

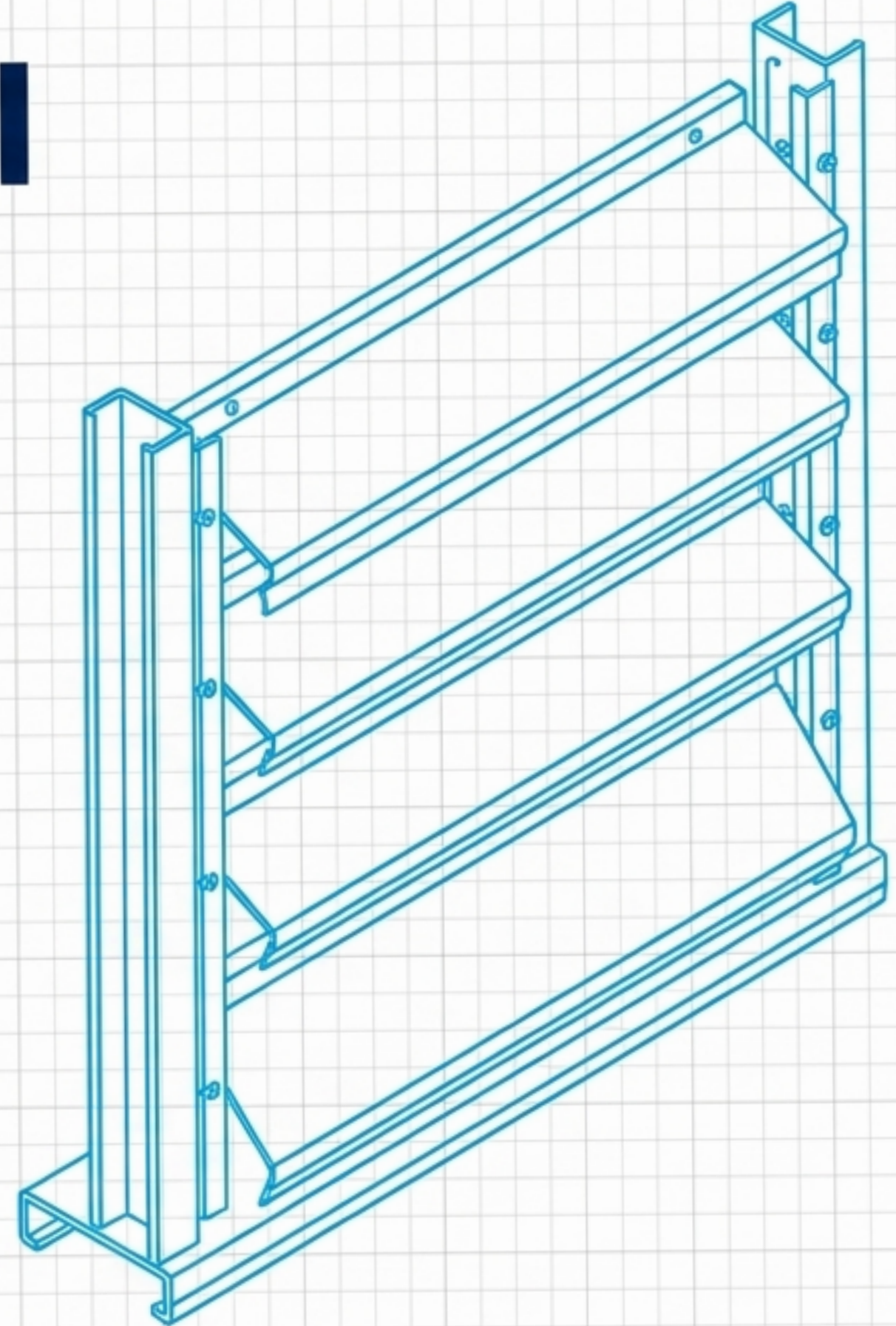
Blade #1 Horizontal Aluminum Louver System

Product Evaluation & Engineering Specifications

Manufactured by:
Paradise Awnings Corporation
DBA Paradise Architectural Panels & Steel

Engineered by:
Tilteco Inc. (Walter A. Tillit, Jr., P.E.)

Document Edition:
Validated for 2023 Florida Building Code (8th Edition)



Engineered and approved for High Velocity Hurricane Zones (HVHZ)



Florida Building Code

Fully compliant with the **2023** FBC (8th Edition). Evaluated under System ID # **1906**.



Large Missile Impact

Certified under TAS 201 and AMCA 540. Impact parameters: **9Lb 2" x 4" timber** traveling at **50 ft/sec**.



Uniform Static Loads

Verified to sustain extreme positive and negative wind pressures in accordance with Protocol **TAS 202**.

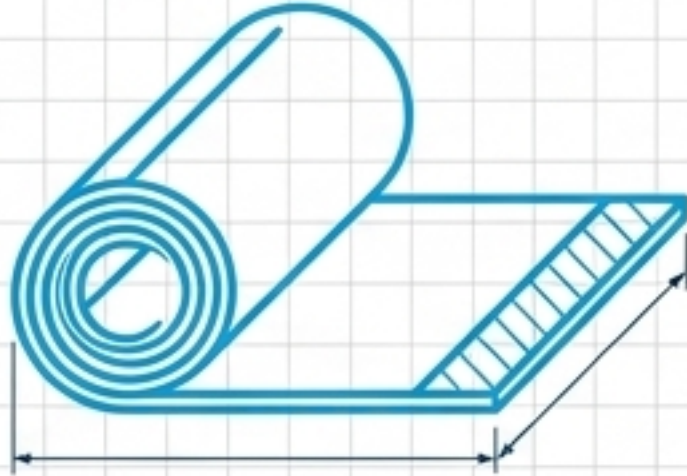


Cyclic Loadings

Meets exhaustive fatigue and structural resilience standards under Protocol **TAS 203**.

Baseline materials and essential application constraints

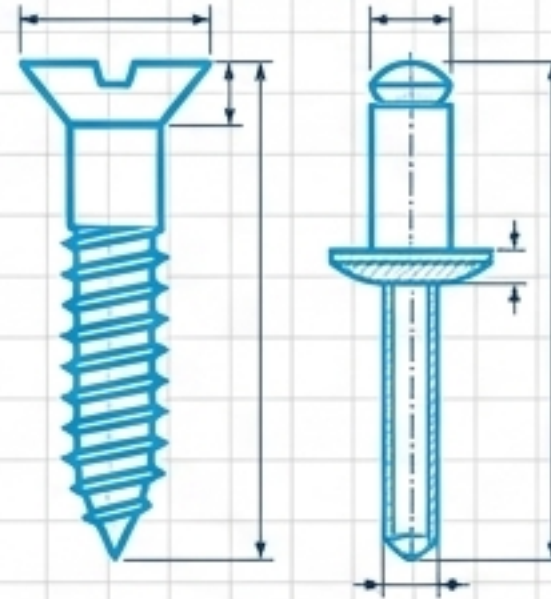
1



Structural Alloy

All aluminum sheet metal is precision-formed from 5052-H32 Aluminum Alloy.

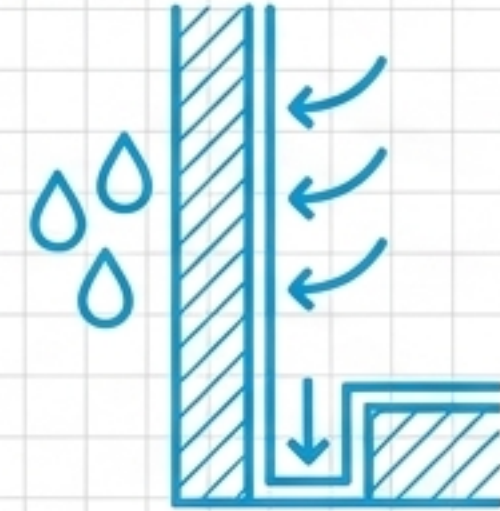
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Hardware Resiliency

All screws and rivets utilize 304 or 316 series Stainless Steel (Minimum specs: 50 ksi yield point, 90 ksi tensile strength) or corrosion-resistant carbon steel per DIN 50018.

3



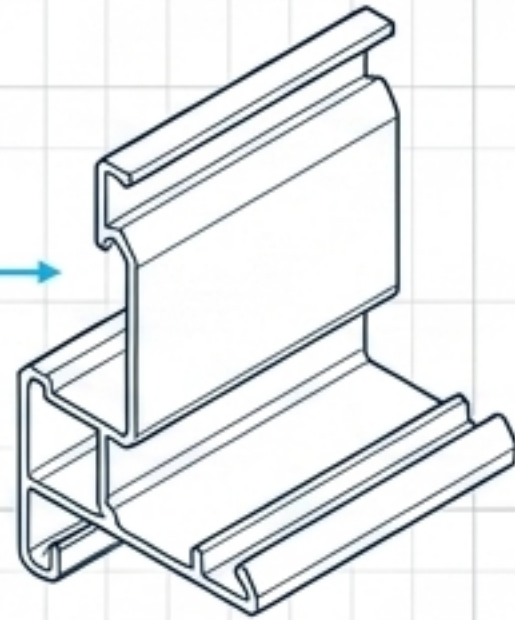
Water Management Application

Strict usage constraint: The system must only be installed in locations where the room behind is designed to **drain water penetrating into the room**, or is equipped with water-resistant house equipment.

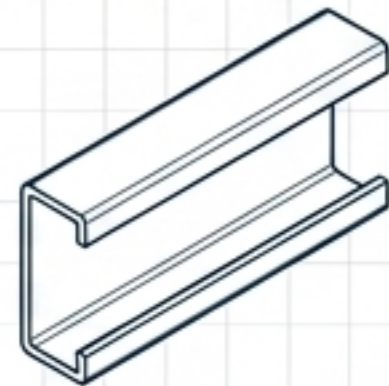
Dissimilar materials in contact must be protected per Section III-6 of the 2020 Aluminum Design Manual.

An exploded taxonomy of structural components

Core Structure

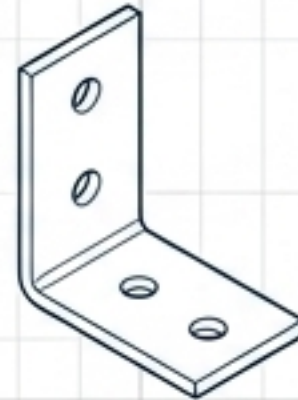


Blade #1
(0.090" thick)



Channel Jamb
(1"x4"x1"x0.090")

Mounting Hardware

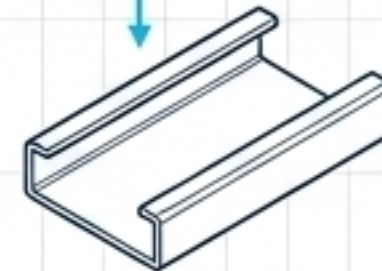


Mounting Angle
(1.5"x2"x0.125")

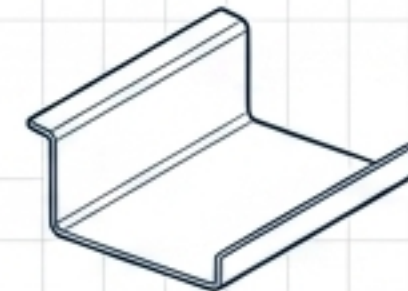


Blade Brace Angle
(0.5"x1.5"x1.5")

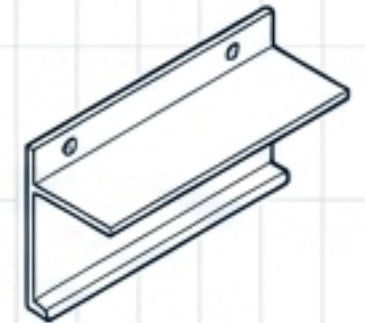
System Accessories



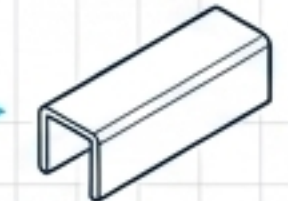
Sill



Drip Pan
(0.050" thick alum)



Head

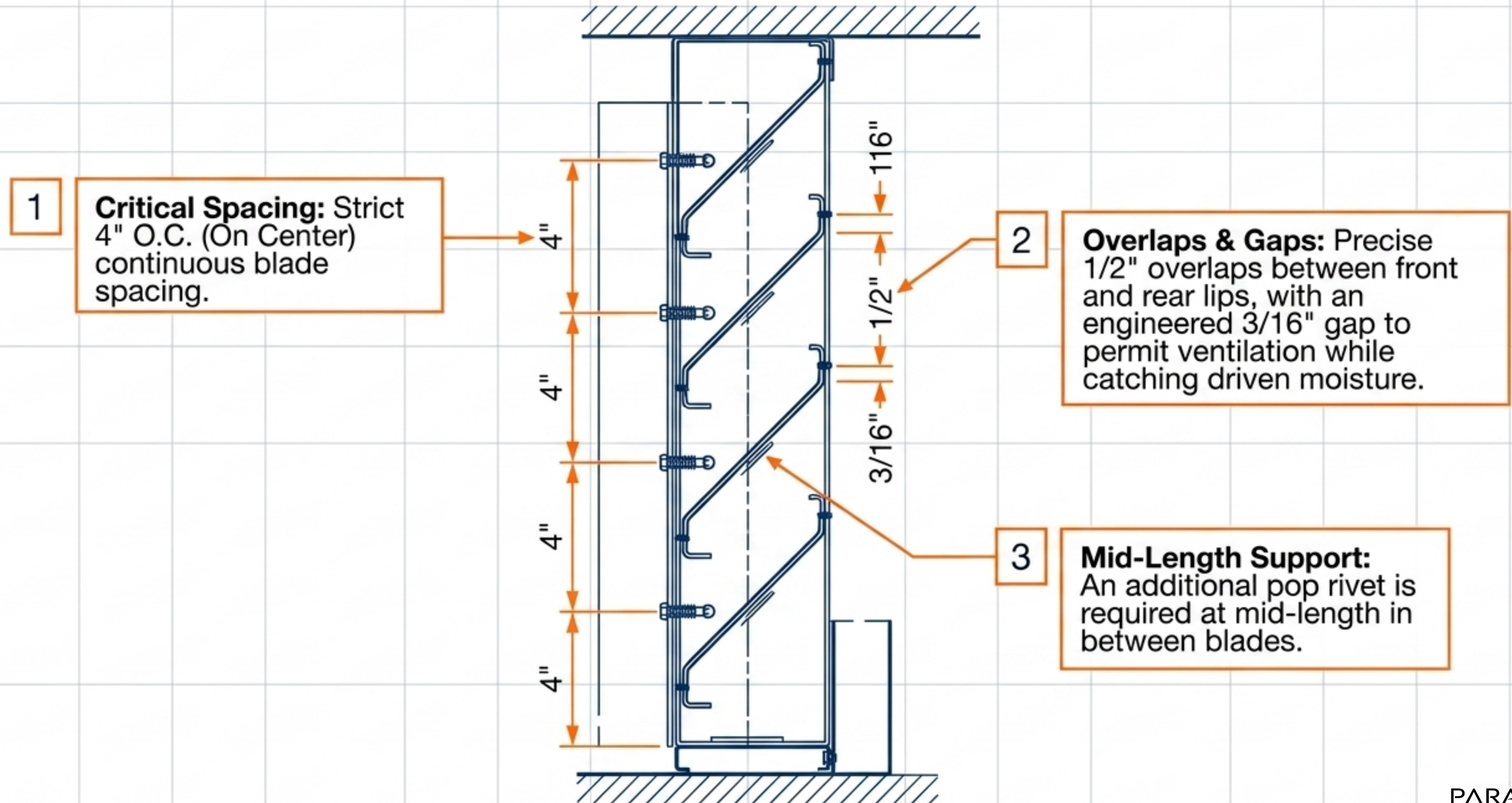


Stiffener Connector
(1 1/2" long, 0.090" thick)

Fasteners

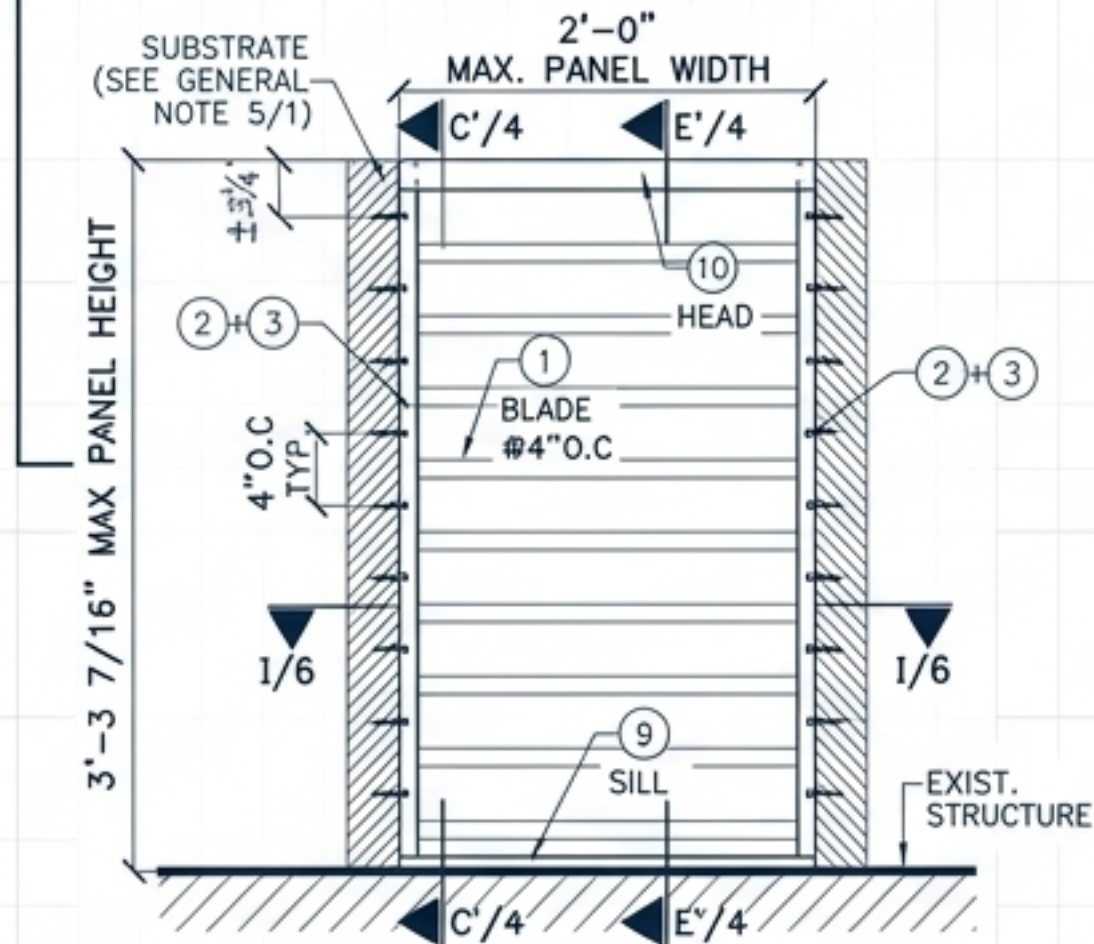
Emphasize the use of 3/16" Pop Rivets (Series 9444 Aluminum) connecting the core components.

Precise spacing geometry balances structural integrity with element defense



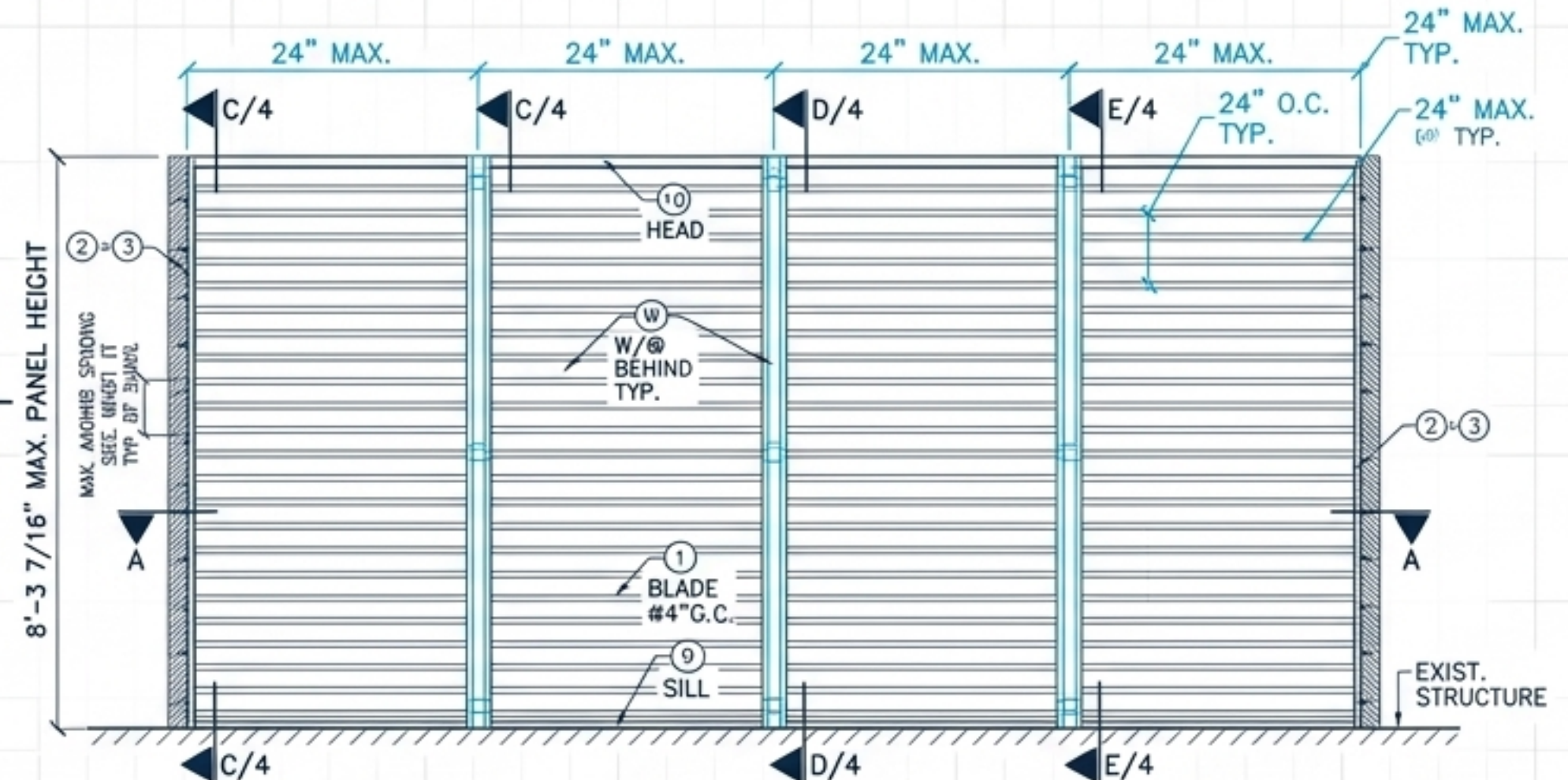
Scaling from single panels to continuous architectural elevations

Standalone Configuration



Maximum panel width without a stiffener is strictly capped at 2'-0".

Continuous Configuration

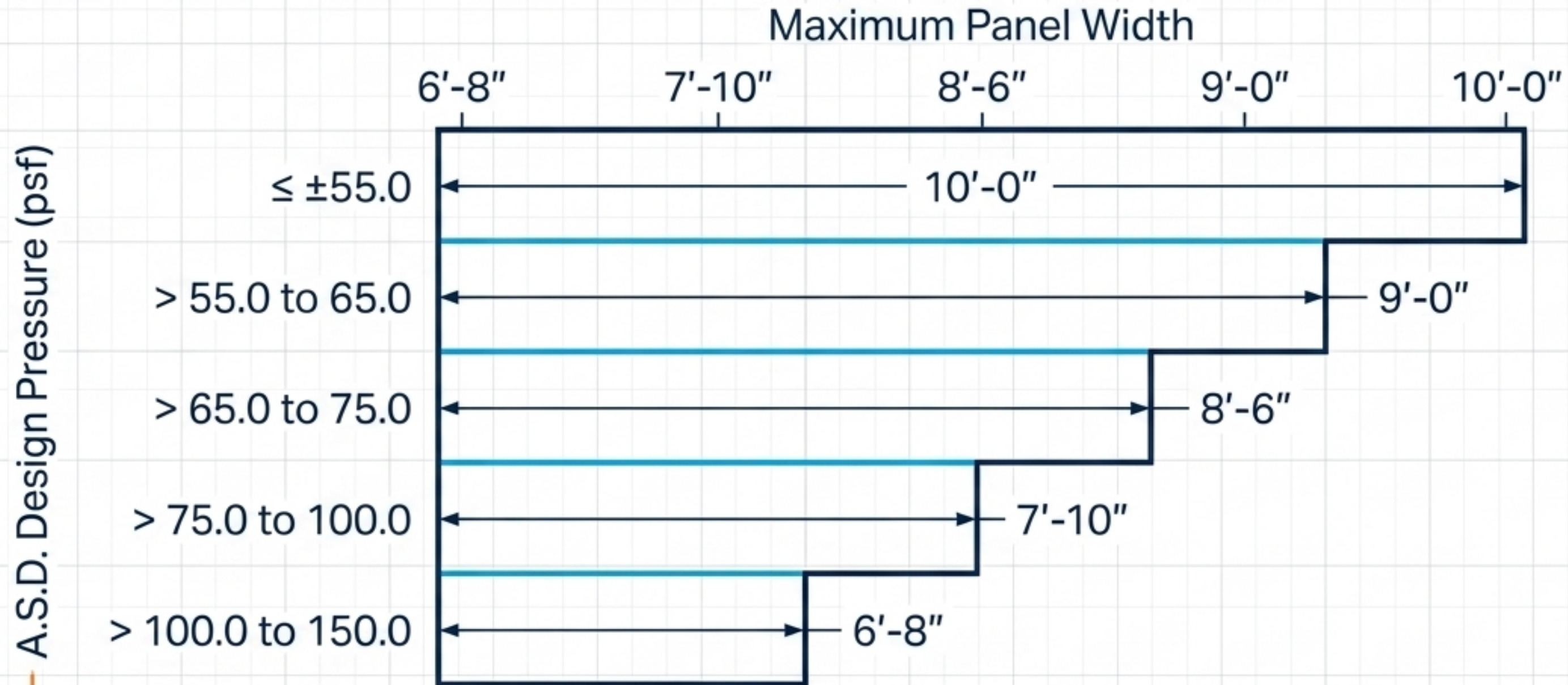


For wider spans, the system utilizes stiffener connectors to bridge panels. Maximum spacing between these stiffeners is strictly limited to 24" O.C.

Jamb Integration

Notice the structural distinction between a 'Jamb with Mounting Angle' versus a 'Jamb without Mounting Angle' depending on direct trapping conditions.

Maximum panel width inversely scales with Design Pressure



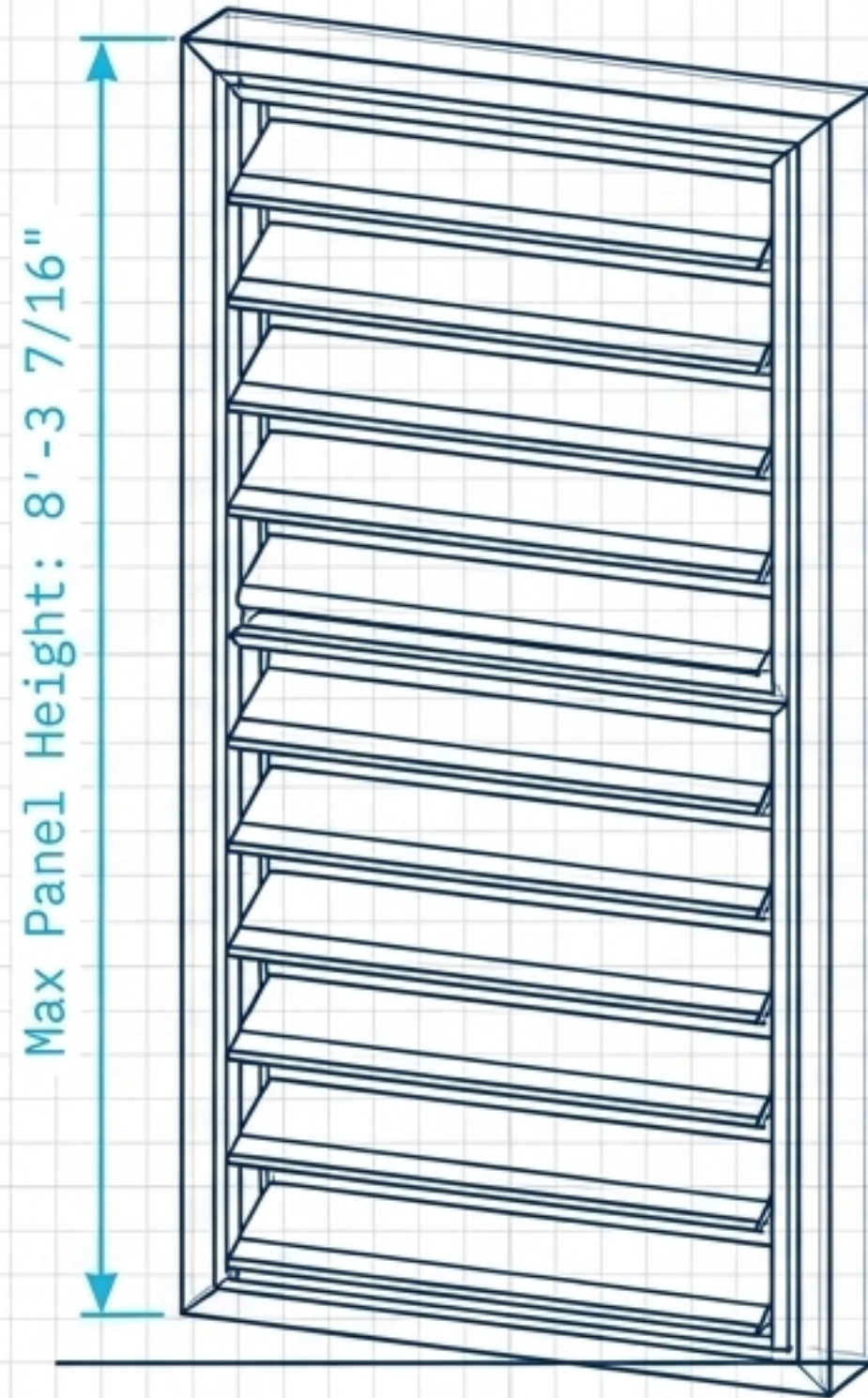
*Note: To verify against ASCE 7-22 ultimate design wind loads, loads must be multiplied by 0.6.

Anchorage requirements tighten dramatically at peak wind pressures

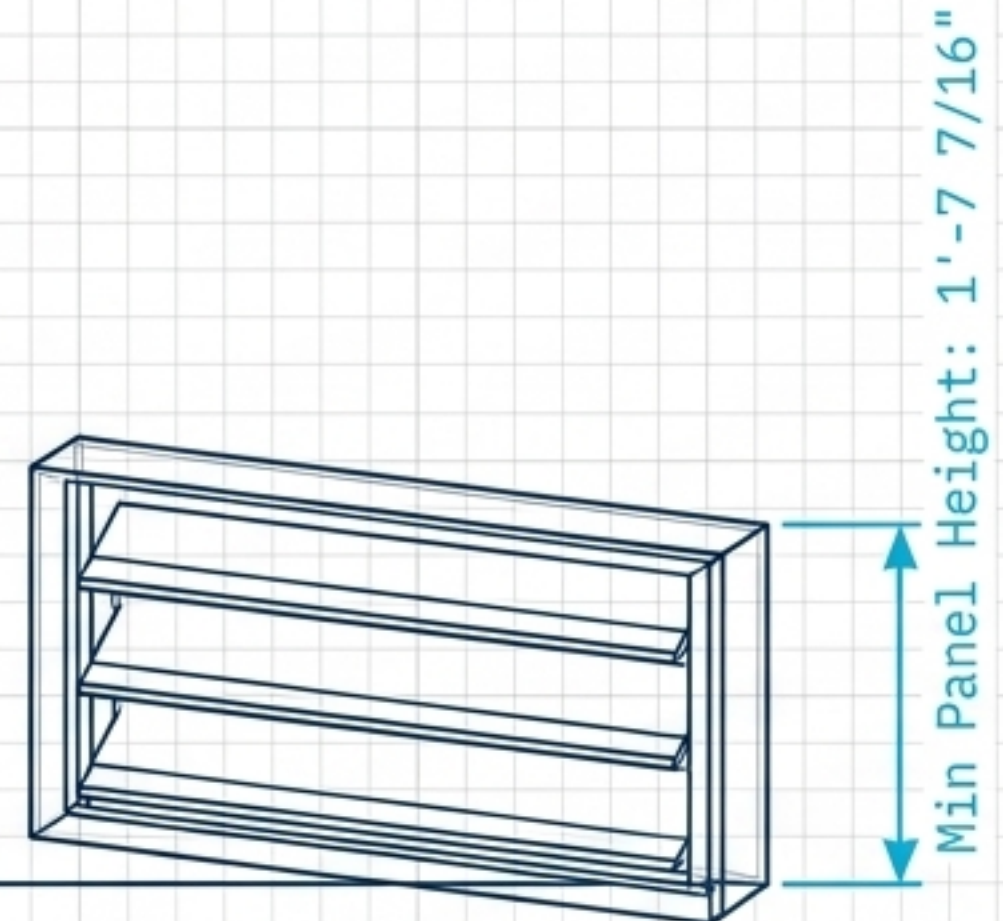
APPROVED SUBSTRATES & ANCHOR TYPES	A.S.D. Pressure Tiers derived from Schedule #2				
	$\leq \pm 55.0$ psf	> 55.0 psf T0 65.0 psf	> 65.0 psf T0 75.0 psf	> 75.0 psf T0 100.0 psf	> 100.0 psf T0 150.0 psf
Poured Concrete ($f'c=3,000$ psi min) with DeWalt Screw-Bolt+ (1/4") or ITW/Buildex Tapcon (1/4")					
Grouted Block (C-90 unit) with Tapcon or Screw-Bolt+					
Min 1/8" Alum/Steel with ITW/Buildex Tek-Screws (1/4"-14)					
Wood ($G \geq 0.55$) with Tapcon (1/4")	8" O.C.	8" O.C.	8" O.C.	Spacing tightens to 4" O.C.	

Standard 8" O.C. spacing
across all pressures

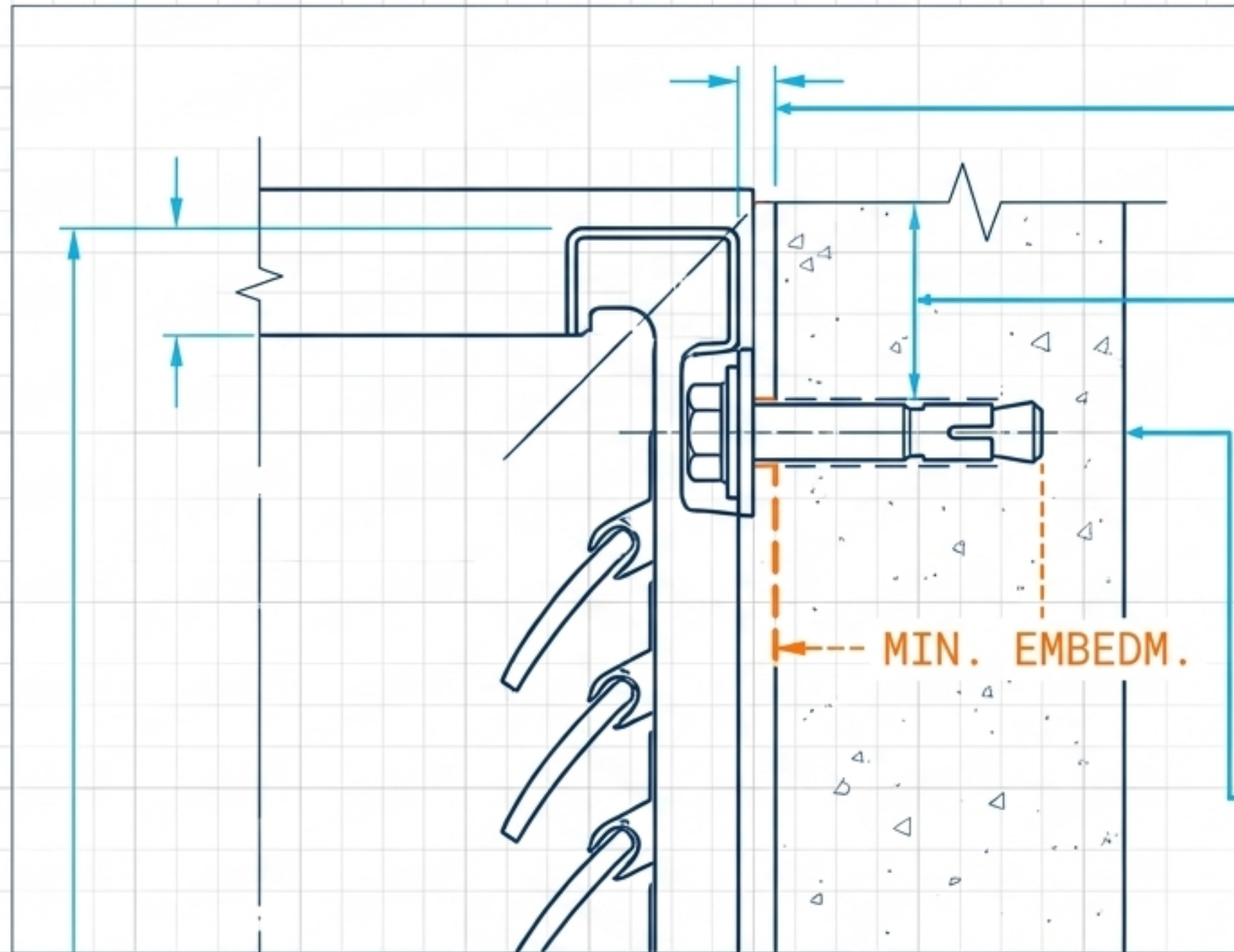
Absolute elevation sizing limits dictate the exterior footprint



Contextual Constraint:
Within these vertical limits, the 4" O.C. blade spacing must remain unbroken to maintain structural certification regardless of final opening height.



Structural interface and perimeter shimming constraints



Clearances: The system mandates a maximum 1/4" shim space around the perimeter.

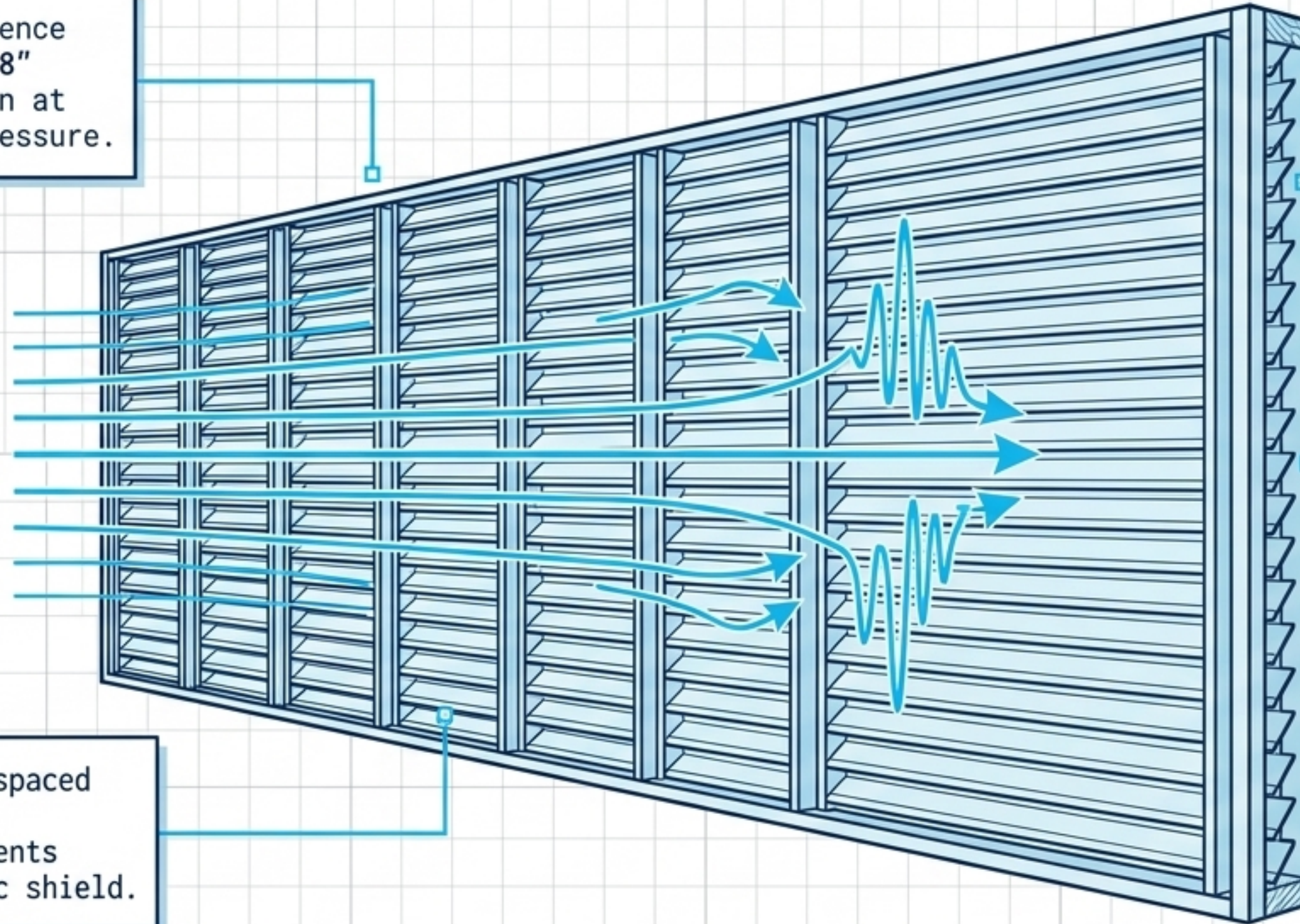
Edge Distances: Minimum Edge Distances (E.D.) for anchors must be strictly observed.

Example: 2 1/2" for concrete/block, 1" for wood.

Embedment Limits: Fasteners must achieve minimum embedment depth into the structural wall, strictly ignoring wall finish.

The Complete Envelope: Modular scale backed by rigorous validation

5052-H32 Alloy resilience enables a massive 6'-8" single panel span even at maximum structural pressure.



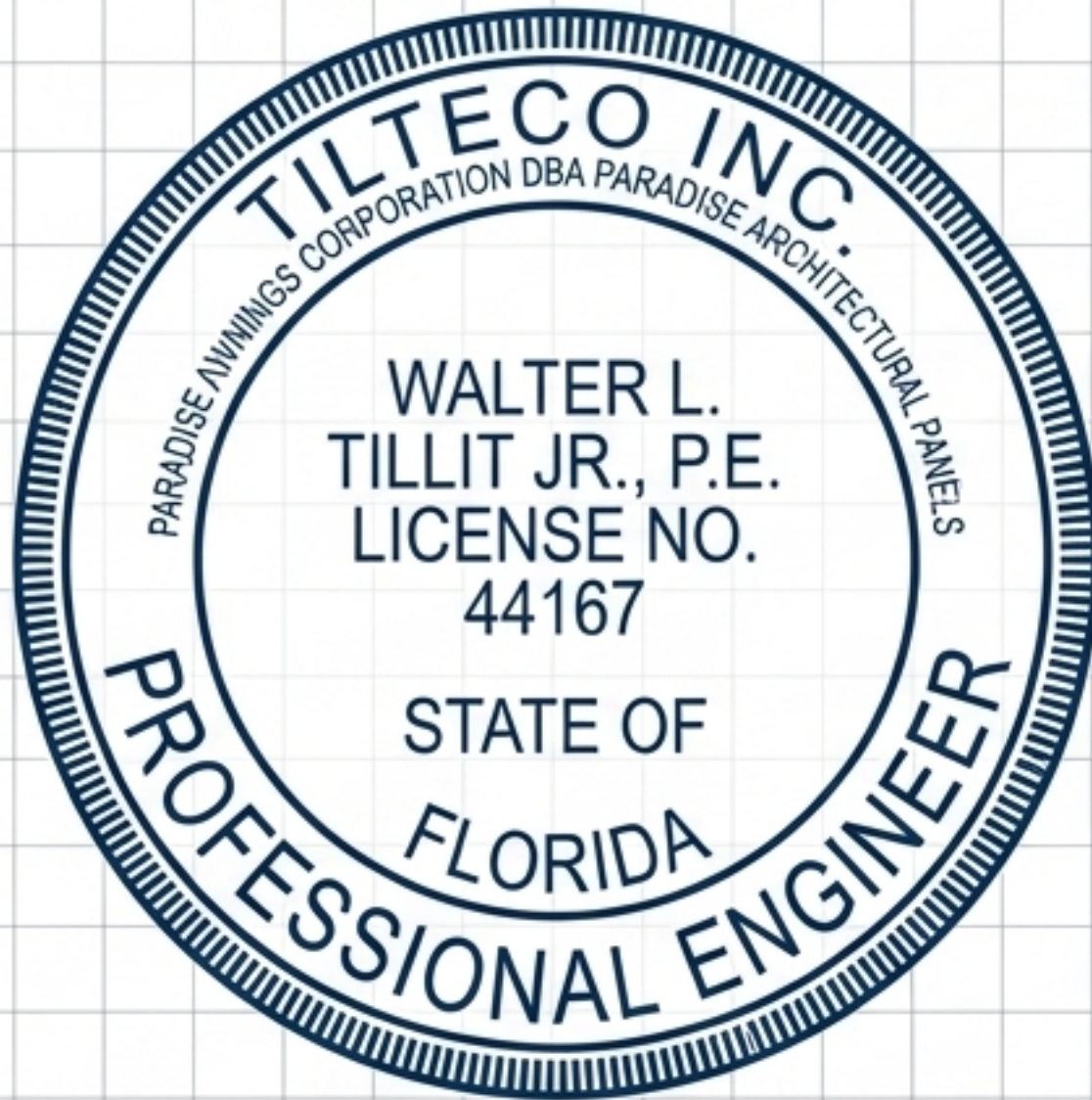
Continuous stiffeners spaced precisely at 24" O.C. transform individual vents into a unified, dynamic shield.

Wood substrate anchor tightening (4" O.C.) ensures structural integrity up to peak loads of **150 psf**.

PARADISE
LOUVERS

Synthesis Insight: The Blade #1 system is not just a vent; it scales safely from small individual vents to massive, continuous building envelopes handling up to **150 psf**, provided the strict inverse formula of panel width, stiffener spacing, and anchorage is executed **correctly**.

Professional execution and site-specific responsibility



Contractor Obligation: The contractor is solely responsible for verifying the soundness of the structure receiving the louver and ensuring proper anchor installation according to these parameters.

Engineer of Record (E.O.R.): Any site-specific projects deviating from this document must be prepared by a Florida-registered architect or engineer, who then becomes the E.O.R. responsible for the project.

Compliance Tracking: Per FBC 1703.5, the product manufacturer's label must be located in a readily visible location, with **one label placed for every opening.**