

X:\VGFD (Vails Gate Fire Dept)\VGFD2021\Vails Gate FD New Firehouse\CBM-CADD\CD\Conductors\H600.00 - Mechanical Schedules.dwg Last Modified: Jul 15, 2022 - 3:09pm By: jgagne

VENTILATION INDEX BASED ON 2020 NEW YORK STATE MECHANICAL CODE

ROOM NUMBER	ROOM NAME	OCCUPANCY CLASSIFICATION	FLOOR AREA (SF)	OCCUPANCY LOAD (PERSONS/1000 SF)	NUMBER OF OCCUPANTS	OCCUPANT BASED OA RATE (CFM/OCCUPANT)	AREA BASED OUTSIDE AIR RATE (CFM/SF)	EXHAUST RATE (CFM/SF)	FIXTURES	UNCORRECTED OA (CFM)	Ez EFFICIENCY FACTOR (HEATING)	CORRECTED OA [HEATING] (CFM)	EXHAUST REQUIRED (CFM)
101 / 223	APP BAY	GARAGE	5051	0	0	0	0.00	0.75	0	0	0.80	0	3788
	MEZZANINE	GARAGE	900	0	0	0	0.00	0.75	0	0	0.80	0	675
102	RADIO ROOM	OFFICE	158	5	1	5	0.06	0.00	0	14	0.80	18	0
103	STORAGE1	STORAGE	121	0	0	0	0.12	0.00	0	15	0.80	18	0
104	STORAGE2	STORAGE	97	0	0	0	0.12	0.00	0	12	0.80	15	0
105	DECON	TOILET	117	0	0	0	0.00	0.00	2	-	-	-	100
106	LAUNDRY	LAUNDRY	145	20	3	7	0.12	0.00	0	40	0.80	50	0
107	GEAR ROOM	LOCKER	735	0	0	0	0.00	0.25	0	-	-	-	184
108	TOILET	TOILET	67	0	0	0	0.00	0.00	1	-	-	-	50
109	SCBA	OFFICE	201	5	2	5	0.06	0.00	0	22	0.80	28	0
111	SPARE TURNOUT GEAR	STORAGE	65	0	0	0	0.06	0.00	0	4	0.80	5	0
112	VENDOR DROP OFF	CORRIDOR	45	0	0	0	0.06	0.00	0	3	0.80	3	0
113	CORRIDOR	CORRIDOR	556	0	0	0	0.06	0.00	0	33	0.80	42	0
114	QUARTERMASTER	OFFICE	66	5	1	5	0.06	0.00	0	9	0.80	11	0
115	JC	JC	41	0	0	0	0.00	0.00	1	-	-	-	50
116	MEETING	CONFERENCE	3000	50	150	5	0.06	0.00	0	930	0.80	1163	0
117	STORAGE	STORAGE	126	0	0	0	0.06	0.00	0	15	0.80	19	0
118	KITCHEN	KITCHEN	433	20	9	7	0.12	0.70	0	119	0.80	149	303
119	PANTRY	STORAGE	66	0	0	0	0.06	0.00	0	4	0.80	5	0
120	READY ROOM	DAY ROOM	221	30	7	5	0.06	0.00	0	48	0.80	60	0
123	ELEVATOR LOBBY	CORRIDOR	45	0	0	0	0.06	0.00	0	3	0.80	3	0
125A	LOBBY	LOBBY	353	10	4	5	0.06	0.00	0	41	0.80	51	0
126	VESTIBULE	CORRIDOR	53	0	0	0	0.00	0.00	0	0	0.80	0	0
127	TOILET	TOILET	187	0	0	0	0.00	0.00	4	-	-	-	200
128	TOILET	TOILET	185	0	0	0	0.00	0.00	4	-	-	-	200
201	CORRIDOR	CORRIDOR	186	0	0	0	0.06	0.00	0	11	0.80	14	0
202	MEETING	CONFERENCE	381	50	20	5	0.06	0.00	0	123	0.80	154	0
203	MEMBER VESTIBULE	LOBBY/ PREUNCTION	126	30	4	7	0.06	0.00	0	38	0.80	47	0
203A	COMPANY ROOM	CONFERENCE	1082	50	55	5	0.06	0.00	0	340	0.80	425	0
203B	KITCHEN	KITCHEN	78	20	2	7	0.12	0.70	0	24	0.80	30	55
204	STORAGE	STORAGE	39	0	0	0	0.06	0.00	0	5	0.80	6	0
205	STORAGE	STORAGE	78	0	0	0	0.06	0.00	0	9	0.80	12	0
206	TRAINING ROOM	CONFERENCE	1005	50	51	5	0.06	0.00	0	315	0.80	394	0
207	EXERCISE ROOM	WEIGHT ROOM	1000	10	10	20	0.06	0.00	0	260	0.80	325	0
208	BATHROOM	BATHROOM	95	0	0	0	0.00	0.00	2	-	-	-	100
209	BATHROOM	BATHROOM	95	0	0	0	0.00	0.00	2	-	-	-	100
210	CORRIDOR	CORRIDOR	505	0	0	0	0.06	0.00	0	30	0.80	38	0
211	COMMISSIONER'S OFFICE	OFFICE	144	5	1	5	0.06	0.00	0	14	0.80	17	0
212	TRUSTEE'S OFFICE	OFFICE	142	5	1	5	0.06	0.00	0	14	0.80	17	0
213	COMPANY OFFICERS	OFFICE	118	5	1	5	0.06	0.00	0	12	0.80	15	0
214	ASST. CHIEF'S OFFICE	OFFICE	118	5	1	5	0.06	0.00	0	12	0.80	15	0
215	CHIEF'S OFFICE	OFFICE	115	5	1	5	0.06	0.00	0	12	0.80	15	0
216	ADMIN STORAGE	STORAGE	42	0	0	0	0.06	0.00	0	5	0.80	6	0
217	RATED STORAGE 1	STORAGE	82	0	0	0	0.06	0.00	0	10	0.80	12	0
218	RATED STORAGE 1	STORAGE	82	0	0	0	0.06	0.00	0	10	0.80	12	0
220	JC	JC	64	0	0	0	0.00	0.00	1	-	-	-	50

LOUVERS

EQMT. TAG	LOCATION	SERVING	PERFORMANCE/CONSTRUCTION REQUIREMENTS					BASIS OF DESIGN INFORMATION				NOTES	
			CFM	EXT S. P. (IN. W.C.)	FACE VELOCITY (FPM)	FREE AREA (FT²)	FRAME THICKNESS (IN.)	BLADE THICKNESS (IN.)	MNF	MODEL NO.	NOMINAL DIMENSIONS (W" x H" x D")		WEIGHT (LBS.)
LV-1	APPARATUS BAY	APPARATUS BAY	2,250	0.03	431	5.13	.125	.081	GREENHECK	ESD-635	72 x 24 x 6	39	1,3
LV-2	APPARATUS BAY	APPARATUS BAY	2,250	0.03	431	5.13	.125	.081	GREENHECK	ESD-635	72 x 24 x 6	39	1,3
LV-3	WORK ROOM	APPARATUS BAY	4,500	0.12	954	4.78	.125	.081	GREENHECK	ESD-635	72 x 24 x 6	39	2-3
LV-4	GEAR ROOM	GEAR ROOM	200	0.07	671	0.29	.081	.081	GREENHECK	ESD-435	12 x 12 x 4	3	3-4
LV-5	BOILER ROOM	BOILER ROOM	N/A	N/A	N/A	4.07	.125	.081	GREENHECK	ESD-635	30 x 36 x 6	30	1,3
LV-6	ELEVAOR	ELEVATOR	N/A	N/A	N/A	1.82	.081	.081	GREENHECK	ESD-435	24 x 24 x 4	15	5-8

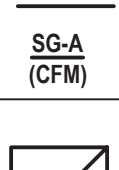
- NOTES:
1. PROVIDE 24" SLEEVE WITH VCD-23 MOTORIZED DAMPER 115V/ 1 INTERLOCKED WITH OPERATION OF APPARATUS BAY GENERAL EXHAUST.
2. PROVIDE 18" SLEEVE AND BLANK OFF PANEL.
3. PROVIDE WITH INTERNAL BIRSCREEN.
4. PROVIDE 12" SLEEVE.
5. PROVIDE WITH (120V/1) VCD-23 MOTORIZED DAMPER W/ INTERNAL ACTUATOR
6. MOUNTING CLIPS TO REMOVE LOUVER AND ACCESS DAMPER FROM BUILDING EXTERIOR
7. DAMPER CONTROLLED BY THERMOSTAT SET TO OPEN DAMPER AT 90F
8. CONFIRM INSTALL WITH ELEVATOR MANUFACTURER

HIGH VOLUME LOW SPEED FANS

FAN NO.	AREA SERVED	BASIS OF DESIGN INFORMATION							REMARKS
		FAN/MOTOR RPM	MNF	MODEL NO.	NOMINAL DIMENSION (DIA" x H")	WEIGHT (LBS.)	VOLTS /PHASE	OPERATING AMPERAGE	
HVLS-1 THRU 3	APPARATUS BAY	148	BIG ASS FANS	BASIC6-10	120 x 46.5	135	208 / 3	10 A	1,0

- NOTES:
1. MANUFACTURER TO PROVIDE VFD MOTOR.
2. PROVIDE BAFCON CONTROLLER SERVING ALL HVLS FANS IN AREA SERVED. PROVIDE MULTI-FAN KIT.

AIR OUTLETS

SYMBOL	BASIS OF DESIGN: MNF/ MODEL NO.	DESCRIPTION	FACE SIZE (IN)	AIR FLOW RANGE (CFM)	NECK SIZE (IN.)	REMARKS
 SD-A (CFM)	NAILOR AUNI	SQUARE FACE CEILING DIFFUSER	24 X 24 OR 12 X 12, SEE DRAWINGS	0-200	6"Ø	1
				201-230	8"Ø	
				231-320	10"Ø	
				321 - 460	12"Ø	
 SG-A (CFM)	NAILOR 61DV-O	DOUBLE DEFLECTION SUPPLY GRILLE	8 x 8 12 x 8 14 x 8	0-100	6 x 6	1
				101-225	10 x 6	
				226-290	12 x 6	
 RG-A (CFM)	NAILOR 61FB45-O	RETURN GRILLE	24 X 24	0-1190	20 x 20	1,3
 EG-A (CFM)	NAILOR 6145H-O	EXHAUST GRILLE	24 X 24 OR 12 X 12, SEE DRAWINGS	0-150	6x6	1
				151-420	12 x 10	
 EG-B (CFM)	NAILOR 5145H-OA	EXHAUST GRILLE	24 X 24 OR 12 X 12, SEE DRAWINGS	0-100	6x6	1,2
				101-200	8x6	
 EG-C (CFM)	NAILOR 5145H	EXHAUST GRILLE	24 x 24 OR 12 x 12, SEE DRAWINGS	N/A [MATCH DUCTWORK OR OPEN TO PLENUM]	N/A [MATCH DUCTWORK OR OPEN TO PLENUM]	1,2
 EG-D (CFM)	NAILOR 6145HC	EXHAUST GRILLE	18 x 10	0-450	16 x 8	1

- NOTES:
1. PROVIDE VOLUME DAMPERS FOR ALL AIR INLETS AND OUTLETS
2. ALL ALUMINUM CONSTRUCTION (TERMINAL AND DAMPER), PROVIDE ALUMINUM CONSTRUCTION IN SHOWER AREAS.
3. PROVIDE WITH 2" FILTER BOX AND MERV-8 FILTER.

VEHICLE GAS DETECTION SYSTEM

EQMT. NO.	LOCATION	SYSTEM SERVED	BASIS OF DESIGN INFORMATION				NOTES
			MNF	MODEL NO.	NOMINAL DIMENSIONS L" x W" x H"	VOLTS / PHASE	
GDS-2	APPARATUS BAY	GX-2	RKI BEACON	410A (4 CHANNEL)	10.5 x 6.5 x 14	120/1	1-7

- NOTES:
1. INCLUDE FOUR CHANNEL DIGITAL CONTROLLER IN NEMA 4 ENCLOSURE FOR WALL MOUNT.
2. LED DISPLAY FOR ALL FOUR CHANNELS FOR NO2 AND CO
3. INCLUDE (2) NITROGEN DIOXIDE SENSORS AND (2) CARBON MONOXIDE SENSORS
4. PROVIDE CONFIGURABLE ALARM OUTPUTS WITH ISOLATION RELAYS FOR INTERLOCK WITH THE EF & FACP.
5. PROVIDE PANEL MOUNTED AUDIBLE ALARM AND SILENCING SWITCH
6. PROVIDE ALARM HORN WITH STROBE.
7. PROVIDE STARTUP, TEST AND CALIBRATION REPORT.

EXHAUST FANS

FAN NO.	SYSTEM SERVED	PERFORMANCE/CONSTRUCTION REQUIREMENTS				BASIS OF DESIGN INFORMATION					NOTES	
		CFM	EXT S. P. (IN. W.C.)	FAN/MOTOR RPM	BHP	MNF	MODEL NO.	NOMINAL DIMENSION (DIA" x H") (L" x W" x H")	WEIGHT (LBS.)	ELECTRICAL DATA		
										VOLTS /PHASE		MOTOR HP
GX-1	APPARATUS ROOM	4,250	0.60	728	2.52	GREENHECK	QEID-22	36.5 x 30 x 35.5	370	208V / 3	3	3,4,10
GX-2	APPARATUS ROOM	250	0.30	1,550	0.03	GREENHECK	SQ-090-VG	19 x 15 x 15	72	115V / 1	1/10	2-4,6,9
GX-3	GEAR ROOM	200	0.30	1,550	0.03	GREENHECK	SQ-090-VG	19 x 15 x 15	72	115V / 1	1/10	2,3,5,6
GX-4	KITCHEN	325	0.40	1,625	0.22	GREENHECK	G-080-VG	22Ø x 27	62	115V / 1	1/10	2,3,6-8
TX-1	TOILET EXHAUST	700	0.60	1,625	0.22	GREENHECK	G-098-VG	24.5Ø x 25.5	78	115V / 1	1/4	2,3,6-8
TX-2	APP BAY TOILET	100	0.25	1,550	0.02	GREENHECK	SQ-060-D	16 x 12 x 12	34	115V / 1	1/40	2,3,5
TX-3	DECON ROOM 105	100	0.25	1,550	0.02	GREENHECK	SQ-060-D	16 x 12 x 12	34	115V / 1	1/40	2,3,5
RXF-122	ELECTRIC ROOM 122	58	0.34	1,550	0.02	GREENHECK	SQ-060-D	16 x 12 x 12	34	115V / 1	1/40	2,11,12

- NOTES:
1. CONTRACTOR TO PROVIDE WITH DISCONNECT SWITCH.
2. MANUFACTURER PROVIDED DISCONNECT SWITCH.
3. PROVIDE WITH 115VAC (WITH 115 VAC TRANSFORMER) MOTORIZED DAMPER WITH END SWITCH.
4. FAN TO OPERATE BASED ON SIGNALS FROM INTERLOCKED TEMPERATURE SENSOR OR GAS DETECTIONS SYSTEM IN ADDITION TO 30-MINUTE SPRING TIMER.
5. ELECTRICAL TO INTERLOCK WITH LIGHT SWITCH.
6. PROVIDE WITH DIAL FOR BALANCING ONLY
7. PROVIDE 12" INSULATED ROOF CURB WITH BUILT-IN DAMPER TRAY.
8. ELECTRICAL TO PROVIDE TIME CLOCK
9. ELECTRICAL TO PROVIDE WALL SWITCH
10. REFER TO MOTORIZED DAMPER SCHEDULES
11. FAN TO OPERATE BASED ON THERMOSTAT IN SPACE
12. PROVIDE GRAVITY BACKDRAFT DAMPER

MOTORIZED DAMPERS

EQMT. TAG	PERFORMANCE/CONSTRUCTION REQUIREMENTS					BASIS OF DESIGN INFORMATION							REMARKS
	CFM	EXT S. P. (IN. W.C.)	FACE VELOCITY (FPM)	FRAME THICKNESS	FAILURE MODE	MNF	MODEL NO.	ACTUATOR MNF	ACTUATOR MODEL NO.	ACTUATOR COUNT	NOMINAL DIMENSIONS (W" x H" x D")	ELECTRICAL DATA VOLTAGE POWER DRAW (W)	
MD-1	4,250	0.095	905	16 GAUGE	CLOSED	GREENHECK	VCD-23	HONEYWELL	MS8104F1210	1	26 x 26 x 5	24VAC 18	1-4

- NOTES:
1. TWO POSITION W/ SPRING RETURN
2. EXTERNALLY MOUNTED ACTUATOR, COORDINATE LOCATION IN FIELD
3. PROVIDE WITH STANDARD SLEEVE
4. INTERLOCK WITH OPERATION OF GX-1
5. ELECTRICAL CONTRACTOR TO PROVIDE 208V/3 TO 24VAC TRANSFORMER

AIR SCRUBBERS

EQUIPMENT NO.	LOCATION	PERFORMANCE/ CONSTRUCTION REQUIREMENTS				BASIS OF DESIGN INFORMATION				NOTES	
		FAN DATA			FILTER DATA	MNF	MODEL NO.	NOMINAL DIMENSIONS L" x W" x H"	NOMINAL OPERATING WEIGHT (LBS.)		
		AIR FLOW (CFM) [LO-MED-HI]	SOUND LEVEL (dBA) [LO-MED-HI]	VOLTS / PHASE	OPERATING CURRENT (A)						FILTER EFFICIENCY
LRS-1	GEAR ROOM	450 - 825 - 1,150	53 - 57 - 61	120V / 1	8.0	95% @ 0.3 MICRONS	HONEYWELL	F111C1012W-3S	48 x 24 x 21.5	198	1-3