CastleRock™

ICAP C-Series

E84 Series - CRX (R-5) , R-10 to R-20 Installation Guide

Warning:

(Read these instructions thoroughly before attempting to install)

ICAP-USA™ Cladding – Patent #: USA #8,176,701B2, Canada 2,588,294

Test reports and certifications are listed below:

Intertek/Warnock Hersey Test Reports W/N 20269

Intertek test reports available at www.spec-direct.com
CastleRock website www.castlerockx.com
Installation Guides available at www.castlerockx.com
Or by contacting us at info@castlerockx.com
Testing conducted in accordance with the following:
Evaluation Guide: ICC EG 315

ASTM E330(2002): *"Standard Test Method for Structural Performance for Exterior Windows, Doors, Skylights and Curtain Walls by Static Air Pressure Difference"*
ASTM E84(2009) -08a "*Standard Test Method for Surface Burning Characteristics of Building Materials"*
CAN/ULC S102 (2007) "*Standard Test Method for Surface Burning Characteristics of Building Materials"*
ASTM C578 *"Standard Test Methods for EPS Foam"*
ANSI A137.1-2012 American National Standard Specifications for Ceramic Tile - Version 2013.1
ASTM C373 Standard Test Methods for Determination of Water Absorption and Associated Properties by Vacuum Method for Pressed Ceramic Tiles and Glass Tiles and Boil Method for Extruded Ceramic Tiles and Non-tile Fired Ceramic Whiteware Products

Summary
ASTM E84, CAN/ULC S102 (2007)
Flame Spread Rating: 0
Smoke Generation Rating: 0

ICAP Series

Installation Guide

	R-Value	Height Range	Length Range
Flat Panels	10-20	5” - 22-1/2”	22-1/2” - 126”

Note: Panels sizes are dictated by porcelain panel sizes. Check with ICAP for available sizes.

Tools Required	
Screw gun w/ adjustable torque chuck:	
Torque Drives: T-21 & T-25 - Screws: See Table “A”	
Diamond Porcelain blade, water cooled saws: Bridge saw, circular saw, or track saw.	
Spot Nail Part #X1S1664 (for attachment to 7/16” OSB/plywood sheathing)	
Oscillating Tool: For cutting or removing foam, fireboard or cleaning adhesive from the back of porcelain tile	
Saws (Diamond Blade):	
4-1/2” water cooled circular saw (Dewald, Milwaukee, etc.)	
4- 1/2” Right Angle Grinder	
Wet/dry diamond blades for saws	
Oscillating Tool blades	
Scaffolding/manlift (w/window pkg. May be required for large panels)	
Ladders	
Normal Carpentry and Construction Tools	
Safety Equipment	

Workmanship

This Installation Guide assumes the construction personnel have knowledge of the materials described and their proper methods of installation. The manufacturer recommends certified installers be used to install ICAP products. Installer certification is available through the ICAP-USA "Factory Certified Installer" program. Contact us at 208-895-8557 for details.

Preparation

Prior to commencing activity related to the scope of this Guide, review all adjacent products and other subcontractor work that precedes the installation of ICAP-USA cladding ensure proper workmanship is reflected and that there are no recognizable errors or deficiencies.

Building Code Requirements

Building code requirements vary from area to area. Check with local authorities for building code requirements for your area and application. Carefully read all sections of this guide and follow the manufactures Installation Instructions before proceeding with your ICAP application. In the event the local building codes conflict with other statements made in this document, contact the manufacture for additional guidance.

Material Requirements:

Flashing

All flashing and flashing accessories must be corrosion resistant materials and integrated with the WRB materials or flashings recommended by the air/water resistant barrier manufacturer for use with their products. Flashing must be installed at all through the wall penetrations and at terminations of ICAP panel system, around doors, windows and other protrusions in accordance with local building codes.

Weep Screed

Some jurisdictions require weep screeds or termite barriers. These must be made of corrosion resistant metal a minimum of .019 inches or 26 gage thickness; or plastic weep screed a minimum of 0.050" with a minimum vertical attachment flange of 3 ½" wide.

Walls and Wall Systems

ICAP-USA ICAP Substrate Panels are designed to attach to the following wall substrates with manufacturer approved fasteners. See table on the next page to determine the appropriate fastener for your application.

Recommended Clearances:

- ICAP Substrate Panels individually attach to the wall or studs and do not require a brick ledge support like masonry products.
- Check with your local building official for requirements above grade and concrete/paving in your area. (slope away from the structure in accordance with local building requirements)
- ICAP-USA™ is a cladding product and all components used in its manufacture are waterproof. Consult with your local building official regarding requirements in your area.

Cautions:

- Do not subject ICAP-USA™ Claddings to frequent water contact such as sprinklers or direct spray. Place downspouts or drainage pipes so the water is not frequently contact the cladding.
- Do no subject ICAP-USA™ to contact with de-icing materials, salt, asphalt roofing material or its drainage, or other harsh chemicals. Prolonged exposure may damage the fascia or panel.
- Do not expose the EPS foam portion of the panel to extended periods of sunlight. All surfaces for EPS must be covered with fascia, flashing, other materials to protect it from UV exposure.

Minimum tools for installation of CastleRock/ICAP cladding panels

A wet cut circular saw with a diamond blade for cutting porcelain/Dekton with a smooth edge diamond blade.

(Special blade required for Dekton. Contact local Cosentino Center)

Available at Amazon: Under $300.00

A 7” diameter smooth diamond saw blade.

A cordless Screw Driver.

A hand saw for cutting and trimming EPS foam

An oscillating tool for cutting & grooving EPS foam.

Also: Comon Carpentry tools such as hammers, tape measures, ladders, scaffolds, man-lifts, etc.

INSULATED PORCLEAIN PANELS

Pre-Engineered Insulated Porcelain Panels (900 Series) with Continuous Insulation Tongue and Groove Interlock: Manufactured by: CastleRock Building Materials, Inc. DBA: ICAP/InsulStone

A. Standard Flat Porcelain Panels:
1. Style:
2. Color:
3. Standard Panel Sizes PAN-900 Series
Width: 63.00 Inches (1,600mm) Height: 22.50 Inches (571.5mm) Part# PA63-225
Width: 126.00 Inches (3,200 mm) Height: 22.50 Inches (571.5mm) Part# PA126-225
Width: 63.00 Inches (1600mm) Height: 14.00" Inches (355.6mm) Part# PA63-14
Width: 63.00 Inches (1600mm) Height: 7.00" Inches (177.8mm) Part# PA63-7

Note: Special sizes available within specified maximum sizes.

B Porcelain Panels and Components

A. Starter Strip Part # SSS-048
B. Window/Door/ Protrusion flashings (provided by others—See flashing drawings on following pages)

REQUIRED SPECIALTY TOOLS

Traditional carpentry and cladding tools, caulking, etc. and the following specialty tools available from ICAP:

1. Oscillating Multi-tool for removing foam
2. Cordless Screw gun or drill with adjustable torque settings
3. Wet/Dry Tile saw (Preferably a bridge saw) with diamond blade for cutting porcelain
4. Laser Level or String Lines to level courses
5. Normal miscellaneous carpentry tools, ladders, scaffold, lifts, etc.

ACCESSORY MATERIALS

Flashing: Rigid, corrosion-resistant metal a minimum of .019 inches (0.5 mm) or 26 gage in thickness; or plastic weep screed a minimum of 0.050 inch (1.3 mm) with a minimum vertical attachment flange of 3-1/2 inches (89 mm) wide.

Fasteners:

	ICAP Part's #:
A. Trufast (VF-2250) Screw for Panel Clips	Part #CLS-103
B. Screws for Starter Strip	Part #SSS-112

Caulk and adhesive:

A. Dow 1199 100% Silicone construction adhesive/caulking.

Available from ICAP/CastleRock 208-859-4200

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Note: Special sizes available within specified maximum sizes.

B. Specialty NFPA 285 Panels
1. Above & Below Window Panels — Part# MAG-930
2. Window Side Panels
Left Hand Window Side Panel — Part # SPL-931
Right Hand Window Side Panel — Part # SPL-940
3. Custom Panel
A. Non-combustible panel(R-4.3) — Part # CPW-990

C. Porcelain Panels and Components
A. Left Side of Window/Door Fire Barrier — Part # WSP-004
B. Right Side of Window/Door Fire Barrier — Part # WSP-004
C. Above Window Fire Barrier — Part # WDP-004
D. Starter Strip — Part # SSS-048

REQUIRED SPECIALTY TOOLS

Traditional carpentry and cladding tools, caulking, etc. and the following specialty tools available from ICAP:

1. Oscillating Multi-tool for removing foam

2. Cordless Screw gun or drill with adjustable torque settings

3. Wet/Dry Tile saw (Preferably a bridge saw) with diamond blade for cutting porcelain

4. Laser Level or String Lines to level courses

ACCESSORY MATERIALS

Flashing: Rigid, corrosion-resistant metal a minimum of .019 inches (0.5 mm) or 26 gage in thickness; or plastic weep screed a minimum of 0.050 inch (1.3 mm) with a minimum vertical attachment flange of 3-1/2 inches (89 mm) wide.

Fasteners:

	ICAP Part's #:
a. Trufast (VF-2250) Screw/washer assembly	Part #CLS-103
d. Screw for Starter Strip	Part #SSS-112

Protect installed products until completion of project. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION

Fasteners

SCW10300

Standard ICAP Screw/Washer Assembly for <u>wood studs</u>:
#9 x 3” Zinc Plated or Stainless Steel—T-25 Torque Drive, Course Auger Thread, Type 17 Point. Used to attach EPS Foam Panels to Studs.

Please Note: Item in picture may not reflect size and finish of actual part

TEK10300

TEK screws #10 by 2-1/2” for use with ICAP screw/washer assembly to attach to <u>metal studs</u>. To be used with Fender washers listed below.

SSS04800

Starter Strip: 48” long section of the starter strip used at the bottom of the wall to receive the groove flange of first row of panels. Required at base of all cladding installations

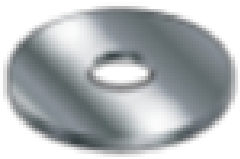
SCW08200W
SCW08200M

Screw for Starter for Wood Stud attachment #10 x 1-1/2” min.

Option: TEK Screws for metal studs #10 x 1-1/2” min

For attachment to TYPE X Gypsum (GlasRoc or Densglass))

Part # Trufast (VF-2250) Screw Part #CLS-103 Screw/washer assembly for attaching ICAP panels to Type X Gypsum sheathing



Optional fender Washer:

Fender Washer: Zinc plated or Stainless Steel, #10 x 1-1/4”.

Optional : Hot Knife and Table

for removing foam from back of porcelain or cutting the groove into a panel. Various blades available

For Wood Studs Only

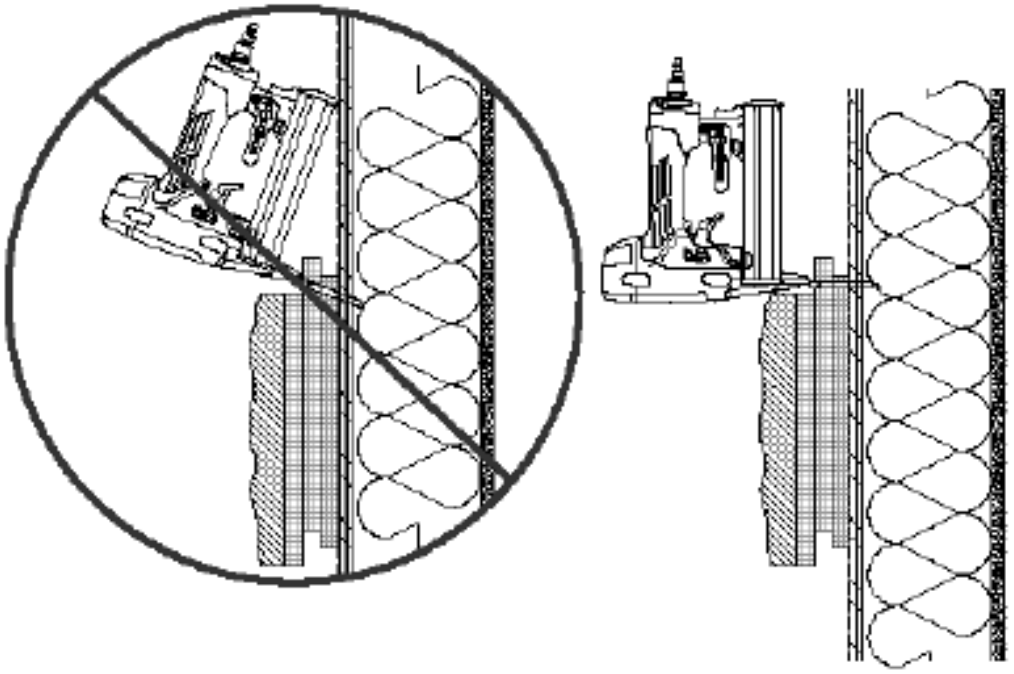
Fastener Installation: Staple requirements for 7/16” OSB/plywood min. sheathing.

Staples are usually used over OSB/plywood or other wood sheathing. Install all fasteners as illustrated through the tongue of the foam panel a minimum of 1” to 1-1/4” from the edge of the tongue foam material into the wood sheathing.

Note:

Set air pressure so the head of the staple is slightly embedds into the foam whereas the next panel will easily interlock.

Staple Size: 18 gauge min. corrosion resistant staple with 1” crown with 2-1/2” legs.



INCORRECT METHOD **CORRECT METHOD**

01 ICAP CORRECT PANEL FASTENING PROCEDURE
SCALE 1-1/2"= 1-0"

WALL DETAIL		STAR ELEMENTARY SCHOOL STAR, IDAHO	
01			

EXECUTION

EXAMINATION

Do not begin installation until the substrates have been properly prepared.

If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

Water resistive barrier shall conform to ICC-ES AC38 acceptance criteria.

PREPARATION

Clean surfaces thoroughly prior to installation.

Protection: Prevent work from occurring on the opposite walls to which cladding is being applied.

INSTALLATION

Installation as shown on drawings and as specified in accordance with manufacturer's installation instructions. Horizontal Panels are designed to be installed from left to right and vertical panels from right to left.

Sheathing:
OSB/plywood sheathing minimum of 7/16" thick or 5/8" Type X Gypsum attached to the studs as prescribed by the sheathing manufacturers installation instructions.

Weather-Resistant Barrier:
Installation of weather barrier and wall panels shall comply with local building code requirements or Authority Having Jurisdiction. Install weather barrier per manufacturer's installation instructions.
Castlerock recommends liquid applied Air/Weather barriers such as Tremco Exoair 230 system, or STO Guard Gold Coat or equivalent. Use appropriate flashings as recommended as per the manufacturer's installation instructions.

Flashing: Install flashing as shown. Drawing #13
Flashing and flashing accessories shall be corrosion resistant materials and integrated with the air/weather barrier materials. Flashing shall be installed at all through-wall penetrations and at terminations of the panel system, around doors, windows and other protrusions in accordance with local building codes. Install flashing around penetrations and terminations of the veneer application. Install flashing to divert water run-off away from the finished surface area.

D. PATTERNS AND LAYOUT

1. Determine the area to be covered with ICAP Porcelain Panels and lay out the pattern See Drawing #13 per panel size, corners, window/door trims, window/door perimeter panels and transition components if required. Refer to plans for locations of various panel sizes and types.

E. ELECTRICAL BOXES

A. The standard CastleRock R-10 foam is 2" thick, but several other thicknesses are available for higher insulation values. For easy installation install a 2" deep electrical box on the surface of the sheathing (not recessed into the wall) and route the electrical wiring into the backside of the box.

B. Locate in the CastleRock Panel the correct location for the panel to fit over the box. Use a 4" right angle grinder with a diamond blade to cut the hole in the porcelain and remove the necessary foam from the hole so it will easily fit over the box. Seal the electrical box to the porcelain watertight to prevent water intrusion with a silicone sealant. Apply the appropriate cover plate over the box.

C. Other wall penetrations: Other wall penetrations can be addressed in a similar manner.

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F. INSTALLING CLADDING PANELS

1. STARTER SECTIONS: Determine the location of the bottom panels and install the J-hook shaped "starter section" Part # SSS-048 at bottom of the wall and lap it a minimum of 1" (25.4 mm) over the foundation. Attach every 6" (152.4mm) to the plate or studs with appropriate fasteners. Note: ICAP panels will hang ¾" below the bottom of the j-hook starter. Check local building codes for code requirements above grade and sidewalks, etc. In the absence of local codes, locate the panels 2 inches (50.8 mm) above sidewalks, pavement etc. and 4 inches (101.6 mm) Above grade.

2. Begin by installing from the corner of the building aligning the first panel to fit to the panels from the adjacent walls with the tongue upward. Horizontal panels install from left to right. Vertical Panels from right to left.

3. Upon reaching the bottom of an opening, cut the panels to fit to the protrusion, window or door.

4. **Do not notch** porcelain panels to fit around the window, door or protrusion. Crosscut the porcelain panel where it meets thee window/door, etc. See drawing #13

G. PANELS ABOVE THE WINDOW

Cut panels above the window/opening/protrusion to fit as below and above protrusion. Keep seems aligned as shown. See Drawing 13

J. CORNERS

Outside Corners

Butt Corner: Cut and fit the panels for the porcelain to fit as desired by removing the necessary EPS foam. Foam cand be cut at 45-degree angle to fit the corner. See drawing #

Inside Corners: Cut the panels at an inside corner to fit the panels from the adjacent wall. Grout may be used to hide any irregularities.

K. SOFFITS

1. Soffit :

Install panels until the last row will not fit under the soffit. Measure the distance between the top of the panel and the soffit. Cut the panel ¾" (19.05) shorter than the desired space. Install the panel by inserting it into the space between the uppermost panel and the soffit. The panel will slide down over the tongue of the panel below, leaving a space between the top of the cut panel and the soffit.

2. Screw the panel to wall through the tongue section on the side of the panels. Install backer rod and sealant into the space between the top panel and soffit. See detail #12

L. PARAPETS

1. Install panels up to the height of the parapet. The top row of cladding will need to be cut to the correct height to match the height of the parapet. Secure panels by screwing through the tongue flange where possible and then "toe nail" screw the top of the panel to the parapet with appropriate screws. When the metal cap is installed, it will secure the top panels in place. See detail 11.

2. Install the metal cap over the top and sides of the panels as required.

Panel Joints

A. Grout-less Joint: Joint thickness: (.02 inch) Installers should use a typical business card to space between panels to achieve the minimum grout-less spacing.

B. Grouted joints can be ordered with the panel design up to 3/8" wide.

Around Windows & Doors

The most common question is "How do you install around doors and windows? There are typically 3 methods depending on the desired finished look and cost of labor.

a. **Option "A": Colored Metal Flashings** (usually match the window frames):
    i. L-shaped metal with a hemmed front edge. This provides color on both sides of the metal and a smooth, rounded edge. (See Installation Guide for details).

b. Option "B":
    i. J-shaped metal trim (See Installation Guide for details)

c. **Option "C": Porcelain Returns** (This method is more expensive both for materials and labor)
    i. Butt-fit corner: The fascia remains proud (visible) over the return porcelain to the wall/window. Return porcelain is custom cut to the same thickness of the EPS panel. The "return" to the wall porcelain fills the void from the backside of the porcelain fascia to the wall and covers the panel foam and butts tight to the backside of the fascia porcelain. Grout joints can be designed in and used also. The "returns" are secured with CastleRock recommended adhesives Dow 790, 795, or 1199.

Corners:

a. **Option "A":** Colored Metal Flashings (usually match the window frames) or porcelain color. The tile is sealed (Dow 790,795 or 1199 recommended) before the metal trim is installed. A 1/8" x 1" 2-sided foam tape is used to hold the metal corner in place. The 1/8" void created by the tape is filled with sealant to adhere the metal trim to the porcelain and create a watertight seal.
b. **Option "B":** Butt-fit corners. The foam is cut at 45-degree angles to fit a 90-degree corner. The foam on one side (proud side) foam is cut back the thickness of the porcelain tile so the edge of the butt is not seen from the proud view. An oscillating tool is usually used to remove foam where needed.

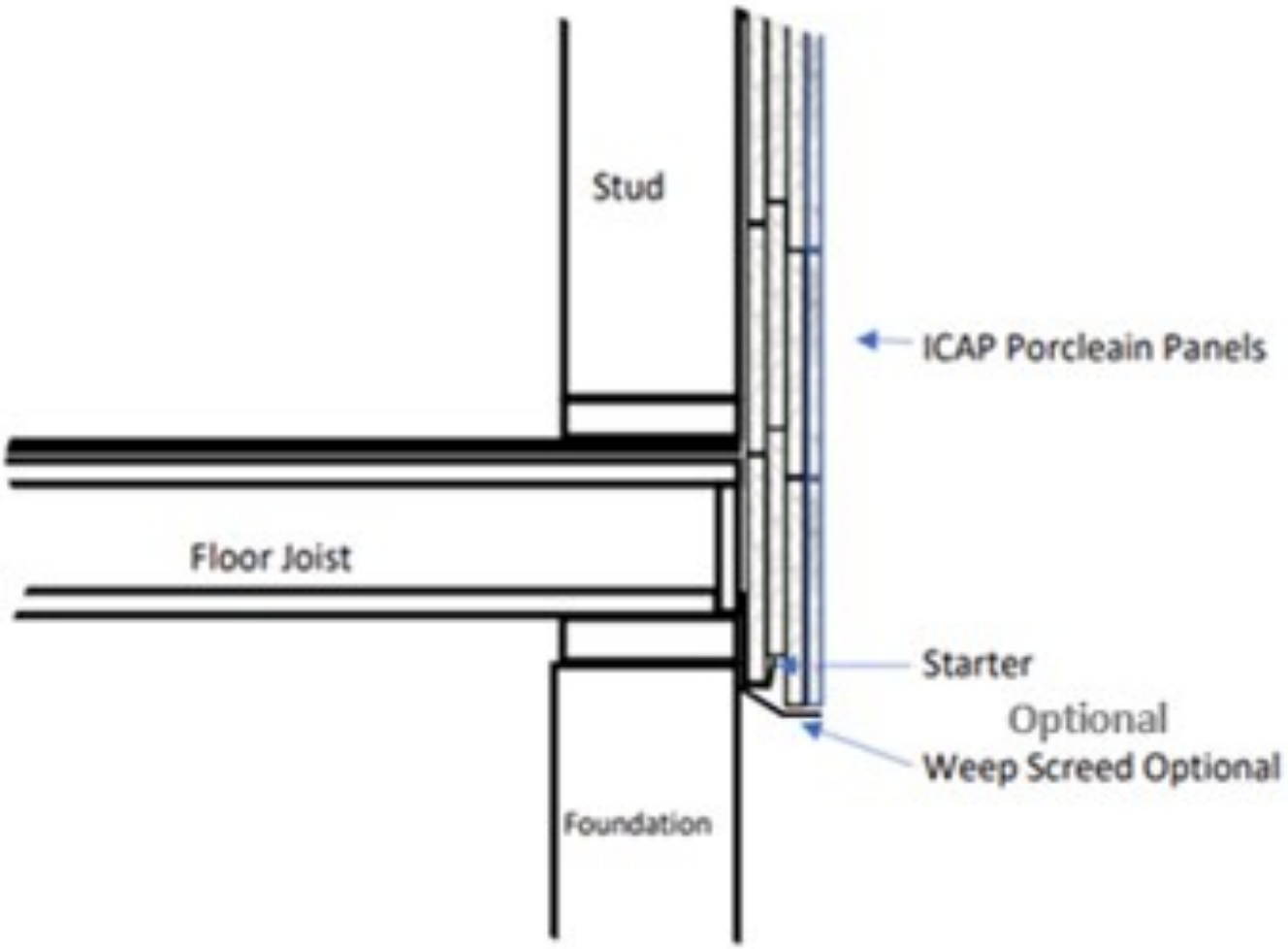
See Illustration on next page:

CastleRock Panels are a very simple 1-piece panel that interlocks similar to Lego's and staples or screws to the wall. Installation is fast and easy and can be done by tile installers, siding Installers, carpenters, or most anyone with some mechanical abilities.

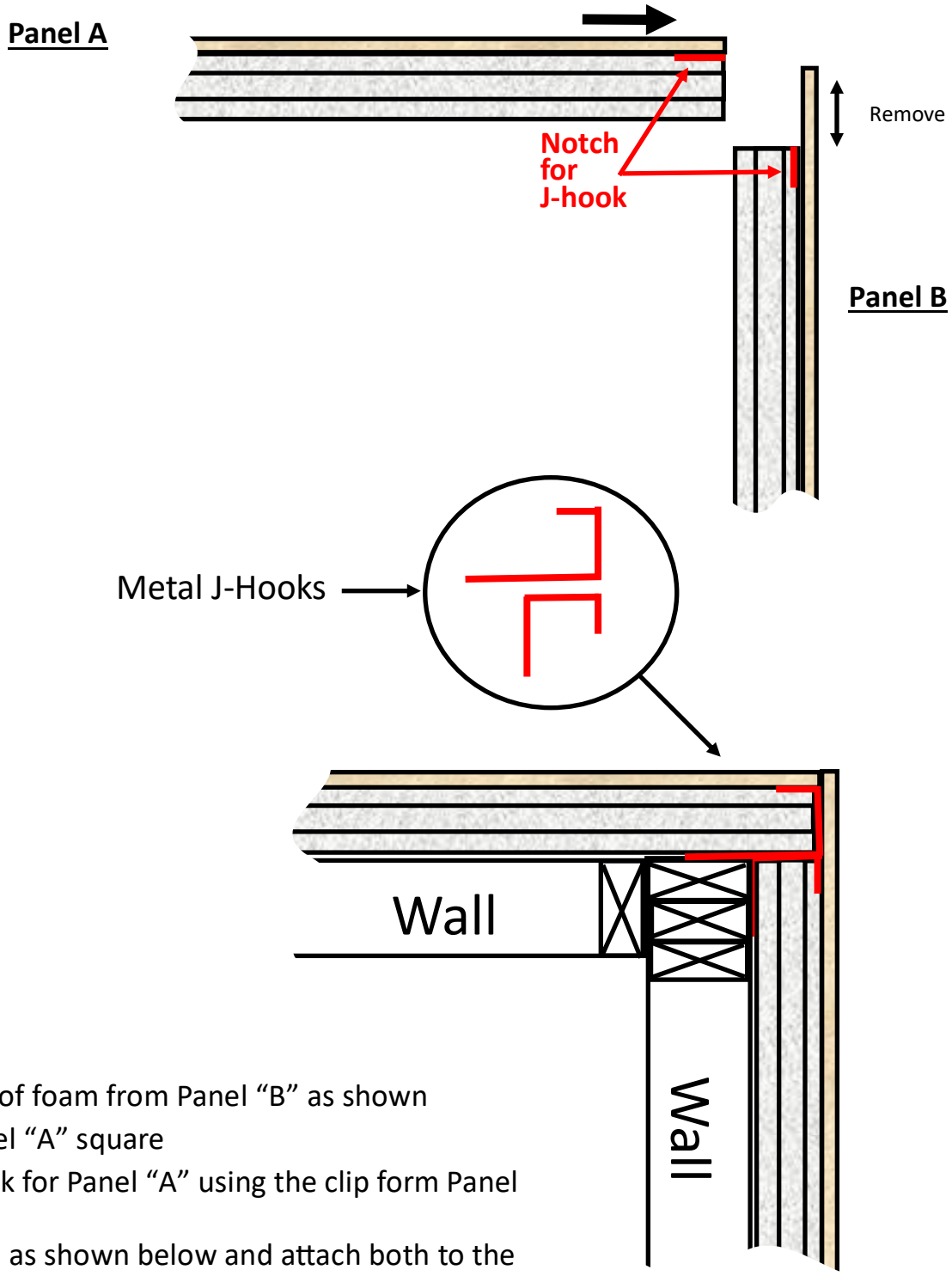
1. **Starter Metal:**
    a. A formed metal J-hook is required at the bottom of each panel. 48" sections are available from CastleRock Part# SSS-048. They are commonly galvanized steel but can be aluminum. Specifications are in the Installation Guide.

Drawing #1

Starter metal at base of wall



Outside Butt-Corner

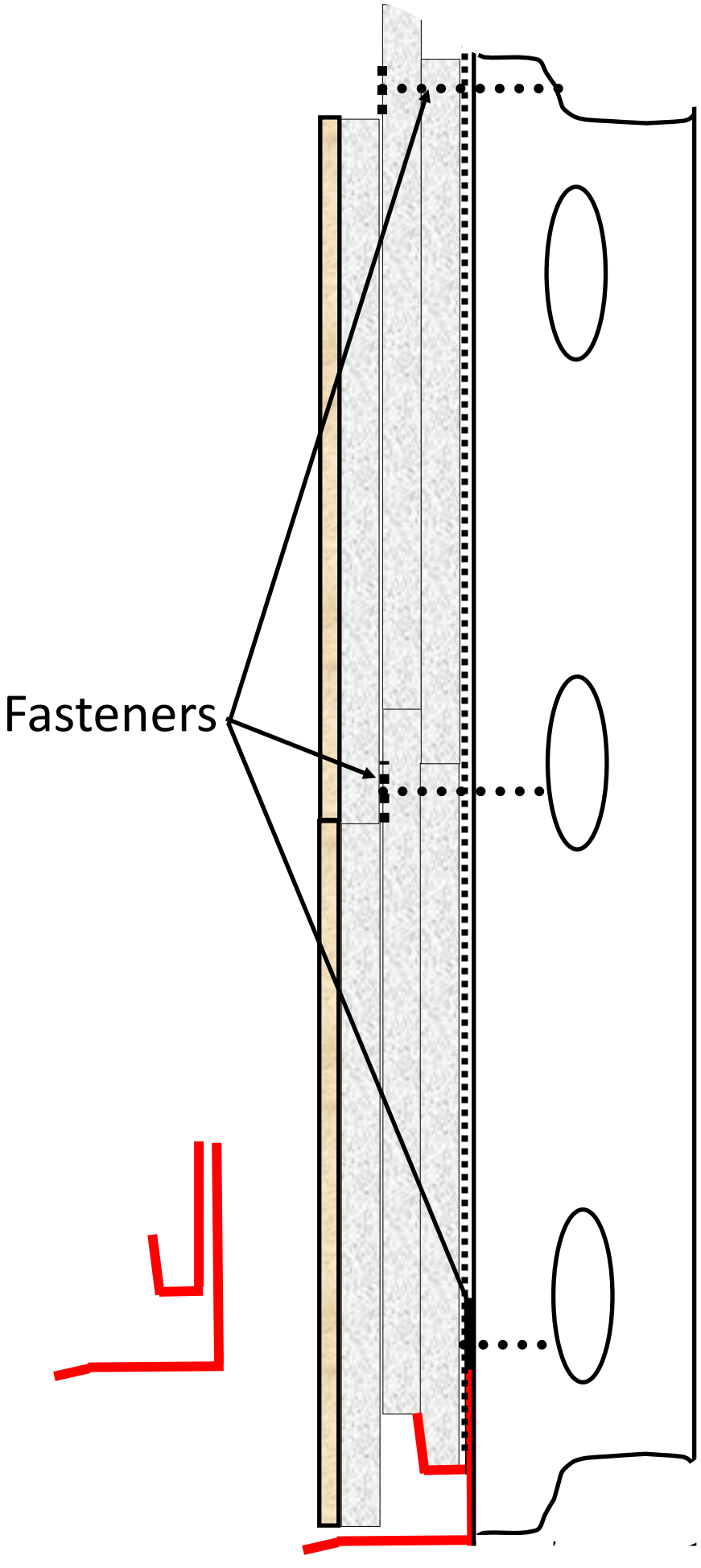


Instructions

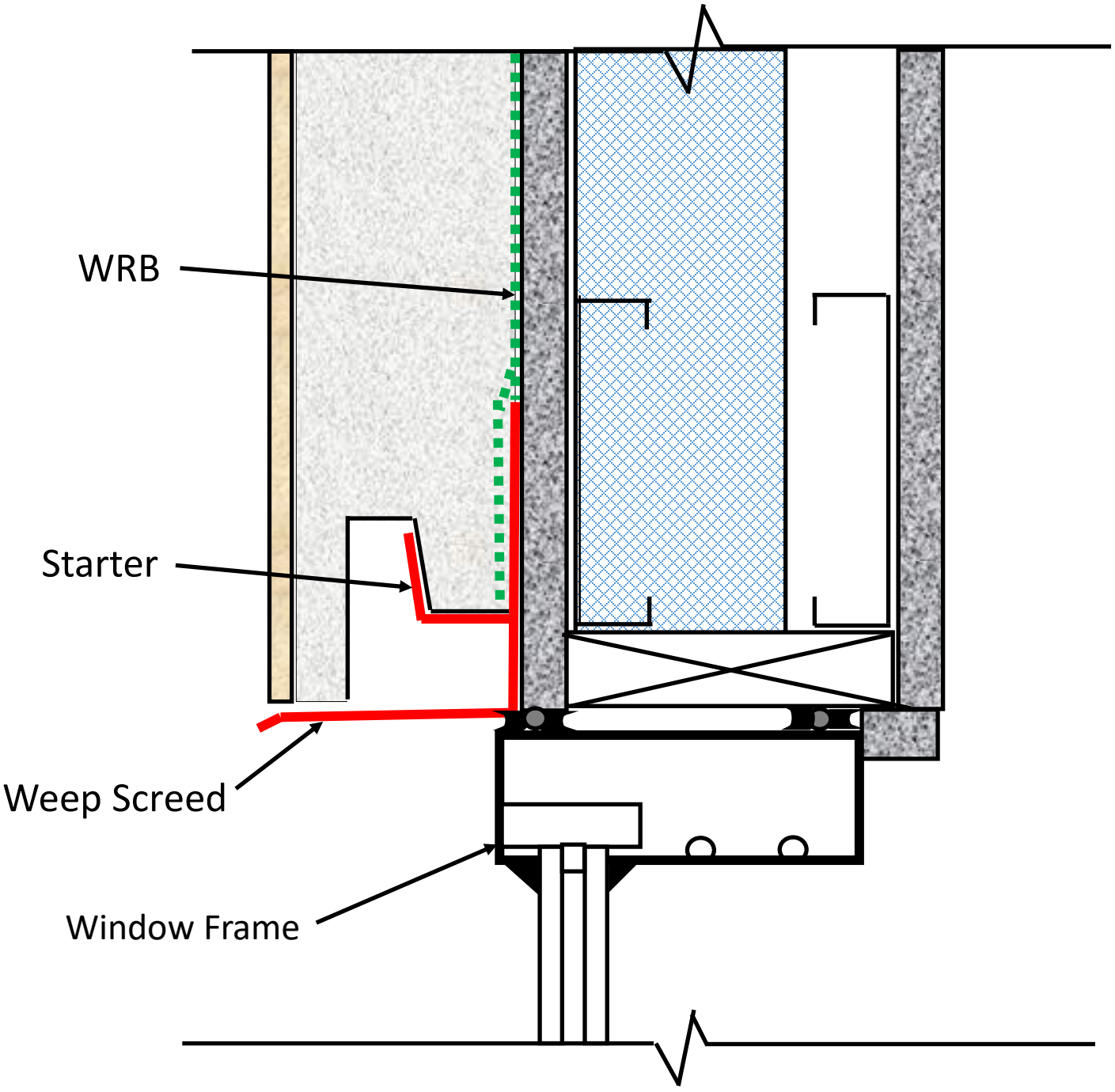
1. Remove 2-3/8” of foam from Panel “B” as shown
2. Cut end of panel “A” square
3. Install the J-hook for Panel “A” using the clip form Panel “B” to align it.
4. Install Panel “B” as shown below and attach both to the wall.
5. Install Panel “A” as shown below.
6. Assemble and fasten to the wall.

Note: The sequence can be reversed if you are installing from the other direction.

ICAP Wall Cladding with WRB, Starter & Weep Screed

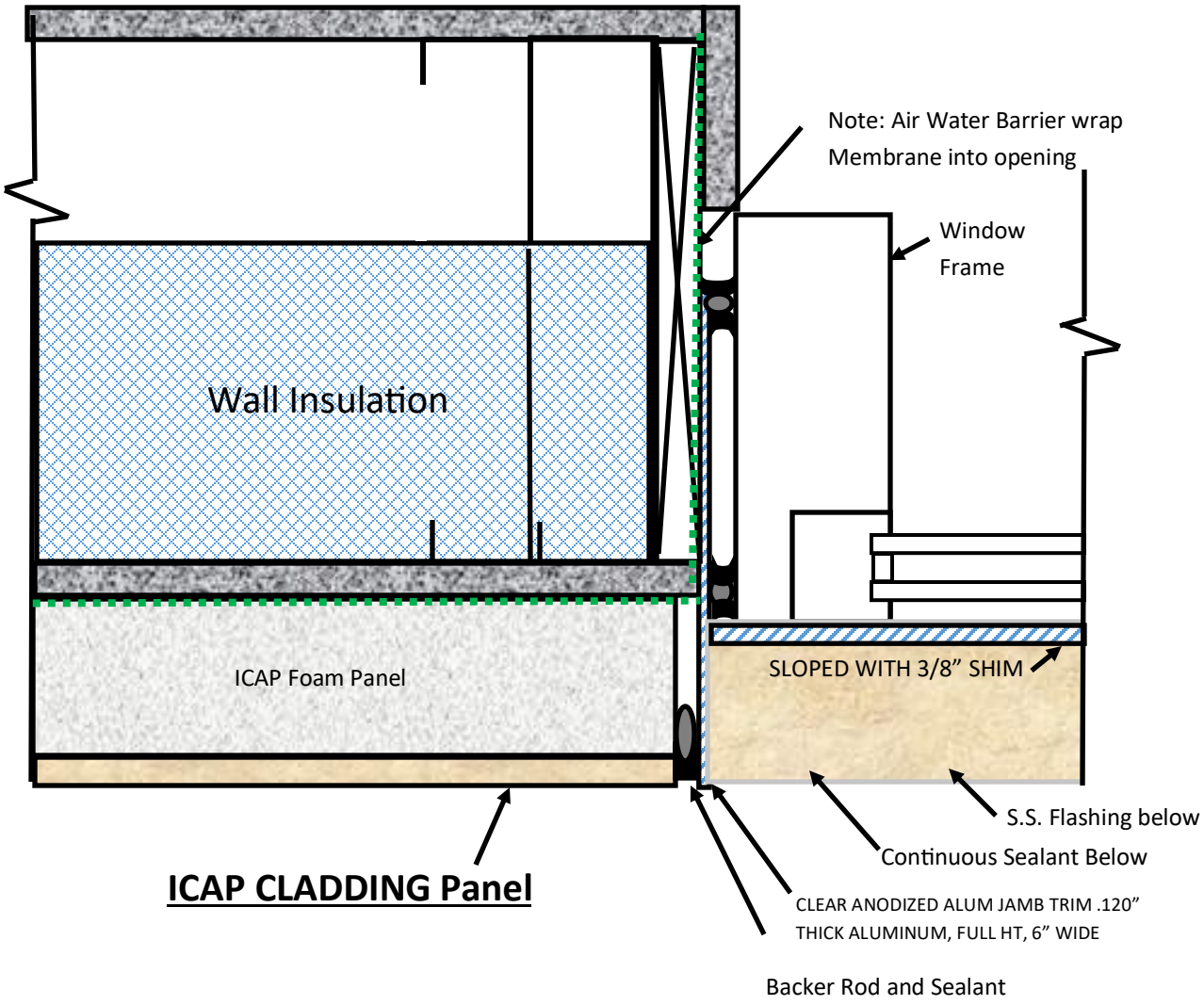


Profile View of the area above the window



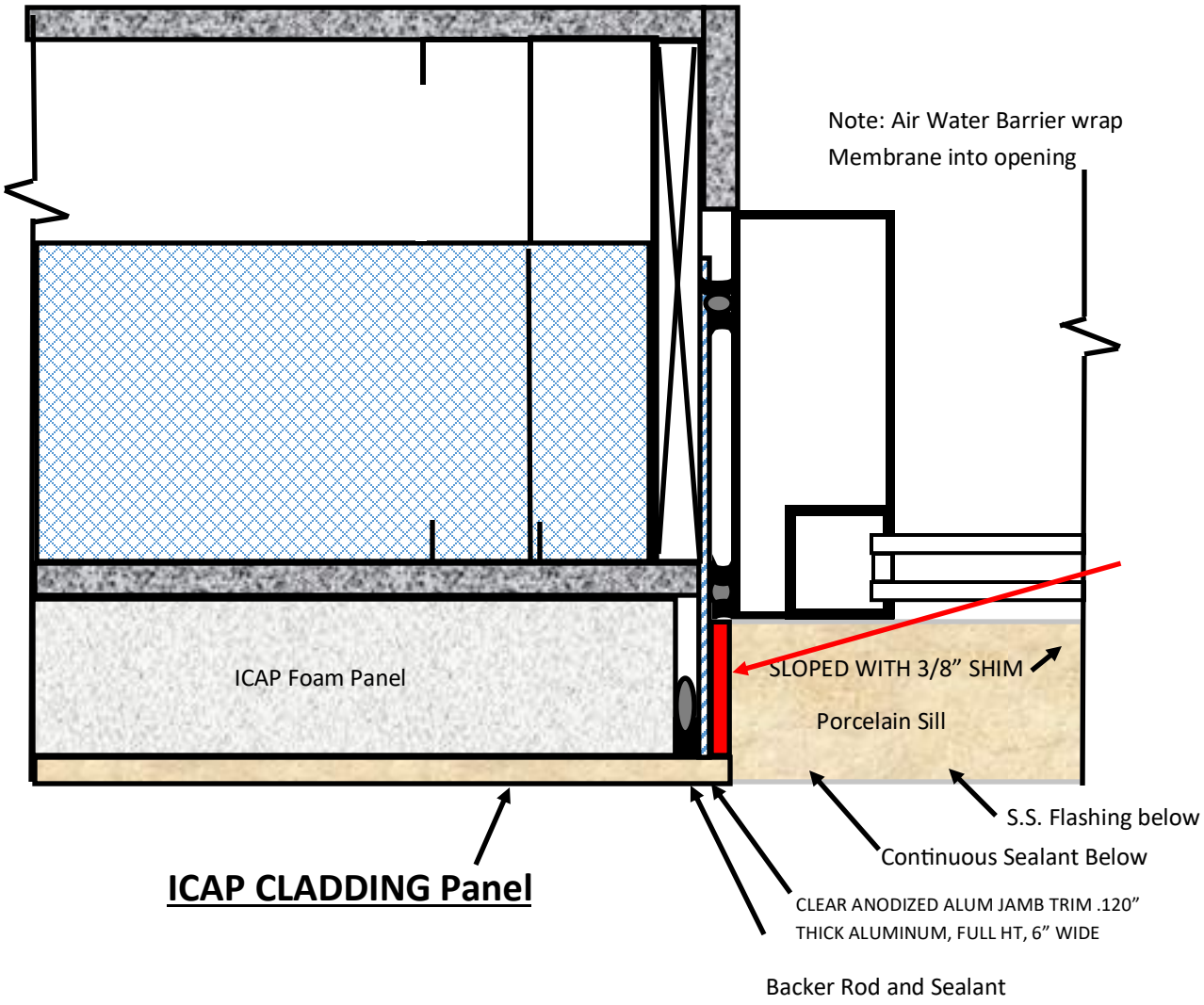
Window C-Head

Top View—Looking Down at window on the right and adjoining wall on the left



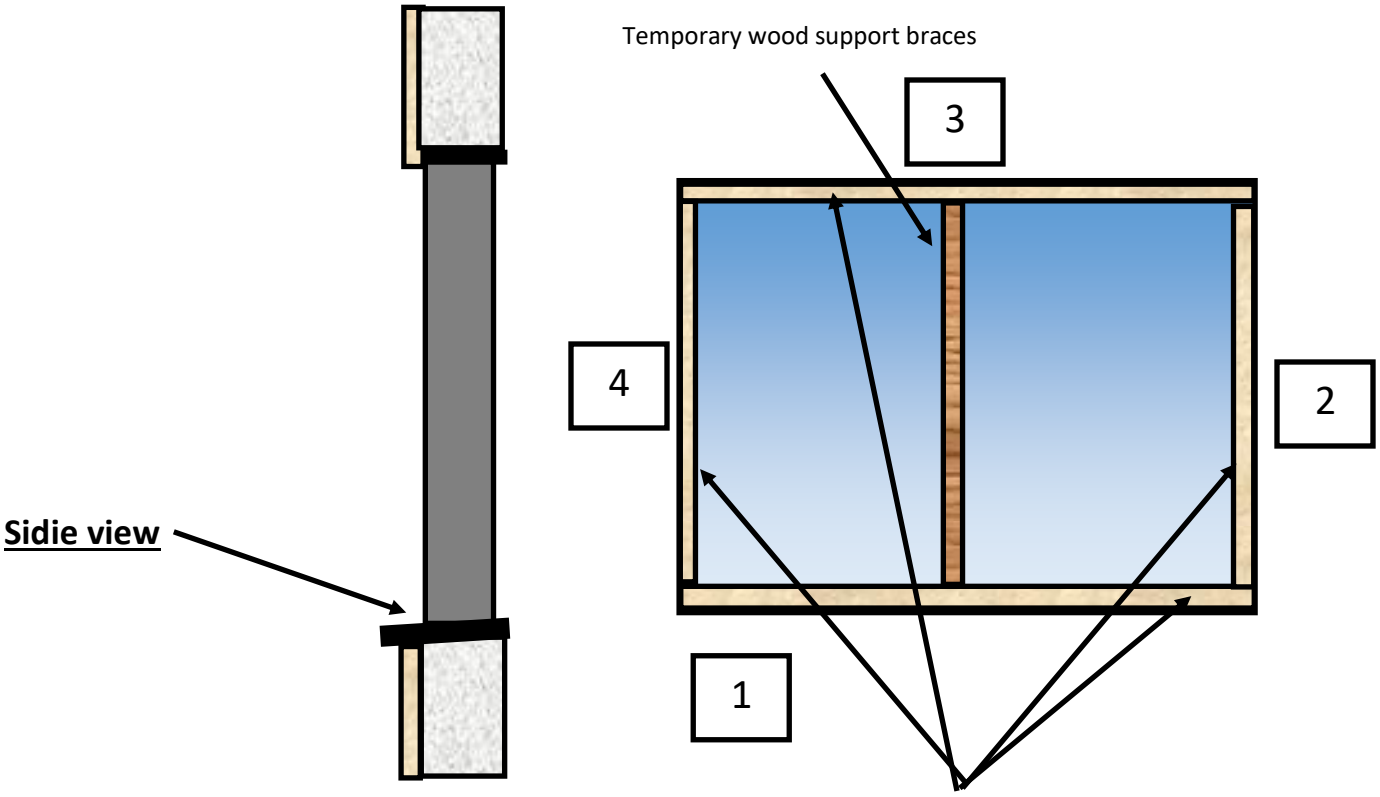
Window C—Jamb

This is the same view as the previous page except with porcelain window returns added. More on the next page. Top View—Looking Down at window on the right and adjoining wall on the left



Window C—Jamb w/Porcelain Return

Porcelain Window Return Trim



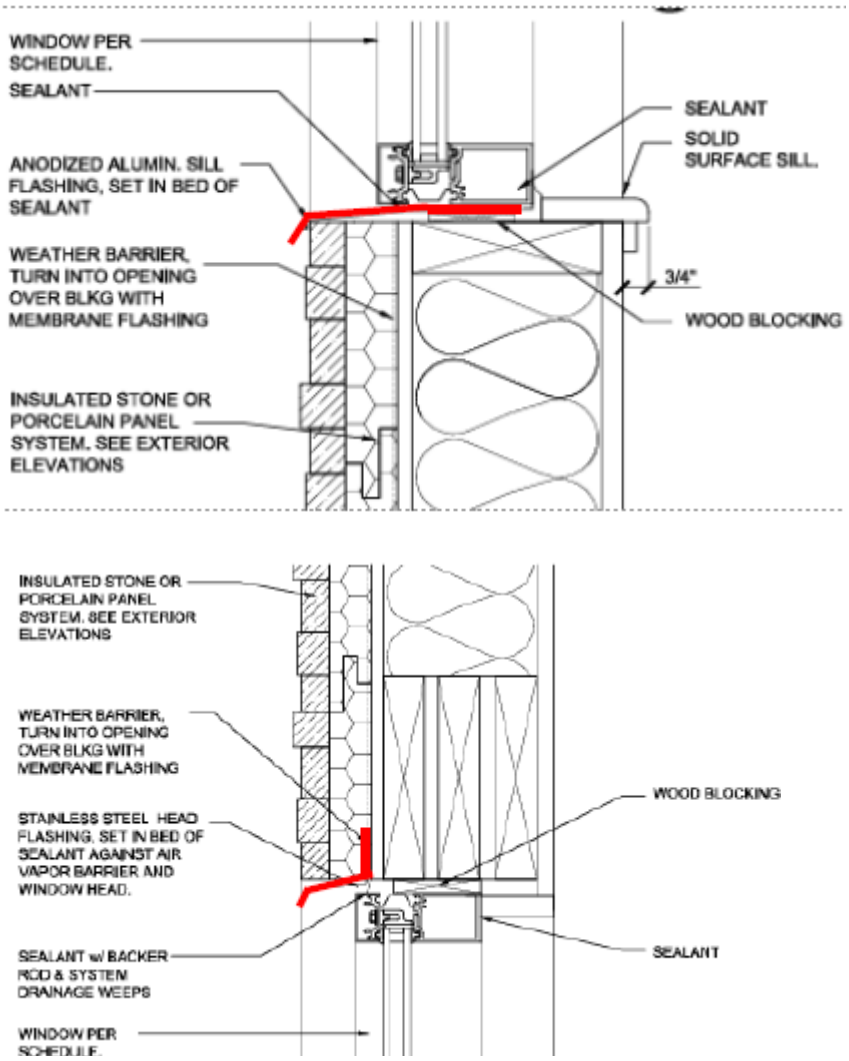
Porcelain/Dekton window

1. Remove 3/8” of foam from Panels “A” as shown
2. Install cladding panels around the opening before installing the return trim.
3. Apply adhesive to the foam on each side/top & bottom of the panels at the opening.
4. Install bottom trim at a slight slope for drainage away from the opening.
5. Install the top trim supporting with appropriately sized temporary brace(s).
6. Cut to size and install each side trim.

Caulk

Optional Methods for Porcelain Returns on Recessed Window

6



Side Window/Door Flashings

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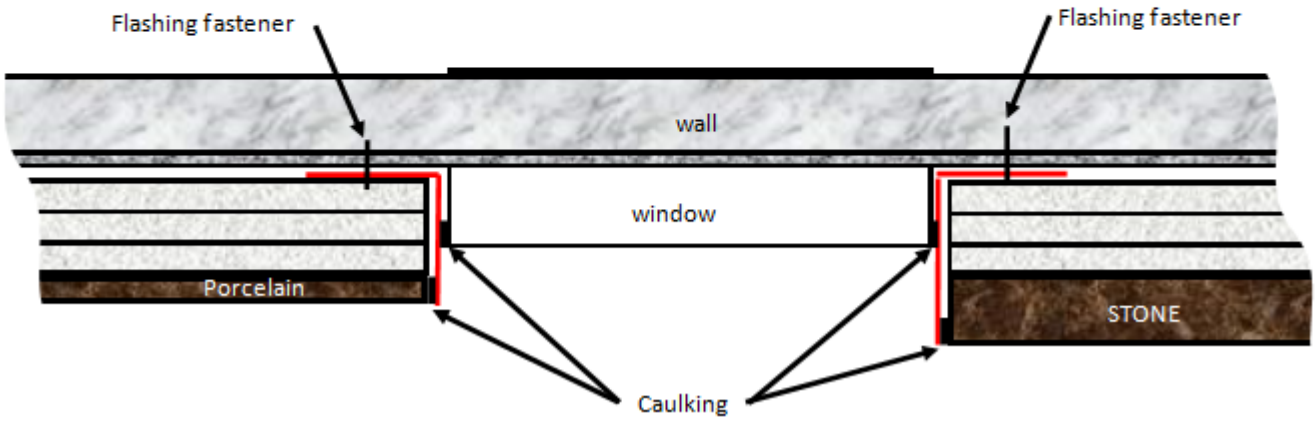
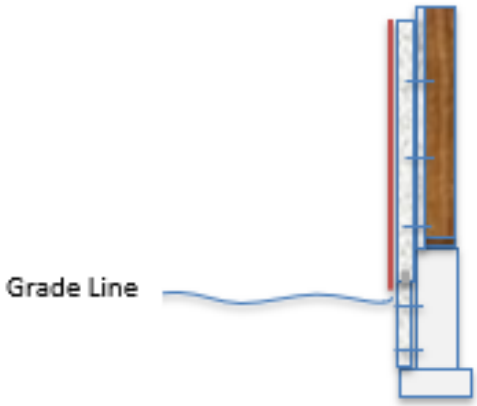


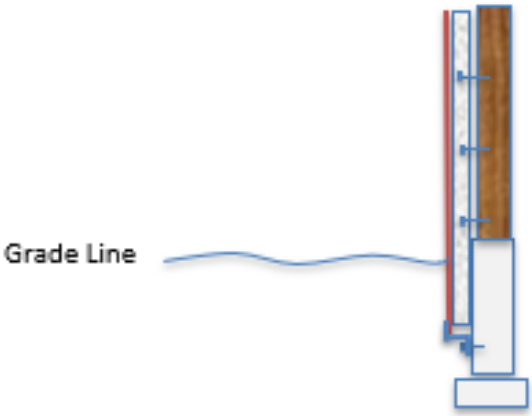
Installing Wall Panels below grade

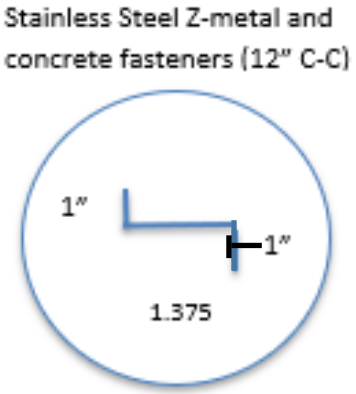
Note: When installing CastleRock Porcelain panels close to or below grade, order the panels with a 1/64" joint spacing to keep the porcelain edges from touching if ground movement occurs.

1. This diagram shows "*foam only*" below grade:



2. This detail shows the porcelain panel below the grade line. All porcelain panels require a joint spacing of 1/64" minimum between the porcelain edges and secure attachment to the wall trough the porcelain. Note: predrilling the hole for the fastener with a diamond hole saw





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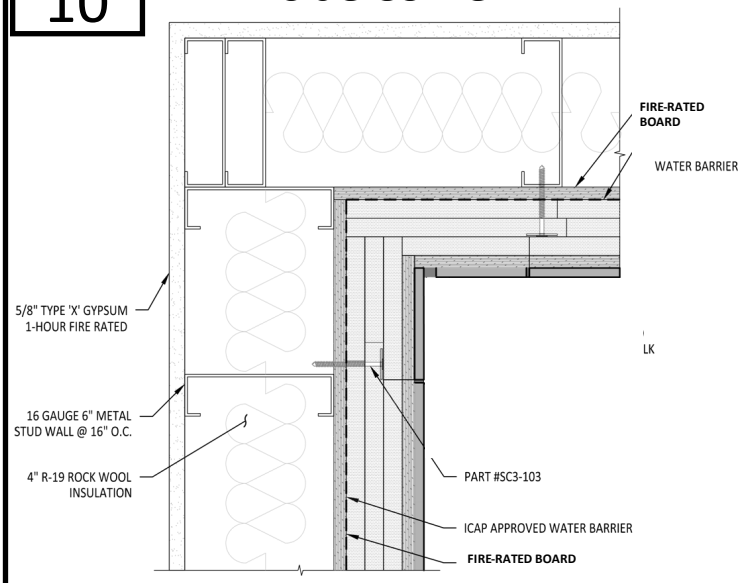
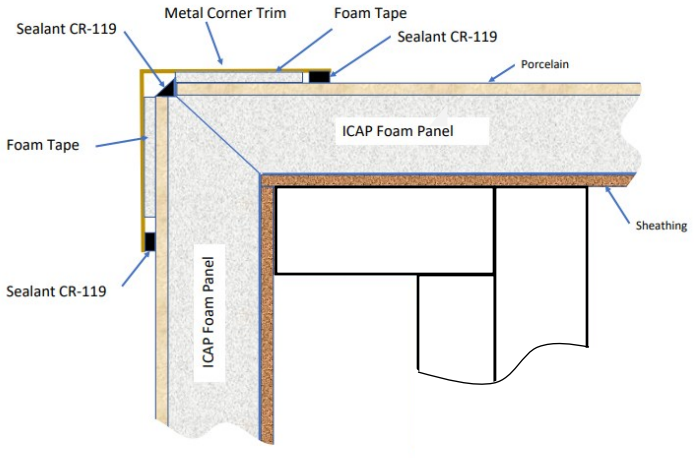
Inside Corner



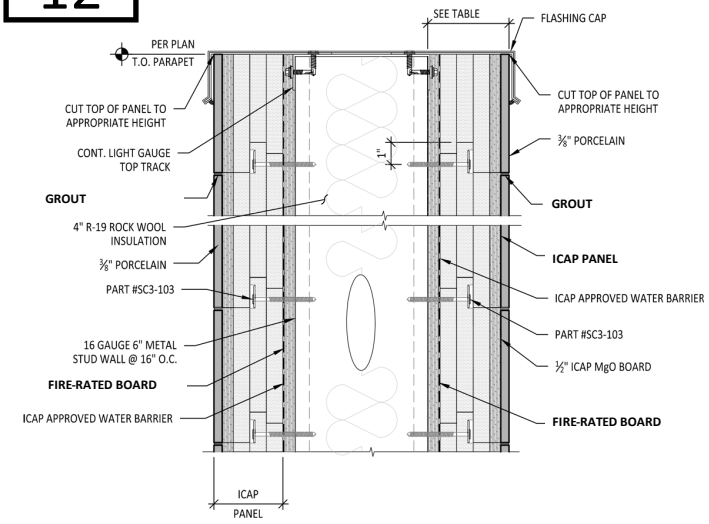
11

Optional Metal Outside Corner



12

Parapet Cap



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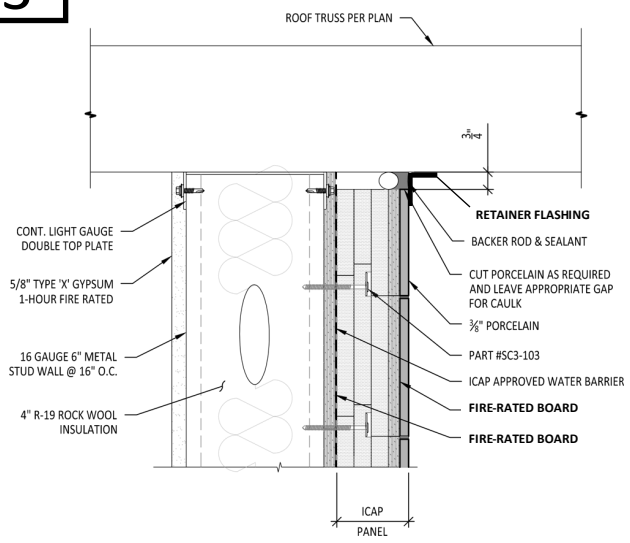
ICAP to Soffit Overhang



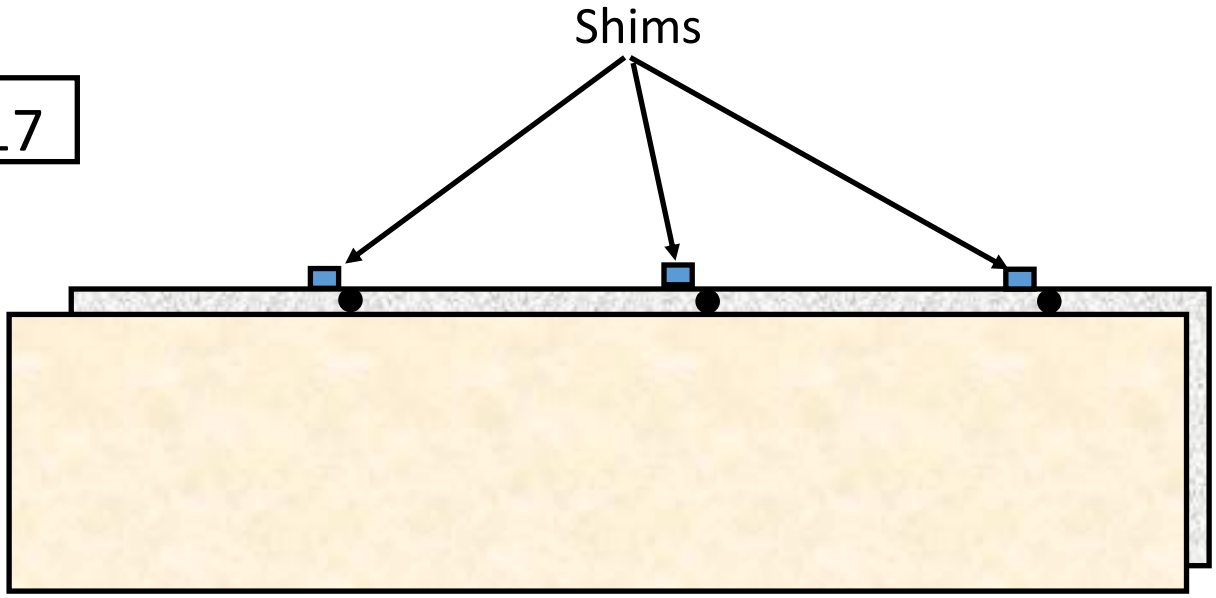
R-12 .25 INSULATION TABLE

ICAP PANEL MATERIAL	TOTAL PANEL INCHES	MILLIMETERS	PANEL R-VALUE
1/2"plywood or 1/2" gypsum	.500	25.4	.62
EPS FOAM	2.00"	50.8/101.6	R-8.33
1/2" Type X Gypsum	.50	25.4	R-.45
BONDING ADHESIVE	.0625"	1.5875	N/A
PORCELAIN	.375"	9.525	R-.34
TOTAL	3.1875"	80.9625	R-10.04

14

60 PSI - HIGH DENSITY EPS (ASTM 578 TYPE XV EPS) w/ AN R-VALUE OF 4.85 PER INCH. PORCELAIN : R-.34 VALUE /INCH

17



Interlocking Tongue & Groove

Fast, Easy, Economical mortar-less installation panels staple or screw to the wall!
(Optional Rainscreen)

Light Weight R-10 to R-20
Porcelain Panels

Screw/washer or Wide Crown Staples
through the foam attachment

Vertical Installation Instructions

1. Install the starter metal making sure it is level and straight.
2. Install the window/door/protrusion trim around these locations as shown on page 12.
3. Begin installing the vertical panels at the side or corner of the wall space from right to left (horizontal panels install left to right).
4. Secure the panels to the wall with the fasteners and at the spacing shown on page 7. Stack the next panel on top keeping them aligned, straight and vertical. Continue to the top of desired height and cut the last panel to fit.
5. Use “leveling tools” as shown on page 19. Notice the sealant dallops on the tongue before interlocking. Allow at least 48 hours for the adhesive (Dow 1199 or 790) to cure before removing the leveling tools.
6. Begin the 2nd vertical row by cutting the panel to the desired stagger of the joints for the best visual appearance or as specified in the plans.
7. Repeat the process until you reach a wall penetration or protrusion such as a door/window, etc. Cut the panel horizontally at the bottom of the window. Then, cut the side section to the height of the window/door, etc. (be sure to allow for the backer rod & sealant) . Use the “Butt Splice method shown in this manual on page 18.
8. Cut panels to fit above the window/door, protrusion remembering to align the horizontal joints to maintain the pattern.
9. Select a corner termination from the choices on page 14 &15.
10. Inside corners and parapets are shown on page 16.
11. Terminate at the top of the wall or soffit with flashings or as shown on page 16 & 17.

For any special installation situations requiring assistance, please reach out to ICAP/CastleRock at 208-859-4200 or les@castlerockx.com.

ICAP-USA

Porcelain Cladding Maintenance Instructions

ICAP Porcelain Cladding can be installed in numerous design possibilities and a variety of looks. The Porcelain is easily cleaned due to the nature of the porcelain and its impervious surface. The grout joints are more vulnerable and should be treated carefully based on the type or grout :

Routine Porcelain Tile Care

Regular, basic cleaning with warm water and mild soap is sufficient to keep porcelain cladding looking good. You can also use gentle, everyday multipurpose spray cleaner to remove hard water deposits and mildew. Do not use cleaning products that contain acids or ammonia (and other harsh chemicals) as these can damage grout and glazed surfaces of the tile. Cladding can be spray washed at normal residential water pressure levels or with low pressure washers. Do not hold nozzle closer than 24 inches from the tile or grout to avoid damage of force waater between joints.

Grout Care

100% Silicone Grout: This grouting method may be cleaned in the same manner as routine porcelain care described above. Be careful not to force water in the grout seams or damage the silicone.

Cementitious Grouts: This type of grout should not be cleaned until it is completely dried and cured, then the grout should be treated with a silicone sealer. Grout, the material used to fill the spaces between tiles, is porous, and sealing it at this time will simplify maintenance in the future (Epoxy grouts and 100% silicones grouts do not require a sealer). We recommend you apply a sealer at least twice a year for maximum stain protection over cementitious grouts.

Heavy Duty Cleaning

Neglected or situations where extreme dirt, smog, mold, mildew or dust is common may require more intensive cleaning. Clean glazed wall tiles with a scouring powder or all-purpose cleaner applied to a non-metallic pad. Rinse and wipe dry. In extreme cases use a commercial tile cleaner, or apply a strong solution of an all-purpose, non oil-based cleaner or scouring powder paste. Let stand for five minutes, brush and scrub. Then rinse with clean water and wipe dry..

Purchasing Maintenance Products

Ceramic tile and Natural Stone cleaning products and sealants may be purchased at your local home center or floor covering store. Consult the manufacturer of the cleaner or sealant for usage instructions and more detailed information about how its specific cleaning solution

DO NOT...

Use cleansers containing acid or bleach for routine maintenance.

Use wax cleaners, oil-based detergents or sealants to maintain your tile (sealants may be used on grout joints).

Use ammonia (it will discolor grout).

Use harsh cleaning aids like steel wool pads or scouring pads containing metal.

Use a cleaning agent that contains color