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Legacy report on the 1997 *Uniform Building Code*™

DIVISION: 08—DOORS AND WINDOWS
Section: 08620—Unit Skylights

BRISTOLITE SKYLIGHTS

BRISTOL FIBERLITE INDUSTRIES,
dba BRISTOLITE SKYLIGHTS
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SANTA ANA, CALIFORNIA 92707

1.0 SUBJECT

Bristolite Skylights.

2.0 DESCRIPTION

2.1 General:

Bristolite Skylights are skylights with glazing of approved plastic materials formed to a dome shape. Figure 1 and Tables 1 through 5 contain further information. All series are available in both curb-mounted and self-flashing models. See Table 1 for general description of the skylight models.

2.1.1 S Series: The S series uses 0.125-inch-thick (3.2 mm), one-piece fiberglass domes fabricated in 3-ounce (85 gram) fiberglass roving impregnated with polyester resin and classified as CC1 plastic. The self-flashing version is mounted to a 4-inch-high (102 mm) frame with 2³/₄-inch-wide (70 mm) mounting flange formed from 6063-T5 aluminum. The dome edge is covered by a continuous, No. 26 gage [0.019 inch (0.48 mm)], galvanized steel angle. See Table 3 for additional description.

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CC1

2.1.2 AS Series: The AS Therm-o-weld series uses acrylic plastic domes, classified as CC2 plastic and recognized in evaluation report [ER-2576](#). These domes are chemically fused to a fiberglass frame consisting of 3 ounces (85 grams) of fiberglass roving impregnated with polyester resin and classified as CC1 plastic. The self-flashing version is mounted to a 4-inch-high (102 mm) frame with a 2³/₄-inch-wide (70 mm) mounting flange formed from 6063-T5 aluminum. See Tables 2 and 5 for additional description.

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2.1.3 AL Series: The AL Alumi-lite series uses acrylic plastic domes, classified as CC2 plastic and recognized in evaluation report [ER-2576](#). These domes are attached at the factory to a retaining frame fabricated from 6063 T5 aluminum. The self-flashing version is mounted to a 4-inch-high (102 mm) frame with a 2³/₄-inch-wide (70 mm) mounting flange formed from 6063-T5 aluminum. See Tables 2 and 5 for additional information.

2.2 Installation:

2.2.1 Curb-mounted Units: The curb is minimum 2-by-6 lumber, sized to the inside dimensions described in Table 2. This curb must allow the plastic dome edge to be at least 4 inches (102 mm) above the roof plane. The roof covering is then removed. The opening is cut into the roof, and damage to rafters must be avoided. The curb is mounted to the roof deck to the satisfaction of the building official.

No. 26 gage (0.48 mm) corrosion-resistant metal flashing, 14 inches (356 mm) wide, is bent into an "L" shape with a 3¹/₂-inch (89 mm) vertical leg. Flashing is 5 to 6 inches (127 to 152 mm) wider than the opening. The leg is cut at the curb width, with the end tabs bent flat. These pieces are placed under shingles at the high end of the openings. A second flashing piece is prepared similarly, except the ends are cut and bent to wrap around the curb. The two pieces are coated on faying surfaces with mastic and bonded together. The sides of the opening are flashed with 12-inch-wide (305 mm), L-shaped pieces lapped 3 inches (76 mm) under the previous piece and under the shingles. A bottom piece of flashing is placed. Each flashing piece is nailed to the curb at the joint. A continuous caulking bead is placed on top of the curb. The skylight is set on top of the curb and positioned to allow a 1/₄-inch (6.4 mm) gap between the unit and the side of the curb. The unit is then nailed to the curb according to Table 4. Nail heads should be 1/₁₆ inch (1.6 mm) from curb to permit movement.

2.2.2 Self-flashing Units: Self-flashing units must not be installed on a wood shake or wood shingle roof. The opening is cut into the roof and damage to rafters must be avoided. The edges of the opening are framed with nominal 2-inch-wide (51 mm) lumber. A 4-to-5-inch-wide (102 to 127 mm) band of roofing mastic, 1/₄ inch (6.4 mm) thick, is applied around the opening. The unit is then set into the mastic and fastened according to Table 4. The flanges are covered on the sides and top with a roof covering.

2.3 Identification:

Each skylight is identified by a label bearing the Bristolite Skylights name and address, the plastic dome thickness and classification, the evaluation report number (ER-2469), and a safety label warning of risk of fall.

3.0 EVIDENCE SUBMITTED

Data in accordance with the ICC-ES Acceptance Criteria for Plastic Skylights (AC16), dated October 2003, and the ICC-ES Interim Criteria for Skylights with Plastic Frames (AC79), dated April 1994.

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4.0 FINDINGS

That the Bristolite Skylights as described in this report comply with the 1997 *Uniform Building Code*™, subject to the following conditions:

4.1 Skylights are installed in accordance with this report, manufacturer's instructions and Section 2603.7 of the code.

4.2 The maximum roof live load is 20 pounds per square foot (958 Pa).

4.3 The maximum roof wind-uplift load is 13 pounds per square foot (622 Pa).

4.4 The AS series is installed only where nonrated roof coverings are permitted.

This report is subject to re-examination in two years.

TABLE 1—GLOSSARY OF MODEL TYPES

MODEL TYPE	DESCRIPTION	CURB MOUNTED	SELF FLASHING	ALUM. RETAINER CAP	CC1 FIBERGLASS RETAINER SKIRT	CC1 ONE-PIECE FIBERGLASS DOME	CC2 ACRYLIC DOME OR PURAMID
S-CM	CC1 FIBERGLASS DOME	X			X	X	
S-SF	CC1 FIBERGLASS DOME		X		X	X	
AS-CM	THERM-O-WELD ACRYLIC DOME	X			X		X
AS-SF	THERM-O-WELD ACRYLIC DOME		X		X		X
AL-CM	ALUMI-LITE ACRYLIC DOME	X		X			X
AL-SF	ALUMI-LITE ACRYLIC DOME		X	X			X
ACS-CM	THERM-O-WELD ACRYLIC CIRCULAR	X			X		X
ACS-SF	THERM-O-WELD ACRYLIC CIRCULAR		X		X		X

TABLE 2—BRISTOLITE ACRYLIC SKYLIGHTS
INSIDE CURB OPENING—DOME THICKNESS—DOME RISE

TYPES: AS-CM, AS-SF, ASL-CM, AL-SF, ACS-CM, ACS-SF

MODEL SIZE (Nominal)	AS-CM-P AND AS-SF-P ¹	AS-CM, AS-SF	ACS-CM, ACS-SF	AL-CM, AL-SF	AL-CM-P AND AL-SF-P ¹	INSIDE CURB DIMENSIONS (inches)	DOME THICKNESS (inch)	DOME RISE (inches)
1414	X	X		X	X	14 ¹ / ₄ × 14 ¹ / ₄	0.125	5
1919	X	X		X	X	19 × 19	0.125	5
2222	X	X		X	X	22 ¹ / ₂ × 22 ¹ / ₄	0.125	5
3030	X	X		X	X	30 ¹ / ₄ × 30 ¹ / ₄	0.125	5
3737	X	X		X	X	37 × 37	0.125	5
4242	X	X		X	X	42 × 42	0.125	5
4646	X	X		X	X	46 ¹ / ₄ × 46 ¹ / ₄	0.125	5
4848	X	X		X	X	48 × 48	0.150	5
5555	X	X		X	X	55 × 55	0.187	6
7070	X	X		X	X	70 ¹ / ₄ × 70 ¹ / ₄	0.250	7
7575	X	X		X	X	75 × 75	0.250	8
8484	X	X		X	X	84 × 84	0.250	9
9292	X	X		X	X	92 ¹ / ₂ × 92 ¹ / ₂	0.250	10
2230		X		X		22 ¹ / ₄ × 30 ¹ / ₄	0.125	5
1422		X		X		14 ¹ / ₄ × 22 ¹ / ₄	0.125	5
1446		X		X		14 ¹ / ₄ × 46 ¹ / ₄	0.125	5
2237		X		X		22 ¹ / ₄ × 37	0.125	5
2246	X	X		X	X	22 ¹ / ₄ × 46 ¹ / ₄	0.125	5
2272	X	X		X	X	22 ¹ / ₄ × 72	0.125	8
2296		X		X		22 ¹ / ₄ × 96	0.125	10
3037		X		X		30 ¹ / ₄ × 37	0.125	5
3046	X	X		X	X	30 ¹ / ₄ × 46 ¹ / ₄	0.125	5
3069	X	X		X	X	30 ¹ / ₄ × 69 ¹ / ₂	0.125	7
3096		X		X		30 ¹ / ₄ × 96	0.125	10
3496		X		X		34 × 96	0.150	10
36120		X		X		36 × 120	0.250	12
3746	X	X		X	X	37 × 46 ¹ / ₄	0.125	5
3775		X		X		37 × 75	0.150	8
3859		X		X		38 × 59	0.150	6
4669	X	X		X	X	46 ¹ / ₄ × 69 ¹ / ₂	0.150	7
4689		X		X		46 ¹ / ₄ × 89 ¹ / ₂	0.150	9
4896	X	X		X	X	48 × 96	0.150	10

TABLE 2—BRISTOLITE ACRYLIC SKYLIGHTS—(Continued)
INSIDE CURB OPENING—DOME THICKNESS—DOME RISE

TYPES: AS-CM, AS-SF, ASL-CM, AL-SF, ACS-CM, ACS-SF

MODEL SIZE (Nominal)	AS-CM-P AND AS-SF-P ¹	AS-CM, AS-SF	ACS-CM, ACS-SF	AL-CM, AL-SF	AL-CM-P AND AL-SF-P ¹	INSIDE CURB DIMENSIONS (inches)	DOME THICKNESS (inch)	DOME RISE (inches)
48120		X		X		48 x 120	0.250	12
5460		X		X		54 x 60	0.187	6
6096		X		X		60 x 96	0.187	10
24 dia			X			24	0.125	5
31 dia			X			31	0.125	5
43 dia			X			43	0.125	5
54 dia			X			54	0.187	6
67 dia			X			67	0.187	7
91 dia			X			91	0.250	9

For **SI**: 1 inch = 25.4 mm.

¹-P designates Pyramid Skylights.

TABLE 3—BRISTOLITE FIBERGLASS SKYLIGHTS INSIDE CURB OPENING—DOME THICKNESS—DOME RISE TYPES: S-CM, S-SF

MODEL SIZE (Nominal) STA. PROD. LINES	S-CM	S-SF	INSIDE CURB DIMENSIONS (inches)	DOME THICKNESS (inch)	DOME RISE (inches)
1414	X		14 ¹ / ₄ x 14 ¹ / ₄	0.125	5
2222	X		22 ¹ / ₄ x 22 ¹ / ₄	0.125	5
1422	X		14 ¹ / ₄ x 22 ¹ / ₄	0.125	5
2246	X		22 ¹ / ₄ x 46 ¹ / ₄	0.125	5
2272	X		22 ¹ / ₄ x 72	0.125	7
2296	X		22 ¹ / ₄ x 96	0.125	10
3037	X		30 ¹ / ₄ x 37	0.125	5
4896	X	X	48 x 96	0.125	10

For **SI**: 1 inch = 25.4 mm.

**TABLE 4—MINIMUM NUMBER OF
SKYLIGHT ATTACHMENT FASTENERS**

MODEL SIZE (Nominal I.D.)	CURB-MOUNTED AL-CM, AS-CM, ACS-CM ¹	SELF-FLASHING S-SF, AS-SF, AL-SF, ACS-SF ²
1414	12	8
1919	12	8
2222	16	8
3030	20	8
3737	24	12
4646	28	12
4848	28	16
5555	32	16
7070	40	20
7575	44	20
8484	44	24
9292	48	28
1422	14	8
1446	20	10
2237	20	10
2246	22	10
2272	28	14
2296	34	18
3037	22	10
3046	24	10
3069	30	14
3096	36	18
3496	36	18
36120	44	26
3746	26	12
3775	32	16
3859	30	14

**TABLE 5—MINIMUM NUMBER OF
DOME RETAINER FRAME FASTENERS**

MODEL SIZE (Nominal I.D.)	AL-SF ¹	AS-SF, S-SF, ACS-SF
1414	4	Chemically Fused
1919	4	
2222	8	
3030	8	
3737	12	
4646	12	
4848	12	
5555	16	
7070	16	
7575	16	
8484	20	
9292	20	
1422	6	
1446	8	
2237	8	
2246	8	
2272	10	
2296	12	
3037	10	
3046	10	
3069	12	
3096	14	
3496	16	
36120	20	
3746	12	
3775	14	
3859	14	

TABLE 4—MINIMUM NUMBER OF
SKYLIGHT ATTACHMENT FASTENERS—(Continued)

MODEL SIZE (Nominal I.D.)	CURB-MOUNTED AL-CM, AS-CM, ACS-CM ¹	SELF-FLASHING S-SF, AS-SF, AL-SF, ACS-SF ²
4669	34	16
3689	40	20
4896	40	22
48120	44	28
5460	40	16
6096	42	22
24 dia.	9	8
31 dia.	9	8
43 dia.	9	12
54 dia.	9	16
67 dia.	9	16
91 dia.	21	28

For SI: 1 inch = 25.4 mm.

¹Fasteners are 6d corrosion-resistant common nails.

²Fasteners are 16d corrosion-resistant common nails.

TABLE 5—MINIMUM NUMBER OF
DOME RETAINER FRAME FASTENERS—(Continued)

MODEL SIZE (Nominal I.D.)	AL-SF ¹	AS-SF, S-SF, ACS-SF
4669	14	
4689	16	
4896	16	
48120	20	
5460	16	
6096	18	
24 dia.	N/A	
31 dia.	N/A	
43 dia.	N/A	
54 dia.	N/A	
67 dia.	N/A	
91 dia.	N/A	

For SI: 1 inch = 25.4 mm.

¹No. 8 stainless steel screws.

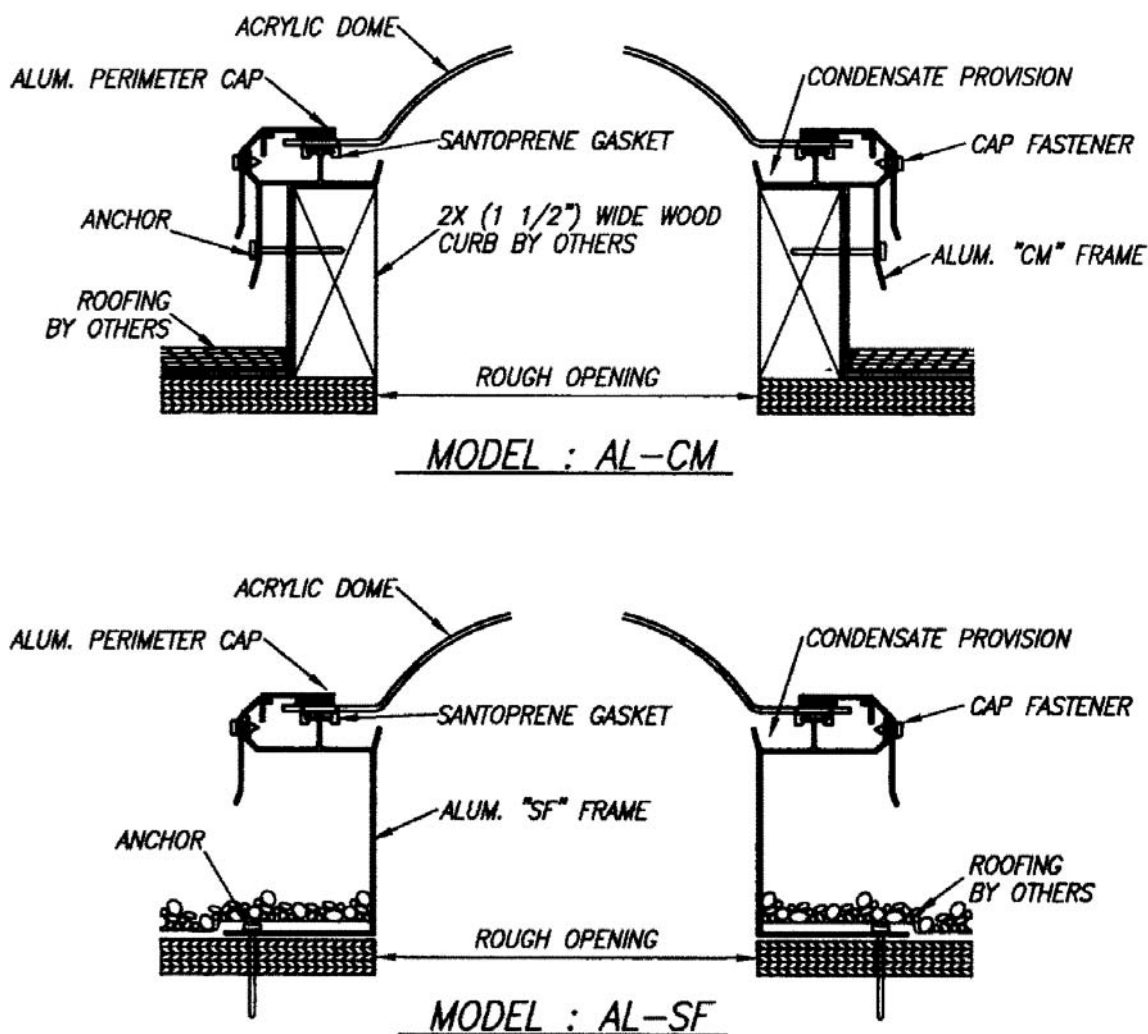


FIGURE 1

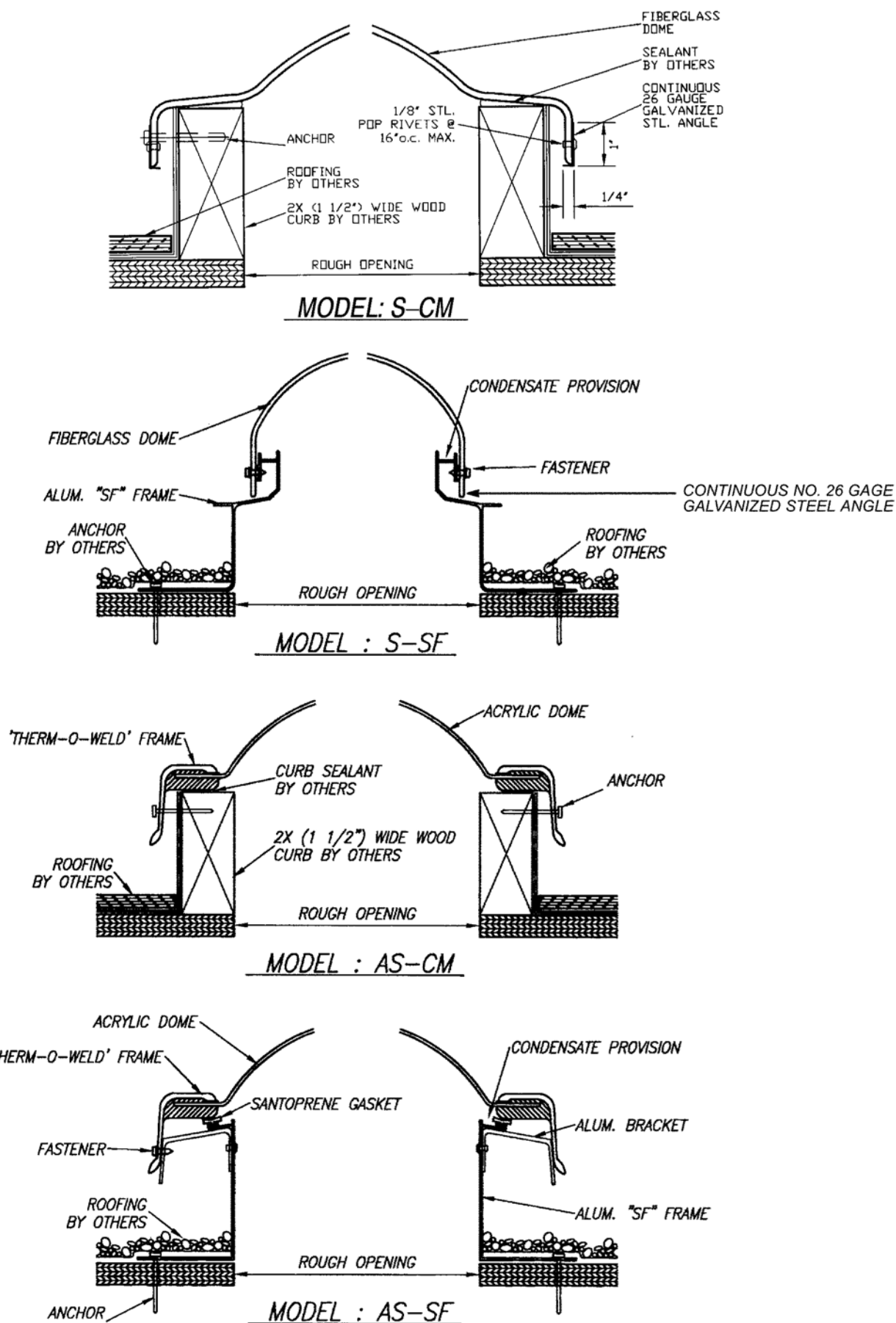


FIGURE 1—(Continued)