

May 01, 2025 -- 10:28am T:\Projects\2024\24-141 -- ACM Makers Space Dust Collection and Weld Fume Extraction Systems\WOOD SHOP\Drawings\24-141 - H5.dwg

DEDICATED OUTSIDE AIR UNIT																								
TAG	SERVES	SUPPLY FAN DATA				HEATING DATA				COOLING DATA				REHEAT SECTION		ISMRE2	CONTROL	ELECT. CHAR.	MCA	MOCP	APPROX. WEIGHT	BASIS OF DESIGN*		
		CFM	O.A.	EXT. S.P.	HP	INPUT MBH	OUTPUT MBH	TEMP. RISE (°F)	HEAT TYPE	NATURAL GAS PRESSURE	COMPRESSOR TYPE	TOTAL CAPACITY	SENSIBLE CAPACITY	LAT (COIL) DB/WB (°F)	CAPACITY MBH							LAT DB / WB (°F)	MANUFACTURER	MODEL
DOAU-1	WOOD SHOP	4,000	4,000	0.75"	1.5	400.0	324.0	75	INDIRECT FIRED	7" - 14" IWC	VARIABLE SPEED INVERTER	274.6 MBH	161.4 MBH	53.2 / 53.1	157.1	75/61	7.6	NOTE 1	460V-60HZ-3Ø	46.7	60.0	3,340	GREENHECK	RV-45-20-1
NOTES: 1. UNIT IS TO OPERATE CONTINUOUSLY WHENEVER THE DUST COLLECTOR OPERATES AND IS TO OPERATE INTERMITTENTLY TO PROVIDE HEATING OR COOLING TO THE SPACE WHEN CALLED FOR AT THE THERMOSTAT. SEE SEQUENCE OF CONTROL FOR ADDITIONAL INFORMATION. 2. UNIT TO HAVE FACTORY INSTALLED HACR BREAKER OR FUSED DISCONNECT SWITCH IS TO BE PROVIDED AS A MEANS OF DISCONNECT. 3. UNIT TO HAVE PHASE LOSS/REVERSAL RELAY PROTECTION AND UNDER VOLTAGE PROTECTION. * OR APPROVED EQUIVALENT.																								

SIDEWALL EXHAUST FAN SCHEDULE												
TAG	SERVES	FAN CFM	S.P.	R.P.M.	DRIVE	HP	FEI	ELECT. CHAR.	TYPE	CONTROL	BASIS OF DESIGN*	
											MANUFACTURER	MODEL
EF-1	WOODSHOP	5,000	0.5"	1,140	DIRECT	2	0.99	460V-60HZ-3Ø	WALL	2-SPEED/ NOTE 1	GREENHECK	CUE-200-B
NOTES: 1. PROVIDE 2-SPEED FAN CONTROLLER. FAN IS TO REMAIN OFF WHEN DUST COLLECTOR OPERATES, WHEN EDC-1 IS NOT OPERATING, RUN FAN ON LOW SPEED (1,000 CFM), WHENEVER DOAU-1 OPERATES AND EDC-1 IS NOT OPERATING, RUN FAN AT FULL SPEED. 2. PROVIDE FAN WITH CLASS-B SPARK RESISTANCE CONSTRUCTION. * OR APPROVED EQUIVALENT												

GRILLES, REGISTERS, AND DIFFUSERS SCHEDULE																
TAG	TYPE			FRAME STYLE		DUTY				CONSTRUCTION		MAX ΔP (IN-WG)	MAX NC RATING	DESCRIPTION	NOTES	BASIS OF DESIGN GREENCHECK
	DIFFUSER	REGISTER	GRILLE	LAY-IN	SURFACE MTD	SUPPLY	RETURN	TRANSFER	EXHAUST	STEEL	ALUMINUM					
R-1	--	--	X	--	X	--	--	X	--	X	--	N/A	N/A	HEAVY DUTY SINGLE DEFLECTION	2,4	XG-4500
NOTES: 1. CONTRACTOR IS TO VERIFY THE REQUIRED FRAME STYLE FOR THE CEILING BEING INSTALLED BEFORE ORDERING GRD'S. 2. CONTRACTOR IS TO FIELD VERIFY LENGTH OF SLEEVE THROUGH WALL. * OR APPROVED EQUIVALENT																

ENCLOSURE-LESS DUST COLLECTOR SCHEDULE																
TAG	SERVES	FAN CFM	S.P.	B.H.P.	CLOTH AREA	# BAG FILTERS	# DUST COLLECTION RECEPTS.	FILTER S.F. EA BAG	FILTER INITIAL PRESSURE DROP	FILTER FINAL PRESSURE DROP	FULL LOAD AMPS (FLA)	LOCKED ROTOR AMPS (LRA)	ELECT. CHAR.	CONTROL	APPROX. SHIPPING WEIGHT	BASIS OF DESIGN*
EDC-1	WOOD SHOP	5,000	12.0"	20.0	257 FT²	28	4	9.2	0.5" WG	6.0" WG	24	220.0	460V-60HZ-3Ø	NOTE 1	2,200 lbs.	DONALDSON 460-1RD-20
NOTES:																
1. DUST COLLECTOR IS TO OPERATE ON/OFF VIA WALL MOUNTED CONTROLLER - SEE FLOOR PLANS																
2. FURNISH DUST COLLECTOR WITH THE FOLLOWING OPTIONS AND ACCESSORIES:																
A. NEMA-4 ENCLOSURE WITH 20-HP MOTOR STARTER, START/STOP PUSH-BUTTON, RUNNING PILOT LIGHT, LIMIT SWITCH TIE-IN AND DISCONNECT.																
B. OPTIONAL SHAKER MOTOR AND NEMA-4 RATED SHAKER CONTROLS ENCLOSURE WITH MANUAL AND AUTO SHAKER SWITCH, ON/OFF TIME AUTO SHAKE ADJUSTMENT DIALS.																
C. EXTERIOR WEATHER KIT.																
D. SPARE ROLL OF PLASTIC REPLACEMENT BAGS.																
3. DUST COLLECTOR TO MEET REQUIREMENTS OF NFPA 654 2020 7.14.1.1.2																
4. DUST COLLECTOR TO MEET REQUIREMENTS OF NFPA 664 2020 8.2.2.6.1.4 & 8.2.2.6.1.6																
5. OWNER IS TO CONSTRUCT EXTERIOR LEAN-TO ROOF AS INDICATED ON THE PLANS.																
6. CONTRACTOR IS TO PROVIDE CONCRETE PAD AND SECURE DUST COLLECTOR TO THE PAD WITH CORROSION RESISTANT ANCHORS PER THE INSTALLATION MANUAL.																
7. ORIENT FAN INLET PER THE DRAWINGS.																
8. PROVIDE FACTORY PERSONNEL FOR START-UP OF EQUIPMENT. START UP THE DUST COLLECTOR PER THE OPERATION MANUAL AND OBSERVE OPERATION DURING USE TO ADJUST THE DISTRIBUTION VANES AND PROVIDE EVEN DISTRIBUTION OF COLLECTED MATERIAL IN THE DISPOSAL RECEPTACLES.																
* OR APPROVED EQUIVALENT.																



SCHEDULES – HVAC

DUST COLLECTION & WELD FUME EXTRACTION
WOOD SHOP & WELDING AREA

FOR
ALLEGANY COLLEGE, LAVALLE BUILDING
37 LANE AVENUE, LAVALLE, MARYLAND 21502



BRETT N. YONISH, P.E.
CHRISTOPHER G. ALBRIGHT, P.E.

541 MAIN STREET
WINDBER, PA 15963
(814) 467-6877

REVISIONS		
MARK	BY	DATE

DATE: 5/01/2025	DRAWING NO. H-5
DRAWN BY: S.M.M.	
CHECKED BY: C.G.A.	
PROJECT NO. 24-141	

PROFESSIONAL CERTIFICATION

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 48279, EXPIRATION DATE: 05-12-2026

CHRISTOPHER G. ALBRIGHT DATE 05-01-2025

NOTE: DO NOT SCALE DRAWING - EACH CONTRACTOR IS TO VERIFY ALL EXISTING CONDITIONS AND ALL DIMENSIONS BEFORE BEGINNING ANY WORK. EACH CONTRACTOR IS TO FULLY COORDINATE THEIR WORK WITH THAT OF OTHERS. REFER TO THE CONTRACT AND SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.