PANEL 15®

ONE PIECE MOLDING SYSTEM

Economical Durability in an Easy-To-Install System

TECHNICAL MANUAL

- System Assembly
- Substrate Layouts
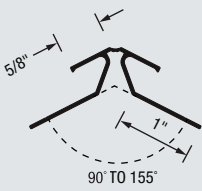- CAD Sections/Details
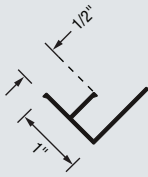- Physical Properties
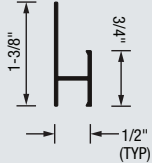- Performance Properties

CITADEL

SYSTEM ASSEMBLY

BATTEN PROFILES

MOLDINGS / EXTRUSIONS

5/8"
1"
90° TO 155°

(B1)

1/2"
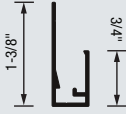1"

(B2)

1-3/8"
3/4"
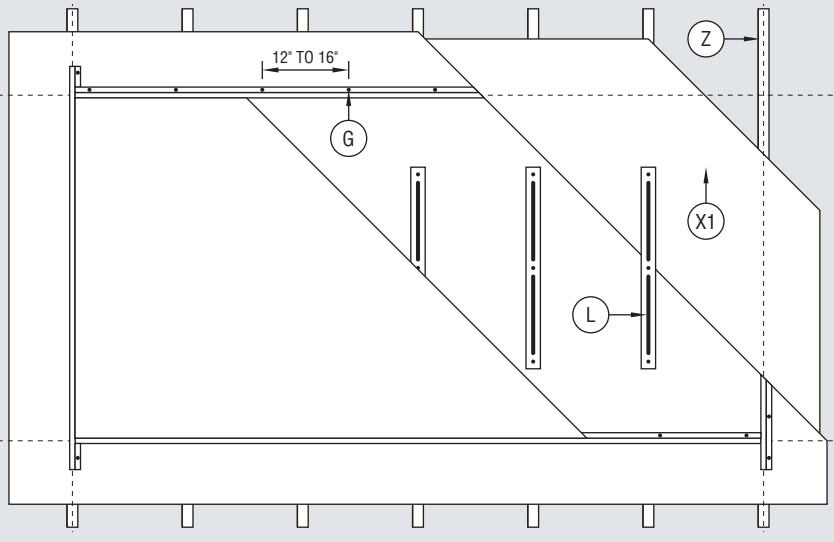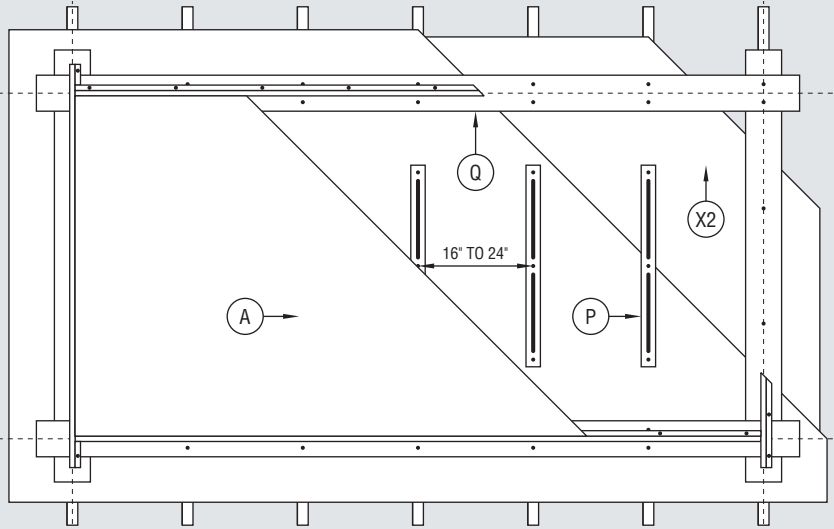1/2"
(TYP)

(B3)

1-3/8"
3/4"

(B4)

PROPERTIES

B1 PA-8X Outside Corner
10'-0," 2.40 lbs

B2 PA-9X Inside Corner
10'-0," 1.20 lbs

B3 PA-12X Horizontal/Vertical
10'-0," 1.35 lbs

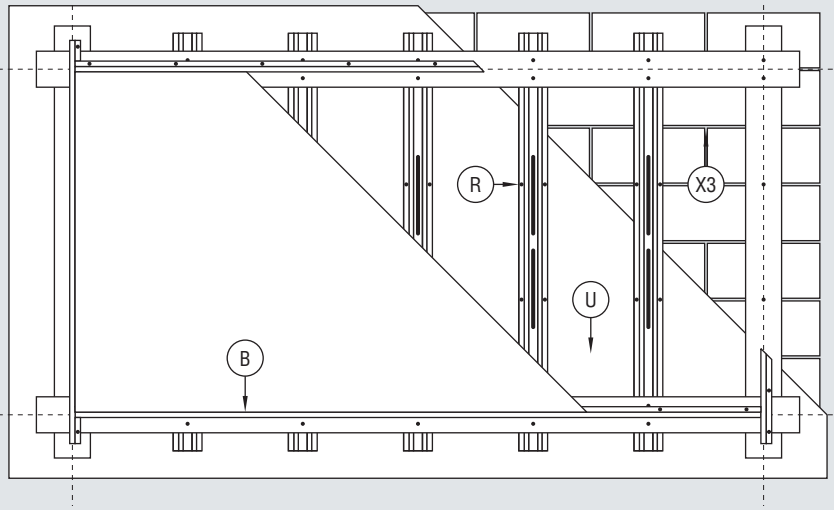**B4** PA-15BX Perimeter J
10'-0," 1.50 lbs

NAILABLE SUBSTRATE

12" TO 16"

G

Z

X1

L

NON-NAILABLE SUBSTRATE

Q

16" TO 24"

A

P

X2

MASONRY SUBSTRATE

R

X3

U

B

COMPONENTS

A Panel 15

B One Piece Molding

G Fastener
As selected by contractor to suit project requirements.
- panel - secured by sealant/adhesive
- molding - 12" to 16" along length

L Construction Adhesive
An approved adhesive must be used. Contact Citadel for current list.
- located 16" to 24" o.c.
- 3/8" bead x 2/3 panel height
- for panels 36" x 36" or larger

P Field Strapping
- located 16" to 24" o.c.
- 1-1/2" (min) x 2/3 panel height
- 22ga (min) recommended
- fastened 12" to 16" along length

Q Grid Strapping
- 16ga (min) recommended
- fastened 12" to 16" along length

R Furring
- metal (hat channels, z-girts) or wood
- located 16" to 24" o.c.
- fastened 12" to 16" along length

S Shim (not shown)
- plastic shims recommended
- flatness tolerance is 1/4" in 20'-0"

U Air/Moisture Barrier
Recommended for this system.

X1 Nailable Substrate
- plywood - 1/2" (min) recommended
- OSB - 1/2" (min) recommended

X2 Non-Nailable Substrate
- exterior gypsum board

X3 Masonry Substrate
- CMU (block)
- pre-formed concrete

Z Stud Framework
- metal or wood
- located 16" to 24" o.c.

NOTE: Combine both SECTION and SUBSTRATE drawings for a complete listing of components.

LAYOUT AND INSTALLATION

- **Field Assembled** - all panels and moldings are shipped directly to the jobsite and are cut-to-size in the field, saving significant time and money.

- **Barrier Wall** - designed to be completely sealed against moisture intrusion to protect the structural wall assembly of the building.

- **Progressive** - each step of the installation process builds off the previous step in a sequential manner, moving up and across the elevation.

- **Joints** - one piece aluminum moldings capture the panel edges and may be color matched or painted a complimentary color .

Comparative Installed Cost

■ ■ ■ □ □ □ □ □ □ □ □ □ □ □ □ □

$ (compared to other Citadel systems) $$

Lead Time:	15 working days
Minimum Qty:	none
System Depth:	1/2" from the face of the substrate to the face of the molding
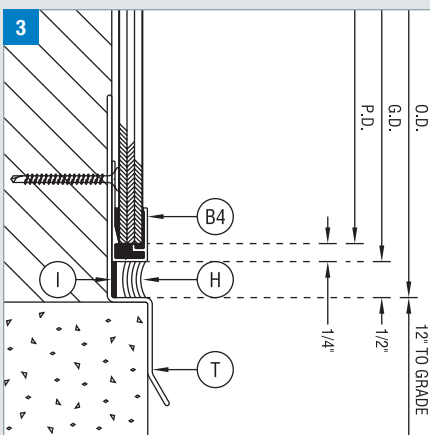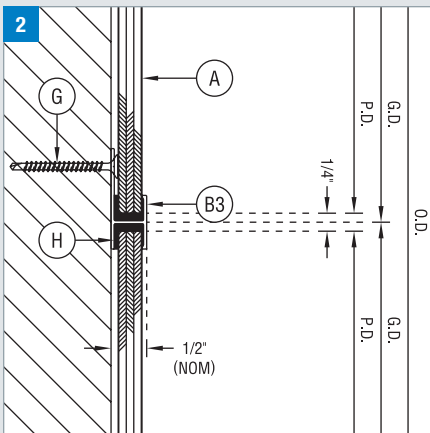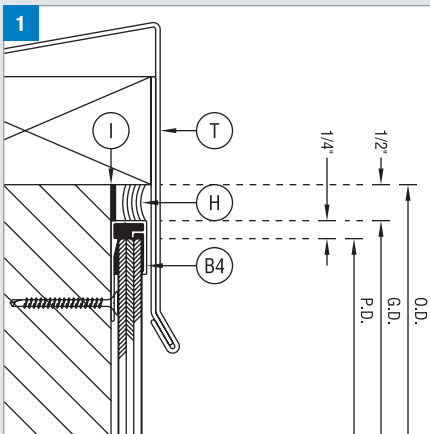
HORIZONTAL SECTIONS

1: Parapet
Metal flashing secured over blocking completes the vertical run and prevents moisture from getting behind the cladding system. This molding may be applied using sealant and adhesive (or face fastened if hidden by the flashing).

2: Horizontal
Sealant is applied into the molding channel and slid over the top of the mounted panel. More sealant is then applied into the top channel of the molding and fasteners are then placed in the top leg of the extrusion.

3: Base/Foundation
Installation typically begins at the base of the wall and moves vertically. The cladding should be kept approximately 12" away from landscaping grade. However, if the system is installed adjacent to a concrete sidewalk, that dimension may be reduced to 1/2".
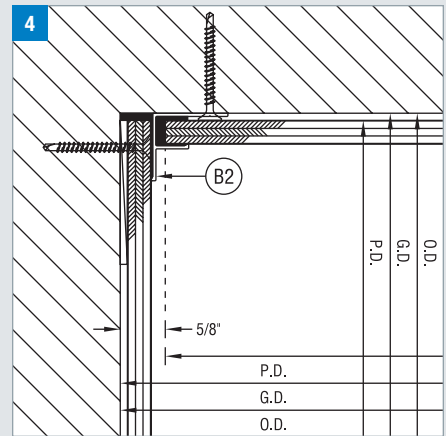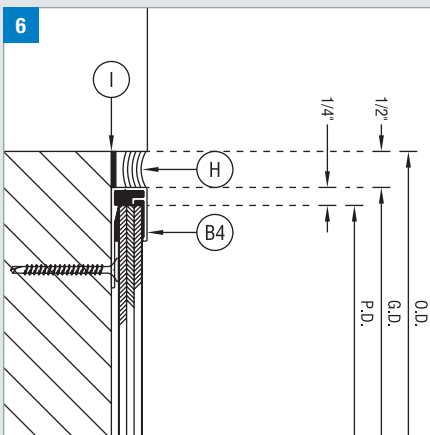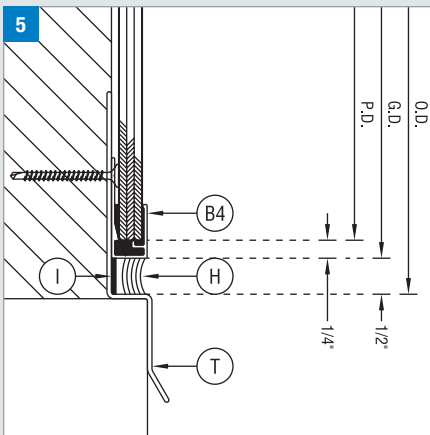
INSIDE CORNER

4: Inside Corner

The lead panel is shimmed to the proper plane and then secured to the substrate. Then the molding is applied to the face and mechnically fastened to the opposite wall. Sealant is then applied and the panel is slid into position. This condition is applicable for soffit to wall transitions.


WINDOW HEAD & SILL

5: Head

Similar to the base condition, flashing should be used behind the system todirect water away and prevent moisture intrusion.

6: Sill

Depending upon visual preference, windows will either extend past the face of the panel or be aligned so that they sit flush. If this is the last panel in the sequence, molding is held in place with sealant and adhesive.

LAYOUT AND INSTALLATION
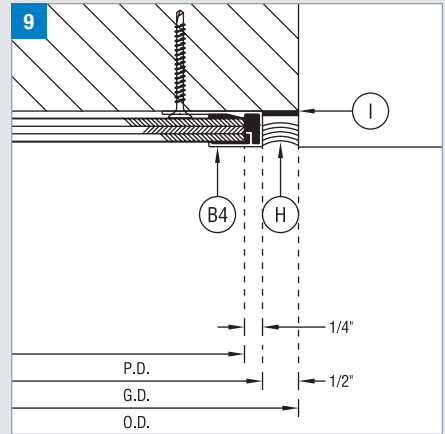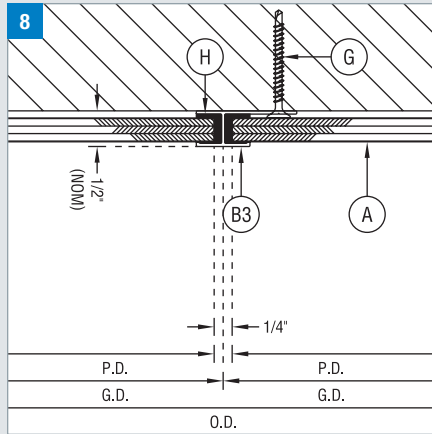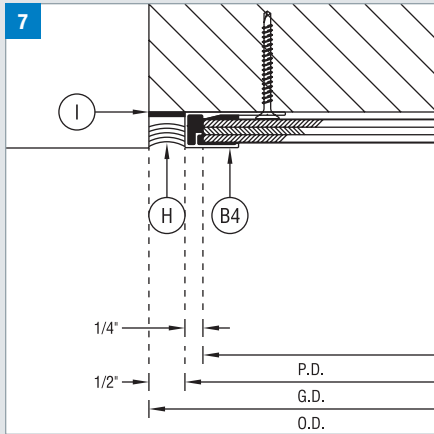

VERTICAL SECTIONS

7: Jamb - Start
Installation moves left to right (or right to left) across the elevation. When abutting dissimilar material, a sealant joint should be used to prevent moisture intrusion behind the cladding system.

8: Vertical
Same condition as the horizontal, the fastener is placed on the leading edge.
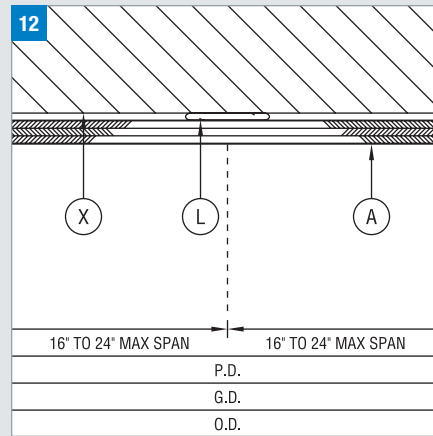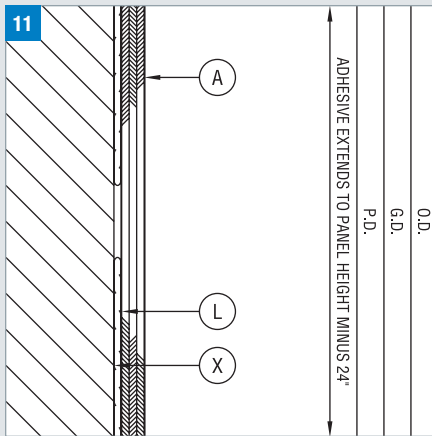
9: Jamb - End
The last molding in the sequence will be held in place with visible fasteners (not shown) or held in place with sealant and adhesive.
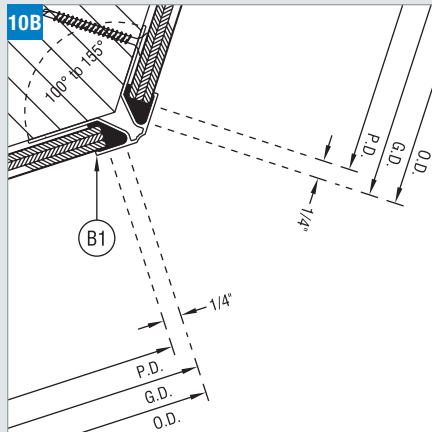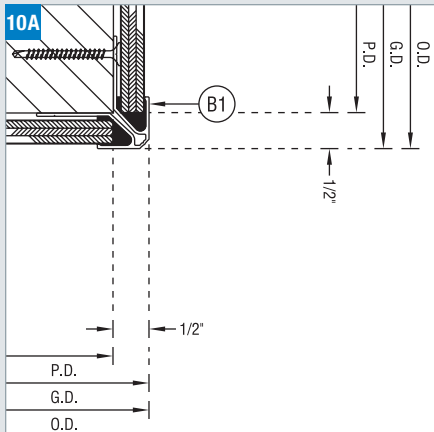
OUTSIDE CORNER

10A & 10B: Outside Corner
The standard molding is designed to accomodate various corner angles. During installation, the molding is bent by hand to reach the correct angle for standard 90° corners. The molding can also be adjusted outward to fit corners up to 155°. This condition is also applicable for fascia to soffit transitions.

11

ADHESIVE EXTENDS TO PANEL HEIGHT MINUS 24"

A

L

X

O.D.
G.D.
P.D.

12

X

L

A

16" TO 24" MAX SPAN   16" TO 24" MAX SPAN

P.D.
G.D.
O.D.

INTERMEDIATE CONNECTION

11: Intermediate Connection - Horz
Construction adhesive secures the field of the panel at intermediate locations. The length of this bead should extend to cover a majority of the panel.

12: Intermediate Connection - Vert
The spacing of the adhesive may be dependent upon the type of substrate chosen for the application.

13

G   J

H

14

G   J

H
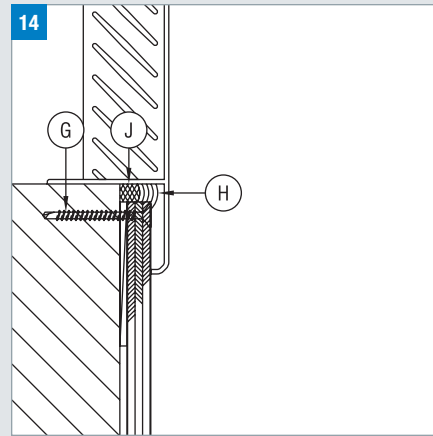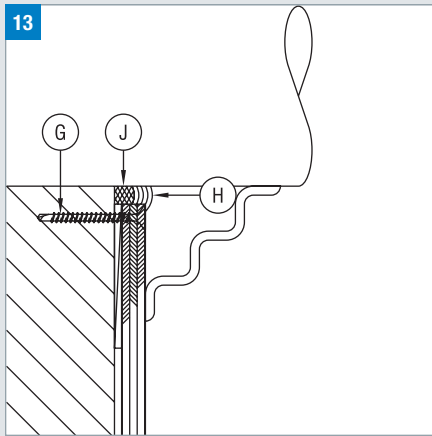
SYSTEM PENETRATIONS

13: Round
When piping or other round penetrations must occur, the hole should be made slightly larger to accomodate a backer rod (when possible) and sealant joint around the object.

**14: Linear (Square or Rectangular)**
Moldings should be used to trim the panel edge for all linear penetrations. However, if that is not possible, a proper sealant joint should be utilized to maintain system integrity.

COMPONENTS

A Panel 15

B1 PA-8X Outside Corner

B2 PA-9X Inside Corner

B3 PA-12X Horizontal/Vertical

B4 PA-15BX Perimeter J

G Fastener
As selected by contractor to suit project requirements.
• panel - secured by sealant/adhesive
• molding - 12" to 16" along length

H Silicone Sealant
An approved sealant must be used. Contact Citadel for current list.

I Bond Breaker Tape

J Foam Backer Rod

L Construction Adhesive
An approved adhesive must be used. Contact Citadel for current list.
• located 16" to 24" o.c.
• 3/8" bead x 2/3 panel height
• for panels 36" x 36" or larger

T Flashing

X Substrate
As selected by architect to suit project requirements.

NOTE: Combine both SECTION and SUBSTRATE drawings for a complete listing of components.
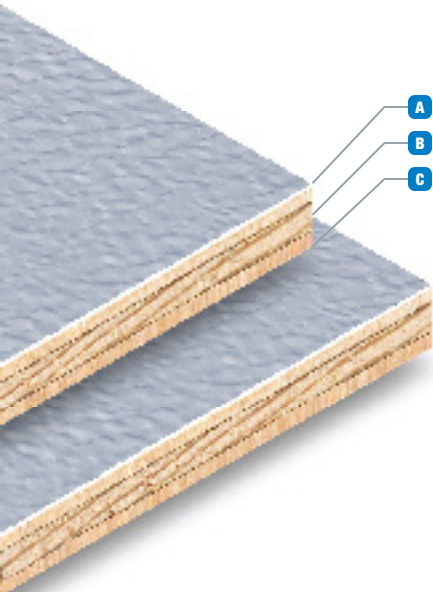
PANEL 15 ONE PIECE MOLDING SYSTEM

MATERIAL PROPERTIES

Component	Standard (in)	Metric (mm)
A. Prefinished Smooth Aluminum[1]	.024"	0.25mm
B. Douglas Fir Plywood	5/16"	7.94mm
C. Fiberglass Reinforced Foil	.008"	0.20mm

PANEL PROPERTIES

Property	Standard (in)	Metric (mm)
Panel Weight	1.01 lbs/ft^2	4.93 kg/m^2
Nominal Thickness	5/16"	7mm
Thickness Tolerance	±1/32"	±0.79mm
Length & Width Tolerance	+0, -1/8"	+0, -3.18mm
Squareness	1/64" per lineal ft	
Flatness	slight camber from factory, flat once installed	

FINISH PROPERTIES

Finish	Type	Coating
Textured Polyester	1-coat	0.80 mil color

PANEL PERFORMANCE

Property	Test	Value	Unit
Flame Spread	ASTM E84	Class A	---

1 - Prefinished aluminum skins are furnished with a PVC film for protection during shipment and installation.

STANDARD SIZES

48" x 96"   (121.9cm x 243.8cm)
48" x 120"   (121.9cm x 304.8cm)
48" x 144"   (121.9cm x 365.8cm)
60" x 96"   (152.4cm x 243.8cm)
60" x 120"   (152.4cm x 304.8cm)

Cut-to-size panels are available in any increment up to 60" x 120".

WARRANTY

Polyester Finishes: 5 years
Panel Composition: 5 years

RECYCLED CONTENT (BY WEIGHT)

Post-Consumer: 0.4%
Post-Industrial: 5.0%