RADIANT BASEBOARD HEATER SCHEDULE

MARK	DESCRIPTION	OUTPUT CAPACITY (W)	ELECTRICAL VOLT (V)	FREQ (HZ)	PHASE	MCA (A)	MOP (A)	REMARKS
CW-RH01	ELECTRIC, LIQUID FILLED, RADIANT BASEBOARD HEATER	500	208	60	1	2.4	15	1 - 3

REMARKS: 1. PROVIDE LINE VOLTAGE THERMOSTAT.
2. PROVIDE TWO POLE DISCONNECT SWITCH.
3. PROVIDE NECESSARY WALL MOUNT HARDWARE.

AIR INLETS AND OUTLETS SCHEDULE

MARK	DESCRIPTION	MATERIAL	AIRFLOW PATTERN	AIRFLOW RATE (CFM)	PRESSURE DROP (INWC)	FINISH	REMARKS
S	12"x 8" DUCT MOUNTED SUPPLY GRILLE	ALUMINUM	35° SINGLE DEFLECTION	440	0.13	WHITE	1
R1	8" x 8" SURFACE MOUNTED LOUVERED RETURN GRILLE	ALUMINUM	0° DEFLECTION	75	NA	WHITE	
R2	48"x36" DUCT MOUNTED, HINGED, 2" FILTER, RETURN GRILLE	ALUMINUM	35° SINGLE DEFLECTION	3,960	0.25	WHITE	2 - 4

REMARKS: 1. PROVIDE NECK MOUNTED OPPOSED BLADE BALANCING DAMPER.
2. PROVIDE TOP HINGE.
3. PROVIDE 2" DISPOSABLE, MERV 8 FILTERS AND ADDITIONAL SET.
4. PROVIDE KNURLED KNOB FASTENERS.

UNIT HEATER SCHEDULE

MARK	DESCRIPTION	AIRFLOW (CFM)	HEAT CAPACITY (KW)	ELECTRICAL VOLT. (V)	FREQ. (HZ)	PHASE	MCA (A)	MOP (A)	REMARKS
CW-EUH01	INDUSTRIAL, ELECTRIC, UNIT HEATER	500	10	480	60	3	12.8	20	1 - 3
CW-EUH02	INDUSTRIAL, ELECTRIC, UNIT HEATER	500	10	480	60	3	12.8	20	1 - 3
CW-EUH03	INDUSTRIAL, ELECTRIC, UNIT HEATER	750	15	480	60	3	18.8	25	1 - 3
CW-EUH04	INDUSTRIAL, ELECTRIC, UNIT HEATER	750	15	480	60	3	18.8	25	1 - 3
SW-EUH01	INDUSTRIAL, ELECTRIC, UNIT HEATER	750	15	480	60	3	18.8	25	1 - 4

REMARKS: 1. PROVIDE WALL MOUNT BRACKET.
2. PROVIDE SINGLE POLE THERMOSTAT KIT.
3. PROVIDE UNIT MOUNTED DISCONNECT.
4. HEATER SHALL BE SUITABLE FOR CLASS 1, DIVISION 2, GROUP D ENVIRONMENT.

SUPPLY FAN SCHEDULE

MARK	DESCRIPTION	AIRFLOW (CFM)	STATIC PRES. DROP (INWC)	MOTOR POWER (HP)	OPERATING POWER (HP)	ELECTRICAL VOLT. (V)	FREQ. (HZ)	PHASE	MOP (A)	REMARKS
SW-SF01	ALUMINUM, INLINE, TUBULAR, BACKWARD INCLINED, BELT DRIVE	4,800	0.7	3	2.92	208	60	3	20	1 - 3

REMARKS: 1. PROVIDE UNIT MOUNTED DISCONNECT SWITCH.
2. FAN SHALL BE SUITABLE FOR CLASS 1, DIVISION 2, GROUP D ENVIRONMENT.
3. MOTOR SHALL BE ORIENTED AS SHOWN ON PLANS WITH A MOTOR GUARD.

DEHUMIDIFIER SCHEDULE

MARK	DESCRIPTION	WATER REMOVAL RATE/DAY VOLUME (PINTS)	TEMP. (DEG F)	RH (%)	ELECTRICAL PINTS/ KWHR	VOLT. (V)	FREQ. (HZ)	PHASE	MOP (A)	REMARKS
CW-DHF01	PORTABLE HIGH-EFFICIENCY DEHUMIDIFIER	106	80	60	6.4	120	60	1	20	1 - 3

REMARKS: 1. PROVIDE WITH 6' POWER CORD.
2. PROVIDE WITH INTERNAL CONDENSATE PUMP.
3. 20-80% RELATIVE HUMIDITY CONTROL WITH POSITIVE "ON" AND "OFF" SETTINGS.

HEAT PUMP SCHEDULE

MARK	DESCRIPTION	AMBIENT AIR TEMP. SUMMER (°F)	WINTER (°F)	COOLING CAPACITY (BTU/H)	HEATING CAPACITY (BTU/H)	ELECTRICAL VOLT. (V)	FREQ. (HZ)	PHASE	MCA (A)	MOP (A)	REMARKS
CW-HP01	AIR-TO-AIR HEAT PUMP	95	-10	60,000	56,000	208	60	1	36	60	1 - 4
CW-HP02	AIR-TO-AIR HEAT PUMP	95	-10	60,000	56,000	208	60	1	36	60	1 - 4

REMARKS: 1. PROVIDE LOW AMBIENT COOLING CAPABILITY TO 20°F.
2. PROVIDE ANTI-SHORT CYCLE TIMER.
3. PROVIDE EVAPORATOR DEFROST CONTROL.
4. PROVIDE CRANKCASE HEATER.

AIR HANDLING UNIT SCHEDULE

MARK	DESCRIPTION	AIRFLOW (CFM)	STATIC PRES. (INWC)	COOLING S. CAP. (BTU/H)	COOLING T. CAP. (BTU/H)	HEATING HEAT PUMP CAP. (BTU/H)	HEATING AUX. ELEC. CAP. (KW)	ELECTRICAL VOLT (V)	FREQ. (HZ)	PHASE	MCA (A)	MOP (A)	REMARKS
CW-AHU01	HORIZONTAL, ELECTRIC HEAT & COOLING	1,980	0.4	45,000	60,000	56,000	5.76	208	60	1	44	45	1 - 3
CW-AHU02	HORIZONTAL ELECTRIC HEAT & COOLING	1,980	0.4	45,000	60,000	56,000	5.76	208	60	1	44	45	1 - 3

REMARKS: 1. PROVIDE HDPE PAN AND ROUTE DRAIN TO NEAREST MOP SINK.
2. PROVIDE UNIT MOUNTED DISCONNECT.
3. PROVIDE MANUFACTURER INSTALLED 24V POWER SUPPLY.

EXHAUST FAN SCHEDULE

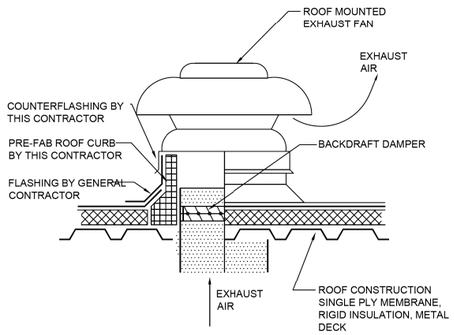
MARK	DESCRIPTION	AIRFLOW (CFM)	STATIC PRES. DROP (INWC)	MOTOR POWER (HP)	OPERATING POWER (HP)	ELECTRICAL VOLT. (V)	FREQ. (HZ)	PHASE	MOP (A)	REMARKS
CW-EF01	ROOF MOUNTED, DIRECT DRIVE, CENTRIFUGAL, DOWNBLAST	75	0.25	1/100	0.01	120	60	1	15	1 - 3
CW-EF02	ROOF MOUNTED, BELT DRIVE CENTRIFUGAL, DOWNBLAST	2,000	0.5	1/2	0.37	208	60	1	20	1 - 3
CE-EF03	ROOF MOUNTED, BELT DRIVE CENTRIFUGAL, DOWNBLAST	2,000	0.5	1/2	0.37	208	60	1	20	1 - 3
CW-EF04	ROOF MOUNTED, BELT DRIVE CENTRIFUGAL, DOWNBLAST	3,000	0.5	3/4	0.56	208	60	1	20	1 - 3
CW-EF05	ROOF MOUNTED, BELT DRIVE CENTRIFUGAL, DOWNBLAST	3,000	0.5	3/4	0.56	208	60	1	20	1 - 3
SW-EF01	SIDEWALL, PROPELLER, ALUMINUM, DIRECT DRIVE	4,593	0.229	3/4	0.52	208	60	3	20	2 - 5
SW-EF02	SIDEWALL EXHAUST, BELT DRIVE, CENTRIFUGAL	1,000	0.25	1/4	0.08	120	60	1	20	2 - 4

REMARKS: 1. PROVIDE MINIMUM 18" PREFABRICATED ROOF CURB WITH MINIMUM 1" FIBER GLASS INSULATION.
2. PROVIDE UNIT MOUNTED DISCONNECT SWITCH.
3. PROVIDE BAROMETRIC BACKDRAFT DAMPER.
4. FAN SHALL BE SUITABLE FOR CLASS 1, DIVISION 2, GROUP D ENVIRONMENT.
5. PROVIDE WITH WALL COLLAR, MOTOR SIDE GUARD, ALUMINUM DAMPER GUARD.

LOUVER SCHEDULE

MARK	DESCRIPTION	LENGTH (IN)	WIDTH (IN)	FREE AREA (SQFT)	STATIC PRES. DROP (INWC)	AIRFLOW (CFM)	REMARKS
CW-LVR01	COMBINATION INTAKE LOUVER/DAMPER	90	48	15.34	0.16"	14,000	1,5,7
CW-LVR02	COMBINATION INTAKE LOUVER/DAMPER	90	48	15.34	0.16"	14,000	1,5,7
CW-LVR03	COMBINATION INTAKE LOUVER/DAMPER	90	30	9.19	0.16"	8,000	1,5,7
CW-LVR04	COMBINATION INTAKE LOUVER/DAMPER	90	30	9.19	0.08"	6,000	2,5,7
CW-LVR05	COMBINATION EXHAUST LOUVER/GRAVITY BACKDRAFT DAMPER	72	96	NA	0.26"	36,000	3,5,7
CW-LVR06	COMBINATION INTAKE LOUVER/DAMPER	48	30	4.36	0.08"	3,000	2,5,7
CW-LVR07	COMBINATION INTAKE LOUVER/DAMPER	48	30	4.36	0.08"	3,000	2,5,7
SW-LVR01	COMBINATION INTAKE LOUVER/DAMPER	30	30	2.54	~0.0"	500	2,4,6,7
SW-LVR02	COMBINATION INTAKE LOUVER/DAMPER	48	30	4.38	0.17"	4,500	2,4,6,7
SW-LVR03	COMBINATION INTAKE LOUVER/DAMPER	30	30	2.54	~0.0"	500	2,4,6,7

REMARKS: 1. SPRING OPEN, 120V POWER CLOSED
2. 120V POWER OPEN, SPRING CLOSE
3. OVERALL DIMENSIONS PROVIDED, MUTLIPLE SECTIONS PERMITTED.
4. ACTUATOR SHALL BE SUITABLE FOR CLASS 1, DIVISION 2, GROUP D ENVIRONMENT
5. PROVIDE WITH EXTENDED SILL
6. PROVIDE WITH FLANGED FRAME
7. PROVIDE WITH SECURITY BARS



ROOF MOUNTED
EXHAUST FAN DETAIL
N.T.S

MECHANICAL EQUIPMENT SEQUENCE OF OPERATION

CW-AHU01, CW-HP01, CW-AHU02 AND CW-HP02

1. OPERATION CONTROLLED BY WALL MOUNTED THERMOSTAT (T:CW-AHU01 AND T CW-AHU02).

CW-EF01:

1. EXHAUST FAN SHALL BE CONNECTED TO LIGHTING CIRCUIT WITHIN SPACE AND SHALL OPERATE WHEN LIGHTS ARE ON.

CW-EF02 AND CW-EF03

1. OPERATION DETERMINED BY HAND-OFF-AUTO (HOA) SELECTOR SWITCH LOCATED IN CW-CP03.
   1.1. HAND POSITION: FAN SHALL OPERATE CONTINUOUSLY.
   1.2. OFF POSITION: FAN SHALL NOT OPERATE
   1.3. AUTO POSITION: FAN OPERATION SHALL BE CONTROLLED BY WALL MOUNTED THERMOSTAT (T:CW-EF02 AND T:CW-EF03) AND SHALL OPERATE DURING AN ALARM CONDITION FROM EITHER THE COMBUSTIBLE GAS OR CARBON MONOXIDE DETECTORS..
   1.4. SEE CONTROL DRAWING No. 4 FOR ADDITIONAL INFORMATION.

CW-EF04 AND CW-EF05

1. OPERATION DETERMINED BY HAND-OFF-AUTO (HOA) SELECTOR SWITCH LOCATED IN CW-CP04.
   1.1. HAND POSITION: FAN SHALL OPERATE CONTINUOUSLY.
   1.2. OFF POSITION: FAN SHALL NOT OPERATE
   1.3. AUTO POSITION: FAN OPERATION SHALL BE CONTROLLED BY WALL MOUNTED THERMOSTAT (T:CW-EF03 AND T:CW-EF04).
   1.4. SEE CONTROL DRAWING No. 5 FOR ADDITIONAL INFORMATION.

CW-EUH01 AND CW-EUH02

1. OPERATION CONTROLLED BY WALL MOUNTED THERMOSTAT (T:CW-EUH01 AND T CW-EUH01).
2. UNITS SHALL BE INTERLOCKED WITH CW-GEN01 TO PREVENT OPERATION OF THE HEATERS WHEN GENERATOR IS OPERATING.
3. SEE CONTROL DRAWING No. 4 FOR ADDITIONAL INFORMATION.

CW-EUH03 AND CW-EUH04

1. OPERATION CONTROLLED BY WALL MOUNTED THERMOSTAT (T:CW-EUH03 AND T CW-EUH04).

CW-LVR01, CW-LVR02, AND CW-LVR03

1. DAMPERS SHALL BE SPRING OPEN, POWER CLOSED.
2. DAMPERS SHALL OPEN WHEN SW-GEN01 IS OPERATING OR DURING A POWER OUTAGE. DAMPERS SHALL BE CLOSED AT ALL OTHER TIMES.
3. SEE CONTROL DRAWING No. 4 FOR ADDITIONAL INFORMATION.

CW-LVR04

1. DAMPER SHALL BE SPRING CLOSE, POWER OPEN.
2. DAMPER SHALL BE OPEN WHEN CW-EF02, CW-EF03, OR THE CW-GEN01 IS OPERATING. DAMPERS SHALL BE CLOSED AT ALL OTHER TIMES.
3. SEE CONTROL DRAWING No. 4 FOR ADDITIONAL INFORMATION.

CW-LVR06 AND CW-LVR07

1. DAMPER SHALL BE SPRING CLOSE, POWER OPEN.
2. DAMPER SHALL BE OPEN WHEN CW-EF03 OR CW-EF04 IS OPERATING. DAMPERS SHALL BE CLOSED AT ALL OTHER TIMES.
3. SEE CONTROL DRAWING No. 5 FOR ADDITIONAL INFORMATION.

CW-RH01

1. OPERATION CONTROLLED BY WALL MOUNTED THERMOSTAT (T:CW-RH01).

SW-EF01 AND SW-SF01:

1. EXHAUST FAN AND SUPPLY FAN SHALL OPERATE WHENEVER THE LIGHTS IN THE LOWER LEVEL OF THE PUMP STATION ARE ON AND SHALL OPERATE DURING AN ALARM CONDITION FROM THE COMBUSTIBLE GAS DETECTOR.
2. SEE CONTROL DRAWING No. 8 FOR ADDITIONAL INFORMATION.

SW-EF02:

1. OPERATION DETERMINED BY HAND-OFF-AUTO (HOA) SELECTOR SWITCH.
   1.1. HAND POSITION: FAN SHALL OPERATE CONTINUOUSLY.
   1.2. OFF POSITION: FAN SHALL NOT OPERATE
   1.3. AUTO POSITION: FAN OPERATION SHALL BE CONTROLLED BY WALL MOUNTED THERMOSTAT (T:SW-EF02) AND SHALL OPERATED DURING AN ALARM CONDITION FROM THE COMBUSTIBLE AS DETECTOR.
   1.4. SEE CONTROL DRAWING No. 7 FOR ADDITIONAL INFORMATION.

SW-LVR01 AND SW-LVR03

1. DAMPERS SHALL BE SPRING CLOSE, POWER OPEN.
2. DAMPERS SHALL BE OPEN WHEN SW-EF02 IS OPERATING. DAMPERS SHALL BE CLOSED AT ALL OTHER TIMES.
3. SEE CONTROL DRAWING No. 7 FOR ADDITIONAL INFORMATION.

SW-LVR02

1. DAMPER SHALL BE SPRING CLOSE, POWER OPEN.
2. DAMPERS SHALL BE OPEN WHEN SW-EF01 AND SW-SF01 ARE OPERATING. DAMPERS SHALL BE CLOSED AT ALL OTHER TIMES.
3. SEE CONTROL DRAWING No. 8 FOR ADDITIONAL INFORMATION.

KLINGNER & ASSOCIATES, P.C.
Engineers • Architects • Surveyors

USER NAME = seb | PLOT SCALE = 40.0000 ' / in. | PLOT DATE = 8/23/2014
DESIGNED - JJN | DRAWN - JJN | CHECKED - | DATE -
REVISED - | REVISED - | REVISED - | REVISED -

STATE OF ILLINOIS
DEPARTMENT OF TRANSPORTATION

MECHANICAL SCHEDULES
MISSOURI AVENUE DEEP WELL FACILITY

SCALE: AS NOTED | SHEET 1 OF 1 SHEETS | STA. | TO STA.

F.A.I. RTE.	SECTION	COUNTY	TOTAL SHEETS	SHEET NO.
64	82-4T-1	ST. CLAIR	185	154

CONTRACT NO. 76G99
ILLINOIS | FED. AID PROJECT