INSTALLATION MANUAL
FOR
SINGLE CLAD IMP SIDING

ENGINEERED FOR HASSLE FREE INSTALLATION

TrimLock (Insulated Metal Panel, IMP) is
purposefully designed for simple installation with less job site hassle.

All TrimLock cladding products follow the guidance of a Passive Build & Green Build Canada application and performance level.

Installers need to be aware of building code requirements in the geographic areas where they are installing, and how the codes relate to the instructions given in this manual. Local building codes must always be observed. They are the legal representation for an installation in a given jurisdiction. However, local codes are based on the national model building codes. Model codes themselves do not have the force of law until they are adopted by a province or local jurisdiction.

In Canada, the main model building code is the National Building Code of Canada (NBC), which is published by the National Research Council of Canada. TrimLock's insulated metal panel (IMP) installation procedures are based on globally recognized standards for metal sandwich panels and exterior insulation finishing systems. They are designed to ensure optimal performance. However, local building codes may include specific requirements that take precedence over the manufacturer's instructions—especially when they are more stringent. As a result, all TrimLock IMP installations must comply with the local building code. In some cases, the local code may also require compliance with the manufacturer's installation guidelines.

INSTALLING FOR WIND LOAD RESISTANCE

TrimLock's IMP system is remarkably resistant to high winds, considering its light weight and relatively simple installation. However, for optimal performance, it must be installed correctly. The installation and fastening procedures are based on standard guidelines used in the global IMP market. Installers must ensure that panels are installed in a way that meets these standards. The instructions in this manual provide the minimum requirements for most installation situations. Read and follow this "Installation Manual for Single Clad IMP Siding" for a hassle-free installation.

MOISTURE-RESISTING BARRIER REQUIREMENTS

TrimLock Insulated Metal Panels (IMP) function as exterior siding/cladding only and do not act as a moisture barrier envelope. Trimlock IMP panels must be installed over a compliant Water-Resisting Barrier* (WRB) to ensure performance and code compliance. Failure to do so may compromise the integrity of the wall assembly.

Water-Resisting Barrier System Components: A complete WRB system typically includes:

- Trimlock IMP exterior cladding
- Properly flashed wall openings and penetrations
- Water-resistive barrier material (e.g. building paper)
- Exterior sheathing

Performance Expectations: An effective exterior wall system should:

- Shed water from the surface
- Control moisture flow through capillary action and diffusion
- Minimize absorption into the wall structure

Code Compliance

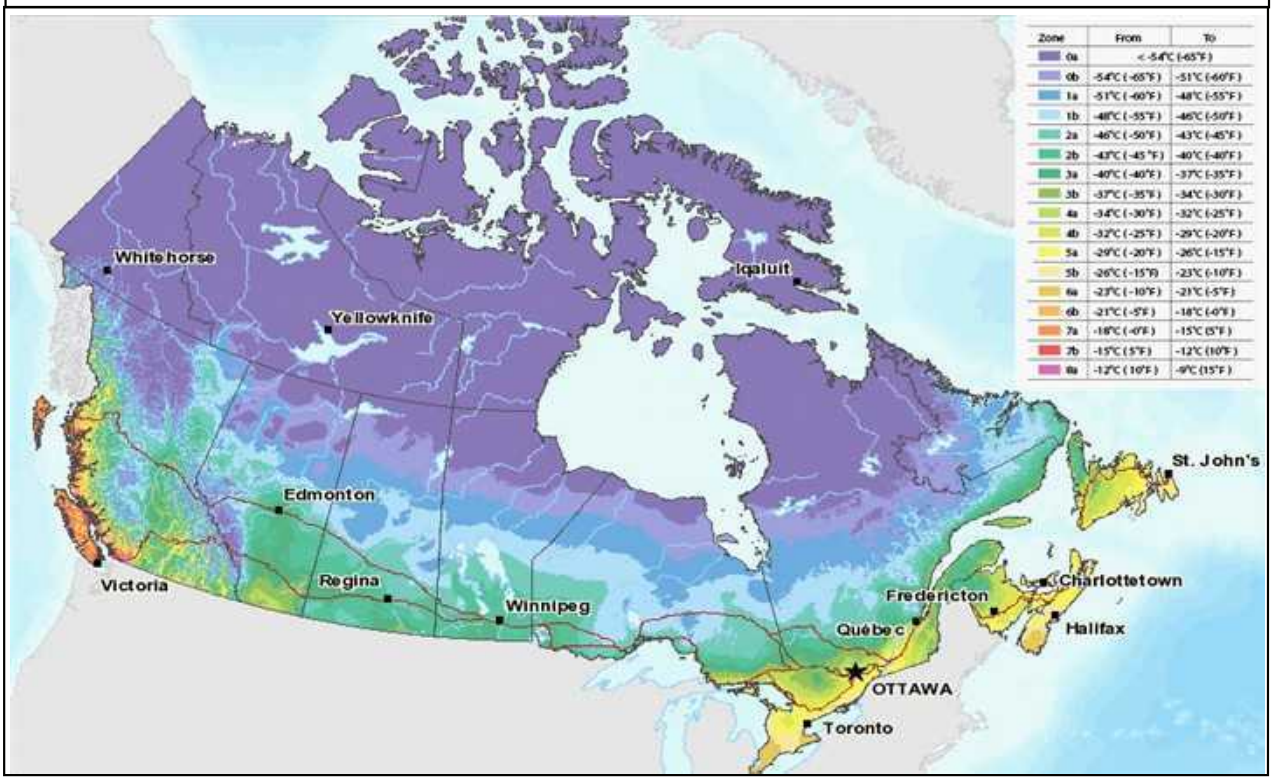
- The required level of water resistance is determined by:
  - o Applicable local building codes
  - o Structure type and design
  - o Regional climate conditions

Enhanced Protection (Optional)

- Installing furring strips or similar measures may provide increased moisture protection beyond code requirements.

**NOTE: Each weather barrier manufacture has detailed instructions on how to properly envelope your building (eg. Typar, Tyvek, Barricade Wrap Plus). Consult online for proper installation along with local building code guidelines.*

Each colour region represents local building code compliant to the NRC regulations. Consulting local building codes will ensure proper weather barrier guidelines and installation.



STORAGE

When transporting TrimLock IMP to a job site, make certain to keep the crates flat and supported along their entire length. To ensure the integrity and longevity of the product, please follow these storage instructions:

- Store the crates on a flat, level surface that supports the entire length of the crate.
- Keep the product dry. The product is intended for vertical installation for proper watershed.
- Store the crates away from areas where falling objects or other activity may cause damage.
- Do not stack more than two crates high. Each crate is approximately 50” tall.
- Do not store the crate in any location where temperatures may exceed 130° F/54.4°C (e.g. on blacktop pavement during unusually hot weather or under dark tarps or plastic wraps without air circulation).

SIDING OVER STUCCO, MASONRY, OR SIDING

Asbestos siding is a regulated material. The appropriate environmental agency or local building code official should be contacted before siding over this product. Application directly over stucco, siding, and masonry can be achieved without removal but proper preparation will be necessary. Consult TrimLock for preparation procedures.

BASIC INSTALLATION RULES

Before getting started, it is important to review several application rules. The following rules are critical for proper TrimLock IMP installation:

1. Determine the IMP profile for proper directional installation. Most TrimLock IMP panels can be installed vertically or horizontally.
2. When installing each panel, push down from the top until the lock is fully engaged with the piece below or from the side to the adjacent panel for vertical installation. Use mechanical fasteners and fasten it into place.
3. Overlap each adjoining panel by ½” (12.7 mm) min. using the prepared overlapping ends (horizontal install). Butt end joints are possible by using proper T-Bar flashing/caulking/moisture proof substrates.
4. Fasten nails or other fasteners in the centre of the nailing slots.
5. Do not drive or over tighten the fastener against the cladding nail hem. Drive fasteners straight and level to prevent distortion and buckling of the panel.
6. Leave a minimum of 1/8" (3.175 mm) clearance at all openings and stops to allow for normal expansion and contraction.
7. Use sealant at the overlap joints EPS to EPS. Caulk all window and door sills and sides after the window trim is installed. Do not caulk the headers.
8. Do not face-nail or staple through siding, except in very limited applications. For example, where the nail hem is removed or in the peeks of the gable walls. Caulk and colour.
9. When re-siding, furring or removal of uneven original siding may be necessary.
10. Ensure that the substrate is stable. Keep in mind that exterior cladding can only be as straight and stable as what lies under it. TrimLock cladding will account for some wall imperfections due to the EPS insulation.
11. All exposed insulation around openings and end joints must be capped with metal flashing.

DISPOSAL/RECYCLING

Dispose of all scrap or excess material in a manner that is consistent with local and provincial rules and regulations. EPS is a material that can be recycled.

CLEAN UP

TrimLock IMP product line is maintained with little to no effort. It is possible to wash it down with an ordinary garden hose and or pressure washer. CAUTION: If using a pressure washer, keep the nozzle at least 18" from the wall to avoid possible damage. Soft brushing may be used for heavy dirt deposits such as mud. When washing down the entire wall, start at the top and work to the bottom in order to prevent streaking.

PANEL PROFILES

TrimLock IMP is available in a variety of shapes and colours, offering a wide range of design options for both residential and commercial applications. The panels are primarily manufactured from galvanized steel, EPS insulation, and a proprietary textured finish. Mill finish steel and wood grain finishes are also available, though with a more limited colour palette. All panel types can be installed either vertically or horizontally, depending on design requirements. TrimLock IMP is offered in both single-clad and double-clad configurations, with various thicknesses and R-values to meet different insulation needs. For projects requiring effective water management, the TrimLock panel is also available with an integrated drainage system. This built-in feature ensures proper water runoff in areas where moisture control is critical. See Fig. 1.

ACCESSORIES

Outside and inside corner posts are used to provide a finished edge at an inside or outside corner. Trim and molding give every installation a professional appearance while contributing to a water-resisting facade. Common accessories include window and soffit trim, starter strips, J-channels, drip caps, and T-bars. Code-compliant flashing should be integrated with the water-resisting barrier and applied properly around windows, doors, roof lines, and other openings to ensure moisture is directed away from the structure.

BASIC INSTALLATION TOOLS AND EQUIPMENT

Any of a skill saw, table saw, cut off saw (grinder), radial arm saw or panel saw can be used to cut the panels. A fine-tooth sheet steel blade or a steel cutting diamond blade is recommended. In extremely cold weather, move the saw through the material slowly to prevent chipping or cracking. For best results cut on the insulation side (back side). Use a utility knife to trim insulation when needed. Good quality tin snips or compound aviation snips will speed up the cutting and shaping of the cladding and metal trim.

WALL SUBSTRATE MATERIALS

TrimLock single clad panels should be applied over a sheathing that provides a sound, flat surface. Consult local building codes for sheathing requirements. TrimLock cladding can be installed over common wood sheathings (eg. plywood, oriented strand board (OSB), magnesium oxide (MGO) boards), insulated concrete form (ICF) block, masonry or concrete. Trimlock IMP panels can be applied over wood and steel frame wall assemblies with sheathing. For steel stud assemblies in the absence of sheathing, use Double-clad IMP panel only and in accordance with approved engineered wall assemblies.

FASTENING PROCEDURES

Use aluminum, galvanized steel, or other corrosion-resistant nails, staples, or screws when installing TrimLock cladding. Fasteners must penetrate the sheathing or other substrate and framing to a minimum depth of 1 1/4” (32 mm). Consult local building codes. Nail heads should be 5/16" (7.9 mm) minimum in diameter and shanks should be 1/8"(3.2 mm) in diameter. For substrates such as masonry or ICF block construction, a combination of mechanical fasteners and adhesives can be used. Consult TrimLock for further recommendations.

Although all measures have been taken to lessen the effect through the manufacturing process and material make up, TrimLock cladding can expand and contract 1/8" (3.175 mm) +/- during normal year-round changes in temperature. Whether using a nail, screw, or staple to fasten the siding, the following rules must be adhered to:

1. Make sure the panels are fully locked tight along the length of the interlocking edges.

2. Do not over drive the head of the fastener tightly against the siding nail hem. Tight nailing, screwing, or stapling will cause the metal to buckle and may cause improper locking of each section.

3. When fastening, start in the centre of the panel and work toward the ends.

4. Center the fasteners in the nailing slots so they are hidden by the next layer of cladding.

5. Drive fasteners straight and level to prevent distortion and buckling of the panel.

6. Space the fasteners a maximum of 16" (406mm) apart for horizontal siding panels, 12" (305mm) for vertical siding panels, and 8" to 12" (203mm to 305mm) for accessories. Start fastening the starter strip at the bottom of the wall.

7. Nail down loose boards of existing substrate and replace damaged area.

8. Scrape off loose caulking and re-caulk around windows, doors, and other areas susceptible to moisture damage.

9. Remove all protrusions such as gutters, downspouts, and light fixtures.

10. Check all walls for evenness and install furring strips where necessary.

TrimLock cladding panel's are typically installed before any trim work is completed other than the U-Channel. This includes all inside and outside corners and window and soffit trim. These trims are installed on top of the finished product.

Step 1: Starter Strip Install

In order for the siding to be installed properly in a level fashion, the starter strip at the bottom of the wall must be level and set at the proper height at transition. See Fig. 2 or Fig. 3.

1. Determine the lowest point of the wall that will be sided; from that point, measure up 2.5" (63.5 mm) and partially drive a nail at one corner, when finished this line will be where the top nailing flange of the starter strip will be lined up for levelness.
2. Attach a chalk line; go to the next corner and pull the line taut.
3. Make sure the line is level by using a line level or a 4' (1.2 m) level.
4. Snap the chalk line and repeat around the entire building.
5. Install the starter strip by lining up the top of the back nailing flange of the starter strip using the chalk line as the level guide. Leave a ¼” gap between each strip for water management. Weep holes can be drilled in the bottom of the starts strip for increased water management.

Step 2: Building Envelope Requirements

Install the complete building envelope according to local building codes and manufacturer instructions. This includes metal flashing, peel and stick flashing, and envelope overlapping tape seal.

Step 3: Install TrimLock Cladding

Panels are designed to be installed left to right (vertically) or bottom to top (horizontally). At the starting point, install the cladding flush with the left corner of the wall. Next, install the mechanical fasteners. See Fig. 1. Continue adding panels in the same direction covering the remainder of the wall. When a horizontal install is chosen, stagger the joints so that they do not line up with each other.

Note: Exposed insulation that results from cutting the IMP for openings or end-butt joints, must be concealed using metal flashing, U-Channels and/or T-Bar. This is very important when installing the double-sided cladding over steel stud walls without sheathing. End joints (EPS to EPS) require a minimum 1/2” (12.7 mm) overlap of metal skin. Each panel should be cut 1/8" (3.175 mm) away from windows and openings to allow for metal flashing. Flashings can be fitted to compensate for transitions, gables, colour changes, or uneven substrates.

TrimLock Single clad Insulated Metal Panel
Specifications and Details

Design Criteria

2023 Alberta Addition.
Design of this structure has been performed in conformation with the National Building Code 9.27.11.1.(1b) part 5. (Part 5) Exterior steel cladding exceeds CSSBI 23M minimum requirements.
Reference Section: 3.1a and 3.1b.

General Notes

1. These drawings shall be read in conjunction with the architectural and and other relevant drawings. It is the contractor's responsibility to review and verify all dimensions on the drawing. Any errors, discrepancies, or omissions should be reported to TrimLock prior to commencing work.
2. The contractor is responsible for the design of all temporary supports, shoring, and form work which may be required during construction of the building. All relevant heath and safety regulations must be followed at all times.
3. Any modifications or substitutions to the design as shown must be authorized by TrimLock Ltd. prior to fabrication and construction.
4. Do not scale the drawings.
5. Inspections of materials and fabrication must be performed by qualified professionals. Defects must be forwarded to TrimLock Ltd.
6. Workmanship is to be in accordance with standard practice and all applicable codes.

Insulated Metal Panel Notes (IMP)

1. These drawings are for the sole purpose of indicating placement of IMP panels and the installation sealants and fasteners. This system is designed for a vertical installation, the determination of material quantities, suitability of the support system to withstand loads imposed by, or transferred through our materials, remain the responsibility of others.
2. All exposed EPS ends, joints, and cuts must be covered with metal flashing. No exceptions.

Site Storage

The panels are not intended for long term horizontal storage. Panels are separated by sheets of paper and topped with lumber wrap. The bundle is shrink wrapped, strapped, and crated. It is important not to let standing water sit in between the panels on a horizontal plane. Efflorescence will occur but can be corrected.

Paint Finishes

Paint finishes will exhibit colour shift and shade variances which are inherent characteristics and are not considered a product defect or cause for rejection.

Sealants and Fasteners

Option A- Butyl Caulk: To be applied in the female groove of the interlock panel.
Option B- Fire Stop Caulk: To be applied in the female groove of the interlock panel.
Low Expansion Sub-Floor Polyurethane adhesive should be applied to the adjoining EPS to EPS end-joints to provide additional sealing and increased fastening strength of adjoining panels.

Site Reviews

It is the contractor's responsibility to conduct the work in accordance with the requirements of the contract documents and applicable codes. TrimLock Ltd. has no jurisdiction over any project, its documents and or applicable codes.

Manufacturing Tolerances

Length: +/- 1/8" (up to 20'-0")
+/- 3/16" (20'-0" and greater)
Width: +/- 1/8"
Thickness: +/- 1/8"
Squareness: +/- 1/8" (ends and edges)

Lateral Bow (deviations of edges from a straight line)
+/- 3/32" (up to 10'-0")
+/- 3/32 (10'-0" to 20'-0")
+/- 3/8" (20'-0" and greater)

Flatness (deviation from two straight edges measured perpendicular to a straight line)
+/- 3/16"

Joints: 1/2" +/- 1/16" depth from outer male edge to core
1/4" +/- 1/16" depth from outer female edge to core

Finish: dents,marks,and scratches on surface:
Place panel in position of intended use, under good light view from the intended installed distance or a minimum of 8'-0" which ever is greater. Exceptions to or deviations from the above tolerances must be approved by the engineer of record. Oil caning or waviness is typical of steel cladding and is not considered defective or cause for rejections.

ALL DRAWINGS ARE FOR A TYPICAL HORIZONTAL/VERTICAL INSTALLATION OF THE TRIMLOCK SIDING PANEL. DRAWINGS AND DOCUMENTS SHOULD BE SIGNED OFF BY AN ENGINEER BEFORE USE IN EACH PROJECT. ALL DOCUMENTS ARE THE COPYRIGHT OF TRIMLOCK AND ARE TO BE USED SOLELY FOR THEIR INTENDED PURPOSE.

SINGLE SIDE IMP PANEL 26 ga/24 ga STEEL CLADDING MILL COATED COLOUR. 2" TO 6" THICKNESS EPS INSULATION. 96" UP TO 288" LONG @ 8", 12", 20" WIDE
EXPOSED EPS INSULATION MUST BE COVERED AND PROTECTED BY METAL FLASHING MINIMUM 26 ga.

Section 3.1a
National Building Code 2023 9027.11.1b

9.27.11.1. Material Standards 1) Horizontal Steel sheet cladding, including horizontal and vertical strip steel siding, including flashing and trim accessories, shall conform to CAN/CGSB-93.4, “Galvanized Steel and Aluminum-Zinc Alloy Coated Steel Siding, Soffits and Fascia, Prefinished, Residential.” a) 2) Steel sheet cladding shall have a minimum thickness of 0.3 0.33 mm, and b) conform to "Revised Standards"- CSSBI 23M, “Standard for Residential Steel Cladding.” CAN/CGSB-93.3-M, “Prefinished Galvanized and Aluminum-Zinc Alloy Steel for Residential Use"

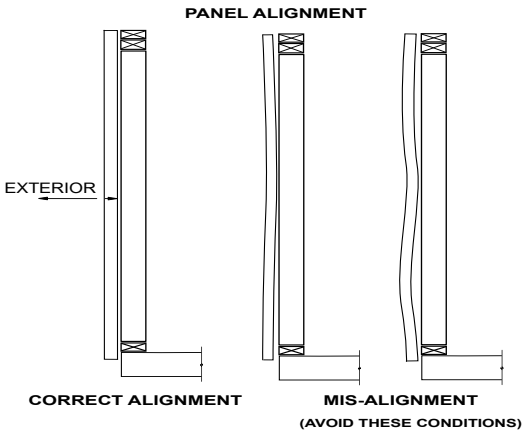
Section 3.1b
CSSBI 23M-2016

Standard for Residential Steel Cladding
Reference: Pg. 3-5

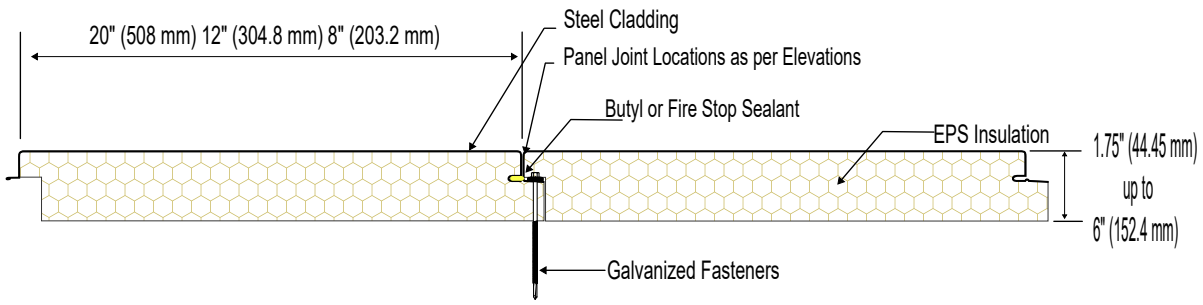
SPECIFICATIONS & TYPICAL DETAILS

RECOMMENDED FASTENERS		
FASTENER	SIZE	
EXTERIOR COATED GALVANIZED SCREW	#8 - #10 @ 2-1/4" MIN 57.15mm	
EXTERIOR COATED GALVANIZED RING NAIL	2-1/4" MIN 57.15mm	
EXTERIOR COATED GALVANIZED SELF DRILLING STEEL SCREW	2-1/4" MIN 57.15mm	
POLYURETHANE ADHESIVE LOW EXPANDING BUTYL SEALANT FIRE STOP SEALANT CONSULT TRIMLOCK FOR DETAILS		

FRAMING RECOMMENDATIONS	
FRAMING MATERIAL	SUPPORT SPAN
2X6 WOOD	16"O/C
STEEL STUD	16"O/C



STANDARD PANEL PROFILE



BUILT IN WATER MANAGMENT PANEL

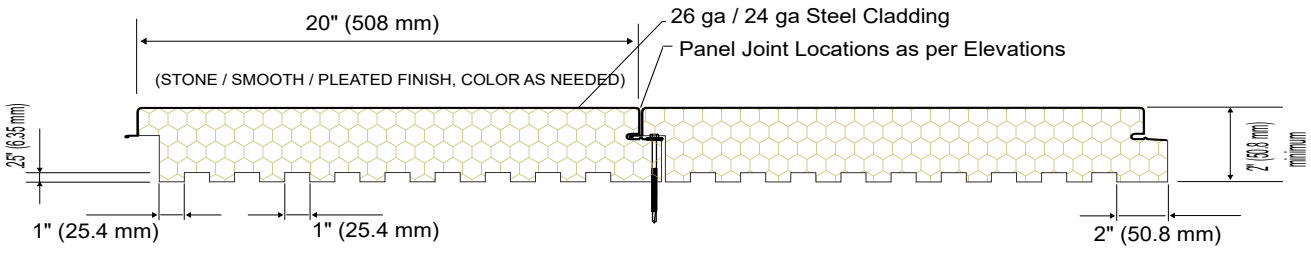
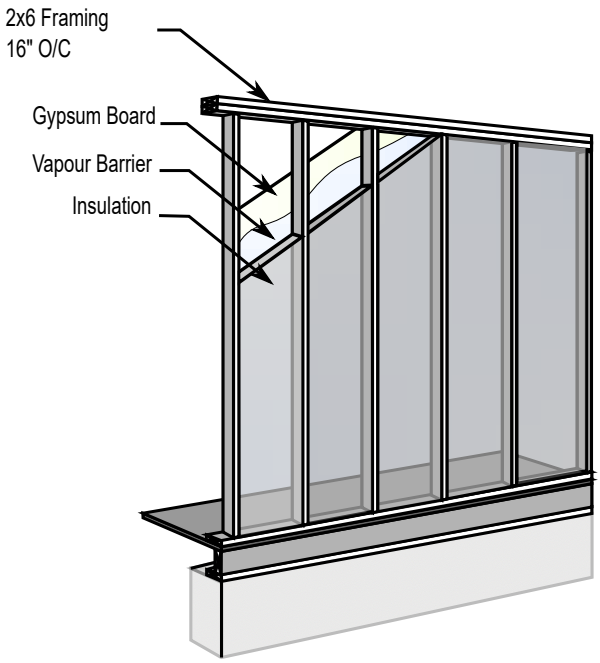
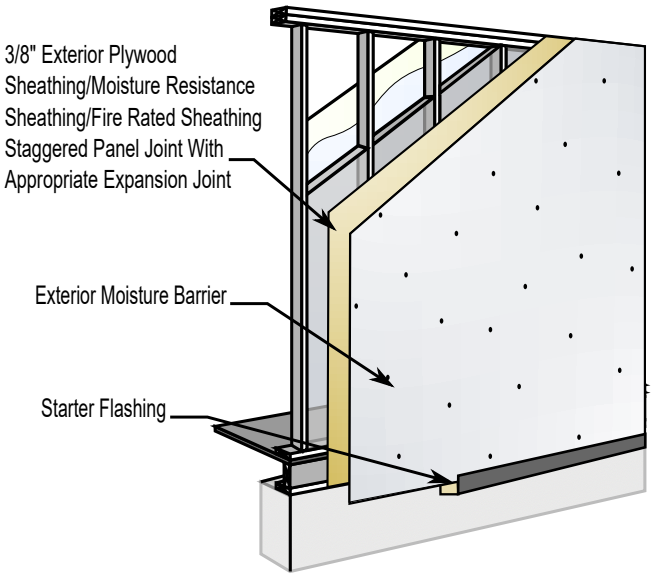


Fig. 1

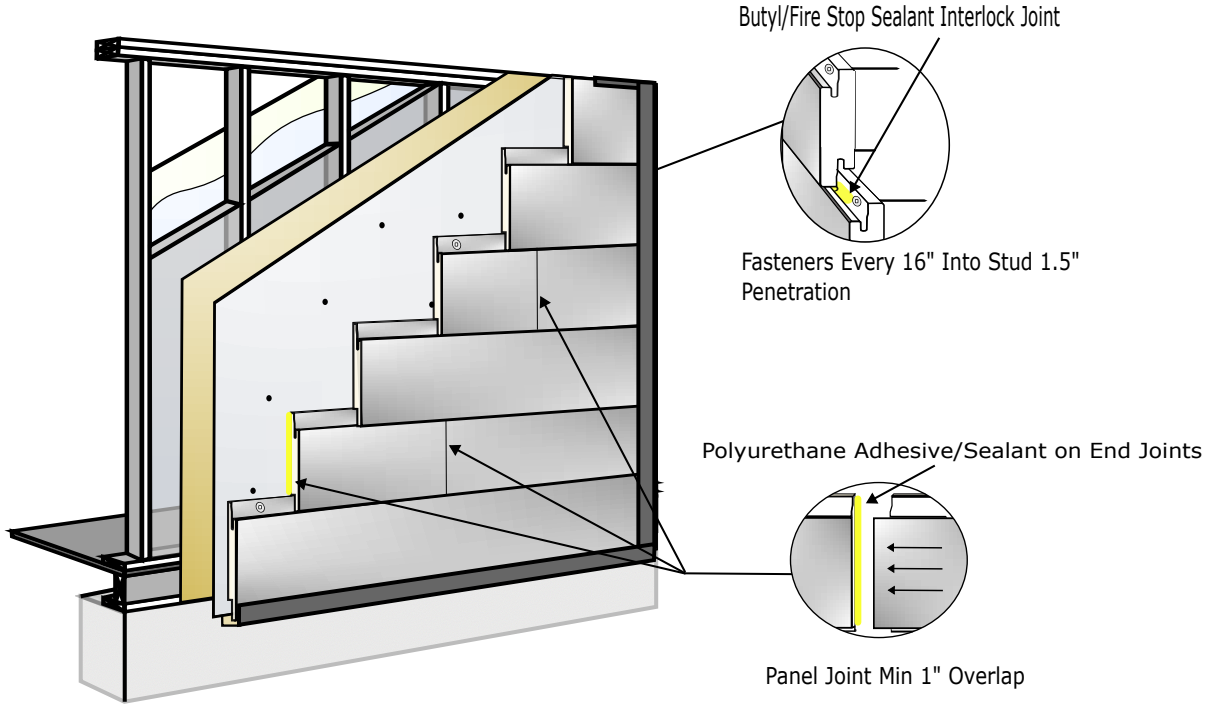
SPECIFICATIONS & TYPICAL WOOD FRAMING DETAILS



WOOD FRAMING, INSULATION, INTERIOR FINISHING

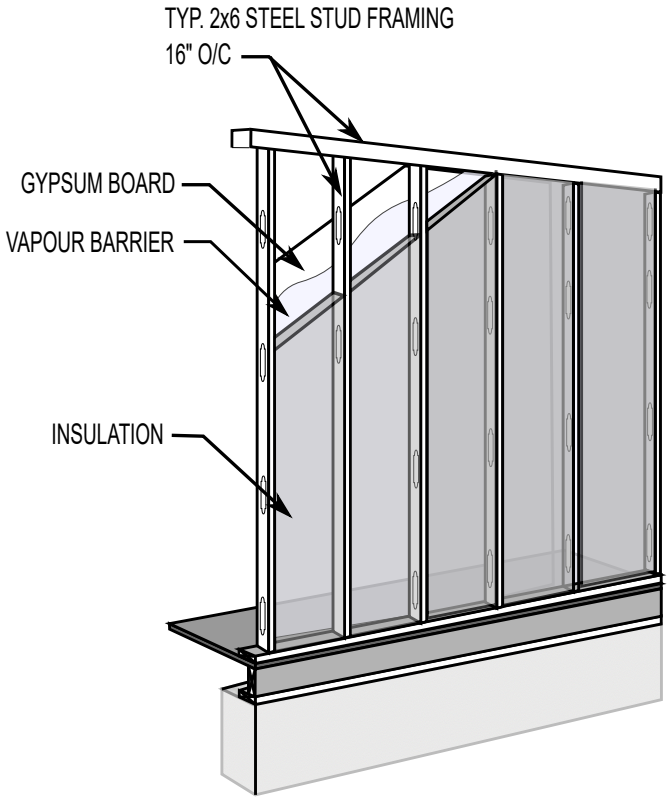


EXTERIOR SHEATHING WITH MOISTURE BARRIER ENVELOPE

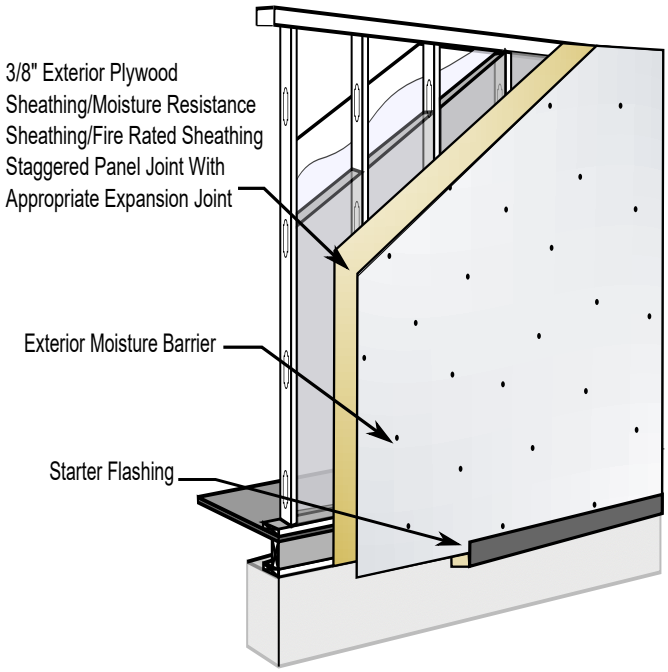


SIDING PANEL LAYOUT HORIZONTAL INSTALL VERTICAL INSTALLATION APPLICABLE

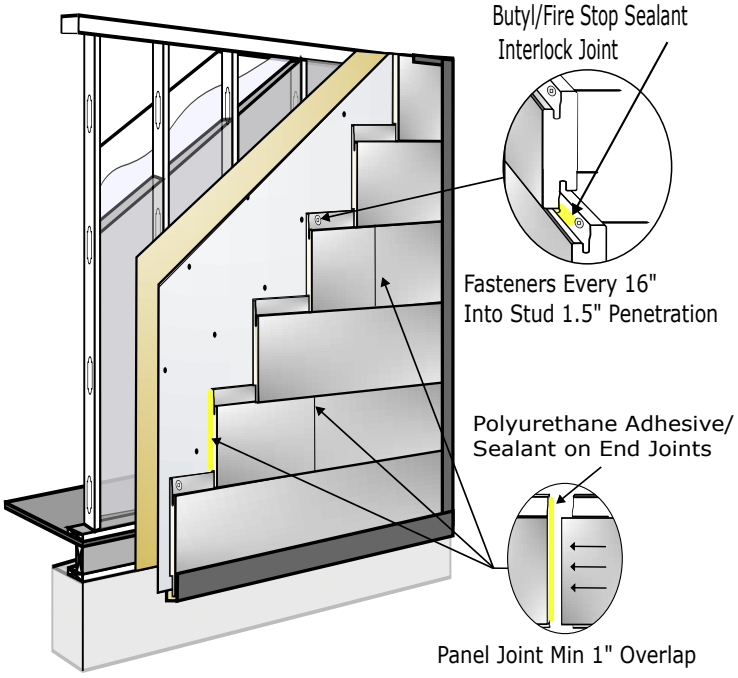
SPECIFICATIONS & STEEL STUD FRAMING DETAILS



STEEL FRAMING, INSULATION, INTERIOR FINISHING



EXTERIOR SHEATHING WITH MOISTURE BARRIER ENVELOPE



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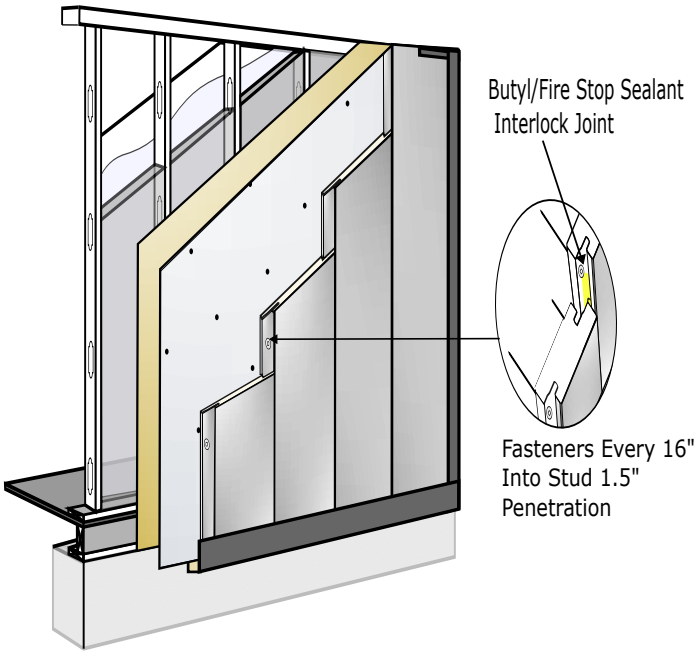
VERTICAL INSTALLATION APPLICABLE



SIDING PANEL LAYOUT FOR VERTICAL INSTALL
WOOD & STEEL FRAMING

SPECIFICATIONS & TYPICAL INSTALL DETAILS

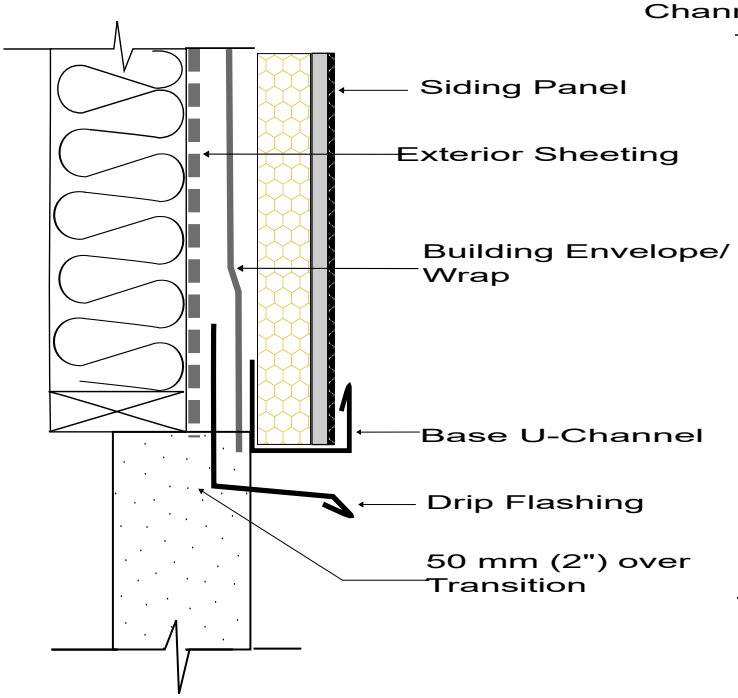


Fig. 2 *Foundation*

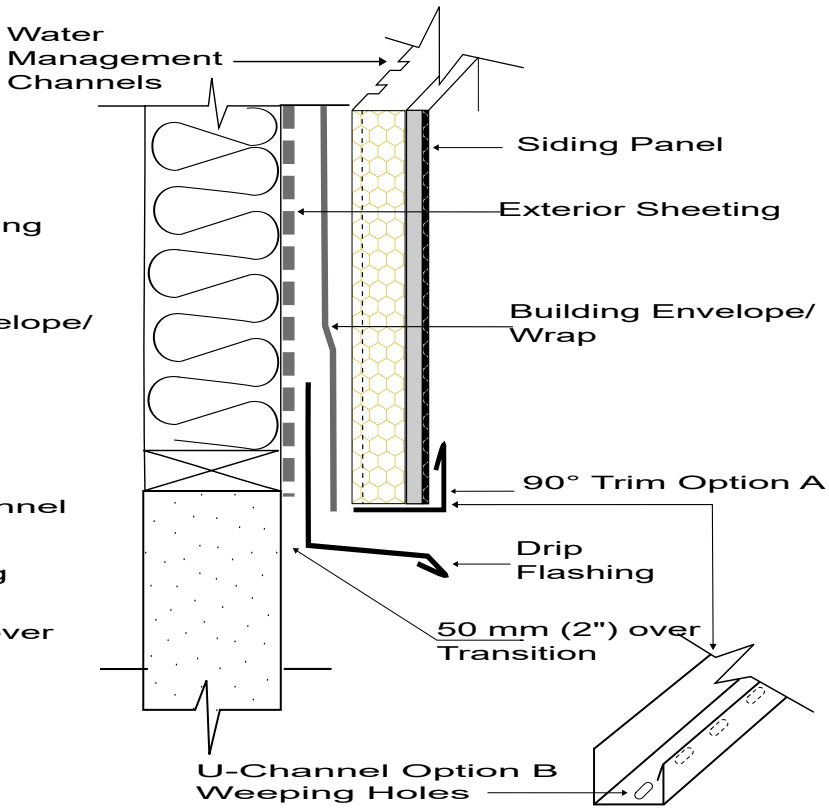


Fig. 3 *Water Management Foundation*

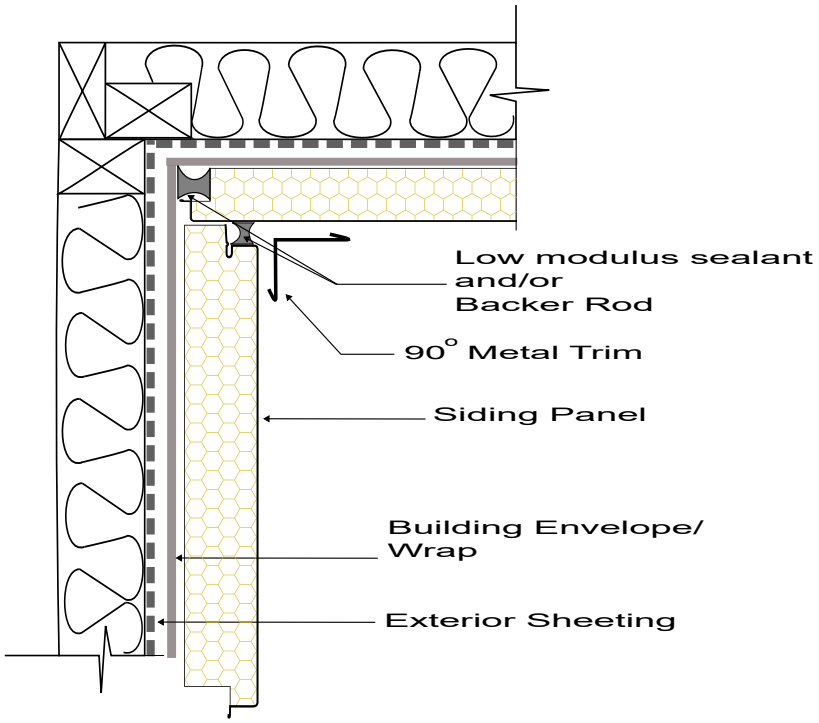


Fig. 4 *Inside Corner*

SPECIFICATIONS & TYPICAL INSTALL DETAILS

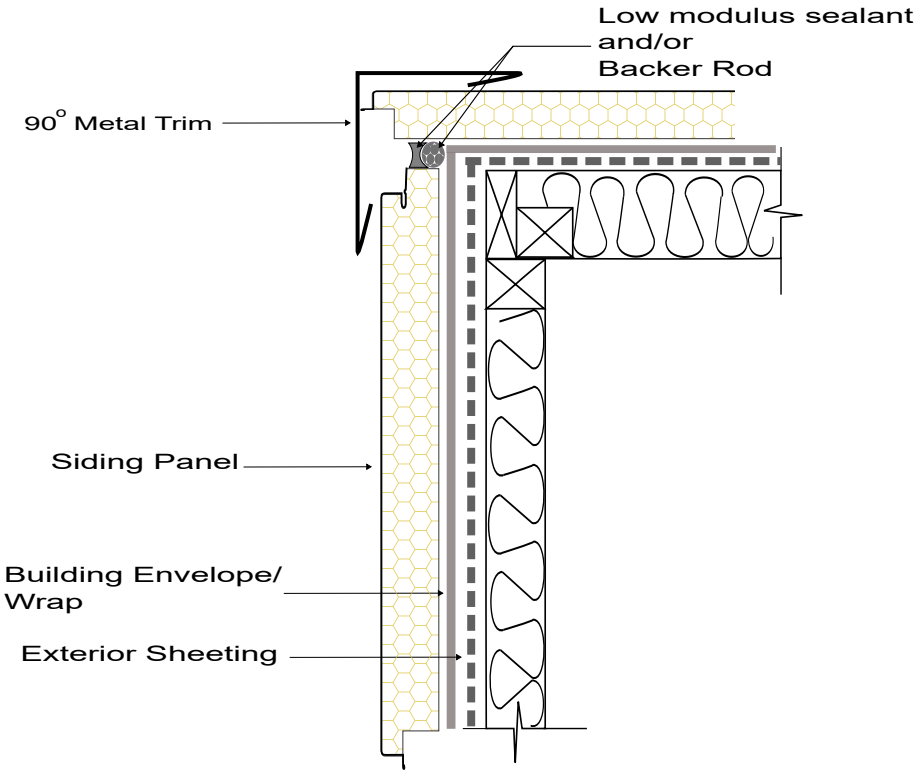


***Fig. 5** Outside Corner*

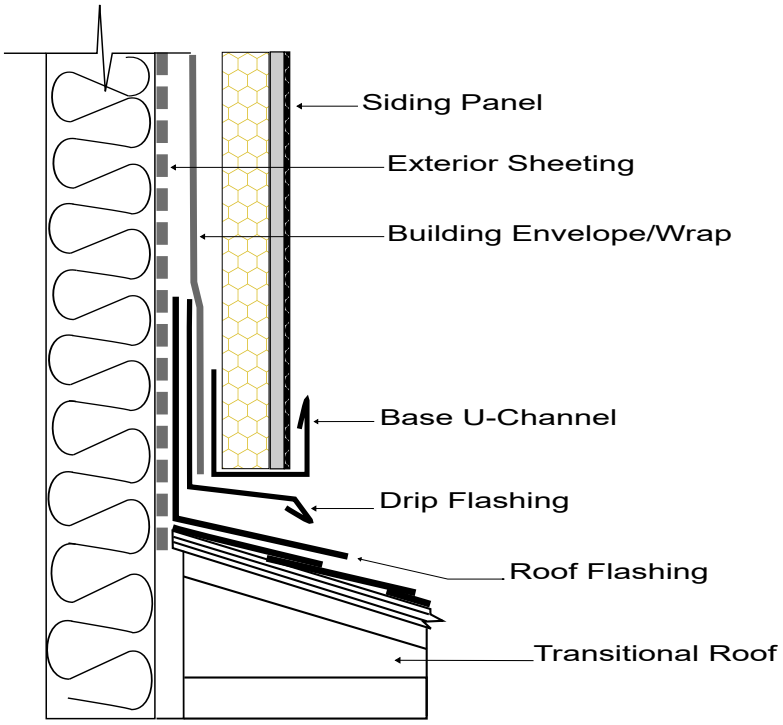


***Fig. 6** Roof Transition*

SPECIFICATIONS & TYPICAL INSTALL DETAILS

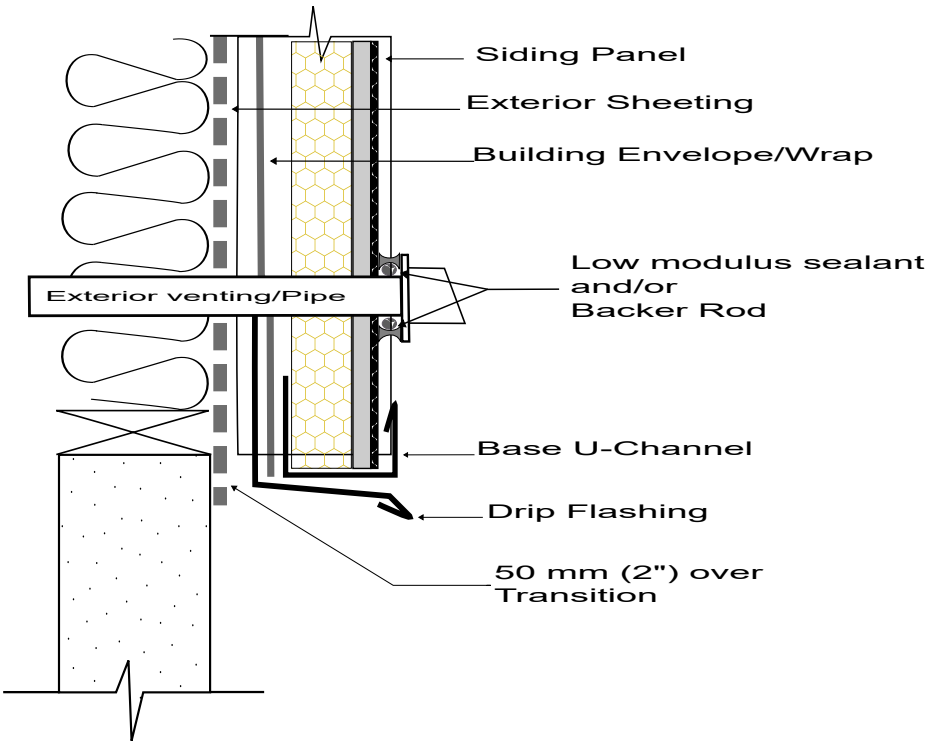


***Fig. 7** Venting Detail*

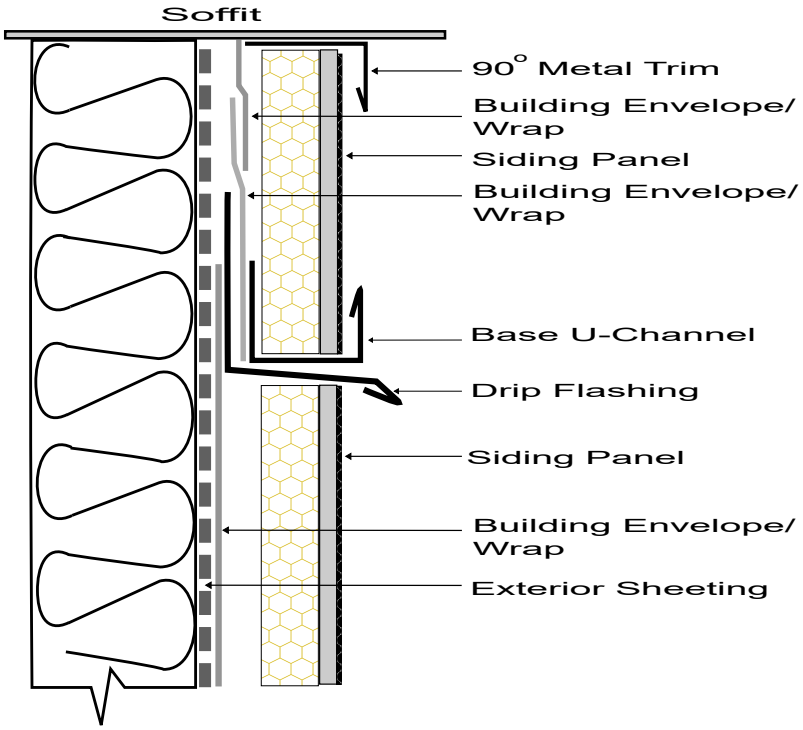


***Fig. 8** Mid Wall Transition*

SPECIFICATIONS & TYPICAL INSTALL DETAILS

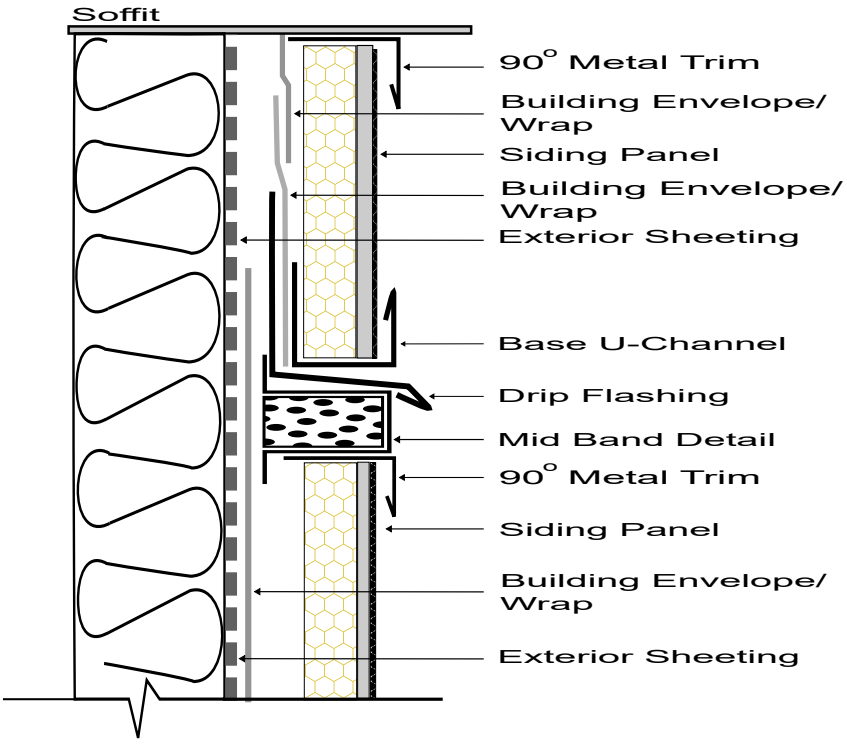


***Fig. 9** Mid Band Transition*

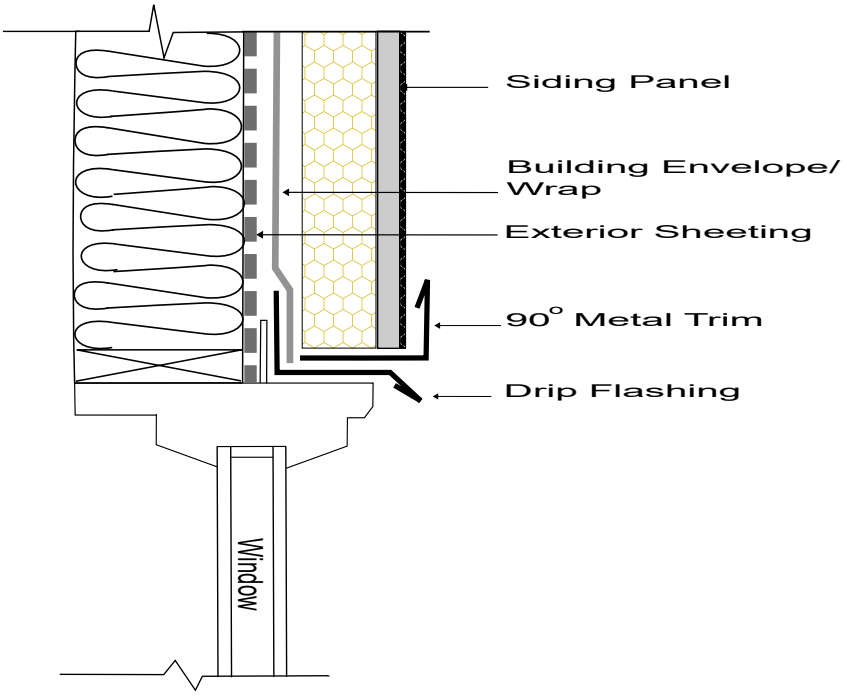


***Fig. 10** Window Header*

SPECIFICATIONS & TYPICAL INSTALL DETAILS

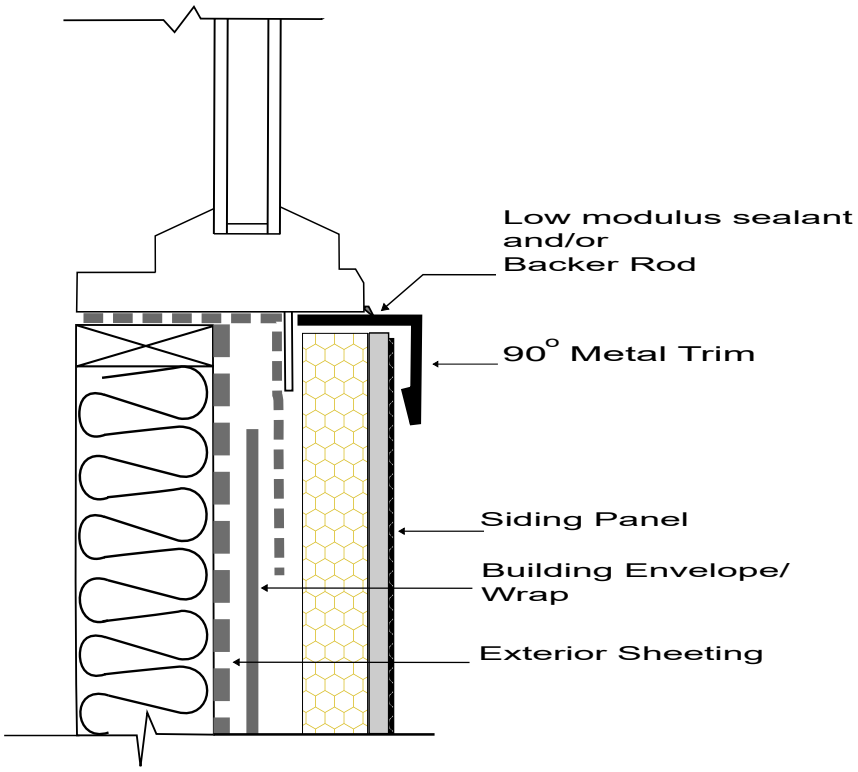


Fig. 11 *Window Sill*

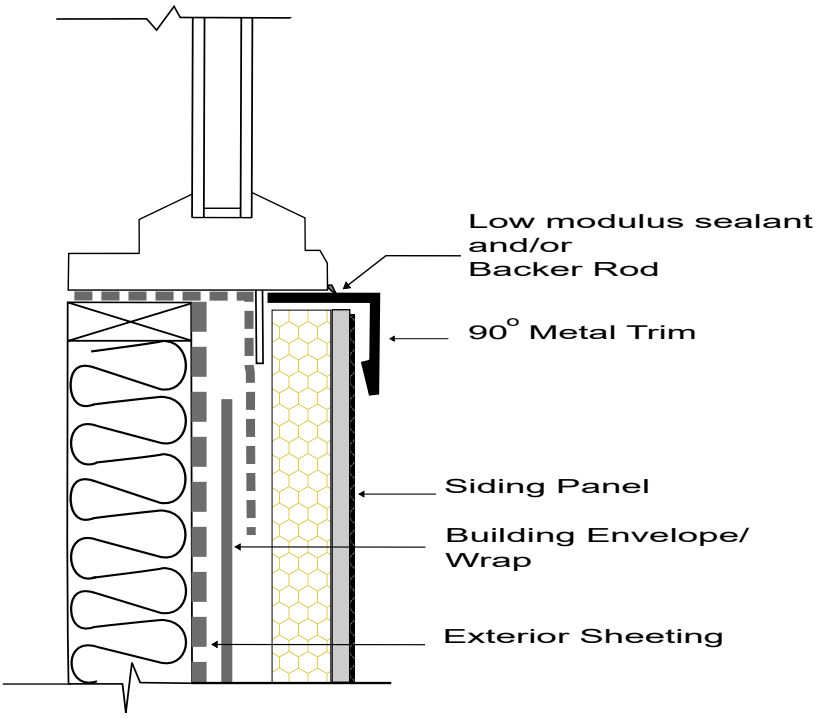


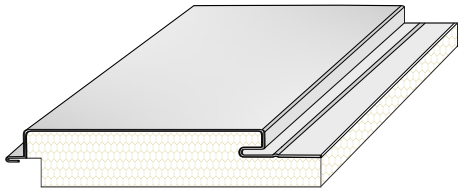
Fig. 12 *Window/Door Style Top View*

PANEL PROFILE SELECTION

26 ga & 24 ga WALL / SKIRTING / FENCING

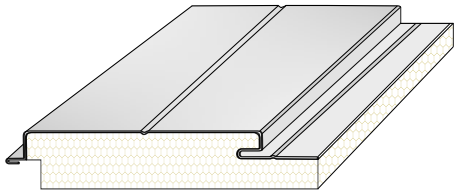
Non-Pleated

(7.5" with .5" reveil 203.2mm) (12" 304.8mm) (20" 508mm)

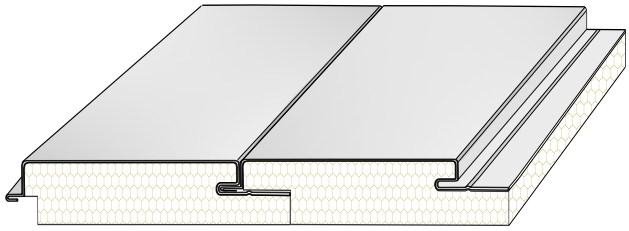


Single Pleat

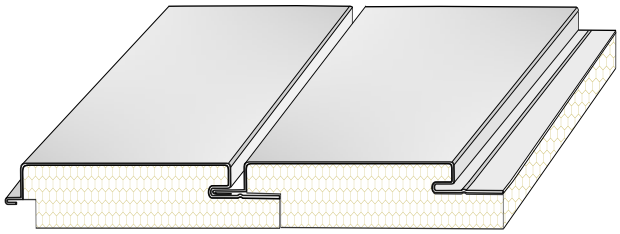
(7.5" with .5" reveil 203.2mm) (12" 304.8mm) (20" 508mm)



8" Tight Fit

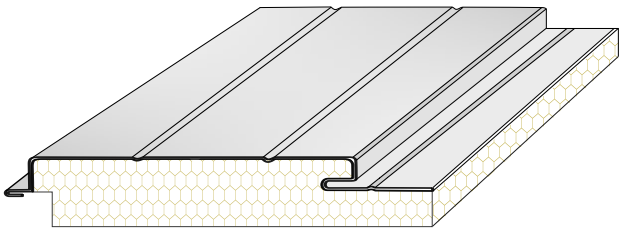


7.5" with 1/2" Reveal



Double Pleat

20" panel only



Panel Profile

(7.5" with .5" reveal- 203.2 mm)
(12"- 304.8 mm)
(20"- 508 mm)