

FAN SCHEDULE											SECTION 15E				
TAG	MANUF.	MODEL	TYPE	SERVICE	AIR FLOW DATA			FAN RPM	DRIVE	SONES	ELECTRICAL DATA				REMARKS
					CFM	ESP (IN WC)	BHP				HP/WATTS	VOLT	PH.	RPM	
SF-1	GREENHECK	VAB-30F17	VANE AXIAL	SUPPLY	12,230	2.0	6.37	1432	BELT	--	10.0	460	3	1725	2,3,4,5,9,11,13,14,15,16,17,18,19
EF-1	GREENHECK	BSQ-300	INLINE CENTRI	EXHAUST	8000	1.15	2.78	699	BELT	18.3	5.0	460	3	1725	2,3,4,5,9,11,12,13,14,15,19
EF-2	GREENHECK	SCE3-20	AXIAL FAN SIDEWALL	EXHAUST	3675	0.50	1.20	1750	DIRECT	33	1 1/2	460	3	1750	1,2,3,4,5,8,9,20
EF-3	GREENHECK	SCE3-24	AXIAL FAN SIDEWALL	EXHAUST	5165	0.50	1.12	1750	DIRECT	37	1 1/2	460	3	1750	1,2,3,4,5,8,9,20
EF-4	GREENHECK	SBCE-3H30	AXIAL FAN SIDEWALL	EXHAUST	8000	0.50	1.27	1151	BELT	28	2.0	460	3	1725	1,2,6,8,9,20

- = ALUMINUM CONSTRUCTION.
- = STAINLESS STEEL FAN SHAFT AND FASTENERS.
- = EXPLOSION PROOF MOTOR
- = AMCA TYPE B SPARK RESISTANT CONSTRUCTION.
- = EXPLOSION PROOF INTEGRAL DISCONNECT SWITCH AND INSTALLED IN ACCORDANCE WITH DIVISION 16.
- = NEMA 4X INTEGRAL DISCONNECT SWITCH AND INSTALLED IN ACCORDANCE WITH DIVISION 16.
- = ALUMINUM BIRDSCREEN.
- = GRAVITY OPERATED DAMPER. SEE DAMPER SCHEDULE.
- = HI-PRO POLYESTER (HERESITE) COATING ON FAN AND DAMPER.
- = ALUMINUM WALL GRILLE.
- = MOTOR COVER AND BELT GUARD.
- = SPRING BASE HANGING VIBRATION AND NEOPRENE ISOLATORS.
- = EASY ACCESS DOOR.
- = FLEX DUCT CONNECTIONS.
- = INLET AND OUTLET FLANGES WITH MOUNTING HOLES.
- = MOUNTING RAILS.
- = INSPECTION SECTION
- = GALVANIZED STEEL CONSTRUCTION
- = MOUNTING BRACKETS FOR CEILING SUSPENDED.
- = OSHA GAURD WITH WALL COLLAR

DAMPERS SCHEDULE						SECTION 15E	
ITEM	SIZE	ACTUATOR			CONFIG.	REMARKS	
		TYPE	VOLT	PH			
DM 1	54"X54"	GRAVITY	---	---	EXHAUST	GRAVITY OPERATED DAMPER ASSOCIATED WITH EF-1	
DM 2	36"X36"	GRAVITY	---	---	EXHAUST	GRAVITY OPERATED DAMPER ASSOCIATED WITH EF-2	
DM 3	36"X48"	GRAVITY	---	---	EXHAUST	GRAVITY OPERATED DAMPER ASSOCIATED WITH EF-3	
DM 4	36"X48"	ELECTRIC MOTOR	115	1	SUPPLY	MOTOR OPERATED DAMPER OAL-3 ASSOCIATED WITH OUTSIDE AIR LOUVER	
DM 5	36"X48"	ELECTRIC MOTOR	115	1	SUPPLY	MOTOR OPERATED DAMPER OAL-4 ASSOCIATED WITH OUTSIDE AIR LOUVER	
DM 6	54"X54"	GRAVITY	---	---	EXHAUST	GRAVITY OPERATED DAMPER ASSOCIATED WITH EF-4	
DM 7	66"X66"	ELECTRIC MOTOR	115	1	SUPPLY	EXP. PROOF MOTOR OPERATED DAMPER ASSOCIATED WITH OAL-1	
DM 8	36"X36"	ELECTRIC MOTOR	115	1	SUPPLY	EXP. PROOF MOTOR OPERATED DAMPER ASSOCIATED WITH OAL-2	
DM 9	36"X36"	ELECTRIC MOTOR	115	1	SUPPLY	EXP. PROOF MOTOR OPERATED DAMPER ASSOCIATED WITH OAL-5	

ELECTRIC HEATER SCHEDULE														SECTION 15E	
TAG	MANUF.	MODEL	TYPE	OUTPUT (MBH)	MOUNT. HEIGHT (FT)	AIR DATA			ELECTRICAL DATA			MOTOR DATA			REMARKS
						CFM	THROW (FT)	ΔT (F)	KW	VOLT	AMP	HP	VOLT	RPM	
EUH-1	QMARK	GUX1500	EXP PROOF	51.18	8'-6"	1450	47	31	15.0	460/3	18.7	--	--	--	1,2,3,4,6,9
EUH-2	QMARK	GUX1500	EXP PROOF	51.18	8'-6"	1450	47	31	15.0	460/3	18.7	--	--	--	1,2,3,4,6,9
EUH-3	QMARK	GUX1500	EXP PROOF	51.18	8'-6"	1450	47	31	15.0	460/3	18.7	--	--	--	1,2,3,4,6,9
EUH-4	QMARK	JUW750	CORR UNIT	25.59	8'-6"	485	--	46	7.5	460/3	9.0	1/14	--	--	3,4,5,10,11
EUH-5	QMARK	JUW750	CORR UNIT	25.59	8'-6"	485	--	46	7.5	460/3	9.0	1/14	--	--	3,4,5,10,11
EUH-6	QMARK	GUX750	EXP PROOF	25.59	8'-6"	840	28	27	7.5	460/3	9.7	--	--	--	1,2,3,4,6,9

- = EXPLOSION PROOF UNIT
- = NEMA 7 DISCONNECT SWITCH AND INSTALLED IN ACCORDANCE WITH DIV. 16.
- = CONTROLS AS SPECIFIED.
- = MANUFACTURES MOUNTING ACCESSORIES.
- = STAINLESS STEEL CONSTRUCTION.
- = WALL MOUNTED EXPLOSION PROOF THERMOSTAT.
- = NEMA 4X DISCONNECT SWITCH AND INSTALLED IN ACCORDANCE WITH DIV. 16.
- = WALL MOUNTED NEMA 4X WITH INSULATED BASE THERMOSTAT.
- = EPOXY COATED.
- = NEMA 3R DISCONNECT SWITCH AND INSTALLED IN ACCORDANCE WITH DIV. 16.
- = WALL MOUNTED NEMA 3R WITH INSULATED BASE THERMOSTAT.

WALL LOUVER SCHEDULE										SECTION 15E	
TAG	MANUF.	MODEL	SERVICE	CFM	WIDTH (IN)	HEIGHT (IN)	DEPTH (IN)	MAX. APD (IN WC)	MAX. FREE AREA VEL. (FPM)	REMARKS	
											OAL-1
OAL-2	GREENHECK	ESD-403	INTAKE	3675	36	36	4	0.132	873	1,2,4,5,6	
OAL-3	GREENHECK	ESD-403	INTAKE	4000	36	48	4	0.084	697	1,2,3,5,6	
OAL-4	GREENHECK	ESD-403	INTAKE	4000	36	48	4	0.084	697	1,2,3,5,6	
OAL-5	GREENHECK	ESD-403	INTAKE	4000	36	36	4	0.156	949	1,2,4,5,6	
EAL-1	GREENHECK	ESD-403	EXHAUST	8000	54	54	4	0.088	780	1,2,6	
EAL-2	GREENHECK	ESD-403	EXHAUST	3675	36	36	4	0.110	872	1,2,6	
EAL-3	GREENHECK	ESD-403	EXHAUST	5165	48	36	4	0.117	901	1,2,6	
EAL-4	GREENHECK	ESD-403	EXHAUST	8000	54	54	4	0.088	780	1,2,6	

- = ALUMINUM BIRDSCREEN.
- = EXTENDED SILL.
- = INSULATED BLADE MOTOR OPERATED DAMPER TO BE FURNISHED BY TEMPERATURE CONTROLS CONTRACTOR. SEE DAMPER SCHEDULE
- = INSULATED EXPLOSION PROOF MOTOR OPERATED DAMPER TO BE FURNISHED BY TEMPERATURE CONTROLS CONTRACTOR. SEE DAMPER SCHEDULE.
- = EXTERNALLY MOUNTED STAINLESS STEEL REMOVABLE INSECT SCREEN.
- = KYNAR FINISH.



ACCESS STAIRWAY AND PUMP LEVELS BELOW GRADE

SUPPLY FAN SF-1, EXHAUST FAN EF-1 AND EF-3 WILL BE CONTROLLED BY M-0-A SWITCH WITH THE COMBUSTIBLE GAS SENSORS IN PUMP LEVELS.

AUTO MODE:
FAN SF-1, EF-1 AND EF-3 SHALL ENERGIZED AND DM 7 SHALL OPEN AND FANS RUN CONTINUOUSLY WHEN:

- THE THERMOSTAT SENSES A ROOM TEMPERATURE ABOVE THE THERMOSTAT SETPOINT.
- COMBUSTIBLE GAS SENSORS DETECT GAS LEVEL ABOVE SETPOINT IN ANY LEVELS OF THE PUMP STATION OR THE STAIRWAY.
- THE STAIRWAY LIGHTS ARE TURNED ON.

OFF MODE:
FANS STOP AND MOTOR OPERATED DAMPER (DM 7) CLOSED

MANUAL MODE:
SF-1, EF-1 AND EF-3 SHALL ENERGIZED AND DM 7 SHALL OPEN AND FANS RUN CONTINUOUSLY.

ELECTRIC UNIT HEATERS

EUH-1, EUH-2, EUH-3, EUH-4, EUH-5 AND EUH-6 UNIT HEATERS WILL RUN IN RESPONSE TO SPACE TEMPERATURE. WHEN UNIT THERMOSTAT DETECTS A TEMPERATURE BELOW THE SETPOINT TEMPERATURE ADJUSTABLE. UPON SATISFACTION OF SPACE TEMPERATURE UNIT HEATER SHALL STOPPED.

ELECTRICAL ROOM VENTILATION CONTROL

EXHAUST FAN EF-4 WILL BE CONTROLLED BY THE M-0-A SWITCH WITH THE THERMOSTAT SET AT (90° F, ADJUSTABLE).

AUTO MODE:
THE STARTER WILL RUN THE FAN, EF-4 AND MOTOR OPERATED DAMPER (DM 4 AND DM 5) ASSOCIATED WITH OAL-3 AND OAL-4 WILL OPEN.

OFF MODE:
EF-1 STOP AND DM 4 AND DM 5 CLOSED.

MANUAL MODE:
EF-1 RUN CONTINUOUSLY AND DM 4 AND DM 5 OPEN.

PUMP ROOM VENTILATION

EXHAUST FAN EF-2 WILL BE CONTROLLED BY THE M-0-A SWITCH WITH THE THERMOSTAT SET AT (90° F, ADJUSTABLE).

AUTO MODE:
THE STARTER WILL ENERGIZE EF-2, FAN WILL RUN CONTINUOUSLY AND MOTOR OPERATED DAMPER (DM 8) ASSOCIATED WITH OAL-2 WILL OPEN. IN THREE CASES:

- WHEN THE THERMOSTAT SENSES A ROOM TEMPERATURE ABOVE THE THERMOSTAT SET POINT.
- WHEN THE GAS SENSOR DETECTS COMBUSTIBLE GAS ABOVE THE SETPOINT.
- WHEN THE PUMP ROOM LIGHTS ARE TURNED ON.

OFF MODE:
EF-2 STOP AND DM 8 CLOSED.

MANUAL MODE:
EF-2 RUN CONTINUOUSLY AND DM 8 OPENED

DM 9

OUTSIDE AIR LOUVER (OAL-5) AND MOTOR OPERATED DAMPER DM 9 WILL BE CONTROLLED BY M-0-A SWITCH WITH DPSI (DIFFERENTIAL PRESSURE SWITCH) SET AT (ADJUSTABLE).

AUTO MODE:
WHEN DPSI SENSE PRESSURE IN ROOM NEGATIVE PRESSURE THE MOTOR OPERATED DAMPER (DM 9) WILL OPEN (TIME DELAY TO CLOSE).

OFF MODE:
OAL-5 AND DM 9 CLOSED.

MANUAL MODE:
OAL-5 AND DM 9 OPENED.

M8

REVISIONS	
NAME	DATE

ILLINOIS DEPARTMENT OF TRANSPORTATION

PUMP STATION NO. 27
REHABILITATION
HVAC SCHEDULE AND
OPERATING SEQUENCE

SCALE: N/A
DATE: 04-23-10

DRAWN BY: HFF
CHECKED BY: KHC