

RTU-1A VENTILATION SCHEDULE															
OUTSIDE VENTILATION AIR DESIGN PER 2017 OMC SECTION 403															
ROOM#	AZ AREA	ROOM NAME	OCCUPANCY CLASSIFICATION	TBL 403.3 OCC DENSITY PEOPLE/1000 SF	PZ POPULATION	TBL 403.3 RP PEOPLE OA	TBL 403.3 BA AREA OA	VZ OA CFM	TBL 403.3.1.2 EZ AIR DIST EFF	VOZ OA REQUIRED	DESIGN CFM	% OA REQUIRED	SYSTEM %OA	ACTUAL OA CFM	NOTES
101	1629	SHOWROOM 1	SALES	15	24	7.5	0.12	375	0.8	469	3800	12%		469	
106	57	HALL 2	CORRIDORS	0	0	0	0.06	3	0.8	4	100	4%	12%	12	
	1686				24					474	3900			482	

- NOTES: (APPLICABLE IF NUMBER APPEARS IN NOTE COLUMN)
- Restroom Exhaust: 70 CFM (public RR's), 50 CFM (private RR's) per toilet or water closet minimum. See drawing for exact exhaust rates.
 - Janitor / Trash Room Exhaust: 1 CFM/Sq.Ft. minimum exhaust. See drawing for exact exhaust rates.
 - Locker Room Exhaust: 0.5 CFM/Sq.Ft. minimum exhaust. See drawing for exact exhaust rates.
 - Locker/Dressing Room Exhaust: 0.25 CFM/Sq.Ft. minimum exhaust. See drawing for exact exhaust rates.

RTU-1B VENTILATION SCHEDULE															
OUTSIDE VENTILATION AIR DESIGN PER 2017 OMC SECTION 403															
ROOM#	AZ AREA	ROOM NAME	OCCUPANCY CLASSIFICATION	TBL 403.3 OCC DENSITY PEOPLE/1000 SF	PZ POPULATION	TBL 403.3 RP PEOPLE OA	TBL 403.3 BA AREA OA	VZ OA CFM	TBL 403.3.1.2 EZ AIR DIST EFF	VOZ OA REQUIRED	DESIGN CFM	% OA REQUIRED	SYSTEM %OA	ACTUAL OA CFM	NOTES
100	1528	SHOWROOM 1	SALES	15	23	7.5	0.12	356	0.8	445	3000	15%		567	
102	520	CUSTOMER WAITING 1	LOBBIES/PREFUNCTION	30	16	7.5	0.06	151	0.8	189	1000	19%	19%	189	
103	206	HALL 1	CORRIDORS	0	0	0	0.06	12	0.8	15	100	15%		39	
	2254				39					649	4100			775	

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 - Janitor / Trash Room Exhaust: 1 CFM/Sq.Ft. minimum exhaust. See drawing for exact exhaust rates.
 - Locker Room Exhaust: 0.5 CFM/Sq.Ft. minimum exhaust. See drawing for exact exhaust rates.
 - Locker/Dressing Room Exhaust: 0.25 CFM/Sq.Ft. minimum exhaust. See drawing for exact exhaust rates.

RTU-2 VENTILATION SCHEDULE															
OUTSIDE VENTILATION AIR DESIGN PER 2017 OMC SECTION 403															
ROOM#	AZ AREA	ROOM NAME	OCCUPANCY CLASSIFICATION	TBL 403.3 OCC DENSITY PEOPLE/1000 SF	PZ POPULATION	TBL 403.3 RP PEOPLE OA	TBL 403.3 BA AREA OA	VZ OA CFM	TBL 403.3.1.2 EZ AIR DIST EFF	VOZ OA REQUIRED	DESIGN CFM	% OA REQUIRED	SYSTEM %OA	ACTUAL OA CFM	NOTES
127	103	PARTS MANAGER	OFFICE SPACE	5	1	5	0.06	11	11.8	1	125	1%		2	
128	255	PARTS TECH	OFFICE SPACE	5	1	5	0.06	20	12.8	2	200	1%		3	
129	2107	PARTS STORAGE	STORAGE ROOMS	0	0	0	0.12	253	13.8	18	1325	1%		18	
130	963	PARTS RECEIVING	SHIPPING/RECEIVING	0	0	0	0.12	116	14.8	8	1000	1%	1%	14	
131	167	WOMEN'S TECH	TOILET/RESTROOM	0	0	0	0.00	0	15.8	0	100	0%		1	
132	214	MEN'S TECH	TOILET/RESTROOM	0	0	0	0.00	0	16.8	0	150	0%		2	
133	243	TECH BREAK ROOM	BREAKROOMS (GENERAL)	25	6	5	0.06	45	17.8	3	300	1%		4	
145	298	SPECIAL TOOLS	STORAGE ROOMS	0	0	0	0.12	36	29.8	1	200	1%		3	
	4350				8					31	3400			44	

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- Restroom Exhaust: 70 CFM (public RR's), 50 CFM (private RR's) per toilet or water closet minimum. See drawing for exact exhaust rates.
 - Janitor / Trash Room Exhaust: 1 CFM/Sq.Ft. minimum exhaust. See drawing for exact exhaust rates.
 - Locker Room Exhaust: 0.5 CFM/Sq.Ft. minimum exhaust. See drawing for exact exhaust rates.
 - Locker/Dressing Room Exhaust: 0.25 CFM/Sq.Ft. minimum exhaust. See drawing for exact exhaust rates.

RTU-3 VENTILATION SCHEDULE															
OUTSIDE VENTILATION AIR DESIGN PER 2017 OMC SECTION 403															
ROOM#	AZ AREA	ROOM NAME	OCCUPANCY CLASSIFICATION	TBL 403.3 OCC DENSITY PEOPLE/1000 SF	PZ POPULATION	TBL 403.3 RP PEOPLE OA	TBL 403.3 BA AREA OA	VZ OA CFM	TBL 403.3.1.2 EZ AIR DIST EFF	VOZ OA REQUIRED	DESIGN CFM	% OA REQUIRED	SYSTEM %OA	ACTUAL OA CFM	NOTES
118	239	STORAGE ROOM	STORAGE ROOMS	0	0	0	0.12	29	7.8	10	180	6%		10	
120	319	SERVICE WRITERS	OFFICE SPACE	5	2	5	0.06	29	4.8	6	325	2%		18	
121	104	SERVICE MANAGER	OFFICE SPACE	5	1	5	0.06	11	5.8	2	110	2%		6	
122	1229	CUSTOMER WAITING 2	LOBBIES/PREFUNCTION	30	37	7.5	0.06	351	6.8	52	1400	4%		80	
123	55	VESTIBULE	CORRIDORS	0	0	0	0.06	3	7.8	0	50	1%	6%	3	
124	169	WOMEN'S RESTROOM	TOILET/RESTROOM	0	0	0	0.00	0	8.8	0	100	0%		6	
125	175	MEN'S RESTROOM	TOILET/RESTROOM	0	0	0	0.00	0	9.8	0	100	0%		6	
126	132	PARTS CASHIER	OFFICE SPACE	5	1	5	0.06	13	10.8	1	135	1%		8	
	2422				41					72	2400			137	

- NOTES: (APPLICABLE IF NUMBER APPEARS IN NOTE COLUMN)
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 - Janitor / Trash Room Exhaust: 1 CFM/Sq.Ft. minimum exhaust. See drawing for exact exhaust rates.
 - Locker Room Exhaust: 0.5 CFM/Sq.Ft. minimum exhaust. See drawing for exact exhaust rates.
 - Locker/Dressing Room Exhaust: 0.25 CFM/Sq.Ft. minimum exhaust. See drawing for exact exhaust rates.

RTU-4 VENTILATION SCHEDULE															
OUTSIDE VENTILATION AIR DESIGN PER 2017 OMC SECTION 403															
ROOM#	AZ AREA	ROOM NAME	OCCUPANCY CLASSIFICATION	TBL 403.3 OCC DENSITY PEOPLE/1000 SF	PZ POPULATION	TBL 403.3 RP PEOPLE OA	TBL 403.3 BA AREA OA	VZ OA CFM	TBL 403.3.1.2 EZ AIR DIST EFF	VOZ OA REQUIRED	DESIGN CFM	% OA REQUIRED	SYSTEM %OA	ACTUAL OA CFM	NOTES
104	76	KIDS PLAY	DAY CARE (4 & 8 UNDER)	25	2	10	0.18	34	0.8	42	170	25%		42	
105	211	SALES MANAGERS	OFFICE SPACE	5	1	5	0.06	18	0.8	22	200	11%		50	
107	207	GENERAL MANAGER	OFFICE SPACE	5	1	5	0.06	17	0.8	22	210	10%		52	
108	65	GENERAL MANAGER'S BATHROOM	TOILET/RESTROOM	0	0	0	0.00	0	0.8	0	50	0%	25%	12	
110	110	BUSINESS MANAGER	OFFICE SPACE	5	1	5	0.06	12	0.8	15	125	12%		31	
112	493	BUSINESS OFFICE	OFFICE SPACE	5	2	5	0.06	40	0.8	49	475	10%		118	
141	800	TRAINING/BREAK ROOM	BREAKROOMS (GENERAL)	25	20	5	0.06	148	25.8	6	770	1%		191	
	1962				27					156	2000			495	

- NOTES: (APPLICABLE IF NUMBER APPEARS IN NOTE COLUMN)
- Restroom Exhaust: 70 CFM (public RR's), 50 CFM (private RR's) per toilet or water closet minimum. See drawing for exact exhaust rates.
 - Janitor / Trash Room Exhaust: 1 CFM/Sq.Ft. minimum exhaust. See drawing for exact exhaust rates.
 - Locker Room Exhaust: 0.5 CFM/Sq.Ft. minimum exhaust. See drawing for exact exhaust rates.
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RTU-5 VENTILATION SCHEDULE															
OUTSIDE VENTILATION AIR DESIGN PER 2017 OMC SECTION 403															
ROOM#	AZ AREA	ROOM NAME	OCCUPANCY CLASSIFICATION	TBL 403.3 OCC DENSITY PEOPLE/1000 SF	PZ POPULATION	TBL 403.3 RP PEOPLE OA	TBL 403.3 BA AREA OA	VZ OA CFM	TBL 403.3.1.2 EZ AIR DIST EFF	VOZ OA REQUIRED	DESIGN CFM	% OA REQUIRED	SYSTEM %OA	ACTUAL OA CFM	NOTES
116	774	NEW VEHICLE DELIVERY	MAIN ENTRY LOBBIES	10	8	5	0.06	86	0.8	108	1300	8%	8%	108	
	774				8					108	1300			108	

- NOTES: (APPLICABLE IF NUMBER APPEARS IN NOTE COLUMN)
- Restroom Exhaust: 70 CFM (public RR's), 50 CFM (private RR's) per toilet or water closet minimum. See drawing for exact exhaust rates.
 - Janitor / Trash Room Exhaust: 1 CFM/Sq.Ft. minimum exhaust. See drawing for exact exhaust rates.
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RTU-6 VENTILATION SCHEDULE															
OUTSIDE VENTILATION AIR DESIGN PER 2017 OMC SECTION 403															
ROOM#	AZ AREA	ROOM NAME	OCCUPANCY CLASSIFICATION	TBL 403.3 OCC DENSITY PEOPLE/1000 SF	PZ POPULATION	TBL 403.3 RP PEOPLE OA	TBL 403.3 BA AREA OA	VZ OA CFM	TBL 403.3.1.2 EZ AIR DIST EFF	VOZ OA REQUIRED	DESIGN CFM	% OA REQUIRED	SYSTEM %OA	ACTUAL OA CFM	NOTES
109	274	WAITING F&1	LOBBIES/PREFUNCTION	30	8	7.5	0.06	76	0.8	96	470	20%		96	
113	164	OFFICE MANAGER	OFFICE SPACE	5	1	5	0.06	15	0.8	19	270	7%		55	
114	140	OFFICE F&1.1	OFFICE SPACE	5	1	5	0.06	13	0.8	17	230	7%	20%	47	
115	144	OFFICE F&1.2	OFFICE SPACE	5	1	5	0.06	14	0.8	17	230	7%		47	
	722				11					148	1200			244	

- NOTES: (APPLICABLE IF NUMBER APPEARS IN NOTE COLUMN)
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RTU-7 VENTILATION SCHEDULE															
OUTSIDE VENTILATION AIR DESIGN PER 2017 OMC SECTION 403															
ROOM#	AZ AREA	ROOM NAME	OCCUPANCY CLASSIFICATION	TBL 403.3 OCC DENSITY PEOPLE/1000 SF	PZ POPULATION	TBL 403.3 RP PEOPLE OA	TBL 403.3 BA AREA OA	VZ OA CFM	TBL 403.3.1.2 EZ AIR DIST EFF	VOZ OA REQUIRED	DESIGN CFM	% OA REQUIRED	SYSTEM %OA	ACTUAL OA CFM	NOTES
119	1294	SERVICE WRITE-UP	LOBBIES/PREFUNCTION	30	39	7.5	0.06	370	3.8	97	2400	4%	4%	97	
	1294				39					97	2400			97	

- NOTES: (APPLICABLE IF NUMBER APPEARS IN NOTE COLUMN)
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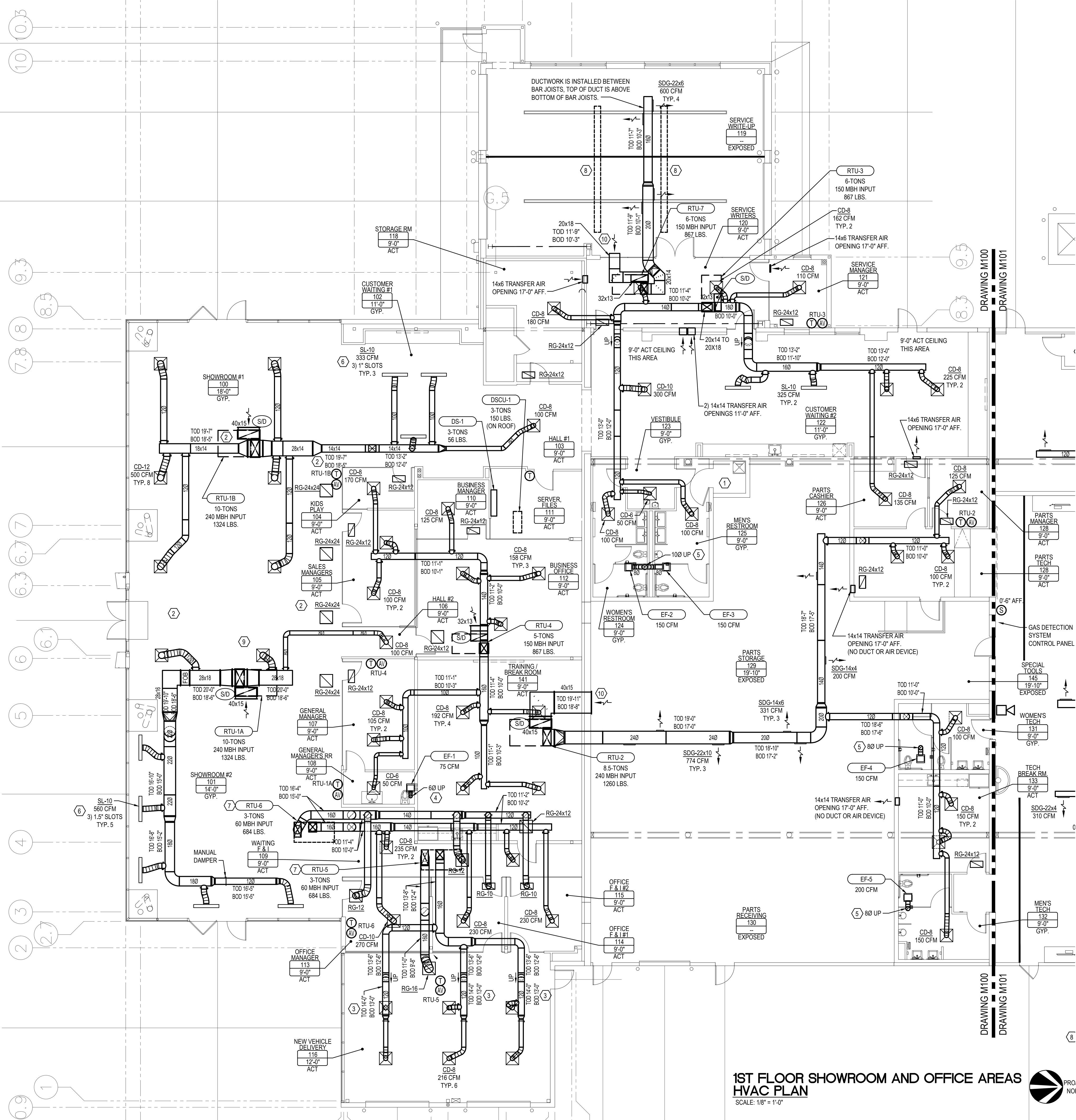
RTU-8 VENTILATION SCHEDULE															
OUTSIDE VENTILATION AIR DESIGN PER 2017 OMC SECTION 403															
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136	338	STORAGE	STORAGE ROOMS	0	0	0	0.12	41	20.8	2	200	1%		5	
137	8193	SERVICE AREA 2	LOBBIES/PREFUNCTION	30	246	7.5	0.06	2337	21.8	107	7800	1%		180	
138	2876	EV SERVICE AREA	LOBBIES/PREFUNCTION	30	86	7.5	0.06	818	22.8	36	1550	2%	2%	36	
139	295	SHOP EQUIPMENT	STORAGE ROOMS	0	0	0	0.12	35	23.8	1	200	1%		5	
140	374	EV BATTERY ROOM	STORAGE ROOMS	0	0	0	0.12	45	24.8	2	250	1%		6	
	12076				332					148	10000			231	

- NOTES: (APPLICABLE IF NUMBER APPEARS IN NOTE COLUMN)
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RTU-9 VENTILATION SCHEDULE															
OUTSIDE VENTILATION AIR DESIGN PER 2017 OMC SECTION 403															
ROOM#	AZ AREA	ROOM NAME	OCCUPANCY CLASSIFICATION	TBL 403.3 OCC DENSITY PEOPLE/1000 SF	PZ POPULATION	TBL 403.3 RP PEOPLE OA	TBL 403.3 BA AREA OA	VZ OA CFM	TBL 403.3.1.2 EZ AIR DIST EFF	VOZ OA REQUIRED	DESIGN CFM	% OA REQUIRED	SYSTEM %OA	ACTUAL OA CFM	NOTES
134/135	3511	SERVICE AREA 1/ DETAIL AREA	LOBBIES/PREFUNCTION	30	105	7.5	0.06	998	18.8	53	5000	1%	1%	53	
	3511				105					53	5000			53	

- NOTES: (APPLICABLE IF NUMBER APPEARS IN NOTE COLUMN)
- Restroom Exhaust: 70 CFM (public RR's), 50 CFM (private RR's) per toilet or water closet minimum. See drawing for exact exhaust rates.
 - Janitor / Trash Room Exhaust: 1 CFM/Sq.Ft. minimum exhaust. See drawing for exact exhaust rates.
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FAN SCHEDULE														
TAG	AREA SERVED	MFG.	MODEL	TYPE	FAN				ELECTRICAL				WEIGHT	OPTIONS / ACCESSORIES
					CFM	ESP	HP	WATTS	V / PH / HZ	WATTS	V / PH / HZ	WATTS		
EF-1	108 GEN. MGR. RR	GREENHECK	SP-B90	CEILING	75	0.25	-	21.1	115 / 1 / 60	10			B	
EF-2	124 WOMEN'S RR	GREENHECK	SP-B150	CEILING	150	0.25	-	128	115 / 1 / 60	12			B	
EF-3	125 MEN'S RR	GREENHECK	SP-B150	CEILING	150	0.25	-	128	115 / 1 / 60	12			B	
EF-4	131 WOMEN'S TECH RR													



1ST FLOOR SHOWROOM AND OFFICE AREAS HVAC PLAN
SCALE: 1/8" = 1'-0"

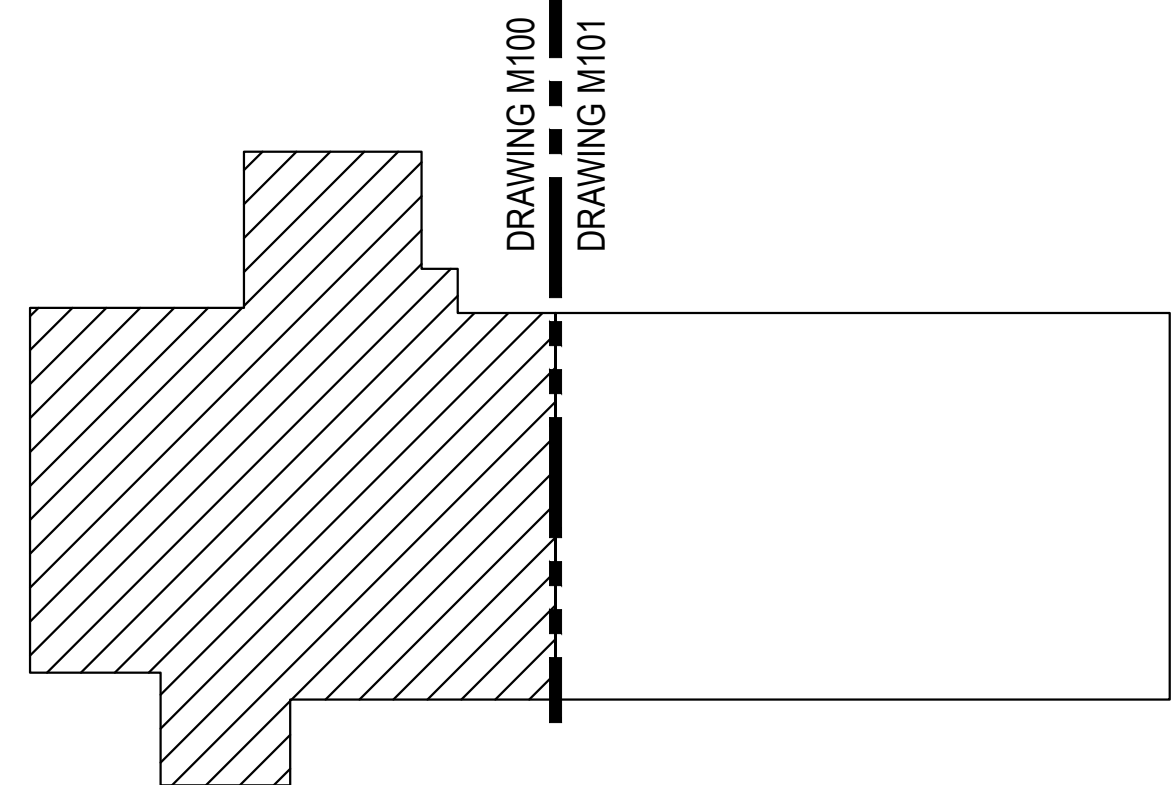


GENERAL NOTES

- DUCTWORK TO BE GALVANIZED, FABRICATED AND INSTALLED PER SMACNA AND SECTION M-603 OF THE 2017 OBC. DUCTWORK SHALL BE CONSTRUCTED WITH A MINIMUM THICKNESS AS SPECIFIED IN SMACNA HVAC, "DUCT CONSTRUCTION STANDARD - METAL AND FLEXIBLE," PER 2017 OBC-M603.4.
- UNLESS OTHERWISE NOTED ON THE MECHANICAL PLAN, DUCT DIMENSIONS INDICATE CLEAR INSIDE MEASUREMENTS. VERIFY EXACT ROUTING OF ALL DUCTWORK WITH EXISTING CONDITIONS AND MAINTAIN CLEAR INSIDE DIMENSIONS.
- COORDINATE EXACT LOCATION OF AIR DEVICES WITH REFLECTED CEILING PLAN, LIGHTING LAYOUT AND EXISTING CONDITIONS.
- BRANCH DUCT TO DIFFUSER TO BE SAME SIZE AS DIFFUSER NECK.
- COORDINATE EXACT LOCATION OF THERMOSTATS WITH FURNITURE PLAN AND OWNER.
- FOR PURPOSES OF CLARITY AND LEGIBILITY, DRAWINGS ARE ESSENTIALLY DIAGRAMMATIC ALTHOUGH SIZE AND LOCATION OF EQUIPMENT ARE SHOWN TO SCALE WHEREVER POSSIBLE.
- ANY DISCREPANCIES OR EXISTING CONDITIONS DISCOVERED DURING CONSTRUCTION THAT PROHIBIT THE SUCCESSFUL COMPLETION OF WORK INDICATED ON THIS PLAN MUST BE REPORTED TO THE PROJECT MANAGER IMMEDIATELY.
- DUCTWORK INSULATION SHALL CONFORM WITH SECTION M-604 OF THE 2017 OBC. COVERINGS AND LININGS, INCLUDING ADHESIVES, SHALL HAVE A FLAME SPREAD INDEX NOT MORE THAN 25 AND A SMOKE-DEVELOPED INDEX NOT MORE THAN 50 WHEN TESTED WITH ACCORDANCE WITH ASTM E 84/UL 723, ASTM E 2231 AND ASTM C 411. INTERNAL DUCT LINING SHALL BE DURABLE AND TESTED IN ACCORDANCE WITH UL181.
- ALL DUCT JOINTS, SEAMS & CONNECTIONS SHALL BE SEALED & FASTENED PER SECTION 603.9 2017 OMC.
- EQUIPMENT TO BE INSTALLED PER MANUFACTURER'S GUIDELINES.
- DUCT SHALL BE SUPPORTED WITH APPROVED HANGERS AT INTERVALS NOT EXCEEDING 10 FEET. (SECT. 603.10 2017 OMC)
- ALL FIELD-INSTALLED POWER AND CONTROL WIRING FOR ALL MECHANICAL EQUIPMENT AND APPLIANCES SHALL BE IN ACCORDANCE WITH NFPA-70 AND THE NATIONAL ELECTRIC CODE.
- THESE DRAWINGS DO NOT ADDRESS OR IMPLY THE STATUS OF THE STRUCTURE AND ITS ABILITY TO SUPPORT ROOFTOP EQUIPMENT SHOWN. THE CINCINNATI AIR CONDITIONING COMPANY DOES NOT PERFORM ANY DESIGN, SPECIFICATION, INSPECTION, OR INSTALLATION OF STRUCTURAL REINFORCEMENTS TO SUPPORT ROOFTOP EQUIPMENT.

DRAWING NOTES

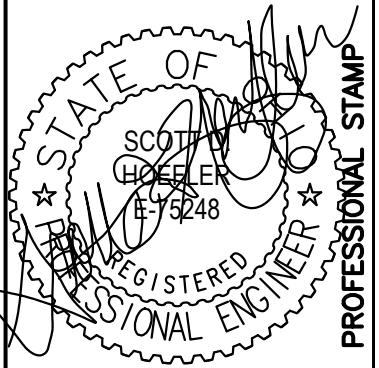
- NO WORK IN THIS AREA.
- DUCTWORK INSTALLED AS HIGH AS POSSIBLE BELOW BAR JOISTS.
- DUCTWORK INSTALLED BETWEEN BAR JOISTS.
- EXHAUST DUCT UP THROUGH ROOF WITH TALLCONE FLASHING, STORM COLLAR, AND CHINA CAP WITH BIRDSCREEN. ROOFING WORK BY OTHERS.
- EXHAUST DUCT UP THROUGH ROOF WITH DECKTITE FLASHING, STORM COLLAR, AND CHINA CAP WITH BIRDSCREEN. ROOFING WORK BY OTHERS.
- LINEAR SLOT DIFFUSERS ARE COLOR BLACK.
- RELOCATED, EXISTING RTU. REMOVED FOR BUILDING DEMOLITION, THEN REINSTALLED.
- DEMO EXISTING INFRARED TUBE HEATER. FIELD VERIFY ON SITE WITH G.C. TO DETERMINE IF C.A.C. OR ROOFER WILL CAP ABANDONED FLUES OR COMBUSTION AIR ROOF STACKS.
- SUPPLY AIR MAIN RUNNING NORTH / SOUTH BETWEEN BAR JOISTS. TOP OF DUCT IS ABOVE BOTTOM OF BAR JOISTS.
- INSTALL WIRE MESH OVER RETURN AIR DUCT OPENING.



KEY PLAN
SCALE: NTS



REVISIONS	DATE:	DESCRIPTION:

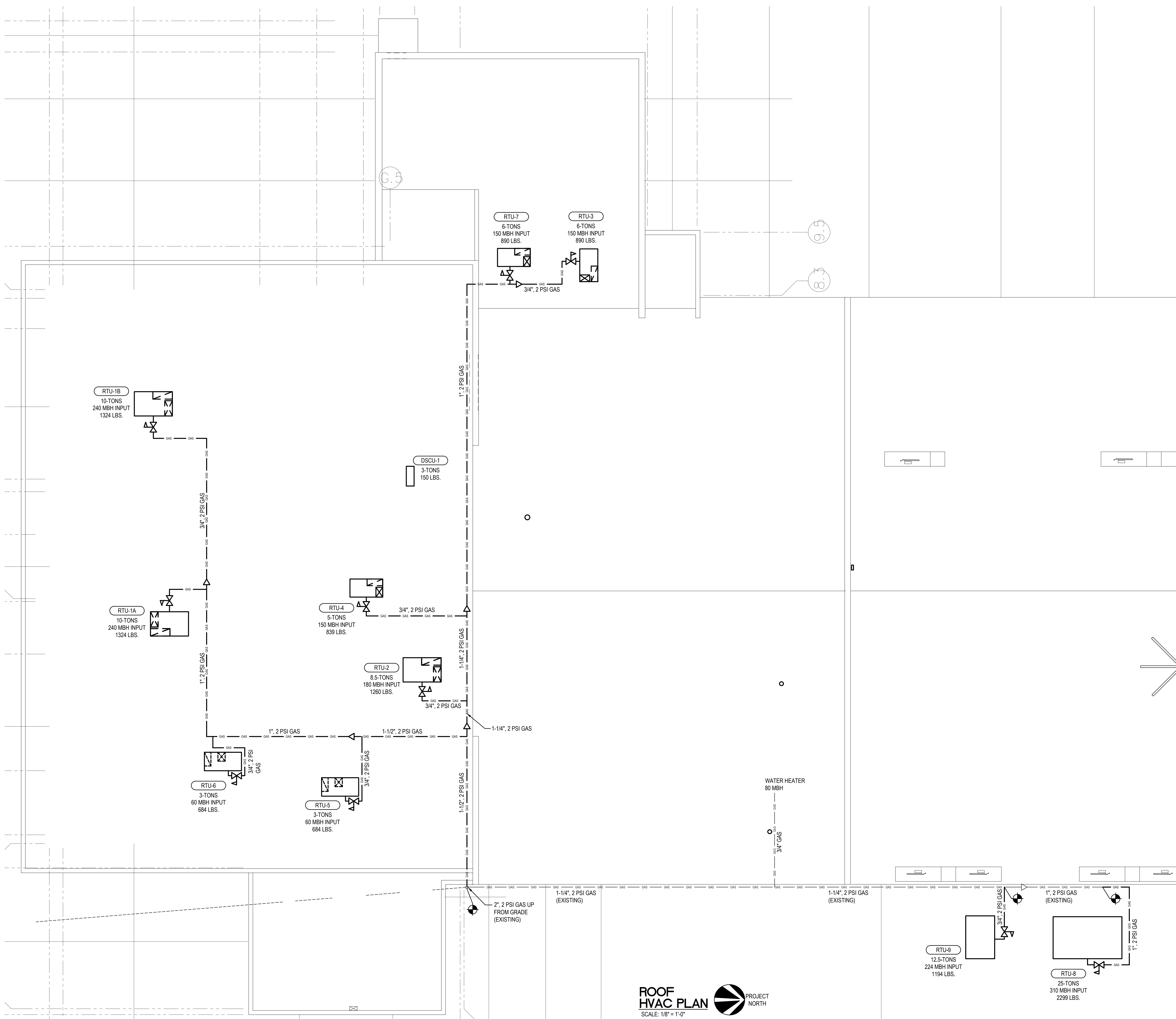


The Cincinnati Air Conditioning Co.
10000 WILSON BLVD. # 200000 • CINCINNATI, OH 45241 • (513) 533-1214
FAX: 513-533-1212 • WWW.CINCINNATIAC.COM
Since 1938
1818 Northway Rd., Cincinnati, Ohio 45215

JEFF WILKINSON OF BEAVERCREEK
2170 HELLER DR.
DAYTON, OHIO 45424

SHOWROOM AND OFFICE AREAS HVAC PLAN

DRAWING SCALE: AS NOTED
DATE DRAWN: 12/08/25
DRAWN BY: C. BLICKENSCHPER
JOB # C-6297
DRAWING # 6274
SHEET # M100



GENERAL NOTES

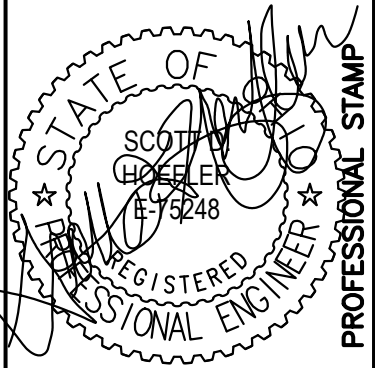
A. PLEASE REFER TO SHEET M101 FOR GENERAL NOTES, LEGENDS, AND ABBREVIATIONS.

GAS PIPING SPECIFICATIONS

A. PIPE AND FITTINGS:
 1.) GAS PIPING SHALL BE STANDARD WEIGHT BLACK STEEL. FITTINGS AND JOINTS SHALL BE STANDARD WEIGHT BLACK MALLEABLE IRON, SCREWED, EXCEPT PIPE 2 1/2" AND LARGER SHALL BE WELDED, OR PRESS FITTING SYSTEM. STANDARD WEIGHT WELDED FITTINGS SHALL BE USED. PIPING WITHIN LAST 10'-0" OF APPLIANCE MAY BE SCREWED IF APPROVED BY CODE AUTHORITIES.

B. INSTALLATION:
 1.) GAS PIPING TO MOUNTED ON THE ROOF ON ROOFTOP BLOX OR APPROVED EQUAL PER LOCAL CODE.
 2.) GAS PIPING INSTALLED OUTSIDE SHALL BE COATED WITH A RUST INHIBITOR TO PREVENT ATMOSPHERIC CORROSION AND LOCATED WHERE IT WILL BE PROTECTED FROM PHYSICAL DAMAGE.

REVISIONS	DATE	DESCRIPTION
	12/08/23	ISSUE FOR PERMIT



The Cincinnati Air-Conditioning Co.
 Since 1938
 2881 Northway Hill Ln., Cincinnati, Ohio 45231
 Phone: 513-251-5422

JEFF WILKINSON OF BEAVERCREEK
 2170 HELLER DR.
 DAYTON, OHIO 45454
 ROOF HVAC PLAN

DRAWING SCALE:
AS NOTED

DATE DRAWN:
12/08/23

DRAWN BY:
C. BLICKENSCHPER

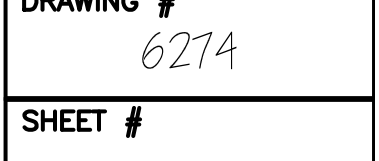
JOB #
C-6297

DRAWING #
6274

SHEET #
M102

ROOF HVAC PLAN
 SCALE: 1/8" = 1'-0"

KEY PLAN
 SCALE: NTS



MONOXIVENT TECHNICAL INFORMATION
Conventional Overhead Exhaust System

PROJECT: LOCATION: ARCHITECT: ENGINEER: CONTRACTOR: SALES ENGINEER: DATE:

www.monoxivent.com info@monoxivent.com 309-794-1000 Page: OES-3

1250 degree F
Intermittent Exhaust Temperatures

1000 degree F
Interior Temperature, per MIL PFR 62028

600 degree F
Continuous Duty, Baking Test

Standard Diameters	4"	6"	8"	10"	12"	I/O
Fiberglass Inner Ply Thickness	.015	.015	.015	.015	.015	Inches
Nomex Outer Ply Thickness	.025	.025	.025	.025	.025	Inches
Wire Gauge	.060	.070	.080	.080	.080	Inches
Wall Thickness	.100	.110	.120	.125	.125	Inches
Helix Pitch	.750	.880	1.000	1.000	1.000	Inches
Weight Per Foot	18.260	18.500	12.880	17.360	22.420	Ounces
Bending Radius	2.25	2.52	3.00	4.00	6.00	Inches

Temperature Range - 88 degrees F to 600 degrees F (Baking Test)
This product meets Military Spec: MIL PFR 62028 - Paragraph 4.7.3, 7.2 Hours at 1000 degrees F.
This product has a temperature rating at 1250 degrees F for intermittent use.

Standard Lengths: 16', 20', 24' (Longer Lengths Available):
Standard Diameters: 4", 5", 6", 8", 10", 12"

Series 4000 extraction hose meets the requirements of the United States Air Force for low temperature flexibility and high temperature stability.

NOTE - The above diameters and lengths of the 4000 series hose are listed as standard. Other diameters and lengths are also available. Please contact MONOXIVENT for your Request.

23827 SL-SC Nozzle

Provided With: .4" Diameter .24 Feet/Hose 4000 Series Hose

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MONOXIVENT TECHNICAL INFORMATION
Series 4000 High-Temperature Exhaust Extraction Hose

PROJECT: LOCATION: ARCHITECT: ENGINEER: CONTRACTOR: SALES ENGINEER: DATE:

www.monoxivent.com info@monoxivent.com 309-794-1000 Page: HS-4

CONSTRUCTION: SILICONE/NOMEX

NOTE - The Series 4000 extraction hose is used for both overhead hose work and conventional overhead systems.

Exhaust extraction hose is a double ply hose with an inner layer ply of woven fiberglass coated silicone rubber. A helically wound spring steel wire is embedded between the inner layer ply and an exterior ply of woven Nomex coated with silicone rubber. The wire insures maximum flexibility and minimum diameter restrictions in sharp bend areas. The assembly is double-wound with a treated Nomex cord and heat vulcanized to provide a greater strength and serviceability.

1250 degree F
Intermittent Exhaust Temperatures

1000 degree F
Interior Temperature, per MIL PFR 62028

600 degree F
Continuous Duty, Baking Test

Standard Diameters	4"	6"	8"	10"	12"	I/O
Fiberglass Inner Ply Thickness	.015	.015	.015	.015	.015	Inches
Nomex Outer Ply Thickness	.025	.025	.025	.025	.025	Inches
Wire Gauge	.060	.070	.080	.080	.080	Inches
Wall Thickness	.100	.110	.120	.125	.125	Inches
Helix Pitch	.750	.880	1.000	1.000	1.000	Inches
Weight Per Foot	18.260	18.500	12.880	17.360	22.420	Ounces
Bending Radius	2.25	2.52	3.00	4.00	6.00	Inches

Temperature Range - 88 degrees F to 600 degrees F (Baking Test)
This product meets Military Spec: MIL PFR 62028 - Paragraph 4.7.3, 7.2 Hours at 1000 degrees F.
This product has a temperature rating at 1250 degrees F for intermittent use.

Standard Lengths: 16', 20', 24' (Longer Lengths Available):
Standard Diameters: 4", 5", 6", 8", 10", 12"

Series 4000 extraction hose meets the requirements of the United States Air Force for low temperature flexibility and high temperature stability.

NOTE - The above diameters and lengths of the 4000 series hose are listed as standard. Other diameters and lengths are also available. Please contact MONOXIVENT for your Request.

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MONOXIVENT TECHNICAL INFORMATION
Oval Mouth Adapter with Spring Clamp Feature 23827-SC

PROJECT: LOCATION: ARCHITECT: ENGINEER: CONTRACTOR: SALES ENGINEER: DATE:

www.monoxivent.com info@monoxivent.com 309-794-1000 Page: AC-9

3" - 4.50"

4.25"

10"

3" - 4.50"

5.50" - 6.50"

1/4" NEOPRENE HEAVY WALL

The Monoxivent oval mouth clamping tailpipe adapter is constructed of 600-degree neoprene rubber. The adapter is supplied with a spring tension clamping device. The spring clamp is attached to the adapter body, allowing for a positive and simple connection and for removal from the vehicle exhaust pipe. The oval mouth design allows the adapter to fit many size by side pipes as well as single exhaust pipes. The 23827-SC is an excellent all-around adapter for automobiles, vans, and pick-up trucks. The mouth and body may be compressed, as shown by the dimensions above.

(Optional Spring Hinged Damper Available)

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MONOXIVENT TECHNICAL INFORMATION
Conventional Overhead Fabric Hose Lifting Elbows

PROJECT: LOCATION: ARCHITECT: ENGINEER: CONTRACTOR: SALES ENGINEER: DATE:

www.monoxivent.com info@monoxivent.com 309-794-1000 Page: OES-9

LIFTING ELBOWS FOR SUPPORTING FABRIC HOSE FROM OVERHEAD

Lifting elbow for use with 3000/4000/5000/7000 Series hose.

Part Number	Fabric Hose	4"
LE-40	4"	4"
LE-60	6"	6"
LE-80	8"	8"

CONSTRUCTION: Short radius die-formed 24-gauge galvanized steel, large diameters available upon request.

*Optional lifting elbow sizes available up to 24", consult factory.

*Optional Stainless Steel & Aluminum construction available, consult factory.

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MONOXIVENT TECHNICAL INFORMATION
Conventional Overhead Pull-up Components for Raising & Lowering Hose

PROJECT: LOCATION: ARCHITECT: ENGINEER: CONTRACTOR: SALES ENGINEER: DATE:

www.monoxivent.com info@monoxivent.com 309-794-1000 Page: OES-5

PU-KIT-R

23857 Pulley 3/4"

23861 Pulley Mounting Hook 1 1/2"

23858 Wall Cleat 6"

23859 Multi-Filament Polypropylene Cord - 750 lbs. Breaking Strength 1/4"

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MONOXIVENT TECHNICAL INFORMATION
Clamp, Bridge Clamps & Worm Gear Clamps

PROJECT: LOCATION: ARCHITECT: ENGINEER: CONTRACTOR: SALES ENGINEER: DATE:

www.monoxivent.com info@monoxivent.com 309-794-1000 Page: AC-30

BRIDGE CLAMP

WORM GEAR CLAMP

Used for flex with external helix.

Used for flex with internal helix.

Model Numbers	3" hose	4" hose	6" hose	8" hose	10" hose
BC-3	for 3" hose				
BC-4	for 4" hose				
BC-5	for 5" hose				
BC-6	for 6" hose				
BC-7	for 7" hose				
BC-8	for 8" hose				
BC-9	for 9" hose				
BC-10	for 10" hose				
BC-12	for 12" hose				
BC-14	for 14" hose				
BC-16	for 16" hose				
BC-18	for 18" hose				
BC-20	for 20" hose				
BC-22	for 22" hose				
BC-24	for 24" hose				

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MONOXIVENT TECHNICAL INFORMATION
Belt Drive Backward Incline Fans

PROJECT: LOCATION: ARCHITECT: ENGINEER: CONTRACTOR: SALES ENGINEER: DATE:

www.monoxivent.com info@monoxivent.com 309-794-1000 Page: EF-10

BELT DRIVE BACKWARD INCLINE FANS - SERIES - BI

The Series BI belt drive utility blower meets today's demand for efficient and dependable ventilation. The use of modern high strength steels insures strength and durability with a considerable savings in weight.

CONSTRUCTION: The scroll wrapper shall be (minimum) 14-gauge steel and the scroll sides shall be (minimum) 12-gauge steel. The entire fan shall have continuously welded seams.

Paint Finish: Baked polyester powder coating - standard

S/P Range: 0 - 5' Standard (higher available)

Wheel: Backward incline non-overloading - steel standard, aluminum optional

Class: Blower Class I Standard (Class II available)

Bearings: Heavy Duty Rn-Adjustable Ball Type - Rated for 200,000 Hours

Drive: V Belt With Adjustable Base & Variable Pitch Motor Pulley

Cover: Cover is Standard and Offers Both Weather and Drive Guard Requirements

Discharge: Eight Different Discharge Positions - Top Horizontal Discharge is standard. Clockwise or counter-clockwise rotation is available.

Motors: QDP Multi-Voltage Standard - TEFC Optional

Standard Coating: Baked polyester powder coating, electrostatically applied

Optional Coatings: Epoxy Powder, Phenolic Epoxy Powder, Easy Clean Powder, Air Dry Phenolic

* Other options available

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GREENHECK Building Value in Air

Printed Date: 09/26/2023
Job: Jeff Wyler Hyundai Beaver Creek
Mark: EF-3
Model: USF-13

Model: USF-13
Universal Single Width Fan

Standard Construction Features:

HOUSING: Class I and under feature Perma-Lock construction on sizes 4-18 and continuously welded on sizes 24-48 and all class II fans. Unit support angles with mounting holes. Adjustable motor plate. Corrosion resistant fasteners - Inlet colors. Outlet flange standard on sizes 27-72 and all class II fans. Unfinished steel parts are processed through a multi-stage cleaning and pre-treatment and then finished with a high-performance powder coating. Sizes 24 and less are rotatable in 45 deg. increments. Sizes greater than 48 are not rotatable.

BEARINGS, SHAFT, AND WHEEL: Air handling quality, self-aligning, ball bearing in pillow block housing - Pushed, axial steel shafts with rust inhibitor. Centrifugal wheel.

Selected Options & Accessories:

Motor VFD Speed without Shaft Grounding Protection
Switch - NEMA-3R, Rogge, For Indoor or Outdoor Use, Mounted & Wired
Motor used for fan run operation with VFD, not power line Hz
Motor with Class B or Greater Insulation
Finish - Coated
Coating: Penetrator, Concrete Gray-RAL 7021, Fan and Attached Accessories
Direct Mount Isolator, Isolator-Rubber Mount, 0.50 Inch, Base Coating - NA
Isolator - CW
Housing - Welded Scroll
Discharge Position - TH
Arrangement - 4
ULUL-100 - Power Ventilators
Access Door - Bolted
Inlet Connection, Slip Fit
Outlet Connection, Slip Fit
Motor Cover - Steel Construction
Fasteners - Standard
Unit Warranty - 1 Yr (Standard)

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GREENHECK Building Value in Air

Printed Date: 09/26/2023
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Model: USF-13

Model: USF-13
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BEARINGS, SHAFT, AND WHEEL: Air handling quality, self-aligning, ball bearing in pillow block housing - Pushed, axial steel shafts with rust inhibitor. Centrifugal wheel.

Selected Options & Accessories:

Motor VFD Speed without Shaft Grounding Protection
Switch - NEMA-3R, Rogge, For Indoor or Outdoor Use, Mounted & Wired
Motor used for fan run operation with VFD, not power line Hz
Motor with Class B or Greater Insulation
Finish - Coated
Coating: Penetrator, Concrete Gray-RAL 7021, Fan and Attached Accessories
Direct Mount Isolator, Isolator-Rubber Mount, 0.50 Inch, Base Coating - NA
Isolator - CW
Housing - Welded Scroll
Discharge Position - TH
Arrangement - 4
ULUL-100 - Power Ventilators
Access Door - Bolted
Inlet Connection, Slip Fit
Outlet Connection, Slip Fit
Motor Cover - Steel Construction
Fasteners - Standard
Unit Warranty - 1 Yr (Standard)

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GREENHECK Building Value in Air

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Switch - NEMA-3R, Rogge, For Indoor or Outdoor Use, Mounted & Wired
Motor used for fan run operation with VFD, not power line Hz
Motor with Class B or Greater Insulation
Finish - Coated
Coating: Penetrator, Concrete Gray-RAL 7021, Fan and Attached Accessories
Direct Mount Isolator, Isolator-Rubber Mount, 0.50 Inch, Base Coating - NA
Isolator - CW
Housing - Welded Scroll
Discharge Position - TH
Arrangement - 4
ULUL-100 - Power Ventilators
Access Door - Bolted
Inlet Connection, Slip Fit
Outlet Connection, Slip Fit
Motor Cover - Steel Construction
Fasteners - Standard
Unit Warranty - 1 Yr (Standard)

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GREENHECK Building Value in Air

Printed Date: 09/26/2023
Job: Jeff Wyler Hyundai Beaver Creek
Mark: EF-3
Model: USF-13

Isolators
Type: Rubber Mount, 0.50 Inch

Standard Construction Features:

Oil resistant neoprene. Color coded or identified to indicate load capacity. Tapped center hole to secure isolator to base. Flanged with through holes for attachment to supporting structure.

Fan Configuration

Model: USF-13
Arrangement: 4
Rotation: CW
Motor Position: Centered
Isolator Color A: Green
Isolator Color C: Black
Isolator Description: RD-1

Discharge Position: TH
Class: I
Motor Frame Size: 145T
Isolator/Deflection: Rubber Mount, 0.50 Inch
Isolator Color B: Red
Isolator Color D: Black
Isolator Manufacturer: VMC

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GREENHECK Building Value in Air

Printed Date: 09/26/2023
Job: Jeff Wyler Hyundai Beaver Creek
Mark: EF-3
Model: USF-13

USF-13 Min/Max Fan Curve

Performance	Required Volume (CFM)	Actual Volume (CFM)	External SP (in. w.g.)	Total SP (in. w.g.)	Fan RPM	Operating Power (hp)
	2,100	2,100	4	4	2559	1.89

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GREENHECK Building Value in Air

Printed Date: 09/26/2023
Job: Jeff Wyler Hyundai Beaver Creek
Mark: EF-3
Model: USF-13

AMCA

AMCA Certified Ratings

AMCA Licensed for Sound and Air Performance and FEI ratings. Power rating (BHP/W) does not include transmission losses.

Greenheck Fan Corporation certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA certified ratings seal applies to sound and air performance and FEI ratings only. Performance certified is for installation type D: Free inlet, Ducted outlet. Performance ratings do not include the effects of accessories (accessories). Power ratings (BHP/W) include transmission losses. The sound power level ratings shown are in decibels, referred to 10-12 watts calculated per AMCA Standard 301. The A-weighted sound ratings shown have been calculated per AMCA International Standard 301. Values shown are for inlet Lw, LwA, and outlet Lw, LwA sound power levels for installation type B: Free inlet, Ducted outlet. Outlet ratings include the effects of duct end connection. dB(A) levels are not licensed by AMCA International. The AMCA Certified Ratings Seal for Sound applies to inlet LwA and outlet LwA ratings only.

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MONOXIVENT TECHNICAL INFORMATION
Control Box Starter (CBS) Electrical Components

PROJECT: LOCATION: ARCHITECT: ENGINEER: CONTRACTOR: SALES ENGINEER: DATE:

www.monoxivent.com info@monoxivent.com 309-794-1000 Page: EF-31

Control Box Starter (CBS) - Electrical Components

NEMA 12 BOX
12" x 12" x 9"

HINGED COVER DOOR

SERIES CBS - CONTROL BOX WITH TRANSFORMER, CONTACTOR, OVERLOAD PROTECTION

NOTE: ON/OFF CONTROL SWITCH MOUNTED ON COVER

ELECTRICAL COMPONENTS ARE UL & CSA APPROVED

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MONOXIVENT TECHNICAL INFORMATION
Control Box Starter (CBS) Wiring Diagram

PROJECT: LOCATION: ARCHITECT: ENGINEER: CONTRACTOR: SALES ENGINEER: DATE:

www.monoxivent.com info@monoxivent.com 309-794-1000 Page: EF-32

Control Box Starter (CBS) - Wiring Diagram

NEMA CABINET W/ON-OFF KNOB TRANSFORMER CONTACTOR OVERLOAD PROTECTION

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REVISIONS

DATE:	DESCRIPTION:
12/08/23	ISSUE FOR PERMIT

STATE OF OHIO
SCOTT J. HELLER
REGISTERED PROFESSIONAL ENGINEER
No. 12488

The Cincinnati Air Conditioning Co.
1415 COMMERCE CENTER DR. #2000B BIRMINGHAM, OH 45240
Since 1938
Phone: 513-251-2422 FAX: 513-251-2424
2826 Northchase Dr., Cincinnati, Ohio 45248

JEFF WYLER HYUNDAI OF BEAVER CREEK
2170 HELLER DR.
DAYTON, OHIO 45454

VEHICLE EXHAUST SYSTEM INFORMATION

DRAWING SCALE: AS NOTED

DATE DRAWN: 12/08/23

DRAWN BY: C. BLICKENSCHPERFER

JOB # C-6297

DRAWING # 6274

SHEET # MIO3