

## IMPORTANT NOTICE

The following document is NOT comprehensive for design, bidding, or installation when used in isolation. Please refer to all related documents in their entirety for complete information regarding this ACM panel system. Such documents include, but may not be limited to, Technical Guides, Architectural Color Chart, Approved Materials List, Systems Guides, Technical Bulletins, Technical Data Sheets, CAD Drawings, Specifications, and Submittals. Visit [LaminatorsInc.com](http://LaminatorsInc.com) for information on the latest documents regarding this panel system.

To consult directly with one of our Professional Engineers regarding our ACM panel systems, contact Laminators Technical Support between the hours of 8:00am – 5:00pm EST:

800.523.2347

[LaminatorsInc.com](http://LaminatorsInc.com)

[engineering@laminatorsinc.com](mailto:engineering@laminatorsinc.com)

The following document contains a detail set for the application of the Dry Seal Installation System over a basic form of Continuous Insulation (CI) that consists of discrete structural rails or Z-girts combined with uncompressed insulation. Such “Alternate” CI (ALT CI or ACI) may be preferred to Laminators Omega CI (OCI) rigid insulation panels. Although many forms of proprietary CI are available, the detail set is intended to represent the relationship of a Dry Seal installation over basic ALT CI.

Laminators has not performed fire testing of the Dry Seal Installation System over any ALT CI, nor has any application of an engineering extension been made with respect to NFPA 285 compliance. Therefore, no claims can be made by Laminators regarding potential impact of ALT CI on the fire performance of the project-specific exterior wall assembly. As such, all specialized detailing requirements for NFPA 285 compliance represented in the detail set are specific to the installation system “layer” of the exterior wall assembly based on historical fire testing without ALT CI.

## **INSTRUCTIONS FOR NFPA 285 COMPLIANCE**

With respect to fire performance, note the following when detailing the Dry Seal Installation System over basic ALT CI comprised of vertical structural rails or Z-girts combined with uncompressed insulation (ACI-V):

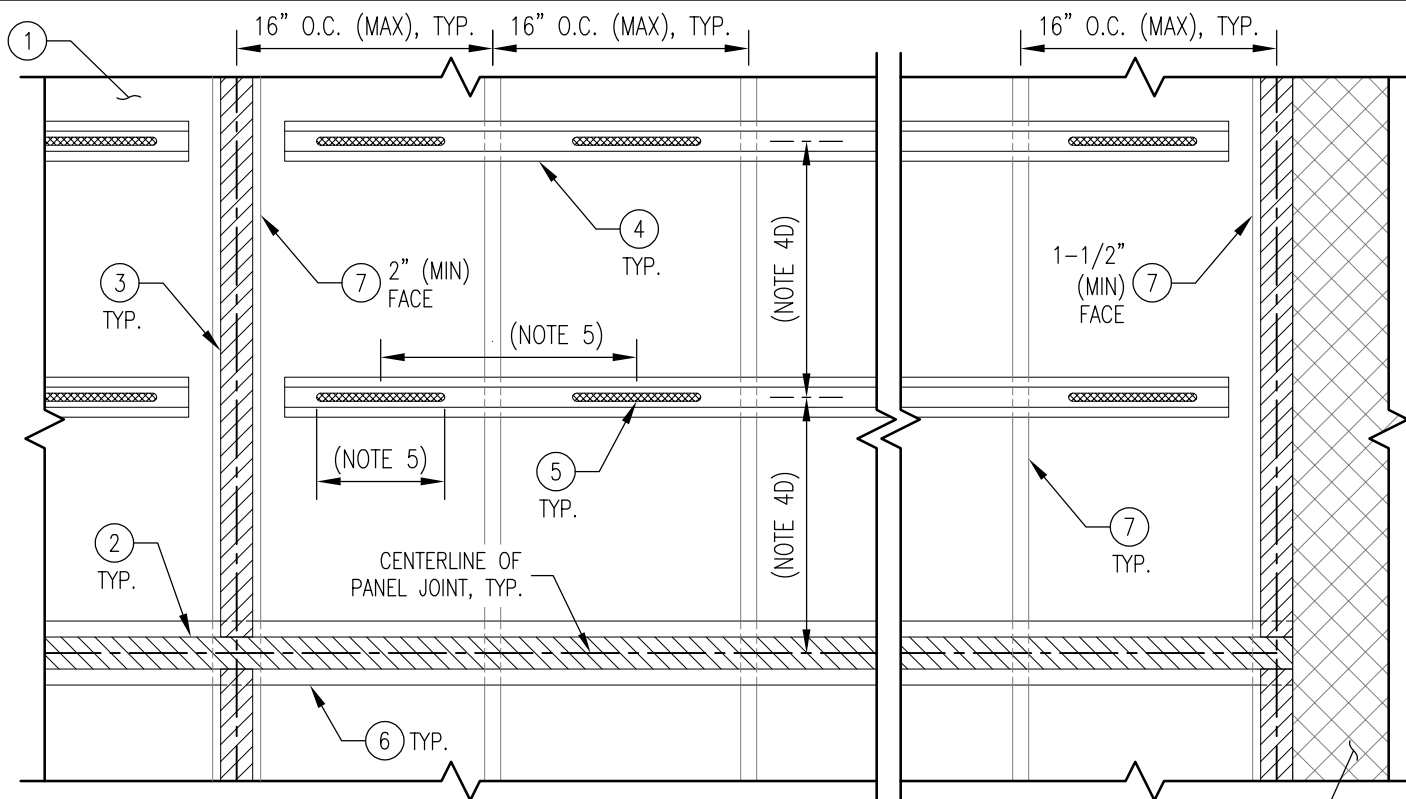
1. The following document represents the referenced system as it has been designed, detailed, and tested and its relationship with a typical exterior wall assembly. As such, the document may be considered a baseline for the system and appropriately applied to project-specific conditions.
  - a. Laminators defines the NFPA 285 Zone as the area contained within a 10'-0" height above any window by the width of the window opening. The following document does not include a partial elevation that outlines the NFPA 285 Zone and related dimensions, notes, and sections. However, in order to maintain NFPA 285 compliance, specialized detailing is still required in the NFPA 285 Zone and at window heads as follows:
    - i. Additional layers of steel flashing are required at window heads per detail DS-ACI-V-02A.
    - ii. Vertical panel joints are not permitted above window openings within the NFPA 285 Zone. All vertical joints must align with vertical window jambs or mullions.
2. Through the use of a specific Engineering Evaluation (EEV) available from Laminators, engineering extensions may be made (in lieu of what has been tested) with respect to base wall framing, fire-stopping at floor lines, cavity insulation, and water-resistive barrier (WRB) components while maintaining NFPA 285 compliance. Note that with respect to CI, the engineering extensions provided in the EEV are only applicable to Laminators OCI rigid insulation panels and do not address basic ALT CI or any other form of proprietary CI. The EEV may be required for submission to the Authority Having Jurisdiction (AHJ) to support the extensions.
3. If one or more engineering extensions are required beyond what is provided in the EEV available from Laminators, it is the responsibility of a third-party to pursue obtaining a separate EEV that adequately addresses each intended substitution. Note that Laminators cannot serve as the third-party in efforts to obtain such an EEV.

Note that the application of any engineering extension for NFPA 285 compliance will need to be evaluated by the Design Professional of Record (DPR) with respect to potential impact on any air, structural, and water performance of the project-specific exterior wall assembly. It is possible that components substituted to achieve fire testing compliance will affect the assembly differently with respect to air, structural, and water performance and need to be coordinated.

If the Dry Seal Installation System is intended to be installed over a different substrate (e.g. fire-retardant-treated wood (FRTW) structural sheathing (panels), gypsum (non-structural) sheathing, CMU, concrete, or Omega CI rigid insulation panels), please defer to the appropriate detail set.

DRAWING INDEX – DS-ACI-V DETAIL SET (Rev 00, 12/03/2020)

DWG NO.	TITLE	REV DATE	REV	CHANGE FROM PREVIOUS REV
DS-ACI-V-EL	Partial System Elevation	12/3/2020	00	
DS-ACI-V-ST	Panel Stiffener Detail	12/3/2020	00	
DS-ACI-V-01H	Horizontal Joint Detail	12/3/2020	00	
DS-ACI-V-01V	Vertical Joint Detail	12/3/2020	00	
DS-ACI-V-02	Window Head Detail	12/3/2020	00	
DS-ACI-V-02A	Window Head Detail (NFPA 285 Zone)	12/3/2020	00	
DS-ACI-V-03	Window Sill Detail	12/3/2020	00	
DS-ACI-V-04	Window Jamb / Vertical Edge Detail	12/3/2020	00	
DS-ACI-V-05	Top of Wall Detail	12/3/2020	00	
DS-ACI-V-06	Base of Wall (Grade) Detail	12/3/2020	00	
DS-ACI-V-07	Inside Corner Detail	12/3/2020	00	
DS-ACI-V-08	Outside Corner Detail	12/3/2020	00	
DS-ACI-V-09	Fascia-to-Soffit Transition Detail	12/3/2020	00	
DS-ACI-V-10	Soffit-to-Wall Transition Detail w/ Joint	12/3/2020	00	
DS-ACI-V-11	Soffit Vent Requirements	12/3/2020	00	



**PARTIAL SYSTEM ELEVATION  
(PANELS AND EXTRUSIONS NOT SHOWN)**

WINDOW OR ADJACENT  
WALL SYSTEM BY OTHERS

- ① CONTINUOUS INSULATION (CI) SYSTEM OVER EXTERIOR WALL ASSEMBLY; LOCATION OF AIR AND WATER BARRIER AND DRAINAGE PLANE TO BE DETERMINED BY DESIGN PROFESSIONAL OF RECORD
- ② CONTINUOUS HORIZONTAL FOAM TAPE APPLIED TO COLD-FORMED STRAPPING ALONG HORIZONTAL PANEL JOINTS
- ③ CONTINUOUS VERTICAL FOAM TAPE APPLIED TO VERTICAL CI RAILS ALONG VERTICAL PANEL JOINTS AND VERTICAL JAMB/EDGES
- ④ PANEL STIFFENERS (1-1/2" HAT CHANNELS, 18 GA. MIN)
  - A. MAINTAIN 3" GAPS BETWEEN ENDS OF PANEL STIFFENERS AND PANEL EDGES
  - B. PANEL STIFFENERS MUST BE ORIENTED HORIZONTALLY AND SUPPORTED BY A MINIMUM OF (2) VERTICAL CI RAILS
  - C. FASTEN STIFFENERS TO VERTICAL CI RAILS USING (2) #10 X 1/2" (MIN) SELF-DRILLING SCREWS PER RAIL LOCATION ALONG HAT CHANNEL FLANGES (REFER TO DETAIL DS-ACI-V-ST)
  - D. REQUIRED PANEL STIFFENER SPACING TO BE BASED ON PROJECT SPECIFIC WIND LOADS:
    - UP TO 40 PSF (ASD): STIFFENERS REQUIRED AT 24" O.C.
    - GREATER THAN 40 PSF (ASD), UP TO 60 PSF (ASD): STIFFENERS REQUIRED AT 16" O.C.
- ⑤ 1/4" (MIN) TO 3/8" (MAX) BEAD OF LAMINATORS APPROVED PANEL ADHESIVE APPLIED TO PANEL STIFFENERS (REFER TO DETAIL DS-ACI-V-ST); LENGTH AND SPACING OF ADHESIVE BEADS TO BE BASED ON PROJECT SPECIFIC WIND LOADS:
  - UP TO 60 PSF (ASD): 8" ADHESIVE LENGTHS AT 16" O.C.
- ⑥ CONTINUOUS 4" COLD-FORMED STRAPPING (18 GA. MIN) FASTENED TO VERTICAL CI RAILS USING (3) #8 X 1/2" PPH SELF-DRILLING SCREWS PER RAIL LOCATION
  - HORIZONTAL STRAPPING INSTALLED AT ALL HORIZONTAL PANEL JOINTS/EDGES
- ⑦ VERTICAL CI RAILS INSTALLED AT 16" O.C. (MAX)
  - A. RAIL DESIGN AND ATTACHMENT TO STRUCTURE TO BE DETERMINED BY DESIGN PROFESSIONAL OF RECORD
  - B. RAILS TO BE 18 GA. (MIN) COLD-FORMED STEEL
  - C. RAILS TO BE LOCATED AT ALL VERTICAL PANEL JOINTS AND VERTICAL JAMB/EDGE CONDITIONS AND COORDINATED WITH WALL FRAMING
  - D. FACE OF RAILS MUST MEET THE FOLLOWING GEOMETRIC REQUIREMENTS FOR PANEL SYSTEM INSTALLATION:
    - VERTICAL JOINT SUPPORTS: 2" (MIN) FACE WIDTH
    - VERTICAL JAMB/EDGE SUPPORTS: 1-1/2" (MIN) FACE WIDTH

#### IMPORTANT NOTICE

PROJECT-SPECIFIC COMPONENTS AND CLADDING WIND LOADS (REQUIRED STRENGTH,  $R_d$ ) SHALL NOT EXCEED AVAILABLE LOAD-CARRYING CAPACITY OF SYSTEM (ALLOWABLE STRENGTH,  $R_n/\Omega$ )

- A. PROJECT-SPECIFIC COMPONENTS AND CLADDING WIND LOADS ARE TO BE DETERMINED BY THE DESIGN PROFESSIONAL OF RECORD
- B. AVAILABLE LOAD-CARRYING CAPACITY OF SYSTEM (UP TO 60 PSF) IS BASED ON ALLOWABLE STRENGTH DESIGN (ASD) METHOD
- C. FOR PROJECT-SPECIFIC COMPONENTS AND CLADDING WIND LOADS GREATER THAN 60 PSF, CONTACT LAMINATORS TECHNICAL SUPPORT FOR PROJECT-SPECIFIC DETAILING REQUIREMENTS



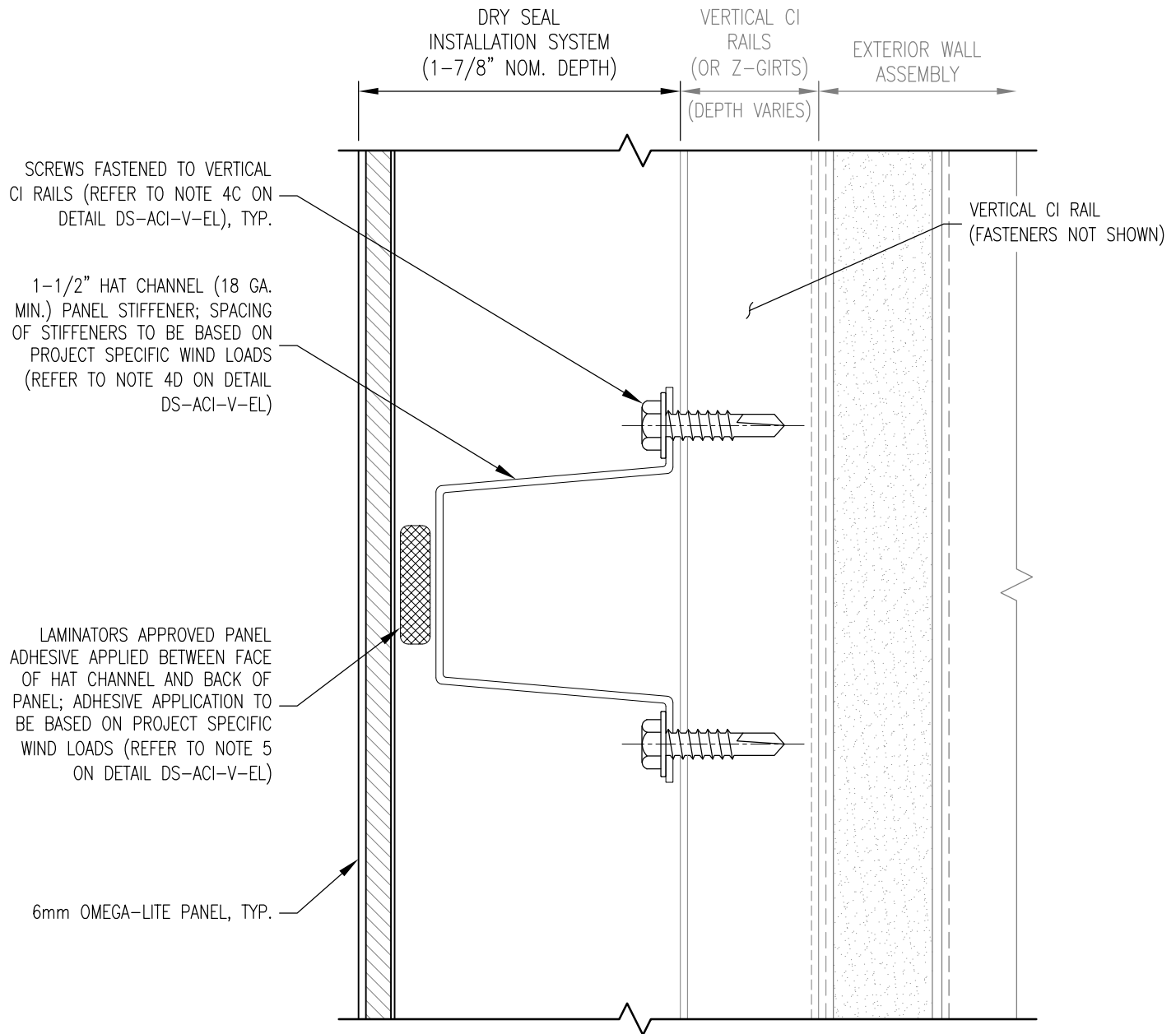
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#### PARTIAL SYSTEM ELEVATION

#### DRY SEAL INSTALLATION SYSTEM OVER ALT CI SYSTEM (WITH VERTICAL RAILS)

Date: 12/3/2020	Drawn By: JJM	Dwg. No.: DS-ACI-V-EL	Rev: 00
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#### SECTION

#### DETAIL NOTES:

1. SPACING SHOWN BETWEEN SOME INSTALLATION SYSTEM COMPONENTS EXAGGERATED FOR CLARITY
2. PANEL STIFFENERS TO BE FASTENED TO SUBSTRATE PRIOR TO PANEL INSTALLATION; REFER TO DETAIL DS-ACI-V-EL FOR ADDITIONAL INFORMATION
3. FULL CONTACT OF PANEL ADHESIVE WITH BACK OF PANEL REQUIRED AT ALL APPLICATION LOCATIONS



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#### PANEL STIFFENER DETAIL

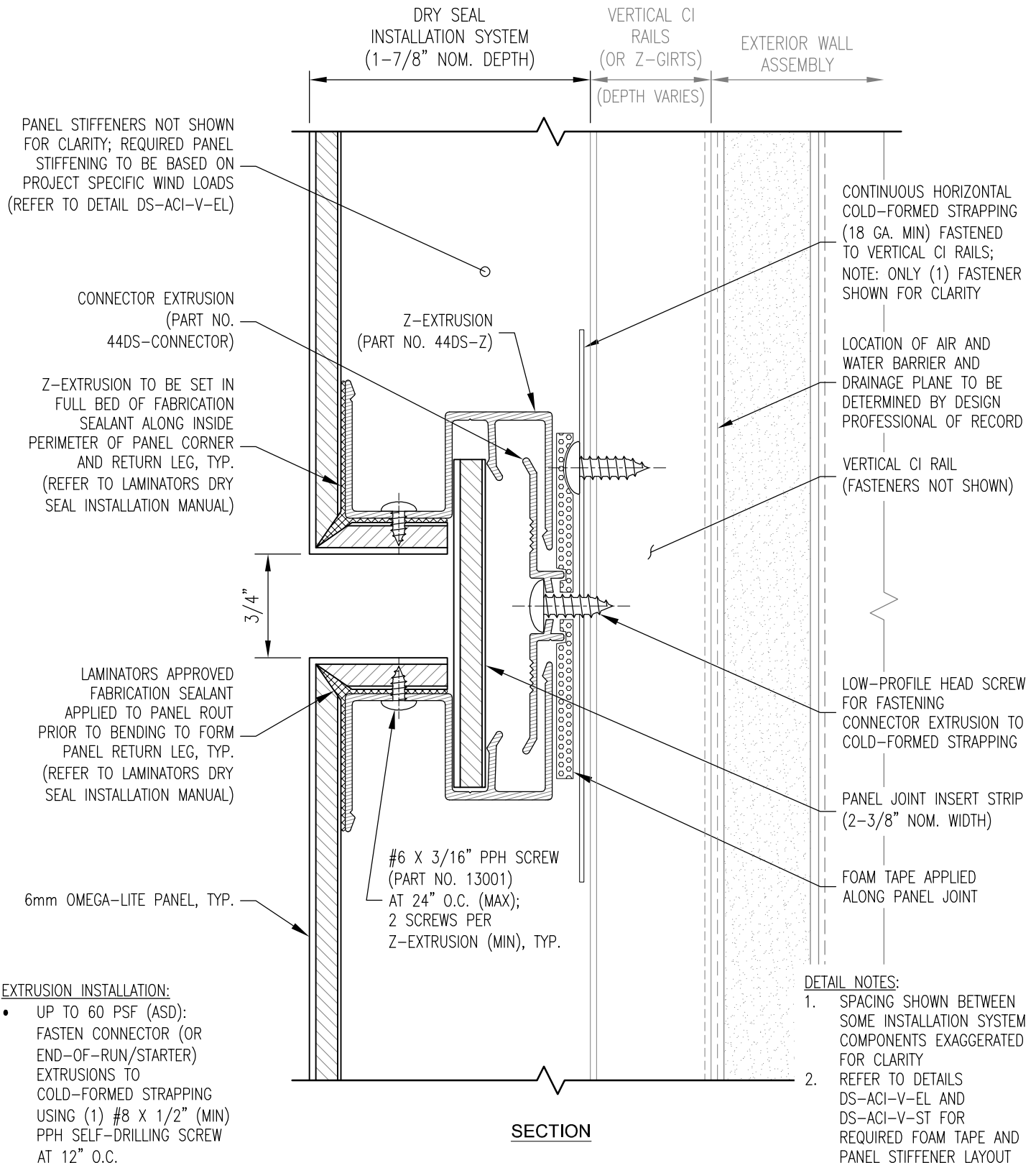
#### DRY SEAL INSTALLATION SYSTEM OVER ALT CI SYSTEM (WITH VERTICAL RAILS)

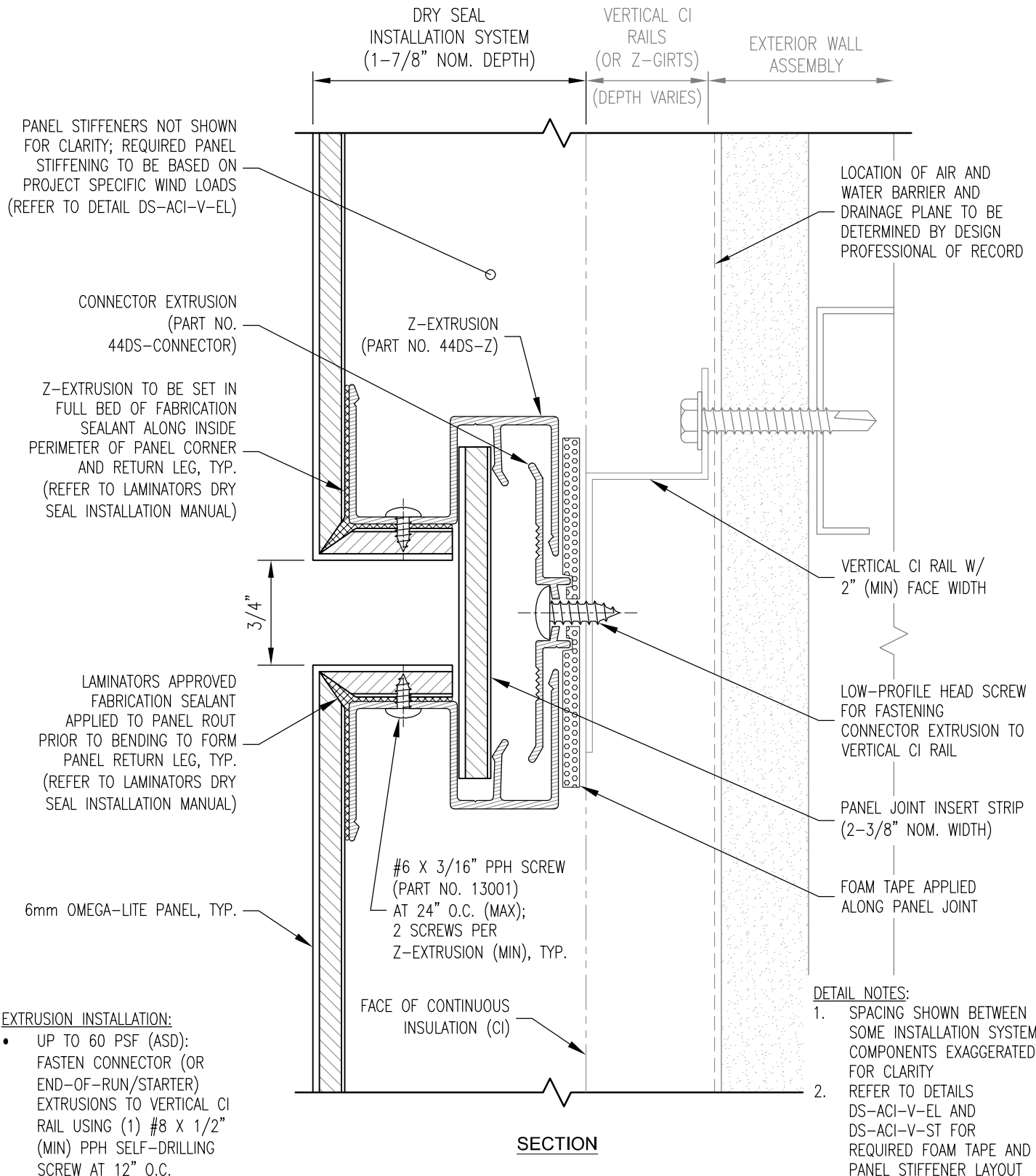
Date:  
12/3/2020

Drawn By:  
JJM

Dwg. No.:  
DS-ACI-V-ST

Rev:  
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#### EXTRUSION INSTALLATION:

- UP TO 60 PSF (ASD): FASTEN CONNECTOR (OR END-OF-RUN/STARTER) EXTRUSIONS TO VERTICAL CI RAIL USING (1) #8 X 1/2" (MIN) PPH SELF-DRILLING SCREW AT 12" O.C.

#### VERTICAL JOINT DETAIL

#### DRY SEAL INSTALLATION SYSTEM OVER ALT CI SYSTEM (WITH VERTICAL RAILS)

Date:  
12/3/2020

Drawn By:  
JJM

Dwg. No.:  
DS-ACI-V-01V

Rev:  
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ALUMINUM FLASHING  
BY OTHERS; COORDINATE WITH  
LOCATION OF AIR AND WATER  
BARRIER AND DRAINAGE PLANE

CONTINUOUS HORIZONTAL  
COLD-FORMED STRAPPING  
(18 GA. MIN) APPLIED ALONG  
PANEL EDGE AND FASTENED  
TO VERTICAL CI RAILS;  
NOTE: ONLY (1) FASTENER  
SHOWN FOR CLARITY

HORIZONTAL FOAM TAPE  
APPLIED ALONG PANEL EDGE

END-OF-RUN/STARTER  
EXTRUSION  
(PART NO. 44DS-ENDRUN)

3" LONG, 5/8" X 1/2" FOAM  
TAPE STRIPS AT 36" O.C.  
BETWEEN PANEL INSERT STRIP  
AND END-OF-RUN/STARTER  
EXTRUSION

PANEL END JOINT  
INSERT STRIP  
(1-1/2" NOM. WIDTH)

3/4"

HORIZONTAL LEG OF  
FLASHING TO EXTEND  
TO FACE OF PANEL;  
DRIP EDGE (OPTIONAL)

AIR AND WATER BARRIER  
TO LAP OVER FLASHING  
IN SHINGLE FASHION

VERTICAL CI RAIL  
(FASTENERS NOT  
SHOWN)

#### DETAIL NOTES:

1. SPACING SHOWN BETWEEN SOME  
INSTALLATION SYSTEM COMPONENTS  
EXAGGERATED FOR CLARITY
2. REFER TO DETAILS DS-ACI-V-EL  
AND DS-ACI-V-ST FOR REQUIRED  
FOAM TAPE AND PANEL STIFFENER  
LAYOUT
3. REFER TO JOINT DETAILS  
DS-ACI-V-01H AND DS-ACI-V-01V  
FOR EXTRUSION FASTENING  
REQUIREMENTS AND TYPICAL  
COMPONENTS NOT ANNOTATED

COORDINATE TERMINATION OF  
FLASHING WITH WINDOW  
SYSTEM; WATER CONTROLS AT  
INTERFACE BY OTHERS

WINDOW SYSTEM BY OTHERS

#### SECTION



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#### WINDOW HEAD DETAIL

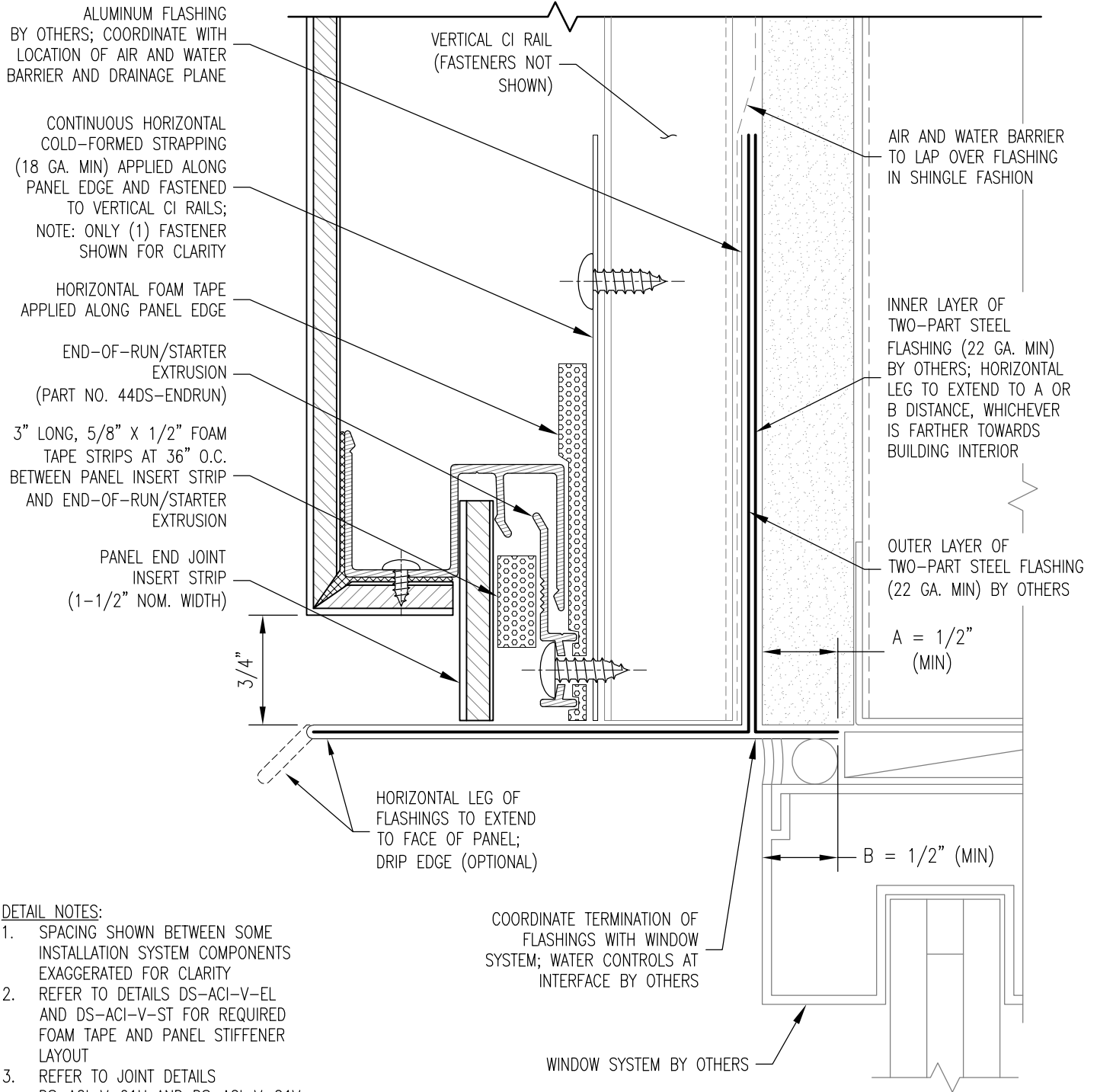
#### DRY SEAL INSTALLATION SYSTEM OVER ALT CI SYSTEM (WITH VERTICAL RAILS)

Date:  
12/3/2020

Drawn By:  
JJM

Dwg. No.:  
DS-ACI-V-02

Rev:  
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**DETAIL NOTES:**

1. SPACING SHOWN BETWEEN SOME INSTALLATION SYSTEM COMPONENTS EXAGGERATED FOR CLARITY
2. REFER TO DETAILS DS-ACI-V-EL AND DS-ACI-V-ST FOR REQUIRED FOAM TAPE AND PANEL STIFFENER LAYOUT
3. REFER TO JOINT DETAILS DS-ACI-V-01H AND DS-ACI-V-01V FOR EXTRUSION FASTENING REQUIREMENTS AND TYPICAL COMPONENTS NOT ANNOTATED

**SECTION**



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**WINDOW HEAD DETAIL (NFPA 285 ZONE)**

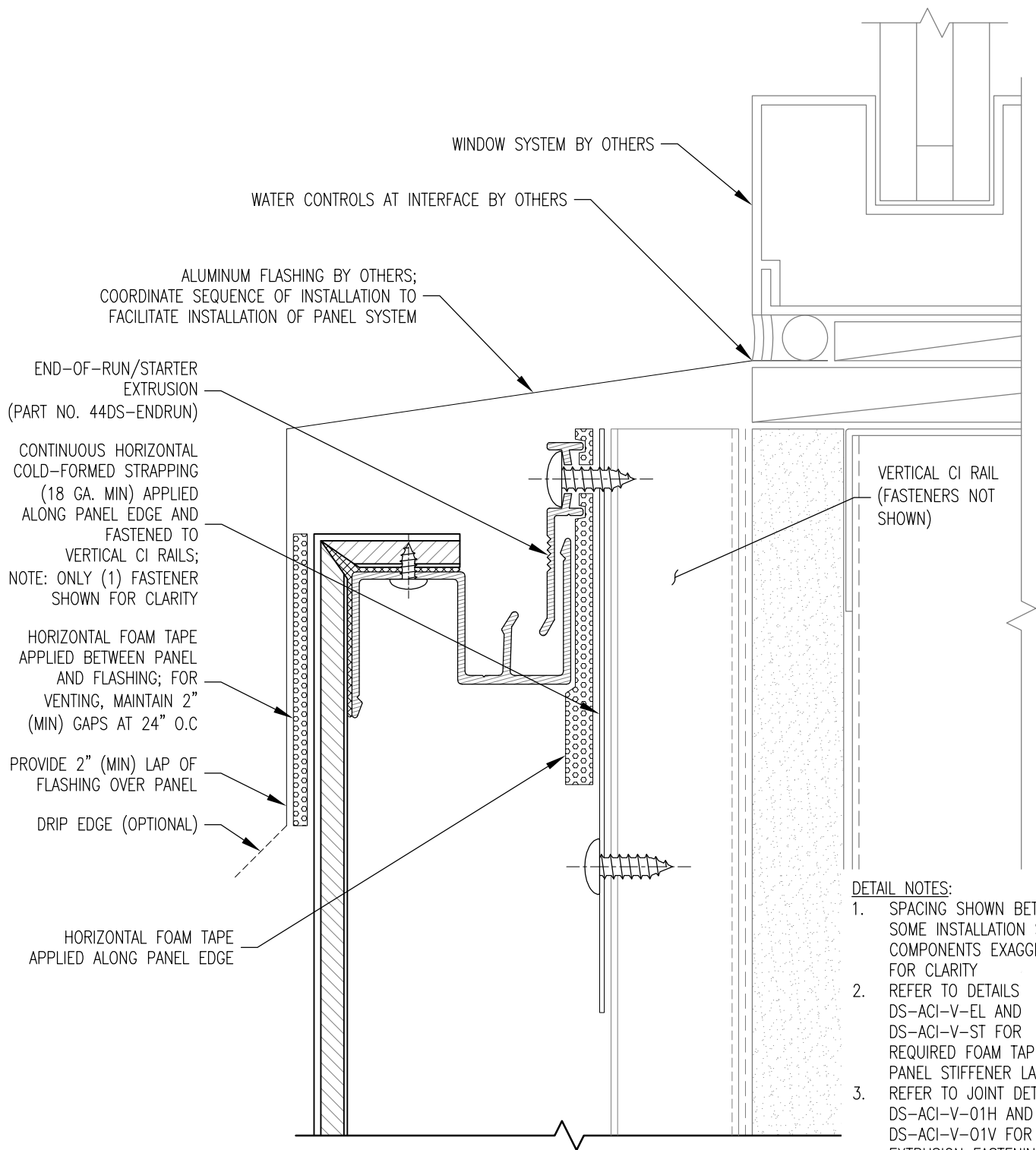
**DRY SEAL INSTALLATION SYSTEM  
OVER ALT CI SYSTEM (WITH VERTICAL RAILS)**

Date:  
12/3/2020

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JJM

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DS-ACI-V-02A

Rev:  
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SECTION



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## WINDOW SILL DETAIL

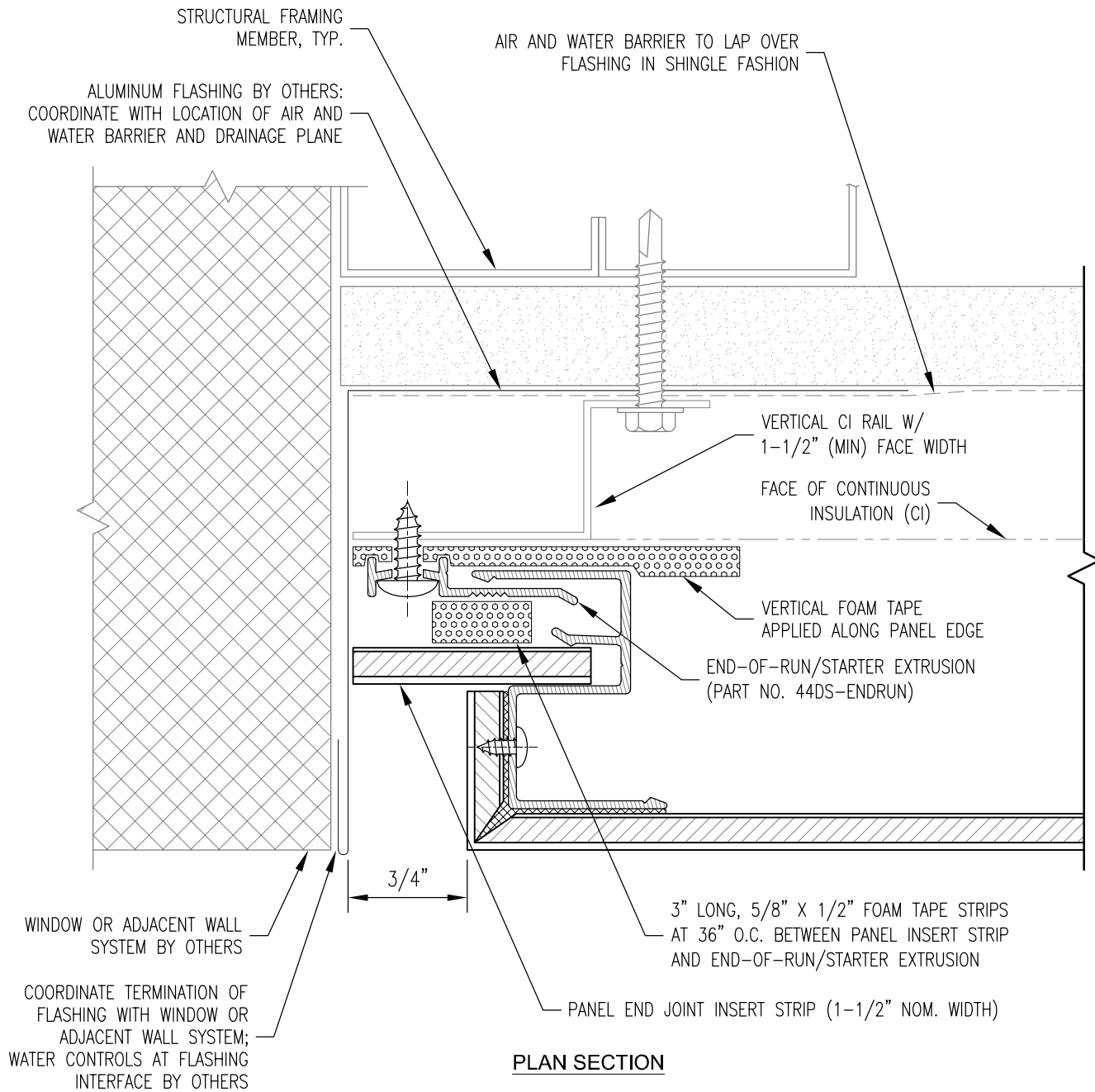
### DRY SEAL INSTALLATION SYSTEM OVER ALT CI SYSTEM (WITH VERTICAL RAILS)

Date:  
12/3/2020

Drawn By:  
JJM

Dwg. No.:  
DS-ACI-V-03

Rev:  
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**DETAIL NOTES:**

1. SPACING SHOWN BETWEEN SOME INSTALLATION SYSTEM COMPONENTS EXAGGERATED FOR CLARITY
2. REFER TO DETAILS DS-ACI-V-EL AND DS-ACI-V-ST FOR REQUIRED FOAM TAPE AND PANEL STIFFENER LAYOUT
3. REFER TO JOINT DETAILS DS-ACI-V-01H AND DS-ACI-V-01V FOR EXTRUSION FASTENING REQUIREMENTS AND TYPICAL COMPONENTS NOT ANNOTATED



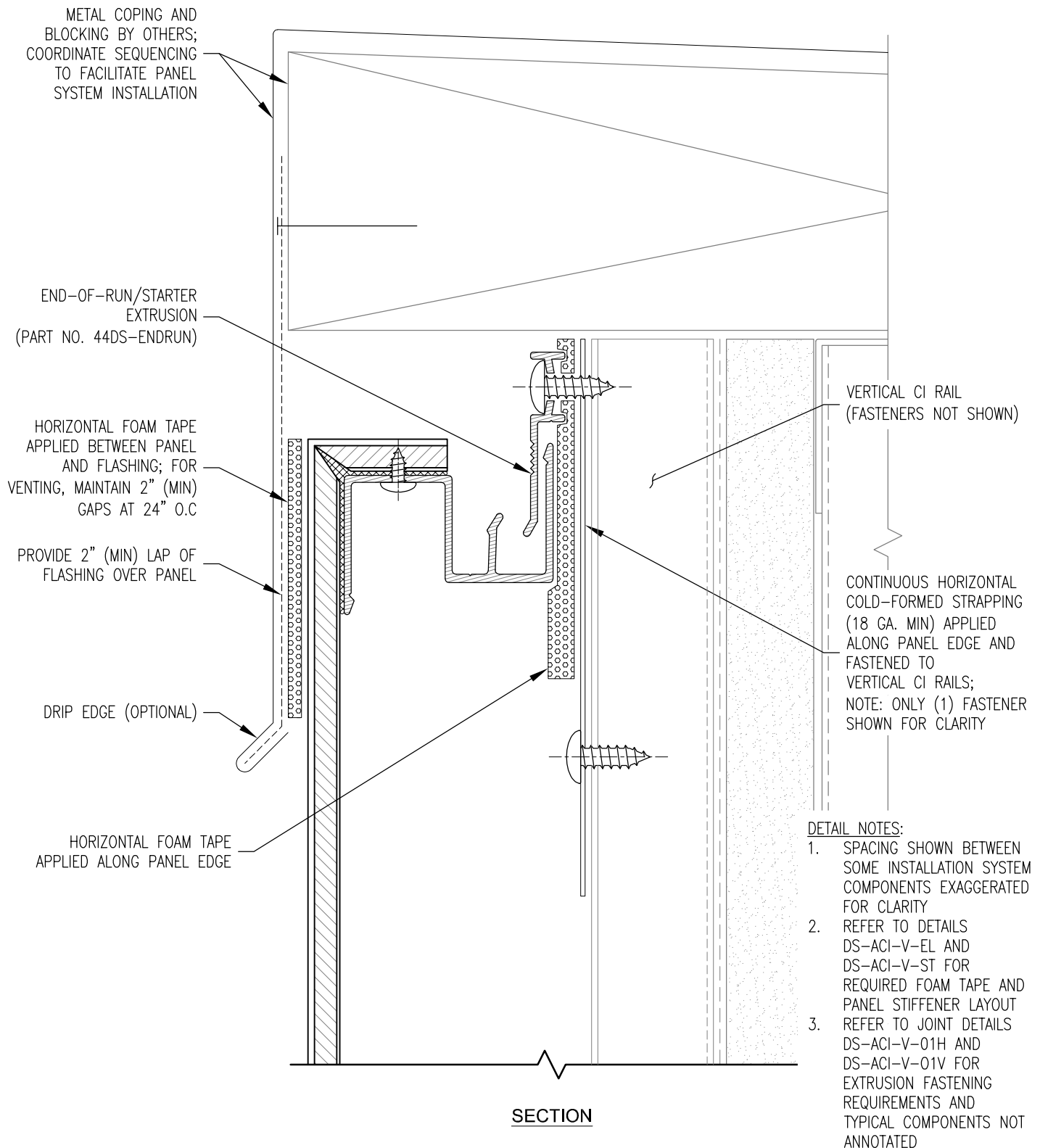
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**WINDOW JAMB / VERTICAL EDGE DETAIL**

**DRY SEAL INSTALLATION SYSTEM  
OVER ALT CI SYSTEM (WITH VERTICAL RAILS)**

Date:	Drawn By:	Dwg. No.:	Rev:
12/3/2020	JJM	DS-ACI-V-04	00



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## TOP OF WALL DETAIL

## DRY SEAL INSTALLATION SYSTEM OVER ALT CI SYSTEM (WITH VERTICAL RAILS)

Date:  
12/3/2020

Drawn By:  
JJM

Dwg. No.:  
DS-ACI-V-05

Rev:  
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ALUMINUM FLASHING  
BY OTHERS; COORDINATE WITH  
LOCATION OF AIR AND WATER  
BARRIER AND DRAINAGE PLANE

CONTINUOUS HORIZONTAL  
COLD-FORMED STRAPPING  
(18 GA. MIN) APPLIED ALONG  
PANEL EDGE AND FASTENED  
TO VERTICAL CI RAILS;  
NOTE: ONLY (1) FASTENER  
SHOWN FOR CLARITY

HORIZONTAL FOAM TAPE  
APPLIED ALONG PANEL EDGE

END-OF-RUN/STARTER  
EXTRUSION  
(PART NO. 44DS-ENDRUN)

3" LONG, 5/8" X 1/2" FOAM  
TAPE STRIPS AT 36" O.C.  
BETWEEN PANEL INSERT STRIP  
AND END-OF-RUN/STARTER  
EXTRUSION

PANEL END JOINT  
INSERT STRIP  
(1-1/2" NOM. WIDTH)

3/4"

CONTINUOUS BUTYL  
SEALANT BETWEEN METAL  
FLASHING AND GRADE

GRADE

SECTION

AIR AND WATER BARRIER  
TO LAP OVER FLASHING  
IN SHINGLE FASHION

VERTICAL CI RAIL  
(FASTENERS NOT SHOWN)

ALUMINUM FLASHING BY  
OTHERS; COORDINATE  
WITH LOCATION OF AIR  
AND WATER BARRIER  
AND DRAINAGE PLANE

DETAIL NOTES:

1. SPACING SHOWN BETWEEN  
SOME INSTALLATION SYSTEM  
COMPONENTS EXAGGERATED  
FOR CLARITY
2. REFER TO DETAILS  
DS-ACI-V-EL AND  
DS-ACI-V-ST FOR  
REQUIRED FOAM TAPE AND  
PANEL STIFFENER LAYOUT
3. REFER TO JOINT DETAILS  
DS-ACI-V-01H AND  
DS-ACI-V-01V FOR  
EXTRUSION FASTENING  
REQUIREMENTS AND  
TYPICAL COMPONENTS NOT  
ANNOTATED



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BASE OF WALL (GRADE) DETAIL

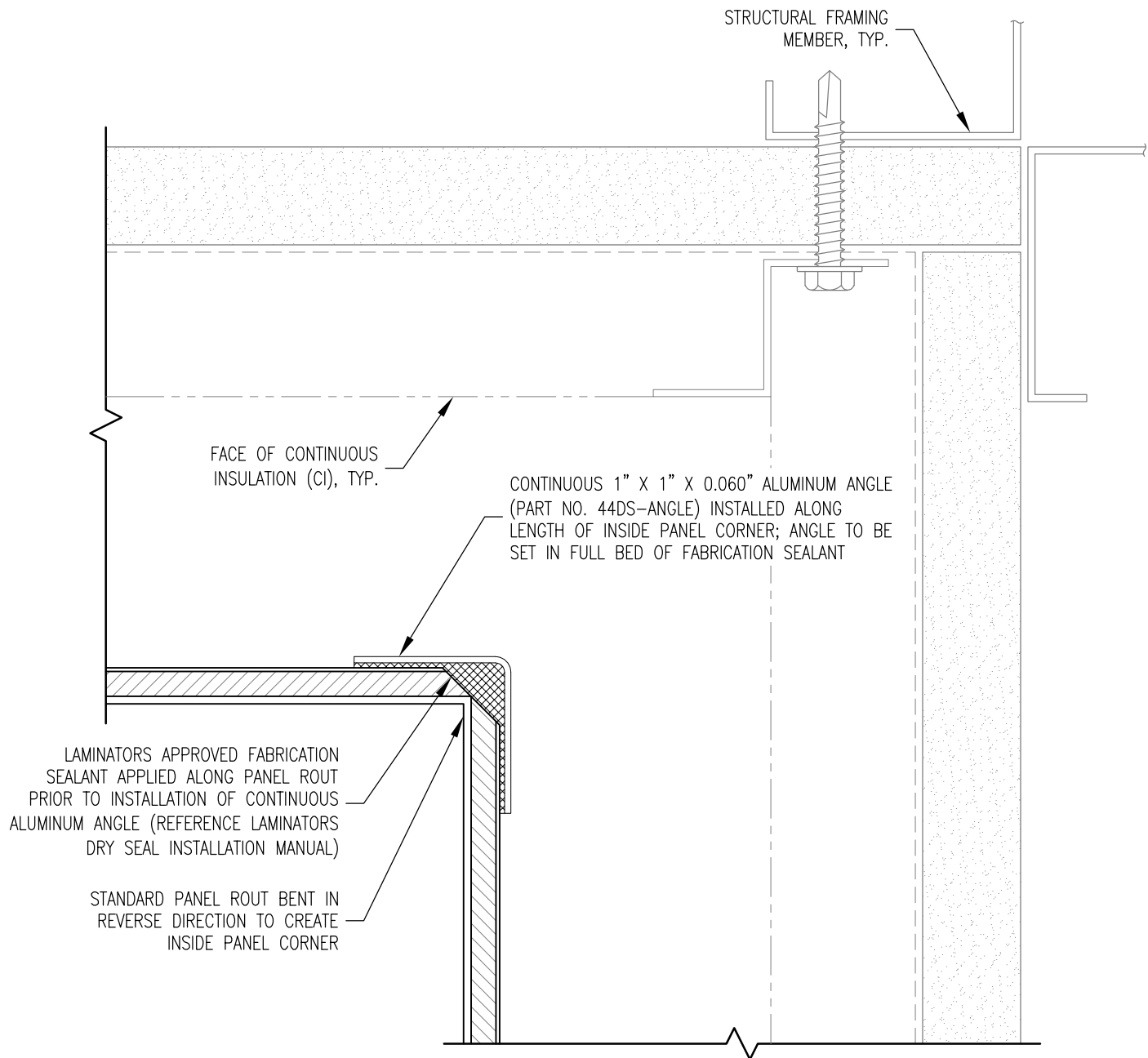
DRY SEAL INSTALLATION SYSTEM  
OVER ALT CI SYSTEM (WITH VERTICAL RAILS)

Date:  
12/3/2020

Drawn By:  
JJM

Dwg. No.:  
DS-ACI-V-06

Rev:  
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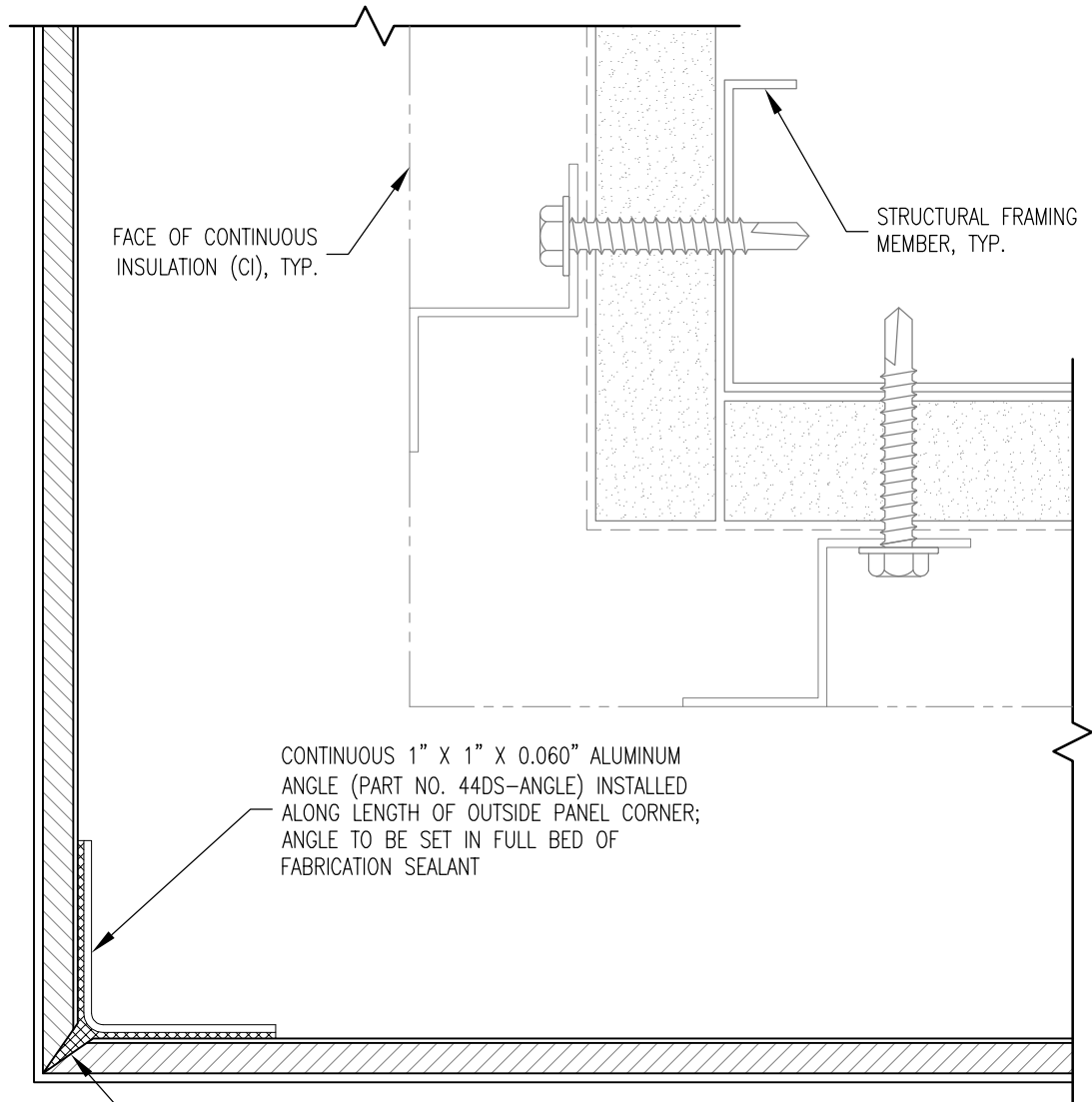
**PLAN SECTION**

**DETAIL NOTES:**

1. SPACING SHOWN BETWEEN SOME INSTALLATION SYSTEM COMPONENTS EXAGGERATED FOR CLARITY
2. REFER TO DETAILS DS-ACI-V-EL AND DS-ACI-V-ST FOR REQUIRED FOAM TAPE AND PANEL STIFFENER LAYOUT
3. REFER TO JOINT DETAILS DS-ACI-V-01H AND DS-ACI-V-01V FOR EXTRUSION FASTENING REQUIREMENTS AND TYPICAL COMPONENTS NOT ANNOTATED

**NOTE: THIS DETAIL IS ALSO APPLICABLE FOR SOFFIT-TO-WALL TRANSITIONS**





DETAIL NOTES:

1. SPACING SHOWN BETWEEN SOME INSTALLATION SYSTEM COMPONENTS EXAGGERATED FOR CLARITY
2. REFER TO DETAILS DS-ACI-V-EL AND DS-ACI-V-ST FOR REQUIRED FOAM TAPE AND PANEL STIFFENER LAYOUT
3. REFER TO JOINT DETAILS DS-ACI-V-01H AND DS-ACI-V-01V FOR EXTRUSION FASTENING REQUIREMENTS AND TYPICAL COMPONENTS NOT ANNOTATED

PLAN SECTION

NOTE: REFER TO DETAIL DS-ACI-V-09 FOR FASCIA-TO-SOFFIT TRANSITIONS



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OUTSIDE CORNER DETAIL

DRY SEAL INSTALLATION SYSTEM  
OVER ALT CI SYSTEM (WITH VERTICAL RAILS)

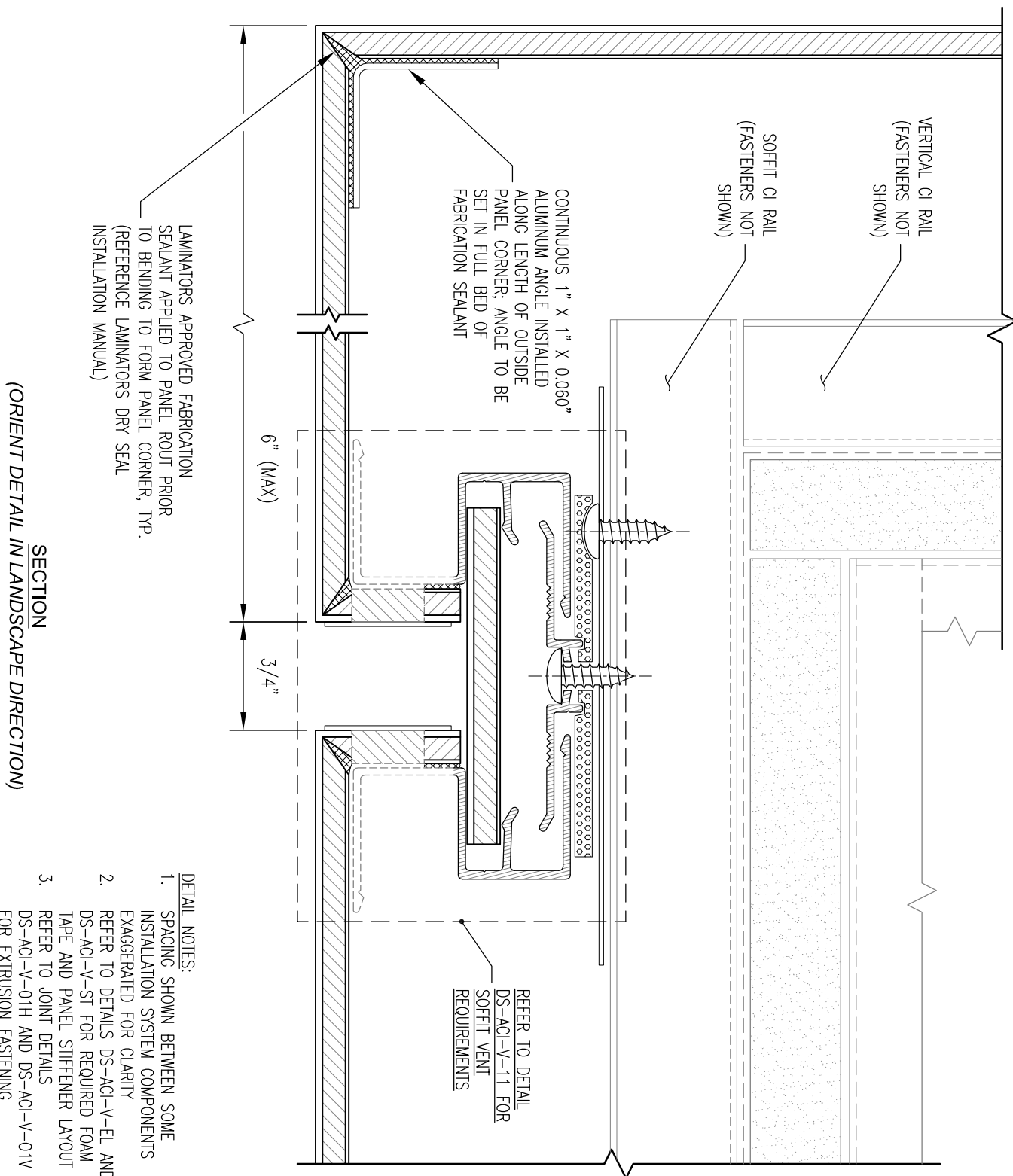
Date:  
12/3/2020

Drawn By:  
JJM

Dwg. No.:  
DS-ACI-V-08

Rev:  
00





**DETAIL NOTES:**

1. SPACING SHOWN BETWEEN SOME  
INSTALLATION SYSTEM COMPONENTS  
EXAGGERATED FOR CLARITY
2. REFER TO DETAILS DS-ACI-V-EL AND  
DS-ACI-V-ST FOR REQUIRED FOAM  
TAPE AND PANEL STIFFENER LAYOUT
3. REFER TO JOINT DETAILS  
DS-ACI-V-01H AND DS-ACI-V-01V  
FOR EXTRUSION FASTENING  
REQUIREMENTS AND TYPICAL  
COMPONENTS NOT ANNOTATED



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**FASCIA-TO-SOFFIT TRANSITION DETAIL**

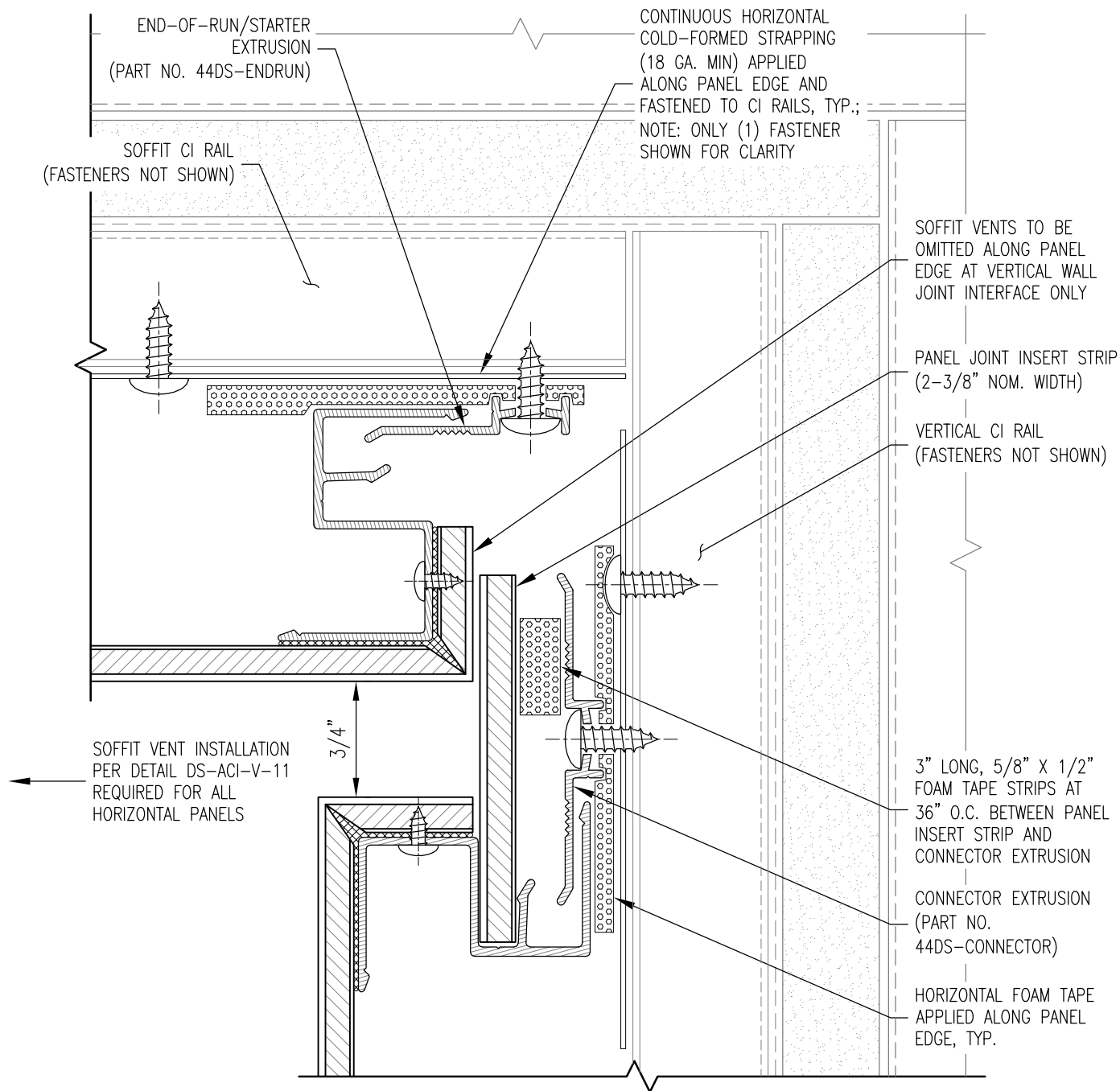
**DRY SEAL INSTALLATION SYSTEM  
OVER ALT CI SYSTEM (WITH VERTICAL RAILS)**

Date:  
12/3/2020

Drawn By:  
JUM

Dwg. No.:  
DS-ACI-V-09

Rev:  
00



#### SECTION

#### DETAIL NOTES:

1. SPACING SHOWN BETWEEN SOME INSTALLATION SYSTEM COMPONENTS EXAGGERATED FOR CLARITY
2. REFER TO DETAILS DS-ACI-V-EL AND DS-ACI-V-ST FOR REQUIRED FOAM TAPE AND PANEL STIFFENER LAYOUT
3. REFER TO JOINT DETAILS DS-ACI-V-01H AND DS-ACI-V-01V FOR EXTRUSION FASTENING REQUIREMENTS AND TYPICAL COMPONENTS NOT ANNOTATED

**NOTE: THIS DETAIL IS ALSO APPLICABLE FOR INSIDE CORNER TRANSITIONS**



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SOFFIT-TO-WALL TRANSITION DETAIL w/ JOINT

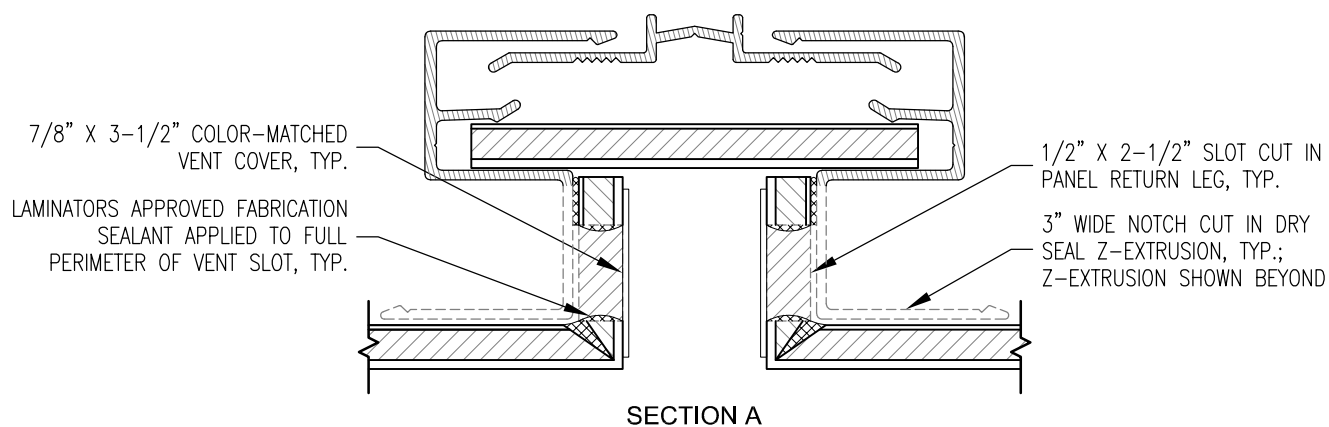
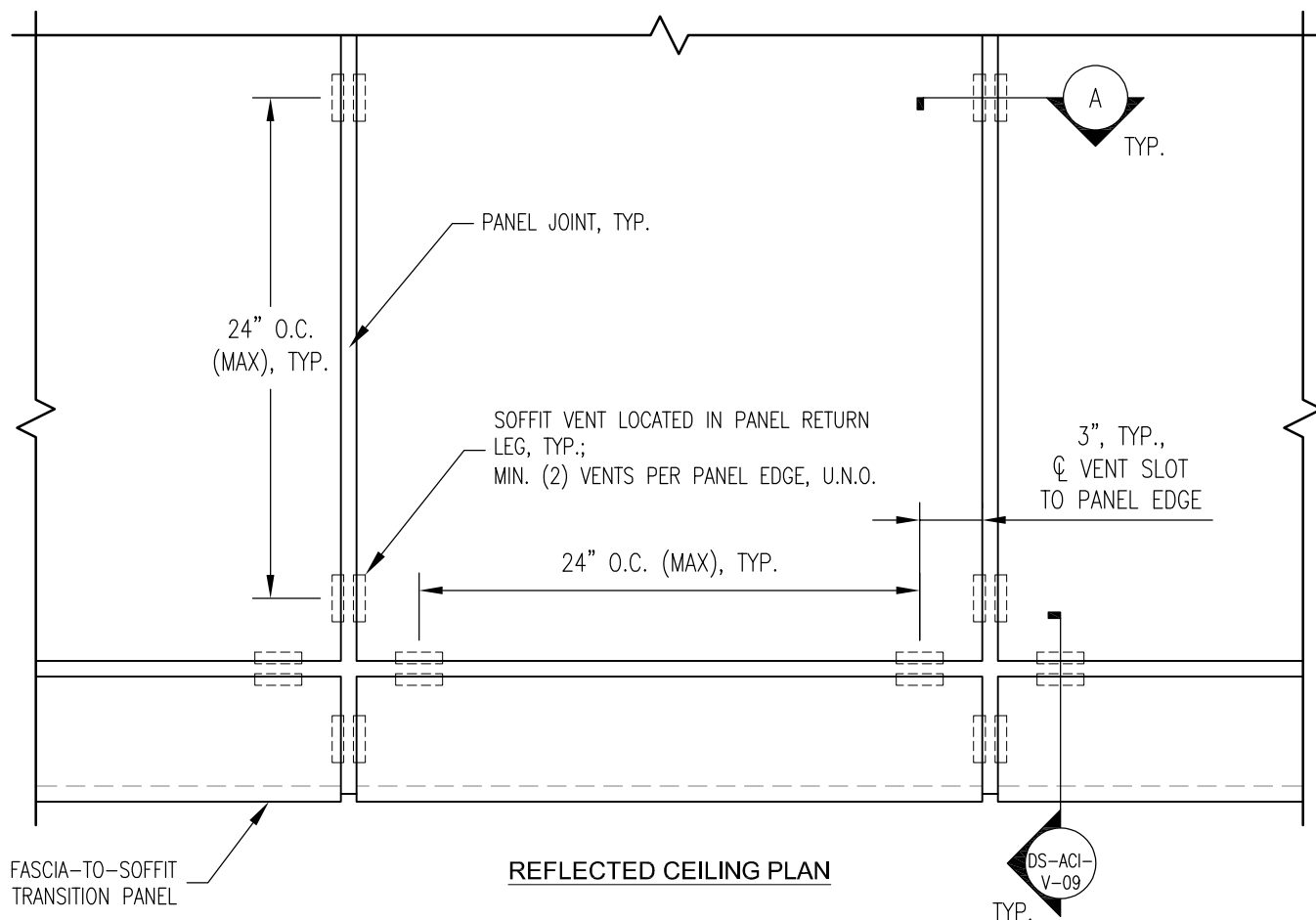
DRY SEAL INSTALLATION SYSTEM  
OVER ALT CI SYSTEM (WITH VERTICAL RAILS)

Date:  
12/3/2020

Drawn By:  
JJM

Dwg. No.:  
DS-ACI-V-10

Rev:  
00



**DETAIL NOTES:**

1. FASTEN VENT COVER TO PANEL RETURN LEG USING (2) 1/8" DIA. ALUMINUM BUTTONHEAD BLIND RIVETS (NOT SHOWN IN SECTION A) INSTALLED THRU PANEL RETURN LEG ON EACH SIDE OF SLOT, TYP.
2. FOR PANEL EDGE DIMENSIONS 18" AND SMALLER, ONLY (1) VENT LOCATION REQUIRED; CENTER VENT LOCATION ALONG PANEL EDGE

**SOFFIT VENT REQUIREMENTS**

**DRY SEAL INSTALLATION SYSTEM  
OVER ALT CI SYSTEM (WITH VERTICAL RAILS)**

Date: 12/3/2020	Drawn By: JJM	Dwg. No.: DS-ACI-V-11	Rev: 00
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