SURE-PANEL®

Architectural Wall Panel Systems

Section 07 42 13
ALUMINUM COMPOSITE PANEL SYSTEM
Sure-Panel® Rainscreen ACM

PART 1 – GENERAL

1.1 RELATED DOCUMENTS

A. The drawings and provisions of the General Conditions, and the sections included under Division 1 specification sections, apply to this

1.2 SUMMARY

A. This section includes aluminum composite panels that are used as the exterior and interior cladding

1.3 PERFORMANCE REQUIREMENTS

A. Structural Performance: provide aluminum composite wall panels capable of withstanding the effects of normal stress from thermal movements and load affects from: wind loads, dead loads, and snow loads; without evidence of permanent defects of the assembly. System designed for a mechanically fastened assembly to substructure:
    1. Dead Load as required by the applicable building code.
    2. Live Load as required by applicable building code
    3. Wind Load: uniform pressure of pound/square foot, acting inward and outward.
    4. Thermal Movements: provide panel assemblies that allow for thermal movements to prevent buckling, opening of joints and other thermal effects

B. Pressure Equalized Rain Screen tested in accordance with AAMA 508-07

C. Structural Performance / Uniform Load Deflection Test: Provide panel system that has been tested in accordance with ASTM E330.

D. Air Infiltration: Panel system shall not have air infiltration rate more than 0.06 cfm per square foot of fixed wall area when tested in accordance with ASTM E283 at a static air pressure differential of 1.57 psf.

E. Static Water Penetration: Panel system shall have no water penetrations defined by in test method when tested in accordance with ASTM E331 at inward static pressure differential of 15% of the positive design pressure but not less than 6.24 psf.

F. Design the panel for a mechanically fastened assembly to substructure

G. Design panel tolerances to manufacturer's standard tolerances

H. Metal panels to have a maximum allowable deflection of L/6

1.4 SUBMITTALS

A. Products Data: Manufacturer's product literature

B. Finish Samples: Submit color samples for final approval
C. Shop Drawings: Submit shop drawings showing plans, sections, and elevation details

1.5 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum of five years' experience in manufacturing of metal wall panel product
B. Installer Qualifications: Acceptable to manufacturer

1.6 DELIVERY, STORAGE AND HANDLING

A. Delivery: Deliver metal panels in manufacturer's crates packed for long haul transit

B. Storage: Store materials in a dry and safe area

C. Handling: Handle Materials to avoid any damage to materials and finishes

1.7 WARRANTY

A. The contractor must warrant the materials to be free of defects in accordance with the general conditions. Finish warranty shall be extended by paint manufacturer's standard warranty

PART 2 – PRODUCTS

2.1 MANUFACTURER

A. Sure-Panel®, 11901 Riverwood Drive, Burnsville, Minnesota 55337, Telephone: (952) 938-3356, www.Sure-Panel.com Sure-Panel® Rainscreen Dry Set Aluminum Composite Panel System (Pressure Equalized Dry Joint)
B. Approved equal submitted for approval 10 days prior to bid

2.2 MATERIALS

A. Panels shall be 4 mm PE core, Aluminum Composite material unless FR (Fire Resistant) core required by the Architect
B. Aluminum composite will be composed of a thermoplastic core laminated between two aluminum sheets (.020") formed in a continuous process with no applied adhesives
C. Composite panels shall have a Class "A" building material rating when tested in accordance with ASTM E84 and performed to a flame spread of 15 and a smoke developed rating of 120

D. Aluminum Extrusions: ASTM B221, alloy 6000 series aluminum

E. Thickness: 4 mm PE core Aluminum Composite material unless otherwise specified

2.3 FABRICATION

A. Tolerances
    1. Brake form edges at right angles to the plane of the w

2. Reinforce panels with proper stiffening as required an applicable based on design loads
3. Panel surfaces shall be free of blemishes, scratches o marks caused during fabrication process

B. Assembly
    1. Extrusions installed in a mitered continuous perimeter application to ensure proper pressure equalization. System must have non-exposed fasteners but be mechanically fastened using a flat pan

2.4 ACCESSORIES

A. Sill starter, Edge clips and mid clips are required for final installation to exterior wall assembly.

2.5 FINISHES

A. Paint:
    1. Coating shall be a coil Applied Fluorocarbon Resin Utilizing a 70% Kynar 500/Hylar 5000 resin
    2. Color as selected by owner from paint manufacturer's standard colors or Custom colors as specified
    3. Material to be painted in accordance with either AAMA specification 2605 or 2604
B. Anodized:
    1. Class I, Clear Finish: AA-M12C22A41, mechanical finish, nonspecular as fabricated. Coating to have an anodic coating of 0.7 mil (0.018 mm) thickness
    2. Class I, Color Finish: AA-M12C22A42/A44, mechanical finish, nonspecular as fabricated. Color to be determined by Owner. Coating to have an anodic coating of 0.7 mil (0.018) thicknes

PART 3 – EXECUTION

3.1 PREPARATION

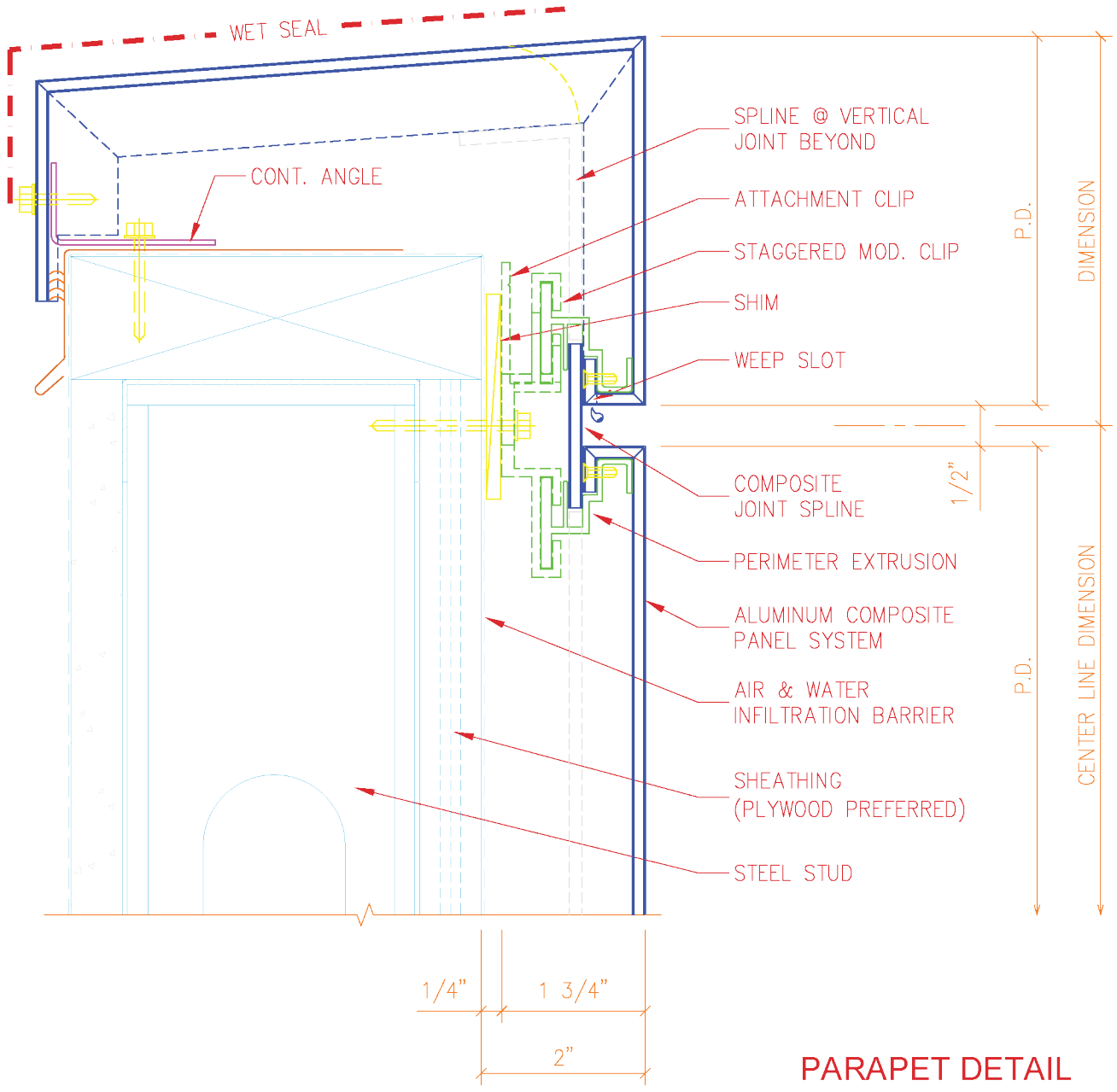
A. Coordinate drawings, diagrams, and instructions for installation
B. Verify that underlayment has been installed over sheathing to prevent air and infiltration or water penetration

3.2 INSTALLATION

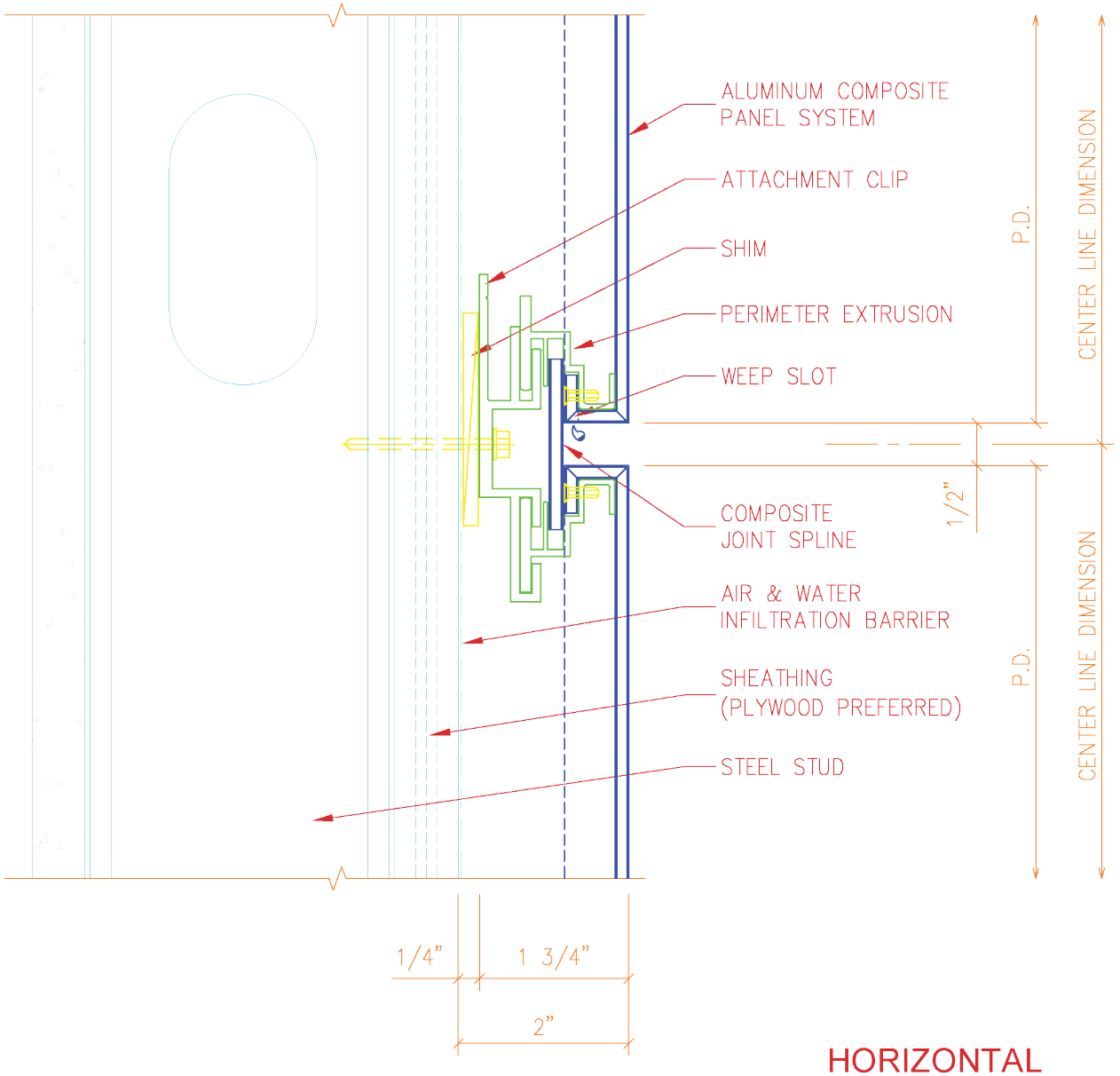
A. Install panels plumb and level per shop drawing detailing
B. Isolation tape or shim shall be installed where dissimilar materials come in contact

3.3 CLEANING AND PROTECTION

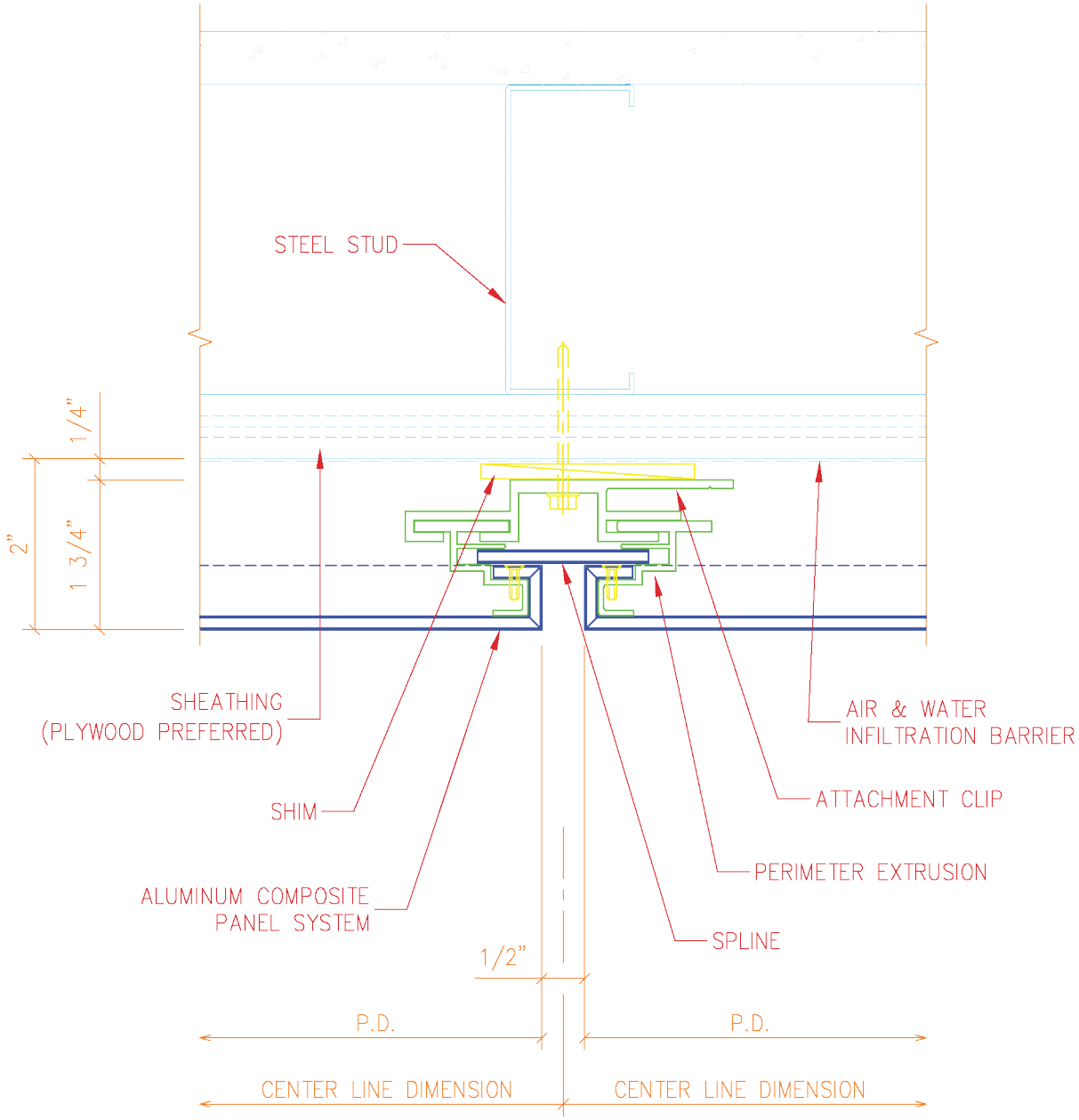
A. Clean exposed surfaces after installation per manufacturer's recommendation
B. Touch up minor abrasions in finish with touch up paint supplied by finish applicator



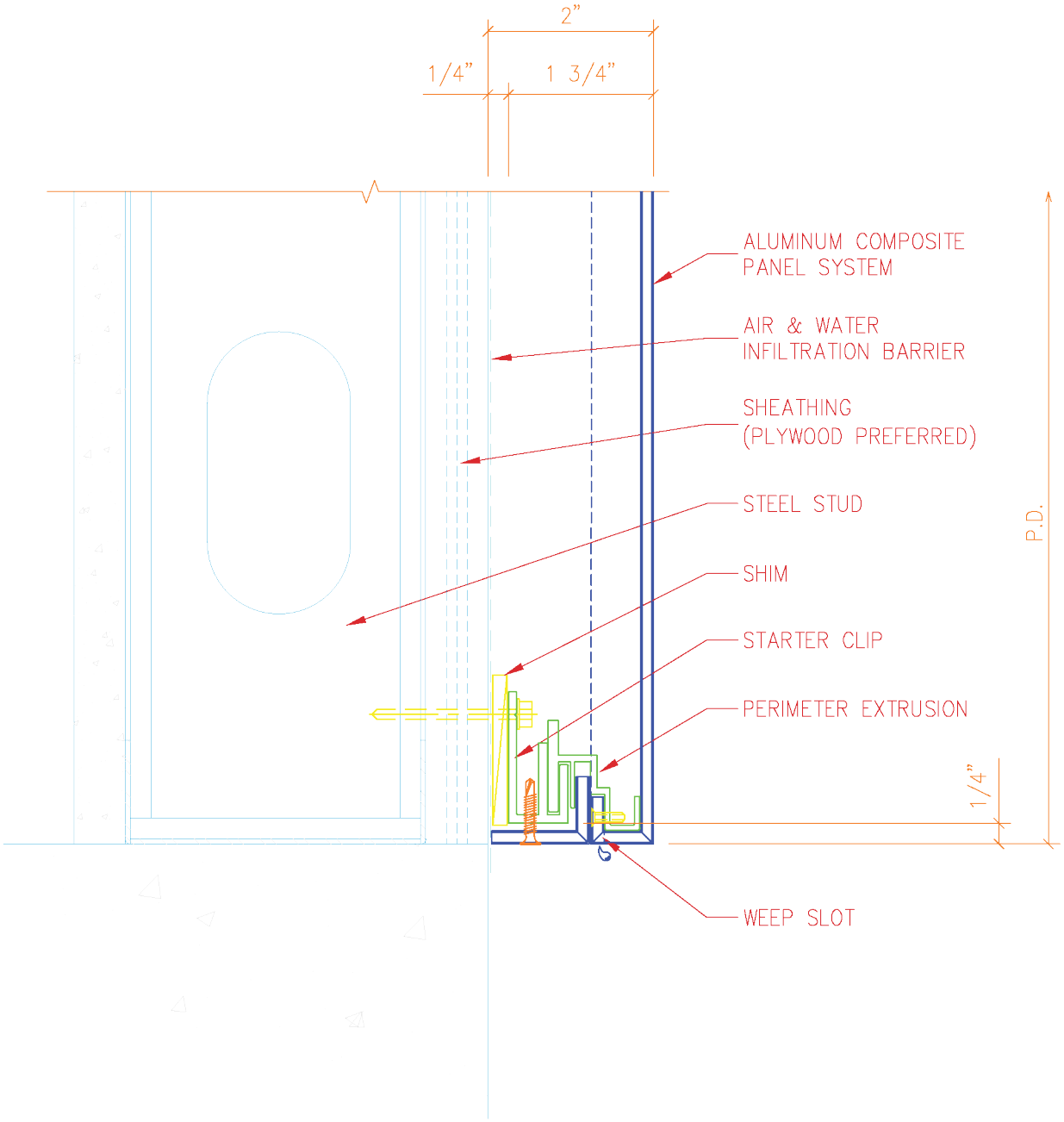
PARAPET DETAIL



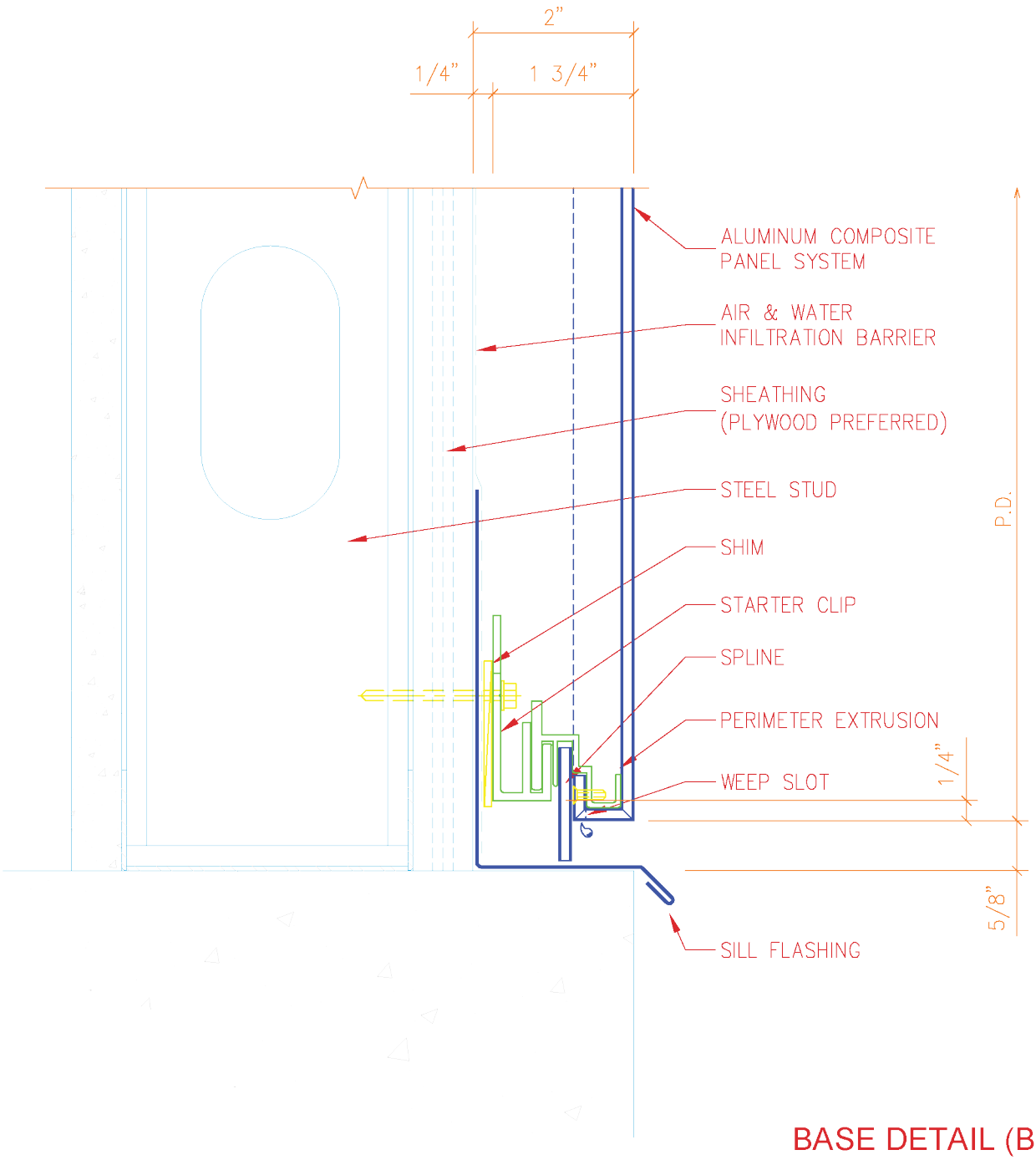
HORIZONTAL JOINT DETAIL



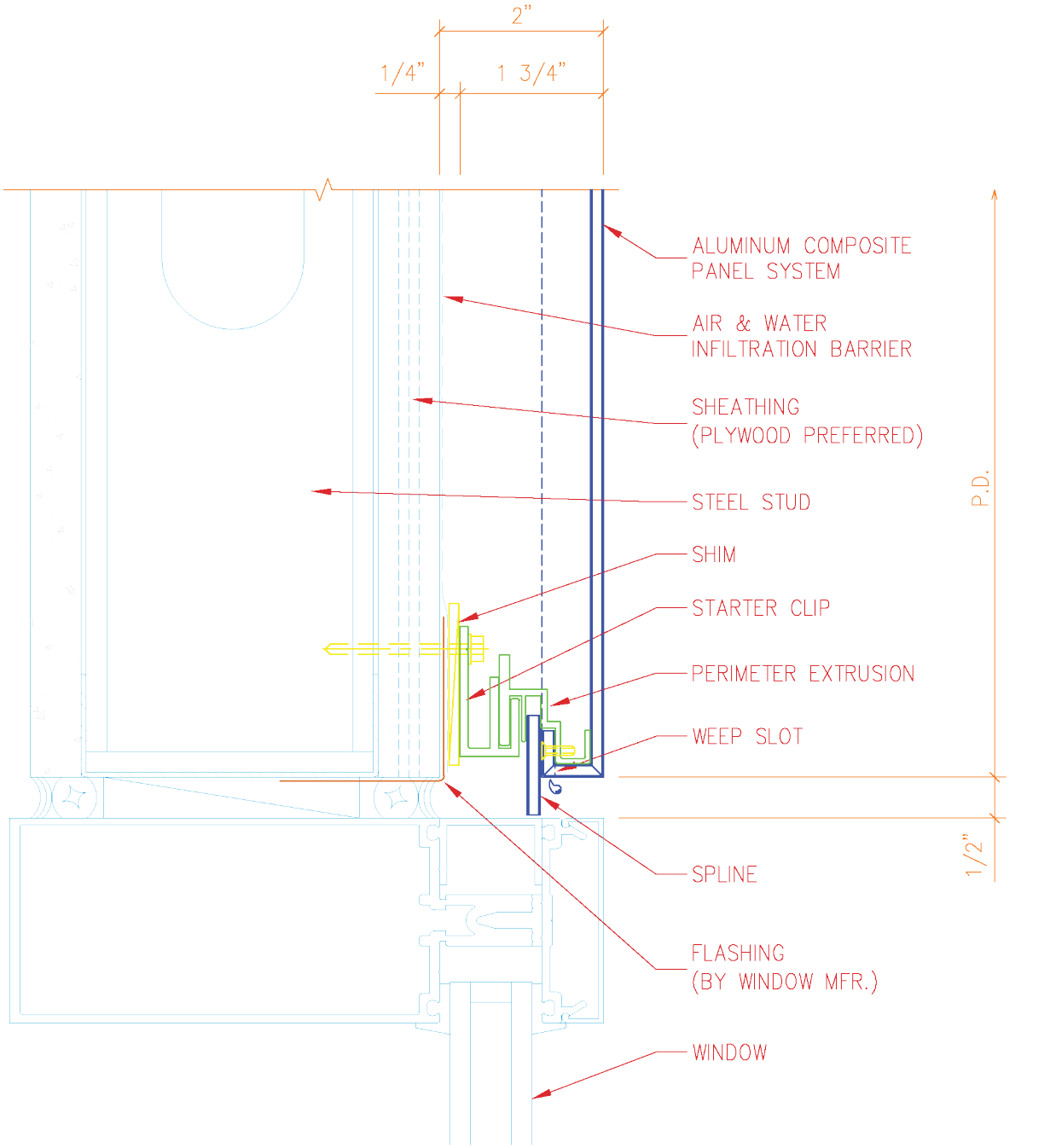
VERTICAL JOINT DETAIL



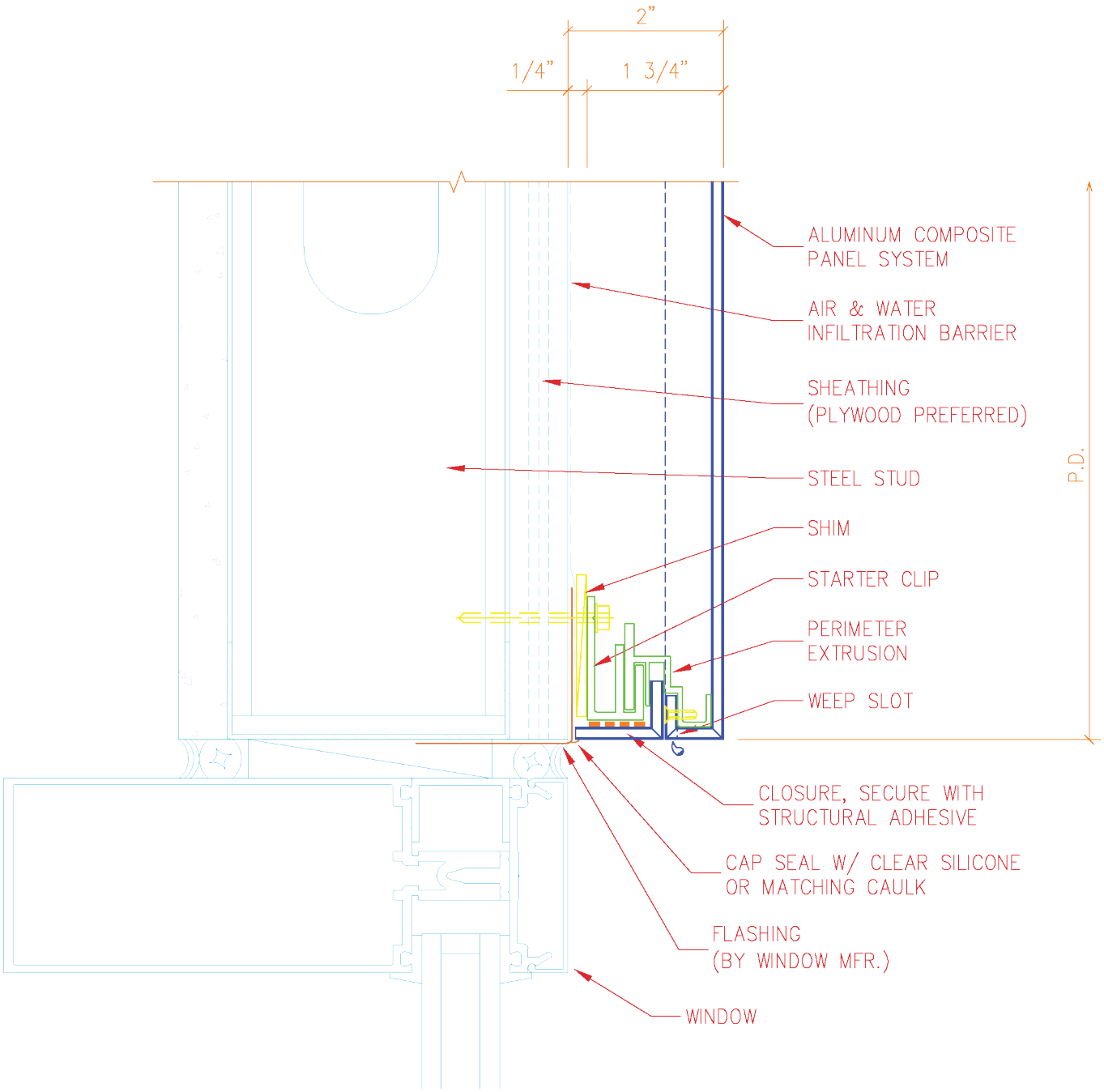
BASE DETAIL (A)



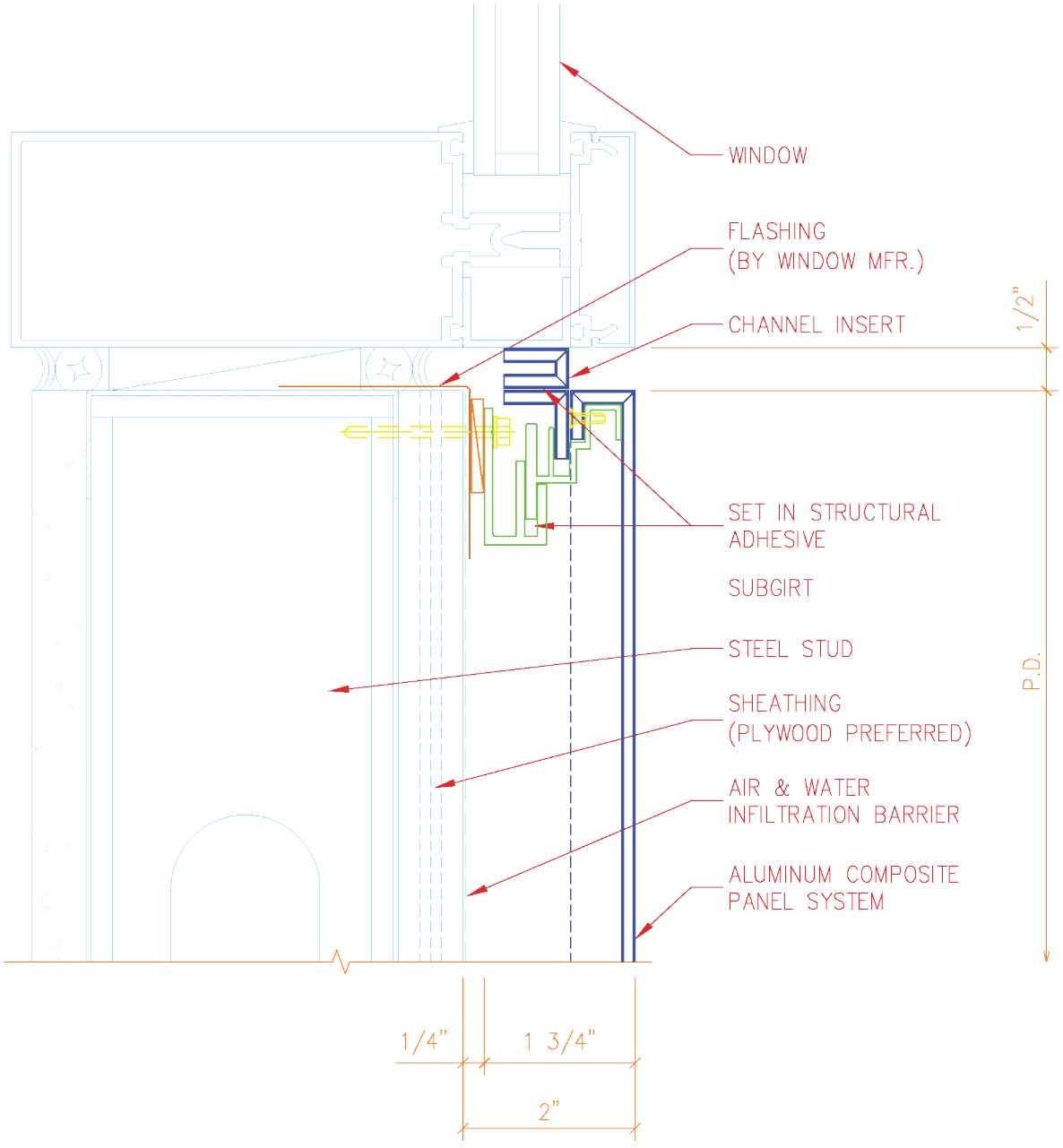
BASE DETAIL (B)



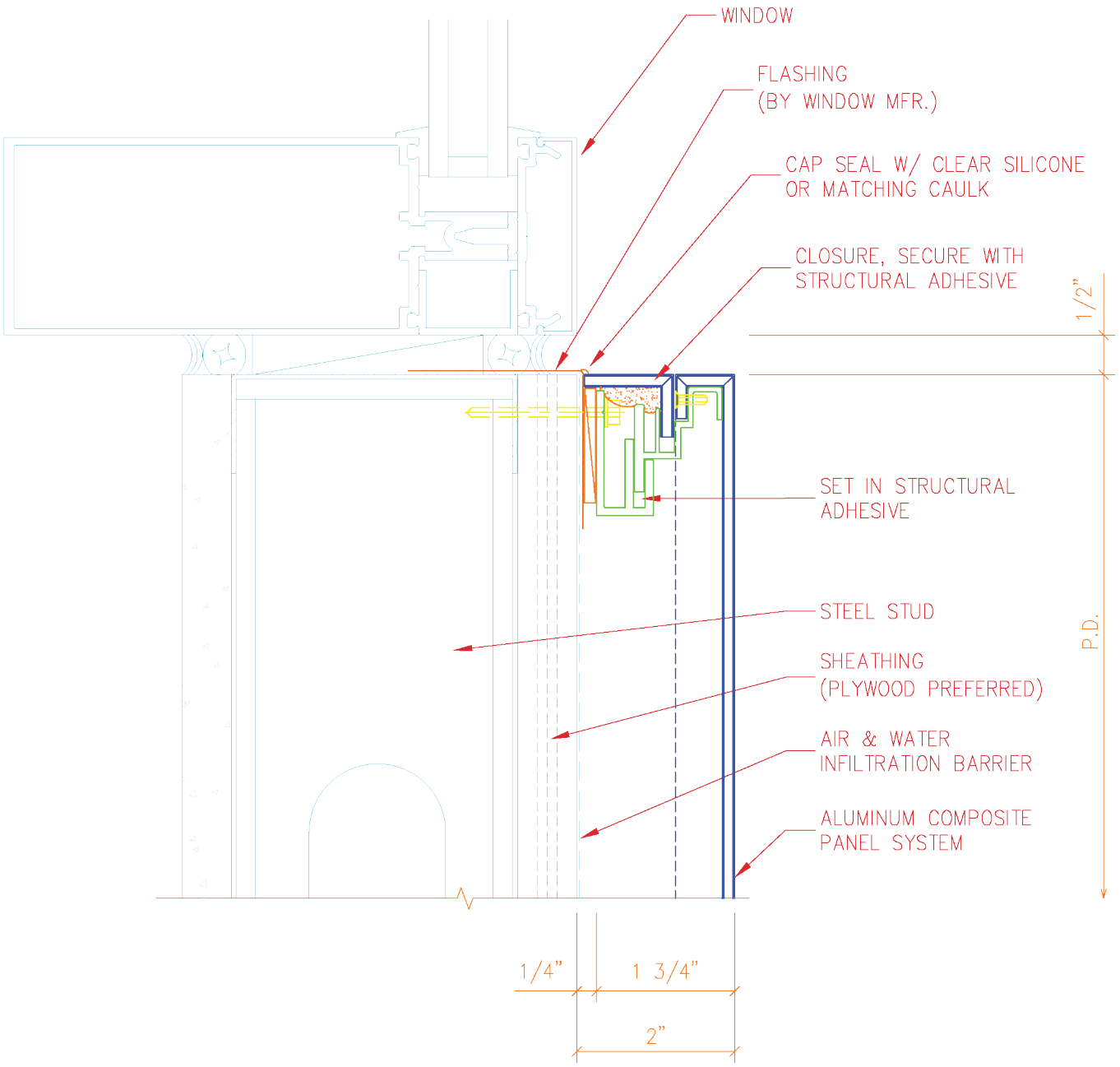
WINDOW HEAD DETAIL



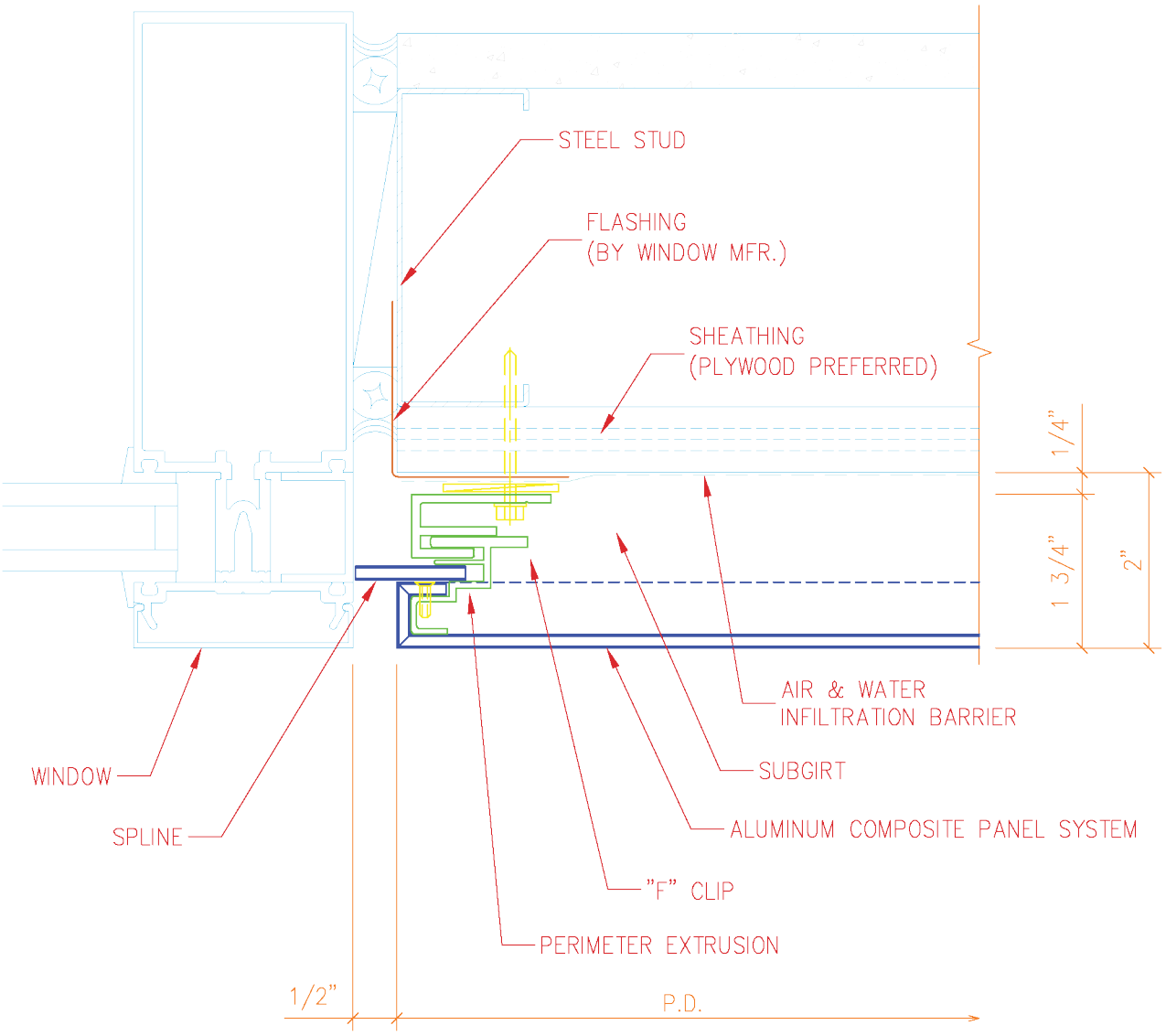
WINDOW HEAD DETAIL



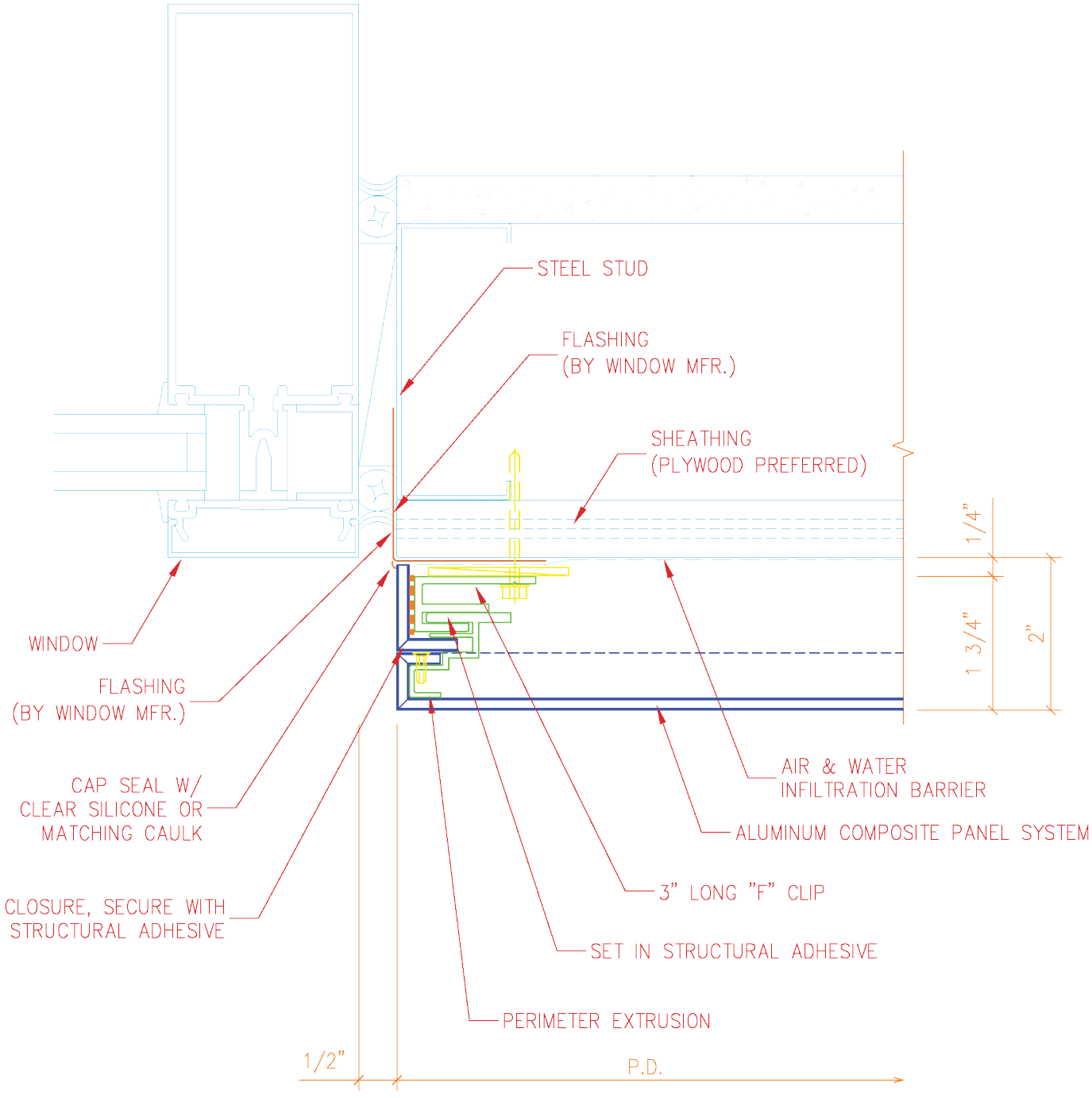
WINDOW SILL DETAIL



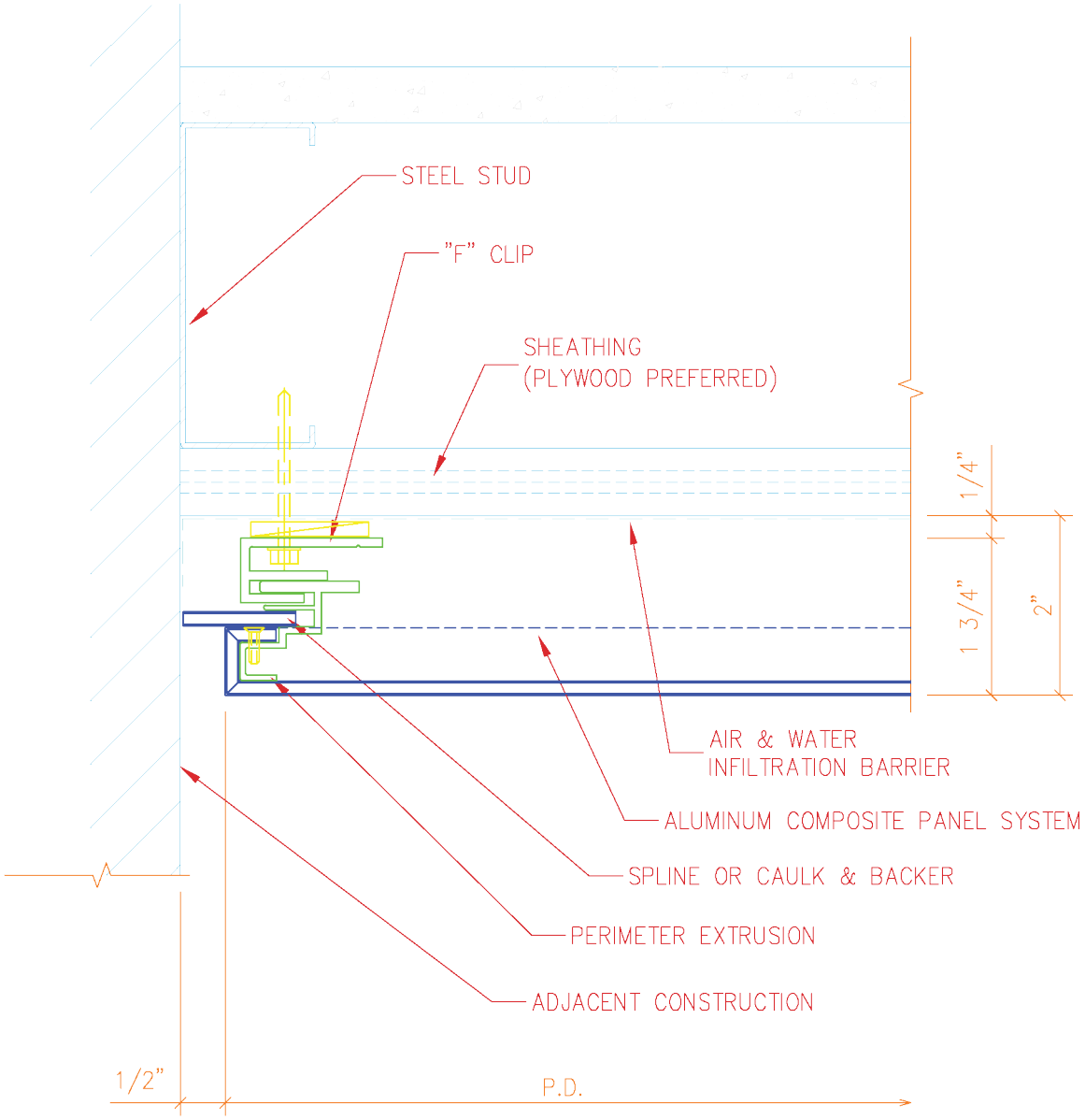
WINDOW SILL DETAIL



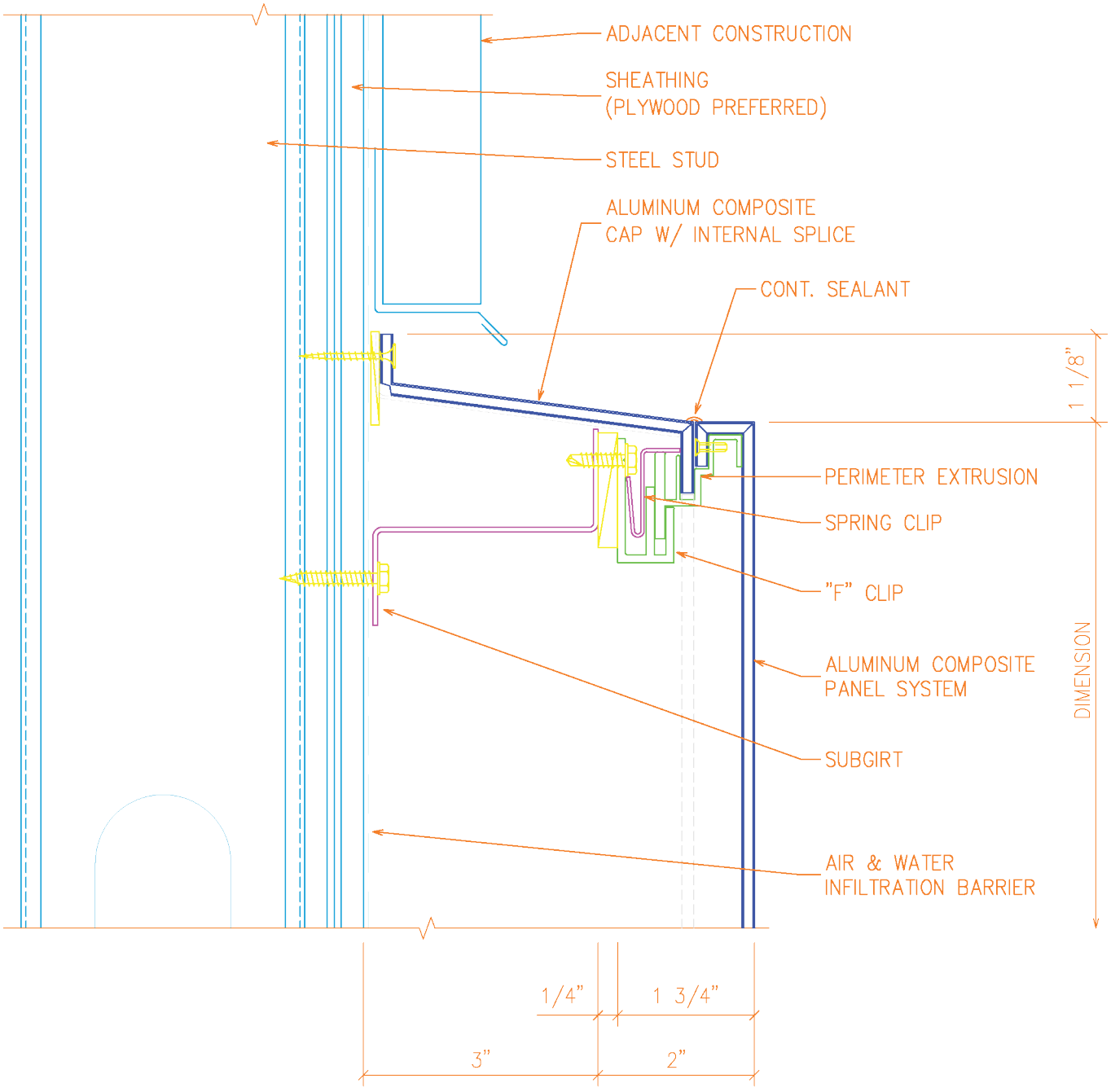
WINDOW JAMB DETAIL



WINDOW JAMB DETAIL


STEEL STUD
"F" CLIP
SHEATHING
(PLYWOOD PREFERRED)
1/4"
1 3/4"
2"
AIR & WATER
INFILTRATION BARRIER
ALUMINUM COMPOSITE PANEL SYSTEM
SPLINE OR CAULK & BACKER
PERIMETER EXTRUSION
ADJACENT CONSTRUCTION
1/2"
P.D.

JAMB DETAIL



TRANSITION DETAIL