



DEPARTMENT OF REGULATORY AND ECONOMIC RESOURCES (RER)  
BOARD AND CODE ADMINISTRATION DIVISION

## NOTICE OF ACCEPTANCE (NOA)

MIAMI-DADE COUNTY  
PRODUCT CONTROL SECTION

11805 SW 26 Street, Room 208  
Miami, Florida 33175-2474  
T (786) 315-2590 F (786) 315-2599

[www.miamidade.gov/economy](http://www.miamidade.gov/economy)

**Twin City Fan Companies, Ltd.**  
**5959 Trenton Lane North**  
**Minneapolis, MN 55442**

**SCOPE:** This NOA is being issued under the applicable rules and regulations governing the use of construction materials. The documentation submitted has been reviewed and accepted by Miami-Dade County RER-Product Control Section to be used in Miami Dade County and other areas where allowed by the Authority Having Jurisdiction (AHJ).

This NOA shall not be valid after the expiration date stated below. The Miami-Dade County Product Control Section (In Miami Dade County) and/or the AHJ (in areas other than Miami Dade County) reserve the right to have this product or material tested for quality assurance purposes. If this product or material fails to perform in the accepted manner, the manufacturer will incur the expense of such testing and the AHJ may immediately revoke, modify, or suspend the use of such product or material within their jurisdiction. RER reserves the right to revoke this acceptance if it is determined by Miami-Dade County Product Control Section that this product or material fails to meet the requirements of the applicable building code.

This product is approved as described herein and has been designed to comply with the Florida Building Code, including the High Velocity Hurricane Zone.

**DESCRIPTION: Series VC and VCU/VCUB Rooftop and Wall Mounted Aluminum Exhaust Fans**

**APPROVAL DOCUMENT:** Drawing No. **500024054**, titled "VC/VCU/VCUB Summary" sheets 1 through 13 of 13, dated 10/18/2022, with Revision E dated 08/23/2023, prepared by Twin City Fan Companies, Ltd., signed and sealed by Wayne K. Helmila, P.E., bearing the Miami-Dade County Product Control Approval stamp with the Notice of Acceptance number and expiration date by the Miami-Dade County Product Control Section.

**MISSILE IMPACT RATING: Large and Small Missile Impact Resistant**

**LABELING:** Each unit shall bear a permanent label with the manufacturer's name or logo, Elkton, SD, model/series and following statement: "Miami-Dade County Product Control Approved", unless otherwise noted herein.

**LIMITATION:** This fan cannot be installed within the ridge area, FBC 1523.6.5.2.13.

**RENEWAL** of this NOA shall be considered after a renewal application has been filed and there has been no change in the applicable building code negatively affecting the performance of this product.

**TERMINATION** of this NOA will occur after the expiration date or if there has been a revision or change in the materials, use, and/or manufacture of the product or process. Misuse of this NOA as an endorsement of any product, for sales, advertising or any other purposes shall automatically terminate this NOA. Failure to comply with any section of this NOA shall be cause for termination and removal of NOA.

**ADVERTISEMENT:** The NOA number preceded by the words Miami-Dade County, Florida, and followed by the expiration date may be displayed in advertising literature. If any portion of the NOA is displayed, then it shall be done in its entirety.

**INSPECTION:** A copy of this entire NOA shall be provided to the user by the manufacturer or its distributors and shall be available for inspection at the job site at the request of the Building Official.

This NOA consists of this page 1 and evidence page E-1, as well as approval document mentioned above.

The submitted documentation was reviewed by **Carlos M. Utrera, P.E.**



**NOA No. 23-0918.01**  
**Expiration Date: October 26, 2028**  
**Approval Date: October 26, 2023**

**NOTICE OF ACCEPTANCE: EVIDENCE SUBMITTED**

**A. DRAWINGS**

1. Drawing No. **500024054**, titled “VC/VCU/VCUB Summary” sheets 1 through 13 of 13, dated 10/18/2022, with Revision E dated 08/23/2023, prepared by Twin City Fan Companies, Ltd., signed and sealed by Wayne K. Helmila, P.E.

**B. TESTS**

1. Test report on 1) Uniform Static Air Pressure Test, Loading per FBC, TAS 202-94  
2) Large Missile Impact Test per FBC, TAS 201-94  
along with marked-up drawings and installation diagram of three Series/Model VC-120, VCU-085 and VCUB-197 Aluminum Roof Fans, prepared by Stork UL Laboratory Canada Inc., Test Report No. **IM-00009-A**, dated 09/14/2023, signed and sealed by Alexis Spyrou, P.E.

**C. CALCULATIONS**

1. Anchor verification calculations, prepared by Rice Engineering, dated 08/07/2023, signed and sealed by Wayne K. Helmila, P.E.

**D. QUALITY ASSURANCE**

1. Miami-Dade Department of Regulatory and Economic Resources (RER).

**E. MATERIAL CERTIFICATIONS**

1. None.

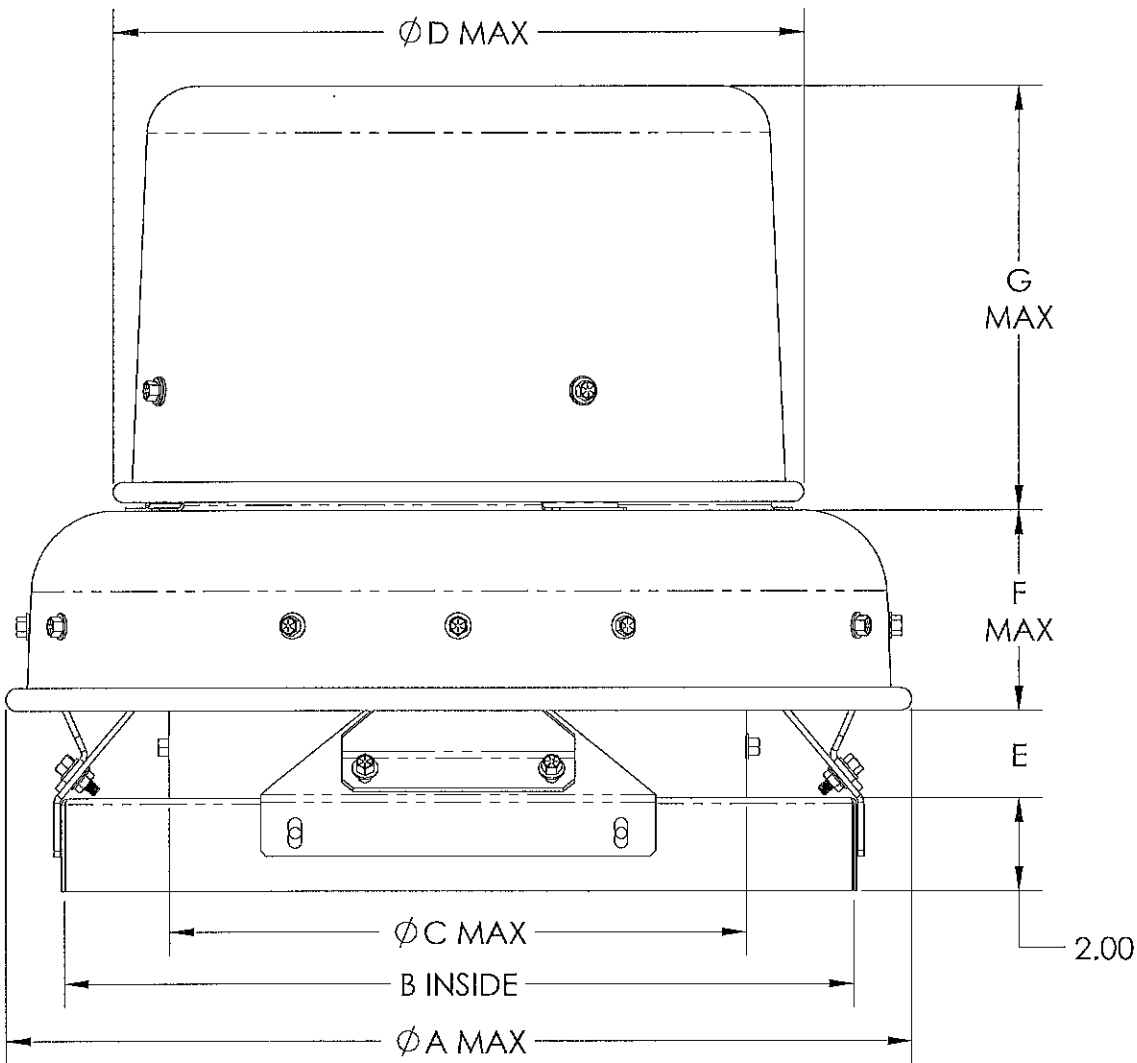
**F. STATEMENTS**

1. Statement letter of code conformance to the 7<sup>th</sup> edition (2020) and 8<sup>th</sup> edition (2023) of the FBC, issued by Rice Engineering, dated 10/24/2023, signed and sealed by Wayne K. Helmila, P.E.
2. Statement letter of no financial interest issued by Rice Engineering, dated 08/24/2023, signed and sealed by Wayne K. Helmila, P.E.



---

**Carlos M. Utrera, P.E.**  
**Product Control Examiner**  
**NOA No. 23-0918.01**  
**Expiration Date: October 26, 2028**  
**Approval Date: October 26, 2023**



VC SIZE	A	B	C	D	E	F	G	WEIGHT.(LB)
077	19.50	17.00	12.47	14.87	1.88	4.31	9.17	44
083	19.50	17.00	12.47	14.87	1.88	4.31	9.17	40
085	19.50	17.00	12.47	14.87	1.88	4.31	9.17	40
089	22.00	17.00	15.47	17.44	2.67	5.57	9.06	46
098	22.00	17.00	15.47	17.44	2.67	5.57	9.06	46
112	22.00	17.00	15.47	17.44	2.67	5.57	9.06	48
120	22.00	17.00	15.47	17.44	2.67	5.57	9.06	48

NOTES:

1. MODEL VC HAVE BEEN SUCCESSFULLY TESTED IN ACCORDANCE WITH THE MIAMI-DADE TEST PROTOCOL TAS-201 (LARGE MISSLE IMPACT) AND TAS-202 (STATIC LOADING).
2. THIS FAN HAS NOT BEEN TESTED FOR WIND DRIVEN RAIN PER FBC, TAS 100(A).
3. THIS APPROVAL IS FOR THE STRUCTURAL PERFORMANCE AND IMPACT RESISTANCE ONLY. INTERIOR MECHANISM AND/OR ELECTRICAL CIRCUITRY ARE OUTSIDE THE SCOPE OF THIS APPROVAL.
4. ROOF STRUCTURE MUST BE DESIGNED TO WITHSTAND THE WEIGHT AND LOADING TRANSMITTED BY ROOF TOP FANS. FASTENERS SHALL BE AS SPECIFIED AND INSTALLED AS DETAILED.
5. DESIGN TESTING AND INSTALLATION CONFORMS TO THE FLORIDA BUILDING CODE 7TH EDITION (2020) AND FLORIDA BUILDING CODE 8TH EDITION (2023).
6. FAN CURBS MUST BE ANCHORED TO ROOF FRAMING MEMBERS AND NOT TO THE ROOFING SYSTEM.
7. DRIL-FLEX SELF DRILLING SCREWS AND WOOD SCREWS TO BE SEALED WITH PROSOCO LIQUID FLASHING OR EQUAL.

DRAWN BY SM DATE 10/18/22 APP BY SM DATE 10/18/22	E	SM	08/23/23	SM	08/23/23	DESIGN PRESSURE OF VCU, VCUB UPDATED
	REV	REV BY	REV DATE	APP BY	APP DATE	DESCRIPTION
						5959 Trenton Lane N Minneapolis, MN 55442 ISO-9001:REGISTERED
	TITLE VC SUMMARY MIAMI-DADE APPROVAL					
DRAWING NO. 500024054			ROW	ITEM	SHEET	REV.
			-	-	1 OF 13	E

For Miami-Dade Product Control

Professional Engineer Seal & License

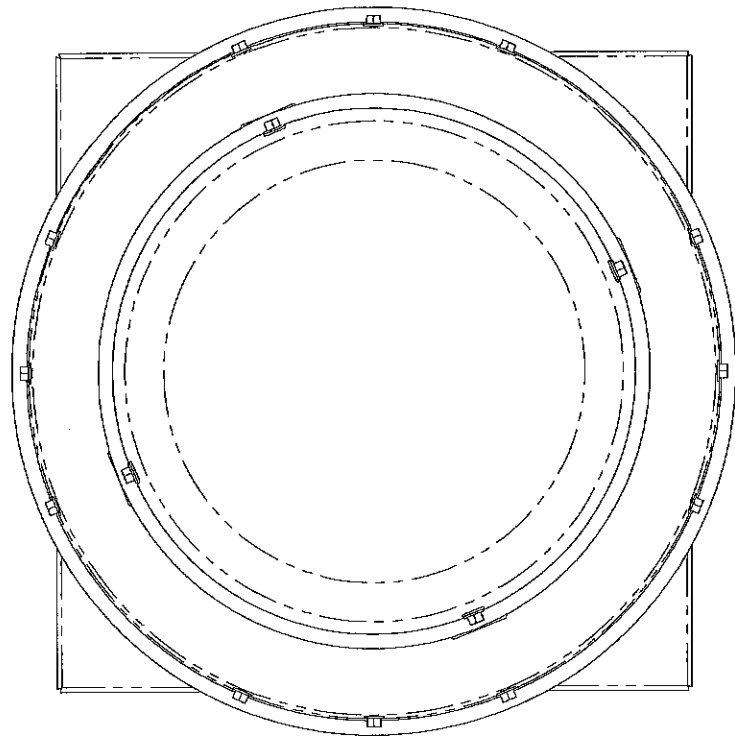
Florida Firm No & Contact Information

Digital Signature Data

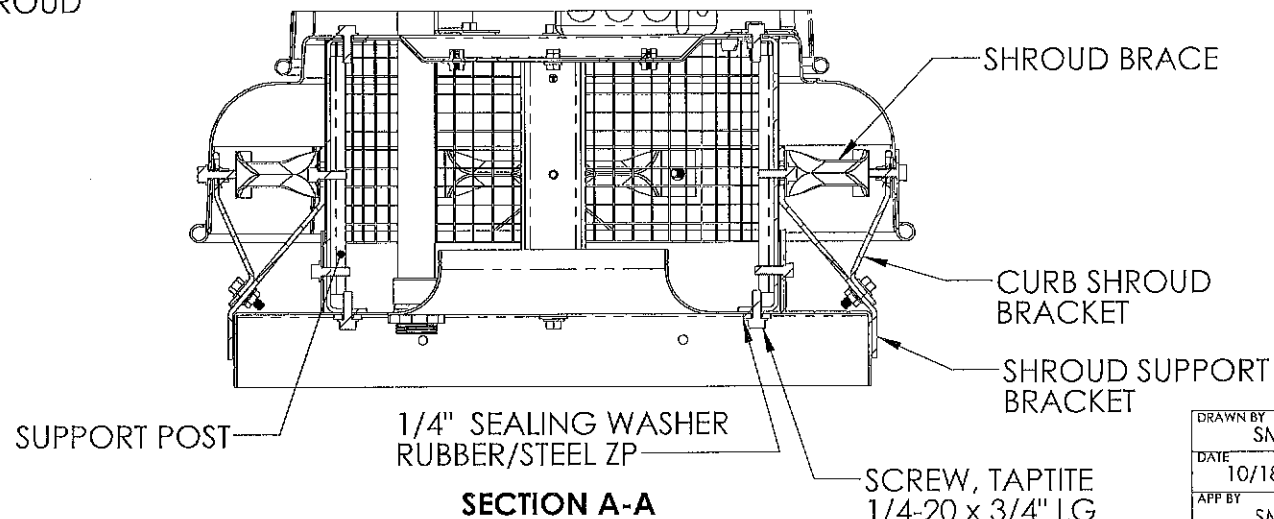
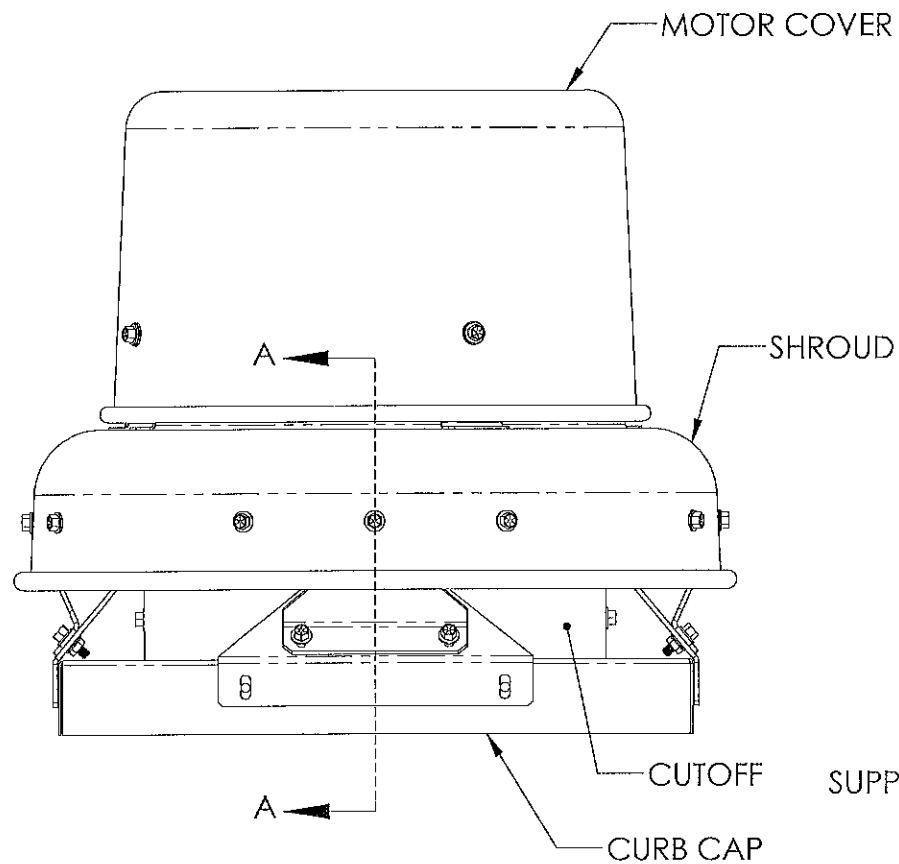
**PRODUCT APPROVED**  
As complying with the Florida  
Building Code  
NOA-No. **23-0918.01**  
Approval Date: **10/26/2023**  
By:   
Miami-Dade Product Control



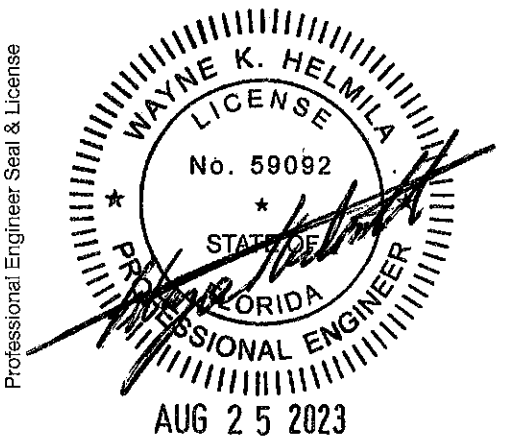
**RICE**  
**ENGINEERING**  
105 School Creek Trail  
Luxemburg, WI 54217  
Phone: (920) 617-1042  
Fax: (920) 617-1100  
www.rice-inc.com  
Florida Firm No: F-01000005061  
Certificate of Authorization: #9090  
Wayne K. Helmila  
Registration No: 59092



DESIGN LIMITS	
MAX: DESIGN LOAD:	±150 psf (7.18 kPa)
MAX: OVERALL UNIT HEIGHT:	17.30 in (0.44 m)
MAX: ENCLOSURE DIAMETER:	22.00 in (0.56 m)



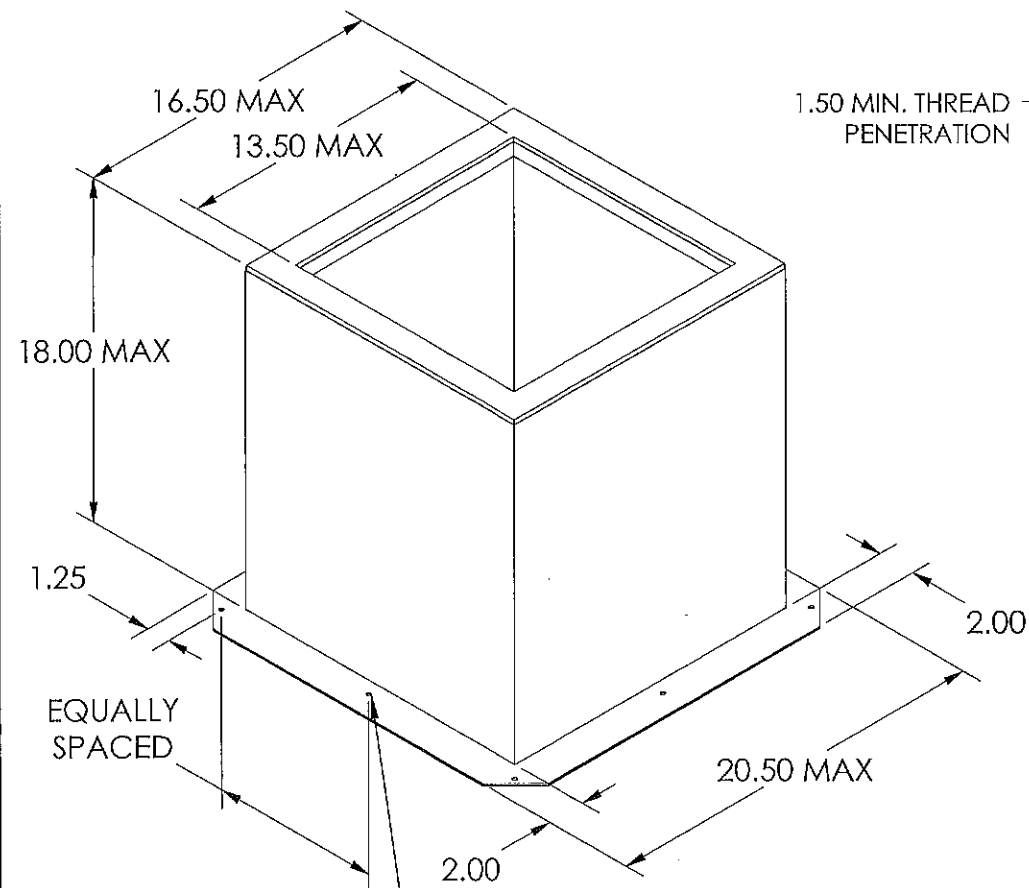
**PRODUCT APPROVED**  
As complying with the Florida  
Building Code  
NOA-No. **23-0918.01**  
Approval Date: **10/26/2023**  
By: *[Signature]*  
**Miami-Dade Product Control**



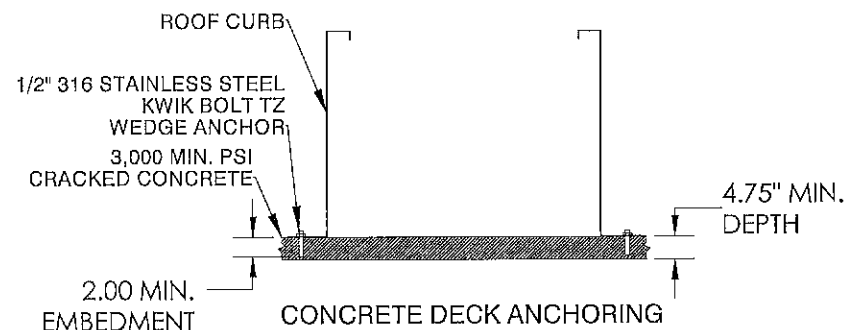
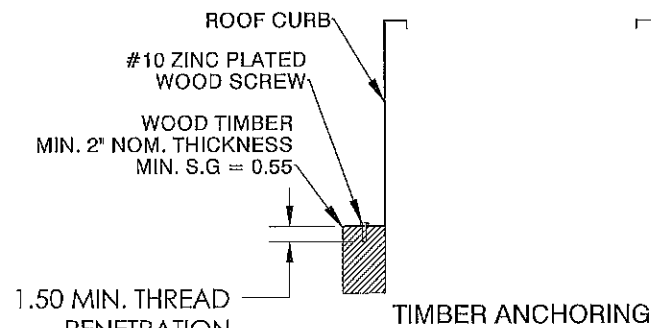
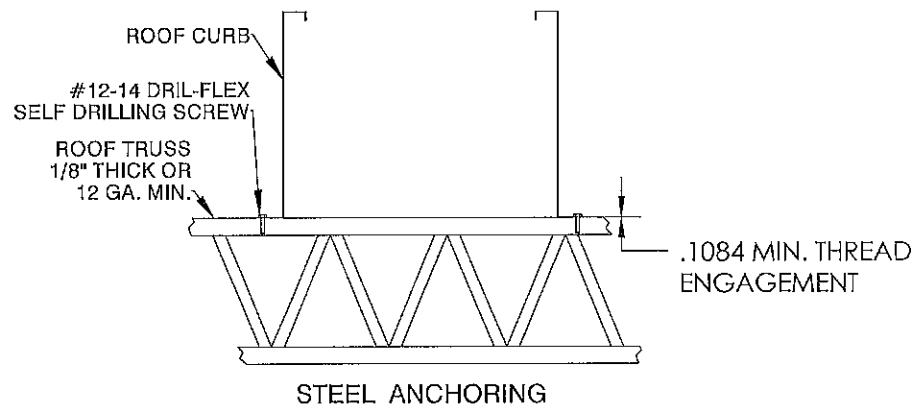
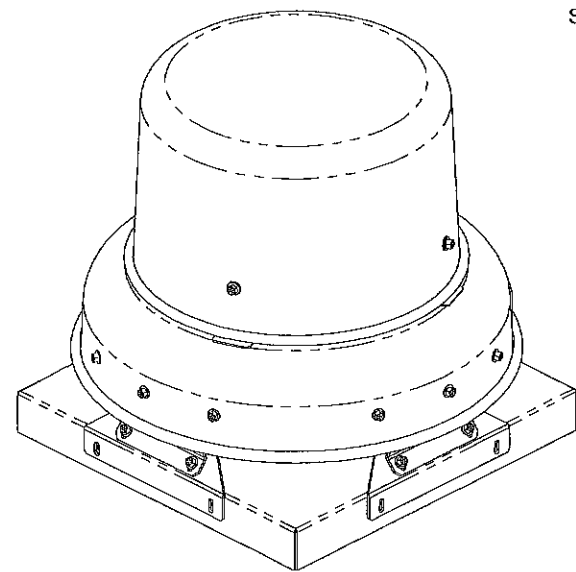
**RICE**  
**ENGINEERING**  
105 School Creek Trail  
Luxemburg, WI 54217  
Phone: (920) 617-1042  
Fax: (920) 617-1100  
www.rice-inc.com  
Florida Firm No: F-01000005061  
Certificate of Authorization: #9090  
Wayne K. Helmila  
Registration No: 59092

E		SM	08/23/23	SM	08/23/23	DESIGN PRESSURE OF VCU, VCUB UPDATED
REV	REV BY	REV DATE	APP BY	APP DATE	DESCRIPTION	
						5959 Trenton Lane N Minneapolis, MN 55442 ISO-9001:REGISTERED
TITLE VC SUMMARY MIAMI-DADE APPROVAL						
DRAWING NO. 500024054			ROW	ITEM	SHEET	REV.
			-	-	2 OF 13	E






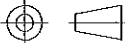
SECURE CURB TO ROOF FRAMING MEMBERS BY DRILLING 1/4" PILOT HOLES IN THE CURB FLANGE AT LOCATIONS SHOWN IN THE DIAGRAM. SEE TABLE FOR MINIMUM QUANTITY OF ANCHORS REQUIRED PER CURB SIDE.



## DRIL-FLEX SELF DRILLING SCREWS AND WOOD SCREWS TO BE SEALED WITH PROSOCO LIQUID FLASHING OR EQUAL

VC SIZE	FASTENER TABLE			MIN. NUMBER OF FASTENERS PER SIDE TO ATTACH UNIT TO CURB
	STEEL ANCHORING	CONCRETE DECK ANCHORING	TIMBER ANCHORING	
077	3	3	3	4
083	3	3	3	4
085	3	3	3	4
089	3	3	3	4
098	3	3	3	4
112	3	3	3	4
120	3	3	3	4

- CURB NOTES:**
- ROOF CURB MODEL RCSF, RCSFV, RCSA OR EQUIVALENT WELDED CONSTRUCTION. NO WOOD NAILER.
    - MATERIAL: 18 GA GALVANIZED STEEL
    - 0.063 ALUMINUM
  - UNIT TO BE ATTACHED TO CURB USING #12-14 DRIL-FLEX SELF DRILLING SCREWS OR EQUIVALENT. LOCATED 3" FROM EACH CORNER AND THROUGH SUPPORT BRACKET (LOCATED 5" FROM EACH CORNER).
  - ANY GAP BETWEEN THE CURB AND FASTENER SHALL BE FILLED BY THE INSTALLING CONTRACTOR WITH A SUITABLE CORROSION RESISTANT MATERIAL THAT ALLOWS THE FASTENERS TO BE INSTALLED WITHOUT CAUSING EXCESSIVE DISTORTION ON THE UNIT FLANGES.
  - CURB MUST BE ATTACHED TO A STRUCTURAL MEMBER OF THE BUILDING
  - CONCRETE DECK
    - CURB ANCHORAGE SHOULD BE INTO MINIMUM 3000 PSI CRACKED CONCRETE, WITH A MINIMUM SLAB DEPTH OF 4.75". USE 1/2" DIA. STAINLESS STEEL HILTI KWIK BOLT TZ EXPANSION ANCHORS OR EQUIVALENT. ANCHORS SHALL HAVE A MINIMUM 2" EMBEDMENT. FASTENERS TO BE EQUALLY SPACED. MAXIMUM ON CENTER SPACING OF 10-1/4" WITH 4-1/2" MINIMUM SPACING AND 3-1/2" MINIMUM EDGE DISTANCE.
  - STEEL ROOF STRUCTURE
    - SHOULD BE INTO MINIMUM 12 GA OR 1/8" THICK STEEL MEMBER. USE #12-14 DRIL-FLEX SELF DRILLING SCREWS OR EQUIVALENT. SCREWS SHALL HAVE A MINIMUM THREAD ENGAGEMENT OF .1084". FASTENERS TO BE EQUALLY SPACED. MAXIMUM ON CENTER SPACING OF 10-1/4" WITH 11/16" MINIMUM SPACING AND 3/8" MINIMUM EDGE DISTANCE.
  - TIMBER ROOF STRUCTURE
    - SHOULD BE MINIMUM S.G.=0.55
    - USE #10 ZINC PLATED WOOD SCREWS OR EQUIVALENT. SCREWS SHALL HAVE A MINIMUM THREAD PENETRATION OF 1-1/2". FASTENERS TO BE EQUALLY SPACED. MAXIMUM ON CENTER SPACING OF 16-3/4" WITH 3/4" MINIMUM SPACING, 3/4" MINIMUM EDGE DISTANCE AND 1.316" MINIMUM END DISTANCE.

	E	SM	08/23/23	SM	08/23/23	DESIGN PRESSURE OF VCU, VCUB UPDATED	
DRAWN BY SM	REV	REV BY	REV DATE	APP BY	APP DATE	DESCRIPTION	
DATE 10/18/22						5959 Trenton Lane N Minneapolis, MN 55442 ISO-9001:REGISTERED	
APP BY SM							
DATE 10/18/22	TITLE						
	VC SUMMARY						
	MIAMI-DADE APPROVAL						
	DRAWING NO.			ROW	ITEM	SHEET	REV.
	500024054			-	-	3 OF 13	E

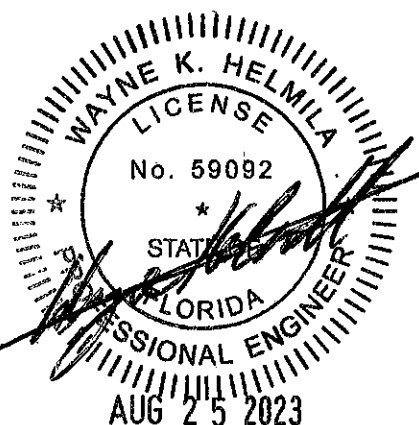
For Miami-Dade Product Control

Professional Engineer Seal & License

Florida Firm No & Contact Information

Digital Signature Data

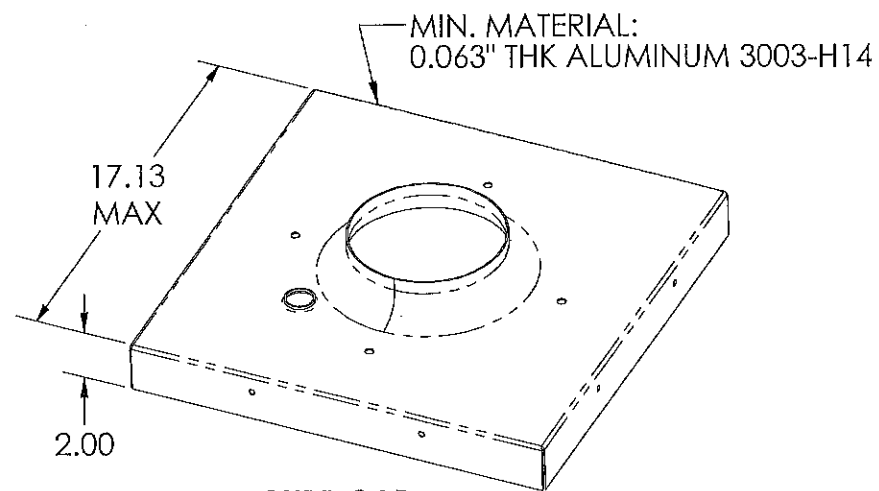
**PRODUCT APPROVED**  
As complying with the Florida  
Building Code  
NOA-No. **23-0918.01**  
Approval Date: **10/26/2023**  
By:   
Miami-Dade Product Control



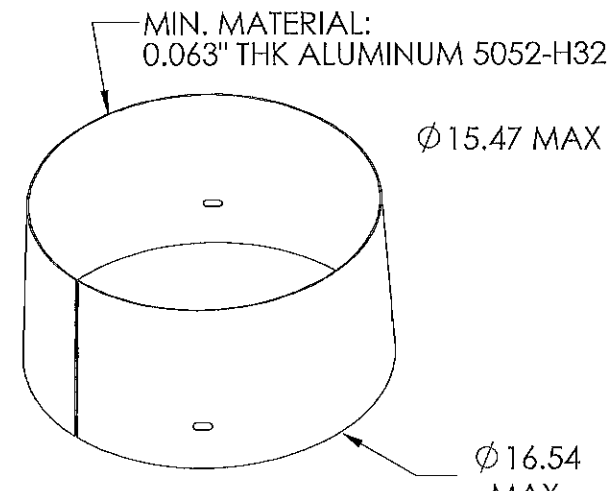
## RICE ENGINEERING

105 School Creek Trail  
Luxemburg, WI 54217  
Phone: (920) 617-1042  
Fax: (920) 617-1100  
www.rice-inc.com

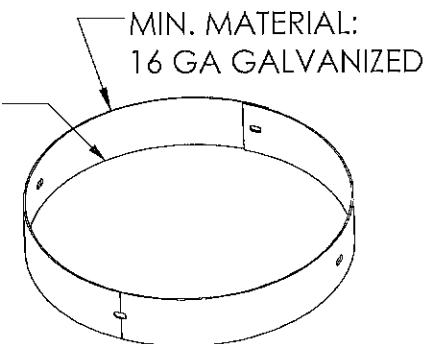
Florida Firm No: F-01000005061  
Certificate of Authorization: #9090  
Wayne K. Helmila  
Registration No: 59092



CURB CAP



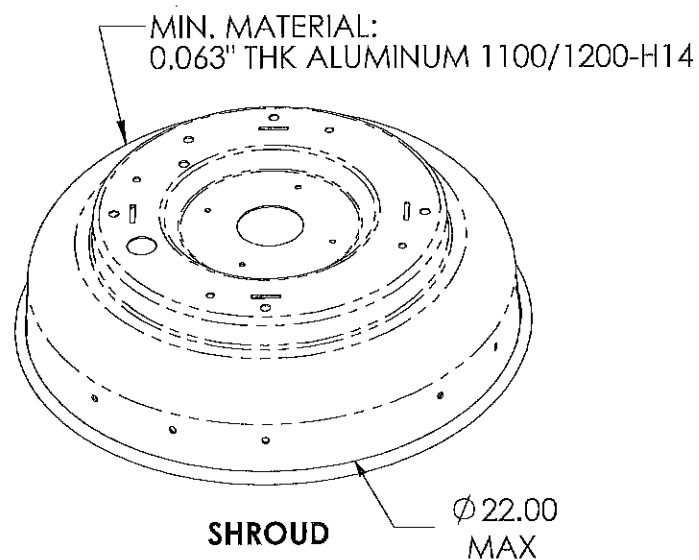
MOTOR COVER LINER



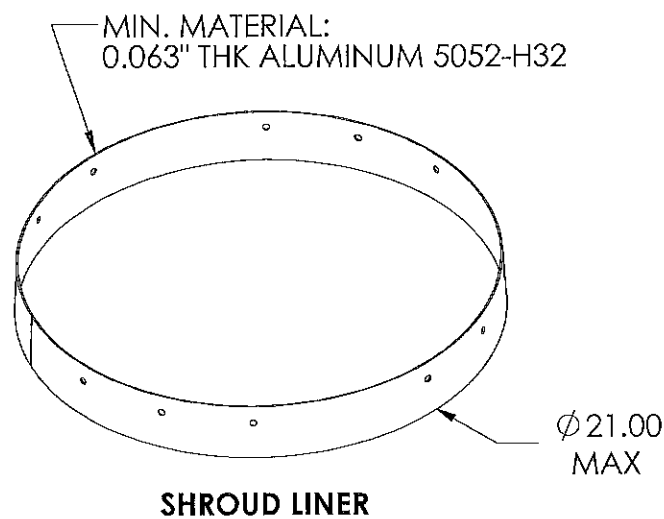
CUTOFF



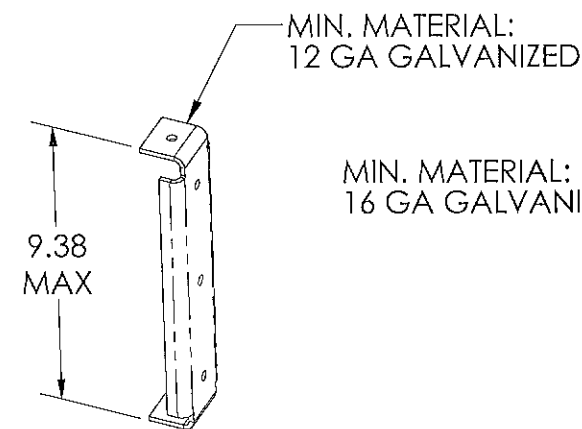
MOTOR COVER SEATING BRACKET



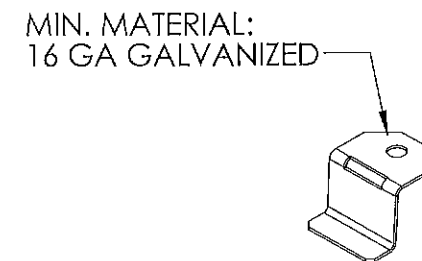
SHROUD



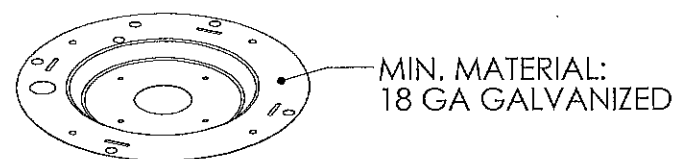
SHROUD LINER



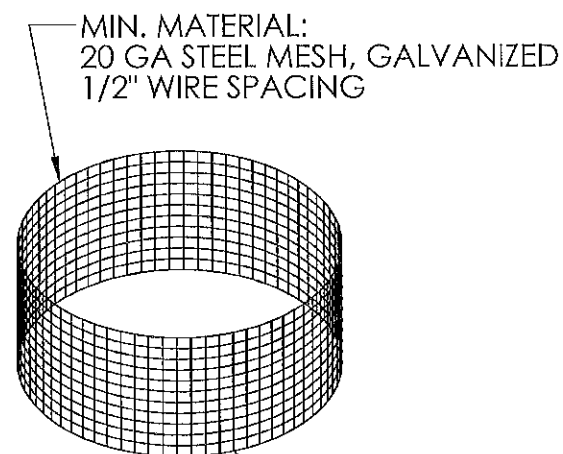
SUPPORT POST



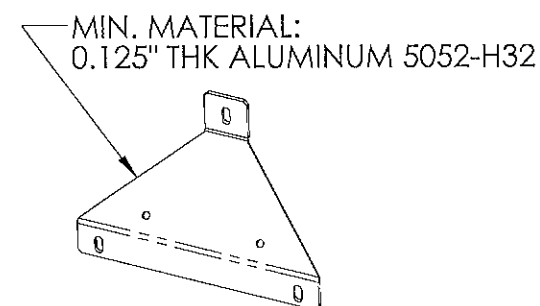
MOTOR COVER BRACKET



MOTOR REINFORCEMENT PLATE



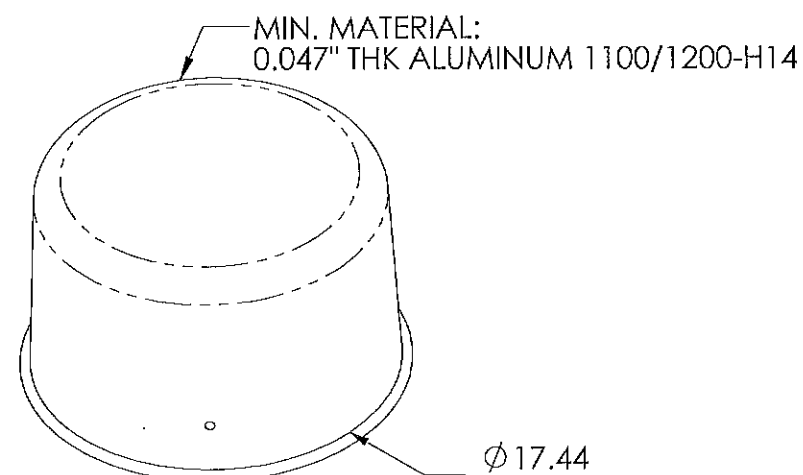
BIRDSCREEN



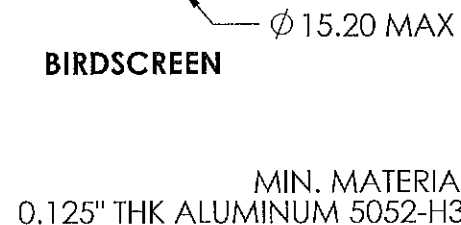
SUPPORT BRACKET



SHROUD BRACE



MOTOR COVER



CURB SHROUD SUPPORT BRACKET

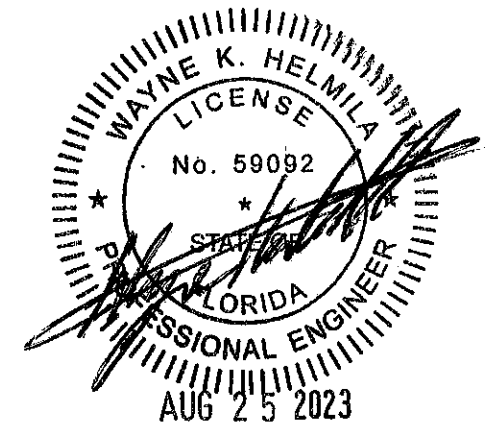
For Miami-Dade Product Control

Professional Engineer Seal & License

Florida Firm No & Contact Information

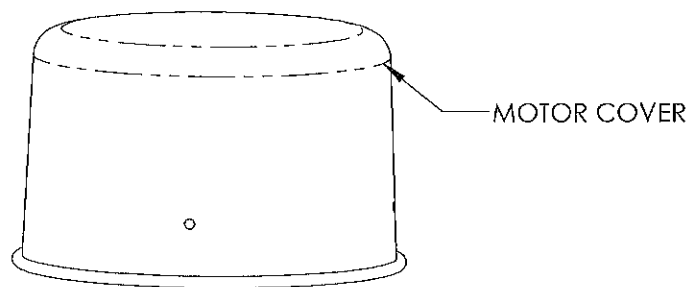
Digital Signature Data

**PRODUCT APPROVED**  
As complying with the Florida  
Building Code  
NOA-No. **23-0918.01**  
Approval Date: **10/26/2023**  
By:   
Miami-Dade Product Control

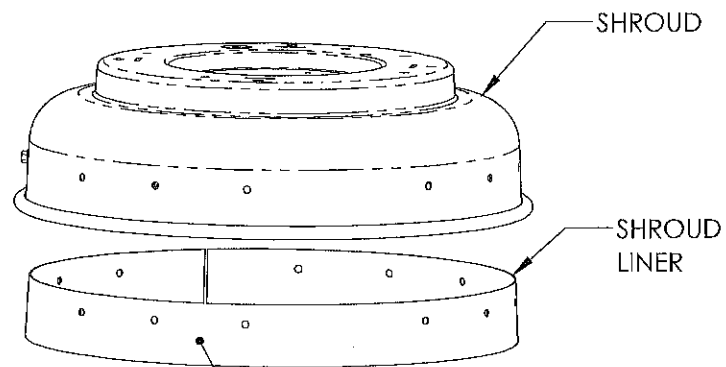


**RICE**  
ENGINEERING  
105 School Creek Trail  
Luxemburg, WI 54217  
Phone: (920) 617-1042  
Fax: (920) 617-1100  
www.rice-inc.com  
Florida Firm No: F-01000005061  
Certificate of Authorization: #9090  
Wayne K. Helmila  
Registration No: 59092

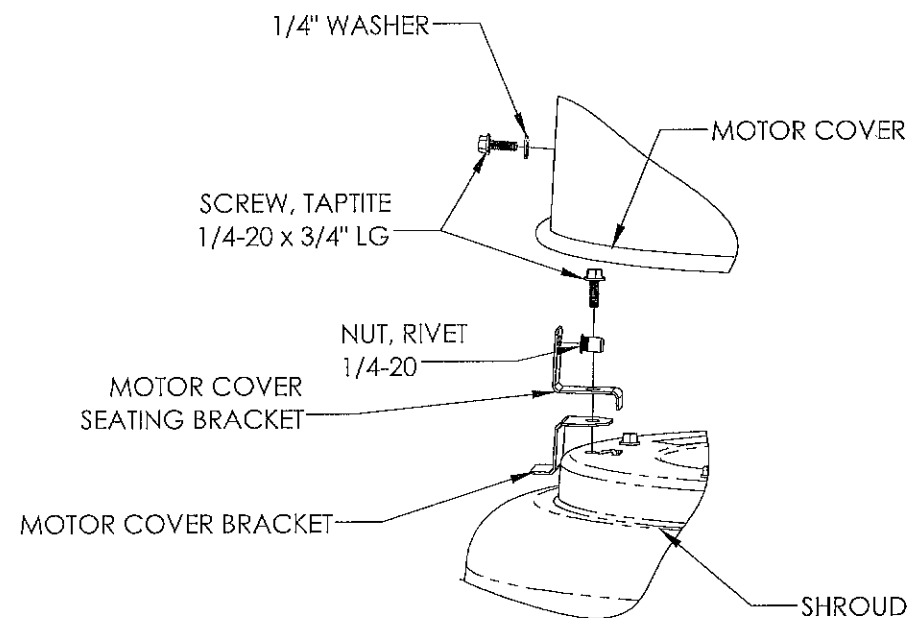
DRAWN BY SM		E	SM	08/23/23	SM	08/23/23	DESIGN PRESSURE OF VCU, VCUB UPDATED
DATE 10/18/22	REV	REV BY	REV DATE	APP BY	APP DATE	DESCRIPTION	
APP BY SM							5959 Trenton Lane N Minneapolis, MN 55442 ISO-9001:REGISTERED
DATE 10/18/22							
TITLE VC SUMMARY MIAMI-DADE APPROVAL		DRAWING NO. 500024054	ROW -	ITEM -	SHEET 4 OF 13	REV. E	
3RD ANGLE PROJECTION							



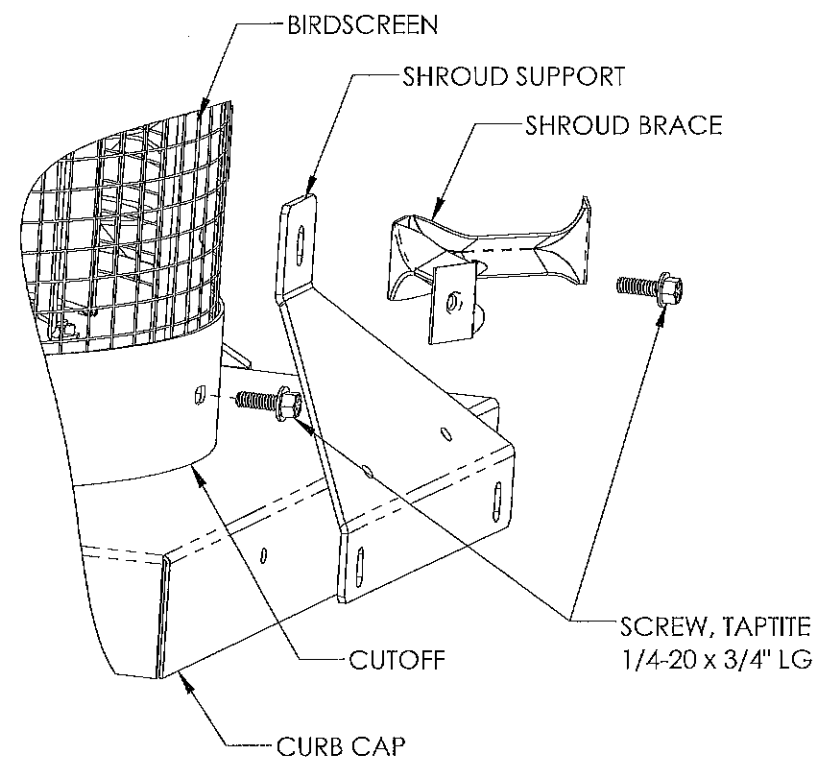
MOTOR COVER LINER EPOXY INSIDE MOTOR COVER



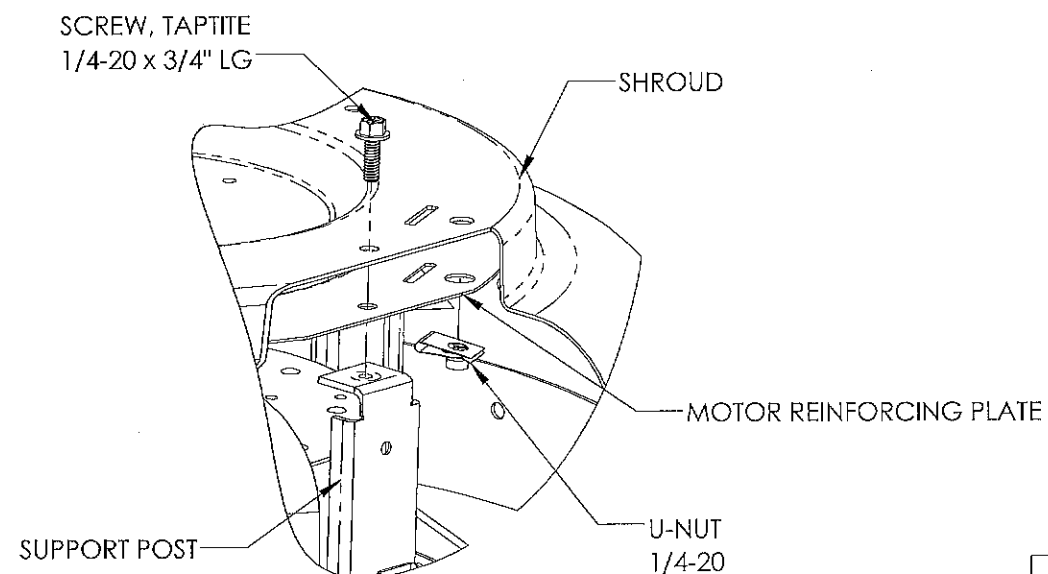
SHROUD LINER EPOXY INSIDE SHROUD




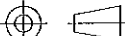
MOTOR COVER MOUNTING WITH SHROUD




SHROUD SUPPORT MOUNTING WITH BIRDSCREEN, CUTOFF & SUPPORT POST



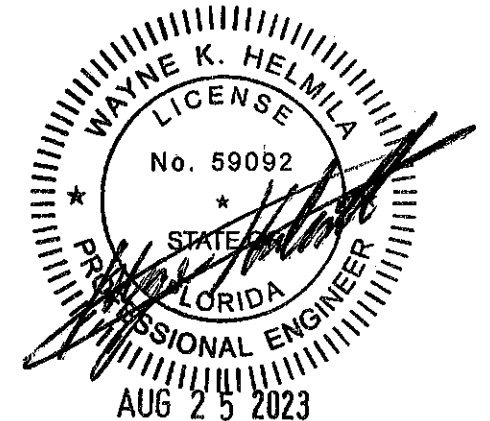
SUPPORT POST MOUNTING WITH SHROUD & DECK PLATE

DRAWN BY SM		E	SM	08/23/23	SM	08/23/23	DESIGN PRESSURE OF VCU, VCUB UPDATED		
DATE 10/18/22		REV	REV BY	REV DATE	APP BY	APP DATE	DESCRIPTION		
APP BY SM							5959 Trenton Lane N Minneapolis, MN 55442 ISO-9001:REGISTERED		
DATE 10/18/22									
		TITLE							
		VC SUMMARY							
		MIAMI-DADE APPROVAL							
 3RD ANGLE PROJECTION		DRAWING NO. 500024054				ROW	ITEM	SHEET	REV.
						-	-	5 OF 13	E

For Miami-Dade Product Control

**PRODUCT APPROVED**  
As complying with the Florida  
Building Code  
NOA-No. **23-0918.01**  
Approval Date: **10/26/2023**  
By:   
Miami-Dade Product Control

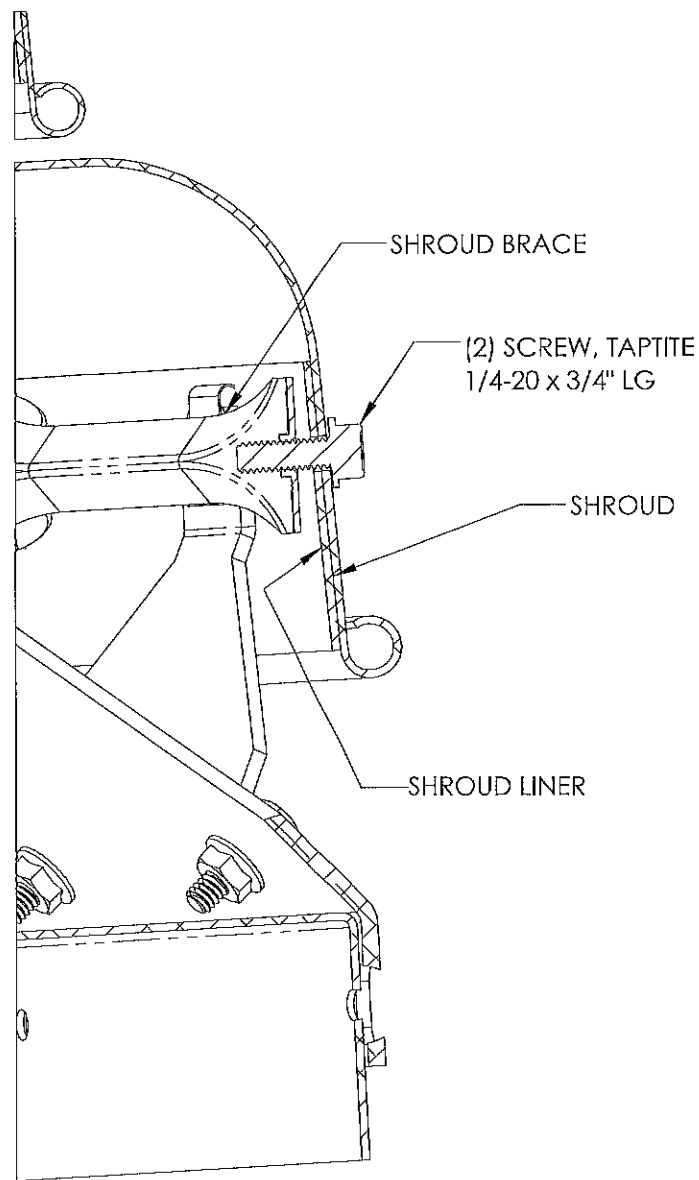
Professional Engineer Seal & License



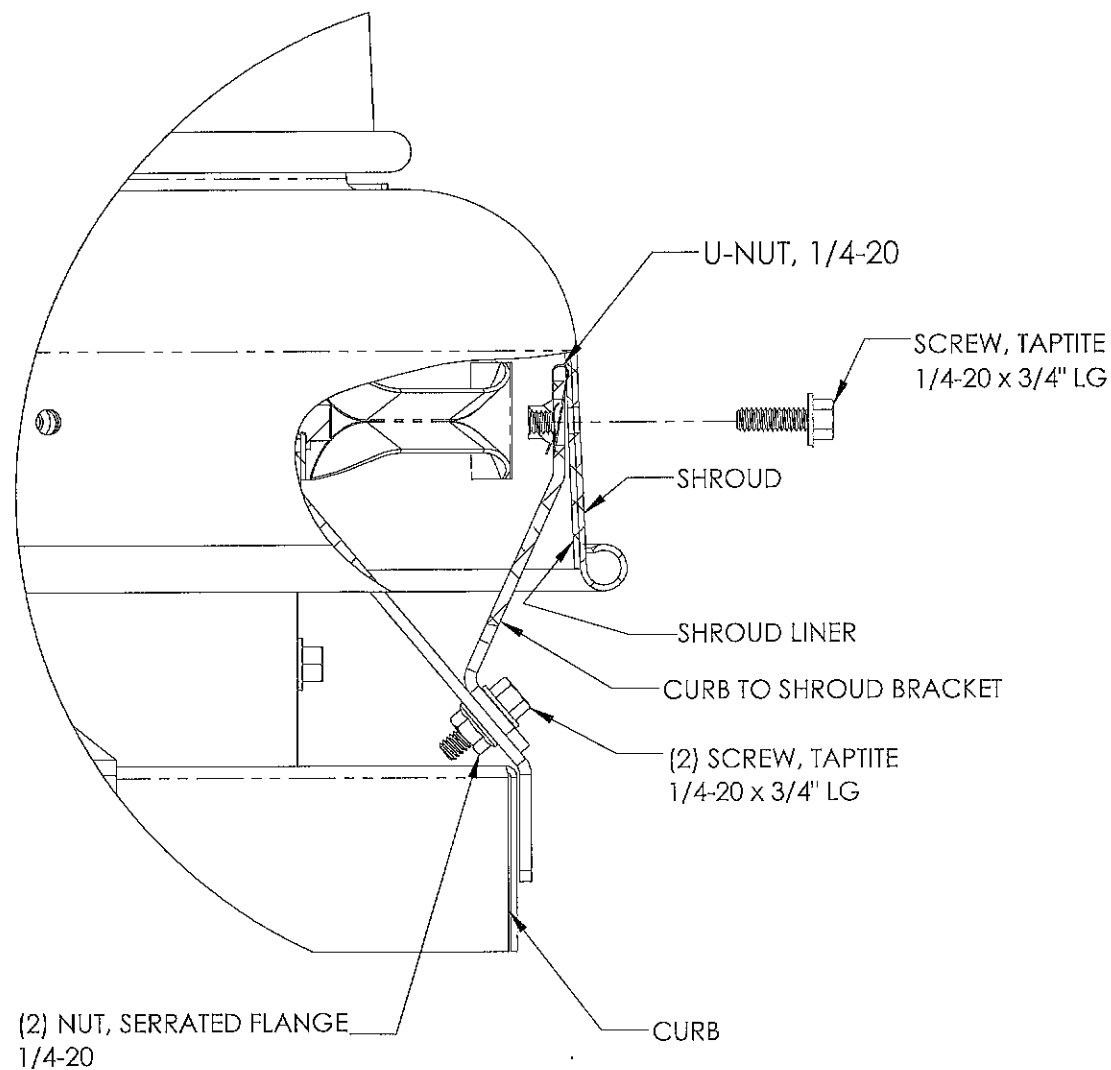
Florida Firm No & Contact Information

**RICE**  
ENGINEERING  
105 School Creek Trail  
Luxemburg, WI 54217  
Phone: (920) 617-1042  
Fax: (920) 617-1100  
www.rice-inc.com  
Florida Firm No: F-01000005061  
Certificate of Authorization: #9090  
Wayne K. Helmila  
Registration No: 59092

Digital Signature Data



SHROUD MOUNTING WITH SHROUD BRACE

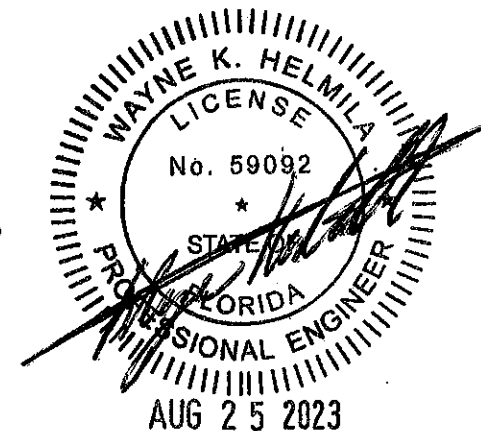


SHROUD MOUNTING WITH CURB SHROUD SUPPORT BRACKET

For Miami-Dade Product Control

**PRODUCT APPROVED**  
As complying with the Florida  
Building Code  
NOA-No. **23-0918.01**  
Approval Date: **10/26/2023**  
By:   
Miami-Dade Product Control


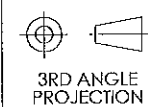
Professional Engineer Seal & License

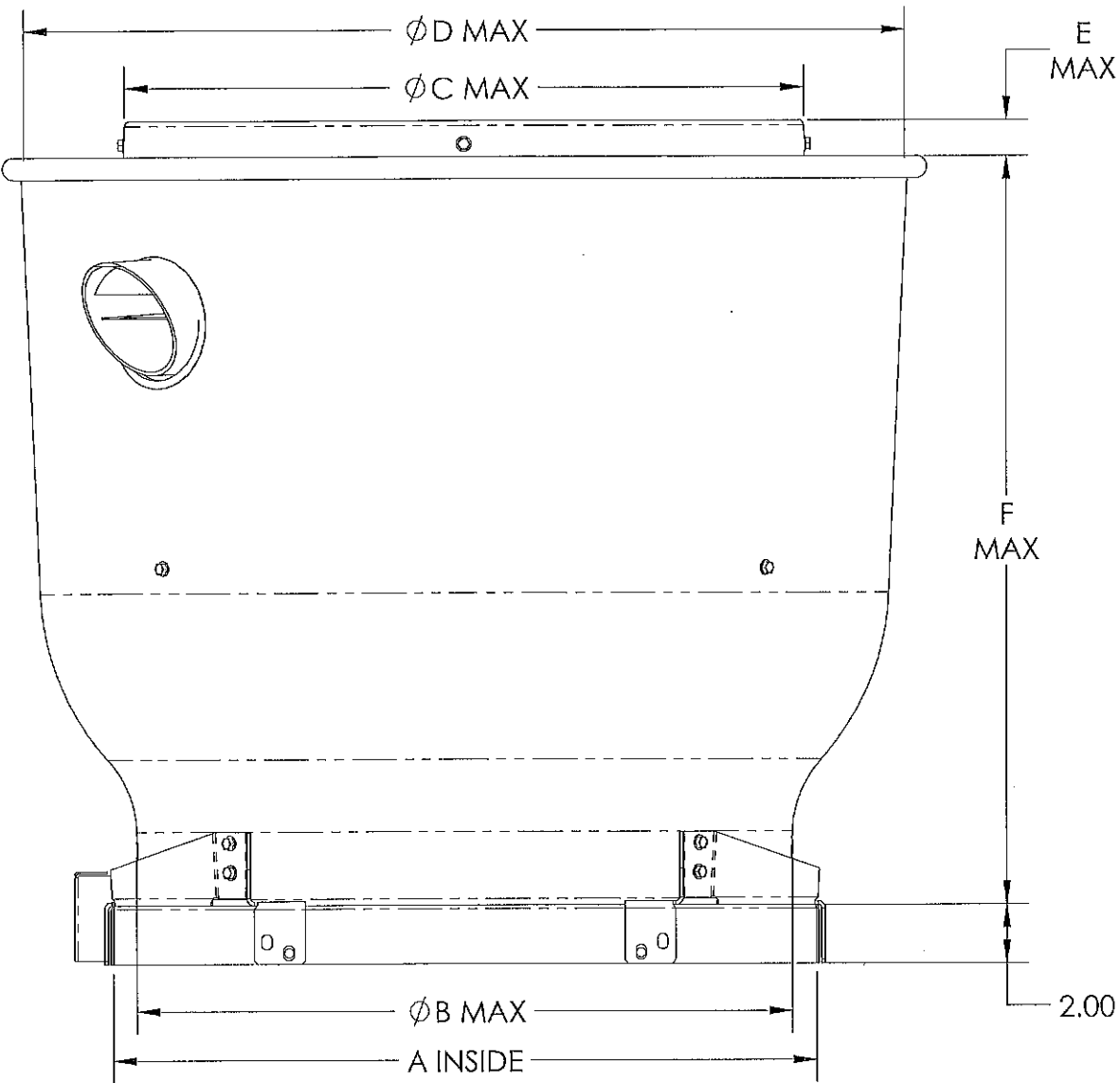


Florida Firm No & Contact Information

**RICE**  
**ENGINEERING**  
105 School Creek Trail  
Luxemburg, WI 54217  
Phone: (920) 617-1042  
Fax: (920) 617-1100  
www.rice-inc.com  
Florida Firm No: F-01000005061  
Certificate of Authorization: #9090  
Wayne K. Helmila  
Registration No: 59092

Digital Signature Data

DRAWN BY SM DATE 10/18/22 APP BY SM DATE 10/18/22	E	SM	08/23/23	SM	08/23/23	DESIGN PRESSURE OF VCU, VCUB UPDATED
	REV	REV BY	REV DATE	APP BY	APP DATE	DESCRIPTION
						5959 Trenton Lane N Minneapolis, MN 55442 ISO-9001:REGISTERED
	TITLE VC SUMMARY MIAMI-DADE APPROVAL					
	DRAWING NO.		ROW	ITEM	SHEET	REV.
	500024054		-	-	6 OF 13	E



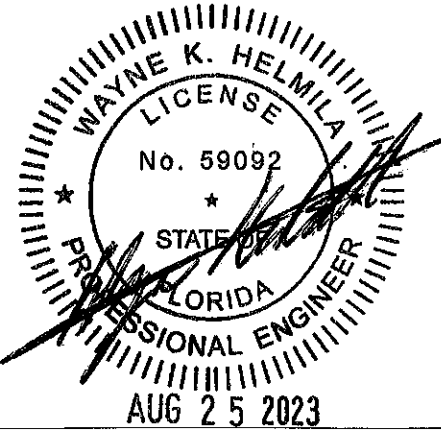
MODEL	SIZE	A	B	C	D	E	F	WEIGHT (LB)
VCU	085	17.00	15.13	15.42	22.00	0.20	18.00	60
VCU	089	20.00	15.13	15.42	22.00	0.20	18.00	65
VCU	098	20.00	15.13	15.42	22.00	0.20	18.00	65
VCU	110	20.00	15.13	15.42	22.00	0.20	18.00	65
VCU	112	20.00	15.13	15.42	22.00	0.20	18.00	65
VCU/VCUB	122	24.00	22.21	23.15	30.00	1.22	25.44	95
VCU/VCUB	124	24.00	22.21	23.15	30.00	1.22	25.44	95
VCU/VCUB	135	24.00	22.21	23.15	30.00	1.22	25.44	95
VCU/VCUB	140	24.00	22.21	23.15	30.00	1.22	25.44	100
VCU/VCUB	150	24.00	22.21	23.15	30.00	1.22	25.44	100
VCU/VCUB	157	24.00	22.21	23.15	30.00	1.22	25.44	100
VCU/VCUB	165	24.00	22.21	23.15	30.00	1.22	25.44	100
VCU/VCUB	177	30.00	26.98	25.63	36.13	3.20	30.00	140
VCU/VCUB	182	30.00	26.98	25.63	36.13	3.20	30.00	140
VCU/VCUB	197	30.00	26.98	25.63	36.13	3.20	30.00	140

NOTES:

1. MODEL VCU/VCUB HAVE BEEN SUCCESSFULLY TESTED IN ACCORDANCE WITH THE MIAMI-DADE TEST PROTOCOL TAS-201 (LARGE MISSILE IMPACT) AND TAS-202 (STATIC LOADING).
2. THIS FAN HAS NOT BEEN TESTED FOR WIND DRIVEN RAIN PER FBC, TAS 100(A).
3. THIS APPROVAL IS FOR THE STRUCTURAL PERFORMANCE AND IMPACT RESISTANCE ONLY. INTERIOR MECHANISM AND/OR ELECTRICAL CIRCUITRY ARE OUTSIDE THE SCOPE OF THIS APPROVAL.
4. ROOF STRUCTURE MUST BE DESIGNED TO WITHSTAND THE WEIGHT AND LOADING TRANSMITTED BY ROOF TOP FANS. FASTENERS SHALL BE AS SPECIFIED AND INSTALLED AS DETAILED.
5. DESIGN TESTING AND INSTALLATION CONFORMS TO THE FLORIDA BUILDING CODE 7TH EDITION (2020). AND FLORIDA BUILDING CODE 8TH EDITION (2023).
6. FAN CURBS MUST BE ANCHORED TO ROOF FRAMING MEMBERS AND NOT TO THE ROOFING SYSTEM.
7. DRIL-FLEX SELF DRILLING SCREWS AND WOOD SCREWS TO BE SEALED WITH PROSOCO LIQUID FLASHING OR EQUAL.

DRAWN BY SM DATE 10/18/22 APP BY SM DATE 10/18/22	E	SM	08/23/23	SM	08/23/23	DESIGN PRESSURE OF VCU, VCUB UPDATED
	REV	REV BY	REV DATE	APP BY	APP DATE	DESCRIPTION
						5959 Trenton Lane N Minneapolis, MN 55442 ISO-9001:REGISTERED
	TITLE VCU/VCUB SUMMARY MIAMI-DADE APPROVAL					
DRAWING NO. 500024054			ROW	ITEM	SHEET	REV.
			-	-	7 OF 13	E

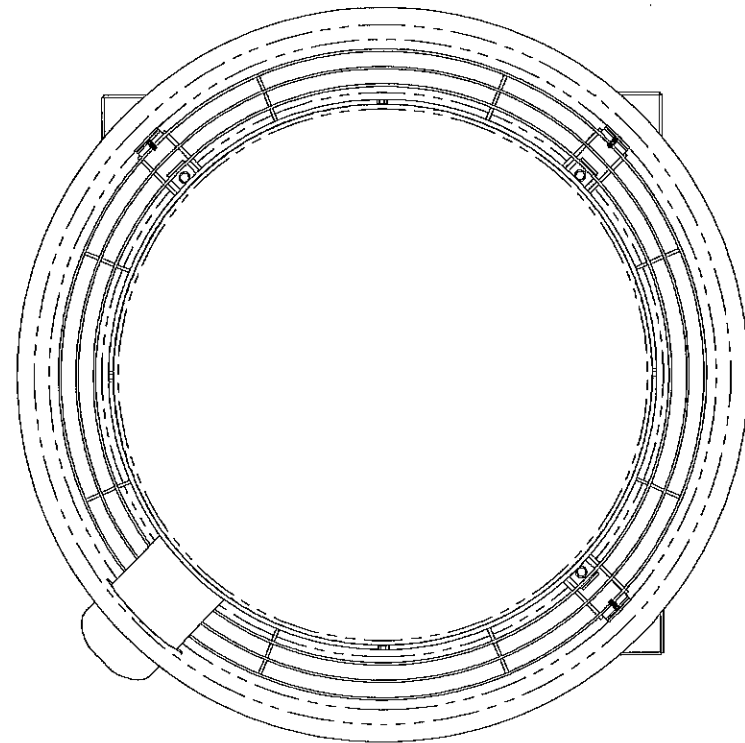
**PRODUCT APPROVED**  
As complying with the Florida  
Building Code  
NOA-No. **23-0918.01**  
Approval Date: **10/26/2023**  
By:   
Miami-Dade Product Control



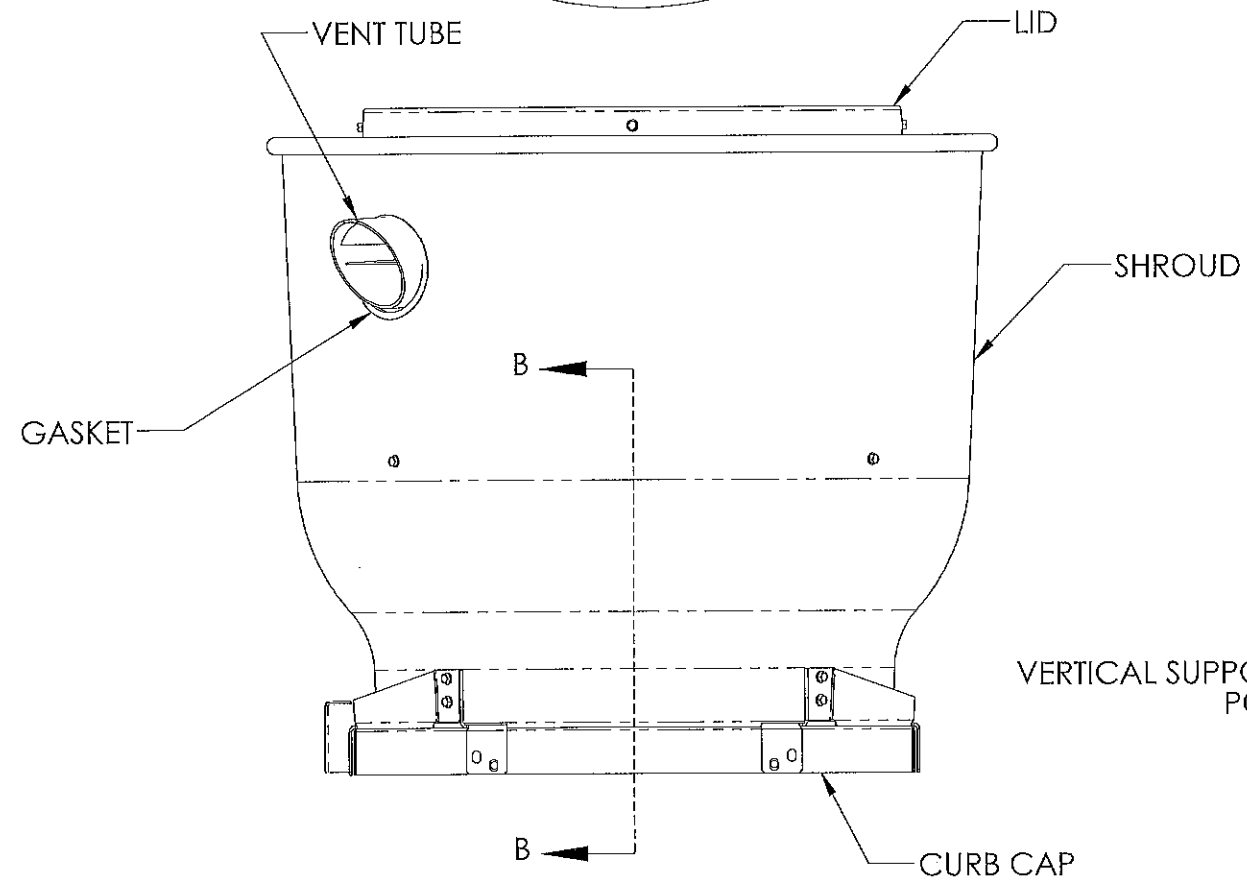
**RICE**  
ENGINEERING

105 School Creek Trail  
Luxemburg, WI 54217  
Phone: (920) 617-1042  
Fax: (920) 617-1100  
www.rice-inc.com

Florida Firm No: F-01000005061  
Certificate of Authorization: #9090  
Wayne K. Helmla  
Registration No: 59092



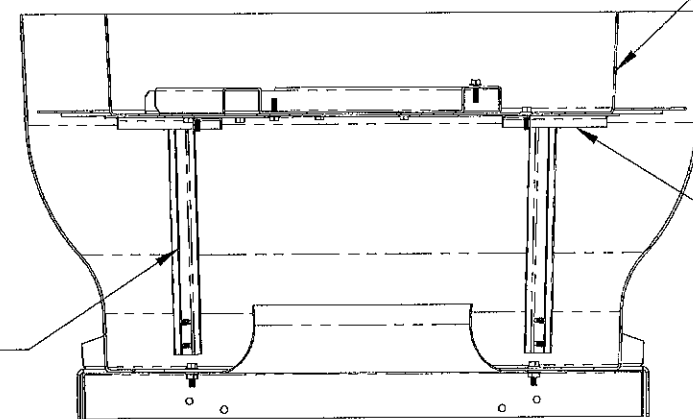
DESIGN LIMITS	
MAX: DESIGN LOAD:	+75 / -125 psf (+3.59 / -5.98 kPa)
MAX: OVERALL UNIT HEIGHT:	30.00 in (0.76 m)
MAX: ENCLOSURE DIAMETER:	30.00 in (0.76 m)



SHROUD

VERTICAL SUPPORT POST

CURB CAP



SECTION B-B

MOTOR HOUSING

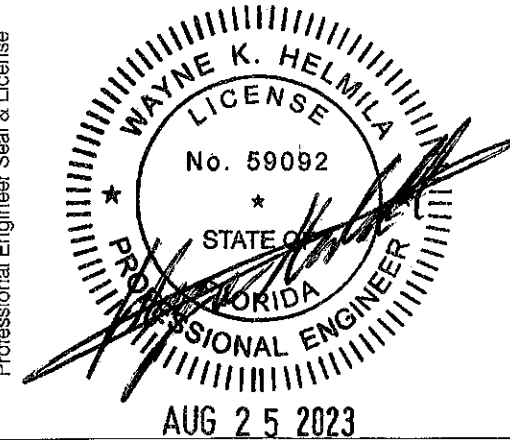
HORIZONTAL SUPPORT POST

DRAWN BY SM DATE 10/18/22 APP BY SM DATE 10/18/22	E	SM	08/23/23	SM	08/23/23	DESIGN PRESSURE OF VCU, VCUB UPDATED
	REV	REV BY	REV DATE	APP BY	APP DATE	DESCRIPTION
						5959 Trenton Lane N Minneapolis, MN 55442 ISO-9001:REGISTERED
	TITLE VCU/VCUB SUMMARY MIAMI-DADE APPROVAL					
	DRAWING NO. 500024054		ROW	ITEM	SHEET	REV.
			-	-	8 OF 13	E

For Miami-Dade Product Control

**PRODUCT APPROVED**  
As complying with the Florida  
Building Code  
NOA-No. **23-0918.01**  
Approval Date: **10/26/2023**  
By:   
Miami-Dade Product Control

Professional Engineer Seal & License



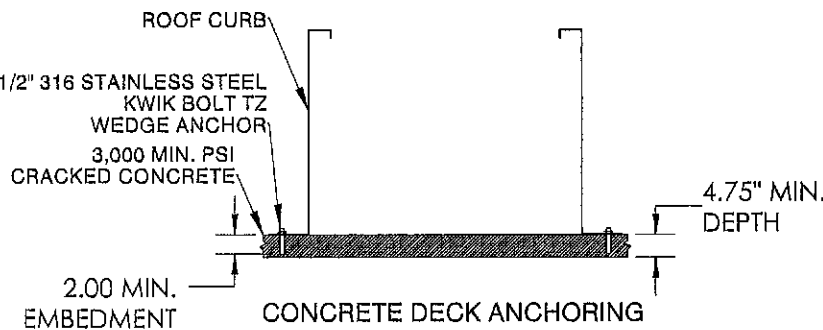
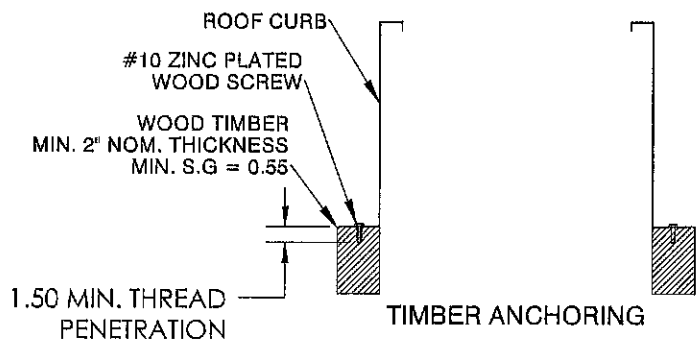
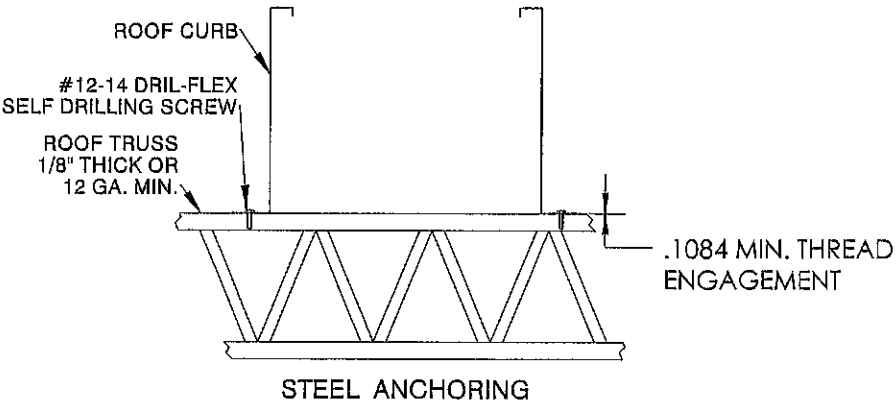
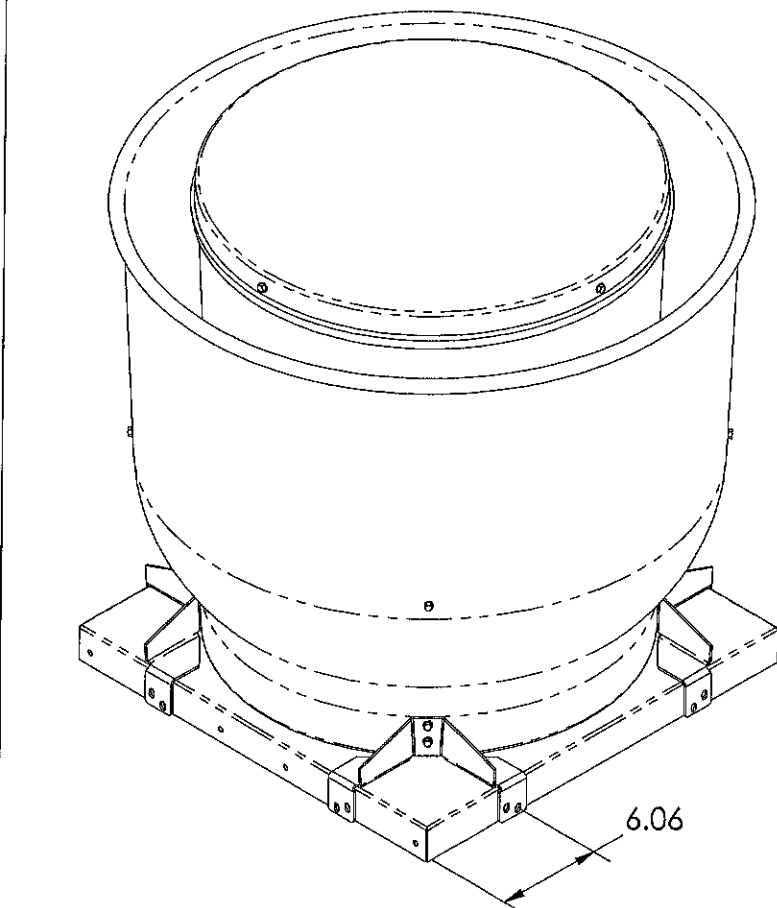
Florida Firm No & Contact Information

**RICE**  
ENGINEERING  
105 School Creek Trail  
Luxemburg, WI 54217  
Phone: (920) 617-1042  
Fax: (920) 617-1100  
www.rice-inc.com  
Florida Firm No: F-01000005061  
Certificate of Authorization: #9090  
Wayne K. Helmila  
Registration No: 59092

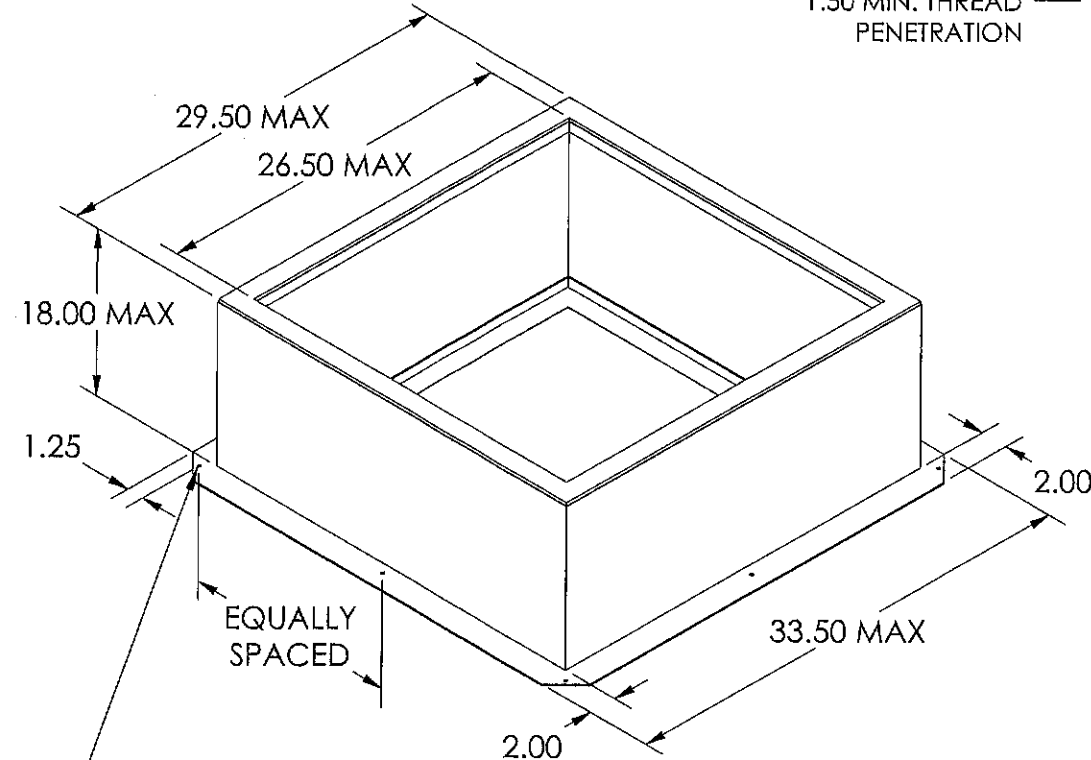
Digital Signature Data

DRIL-FLEX SELF DRILLING SCREWS AND  
WOOD SCREWS TO BE SEALED WITH  
PROSOCO LIQUID FLASHING OR EQUAL

FASTENER TABLE				
VCU/ VCUB SIZE	MINIMUM NUMBER OF FASTENERS PER SIDE TO ATTACH CURB TO ROOF STRUCTURE			MIN. NUMBER OF FASTENERS PER SIDE TO ATTACH UNIT TO CURB
	STEEL ANCHORING	CONCRETE DECK ANCHORING	TIMBER ANCHORING	
085	3	3	3	5
089	3	3	3	5
098	3	3	3	5
110	3	3	3	5
112	3	3	3	5
122	3	3	3	5
124	3	3	3	5
135	3	3	3	5
140	3	3	3	5
150	3	3	3	5
157	3	3	3	5
165	3	3	3	5
177	3	3	5	5
182	3	3	5	5
197	3	3	5	5



- CURB NOTES:**
- ROOF CURB MODEL RCSF, RCSFV, RCSA OR EQUIVALENT WELDED CONSTRUCTION. NO WOOD NAILER.
    - MATERIAL: 18 GA GALVANIZED STEEL
    - 0.063 ALUMINUM
  - UNIT TO BE ATTACHED TO CURB USING #12-14 DRIL-FLEX SELF DRILLING SCREWS OR EQUIVALENT. LOCATED 3" FROM EACH CORNER, THROUGH SUPPORT BRACKET (LOCATED 6" FROM EACH CORNER) AND CENTER OF UNIT. ANY GAP BETWEEN THE CURB AND FASTENER SHALL BE FILLED BY THE INSTALLING CONTRACTOR WITH A SUITABLE CORROSION RESISTANT MATERIAL THAT ALLOWS THE FASTENERS TO BE INSTALLED WITHOUT CAUSING EXCESSIVE DISTORTION ON THE UNIT FLANGES.
  - CURB MUST BE ATTACHED TO A STRUCTURAL MEMBER OF THE BUILDING
  - CONCRETE DECK
    - CURB ANCHORAGE SHOULD BE INTO MINIMUM 3000 PSI CRACKED CONCRETE, WITH A MINIMUM SLAB DEPTH OF 4.75".
    - USE 1/2" DIA. STAINLESS STEEL HILTI KWIK BOLT TZ EXPANSION ANCHORS OR EQUIVALENT. ANCHORS SHALL HAVE A MINIMUM 2" EMBEDMENT. FASTENERS TO BE EQUALLY SPACED. MAXIMUM ON CENTER SPACING OF 10-1/4" WITH 4-1/2" MINIMUM SPACING AND 3-1/2" MINIMUM EDGE DISTANCE.
  - STEEL ROOF STRUCTURE
    - SHOULD BE INTO MINIMUM 12 GA OR 1/8" THICK STEEL MEMBER.
    - USE #12-14 DRIL-FLEX SELF DRILLING SCREWS OR EQUIVALENT. SCREWS SHALL HAVE A MINIMUM THREAD ENGAGEMENT OF .1084". FASTENERS TO BE EQUALLY SPACED. MAXIMUM ON CENTER SPACING OF 16-3/4" WITH 11/16" MINIMUM SPACING AND 3/8" MINIMUM EDGE DISTANCE.
  - TIMBER ROOF STRUCTURE
    - SHOULD BE MINIMUM S.G.=0.55
    - USE #10 ZINC PLATED WOOD SCREWS OR EQUIVALENT. SCREWS SHALL HAVE A MINIMUM THREAD PENETRATION OF 1-1/2". FASTENERS TO BE EQUALLY SPACED. MAXIMUM ON CENTER SPACING OF 16-3/4" WITH 3/4" MINIMUM SPACING, 3/4" MINIMUM EDGE DISTANCE AND 1.316" MINIMUM END DISTANCE.



SECURE CURB TO ROOF FRAMING MEMBERS BY DRILLING 1/4" PILOT HOLES IN THE CURB FLANGE AT LOCATIONS SHOWN IN THE DIAGRAM. SEE TABLE FOR MINIMUM QUANTITY OF ANCHORS REQUIRED PER CURB SIDE.

DRAWN BY SM DATE 10/18/22 APP BY SM DATE 10/18/22	E	SM	08/23/23	SM	08/23/23	DESIGN PRESSURE OF VCU, VCUB UPDATED
	REV	REV BY	REV DATE	APP BY	APP DATE	DESCRIPTION
						5959 Trenton Lane N Minneapolis, MN 55442 ISO-9001:REGISTERED
TITLE VCU/VCUB SUMMARY MIAMI-DADE APPROVAL						
DRAWING NO. 500024054	ROW	ITEM	SHEET	REV.		
	-	-	9 OF 13	E		

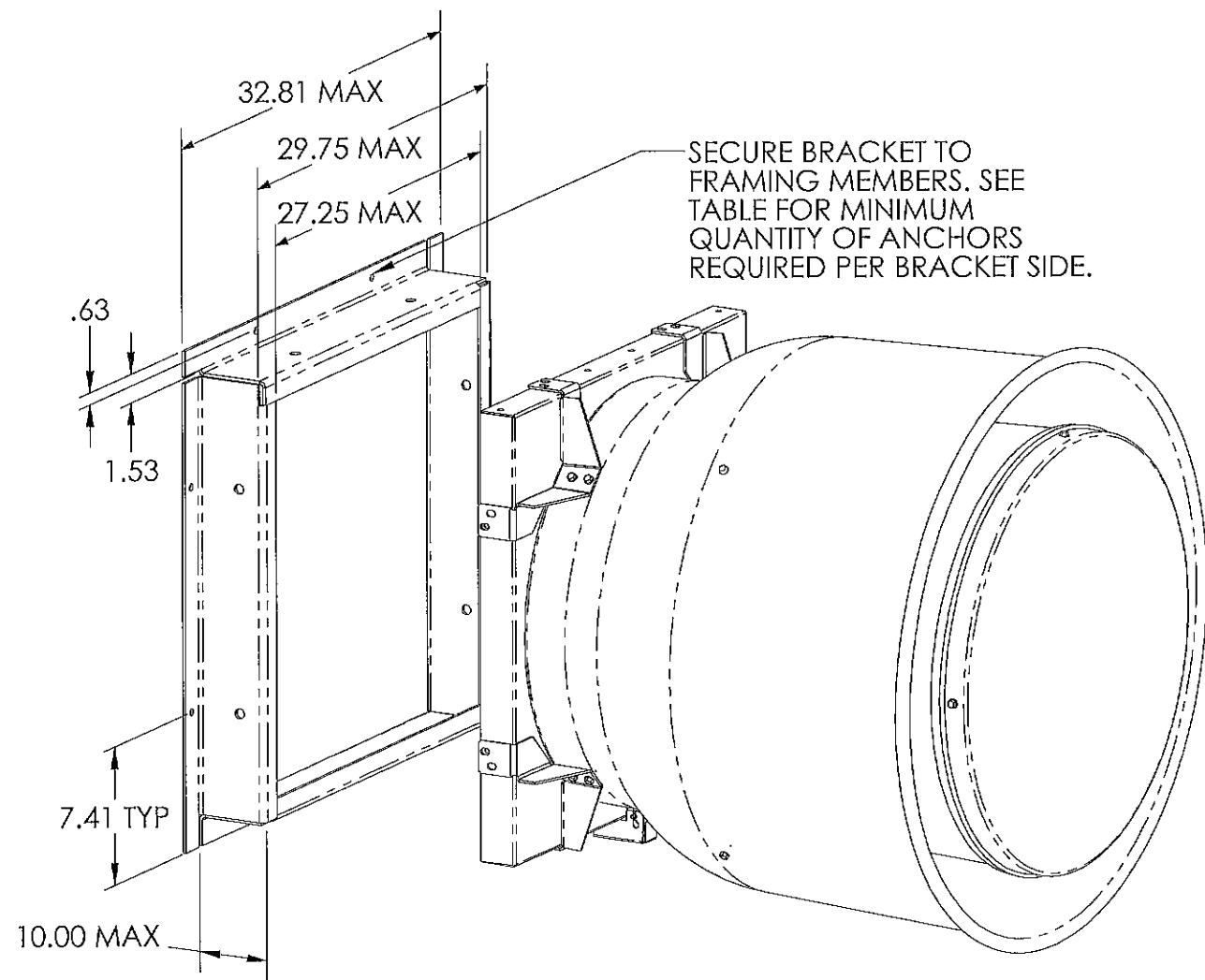
**PRODUCT APPROVED**  
As complying with the Florida  
Building Code  
NOA-No. **23-0918.01**  
Approval Date: **10/26/2023**  
By:   
Miami-Dade Product Control

**RICE**  
ENGINEERING  
105 School Creek Trail  
Luxemburg, WI 54217  
Phone: (920) 617-1042  
Fax: (920) 617-1100  
www.rice-inc.com  
Florida Firm No: F-01000005061  
Certificate of Authorization: #9090  
Wayne K. Helmila  
Registration No: 59092

Digital Signature Data

Professional Engineer Seal & License

Florida Firm No & Contact Information

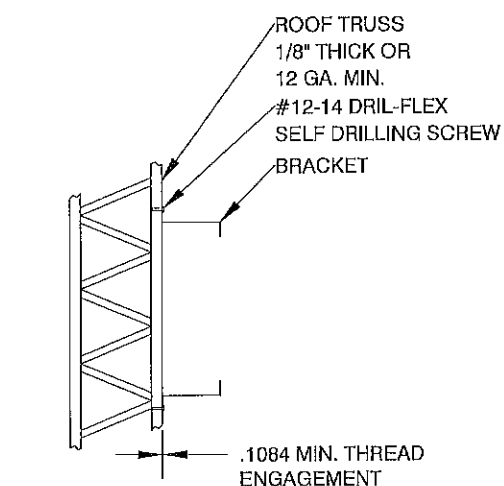


# DRIL-FLEX SELF DRILLING SCREWS AND WOOD SCREWS TO BE SEALED WITH PROSOCO LIQUID FLASHING OR EQUAL

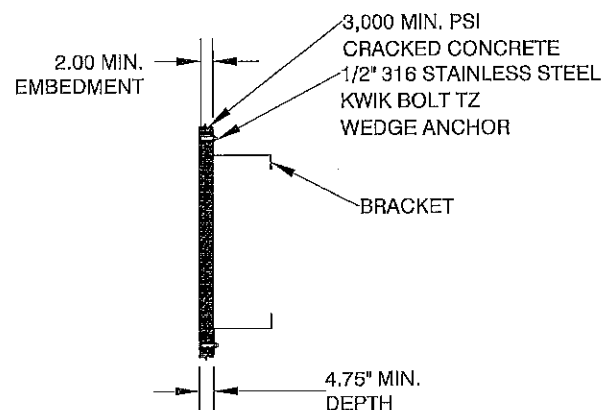
FASTENER TABLE				
VCU/ VCUB SIZE	MINIMUM NUMBER OF FASTENERS PER SIDE TO ATTACH BRACKET TO WALL STRUCTURE			MIN. NUMBER OF FASTENERS PER SIDE TO ATTACH UNIT TO BRACKET
	STEEL ANCHORING	CONCRETE DECK ANCHORING	TIMBER ANCHORING	
085	3	3	3	5
089	3	3	3	5
098	3	3	3	5
110	3	3	3	5
112	3	3	3	5
122	3	3	3	5
124	3	3	3	5
135	3	3	3	5
140	3	3	3	5
150	3	3	3	5
157	3	3	3	5
165	3	3	3	5
177	3	3	4	5
182	3	3	4	5
197	3	3	4	5

## WALL BRACKET NOTES:

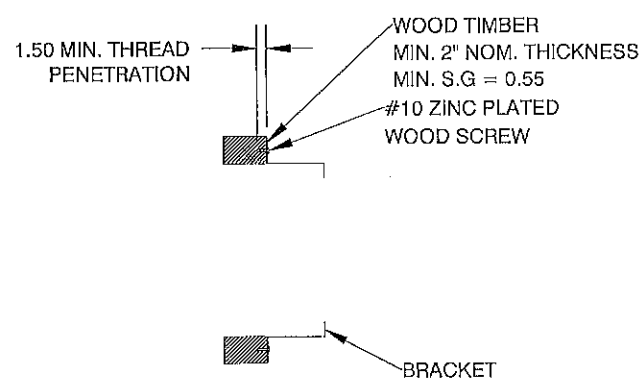
- MATERIAL: 0.160 ALUMINUM 5052-H32
- UNIT TO BE ATTACHED TO WALL BRACKET USING 5/16-18 SCREWS OR EQUIVALENT. LOCATED 3" FROM EACH CORNER, THROUGH SUPPORT BRACKET (LOCATED 6" FROM EACH CORNER) AND CENTER OF UNIT.
- ANY GAP BETWEEN THE CURB AND FASTENER SHALL BE FILLED BY THE INSTALLING CONTRACTOR WITH A SUITABLE CORROSION RESISTANT MATERIAL THAT ALLOWS THE FASTENERS TO BE INSTALLED WITHOUT CAUSING EXCESSIVE DISTORTION ON THE UNIT FLANGES.
- BRACKET MUST BE ATTACHED TO A STRUCTURAL MEMBER OF THE BUILDING
- CONCRETE STRUCTURE
  - BRACKET ANCHORAGE SHOULD BE INTO MINIMUM 3000 PSI CRACKED CONCRETE, WITH A MINIMUM SLAB DEPTH OF 4.75".
  - USE 1/2" DIA. STAINLESS STEEL HILTI KWIK BOLT TZ EXPANSION ANCHORS OR EQUIVALENT. ANCHORS SHALL HAVE A MINIMUM 2" EMBEDMENT. FASTENERS TO BE EQUALLY SPACED. MAXIMUM ON CENTER SPACING OF 10-1/4" WITH 4-1/2" MINIMUM SPACING AND 3-1/2" MINIMUM EDGE DISTANCE.
- STEEL STRUCTURE
  - SHOULD BE INTO MINIMUM 12 GA OR 1/8" THICK STEEL MEMBER.
  - USE #12-14 DRIL-FLEX SELF DRILLING SCREWS OR EQUIVALENT. SCREWS SHALL HAVE A MINIMUM THREAD ENGAGEMENT OF .1084". FASTENERS TO BE EQUALLY SPACED. MAXIMUM ON CENTER SPACING OF 16-3/4" WITH 11/16" MINIMUM SPACING AND 3/8" MINIMUM EDGE DISTANCE.
- TIMBER STRUCTURE
  - SHOULD BE MINIMUM S.G.=0.55
  - USE #10 ZINC PLATED WOOD SCREWS OR EQUIVALENT. SCREWS SHALL HAVE A MINIMUM THREAD PENETRATION OF 1-1/2". FASTENERS TO BE EQUALLY SPACED. MAXIMUM ON CENTER SPACING OF 16-3/4" WITH 3/4" MINIMUM SPACING, 3/4" MINIMUM EDGE DISTANCE AND 1.316" MINIMUM END DISTANCE.



STEEL ANCHORING

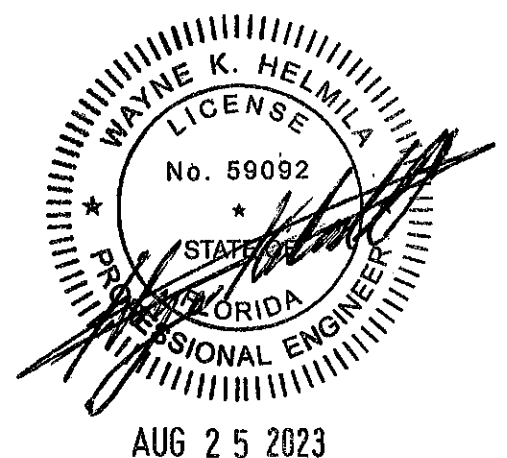


CONCRETE DECK ANCHORING



TIMBER ANCHORING


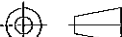
**PRODUCT APPROVED**  
As complying with the Florida  
Building Code  
NOA-No. **23-0918.01**  
Approval Date: **10/26/2023**  
By: *[Signature]*  
Miami-Dade Product Control

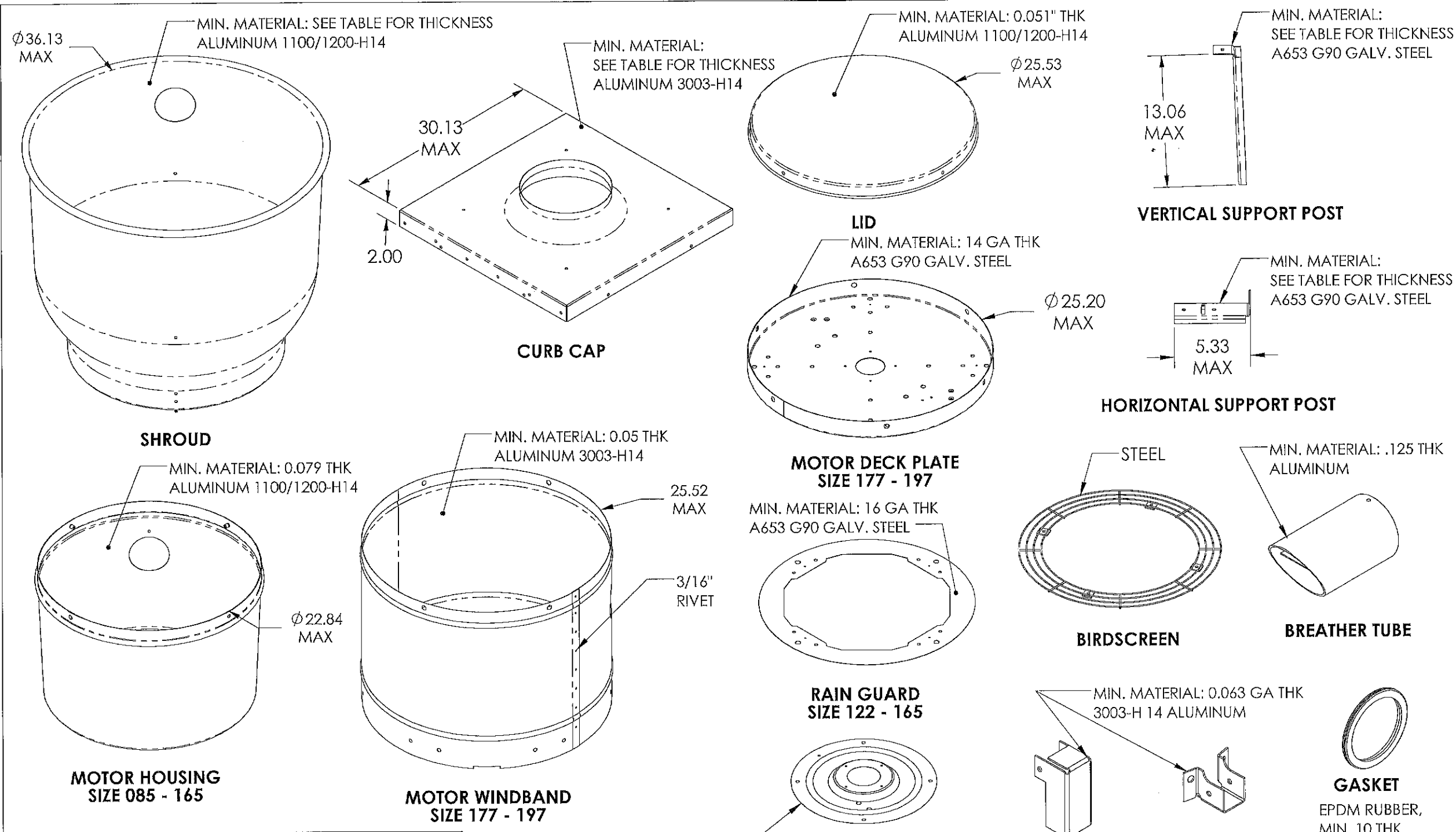


## **RICE** ENGINEERING

105 School Creek Trail  
Luxemburg, WI 54217  
Phone: (920) 617-1042  
Fax: (920) 617-1100  
www.rice-inc.com

Florida Firm No: F-01000005061  
Certificate of Authorization: #9090  
Wayne K. Helmla  
Registration No: 59092

		E	SM	08/23/23	SM	08/23/23	DESIGN PRESSURE OF VCU, VCUB UPDATED		
DRAWN BY SM		REV	REV BY	REV DATE	APP BY	APP DATE	DESCRIPTION		
DATE 10/18/22							5959 Trenton Lane N Minneapolis, MN 55442 ISO-9001:REGISTERED		
APP BY SM									
DATE 10/18/22									
		TITLE VCU/VCUB SUMMARY MIAMI-DADE APPROVAL							
 3RD ANGLE PROJECTION		DRAWING NO. 500024054				ROW —	ITEM —	SHEET 10 OF 13	REV. E



THICKNESS TABLE					
VCU/ VCUB	CURB CAP	SHROUD	SHROUD SUPPORT	HORIZONTAL SUPPORT POST	VERTICAL SUPPORT POST
085	0.118	0.078	0.125	14 GA	14 GA
089	0.063				
098					
110					
112	0.118				
122	0.063	0.098			
124					
135					
140					
150					
157					
165					
177					
182			0.19	12 GA	12 GA
197					

MODEL	6.93 MAX	8.43 MAX	8.43 MAX	6.73 MAX
MATERIAL	MIN. MATERIAL: SEE TABLE FOR THICKNESS, ALUMINUM 5052-H32			
SIZES	085	089-112	122-165	177-197
PART NAME	SHROUD SUPPORT			

DRAWN BY SM  
 DATE 10/18/22  
 APP BY SM  
 DATE 10/18/22  
 3RD ANGLE PROJECTION

E	SM	08/23/23	SM	08/23/23	DESIGN PRESSURE OF VCU, VCUB UPDATED
REV	REV BY	REV DATE	APP BY	APP DATE	DESCRIPTION
					5959 Trenton Lane N Minneapolis, MN 55442 ISO-9001:REGISTERED
TITLE VCU/VCUB SUMMARY MIAMI-DADE APPROVAL					
DRAWING NO. 500024054		ROW	ITEM	SHEET	REV.
		-	-	11 OF 13	E

For Miami-Dade Product Control

**PRODUCT APPROVED**  
 As complying with the Florida Building Code  
 NOA-No. **23-0918.01**  
 Approval Date: **10/26/2023**  
 By:   
 Miami-Dade Product Control

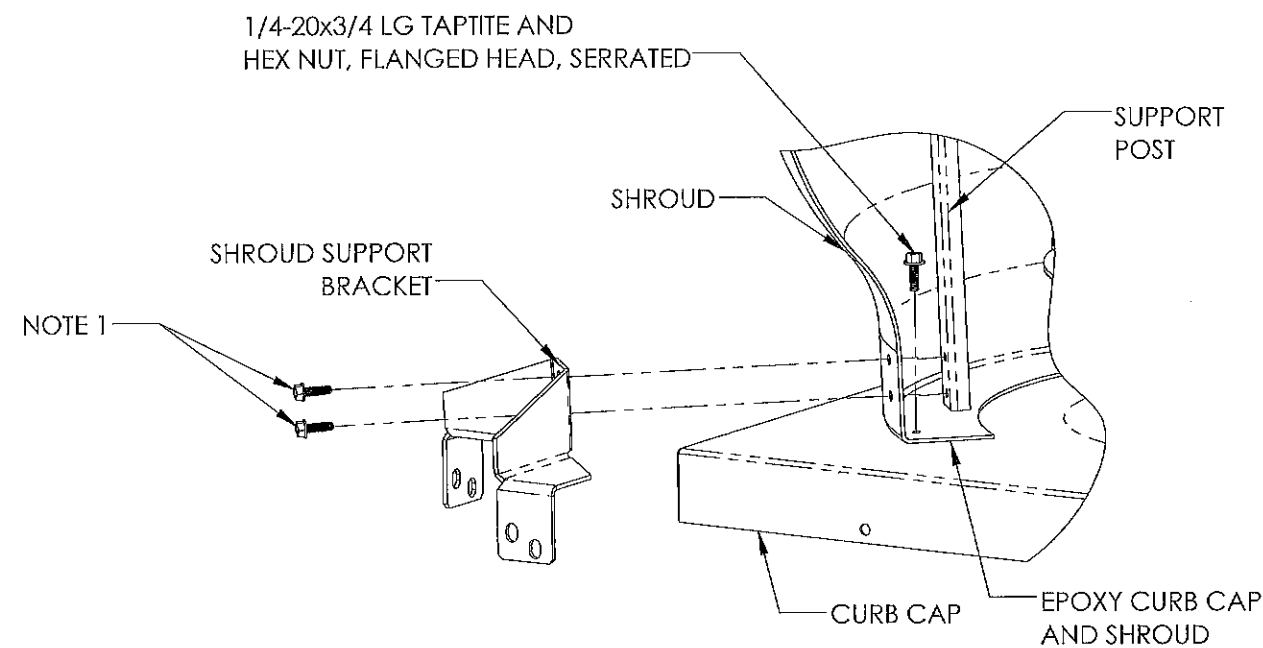
Professional Engineer Seal & License

AUG 25 2023

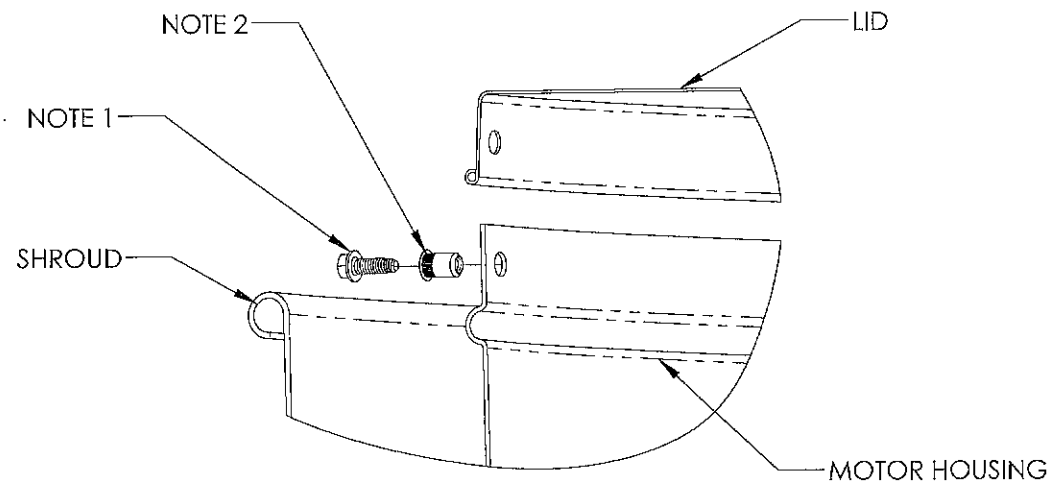
Florida Firm No & Contact Information

**RICE ENGINEERING**  
 105 School Creek Trail  
 Luxemburg, WI 54217  
 Phone: (920) 617-1042  
 Fax: (920) 617-1100  
 www.rice-inc.com  
 Florida Firm No: F-01000005061  
 Certificate of Authorization: #9090  
 Wayne K. Helmila  
 Registration No: 59092

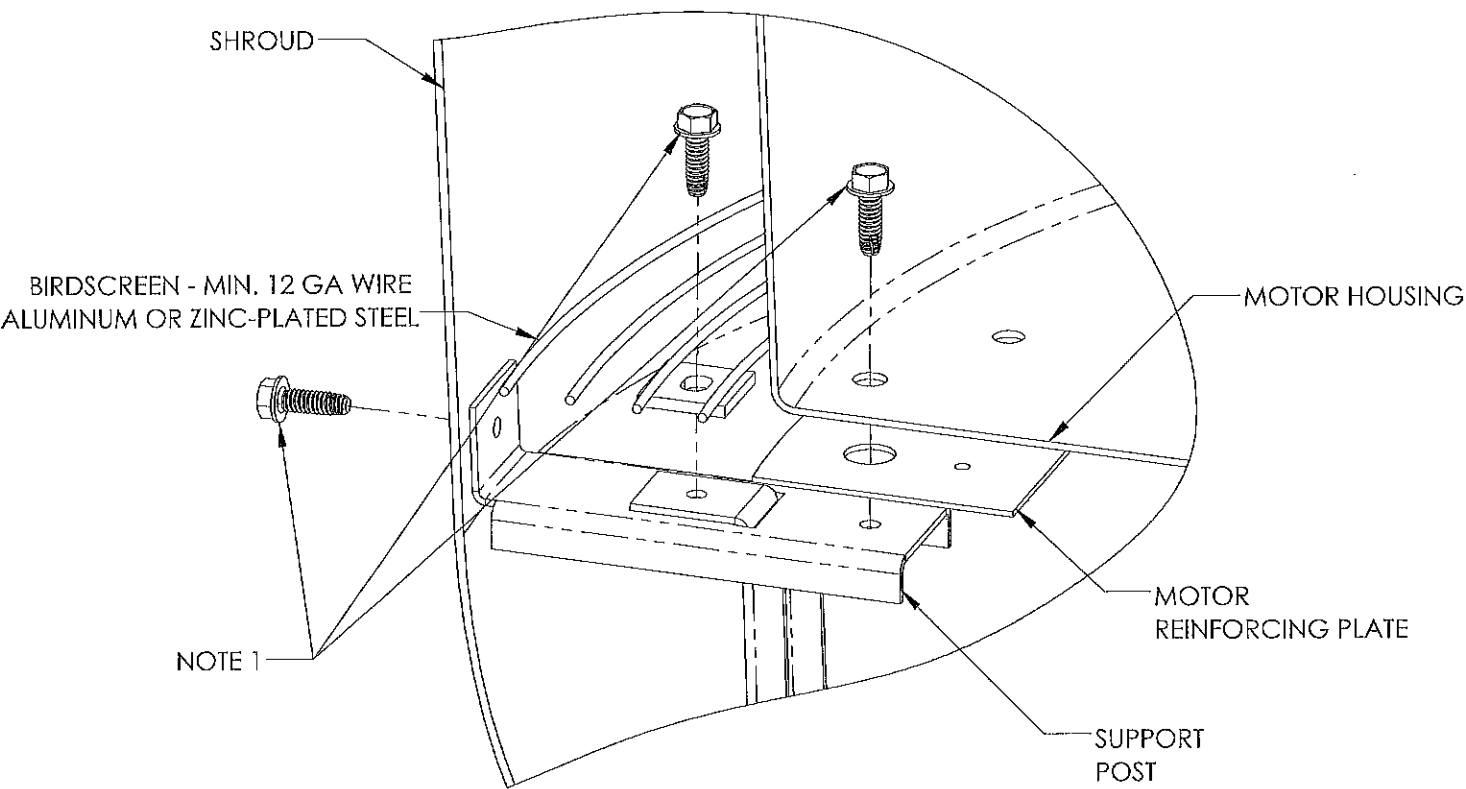
Digital Signature Data



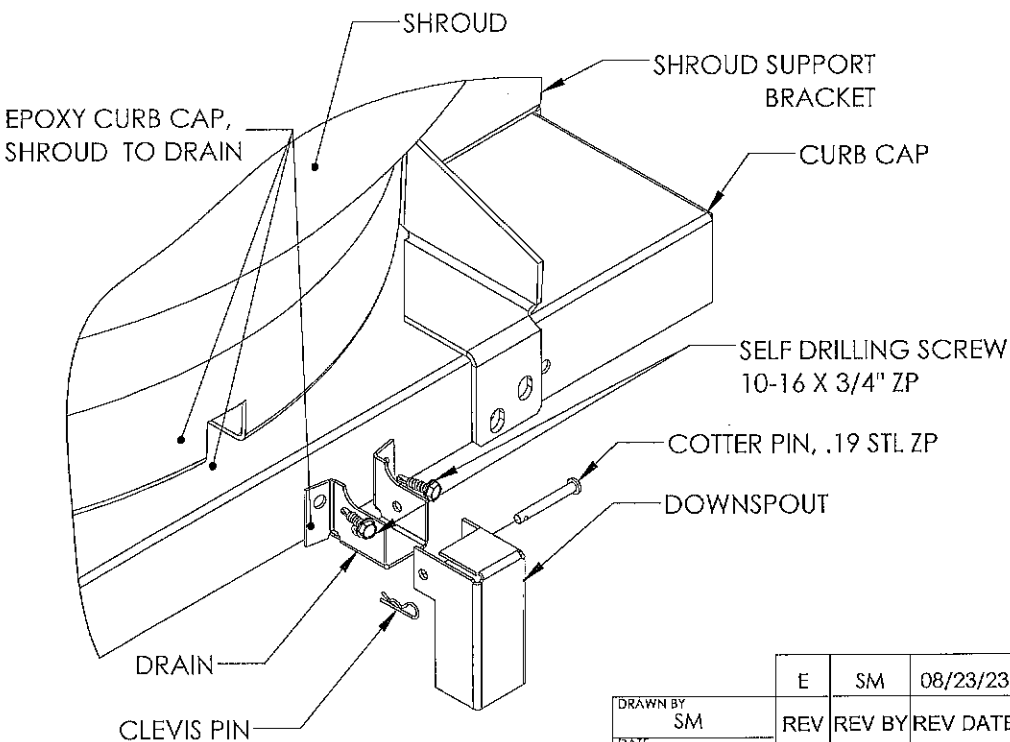
SHROUD BRACKET MOUNTING WITH SHROUD & SUPPORT POST  
SIZE 085 - 165



LID MOUNTING ON MOTOR HOUSING  
SIZE 085 - 165



BIRDSCREEN MOUNTING WITH SUPPORT POST & MOTOR HOUSING  
SIZE 085 - 165



DRAIN & DOWNSPOUT MOUNTING  
SIZE 085 - 165

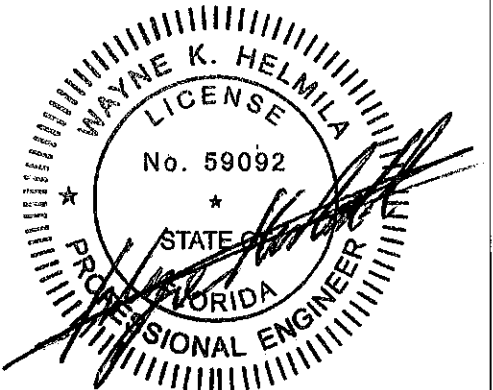
NOTES:  
01. SIZES 085-165 = 1/4-20 x 3/4" LG, TAPTITE SCREW, FLANGED, SERRATED  
02. SIZES 085-165 = 1/4-20 RIVET NUT, KNURLED BODY

DRAWN BY SM DATE 10/18/22 APP BY SM DATE 10/18/22	E	SM	08/23/23	SM	08/23/23	DESIGN PRESSURE OF VCU, VCUB UPDATED
	REV	REV BY	REV DATE	APP BY	APP DATE	DESCRIPTION
<div><div><div><div></div><div>T</div><div>C</div><div>F</div></div><div>TWIN CITY FAN</div></div></div> <div>TITLE VCU/VCUB SUMMARY MIAMI-DADE APPROVAL</div>						5959 Trenton Lane N Minneapolis, MN 55442 ISO-9001:REGISTERED
DRAWING NO. 500024054			ROW -	ITEM -	SHEET 12 OF 13	REV. E

For Miami-Dade Product Control

**PRODUCT APPROVED**  
As complying with the Florida  
Building Code  
NOA-No. **23-0918.01**  
Approval Date: **10/26/2023**  
By:   
Miami-Dade Product Control

Professional Engineer Seal & License

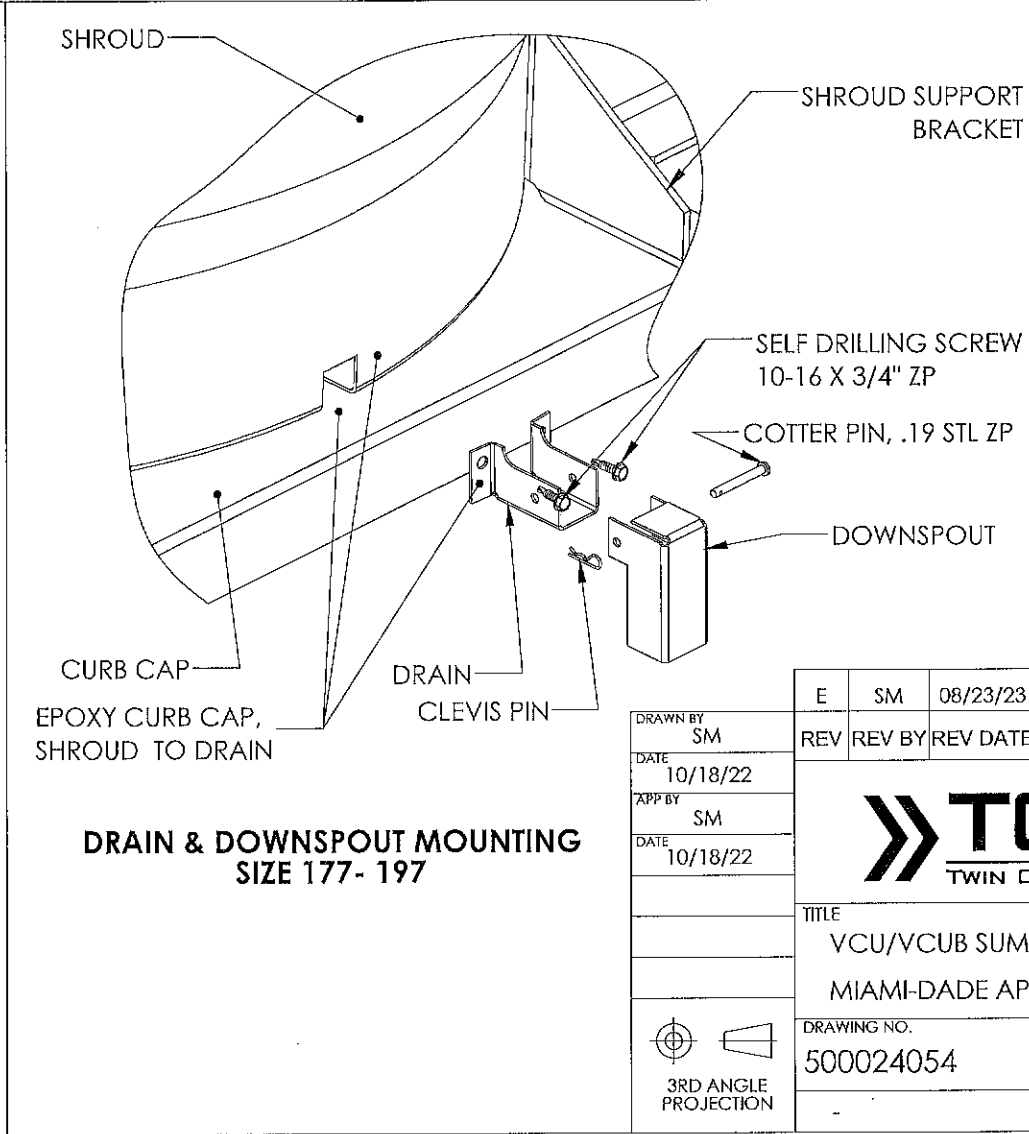
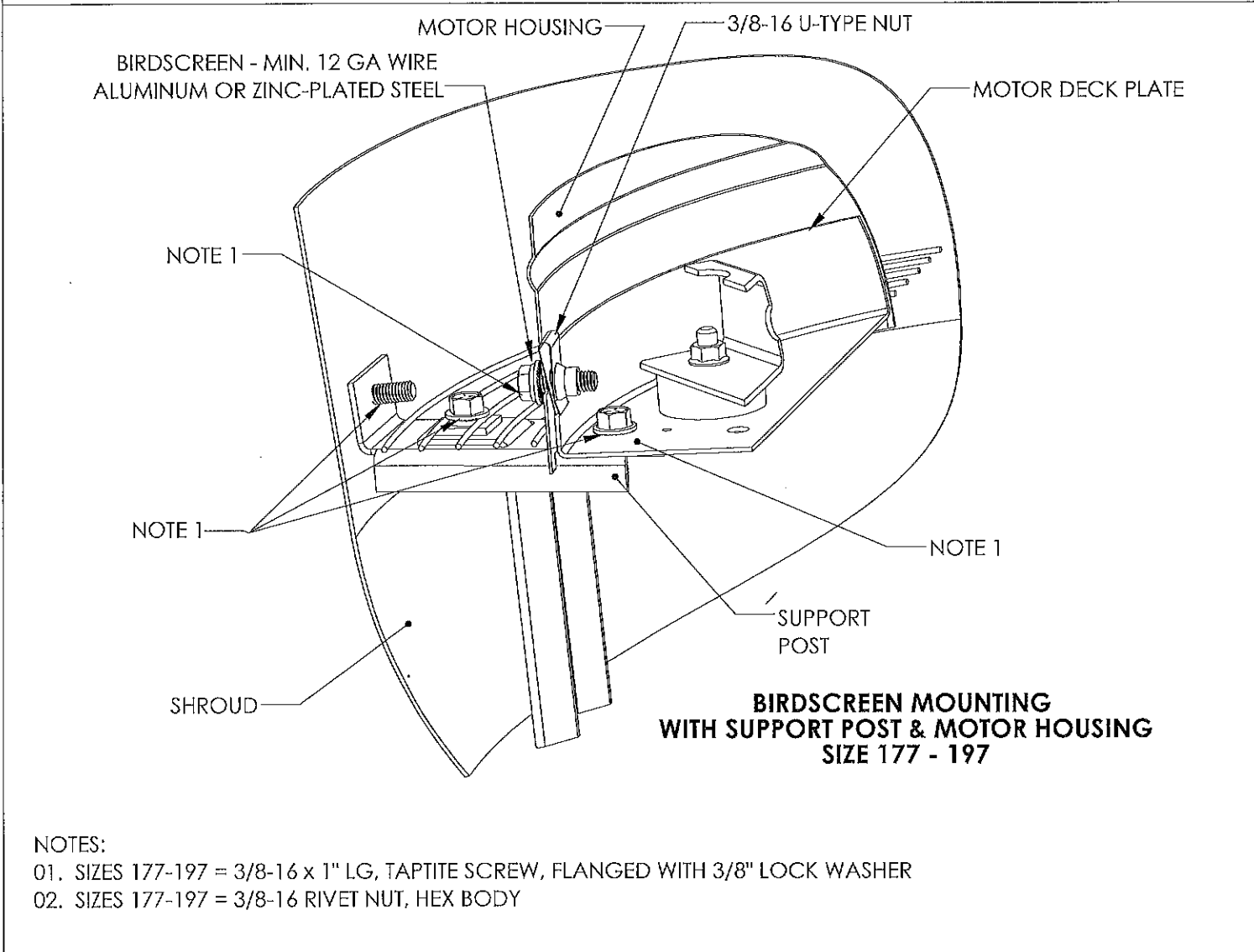
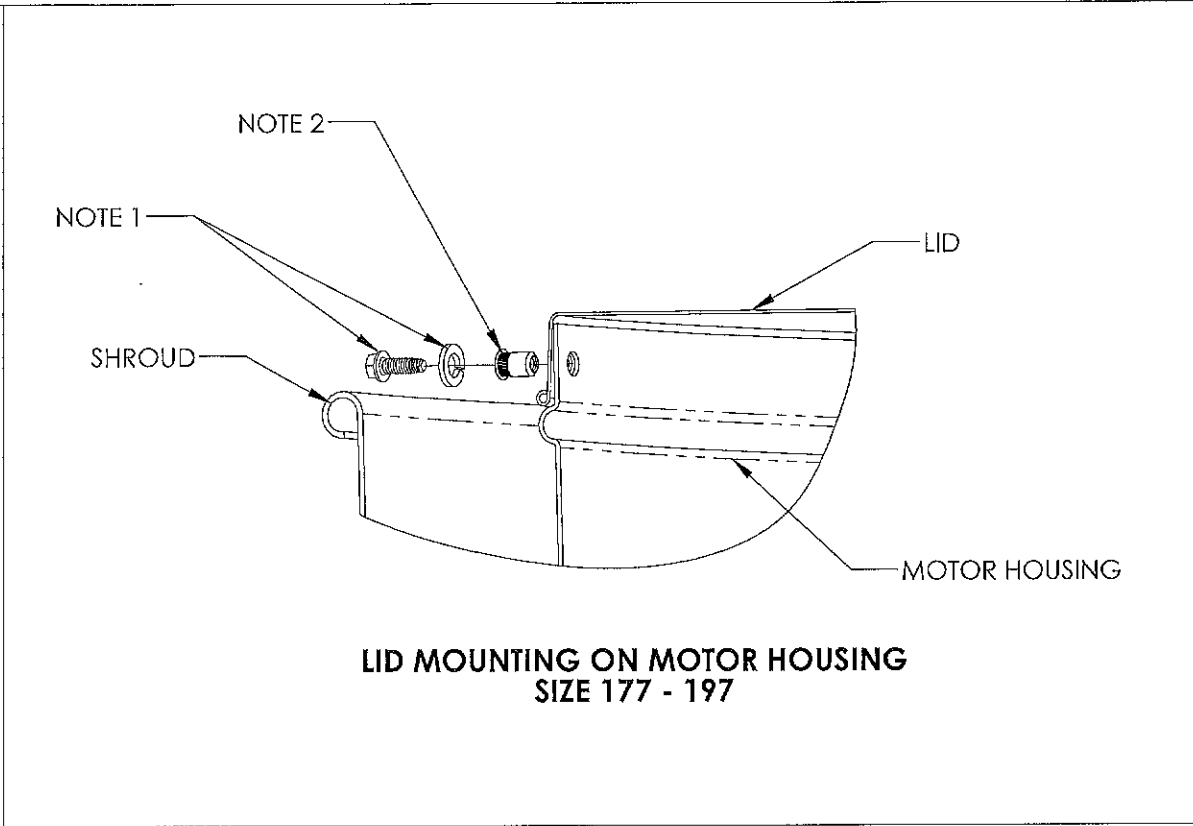
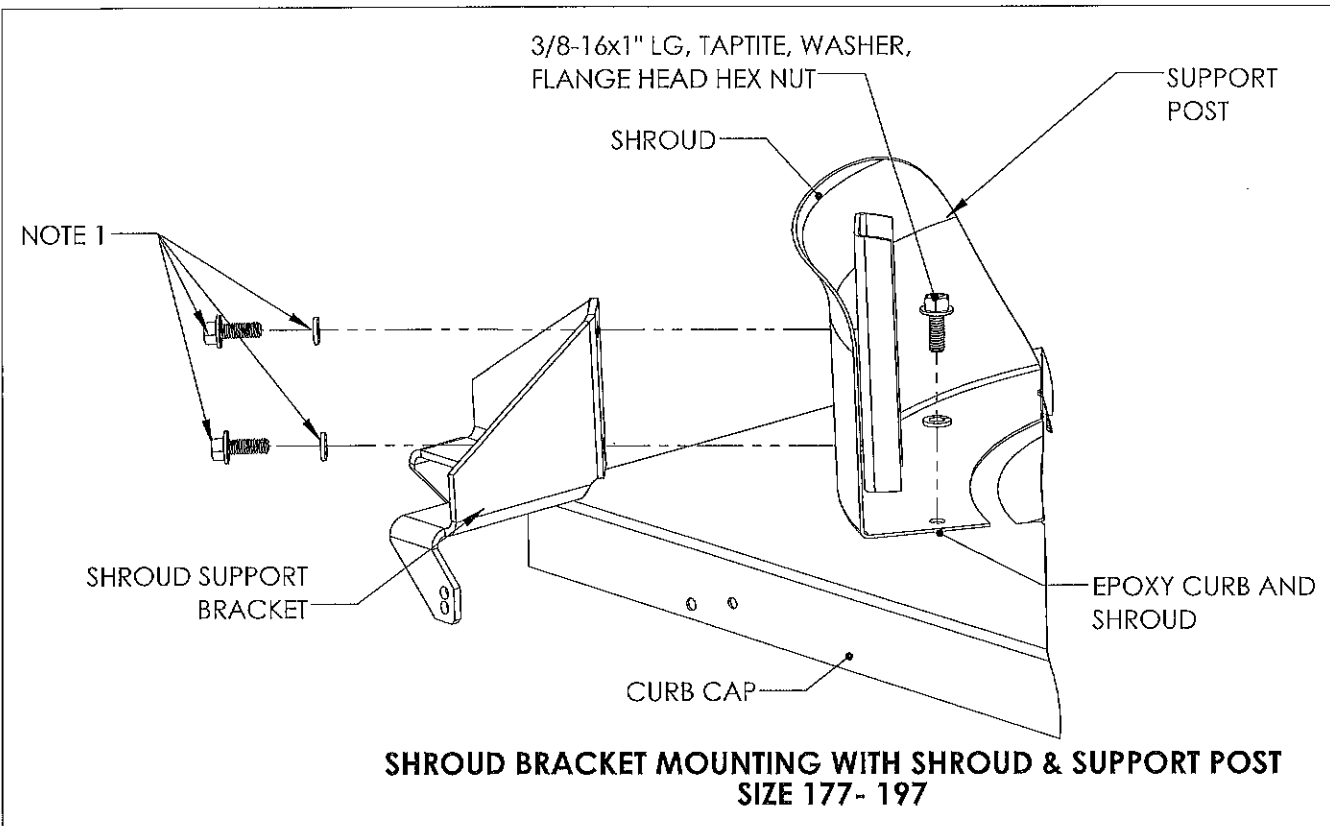


AUG 25 2023

Florida Firm No & Contact Information

**RICE**  
ENGINEERING  
105 School Creek Trail  
Luxemburg, WI 54217  
Phone: (920) 617-1042  
Fax: (920) 617-1100  
www.rice-inc.com  
Florida Firm No: F-01000005061  
Certificate of Authorization: #9090  
Wayne K. Helmila  
Registration No: 59092

Digital Signature Data



For Miami-Dade Product Control

Professional Engineer Seal & License

Florida Firm No & Contact Information

Digital Signature Data

**PRODUCT APPROVED**  
As complying with the Florida Building Code  
NOA-No. **23-0918.01**  
Approval Date: **10/26/2023**  
By: *[Signature]*  
Miami-Dade Product Control

**WAYNE K. HELMILA**  
LICENSE  
No. 59092  
STATE OF FLORIDA  
PROFESSIONAL ENGINEER  
AUG 25 2023

**RICE ENGINEERING**  
105 School Creek Trail  
Luxemburg, WI 54217  
Phone: (920) 617-1042  
Fax: (920) 617-1100  
www.rice-inc.com  
Florida Firm No: F-01000005061  
Certificate of Authorization: #9090  
Wayne K. Helmila  
Registration No: 59092

E	SM	08/23/23	SM	08/23/23	DESIGN PRESSURE OF VCU, VCUB UPDATED
REV	REV BY	REV DATE	APP BY	APP DATE	DESCRIPTION

DRAWN BY  
SM  
DATE  
10/18/22  
APP BY  
SM  
DATE  
10/18/22

3RD ANGLE PROJECTION

**TCF**  
TWIN CITY FAN

TITLE  
VCU/VCUB SUMMARY  
MIAMI-DADE APPROVAL

DRAWING NO.  
500024054

ROW  
-

ITEM  
-

SHEET  
13 OF 13

REV.  
E

5959 Trenton Lane N  
Minneapolis, MN 55442  
ISO-9001:REGISTERED