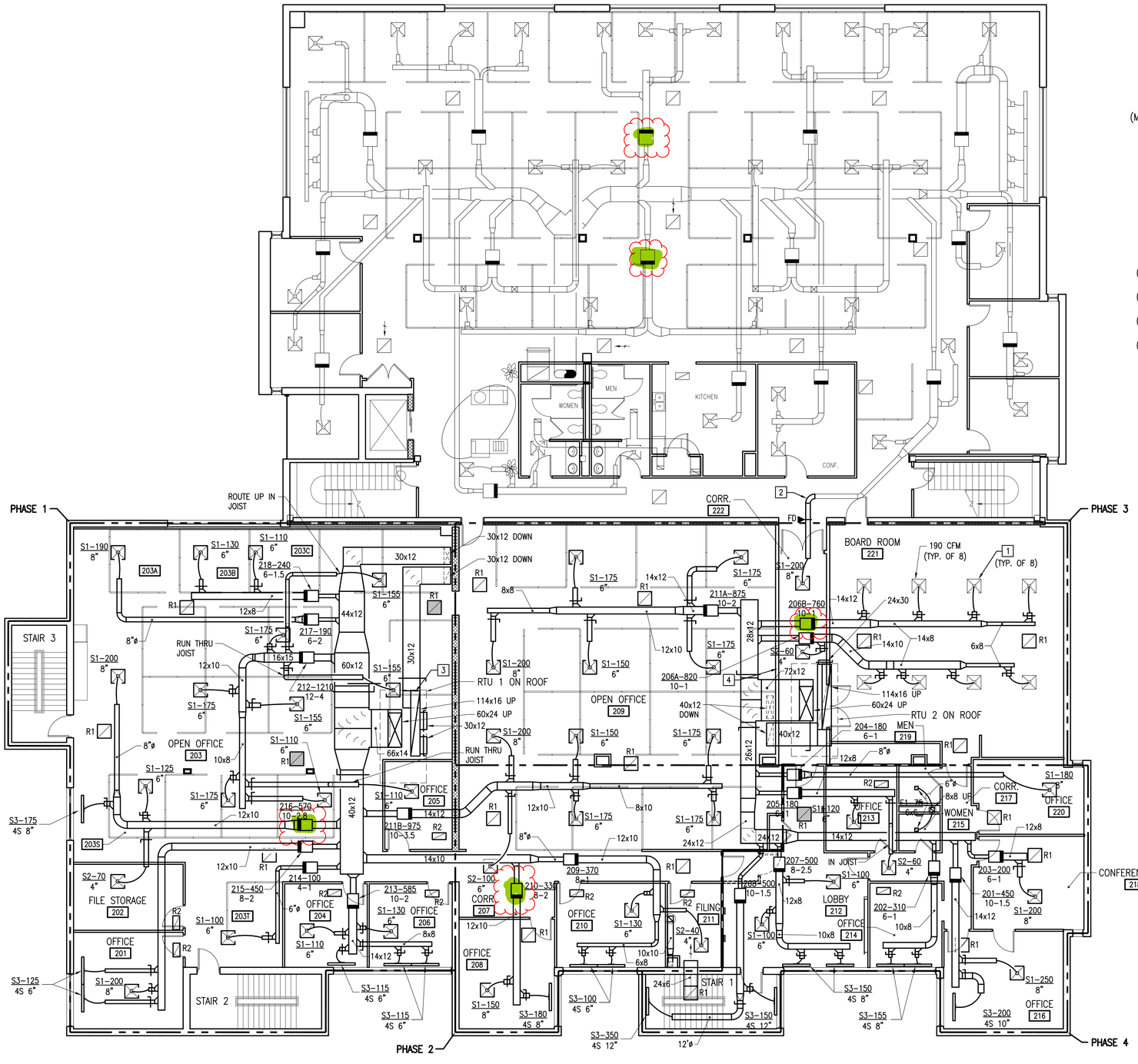
KEYED NOTES (VENTILATION):

(MC) 1 REUSE EXISTING PLAQUE DIFFUSERS. CLEAN ANY DUST OR GRIT AND ATTACH NEW 8" FLEX.

(MC) 2 RELOCATE EXISTING DIFFUSER IN BOARD ROOM HALLWAY AS SHOWN.

(MC) 3 TRANSITION INTO 30X16 INTO RETURN AIR PLENUM. SEE ELEVATIONS 3/M5.2 AND 4/M5.2.

(MC) 4 SEE ELEVATIONS 5/M5.2 AND 6/M5.2.



N

SECOND FLOOR PLAN – NEW WORK

SCALE 1/8"=1'-0"

4 0 8 16 FEET

AIR DEVICE
24x24 DIFFUSERS

MARK — S3–200 — 8" — NECK SIZE — CFM

NOTE: FOR 24x24 AIR DEVICES PROVIDE 4–WAY PATTERN UNLESS OTHERWISE SPECIFIED.

AIR DEVICE
SLOT DIFFUSERS

MARK — S3–200 — 4S–8" — # OF SLOTS FOR LINEAR DIFFUSERS — NECK SIZE — CFM

HW REHEAT COIL — VAV BOX # — 205–750 — 8–2.5 — BOX SIZE — CFM — HW GPM

ALL COILS SHALL HAVE 3–WAY VALVES

R1 RETURN AIR DEVICE WITHOUT RETURN DUCT ELBOW

R1 RETURN AIR DEVICE WITH RETURN DUCT ELBOW

REVISION	DATE

HANSON

Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886

Phone: (217) 788-2450
Fax: (217) 788-2503
www.hanson-inc.com
Offices Nationwide

Hanson No.	02S1363
Filename	M–102NW.DWG
Scale	1/8"=1'-0"
Date	4/30/2007

LAYOUT	MLZ	2/19/07
DRAWN	MLZ	2/19/07
REVIEWED	DAH	xx/xx/xx

HANSON

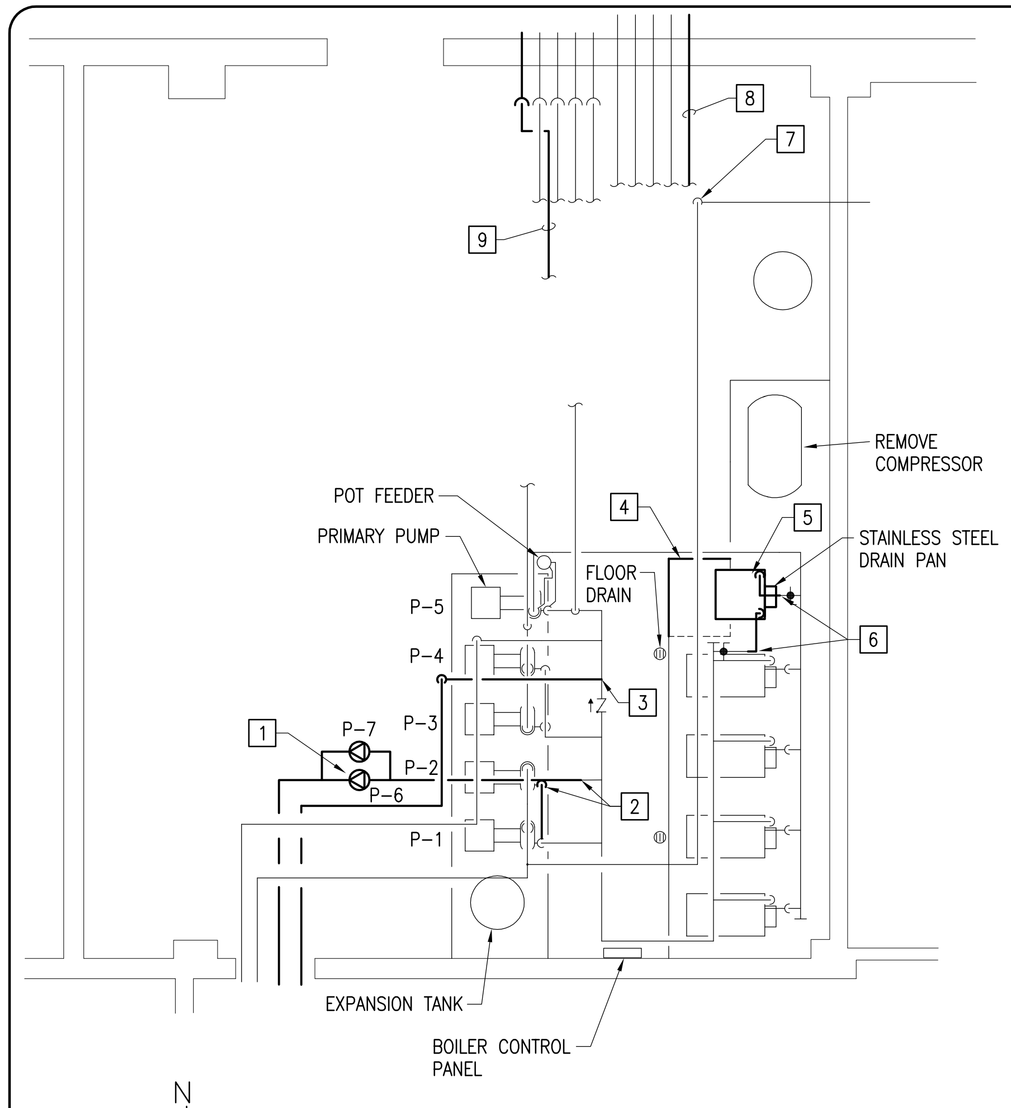
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886

SECOND FLOOR VENTILATION
NEW WORK

2007 REMODEL
HANSON OFFICE BUILDING
SPRINGFIELD, ILLINOIS

M2.2V

X of XX sheets

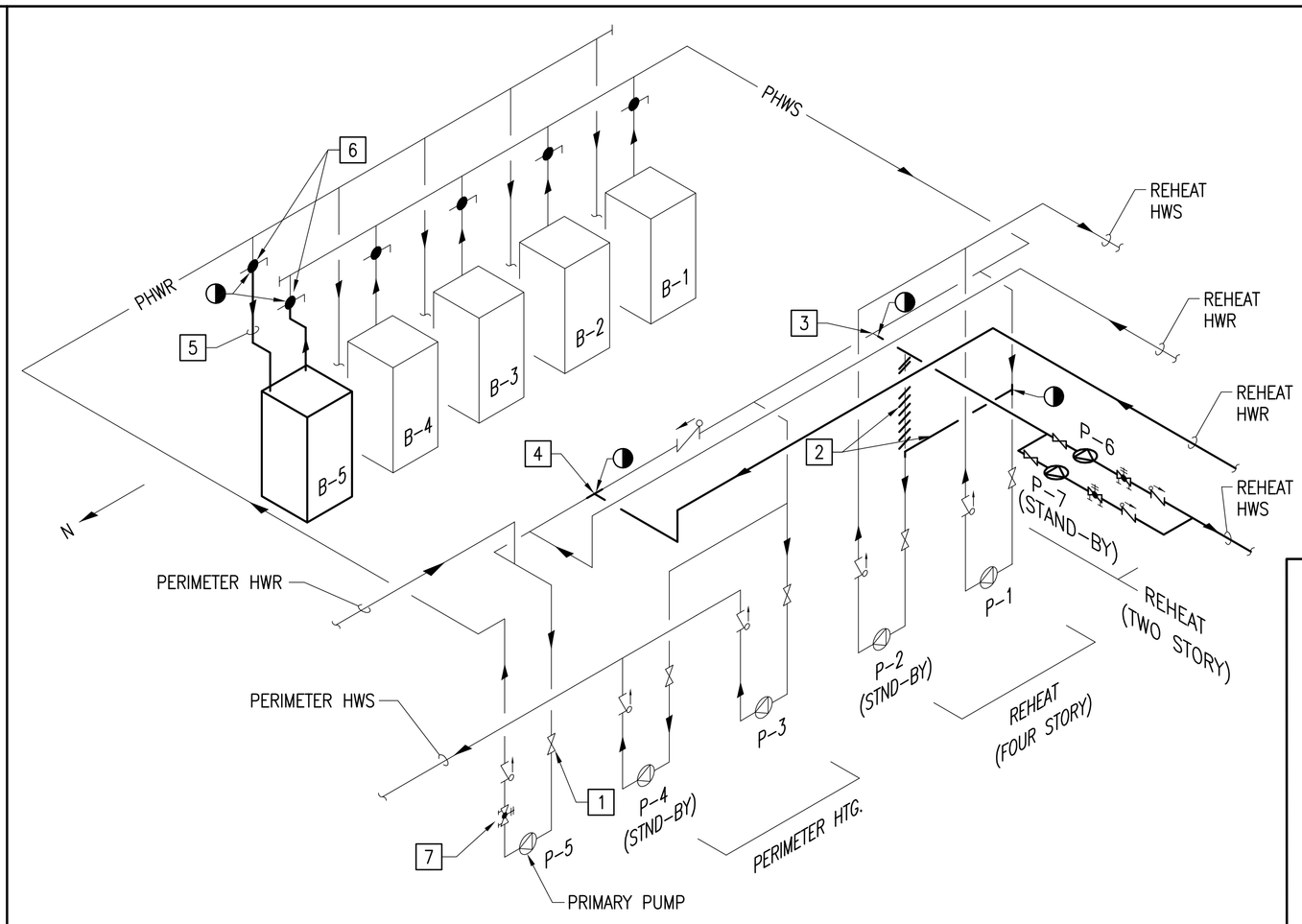


1 M5.1 — MECH. ROOM FLOOR PLAN

SCALE: 1/4" = 1'-0"

KEYED NOTES (FLOOR PLAN):

1. ATTACH NEW INLINE PUMPS TO CEILING JOISTS. SEE PUMP SCHEDULE.
2. RE-ROUTE PIPING AS SHOWN. USE EXISTING TAP OFF OF PRIMARY LOOP FOR SUCTION LINE OF NEW INLINE PUMP. SEE BOILER PIPING ISOMETRIC 2/M5.1.
3. INSTALL NEW TAP FOR RETURN DOWNSTREAM OF CHECK VALVE AS SHOWN.
4. POUR NEW CONCRETE PAD TO MAKE IT CONTIGUOUS WITH EXISTING PAD FOR NEW BOILER. APPROX. 3 FEET NORTH AS SHOWN.
5. PROVIDE NEW ULTRA CONDENSING HIGH EFFECIENCY GAS BOILER-310 SERIES 2. SEE BOILER SCHEDULE.
6. CONNECT TO EXISTING 1 1/2" TAPS ON EXISTING HWS/HWR MAINS. SEE BOILER PIPING SCHEMATIC 4/M5.1.
7. MODIFY HWS PIPING SO NEW FLUE GAS VENT PIPING MAY BE ROUTED BELOW.
8. ADD NEW 4" CPVC FLUE GAS PIPING TO BE PITCHED 1/4" PER FOOT TO DRAIN CONDENSATE BACK TO BOILER. SEE ALSO SCHEMATIC 3/M5.1.
9. ADD NEW 4" SCHEDULE 40 PVC COMBUSTION AIR FLUE. LIMITED SPACING MAY REQUIRE FLUE TO BE RUN BENEATH OTHERS. SEE ALSO SCHEMATIC 3/M5.1.



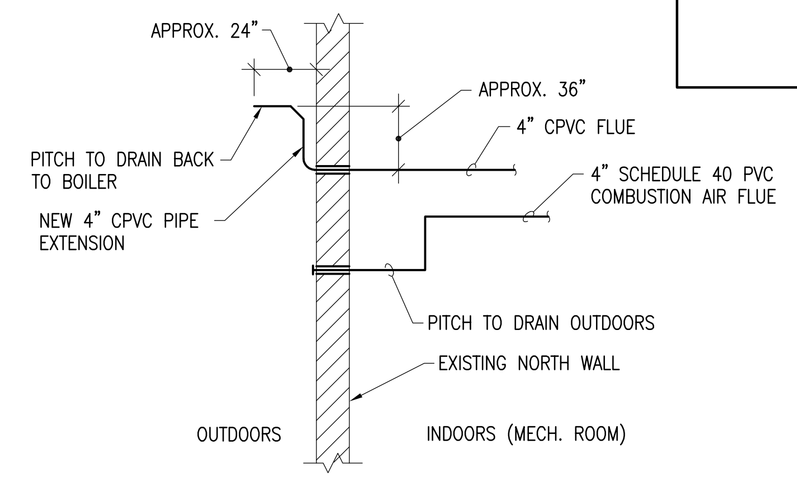
2 M5.1 — BOILER PIPING ISOMETRIC

SCALE: NONE

KEYED NOTES (ISOMETRIC):

1. ISOLATE HW HEATING SYSTEM FROM THE BUILDING HW PIPING.
2. REMOVE HASHED PIPING AND RE-ROUTE PIPING AS SHOWN.
3. REUSE EXISTING TEE/TAP FOR NEW SUCTION LINE TO NEW INLINE PUMPS.
4. INSTALL NEW RETURN PIPING TAP DOWNSTREAM OF CHECK VALVE AS SHOWN.
5. INSTALL NEW BOILER(B-5) AND NEW PIPING. SEE SCHEMATIC 4/M5.1 FOR BOILER PIPING ACCESSORIES.
6. ATTACH BOILER PIPING TO EXISTING TAPS ON MAINS.
7. REBALANCE PRIMARY FLOW TO 137.5 GPM.

BOILER SCHEDULE	
MARK	B-5
LOCATION	BOILER RM.
TYPE	CONDENSING
INPUT (BTUH)	310
OUTPUT (BTUH)	289
BURNER TYPE	S.S.
FUEL	GAS
INLET GAS PRESS.(IN)	–
NO. OF PASSES	–
MIN. EFFICIENCY	93
WORKING PRESSURE	30
INLET WATER TEMP (°F)	160
OUTLET WATER TEMP (°F)	180
FLOW	27.5
MAX. W.P.D. (FT)	15
ACCESSORIES	
REMARKS	



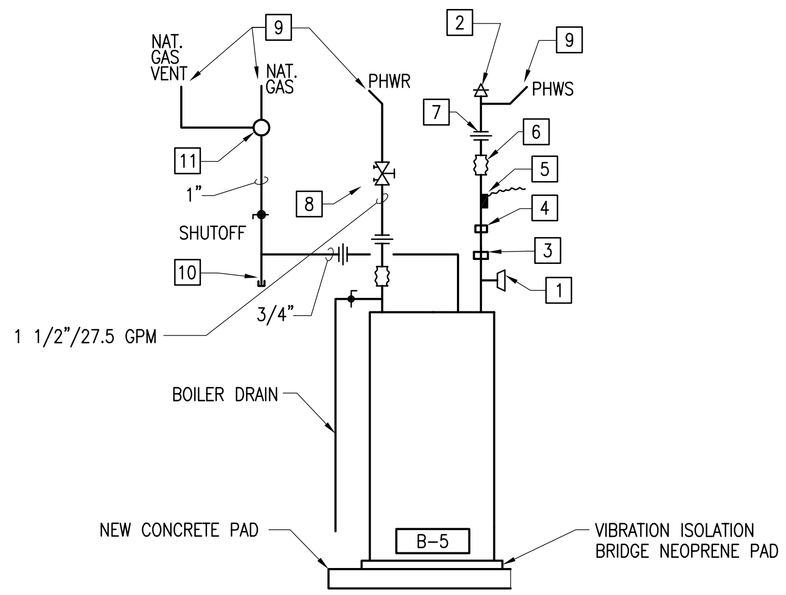
NOTES:

1. NEW 4" CVPC FLUE PIPE TO BE PITCHED 1/4" PER FOOT TO ENABLE CONDENSATE TO DRAIN BACK TO BOILER.
2. NEW 4" COMBUSTION AIR HORIZONTAL PIPE SHALL BE PITCHED TO DRAIN AWAY FROM BOILER. IT IS CRITICAL THAT NO TRAPS ARE FORMED ON THE COMBUSTION AIR INTAKE.
3. INSTALL FLUE GAS PIPE (CVPC) OUTDOORS CLOSE TO THE BUILDING. PROVIDE ELBOW, PIPE, ELBOWS, ETC. TO ROUTE PIPE AS SHOWN.

3 M5.1 — COMBUSTION AIR AND FLUE GAS PIPING SCHEMATIC

SCALE: NONE

PUMP SCHEDULE				
MARK		P-6	P-7	
LOCATION		MECH. ROOM	MECH. ROOM	
SERVICE		PRIMARY HOT WTR.	PRIM. HW (ST. BY)	
TYPE		INLINE	INLINE	
FLOW RATE (GPM)		52	52	
HEAD (FT.)		35	35	
NO FLOW HD. (FT.)		–	–	
MIN. EFF. %		60	60	
FLUID OPER. TEMP. (°F)		180	180	
MOTOR	HP	1.5	1.5	
	RPM	1750	1750	
	VOLTS	208	208	
	PH	3	3	
	TYPE	–	–	
VIBRATION ISOLATION	TYPE	DOUBLE DEFL.	DOUBLE DEFL.	
	DEFL.	1"	1"	
ACCESSORIES				
REMARKS				



KEYED NOTES (NEW WORK):

1. TEMP/PRESSURE GUAGE
2. RELIEF VALVE
3. MCDONELL FLOW SWITCH MODEL FS4-3
4. MCDONELL LOW WATER CUT-OFF MODEL 901
5. HI LIMIT
6. FLEXIBLE PIPE CONNECTION
7. UNION
8. CIRCUIT SETTER
9. ATTACH TO EXISTING TAPS.
10. DIRT LEG
11. PRESSURE REGULATOR

NOTES:

1. PROVIDE STAINLESS STEEL CONDENSATE DRAIN PAN.

4 M5.1 — BOILER PIPING SCHEMATIC – (NEW WORK)

SCALE: NONE

ELECTRIC BASEBOARD HEATER SCHEDULE		
MARK		EH-1
LOCATION		OFFICE 208
MANUFACTURER		QMARK
MODEL		QMKC2516W
HEATER DATA	KW	1.5
	LENGTH	6'
	VOLTS/PH	120/1
ACCESSORIES		SINGLE POLE THERMOSTAT RATED 22A @ 120-277V DOUBLE POLE DISCONNECT SWITH RATED 20A @120-277V
REMARKS		

GENERAL NOTES:

1. ENTIRE HYDRONIC SYSTEM SHALL BE MAINTAINED DUST AND GRIT FREE DURING THE CONSTRUCTION PERIOD. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING OF ALL COMPONENTS (AFFECTED BY THIS PROJECT) TO THE OWNERS SATISFACTION PRIOR TO START-UP.
2. USE BALL/BUTTERFLY/GATE VALVES FOR SHUT-OFF FUNCTION.
3. PROVIDE AUTO AIR VENTS AT ALL HIGH POINTS AND DRAIN VALVES AT LOW POINTS.
4. PROVIDE 45° Y CONNECTION AT BRANCH PIPING TAKE-OFF'S.
5. PROVIDE 2" CPVC (OR STAINLESS STEEL PIPE) MAIN DRAIN FOR ROUTING CONDENSATE FROM BOILER MODULE. TERMINATE MAIN DRAIN OPENSITE AT EXISTING FLOOR DRAIN. THIS IS NOT SHOWN ON FLOOR PLAN.
6. PROVIDE REINFORCED (#4 BARS @ 12" EACHWAY) CONCRETE PADS WHERE SPECIFIED. PAD SHALL HAVE 1"/45° CHAMFERED EDGE ALONG PERIMETER. CONCRETE PAD SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH OF 3000 PSI.
7. CONTRACTOR SHALL PROVIDE CONDUIT AND WIRING FROM SENSORS/SAFETY DEVICES TO RESPECTIVE BOILER OR BOILER CONTROL PANEL. PROVIDE "AS BUILT" WIRING DIAGRAM.
8. NEW HW PIPING SHALL BE SCHEDULE 40 BLACK STEEL OR COPPER PIPE TYPE L.
9. PIPE INSULATION SHALL BE NON-FLEXIBLE FIBERGLASS WITH ALL SERVICE JACKET. PROVIDE PVC JACKET ON ALL NEW PIPING AND PIPE FITTINGS. INSULATION SHALL BE 1" THICK FOR PIPE SIZES 2" AND SMALLER AND 1 1/2" THICK FOR ALL PIPE SIZES 2 1/2" AND LARGER.
10. INCLUDE TEST AND BALANCE FOR PRIMARY HOT WATER CIRCUIT.
11. BOILER MANUFACTURER'S REPRESENTATIVE SHALL PROVIDE START-UP FOR HOT WATER SYSTEM INCLUDING SETTING UP OF EXISTING CONTROL PANEL FOR HW RESET BASED ON OUTDOOR AIR TEMP. (HWST 180°F-120°F FOR OAT 20°F TO 60°F).
12. CONTRACTOR SHALL PROVIDE COMPLETE WIRING DIAGRAM BASED ON SENSORS/SAFETIES IDENTIFIED ON THE SHEMATIC.
13. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR:
    - BOILER
    - ALL PIPING ACCESSORIES INCLUDING SAFETIES
    - REVISED WIRING DIAGRAM FOR BOILER CONTROL PANEL INCLUDING NEW SAFETIES, SENSORS, ETC.
14. HOT WATER TEMP SENSORS SHALL BE IMMERSION TYPE.

JAN 15, 2013 1:24 PM KOCHM0984
I:\HE~BLDG\SPRINGFIELD ORIGINAL DRAWINGS 1974, 1980, 1990, 2002, 2003 & 2007\CORRPROC0000 -- 2007 -- 01-11-13\MECH\H-501.DWG

REVISION | DATE

HANSON

Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Phone: (217) 788-2450
Fax: (217) 788-2503
www.hanson-inc.com
Offices Nationwide

Hanson No. 02S1363
Filename H-501.DWG
Scale AS SHOWN
Date 4/30/07

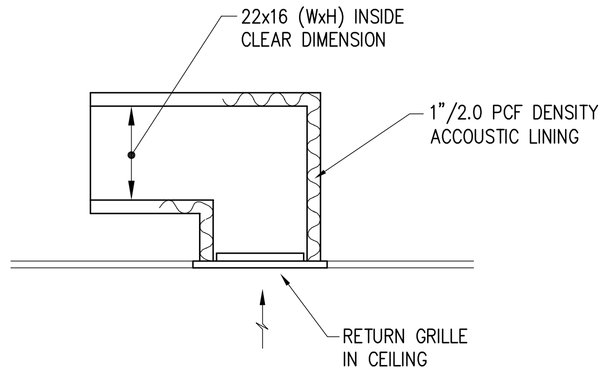
LAYOUT	MLZ	4/11/07
DRAWN	MLZ	4/11/07
REVIEWED	xxx	xx/xx/xx

BOILER ROOM DETAILS AND SCHEDULES

2007 REMODEL
HANSON OFFICE BUILDING
SPRINGFIELD, ILLINOIS

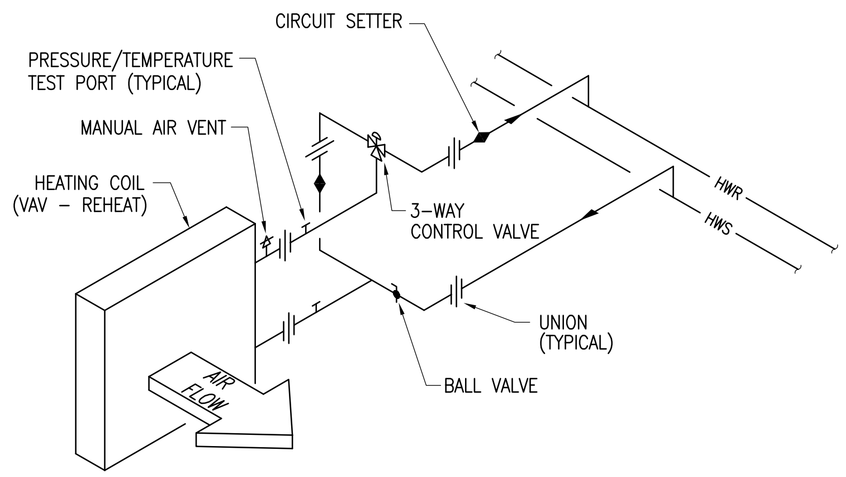
M5.1

X of XX sheets



1 M5.2 DUCTED ELBOW RETURN AIR DEVICE DETAIL

SCALE: NONE



2 M5.2 HEATING COIL PIPING SCHEMATIC
3-WAY VALVE (TYPICAL)

SCALE: NONE

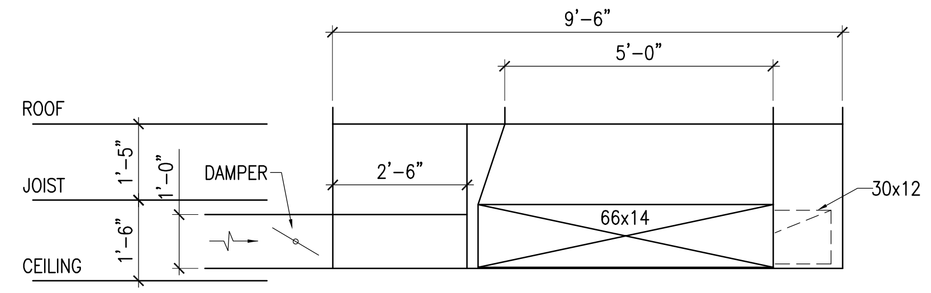
EXHAUST FAN SCHEDULE			
MARK		EF-1	EF-2
SERVICE		MEN #219 WOMEN #215	MEN #122 WOMEN #121
MANUFACTURER/MODEL		COOK/70C15DM	COOK/90C15DL
LOCATION		ROOF	ROOF
CFM		150	300
EXT S.P.		0.25	0.35
FAN RPM (APPROX.)		1670	1715
MAX. BHP		–	–
MOTOR	HP	1/20	1/8
	VOLT	115	115
	PHASE	1	1
	RPM	–	–
ACCESSORIES		1 THRU 5	1 THRU 5
REMARKS		1	1

ACCESSORIES:

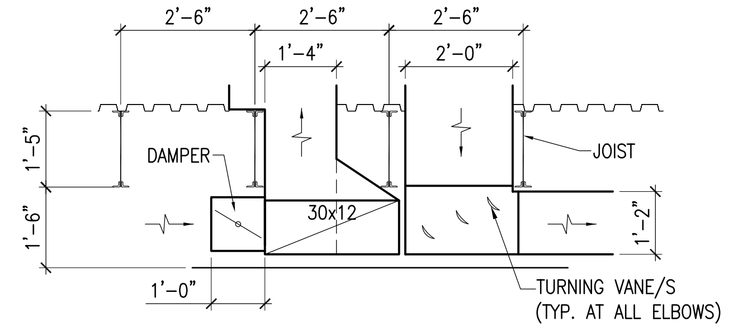
1. PREFAB INSULATED ROOF CURB (18" H) WITH WELDED SEAM.
2. BIRDSCREEN.
3. GRAVITY BACKDRAFT DAMPER.
4. PREWIRED DISCONNECT.
5. SOLID STATE SPEED CONTROLLER. IF SPEED CONTROLLER IS SHIPPED LOOSE, VC SHALL BE RESPONSIBLE FOR FIELD INSTALLATION.

REMARKS:

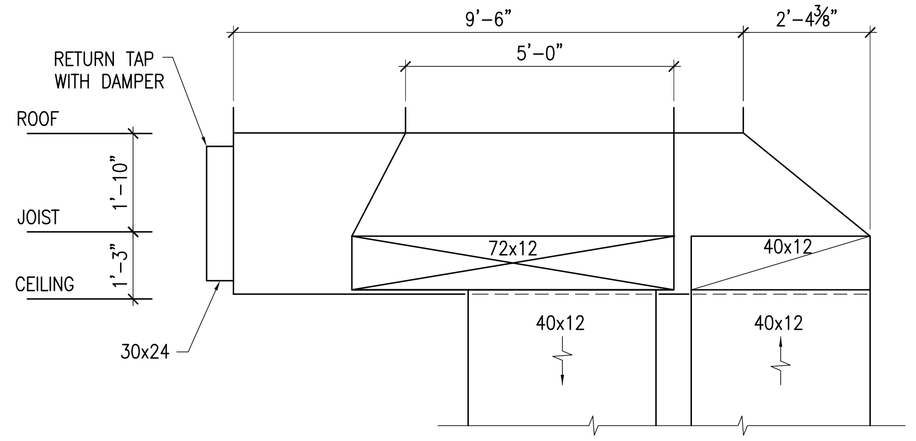
1. FAN MANUFACTURER SHALL ALLOW FOR INTERNAL STATIC SPECIFIC TO THE FAN BEING INSTALLED.



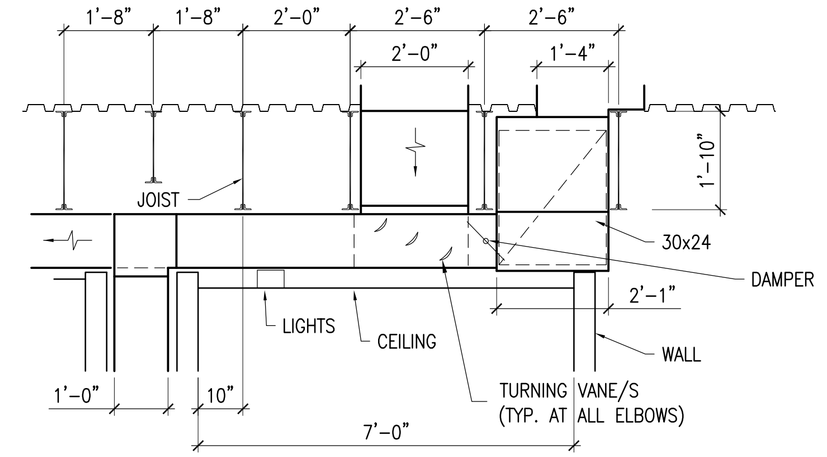
3 M5.2 WEST ELEVATION OF DUCTOWRK OF RTU-1



4 M5.2 NORTH ELEVATION OF OF DUCTWORK OF RTU-1



5 M5.2 WEST ELEVATION OF DUCTWORK OF RTU-2



6 M5.2 SOUTH ELEVATION OF DUCTWORK OF RTU-2

CONSTRUCTION PHASING					
PHASE	UNITS SERVING AREA	ADDITIONAL EQUIPMENT ON ROOF	AREAS	PEOPLE DISPLACED	NOTES
1	RTU-7	EXHAUST FAN	OPEN OFFICE 203	17	REMOVE UNITS RTU-7 & 8 AND ASSOCIATED DUCTWORK. INSTALL NEW RTU-1 AND DUCTWORK, VAV BOXES AND HW PIPING. REMOVE AND CAP BACK ANY DUCTWORK IN SPACE ASSOCIATED WITH PHASE ONE(1) (OFFICE 204, 205, & 206) FROM RTU-5 & 6 WHILE KEEPING RTU-5 & 6 OPERATIONAL. CREATE HOLE IN FLOORING WHERE NEW DUCTWORK AND CHASE ENTER FIRST FLOOR MECHANICAL ROOM. INSTALL NEW CIRCULATING PUMPS IN BOILER ROOM, AND RUN HW PIPING TO FIRST FLOOR MECHANICAL ROOM, AND PIPE UP TO SECOND FLOOR IN CHASE WITH DUCTWORK. RUN DUCTWORK DOWN TO FIRST FLOOR MECHANICAL ROOM, AND ADD DAMPERS FOR TEMPORARY DUMPING OF AIR. PREPARE FOR REMOVAL OF DISCONNECTED EXHAUST FAN, CURB, ASSOCIATED DUCTWORK, AND VENT.
	RTU-8	VENT	OFFICE 201	1	
			ROOM 202		
			OFFICE 204		
			OFFICE 205	1	
			OFFICE 206	1	
				20	
2	RTU-5	EXHAUST FAN	OPEN OFFICE 209	4	PHASE ONE(1) SHOULD BE COMPLETED BEFORE MOVING TO PHASE TWO(2). DISCONNECT UNITS RTU-5 & 6, AND REMOVE ASSOCIATED DUCTWORK. INSTALL NEW DUCTWORK, VAV BOXES AND HW PIPING. PREPARE DISCONNECTED EXHAUST FANS, CURBS, VENTS, ASSOCIATED DUCTWORK AND PIPING FOR REMOVAL. VENT FOR FIRST FLOOR RESTROOMS SHALL REMAIN. INSTALL NEW EXHAUST FAN AND DUCTWORK.
	RTU-6	2 VENTS	CORR. 207		
		2 CONDENSERS	OFFICE 208	1	
		ABANDONED RTU	OFFICE 210	1	
			FILING 211		
				6	
3	RTU-1	2 EXHAUST FANS	OPEN OFFICE 209	8	COMPLETE FIRST FLOOR HW PIPING LOOP. REMOVE UNIT RTU-1 AND ASSOCIATED DUCTWORK. INSTALL NEW RTU-2 AND NEW DUCTWORK, VAV BOXES AND HW PIPING. DISCONNECT RTU-2 &3 AND REMOVE ASSOCIATED DUCTWORK. COORDINATE TEMPORARY DUCTWORK FOR OFFICE 220 (COOMBE) WITH MECHANICAL ENGINEER. PREPARE FOR REMOVAL OF DISCONNECTED EXHAUST FANS, CURBS, VENT, ASSOCIATED DUCT WORK, AND PIPING. CREATE HOLE IN FLOORING WHERE DUCTWORK ENTERS FIRST FLOOR. HOLE CONSTRUCTION NEEDS TO BE PERFORMED ON WEEKEND AS FIRST FLOOR OFFICE SPACE NEEDS TO NOT BE DISTURBED. RUN DUCTWORK DOWN TO FIRST FLOOR AND ADD DAMPERS FOR TEMPORARY DUMPING OF AIR.
	RTU-2	VENT	BOARD ROOM 221		
	RTU-3				
				8	
4	RTU-4	2 EXHAUST FANS	OFFICE 216	1	PHASE FOUR(4) WILL INCLUDE WORK IN THE LOBBY AND EXECUTIVE OFFICE AREA. EXECUTIVE OFFICE WORK SHOULD BE PERFORMED AS QUICKLY AS POSSIBLE TO REDUCE THE TIME OCCUPANTS ARE DISPLACED FROM THEIR OFFICES. DISCONNECT UNITS RTU-4 & 10 , AND REMOVE ASSOCIATED DUCTWORK. INSTALL NEW DUCTWORK, VAV BOXES AND HW PIPING. INSTALL NEW EXHAUST FAN. VENT FOR SECOND FLOOR RESTROOM REMAINS.
	RTU-10	2 VENTS	OFFICE 214	1	
		CONDENSER	OFFICE 213	1	
			MEN 219		
			WOMEN 215		
			LOBBY 212		
			OFFICE 220	1	
				4	
5	F-5	EF-8 (IN CELING)	VAULT 104		PHASE FIVE(5) WORK CAN OVERLAP WITH PHASE FOUR(4) WORK. REMOVE FURNACES 5 & 6 AND DISCONNECT FOR REMOVAL ROOF TOP CONDENSERS ACCU 5 & 6. REMOVE ALL ASSOCIATED DUCTWORK. REMOVE EXHAUST FANS 8 & 9 AND ASSOCIATED DUCTWORK. INSTALL NEW DUCTWORK, VAV BOXES AND HW PIPING.
	F-6	EF-9 (IN CEILING)	SUPPLY RM. 106		
	ACCU-5		OFFICE 103		
	ACCU-6		MAIL RM. 107	1	
			MAP FILING 109		
			LIBRARY 102	2	
			OFFICE 101	1	
			TRAINING LAB123		
			CORR. 120	4	
6			OPEN OFFICE 110	9	REMOVE EXISTING DUCTWORK AND CAP DUCTS BACK ENTERING THE SPACE FROM FURNACES 3 & 4. INSTALL NEW DUCTWORK.
				9	
7	F-1		OPEN OFFICE 114	11	REMOVE FURNACES 1, 3, & 4, AND DISCONNECT FOR REMOVAL ROOF TOP CONDENSERS ACCU 1, 3, & 4. REMOVE ALL ASSOCIATED DUCTWORK. INSTALL NEW DUCTWORK, VAV BOXES AND HW PIPING.
	F-3		MECH. RM. 115		
	F-4		SERVER RM. 111		
	ACCU-1		OFFICE 112	1	
	ACCU-3		OFFICE 117	1	
	ACCU-4		OFFICE 118	1	
			OFFICE 119	1	
			ACC. STO. 116	15	

REVISION | DATE

HANSON

Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886

Hanson No. 02S1363
Filename M-502.DWG
Scale
Date 4/30/2007

LAYOUT	MLZ	4/10/07
DRAWN	MLZ	4/10/07
REVIEWED	DAH	xx/xx/xx

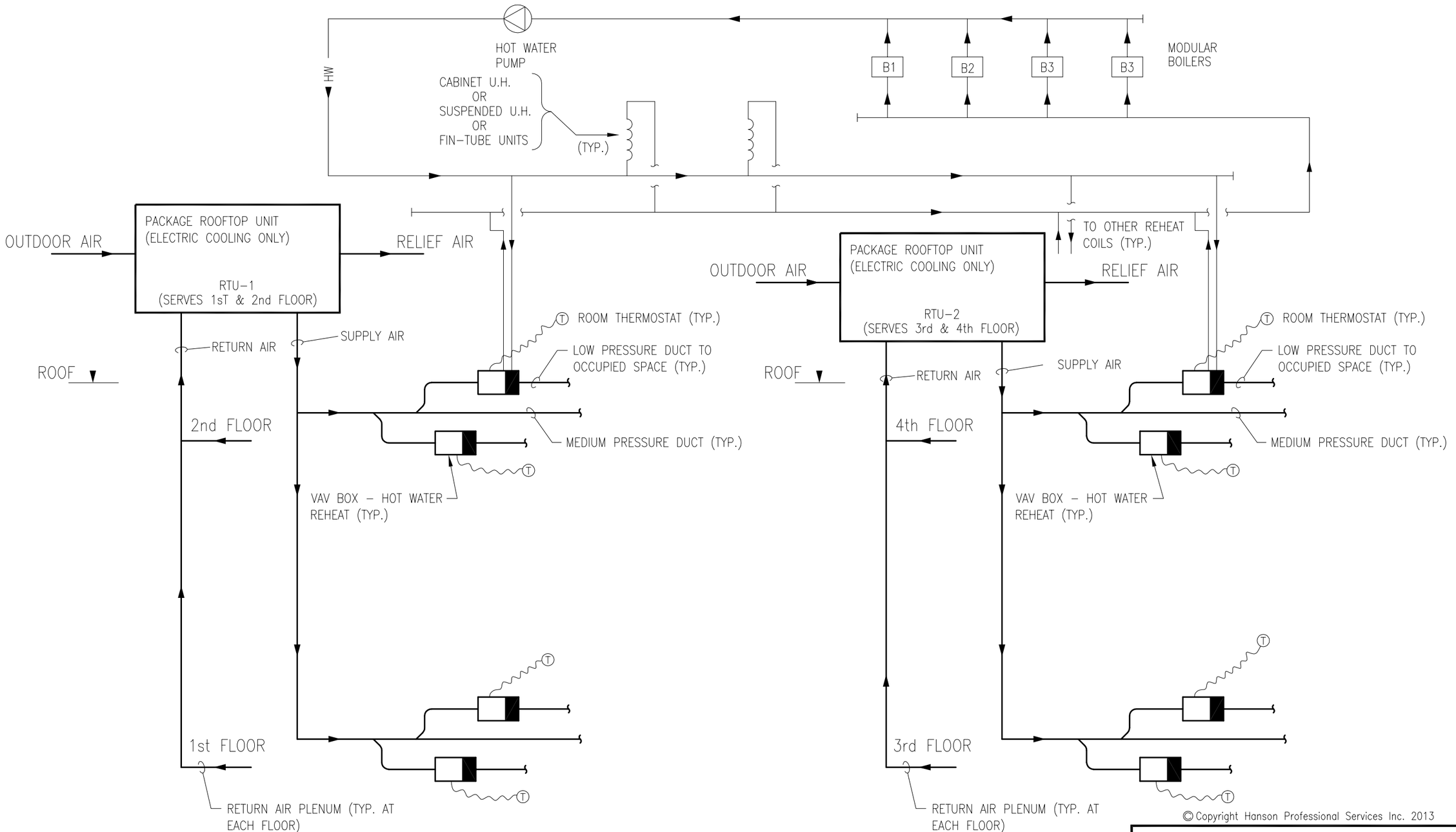
Phone: (217) 788-2450
Fax: (217) 788-2503
www.hanson-inc.com
Offices Nationwide

DETAILS, SCHEDULES, & PHASING NOTES

2007 REMODEL
HANSON OFFICE BUILDING
SPRINGFIELD, ILLINOIS

M5.2

- of XX sheets



PACKAGE ROOFTOP UNIT SYSTEM SCHEMATIC

SCALE: NONE

HANSON
Hanson Professional Services Inc.

HANSON PROFESSIONAL SERVICES INC.
1525 S. SIXTH STREET
SPRINGFIELD, IL. 62703

08/20/03 M5

VAV BOX SCHEDULE (FIRST FLOOR) – FURNISHED BY TC, INSTALLED BY MC

MARK		101	102	103	104	105	106	107	108	109	110	111	112	113	114
SERVICE		OFFICE 119	OFFICE 119 & 118, ROOMS 115 & 116	OPEN OFFICE 114	OPEN OFFICE 114M & 114L	TRAINING LAB 123, CORR. 120	OPEN OFFICE 110	OFFICE 112	VAULT 104, CORR. 124 SUPPLY RM. 106	OFFICE 103	MAIL RM. 107 MAP FILING 109	LIBRARY 102	LIBRARY WEST 102A	OFFICE 101	SERVER ROOM
INLET SIZE (IN.) (BASED ON TITUS)		6	10	12	6	8	10	4	6	4	6	8	6	6	12
MAX. CFM		200	370	1060	330	400	700	120	200	140	150	525	250	190	1700
MIN. CFM		185	300	325	170	200	230	45	190	45	80	145	150	140	500
MAX. AIR PRESSURE DROP		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
WATER REHEAT COIL	HEATING CFM	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	MAX. WPD. FT.	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	N.A.
	TOTAL MBH	7.9	13.2	6.0	7.3	8.5	4.2	0.8	8.2	0.8	1.5	5.8	6.5	6.1	–
	GPM	2	2	1	1	1	1	1	2	1	1	1	1	1	–
	EAT	55	55	55	55	55	55	55	55	55	55	55	55	55	55
ACCESSORIES		1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4
REMARKS		1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4

VAV BOX SCHEDULE (SECOND FLOOR) – FURNISHED BY TC, INSTALLED BY MC

MARK		201	202	203	204	205	206A	206B	207	208	209	210	211A	211B
SERVICE		OFFICE 216	OFFICE 214	CONF. ROOM 218	OFFICE 220	OFFICE 213 CORR. 217	BOARD ROOM 221, CORR. 222	BOARD ROOM 221	LOBBY 212	STAIR 1	OFFICE 210, FILING 211	OFFICE 208	OPEN OFFICE 209	OPEN OFFICE 209 CORR. 207
INLET SIZE (IN.) (BASED ON TITUS)		10	6	6	6	6	10	10	8	10	8	8	10	10
MAX. CFM		450	310	200	180	180	820	760	500	500	370	330	875	975
MIN. CFM		285	155	130	105	95	250	250	260	500	210	240	300	365
MAX. AIR PRESSURE DROP		0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
WATER REHEAT COIL	HEATING CFM	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	MAX. WPD. FT.	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.5	2.0	2.0
	TOTAL MBH	12.2	6.7	5.7	4.5	4.0	10.8	10.8	11.1	23.0	8.9	10.4	12.9	15.8
	GPM	1.5	1	1	1	1	1	1	2.5	1.5	1	2	2	3.5
	EAT	55	55	55	55	55	55	55	55	55	55	55	55	55
ACCESSORIES		1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4
REMARKS		1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1, 2, 4, 5	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4

VAV BOX SCHEDULE (SECOND FLOOR) – FURNISHED BY TC, INSTALLED BY MC

MARK		212	213	214	215	216	217	218
SERVICE		OPEN OFFICE 203	OFFICE 204 & 206	OPEN OFFICE 203T	OFFICE 201	OPEN OFFICE 203 RM. 202	OPEN OFFICE 203 A	OPEN OFFICE 203B & 203C
INLET SIZE (IN.) (BASED ON TITUS)		12	10	4	8	10	6	6
MAX. CFM		1210	585	100	450	570	190	240
MIN. CFM		500	300	45	245	350	190	180
MAX. AIR PRESSURE DROP		0.3	0.3	0.3	0.3	0.3	0.3	0.3
WATER REHEAT COIL	HEATING CFM	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	MAX. WPD. FT.	3.0	2.0	2.0	2.0	2.0	2.0	2.0
	TOTAL MBH	20.8	13.0	2.0	10.5	15.0	8.1	7.7
	GPM	4	2	1	2	2.8	2	1.5
	EAT	55	55	55	55	55	55	55
ACCESSORIES		1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4
REMARKS		1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4	1 THRU 4

AIR DEVICE SCHEDULE (BY MC)

MARK	S1	S2	S3	S4		R1	R2	E1	E2
SERVICE	SUPPLY	SUPPLY	SUPPLY	SUPPLY		RETURN	RETURN	EXHAUST	EXHAUST
MODEL # (BASED ON TITUS)	TMS–AA	TMS–AA	TBD–30	TBD–30		PAR–AA	PAR–AA	50F	350FL
MAX. APD (IN. WG)	0.1	0.1	0.1	0.1		0.1	0.1	0.1	0.1
THROW (FT/50 FPM)	–	–	–	–		–	–	–	–
MAXIMUM NC	25	25	25	25		25	25	25	25
ADAPTER SIZE, IN	–	–	–	–		–	–	–	–
NOMINAL NECK SIZE, IN	SEE PLANS	SEE PLANS	SEE PLANS	SEE PLANS		22x22	10x22	SEE PLANS	SEE PLANS
MODULE SIZE, IN	24x24	12x12	48"	24"		24x24	12x24	6x6	6x6
PATTERN	4–WAY	4–WAY	SLOT	SLOT		–	–	–	–
FRAME	LAY–IN	LAY–IN	LAY–IN	LAY–IN		LAY–IN	LAY–IN	SURFACE	SIDEWALL
FINISH	WHITE	WHITE	WHITE	WHITE		WHITE	WHITE	WHITE	WHITE
MATERIAL	ALUMINUM	ALUMINUM	ALUMINUM	ALUMINUM		ALUMINUM	ALUMINUM	ALUMINUM	ALUMINUM
ACCESSORIES	1	1	2,3	2,3		–	–	–	–
REMARKS	–	–	1	1		2	2	–	–

ACCESSORIES (TYP.)

1. FACTORY INSTALLED TRANSFORMER.
2. NEMA 1 CONTROL ENCLOSURE.
3. STERI–LOC LINER.
4. HW COIL ACCESS DOOR.

REMARKS (TYP.)

1. FACTORY INSTALLED VAV CONTROLLER AND DAMPER ACTUATOR.
2. LH/RH COIL CONNECTION SHALL BE COORDINATED WITH CONTRACTOR. TC IS RESPONSIBLE FOR FIELD DETERMINATION OF LH/RH CONNECTIONS.
3. ONE ROW COILS.
4. ACCEPTABLE MANUFACTURERS: TITUS, KRUGER, E H PRICE, TRANE, ANEMOSTAT.
5. TWO ROW COIL.

ACCESSORIES:

1. OPPOSED BLADE DAMPER AND INSULATION BLANKET ON BACKPAN FOR SUPPLY AIR DEVICES.
2. INSULATED PLENUM WITH INLET DAMPER.
3. PATTERN CONTROLLER.
4. HANGER BRACKETS FOR SUSPENSION.

REMARKS:

1. PLENUM HEIGHT SHALL BE APPROX. 11 INCHES. INLET CONNECTION TO THE PLENUM SHALL BE AS HIGH AS POSSIBLE TO PREVENT CONFLICT WITH ADJACENT LIGHT FIXTURES.
2. PROVIDE RECTANGULAR DUCT WITH OPEN NECK AT ALL RETURN AIR DIVICES.

REVISION	DATE

HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Phone: (217) 788-2450
Fax: (217) 788-2503
www.hanson-inc.com
Offices Nationwide

Hanson No. 02S1363
Filename M-601.DWG
Scale
Date 4/30/2007

LAYOUT	MLZ	1/29/07
DRAWN	MLZ	1/29/07
REVIEWED	DAH	xx/xx/xx

VAV SCHEDULE

2007 REMODEL
HANSON OFFICE BUILDING
SPRINGFIELD, ILLINOIS

M6.1
- of XX sheets

ROOF TOP UNIT SCHEDULE

MARK	MANUF.	MODEL	CONFIG.	SERVICE	LOCATION	SYSTEM TYPE	SUPPLY AIR FAN					EXH AIR FAN				COOLING (95°F AMB)				MIN O.A. CFM	FILTER			ELECTRICAL			ACCESSORIES	REMARKS
							CFM	ESP		BHP	MOTOR HP	CFM	ESP	BHP	MOTOR FLA	EAT DB/WB°F	LAT DB/WB°F	TOTAL MBH	SENS MBH		TYPE	THICK	EFFCY	V/ø/HZ	MOCP	MCA		
								SUP	RET																			
RTU-1	CARRIER	50AK-020	DOWN FLOW	WEST	ROOF	VAV	6800	2.0	1.0	8.3	10.0	6800	0.7	–	23.6	81.3/65.5	56.2/53.5	243	180	1200	PL	2"	30%	208/3/60	175	151.1	1 THRU 26	1 THRU 6
RTU-2	CARRIER	50AK-025	DOWN FLOW	EAST	ROOF	VAV	5600	2.0	1.0	7.2	10.0	5600	0.7	–	23.6	84.4/68.4	54.2/52.1	277	178	1900	PL	2"	30%	208/3/60	175	155.1	1 THRU 26	1 THRU 6

ACCESSORIES

1. ENTHALPY ECONOMIZER WITH 100% MODULATION AND POWER EXHAUST. PROVIDE HUMIDITY SENSOR ON O.A. AND R.A. SYSTEM FOR MONITORING/ALARMING.
2. ULTRA LOW LEAKAGE TYPE ECONOMIZER DAMPERS.
3. EXTENDED HEIGHT FULL PERIMETER, SLOPED, INSULATED ROOF CURB (14"–18" HIGH). SLOPE TO BE DETERMINED BY CONTRACTOR.
4. GENERIC BAS SYSTEM INTERFACE.
5. ANTISHORT CYCLE FOR COMPRESSOR AND TIME DELAY BETWEEN COMPRESSOR STARTS.
6. CONVENIENCE OUTLET – FACTORY WIRED AND INSTALLED.
7. ONE EXTRA SET OF AIR FILTERS FOR EACH RTU.
8. PRE–WIRED ELECTRICAL DISCONNECT.
9. UNIT MOUNTED INLET HOOD OR MOISTURE ELIMINATOR WITH BIRD SCREEN.
10. HIGH EFFICIENCY MOTORS, VFD RATED.
11. FACTORY WIRED RETURN AIR SMOKE DETECTOR WITH ONE SET OF AUXILLARY CONTACTS FOR FIRE ALARM SYSTEM.
12. FURNISH CO_2 SENSOR AND CONTROLLER (SENSOR MOUNTED IN SPACE) FOR CONTROLLING OUTDOOR AIR DAMPER.
13. LOCK OUT MECHANICAL REFRIGERATION WHEN OAT ≦ 45° F. (ADJ).
14. AVERAGING TYPE LOW LIMIT CONTROL STAT WITH MANUAL RESET FOR DISCHARGE AIR TEMP. (40° ADJ).
15. PHASE AND BROWN OUT PROTECTION. PROVIDE INDICATING LIGHT WHEN UNIT TRIPS VIA PHASE PROTECTION SAFETY.
16. HOT GAS BY–PASS CONTROL ON LEAD CIRCUIT/COMPRESSOR.
17. SLOPED STAINLESS STEEL DRAIN PAN.
18. SPRING TYPE ANTIVIBRATION RAIL (2" DEFLECTION) UNDER ENTIRE UNIT.
19. SERVICE VALVES ON REFRIGERATION CIRCUIT.
20. FILTER DRYERS AND SIGHT GLASS (WITH ISOLATION VALVES FOR MAINTENANCE) FOR EACH REFRIGERATION CIRCUIT.
21. PROVIDE VARIABLE FREQUENCY DRIVES FOR SUPPLY AND EXHAUST FANS. DRIVES SHALL BE COMPLETE WITH BYPASS. SEE VFD SPECIFICATION IN DIVISION 16. DUCT STATIC PRESSURE SENSORS AND BUILDING PRESSURE SENSORS FOR CONTROL OF VFD'S SHALL BE INCLUDED BY RTU VENDOR. INTEGRATE BLDG. PRESSURE CONTROL WITH ECONOMIZER.
22. EXTENDED GREASE LINES.
23. HINGED SERVICE PANELS.
24. HAIL GUARD FOR CONDENSER COIL.

REMARKS:

1. ESP INCLUDES SUPPLY AND RETURN DUCT. LOSSES AT CURB AND WITHIN THE UNIT SHALL BE FACTORED IN BY RTU MANUFACTURER.
2. RTU SHALL BE EQUIPPED WITH FACTORY FURNISHED DDC CONTROLS FOR ECONOMIZER, BUILDING PRESSURE, CO_2 BASED CONTROL OF FRESH AIR, OA/RA/RH/SA SENSORS, PROGRAMMABLE DAT RESET CONTROL, COMPRESSOR STAGING, ETC. SEE SEQUENCE OF OPERATION.
3. LOCATE CO_2 SENSOR IN OCCUPIED SPACE. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD INSTALLATION OF CO_2 SENSOR AND CONTROLLER.
4. CONTRACTOR SHALL INCLUDE COST FOR CONDUIT AND WIRING BETWEEN ALL FIELD INSTALLED DEVICES AND THE RTU.
5. NEW DUCT MOUNTED SMOKE DETECTORS SHALL BE WIRED INTO FAN SAFETY CIRCUIT.
6. ALTERNATE SCHEDULED/SPECIFIED EQUIPMENT MANUFACTURERS MUST MEET SCHEDULED PERFORMANCE CRITERIA.

GENERAL NOTES (HEATING):

(MC, TC) 1. CONTRACTOR SHALL INCLUDE NECESSARY AND ASSOCIATED COSTS TOWARDS ACCOMPLISHING THE SCOPE IDENTIFIED ON THE DRAWINGS.

(MC, TC) 2. COORDINATE LOCATION OF VAV'S, CONTROL VALVES, ETC. FOR EASE OF ACCESSIBILITY DURING MAINTENANCE.

(MC) 3. ENTIRE HYDRONIC SYSTEM SHALL BE MAINTAINED DUST AND GRIT FREE DURING THE CONSTRUCTION PERIOD. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING OF ALL COMPONENTS TO A/E SATISFACTION PRIOR TO START–UP.

(TC) 4. PROVIDE INSULATED BASE FOR SENSORS INSTALLED ON EXTERIOR WALL AND WHERE SPECIFICALLY INDICATED.

GENERAL NOTES (TEMPERATURE CONTROLS): (TC)

1. LOCATION AND TYPE OF ALL SENSORS SHALL BE CAREFULLY REVIEWED SO AS TO GET THE BEST REPRESENTATION FOR THE TASK IT HAS BEEN SET TO ACCOMPLISH.
2. CONTRACTOR SHALL INCLUDE COST FOR GRAPHICS AND PROGRAMMING OF ALL SYSTEMS WHICH WILL BE CONTROLLED BY BAS.
3. CONTRACTOR SHALL PROVIDE ALL LOW VOLTAGE WIRING REQUIRED FROM EMS PANELS TO SENSORS AND EQUIPMENT. WIRING INSTALLED ABOVE 8'–0" SHALL BE BUNDLED AND TIE–WRAPPED AND SUPPORTED FROM STRUCTURAL MEMBERS. EXPOSED WIRING IN OCCUPIED AREAS SHALL BE PROVIDED IN CONCEALED CONDUIT (SIZED AS REQUIRED). ALL WIRING IN MECH. ROOMS SHALL BE PROVIDED IN CONDUIT.
4. EMS PANELS SHALL BE MOUNTED TO FLOOR MOUNTED STRUT STANTION ASSEMBLIES OR WALL MOUNTED TO STRUT SUPPORTS. BOTTOM OF PANELS SHALL BE APPROXIMATELY 48" A.F.F. STRUTS FOR WALL MOUNTED PANELS SHALL BE SECURED TO CONCRETE OR MASONRY WITH EXPANSION ANCHORS OR SECURED TO EXISTING WALL FRAMING AS REQUIRED. STANTION ASSEMBLIES SHALL HAVE ADEQUATE BRACING AND BE PROVIDED WITH BASE PLATES ANCHORED TO CONCRETE FLOOR. STRUT SUPPORTS SHALL BE SIZED AND DESIGNED FOR SAFE AND RIGID SUPPORT OF PANELS.
5. TYPE AND SIZE OF SENSOR WIRE AND COMMUNICATION/NETWORK CABLE SHALL BE AS PER EMS MANUFACRURERS RECOMMENDATIONS. COMMUNICATION/NETWORK CABLES SHALL BE TWISTED PAIR OR COAX AS PER EMS MANUFACTURERS RECOMMENDATIONS. USE PLENUM RATED CABLES.
6. TC CONTRACTOR SHALL PROVIDE ELECTRONIC REPEATERS/AMPLIFIERS AS RECOMMENDED BY BAS MANUFACTURER. CONTRACTOR SHALL BE RESPONSIBLE FOR POWER AND COMMUNICATIONS WIRING AT REPEATERS (IF REQUIRED).
7. ROOM SENSORS FOR SPACES SHALL BE PROVIDED WITH SENSING ELEMENT, SET POINT ADJUSTMENT, AND DIGITAL READ–OUT. SENSOR WITH SENSING ELEMENT ONLY SHALL BE FLAT PLATE STAINLESS STEEL TYPE. PROVIDE SENSORS WITH OVERRIDE SWITCHES. EACH SPACE TEMP SENSOR SHALL BE A SEPARATE BAS INPUT.
8. THE FOLLOWING OUTLINES THE SCOPE FOR COORDINATION/DIVISION OF WORK BETWEEN ELECTRICAL (EC) AND MECHANICAL CONTRACTOR. ALL ELECTRICAL WORK IDENTIFIED AS PERFORMED BY EC SHALL BE THE SCOPE AND/OR RESPONSIBILITY OF THE TEMP. CONTROLS CONTRACTOR.
   A. POWER WIRING FROM DEDICATED CIRCUITS TO ALL VAV BOXES AND OTHER BAS PANELS INCLUDING TERMINATION SHALL BE THE SCOPE OF TC. A 120/24V TRANSFORMER SHALL BE FACTORY FURNISHED AND INSTALLED BY VAV BOX MANUFACTURER. SEE FLOOR SHEETS FOR LOCATION OF VAV BOXES. TC SHALL ASSUME THAT SPARE CIRCUITS ARE AVAILABLE AT SW CORNER ON EACH FLOOR.
   B. OUTLET BOX WITH STUB AND CONDUIT FOR ROOM SENSOR WIRING SHALL BE PROVIDED BY TC. ALL LOW VOLTAGE CONTROL WIRING AND CONDUIT (WHEREVER NECESSARY) SHALL BE THE SCOPE OF TC. INSTALL (TOP OF) SENSOR AT SAME HEIGHT AS LIGHT SWITCH.
   C. TWISTED PAIR/COAX/FIBER (INCLUDING CONDUIT WHEREVER NECESSARY) FOR COMMUNICATION BETWEEN CONTROLLERS SHALL BE THE SCOPE OF THE TC.
   D. ALL INPUT/OUTPUT CONTROL WIRING (INCLUDING NECESSARY CONDUIT) FROM BAS PANELS OR TERMINAL CONTROLLERS TO RESPECTIVE I/O DEVICES SHALL BE THE SCOPE OF TC. ALL I/O DEVICES (EXCEPT SMOKE DETECTORS) SHALL BE PROVIDED BY TC.
   E. TERMINAL CONTROLERS FOR EXISTING UNIT HEATERS AND CABINET UNIT HEATERS SHALL BE PROVIDED WITH 120/24TRANSFORMER BY TC. ELECTRICAL CONTRACTOR (OR TC) SHALL PROVIDE DEDICATED POWER SIMILAR TO VAV CONTROLLERS.

(TC, MC) 9. PIPING ACCESSORIES SUCH AS HW TEMP. SENSORS, DIFFERENTIAL PRESSURE SWITCHES, MOTORIZED CONTROL VALVES, ETC. SHALL BE FURNISHED BY TC AND INSTALLED BY MC.

10. BAS SHALL BE LIMITED TO ANDOVER.

GENERAL NOTES (VENTILATION):

(MC) 1. PROVIDE BALANCING DAMPERS AT ALL BRANCH TAKE–OFF'S AND OTHER LOCATIONS FOR A BALANCEABLE AIR DISTRIBUTION. SUCH DAMPERS SHALL BE PROVIDED IRRESPECTIVE OF WHETHER OR NOT THEY ARE SPECIFICALLY SHOWN ON THE DRAWINGS. PROVIDE SPLITTER DAMPERS AT TEES AND TURNING VANES AT ELBOWS.

(MC) 2. NEW SUPPLY DUCT JOINTS SHALL BE CONSTRUCTED USING DUCTMATE, NEXUS, OR PYRAMID LOC DUCT CONNECTION. ALL NEW DUCTWORK SHALL BE MINIMUM 24G CONSTRUCTION.

(MC) 3. COORDINATE LOCATION OF VAV'S, ETC. FOR EASE OF ACCESSIBILITY.

(MC) 4. WHENEVER FEASIBLE, PROVIDE MINIMUM 6'–0" LENGTH OF DUCT DOWNSTREAM OF REHEAT COIL BEFORE TAKE–OFF'S/TEE'S.

(MC) 5. ENTIRE AIR DISTRIBUTION SYSTEM INCLUDING SUPPLY/RETURN/EXHAUST DUCTWORK, GRILLES, DIFFUSERS, AND VAV BOXES, SHALL BE MAINTAINED DUST AND GRIT FREE DURING CONSTRUCTION PERIOD. CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING OF ALL COMPONENTS TO A/E SATISFACTION PRIOR TO STARTUP OF THE SYSTEM.

(MC, TC) 6. PIPING AND DUCT INSTALLATION HEIGHTS WHENEVER PROVIDED ON THE DRAWINGS ARE INTENDED FOR GUIDANCE PURPOSES ONLY. CONTRACTOR SHALL BE RESPONSIBLE FOR SHOP DRAWINGS, COORDINATION AND PROPER INSTALLATION OF SYSTEM.

(MC) 7. DUCTWORK ARRANGEMENT SHOWN ON DRAWINGS HAVE BEEN DESIGNED TO MINIMIZE NOISE IN THE SYSTEM. ALL TAKE–OFF'S SHALL BE EXTENDED PLENUM. ALL SIZE CHANGES SHALL BE WITH GRADUAL TRANSITION. DIFFUSERS SHALL BE SIZED FOR MAX. NC OF 25. ALL ELBOWS SHALL BE OF RADIUS TYPE WITH TURNING VANES. NO SQUARE ELBOWS SHALL BE ALLOWED UNLESS APPROVED BY ENGINEER.

(MC) 8. NEW SUPPLY DUCTS SHALL BE INSULATED WITH 1.5" THICK. 1.5 PCF DENSITY DUCTWRAP.

(TC) 9. CONTRACTOR SHALL PROVIDE ID STICKERS ON CEILING TILES TO INDICATE OVERHEAD VAV BOX. ALL ROOM THERMOSTATS/SENSORS SHALL ALSO BE LABELED TO SPECIFICALLY IDENTIFY WITH VAV BOX, FINTUBE, CABINET UNIT HEATER, ETC.

(MC, TC) 10. CONTRACTOR SHALL BE REQUIRED TO COMPLETE ONE PHASE BEFORE PROCEEDING TO THE NEXT.

(MC) 11. CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD MEASURING EXACT DIMENSIONS AND LOCATIONS OF SUPPLY AND RETURN DUCTS.

(MC, TC) 12. REMOVAL AND REPLACEMENT OF CEILING TILES AND OTHER CEILING MOUNTED DEVICES (AS REQUIRED) SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.

(MC, TC) 13. ALL NEW VAV BOXES, DUCTWORK AND AIR DEVICES ARE SHOWN IN BOLD. CONTRACTOR SHALL BE RESPONSIBLE FOR DUCT TRANSITIONS AT INLET AND OUTLET OF VAV BOXES.

(MC) 14. SHADED RETURN AIR DEVICES SHALL BE PROVIDED WITH RETURN DUCT ELBOW AS SHOWN ON DETAIL SHEET.

(MC) 15. TESTING AND BALANCING SHALL INCLUDE SUPPLY AND RETURN AIR DISTRIBUTION, REST ROOM EXHAUST SYSTEM AND HOT WATER HEATING SYSTEM.

SPECIAL NOTES (MC, TC):

1. SEE SHEET M5.3 FOR PHASING PLAN AND NOTES.
2. UNDER BASE BID PROVIDE TWO YEAR PARTS AND WARRANTY FOR VAV BOXES, CONTROL VALVES AND OTHER COMPONENTS OF BAS SYSTEM.
3. SCOPE FOR EACH TRADE IS IDENTIFIED ALONGSIDE (TO THE LEFT) OF EACH NOTE. THIS IS DONE WITH A VIEW TO ASSIST THE TRADES IN BIDDING PROCESS. SINCE TC WILL BE ASSIGNED TO MC, ALL WORK FOR THIS PROJECT SHALL BE THE RESPONSIBILITY OF MC. SUCCESSFULL TC SHALL BE IDENTIFIED TO ALL MECHANICAL CONTRACTORS PRIOR TO BIDDING THIS PROJECT.

REVISION | DATE

HANSON

Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886
Phone: (217) 788-2450
Fax: (217) 788-2503
www.hanson-inc.com
Offices Nationwide

Hanson No. 02S1363
Filename M-602.DWG
Scale
Date 4/30/2007

LAYOUT	MLZ	4/11/07
DRAWN	MLZ	4/11/07
REVIEWED	DAH	xx/xx/xx

HANSON
Hanson Professional Services Inc.
1525 South Sixth Street
Springfield, Illinois 62703-2886

RTU SCHEDULES & GENERAL NOTES

2007 REMODEL
HANSON OFFICE BUILDING
SPRINGFIELD, ILLINOIS

M6.2
- of XX sheets