

SOLATUBE

SOLAR STAR HIGH PROFILE RM-1500 ROOF VENT

INSTALLATION ANCHORAGE DETAILS

PROJECT NUMBER:	417-0905		RJA	2/6/18	JBH	RJA	TJH	BY
		UPDATE TO 6TH EDITION (2017) FBC			UPDATE TO 5TH EDITION (2014) FBC	REVISED TESTING INC.	UPDATE TO 2010 FBC	DATE
		D		C	B	A	REV	

SOLATUBE

2210 OAK RIDGE WAY
VISTA, CALIFORNIA 92081-8341

TITLE:
SOLATUBE "SOLAR STAR"
HIGH PROFILE RM-1500 ROOF VENT
GENERAL AND INSTALLATION NOTES

DATE: 08/29/11
DRAWING NO: SOLA0006
SHEET: 1 OF 4

PREPARED BY: TJH

SCALE: N.T.S.

REV: D

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GENERAL NOTES:

1. THE PRODUCT ANCHORAGE SHOWN HEREIN IS DESIGNED TO COMPLY WITH THE CURRENT EDITION OF THE FLORIDA BUILDING CODE (FBC) INCLUDING THE HIGH VELOCITY HURRICANE ZONE (HVHZ) AT THE DESIGN PRESSURES STATED HEREIN.
2. THE PRODUCT DETAILS CONTAINED HEREIN ARE BASED UPON SIGNED AND SEALED ATI TEST REPORT C1439.01-109-18-R0, ATI TEST REPORT C1439.02-109-18-R0 AND ASSOCIATED LABORATORY STAMPED DRAWINGS.
3. TESTING SUMMARY
 - 3.1. THE PRODUCT HAS BEEN STRUCTURALLY TESTED TO TAS-202-94 (ATI TEST REPORT C1439.02-109-18-R0) AND FOUND TO BE IN CONFORMANCE TO THE CURRENT EDITION OF THE FLORIDA BUILDING CODE (FBC). THE DESIGN PRESSURES SHOWN IN DESIGN PRESSURE RATING TABLE ON SHEET 1 OF THIS DRAWING ARE BASED ON THE RESULTS OF TEST REPORT NO. C1439.02-109-18-R0 DIVIDED BY A FACTOR OF SAFETY OF 2.
 - 3.2. THE PRODUCT HAS BEEN TESTED FOR WIND-DRIVEN RAIN RESISTANCE TO TAS-100(A)-95 (ATI TEST REPORT C1439.01-109-18-R0). SUBSEQUENT STRUCTURAL TESTING FOR INCREASED WINDSPEED RESISTANCE FOR VENTS EXCEEDING DIMENSIONAL LIMITATIONS OF SECTION 10.4.1 OF TAS-100(A)-95 WAS PERFORMED TO TAS-202-94 (ABOVE). AS DOCUMENTED IN PRODUCT EVALUATION REPORT NO. 1906. AN INSTALLATION HEIGHT NOT TO EXCEED 75 FEET IS APPLICABLE.
4. PLASTIC COMPONENTS OF THE SOLATUBE SOLAR STAR ROOF VENT HAVE BEEN EVALUATED TO THE REQUIREMENTS OF THE CURRENT EDITION OF THE FLORIDA BUILDING CODE AND ARE IN COMPLIANCE AS DOCUMENTED IN PRODUCT EVALUATION REPORT NO. 1906 BY ROBERT J. AMORUSO, P.E.
5. ADEQUACY OF THE EXISTING STRUCTURAL ROOF SHEATHING AND SUPPORTING 2X FRAMING AS A MAIN WIND FORCE RESISTING SYSTEM CAPABLE OF WITHSTANDING AND TRANSFERRING APPLIED PRODUCT LOADS TO THE FOUNDATION IS THE RESPONSIBILITY OF THE ENGINEER OR ARCHITECT OF RECORD FOR THE PROJECT OF INSTALLATION.
6. THE INSTALLATION DETAILS DESCRIBED HEREIN ARE GENERIC AND MAY NOT REFLECT ACTUAL CONDITIONS FOR A SPECIFIC SITE. IF SITE CONDITIONS CAUSE INSTALLATION TO DEVIATE FROM THE REQUIREMENTS DETAILED HEREIN, A LICENSED ENGINEER OR ARCHITECT SHALL PREPARE SITE SPECIFIC DOCUMENTS FOR USE WITH THIS DOCUMENT.
7. THE SOLAR STAR'S PRIMARY COMPONENTS ARE COMPRISED OF THE FOLLOWING MATERIALS:
 - 7.1. FLASHING AND TOP PANEL: ALUMINIZED STEEL EDDS T1-25 (TYPE 1)
 - 7.2. STANDOFF, 10 x 1 x 74: ALUMINUM 6061-T6
 - 7.3. HVHZ SPRING CLIP: 301 STAINLESS STEEL
 - 7.4. FAN GRILL: POLYPROPYLENE
8. THIS PRODUCT EVALUATION DOCUMENT ADDRESSES THE STRUCTURAL ATTACHMENT OF THE ROOF VENT TO THE ROOF SHEATHING ONLY. PREPARATION OF THE ROOF SHEATHING AND ROOF COVERING(S) TO RECEIVE THE ROOF VENT SHALL BE PER THE MANUFACTURER'S INSTRUCTIONS.
9. THIS APPROVAL IS FOR THE STRUCTURAL PERFORMANCE ONLY. IMPACT RESISTANCE WAS NOT TESTED. INTERIOR MECHANISM AND/OR ELECTRICAL CIRCUITRY ARE OUTSIDE THE SCOPE OF THIS PRODUCT APPROVAL DOCUMENT.

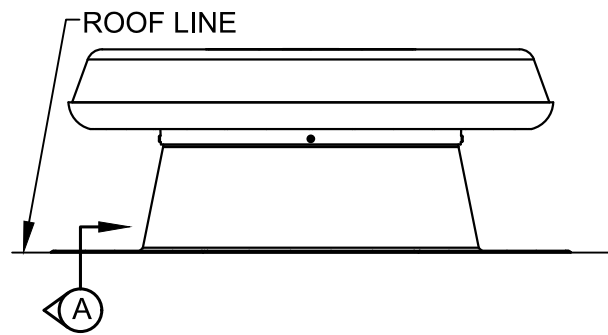
INSTALLATION NOTES:

1. ONE (1) INSTALLATION ANCHOR IS REQUIRED AT EACH ANCHOR LOCATION SHOWN ON SHEETS 2 AND 3.
2. THE NUMBER OF INSTALLATION ANCHORS DEPICTED IS THE MINIMUM NUMBER OF ANCHORS TO BE USED FOR PRODUCT INSTALLATION.
 - 2.1. ALL UNITS REQUIRE EIGHT (8) ANCHORS MINIMUM LOCATED AT ALL CORNERS.
 - 2.2. AN ADDITIONAL EIGHT (8) ANCHORS MINIMUM LOCATED AT MID-SPAM BETWEEN CORNERS SHALL BE REQUIRED TO OBTAIN ENHANCED DESIGN PRESSURES.
 - 2.3. DESIGN PRESSURE RATING TABLE BELOW DETAILS TOTAL ANCHOR QUANTITIES BASED ON DESIGN PRESSURE AND SUBSTRATE TYPE (PLYWOOD SPECIES OR OSB).
 - 2.4. MAXIMUM UPLIFT DESIGN PRESSURE OF -170 PSF BASED ON PERFORMANCE TESTING IS NOT EXCEEDED. POSITIVE DOWNWARD DESIGN PRESSURE OF +50 PSF IS NOT LIMITED BY ANCHOR QUANTITY.
 - 2.5. SEE VENT TOP VIEW ON SHEETS 2 AND 3.
3. FOR INSTALLATION INTO PLYWOOD/OSB ROOFING, USE NO. 10, TYPE AB, PAN HEAD, ROUND HEAD OR TRUSS HEAD CORROSION RESISTANT STEEL TAPPING SCREWS MEETING ASME/ANSI B18.6.4 OF SUFFICIENT LENGTH TO ACHIEVE FULL DEPTH OF EMBEDMENT INTO PLYWOOD/OSB SHEATHING A MINIMUM OF 15/32" INCH IN THICKNESS. EDGE DISTANCE FROM CENTERLINE OF SCREW TO EDGE OF PLYWOOD/OSB SHALL BE AT LEAST 1-1/4 INCH.
4. MINIMUM EMBEDMENT AND EDGE DISTANCE EXCLUDE ROOF FINISHES.
5. INSTALLATION ANCHORS MUST BE MADE OF CORROSION RESISTANT MATERIAL OR HAVE A CORROSION RESISTANT COATING.
6. INSTALLATION ANCHOR CAPACITIES FOR PRODUCTS HEREIN ARE BASED ON SUBSTRATE MATERIALS WITH THE FOLLOWING PROPERTIES:
 - 6.1. 15/32" THICK PLYWOOD - SPECIES GROUP 1 OR 2 (APA VOLUNTARY PRODUCT STANDARD PS 1) MINIMUM.
 - 6.1.1. FOR PLYWOOD SPECIES NOT MEETING SPECIES GROUP 1 OR 2, SEE NOTE 2.2 ABOVE FOR ADDITIONAL ANCHORAGE REQUIREMENTS.
 - 6.2.2. LIMITATIONS AS THEY APPLY TO PLYWOOD IN THE HVHZ PER THE FLORIDA BUILDING CODE AND/OR JURISDICTIONAL REQUIREMENTS SHALL BE MET.
 - 6.3. 15/32" OSB - SHEATHING GRADE (APA VOLUNTARY PRODUCT STANDARD PS 2) MINIMUM.
 - 6.3.1. LIMITATIONS AS THEY APPLY TO OSB IN THE HVHZ PER THE FLORIDA BUILDING CODE AND/OR JURISDICTIONAL REQUIREMENTS SHALL BE MET.
7. ADDITIONAL INSTALLTION LIMITATIONS
 - 7.1. PRODUCT SHALL NOT BE INSTALLED AT AN ELEVATION EXCEEDING 75 FET.
 - 7.2. PRODUCT SHALL NOT BE INSTALLED ON ROOF SHEATHING LESS THAN 15/32" IN THICKNESS.
 - 7.3. PRODUCT SHALL BE INSTALLED ON ROOFS UTILIZING ASPHALT SHINGLES OR HIGH-PROFILE ROOF TILES NOT EXCEEDING THREE INCHES (3") IN HEIGHT.

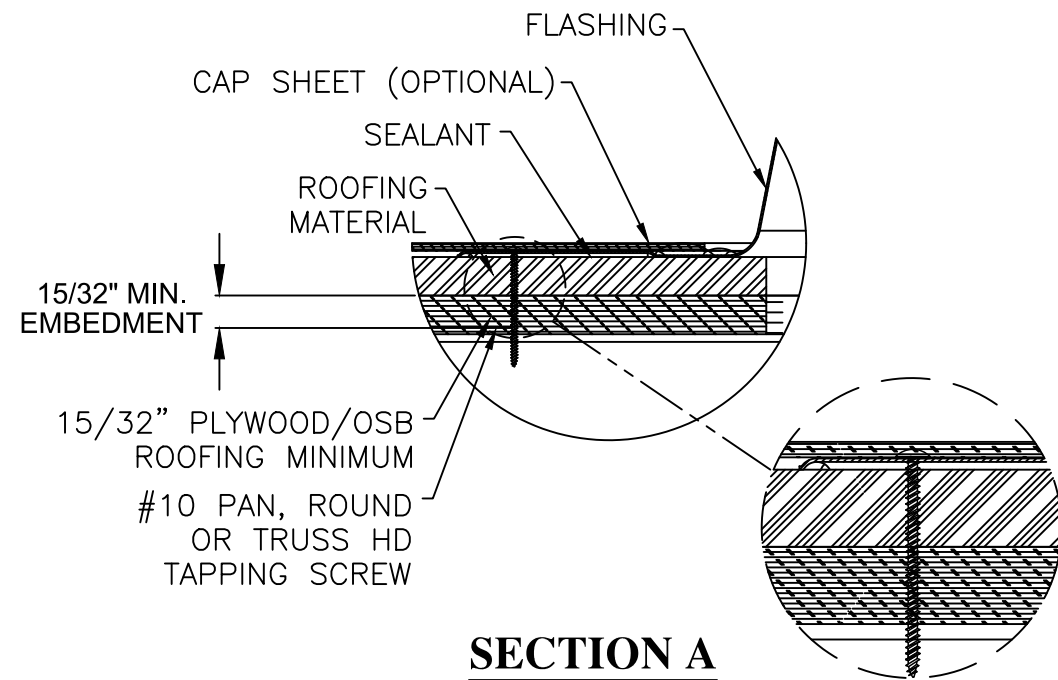
DESIGN PRESSURE RATING (PSF)			
PLYWOOD SPECIES GROUP	ANCHOR QUANTITY	NEGATIVE UPLIFT (PSF)	POSITIVE DOWNWARD (PSF)
1	8	-152	50
	16	-170	50
2	8	-106	50
	16	-170	50
3, 4, 5	8	-84	50
	16	-170	50
OSB	8	-106	50
	16	-170	50

TABLE OF CONTENTS	
SHEET	DESCRIPTION
1	GENERAL AND INSTALLATION NOTES
2	ELEVATION, ANCHORING AND SECTIONS
3	COMPONENTS
4	BILL OF MATERIALS AND ISOMETRIC VIEW

Robert J. Amoruso, P.E.
FL P.E. No. 49752



**SOLAR STAR RM-1500
HIGH PROFILE VENT**

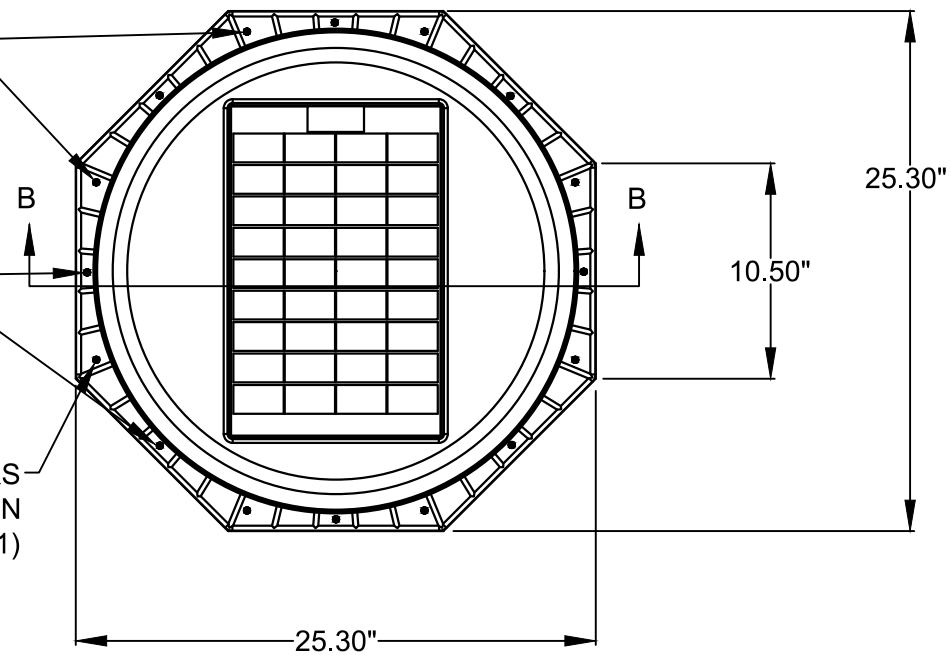


SECTION A

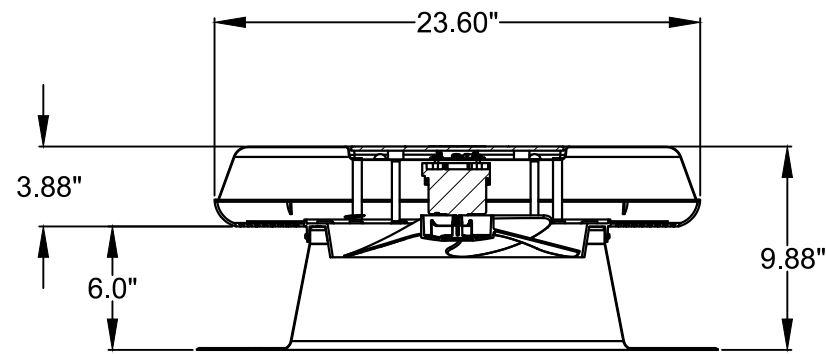
INSTALLATION ANCHORS AT
CORNERS, 8X MIN. REQUIRED.
SEE INSTALLATION NOTE 2 ON
SHEET 1.

INSTALLATION ANCHORS AT
MID-SPAN, 8X MIN.
REQUIRED. SEE
INSTALLATION NOTE 2 ON
SHEET 1.

INSTALLATION ANCHORS
(SEE INSTALLATION
NOTES ON SHEET 1)



**SOLAR STAR RM-1500
HIGH PROFILE VENT
TOP VIEW**



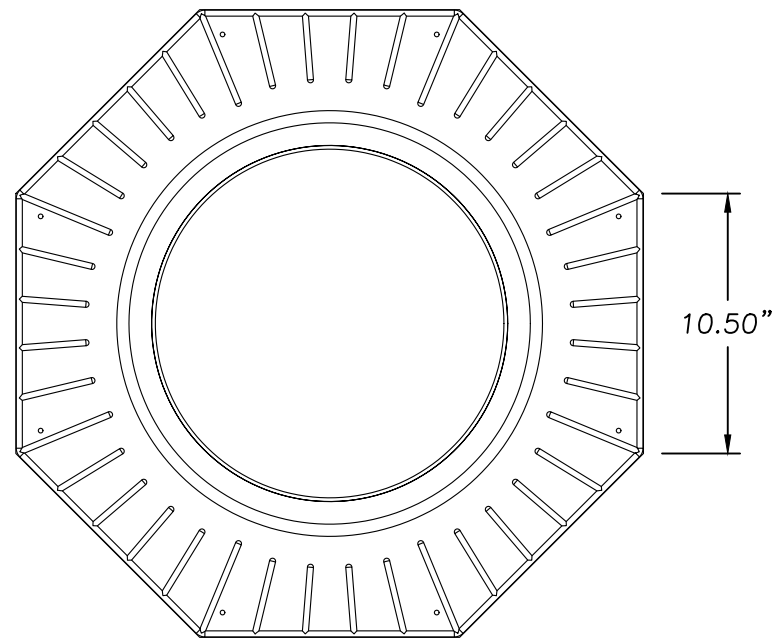
SECTION B-B

PROJECT NUMBER: 417-0905

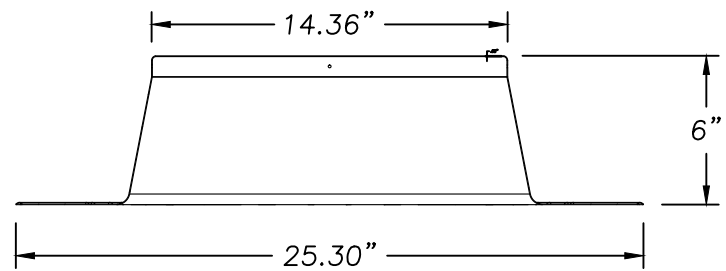
SOLATUBE		2210 OAK RIDGE WAY VISTA, CALIFORNIA 92081-8341	
TITLE:		SOLATUBE "SOLAR STAR" HIGH PROFILE RM-1500 ROOF VENT ELEVATION, ANCHORING AND SECTIONS	
PREPARED BY:	TJH	DATE:	08/29/11
SCALE:	N.T.S.	DRAWING NO.:	SOLA0006
REV:	D	SHEET:	2 OF 4
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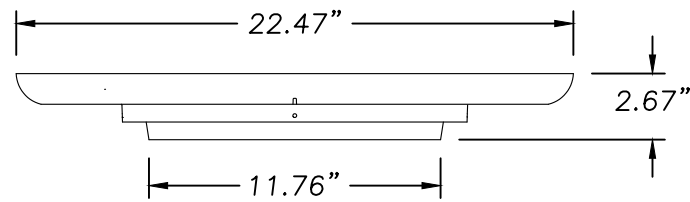
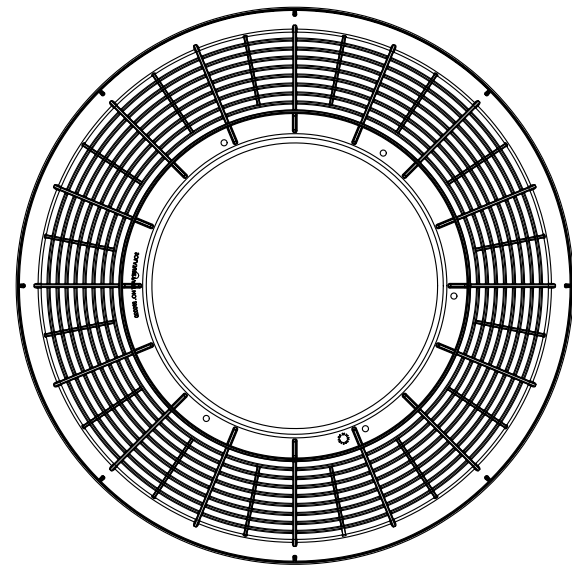
REV	DESCRIPTION	DATE	BY
A	UPDATE TO 2010 FBC	02/08/12	TJH
B	REVISED TESTING INC.	08/23/12	RJA
C	UPDATED TO 5TH EDITION (2014) FBC	05/11/15	JBH
D	UPDATE TO 6TH EDITION (2017) FBC	2/6/18	RJA



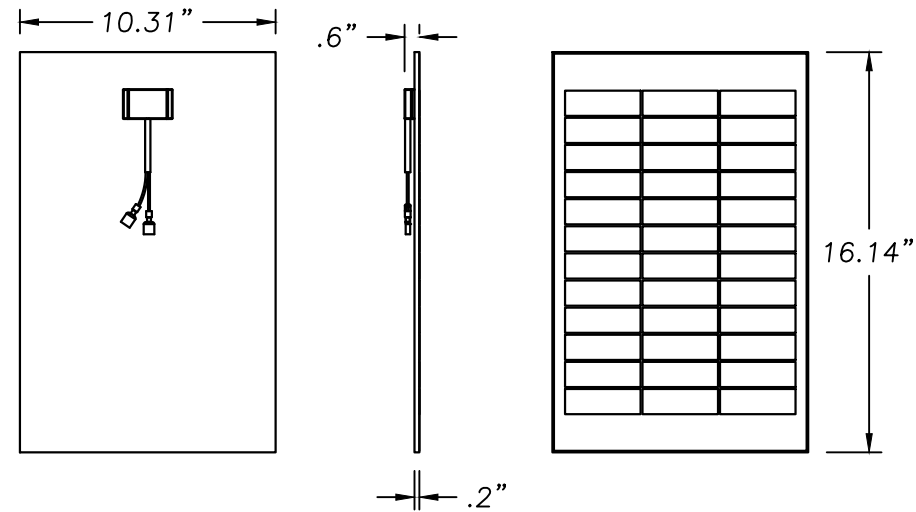
10.50"



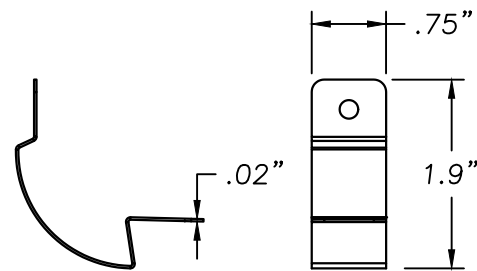
12 **FLASHING 14" NO PITCH 6"**
ALUMINIZED STEEL EDSS T1-25 .028" THICK



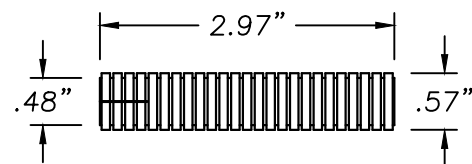
2 **FAN GRILL, SOLAR STAR 14"**
POLYPROPYLENE .120" THICK



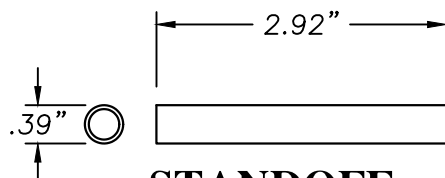
4 **RM-1500**
SOLAR PANEL



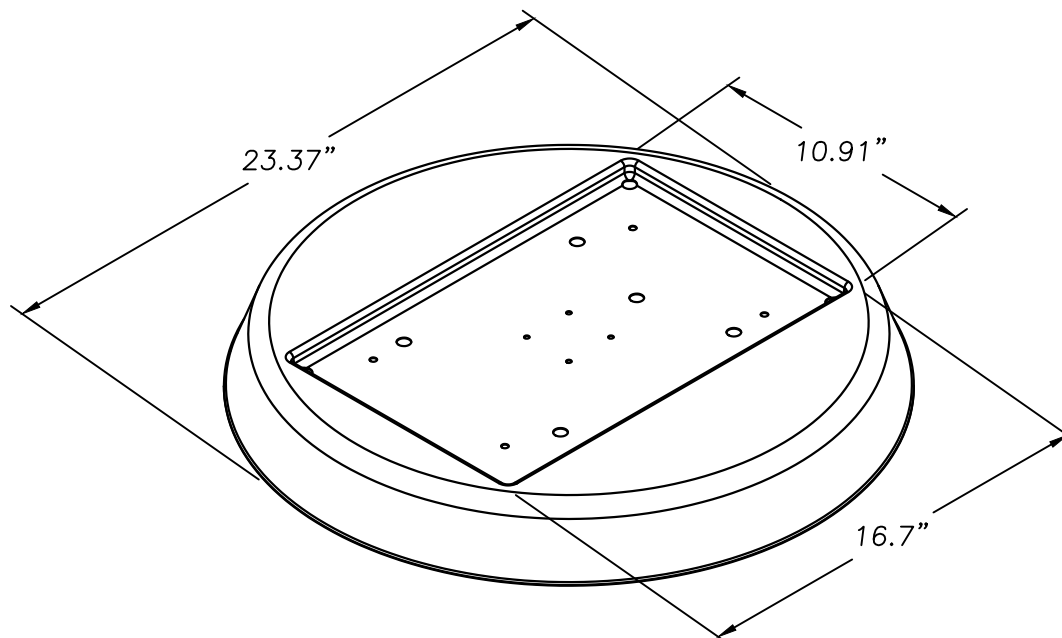
13 **HVHZ SPRING CLIP**
301 STAINLESS STEEL .020" THICK



16 **TUBE, SLIT**
CORRUGATED
POLYPROPYLENE .01" THICK



1 **STANDOFF,**
10 x 1 x 74
ALUMINUM 6061-T6 .039" THICK



3 **TOP PANEL SS 14" BLACK**
ALUMINIZED STEEL EDSS T1-25 .028" THICK

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SOLATUBE
2210 OAK RIDGE WAY
VISTA, CALIFORNIA 92081-8341

TITLE:
SOLATUBE "SOLAR STAR"
HIGH PROFILE RM-1500 ROOF VENT COMPONENTS

PREPARED BY: PTC
DRAWN BY: TJH
SCALE: N.T.S.
REV: D

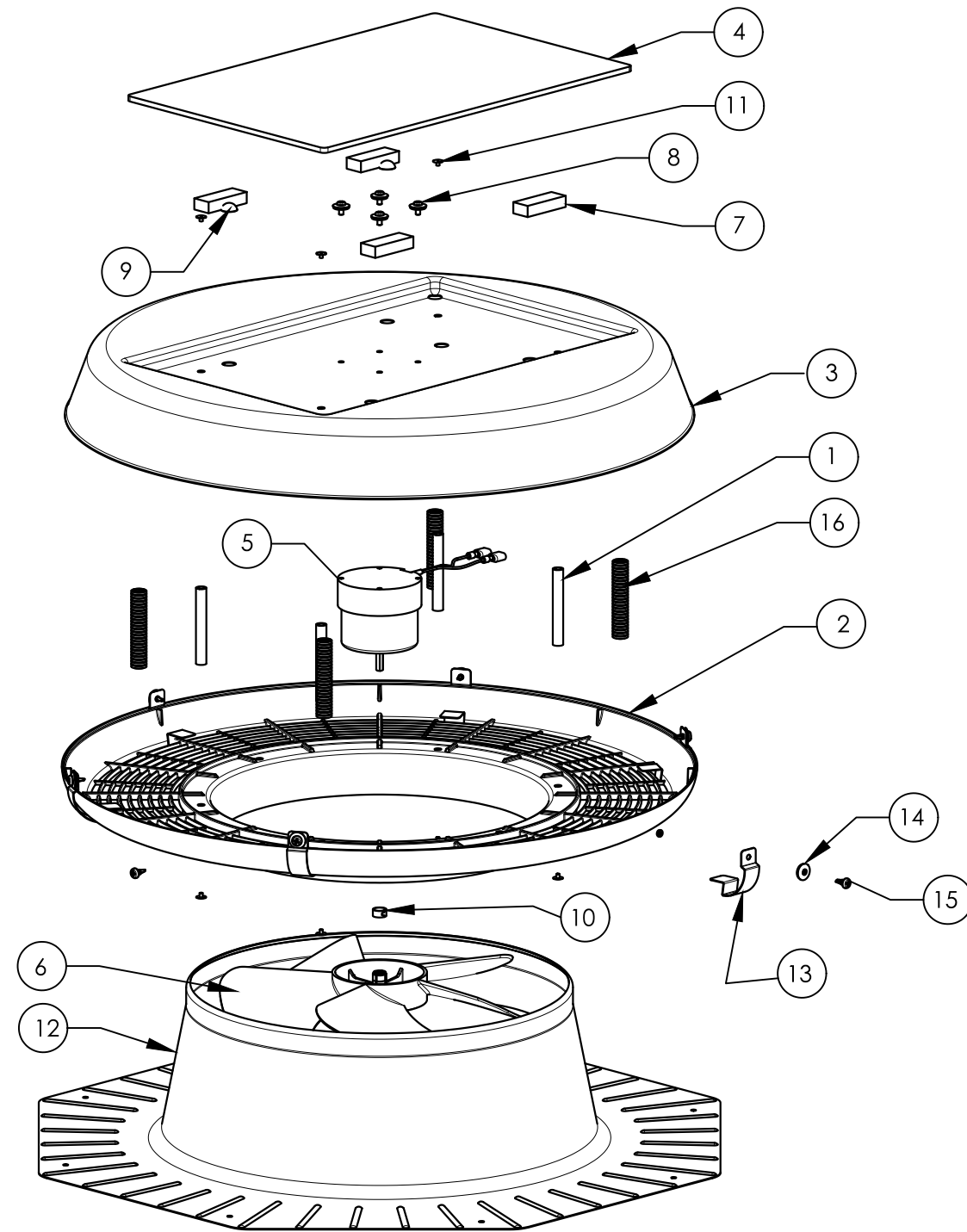
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SHEET: 3 OF 4

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ITEM	QTY.	PART	DESCRIPTION
1	4	503101	STANDOFF, 10X1X74
2	1	590020	FAN GRILL, SOLAR STAR 14"
3	1	590030	TOP PANEL, SS 14" BLACK
4	1	590150	SOLAR PANEL 16W
5	1	590100	SOLAR STAR MOTOR
6	1	592010	SOLAR STAR FAN BLADE
7	4	600201	FOAM PAD, PSA
8	4	700210	SCREW, SEAL 8-32 X 5/16 SS
9	4	700280	ROOF SEALANT BLACK
10	1	700510	COMPRESSION RING
11	8	700661	RIVET OPEN END BLIND 6.4 X 20
12	1	230445	FLASHING 14" NO PITCH 6" HIGH
13	6	520020	HVHZ SPRING CLIP
14	6	700910	WASHER #6 EPDM RUBBER
15	6	700125	SCREW #8 DRILL TIP SS
16	4	504275	TUBE, SLIT CORRUGATED

17	1	504320	SOLAR STAR BASE FASTENER KIT (NOT SHOWN)
18	1	590155	LABEL, SOLAR STAR (NOT SHOWN)
19	1	803610	BUBBLE WRAP FILM (NOT SHOWN)
20	1	830580	BOX, 25-5/8" X 5-7/8" X 25-5/8" (NOT SHOWN)
21	1	830605	BOX PITCHED SOLAR STAR (NOT SHOWN)
22	4	830615	SOLAR STAR FOAM INSERT (NOT SHOWN)
23	1	950910	PRODUCT OWNERSHIP AND CARE GUIDE (NOT SHOWN)
24	1	951900	SOLAR STAR INSTALLATION INSTRUCTIONS (NOT SHOWN)



ISO METRIC VIEW

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REV	DESCRIPTION				

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TITLE:
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 HIGH PROFILE RM-1500 ROOF VENT
 BILL OF MATERIALS AND ISOMETRIC VIEW

PREPARED BY: TJH
 DRAWN BY: N.T.S.
 SCALE: D

DATE: 08/29/11
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