



76 Crest ACM Fascia Installation Guide

This product is designed to fit a 76 36", 42" or 48" canopy. Please verify that your site meets these specifications. If not, please contact LSI Customer Service at 1-800-231-0129 for installation support.

Read through all of the instructions prior to beginning installation, and verify (using the packing list) that all parts have been received and are in good condition.

The location of the disconnect switch after installation shall comply with Article 600 (A)(1) of the National Electrical Code.

This product is intended to be installed in accordance with the requirements of Article 600 of the National Electrical Code and/or other applicable codes. This includes proper grounding and bonding of the product.

Important Notes

- Verify canopy dimensions before starting installation.
- Refer to any site specific layout or rendering.
- Use #12 x 7/8" hex washer hd Tek screws to attach mounting angles to canopy with recommended 12" spacing. Use K-lathe screws to attach ACM panels with recommended 12" spacing. Conditions outside of the norm, including excessive wind/snow load may necessitate special structure and fastening requirements.
- A gap is needed between panels to allow for thermal expansion (varies with temperature).



PLEASE NOTE

The packing lists below will vary per site, depending on what is needed. These lists are to give the installer a guideline of what should be received from LSI. Quantities will vary by site. Custom material will not be included below. Please make sure to check the packing list included with each shipment for more accurate verification.

Packing List

Mounting Angles

QTY.	PART #	DESCRIPTION	FINISH
Varies per Site	594488	1x2x96" Mounting Angle	Aluminum Mill
Varies per Site	576282	1x5x96" Mounting Angle	Galvanized Steel

36" Fascia

QTY.	PART #	DESCRIPTION	FINISH
1	653988	39x118" 3mm Silver ACM Panel	Silver
1	652114	39x12.86x12.86" 3mm Silver Corner w/ BDM (per panel – crated with full panels)	Silver/ BDM
1	653205	39x118" 3mm Silver ACM Panel w/ BDM (per panel – 20 panels per crate)	Silver/ BDM
1	664314	50' Long Crest (6 panel set) (per set – 20 panels per crate)	Silver/ BDM/ Crest
1	664316	32' Medium Crest (4 panel set) (per set – 20 panels per crate)	Silver/ BDM/ Crest
1	657402	22' Short Crest (3 panel set) (per set – 20 panels per crate)	Silver/ BDM/ Crest
1	653314	Extender Panel (per panel – 20 panels per crate)	Silver/ Crest
Varies	658534	Hardware Kit	Silver K-Lathe Screws

42" Fascia

QTY.	PART #	DESCRIPTION	FINISH
1	654951	45x118" 3mm Silver ACM Panel	Silver
1	653208	45x12.86x12.86" 3mm Silver Corner w/ BDM (per panel – crated with full panels)	Silver/ BDM
1	653211	45x118" 3mm Silver ACM Panel w/ BDM (per panel – 20 panels per crate)	Silver/ BDM
1	664312	50' Long Crest (6 panel set) (per set – 20 panels per crate)	Silver/ BDM/ Crest
1	664315	32' Medium Crest (4 panel set) (per set – 20 panels per crate)	Silver/ BDM/ Crest
1	669144	22' Short Crest (3 panel set) (per set – 20 panels per crate)	Silver/ BDM/ Crest
1	656053	Extender Panel (per panel – 20 panels per crate)	Silver/ Crest
Varies	658534	Hardware Kit	Silver K-Lathe Screws

48" Fascia

QTY.	PART #	DESCRIPTION	FINISH
1	653989	51x118" 3mm Silver ACM Panel	Silver
1	653304	51x12.86x12.86" 3mm Silver Corner w/ BDM (per panel – crated with full panels)	Silver/ BDM
1	653306	51x118" 3mm Silver ACM Panel w/ BDM (per panel – 20 panels per crate)	Silver/ BDM
1	664308	50' Long Crest (6 panel set) (per set – 20 panels per crate)	Silver/ BDM/ Crest
1	664310	32' Medium Crest (4 panel set) (per set – 20 panels per crate)	Silver/ BDM/ Crest
1	664311	22' Short Crest (3 panel set) (per set – 20 panels per crate)	Silver/ BDM/ Crest
1	653316	Extender Panel (per panel – 20 panels per crate)	Silver/ Crest
Varies	658534	Hardware Kit	Silver K-Lathe Screws

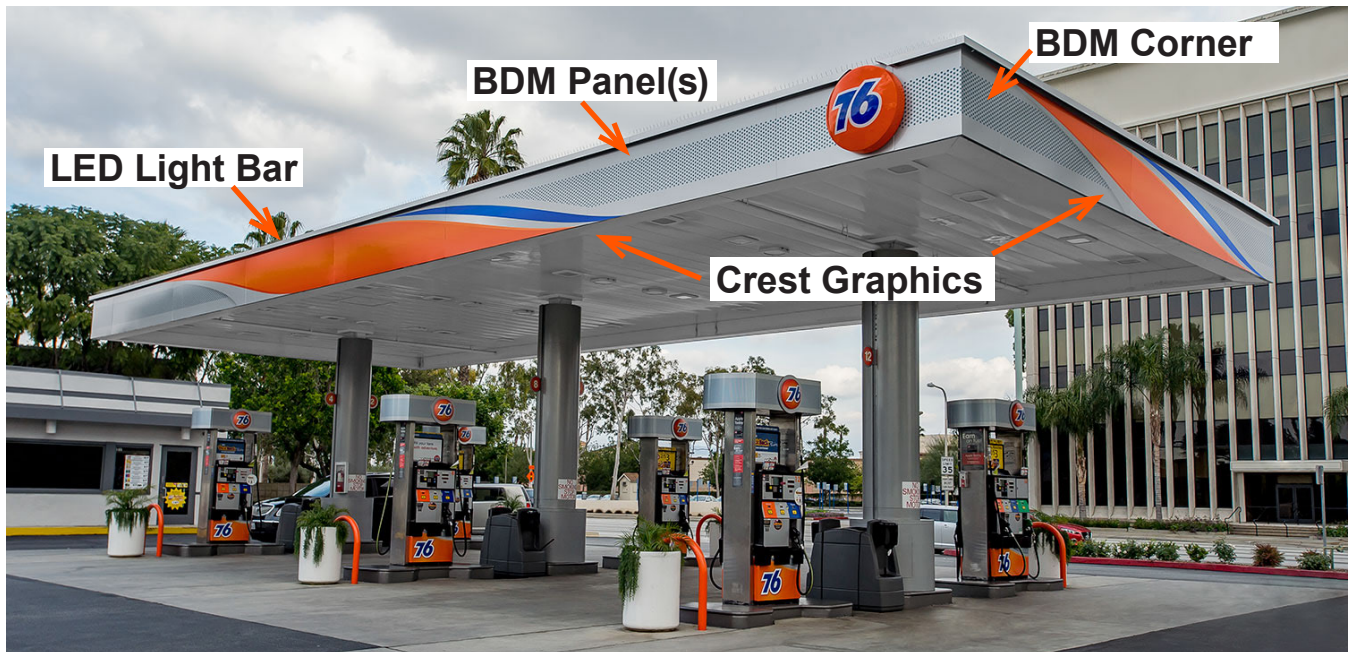


76 Crest Fascia Image

The Crest image is comprised of two main images – the the blue dot matrix (BDM) and the crest.

All graphics for Crest will be shipped pre-applied to the ACM panels. The ACM panels will be received pre-notched and pre-routed in a crate.

All Crest graphics are left hand oriented.



***NOTE* BEFORE CUTTING OR INSTALLING ANY ELEMENTS, FIELD VERIFY DIMENSIONS!**

Verification is VITAL in ensuring all canopy elements are installed properly.

PLEASE REFER TO RENDERINGS FOR GUIDANCE WITH CUT PANELS AND ELECTRICAL WIRING.



Take-off/Layout Guide

Specifications & Image Standards

All panels/corners have a 1.5" flange top & bottom and 1" flange left & right

Canopy height	Panel O.A.	Panel V.O.	Corner O.A.	Corner V.O.
36"	39" x 118"	36" x 116"	39" x 12.86" x 12.86"	36" x 11.86" x 11.86"
42"	45" x 118"	42" x 116"	45" x 12.86" x 12.86"	42" x 11.86" x 11.86"
48"	51" x 118"	48" x 116"	51" x 12.86" x 12.86"	48" x 11.86" x 11.86"

Crest graphic specifications

Crest description	# of panels in set	Overall V.O. length of ACM	Actual dimension of Crest	Left BDM	Right BDM
36"/42" Fascia					
50' Long Crest	6 panels	696"	600"	48"	48"
32' Medium Crest	4 panels	464"	384"	40"	40"
Crest Extender	1 panel	116"	Adds 116"	N/A	N/A
22' Short Crest	3 panels	348"	264"	41.04"	42.97"
48" Fascia					
50' Long Crest	6 panels	696"	600"	48"	48"
32' Medium Crest	4 panels	464"	384"	40"	40"
Crest Extender	1 panel	116"	Adds 116"	N/A	N/A
22' Short Crest	3 panels	348"	264"	42"	42"

Crest Hierarchy

Crest	Canopy Lengths
22' Short Crest	24' to 40'
32' Medium Crest	40' to 50'
32' Medium Crest w/ 1 extender	50' to 60'
50' Long Crest	60' to 80'
59' 8" Long Crest w/ 1 extender	80' to 100'
69' 4" Long Crest w/ 2 extender	100' to 120"
79' Long Crest w/ 3 extender	120' to 140'
88' 8" Long Crest w/ 4 extender	140' to 160'
98' 4" Long Crest w/ 5 extender	160'+

BDM on Panel Spacing (excludes 1.5" flange)

Fascia Height	Top of Panel to BDM	Bottom of Panel to BDM
36"	9.92"	7.90"
42"	12.92"	10.90"
48"	16.27"	13.55"

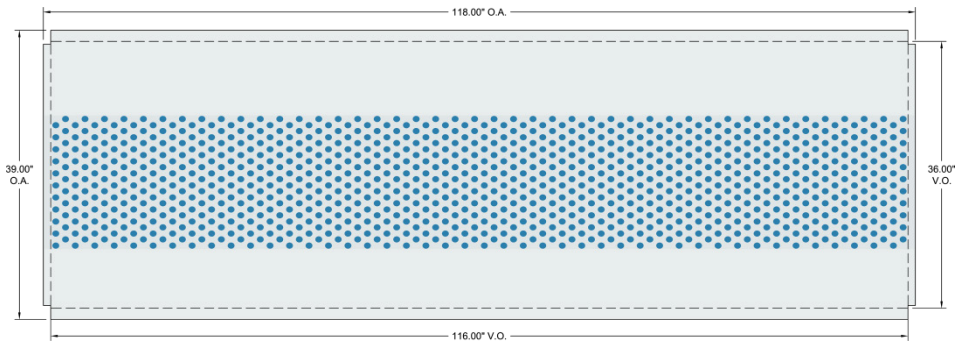
Smallest canopy dimensions

New Crest Graphics	36/42" Canopy	36/42" Canopy w/ logo	48" Canopy	48" Canopy w/ logo
22' Short Crest	24'	28' 10"	24'	29' 9"

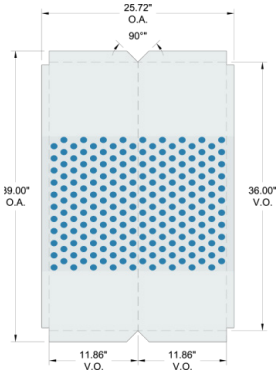
Logos will always be 2' from the edge of the canopy
 For 36" fascia, the logo is approximately 34" diameter
 For 48" fascia, the logo is approximately 45" diameter



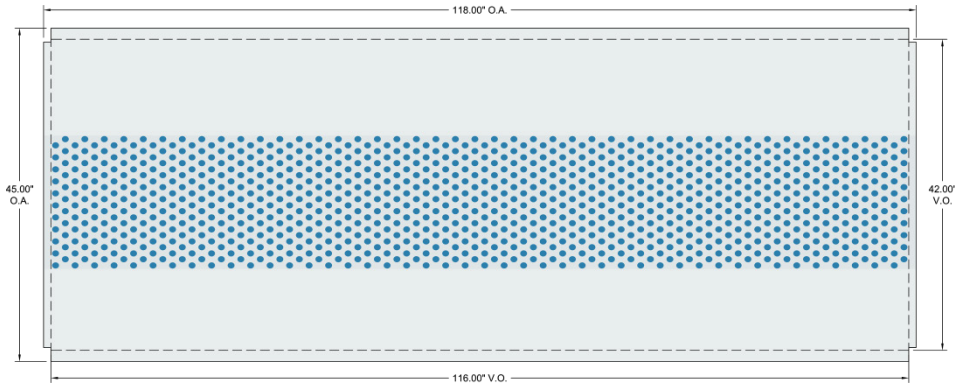
ACM Fascia



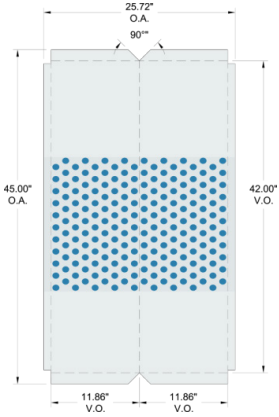
36" BDM Panel



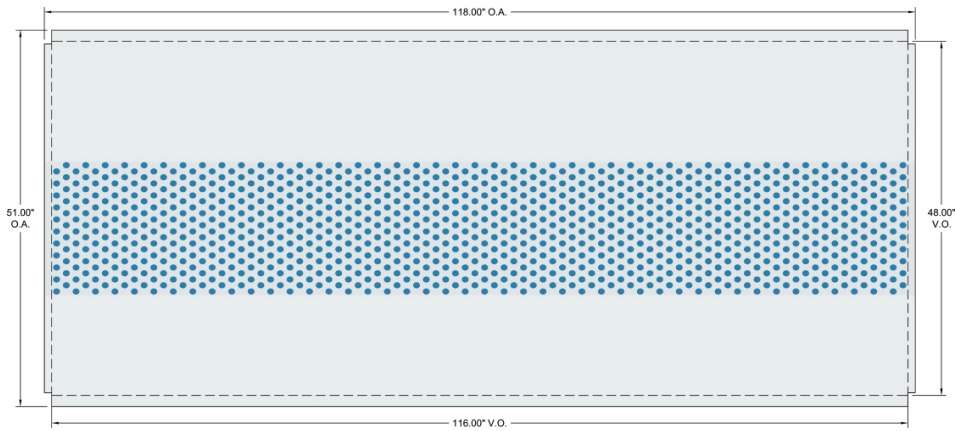
36" BDM Corner



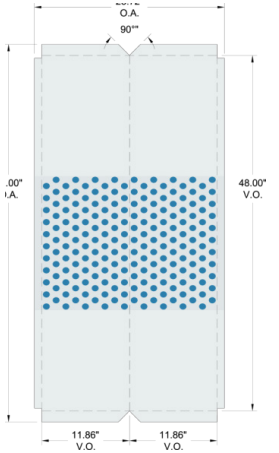
42" BDM Panel



42" BDM Corner

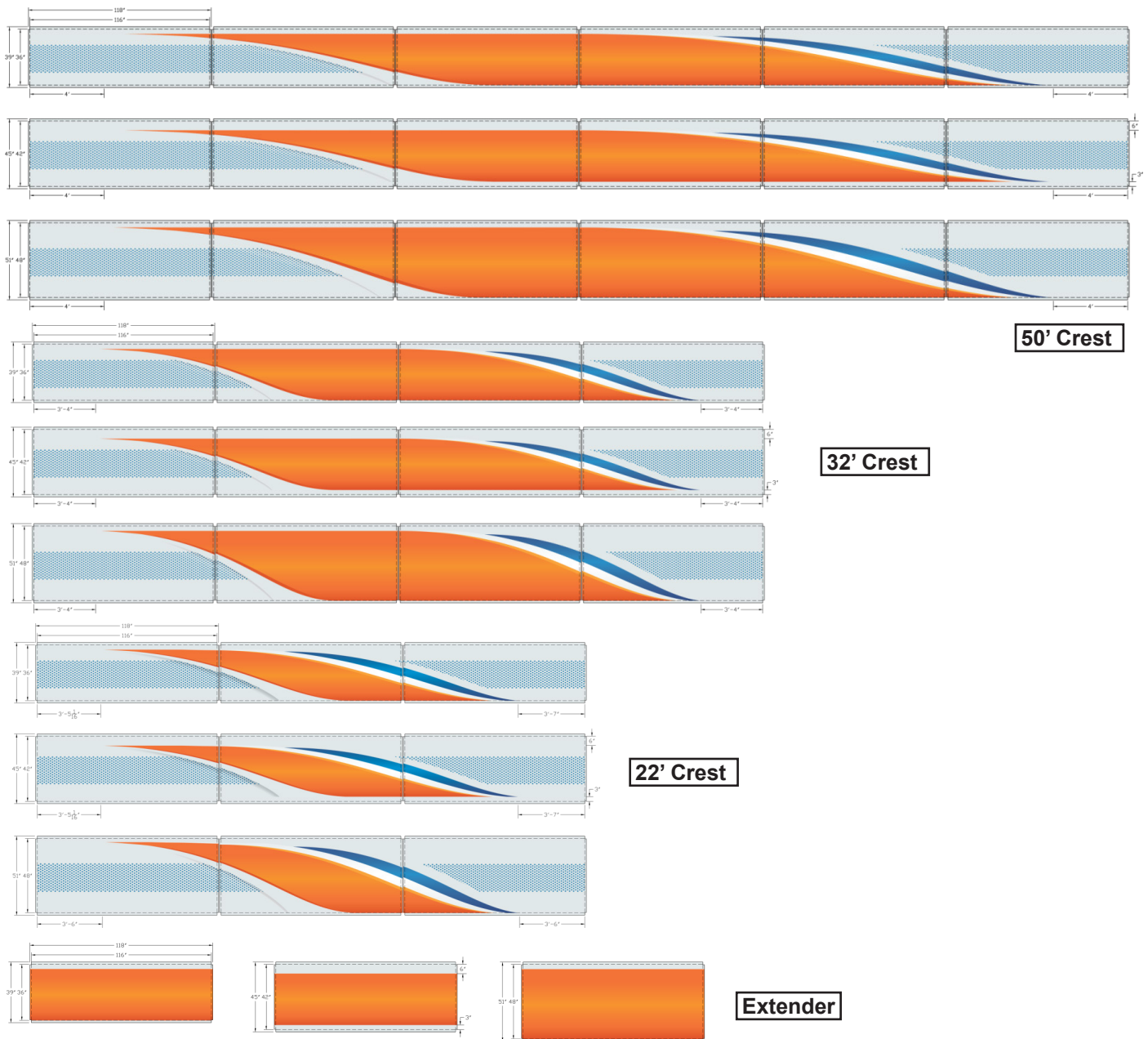


48" BDM Panel



48" BDM Corner





Crest for 36"/42"/48" Fascia	Overall V.O. ACM	Actual Crest Length	# of Panels	Left End BDM	Right End BDM
50' Long Crest	696"	600"	6	48"	48"
32' Medium Crest	464"	384"	4	40"	40"
22' Short Crest	348"	264"	3	42"	42"
Extender	116"	Adds 116"	1	N/A	N/A



Non-standard Canopy Alternatives

There will be some instances where the standard ACM with crest graphics will not work.

Muted Canopy

In the case that permitting will not allow the crest graphics, blank silver ACM panels will be the first option for a muted canopy. If silver cannot be approved, pueblo tan ACM is the secondary option.

A muted canopy can also apply if the canopy cannot be built up to the minimum standard canopy height of 36" (i.e. roof system or structure will not allow), silver ACM will be installed rather than graphics.

18" Crest Fascia

In the case that the canopy fascia is only 18" in height (i.e. roof/beam structure), the overall fascia will be 76 silver (either paint or vinyl film-over) with a 5" 76 orange stripe applied to the bottom (either painted or vinyl).

Canopy with Rounded Sides ("Shark Fin")

In the case that the canopy fascia has rounded sides on two ends (NOT rounded corners), a vinyl film-over option with the crest graphics is available. The vinyl will be shipped in 118" sheets, varying in heights depending on the canopy heights.

Installation

Demolition and Angle

Remove any fascia layers necessary to install the new fascia system.

It is the installer's responsibility to determine whether or not the canopy structure/existing fascia is capable of supporting the new fascia system.

If there are existing mounting angles in good condition, leave installed and use existing angles for installation.

If there are no mounting angles present, existing mounting angle is not in good condition, or if mounting angle needs to be installed onto existing fascia, install new angles (next section).



Mounting Angles and Hardware

Name	Image	Application	Location
1" x 2" x 1/8" Mounting angle		Mounting ACM to canopy structure	Top of canopy structure
1" x 5" x 1/16" Mounting angle		Mounting ACM to canopy structure	Bottom of canopy structure
#12x7/8 hex Tek screw (suggested - installer provided)		Mounting angle to canopy structure	Top and bottom of canopy structure

For 36" canopy, angles will be placed 35-3/4" to 35-5/8" apart (very top to very bottom of angles).

For 42" canopy, angles will be placed 41-3/4" to 41-5/8" apart.

For 48" canopy, angles will be placed 47-3/4" to 47-5/8" apart.

Suggested hardware for installation is a #12x7/8 hex washer head Tek screw – this can vary depending on the canopy structure. Because of this, installers are to provide all necessary hardware for attaching angles to structure.

The mounting angles will be attached straight, level and plumb to the existing canopy structure.

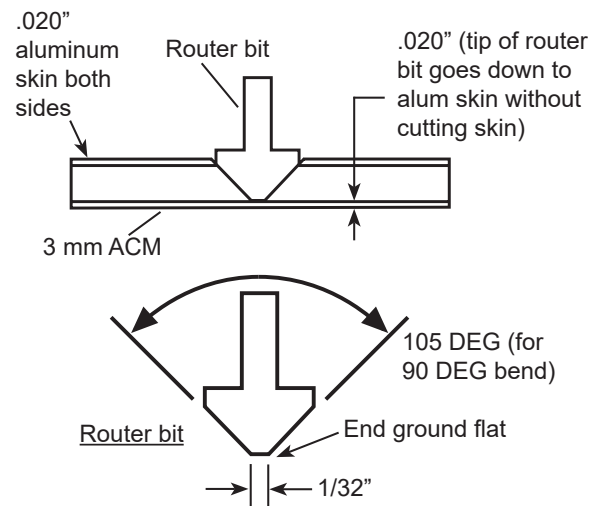
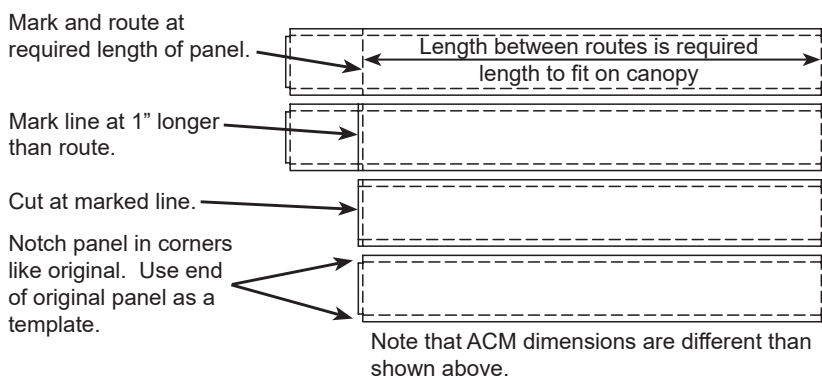
The top angle will be attached using (suggested) #12 x 7/8 hex Tek screws with recommended 12" spacing.

The bottom angle will also be attached using (suggested) #12 x 7/8 hex Tek screws with recommended 12" spacing.

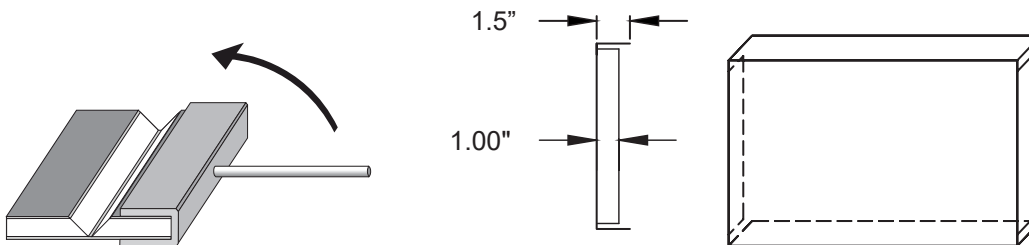


Routing and Cutting ACM Panels

- Measure the length between the last panel and the corner panel (length "X").
- Take a 116" panel and measure from the route inward for the length of "X", and create a new route.
- Measure over 1", and cut the panel. Notch the panel as the original, 1-3/4" deep.
- Use the end of the original panel as a template.
- Depending on the circumstance, it is possible that there will be more than one cut panel on a side. If a cut length will be 24" or less, two cut panels will be required.
- It is possible that the BDM pattern on the left and/or right sides of the crest panels will need to be cut down. If that is the case, be sure that the cuts do not remove any part of the crest graphic. There will be instances where the route in a panel will be right to the edge of the crest graphic (i.e. a 22' crest on a 24' side with no logo).
- A cut seam should **NEVER** fall behind a logo. A crest panel's BDM pattern may need to be cut down to allow for a seam to fall past the logo. The panel behind the logo can be shorter than 116", but no less than the logo and additional 1' for spacing. It is also possible that a crest panel's BDM pattern may be the only panel behind a logo, with no additional BDM panel needed.
- Do this for all necessary places on each side of the canopy. For the long side of a canopy, most will have at least two cut panels, one on each end of the crest graphic.



Bending ACM Panels



Using a bending tool available from LSI or a similar guide, bend the panels along the routed lines as shown in this detail. Duckbill pliers can be used for bending ACM, but **DO NOT USE REGULAR PLIERS!** This can damage the vinyl overlay and/or mar the surface of the ACM.

Minimum Temperature for Bending ACM

3M requires the substrate and ambient temperature to be a minimum of 60 deg F (16 deg C) for the 3M vinyl on the ACM panels for bending. Failure to follow this procedure can lead to cracking of the 3M vinyl.

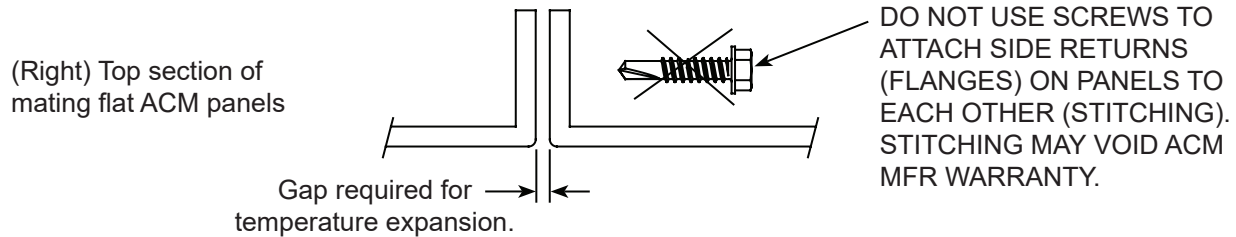
When working in temperatures below 60 deg F, the ACM could be kept and bent inside a truck, car wash or other enclosed space that is at a higher temperature. Panels should be kept separated by 1/2" space to allow warm air to circulate around each panel. Panels must not be re-bent in the cold to avoid vinyl cracking.



Gap Needed Between Panels to Allow for Temperature Expansion

To prevent warping of ACM panels on canopy structures caused by thermal expansion, a gap should be allowed between panels. Also, stitching (using screws to attach end returns on adjacent panels together) must not be done, because it eliminates the gap between panels and aggravates warping of panels.

At 80 deg F or higher, a 1/16" gap should be used between full length panels. Installation at lower temperature requires a greater gap to allow the panels to expand (for example, installation at 40 deg F requires a 1/8" gap). The thermal coefficient of expansion of 1.31×10^{-5} in/in-degree F can be used to calculate required gap for a larger temperature change.



Installing ACM Corners/Panels

Install the ACM corners to both ends of the structure, overlapping the top of the top mounting angle and the bottom of the bottom angle. The top and bottom ACM returns should be attached with recommended 12" spacing using #8 x 3/4" K-Lathe screws. Decreased spacing is required for top and bottom screws for wind load design higher than 115mph IBC. Install ACM panels the same way as the ACM corners.

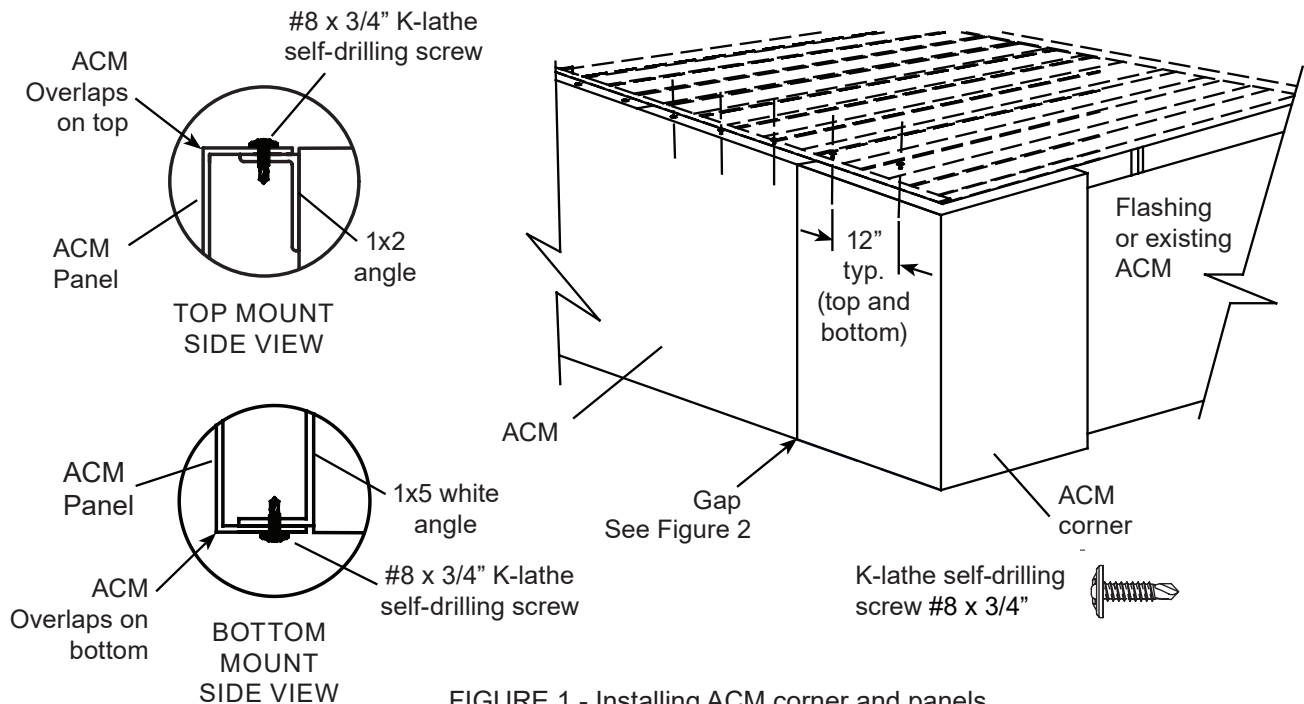


FIGURE 1 - Installing ACM corner and panels

If Light Bar will not be installed on top of an ACM panel, then use PN 771520 - SCR TEK HWH #12X1 SHEETING, STL ZINC W/ WSHR to fasten top return of ACM panel to top mounting angle. These sheeting screws hold panels to canopy better in high wind. If Light Bar will be installed on top of a panel later, use the K-lathe screws to fasten top of that panel to top mounting angle (sheeting screws on panel prevent Light Bar from seating flush). Fasten Light Bar using sheeting screws later.



PN 771520, #12X1
SHEETING SCREW



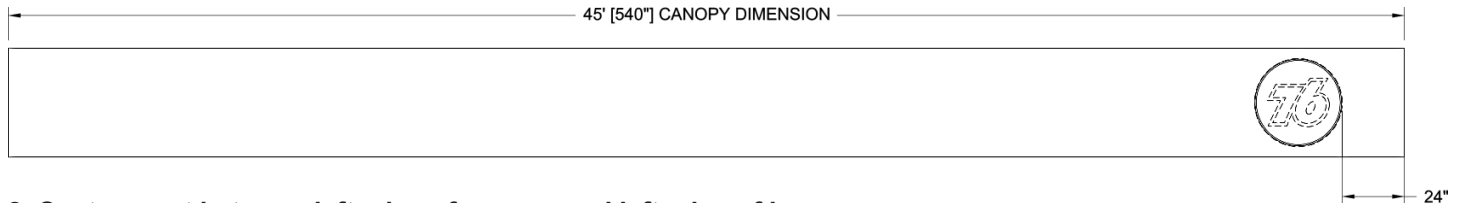
Calculating Crest/Logo Placement

BEFORE beginning installation, determine panel placement dimensions. This is VITAL to making sure the canopy meets image standards set by Phillips 66. Be sure to know the overall length of the canopy sides before proceeding. If available, reference any site specific renderings/layouts.

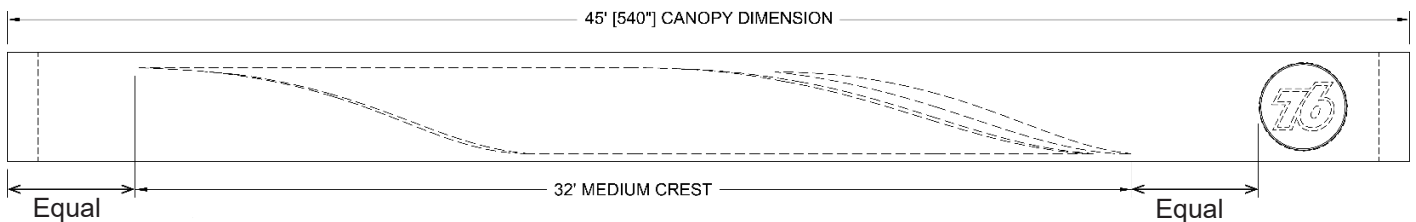
1. Logos will always be 24" from the edge of the canopy to the edge of the logo, regardless of logo size. Please refer to rendering documentation provided to determine logo placement (left or right) on a canopy side.

Example:

34" logo on 42" canopy fascia



2. Center crest between left edge of canopy and left edge of logo.



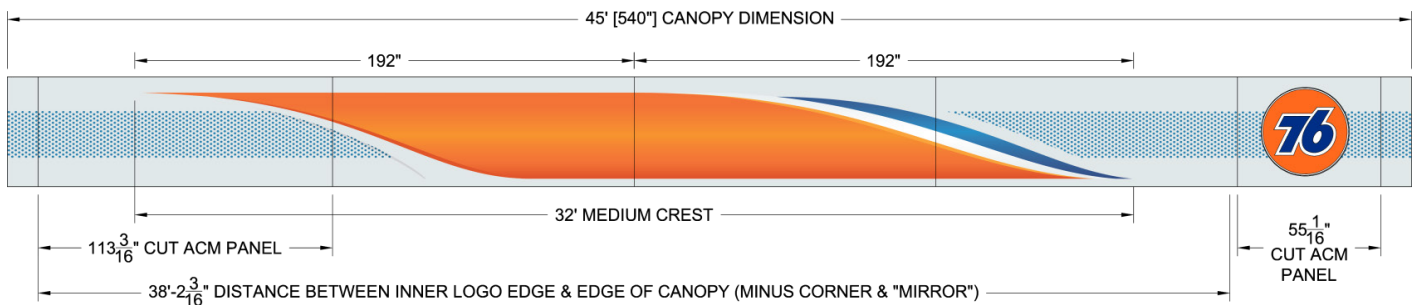
3. Determine where the actual crest ACM panel begins. On the first and last panels of each crest set, there's additional BDM pattern that extends to the edge of the panels. ****Please see chart with crest lengths for BDM dimensions.****

Example:

BDM pattern extends 40" on the left end and 40" on the right end.

An additional BDM panel (cut down) is needed behind the logo.

The BDM on the left crest panel has to be cut down in order to fit to the corner panel.



****Note – The crest itself and extender panels should NEVER be cut down!**

- If a full crest does not fit in the designated space (following the crest hierarchy chart), then the next smallest crest size should be used.
- If a full extender panel does not fit in the designated space (following the crest hierarchy chart), then that extender panel is not used.

****Note - When doing a take-off, side A is always the side closest to the C-store front.**

Hierarchy of Crest Graphic/BDM on sides

Depending on the distance from the front of the C-store or visibility of motoring public of a side, a "muted" image may be used – blank silver ACM or BDM panels only rather than the crest graphics.

Distance from C-Store to canopy side A

5' or less – Silver ACM only (this includes any side not visible by customers, i.e. T-canopy side A over C-store)

6' to 25' – BDM panels only

Over 26' – BDM & Crest graphics (full image)



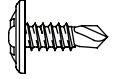
Installation

All ACM will be installed with silver #8x1/2 K-Lathe screws. Hardware should be in found in a bulk bag.

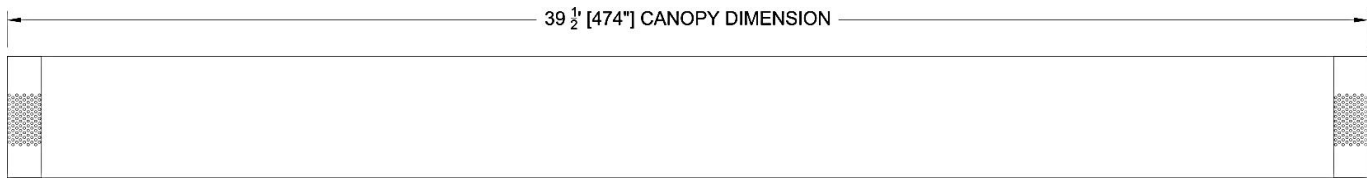
Fold ACM along routing lines, using an ACM bending tool or duckbill pliers.

DO NOT USE REGULAR PLIERS! This can mar the surface of the ACM.

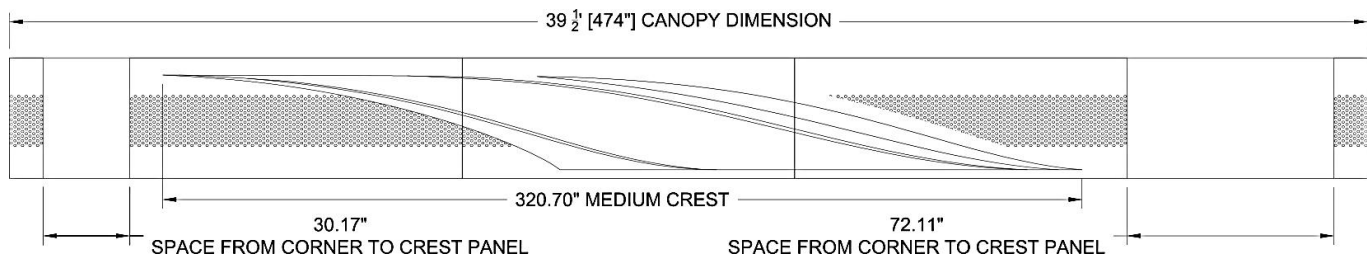
#8x1/2 K Lathe
screw (silver)



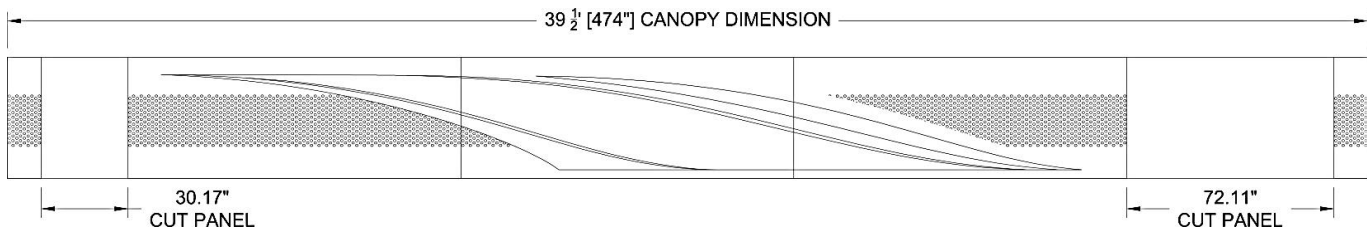
1. Install corner panels first.



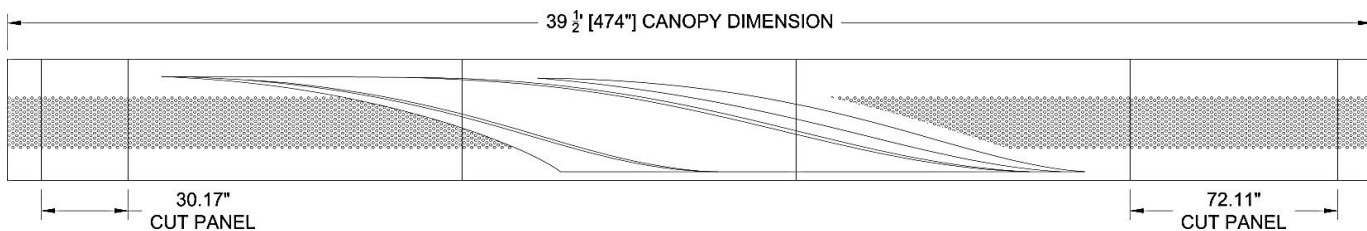
2. Using the calculations to determine crest placement, install crest panels onto canopy. Be sure to verify that a cut panel will not fall behind a logo. It is possible that the BDM on the crest panel may need to be cut down to properly fit a panel behind the logo.



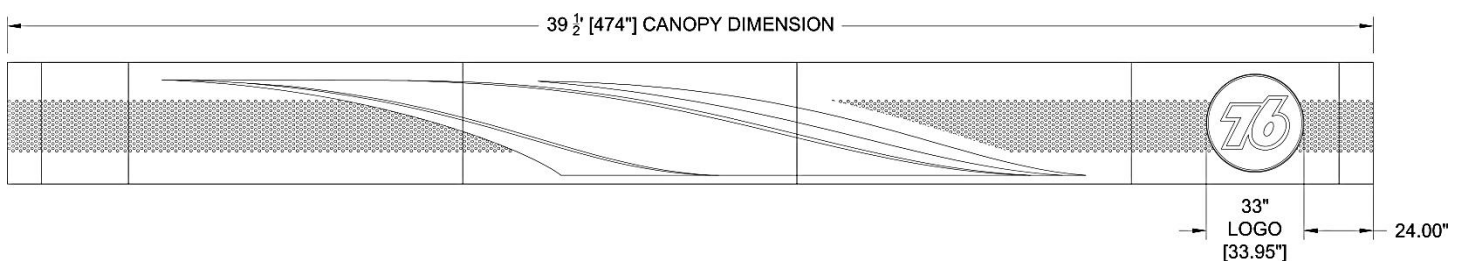
3. Measure the space between the corners to the crest panels to determine the dimension(s) for the cut BDM panel(s). If a space is LESS than 24", two cut sections may be required.



4. Cut and install the BDM panel(s) to complete the canopy fascia for that side. See below section for routing & cutting information.



5. Install logo 2' from the edge of the canopy.



LED Lightbar

Please see the LED Light Bar Installation Guide BEFORE beginning any installation of the light bars.

Logos are installed BEFORE the light bar has been installed.

If a canopy receives LED light bar, strips of 3" matte film will be provided in the boxes containing the light bar sections. This matte film **MUST** be installed **BEFORE** the LED light bar is installed. Failure to do so will cause the LED light bar to distribute poorly on the canopy surface.

The suggested method of application is to apply the matte film to the ACM panels before installation onto the canopy. This can ensure that the seams of the matte film wrap a small amount on the flange to keep from peeling up in the future. The film does not have to go edge to edge of the ACM panel, but it **MUST** cover the entire visual opening of the panel (116") between the flanges.

5/17/2017 – Date created

12/13/2017 – Update to demolition & angle information: LED light bar section added, Table of Contents, Packing List page, Fascia drawings, Bizlink verbage.

9/8/2021 – Added updated instructions (yellow box) to use PN 771520, #12X1 sheeting screws to fasten top return of ACM panels to top mounting angle (for more strength in high wind). Added gap requirement between panels to allow for temperature change and no stitching panels together.

2/21/2022 – P. 6 added row to Crest Hierarchy table showing 32' medium crest w/ 1 extender for 50' to 60' canopy. P. 7 removed one elevation and calculations. Changed last elevation on p. 7 to show crest equal distance between left edge of canopy and left edge of logo.

1/15/2015 - Converted to In-Design from MS Word, clarified that screw spacing is 12" recommended rather than about 12".

