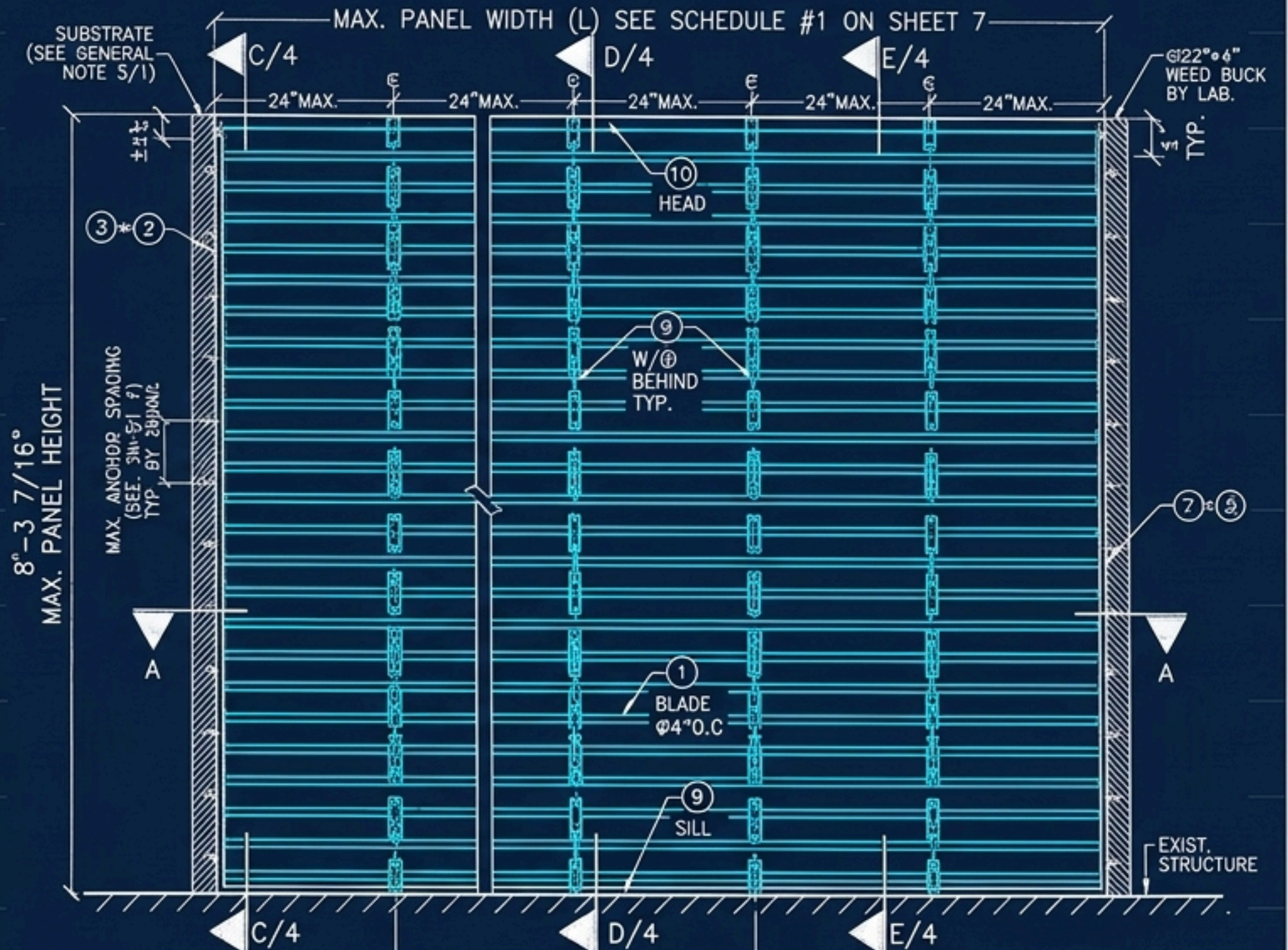




2023 Florida Building Code (8th Edition) Compliant
Evaluated by Tilteco, Inc. | System ID # 1906

BLADE #1 HORIZONTAL ALUMINUM LOUVER SYSTEM

High-Velocity Hurricane Zone (HVHZ)
Engineered Solution



TYPICAL EXTERIOR ELEVATION

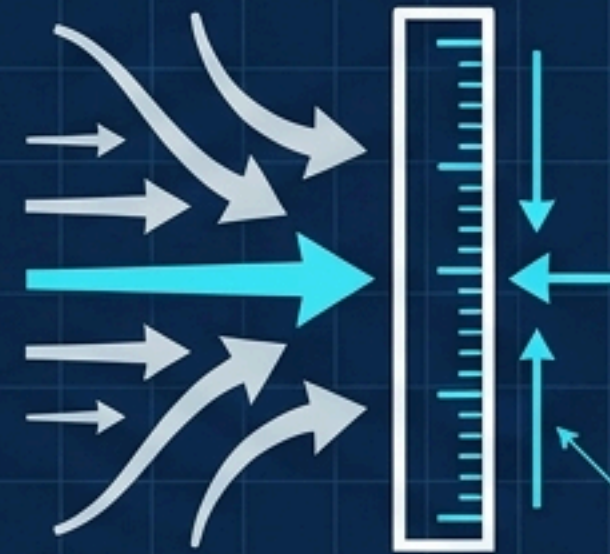
SCALE: N.T.S

EXECUTIVE SUMMARY: EVALUATION & VERIFICATION



CODE & ZONE CERTIFICATION

Certified for High-Velocity Hurricane Zones (**HVHZ**) and verified for strict compliance with the **2023 Florida Building Code (8th Edition)**.



DYNAMIC LOAD ENGINEERING

Engineered and explicitly evaluated for maximum panel width versus specific design wind loads, maintaining integrity up to **150.0 psf**.



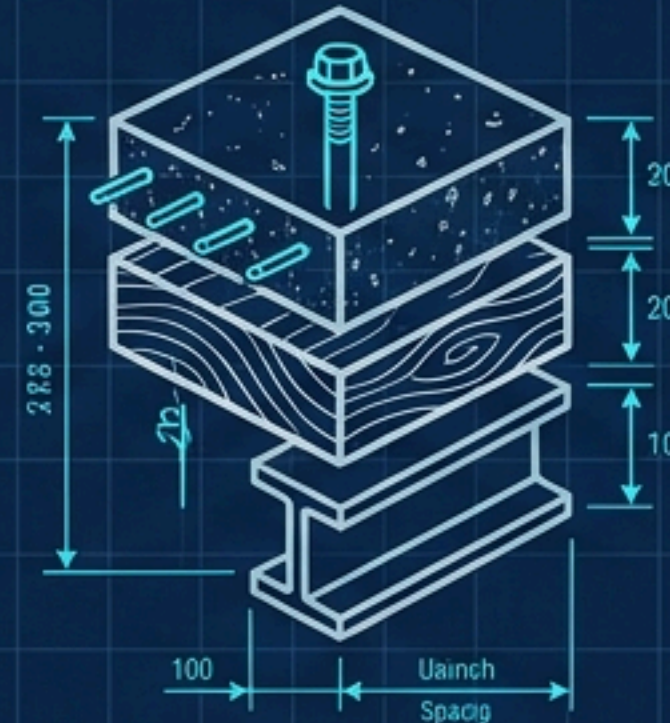
IMPACT RESILIENCE VERIFIED

Passed rigorous large missile impact and cyclic loading testing per **TAS 201, 202, and 203** protocols, alongside **AMCA 540** standards.

ASTM E1886/E1996

ASTM E1886/E1996

ASTM E107/E1996



SUBSTRATE VERSATILITY

Approved for direct structural anchoring into **poured concrete**, **grouted concrete block**, **wood framing**, and **steel or aluminum** substrates.



SPECIFICATION MATRIX

REV. A

DATE: 2024-05-27

ENG. REF: 0 2019-001

PARADISE
LOUVERS



IMPACT RESISTANCE:

Sustains a 9-lb 2"x4" large missile impact traveling at 50 ft/sec per FBC sections 1626 and 1609.1.2.

THREAT MITIGATION & TESTING STANDARDS

MASTERED PROTOCOLS:

– TAS 201:	Large Missile Impact
– TAS 202:	Uniform Static Load
– TAS 203:	Cyclic Wind Pressure Loading
– AMCA 540:	Test Method for Louvers Impacted by Wind Borne Debris

CONSERVATIVE ENGINEERING NOTE:

A 33% increase in allowable stress for wind loads was NOT used in our analysis, ensuring robust safety margins.



SPECIFICATION MATRIX

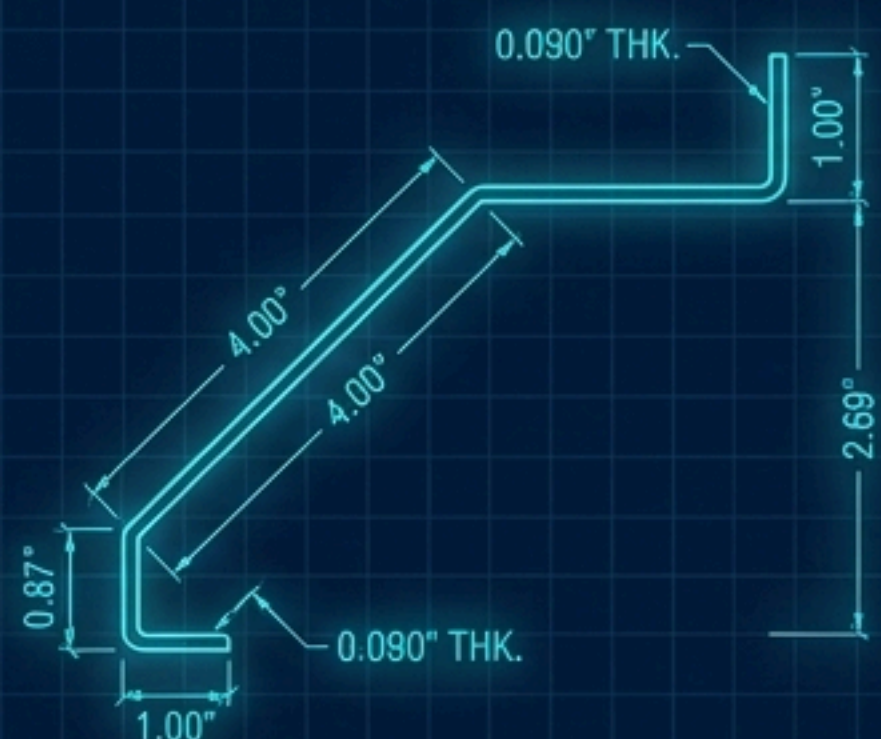
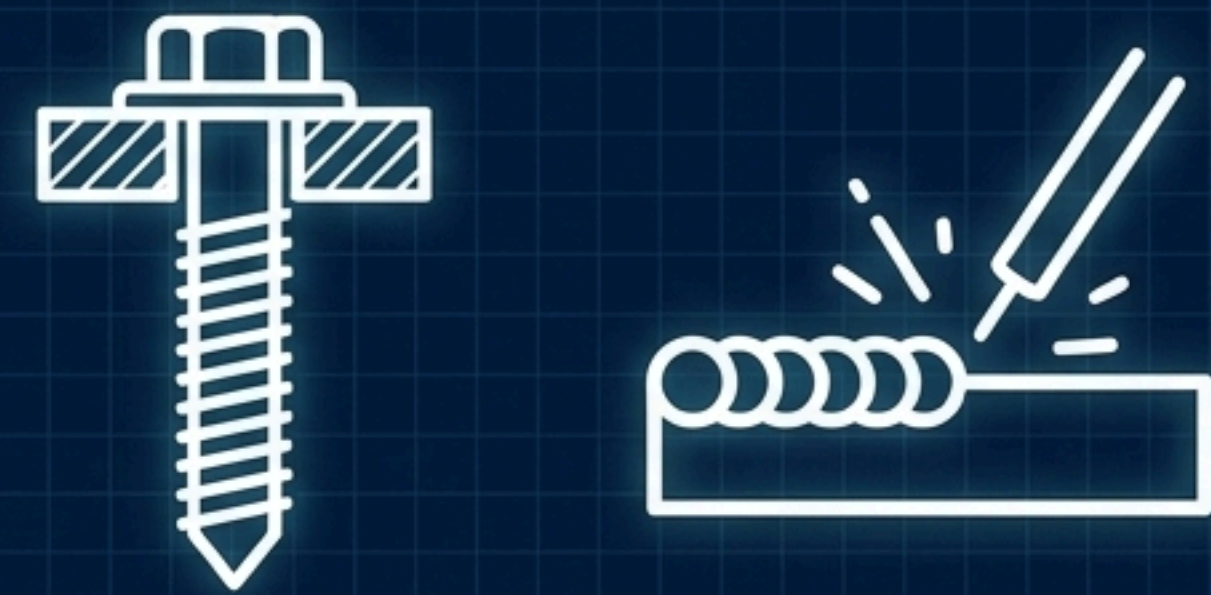
KEY: A

DATE: 2024-05-27

ENG. REF: 0-2018-001

PARADISE
LOUVERS

MATERIAL INTELLIGENCE: CORE & CONNECTIONS

THE STRUCTURAL CORE	THE HARDWARE & CONNECTIONS
	
▪ Alloy Specification: 5052-H32 Aluminum Alloy. ▪ Application: Exclusively used for all primary structural sheet metal, including the main blades, channel jambs, mounting angles, sill, head, and drip pan.	▪ Fastener Strength: 304 or 316 Series Stainless Steel anchors and screws (Minimum 50 ksi yield strength / 90 ksi tensile strength). ▪ Welding Protocol: AWS D.1.2 certified welding strictly utilizing ER-5356 electrodes. ▪ Wood Fastening Note: A duration factor of CD=1.60 is engineered for the verification of fasteners in wood substrates.

SPECIFICATION MATRIX
REV: A
DATE: 2024-05-27
ENG. REF: D-38A7-001

ANATOMY OF THE BLADE #1 SYSTEM

Component 2: Channel Jamb
(Vertical side-supports,
1" x 4" x 1" x 0.090" thick)

Components 9 & 10: Sill and Head
(Top/bottom framing, Sill incorporates
a 0.050" thick Aluminum Pan)

Component 3: Mounting Angle
(1.5" x 2" continuous mount
for existing structures)

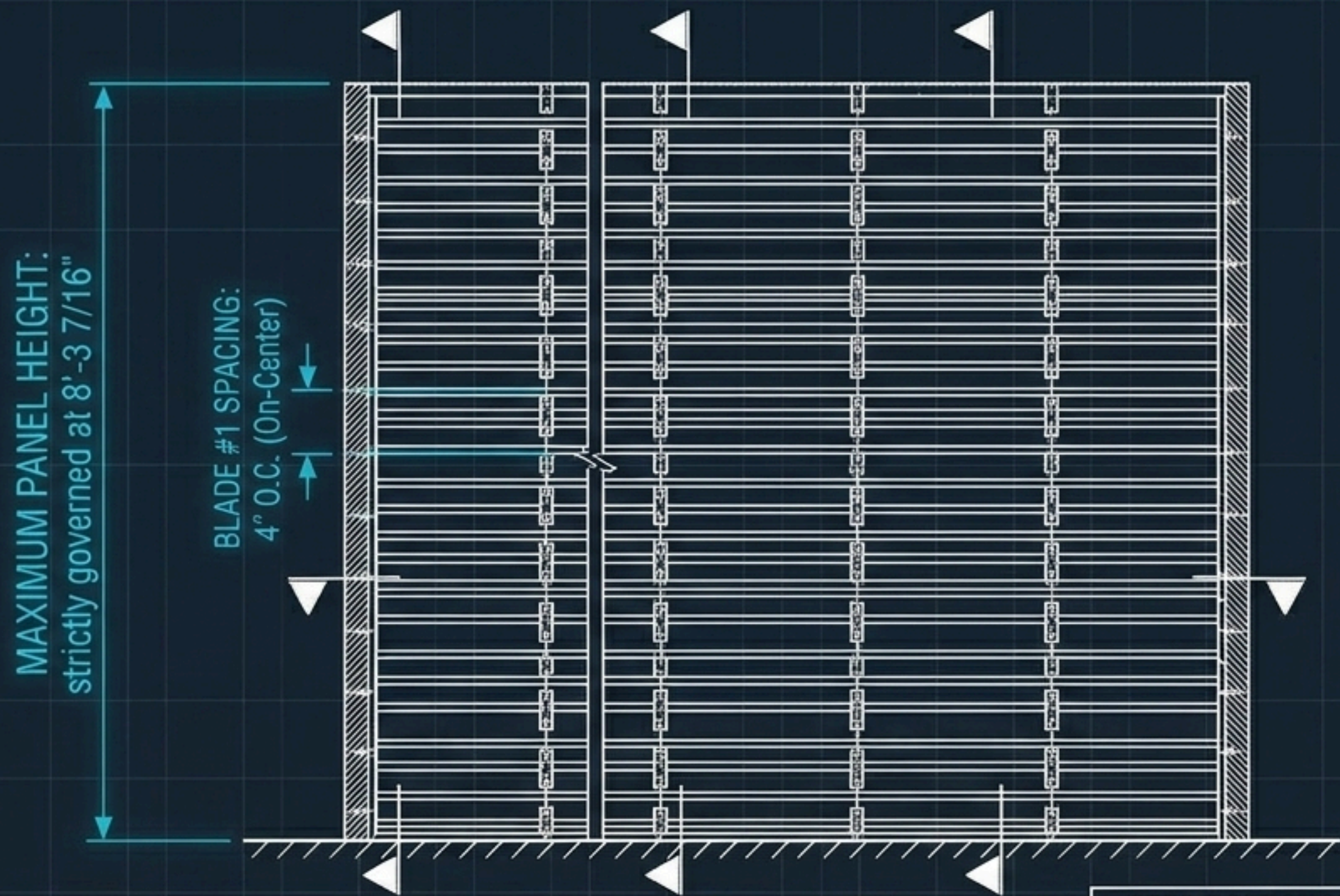
Components 9 & 10: Sill and Head
(Top/bottom framing, Sill incorporates
a 0.050" thick Aluminum Pan)

SPECIFICATION MATRIX	
REV:	A
DATE:	2024-05-27
ENG. REF:	D-38A7-002

STRUCTURAL BOUNDARIES & EXTERIOR ELEVATION

FRAMING ARCHITECTURE:

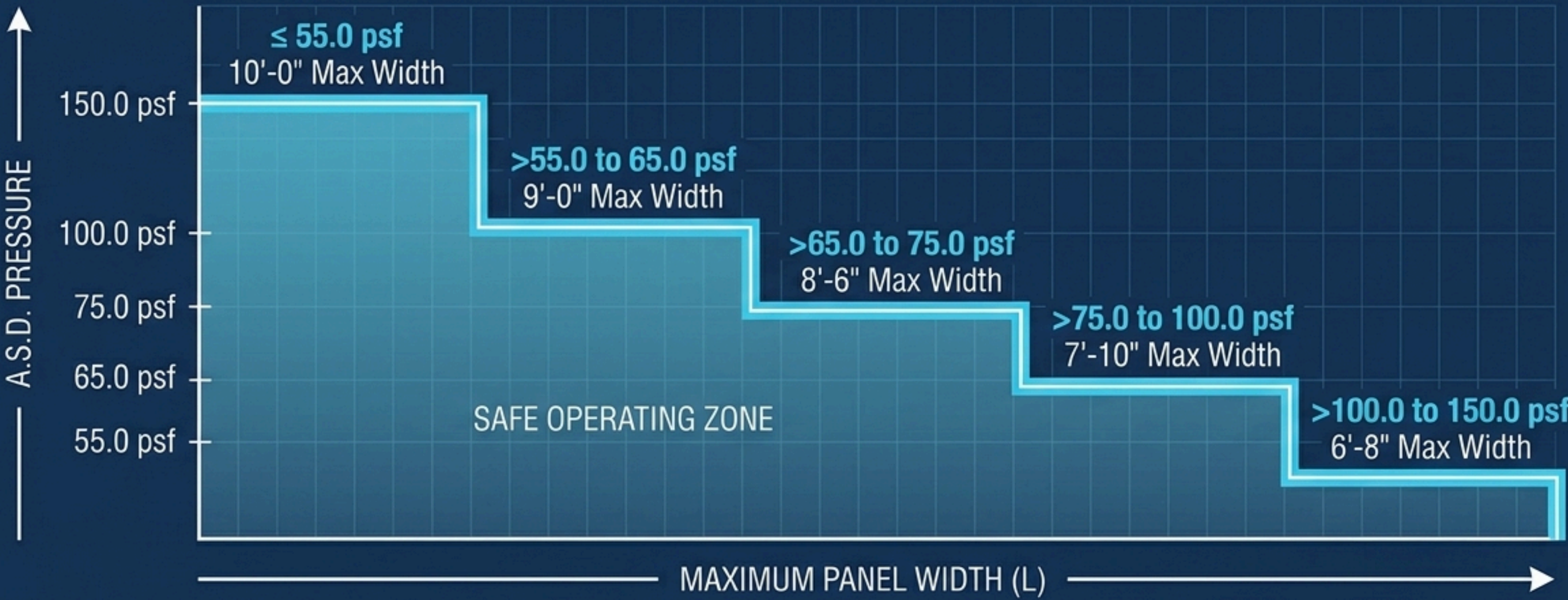
- **Continuous Head** bounds the top aperture.
- **Continuous Sill** bounds the bottom edge.
- **Structural Channel Jambs** enclose the 4" O.C. blade array on the vertical axes.



SPECIFICATION MATRIX	
REV:	A
DATE:	2024-05-27
ENG. REF:	D-38A7-003

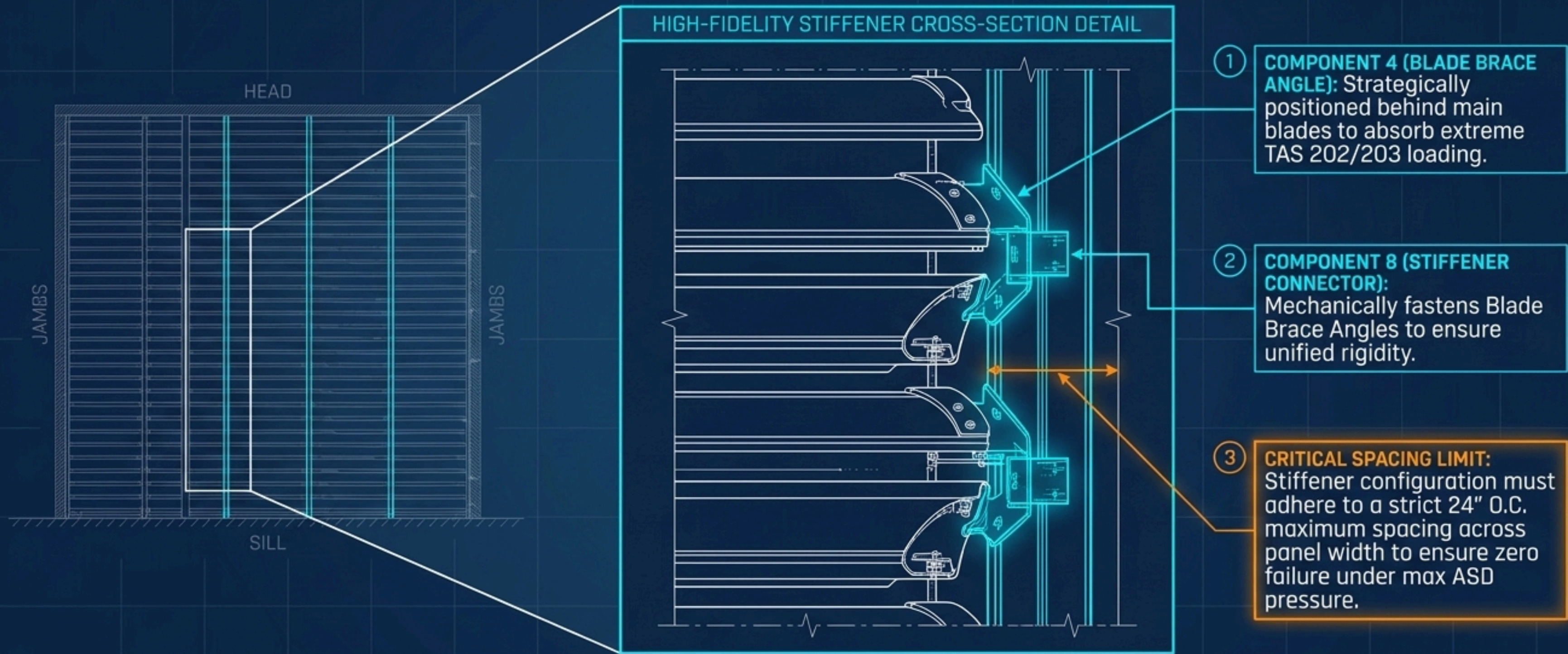
Performance Matrix: Wind Load vs. Maximum Panel Width

Schedule #1 limitations valid across all approved substrates.



SPECIFICATION MATRIX	REV: A
	DATE: 2025-01-16
	ENG. REF: D-38A7-004

STRUCTURAL REINFORCEMENT: STIFFENING PROTOCOLS

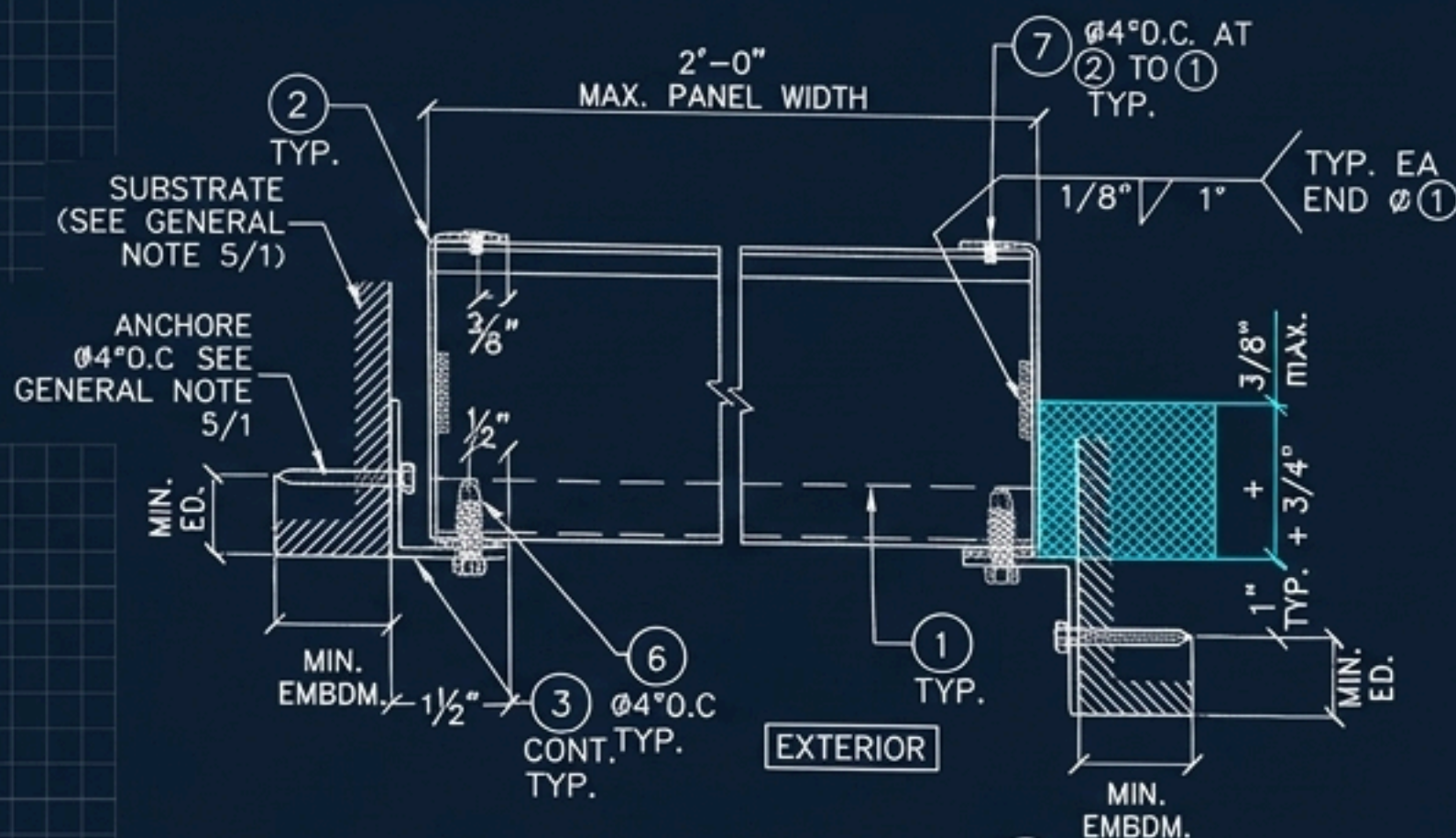


SPECIFICATION MATRIX		
REV	DATE	ENG. REF
A	2024-06-15	D-2017-005

PARADISE LOUVERS

INSTALLATION CONFIGURATIONS: JAMB TO SUBSTRATE INTERFACE

OPTION A: SECTION I-I (WITH MOUNTING ANGLE)

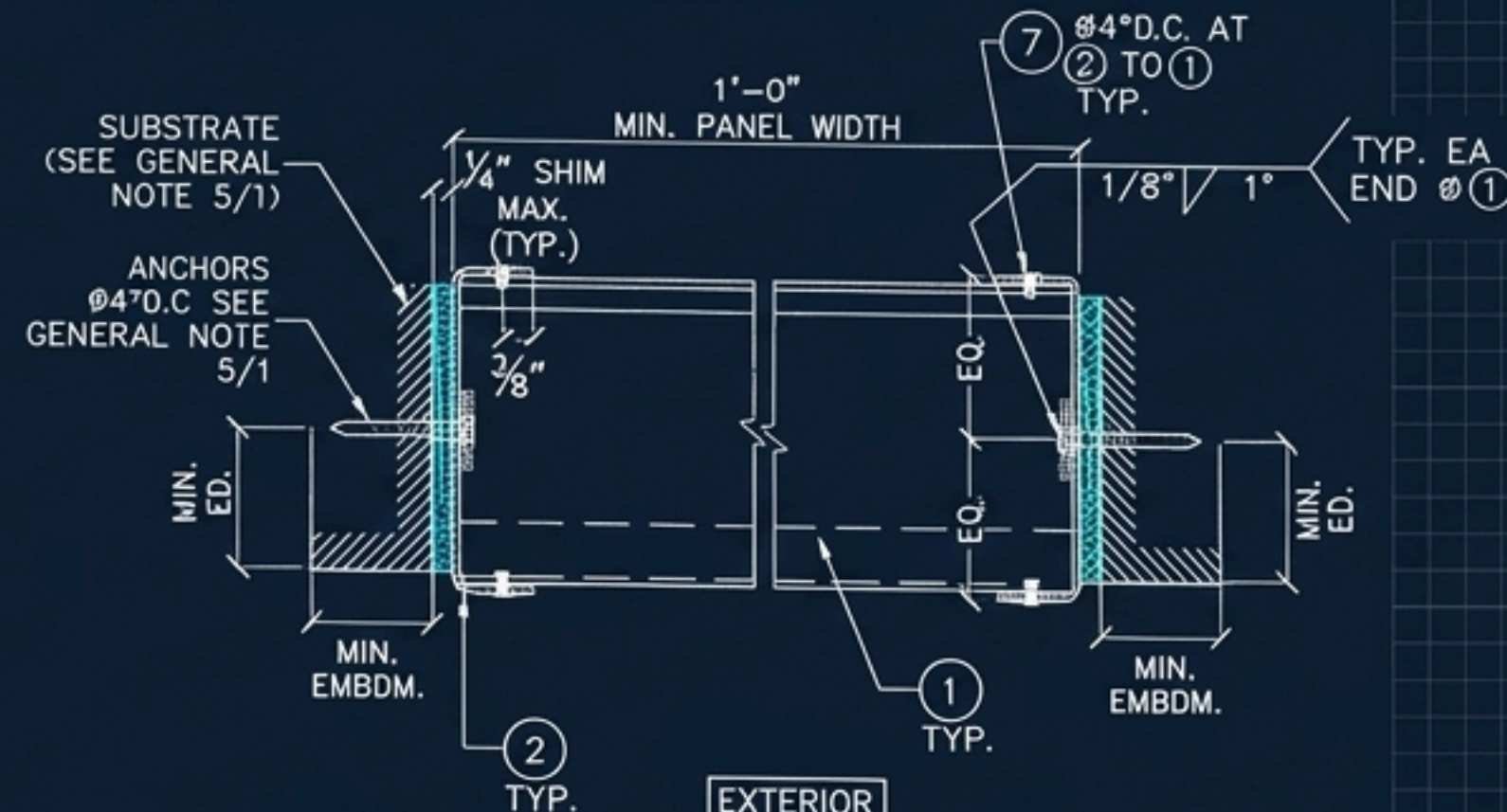


SECTION I-I: JAMB W/③

SCALE: N.T.S.

- Utilizes the Continuous Mounting Angle (Component #3).
- Field Advantage: Highly adaptable architecture allows for a generous maximum shim space of $\pm 3/4"$ between the mounting angle and the existing structure.

OPTION B: SECTION J-J (DIRECT MOUNT)



SECTION J-J JAMB W/O (3)

SCALE: N.T.S

- Direct mounting executed straight through the Channel Jamb (Component #2).
- Field Constraint: Requires high-precision framing; strictly limits maximum allowable shim space to a tight 1/4".

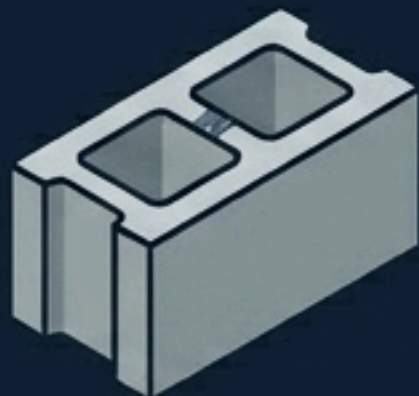
SPECIFICATION MATRIX	
REV: A	DATE: 2025-01-16
ENG. REF: D-38A7-006	

ANCHORING ANATOMY: SUBSTRATE COMPATIBILITY MATRIX

Minimum embedment and edge distance requirements for structural integrity.



POURED CONCRETE
(f'c=3000 psi min)



GROUTED CONCRETE BLOCK
(C-90 unit)



WOOD FRAME
(G ≥ 0.55)



STEEL OR ALUMINUM
(1/8" min thickness)

DeWalt Screw-Bolt+ (1/4"):
1 5/8" Embedment
2 1/2" Edge Dist.

ITW/Buildex Tapcon (1/4"):
1 3/4" Embedment
2 1/2" Edge Dist.

DeWalt Screw-Bolt+ (1/4"):
1 5/8" Embedment
2 1/2" Edge Dist.

ITW/Buildex Tapcon (1/4"):
1 1/4" Embedment
2 1/2" Edge Dist.

ITW/Buildex Tapcon (1/4"):
1 1/2" Embedment
1" Edge Dist.

ITW/Buildex Tek-Screws
(1/4"-14):
Fully embedded +
3 threads beyond.
3/4" Edge Dist.

SPECIFICATION MATRIX

REV: A | DATE: 2025-01-16

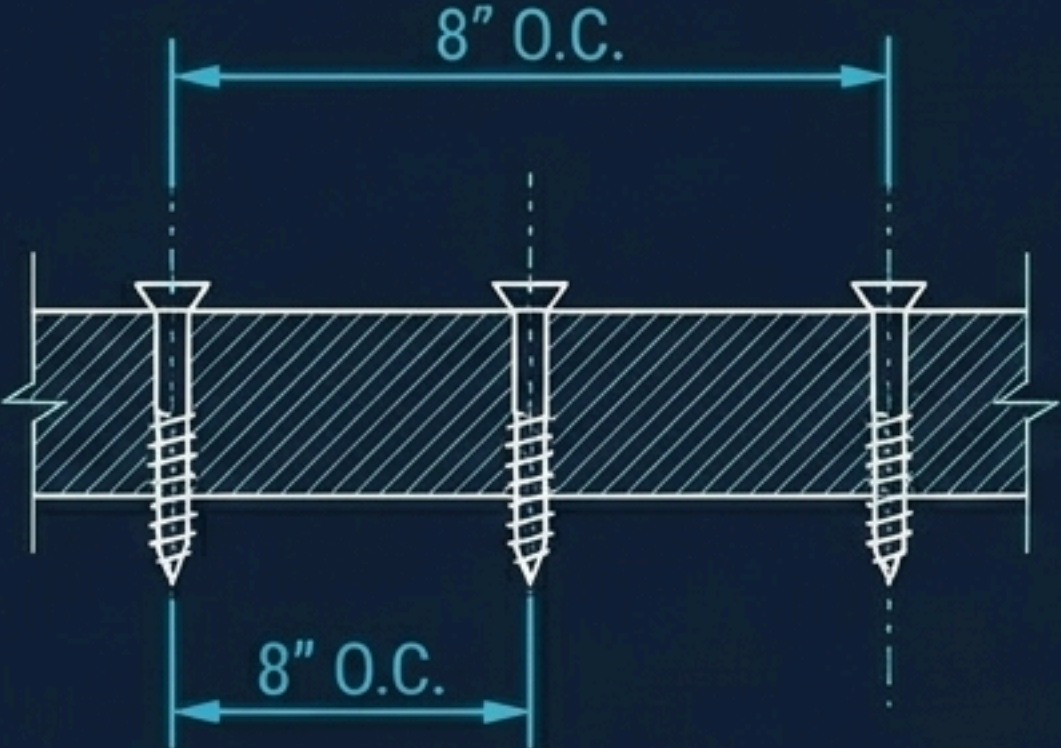
ENG. REF: D-38A7-007

MAXIMUM ANCHOR SPACING DYNAMICS

STANDARD OPERATING CONSTRAINTS

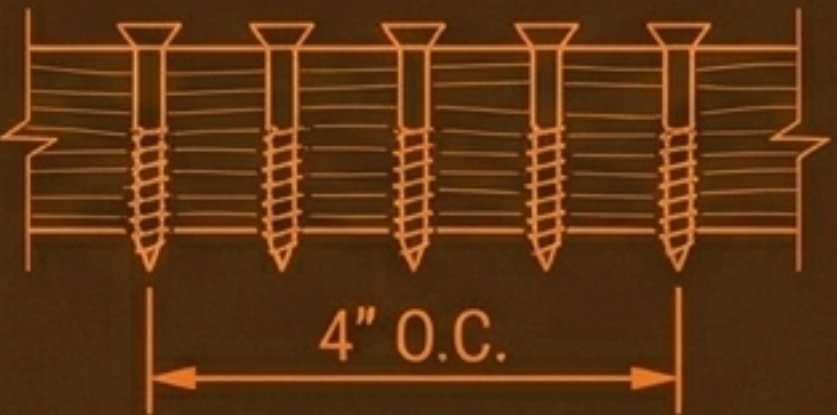
For Concrete, Grouted Block, and Steel/Aluminum Substrates:

Maximum anchor spacing is strictly maintained at 8" O.C. across all tested wind pressure brackets, up to 150.0 psf.



CRITICAL EXCEPTION: Wood Substrates

The standard 8" O.C. spacing is valid ONLY up to 65.0 psf. When A.S.D. pressure exceeds 65.0 psf, anchor spacing into wood structures must dynamically tighten to a maximum of 4" O.C. to prevent pull-out failure.

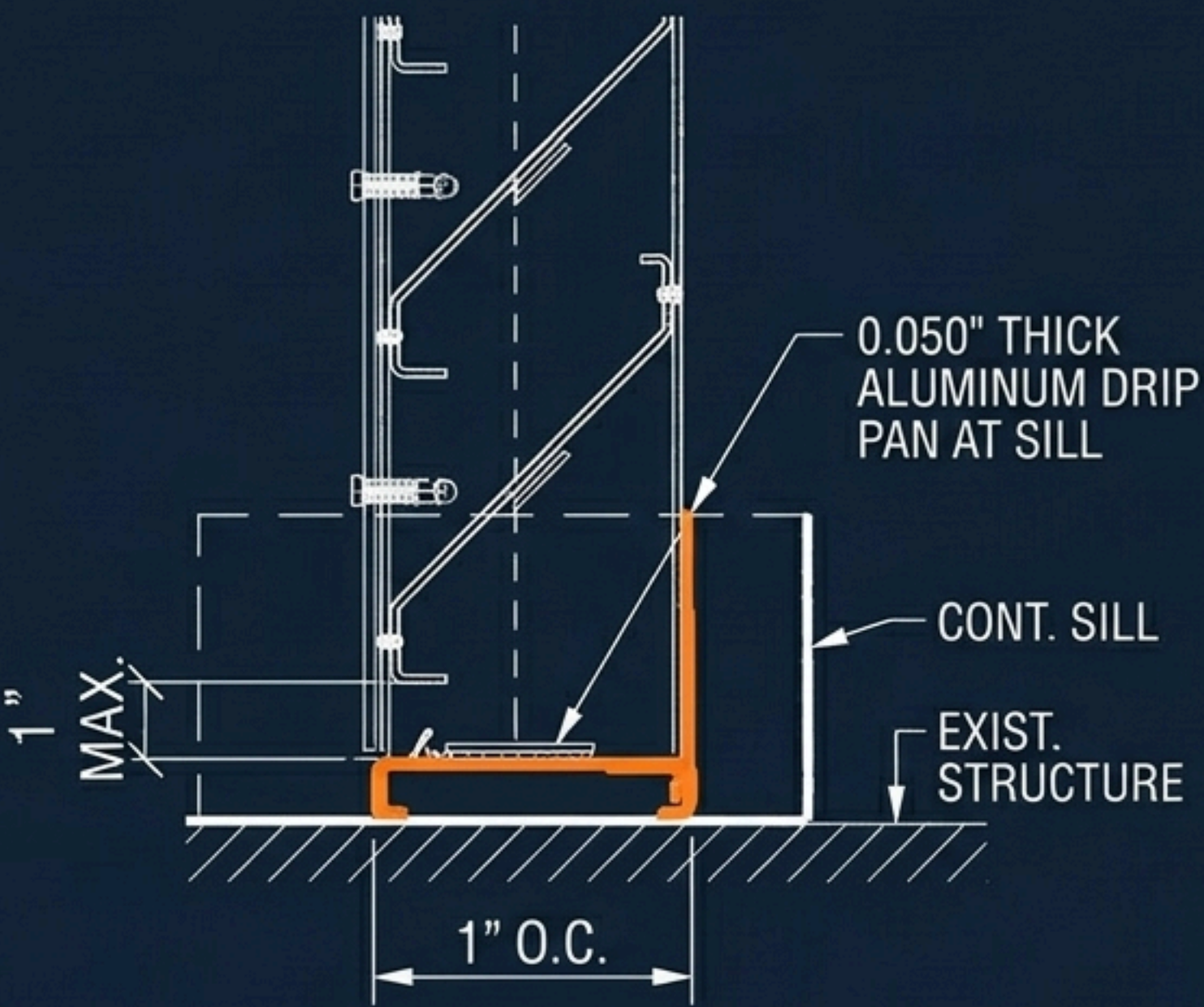


SPECIFICATION MATRIX

REV: A | DATE: 2025-01-16

ENG. REF: D-38A7-007

CRITICAL FIELD EXECUTION DIRECTIVES



DIRECTIVE 1: WATER MANAGEMENT IMPERATIVE

The system deflects debris and extreme wind shear, but is NOT fully water-tight. Per FBC mandate, the room positioned immediately behind the louver system must be actively designed to drain penetrating water, or strictly house water-resistant equipment. Note the 0.050" thick Aluminum Drip Pan at the Sill.

DIRECTIVE 2: GALVANIC CORROSION PROTECTION

Aluminum structural members coming into direct contact with dissimilar materials (such as structural steel or raw concrete) MUST be insulated and protected in strict compliance with Section III-6 of the 2020 Aluminum Design Manual to prevent rapid galvanic decay.

SPECIFICATION MATRIX	
REV: A	DATE: 2025-01-16
ENG. REF: D-38A7-007	

Synthesis: The Anatomy of Resilience

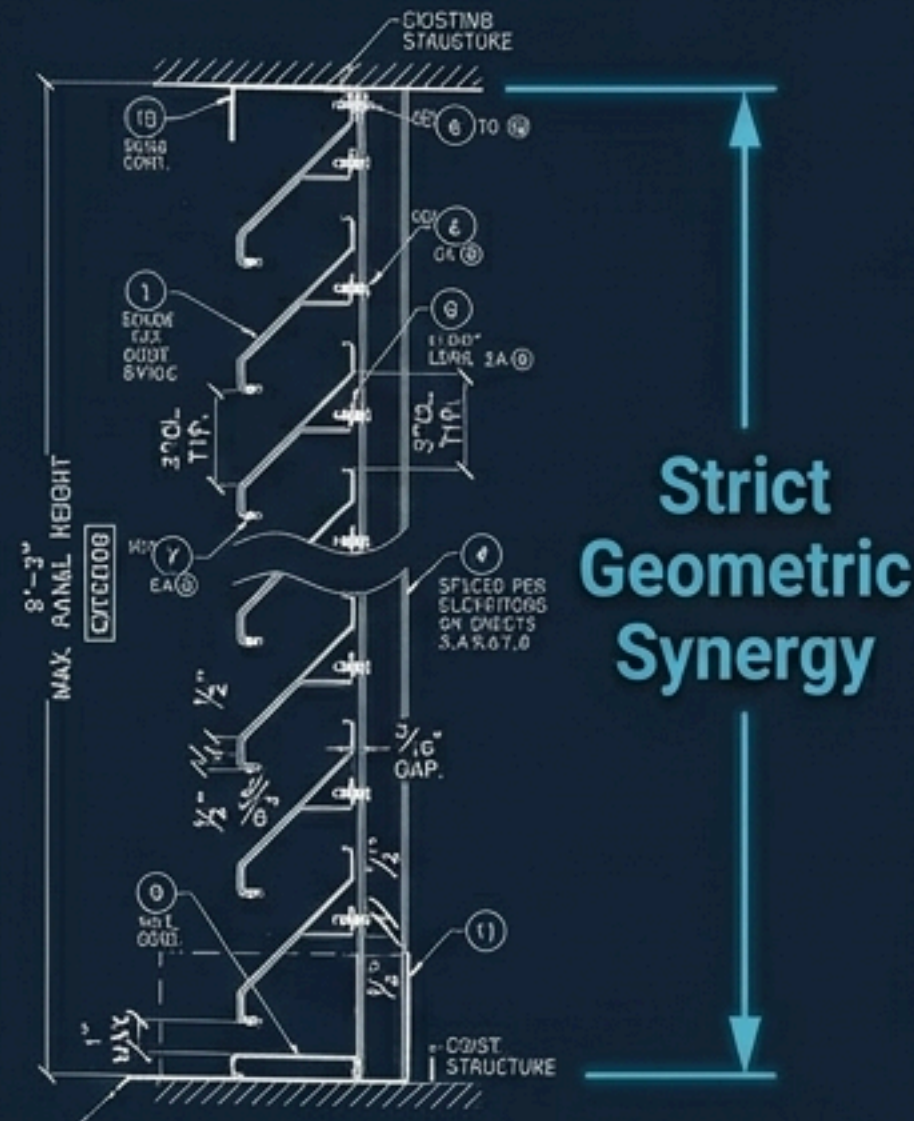
THE MACRO



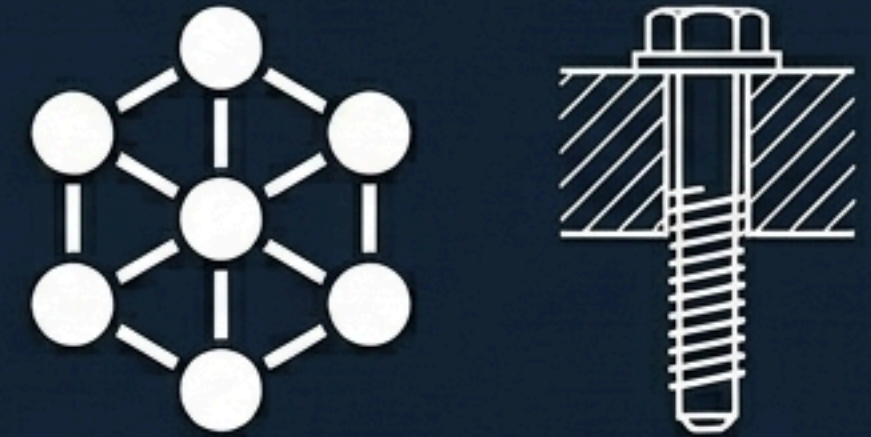
**FBC 2023
COMPLIANT**

Validated through extreme
150 psf loading and TAS
201 missile impacts.

THE ENVELOPE



THE MICRO



5052-H32 Aluminum Core
paired with adaptive
304/316 Stainless Steel
anchoring.

The Blade #1 Louver operates flawlessly not through sheer mass, but through exact **geometric and material synergy**. By aligning **highly ductile aluminum** with **strict stiffening (24" O.C.)** and **adaptive anchoring protocols**, it transforms a standard airflow vent into a rigorously evaluated HVHZ shield, guaranteeing architectural integrity under catastrophic forces.

SPECIFICATION MATRIX	
REV: A	DATE: 2025-01-16
ENG. REF: D-38A7-007	