



DUO-GARD

TOGETHER BY DESIGN.™



ILLUMAWALL 3500

FOCUSED DESIGN APPROACH

C O L L A B O R A T E → I N T E G R A T E → I N N O V A T E → C R E A T E

Duo-Gard's proven Focused Design Approach is based on the belief and experience that each architectural project and outdoor structure is unique and deserves a solution that meets specific requirements and performance. Our service package has been designed to be a resource for the design community. We make sure the best technology is used, the best engineering and fabrication practices are incorporated and the best results are achieved.





WHAT IS ILLUMAWALL 3500

Duo-Gard's polycarbonate translucent wall incorporates a tongue and groove panel connection requiring no mullions, offering a clean and seamless aesthetic. This wall emits a controllable light transmission while offering high thermal values. Daylight and artificial light flows are diffused for even light distribution. Lumira Aerogel is available for enhanced light and thermal performance.

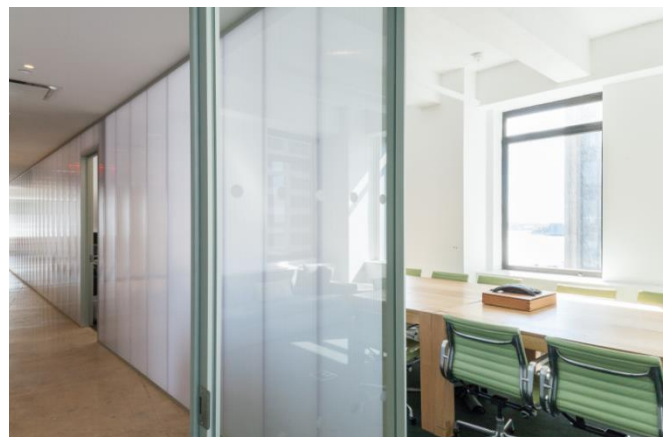
UNIQUE FEATURES

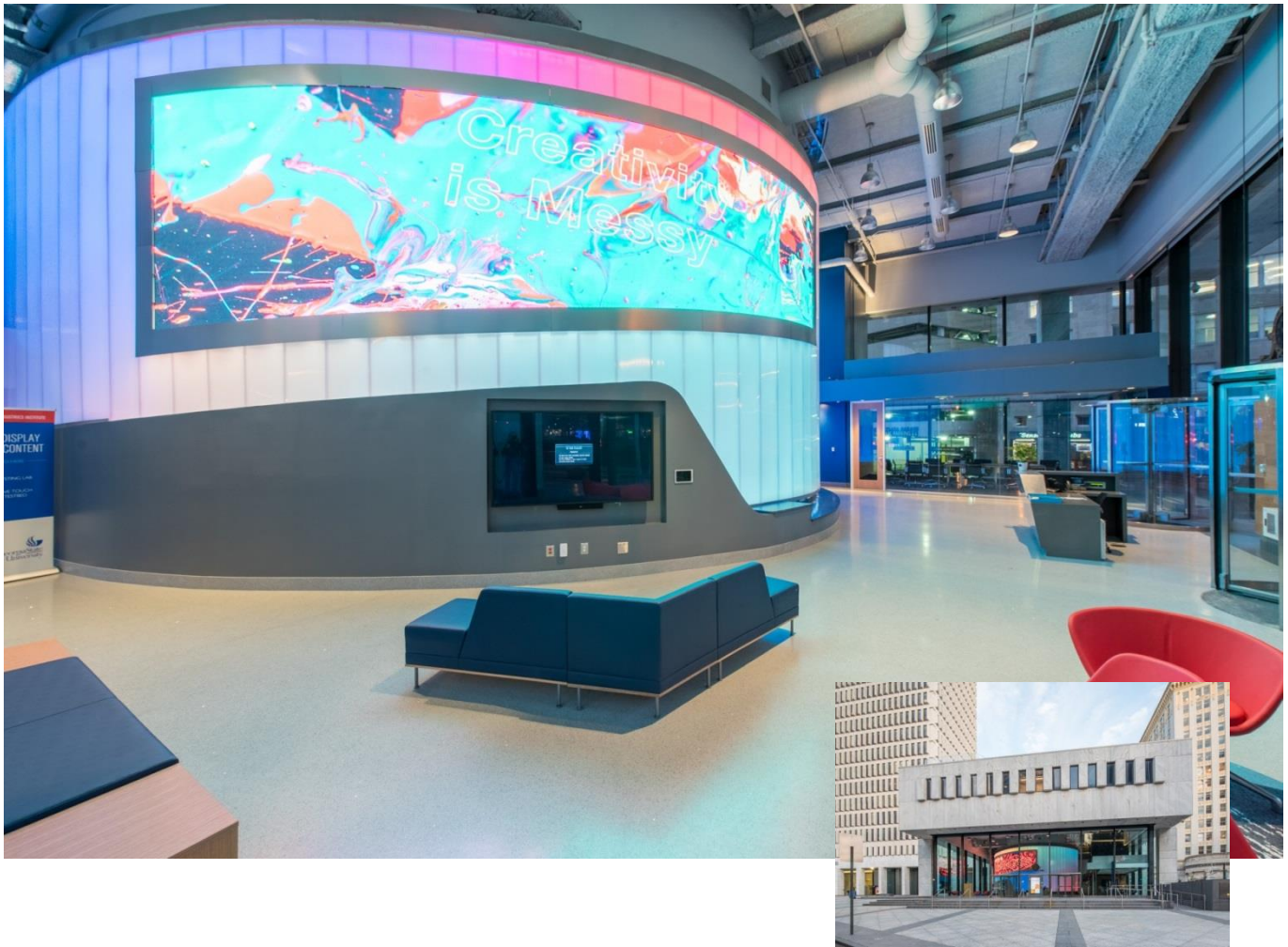
- Panels are available in up to 50 foot lengths for continuous facades
- 40mm and 50mm thicknesses
- Thermally improved for superior performance
- Panels are UV protected on both sides
- 15 year warranty
- Colors and finishes offer design flexibility
- Panels will not sustain a flame and are self-extinguishing
- Lightweight and easy to install
- Excellent for backlighting
- NFRC tested and certified
- Enhance spans and reduce structural girts using Duo-Gard's aluminum structural grid



INTERIOR WALLS

- Contiguous glazed walls with no mullions
- Clear span up to 10 feet
- Class A fire rating
- Multiple colors available
- Matte and gloss finishes
- Moves light from perimeter walls deeper into interior spaces
- Panel options offer various light flow choices and visibility levels
- Lumira Aerogel options for greater acoustics
- Perfect for backlighting
- Walls are movable and easy to install
- Structural packages for door framing available





Duo-Gard's Translucent Wall Glows as Beacon at Creative Media Industries Institute

If presentation is everything, how do you make it informative, innovative and impressive today?

If you're a student, researcher or industry professional in the creative arts, associated with Georgia State University, you splash it over an interactive display screen 10 feet high by 41 feet wide embedded into an illuminated, curved translucent wall 20 feet high by 72 feet wide located in the university's new Creative Media Industries Institute.

Abandoned for years, a three-story annex to downtown Atlanta's former SunTrust Bank building is now enjoying life as the CMII, thanks to a \$22.8 million gift from the Robert W. Woodruff Foundation – the university's largest donation. Designed by Cooper Carry Architects, CMII is created to support, expand and enhance Georgia's burgeoning \$6 billion film and digital media industry. The new facility opened in October 2017.

Photo Credit: Martin DiGeronimo



Sporting Life is Brighter at Michigan's Saginaw Valley State University

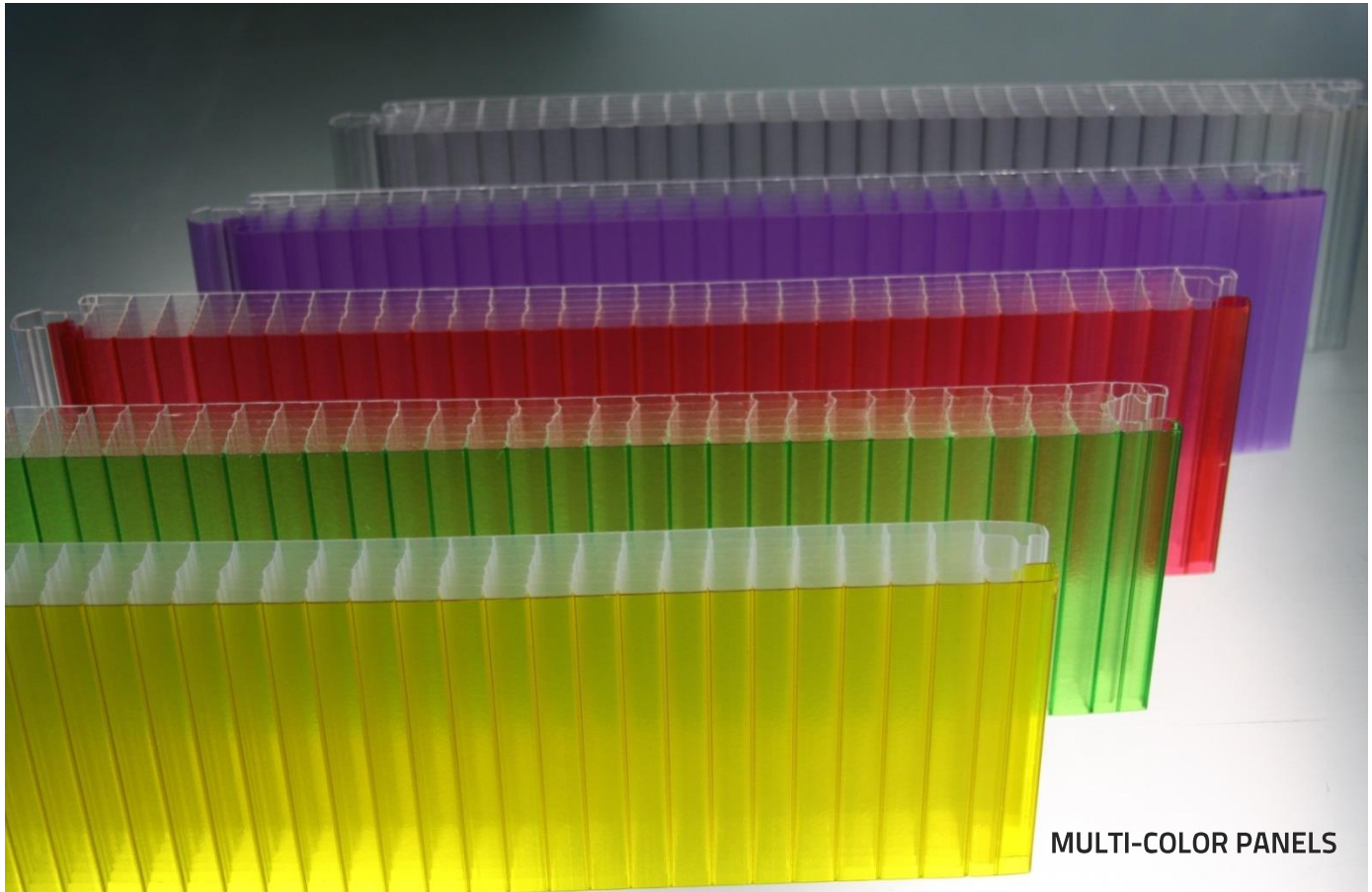
Student athletes at Michigan's Saginaw Valley State University are reaping the benefits of a new indoor training facility. Connecting to the existing Ryder Center, the facility features a 300-meter track and 'an interior environment that's very different,' according to Jonathan Disbrow AIA, lead designer for the project by ROSSETTI, an architectural design and planning firm headquartered in Detroit.

He says often such huge facilities end up resembling caves, not the effect he wanted. 'One of the major design objectives was natural light. We wanted a bright interior environment without relying on artificial lighting,' Disbrow says. 'We wanted a translucent glazing material that not only allowed natural light, but was also cost effective and had a decent U-value and a low solar heat gain coefficient.'

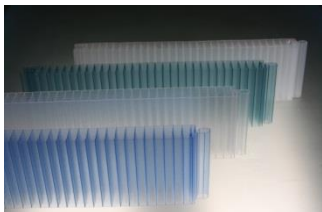
He achieved all this with a 14,995-square-foot daylighting system engineered by Duo-Gard Industries. The system, designed for vertical glazing applications, integrates 40mm tongue-and-groove multiwall polycarbonate in specially engineered aluminum framing. According to the National Fenestration Rating Council, this Duo-Gard system, with glazing in the opal tint chosen, allows 30% visible light transmittance; it carries a U-value 0.29 and SHGC 0.39.

Photo Courtesy of SVSU

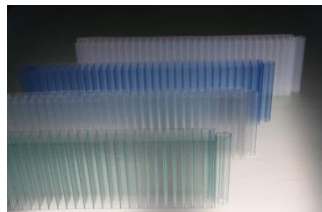
PANEL OPTIONS



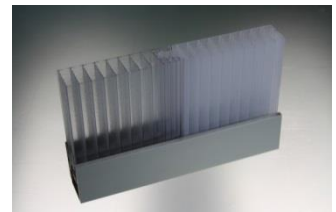
MULTI-COLOR PANELS



MATTE FINISH



STANDARD GLOSS FINISH



CLEAR AND OPAL PANELS

40mm Tongue & Groove
Polycarbonate Panel

	Wall Configuration	U-Value	Light Transmission	SHGC
Standard Opal		0.28	0.30	0.39
Standard Clear		0.28	0.67	0.58
Standard Opal		0.27	0.50	0.57
Standard Clear		0.27	0.59	0.53
Clear with Matte (2 sides)		0.24	0.48	0.48
Opal with InfraRed (IR) Inhibitor (Bi-Color)		0.26	0.23	0.30
Clear with IR (Bi-Color)		0.26	0.41	0.35
Clear with Lumira® Aerogel		0.10	0.38	0.42

BOLD denotes NFRC certified

Performance values should be confirmed for each application, contact Duo-Gard at info@duo-gard.com.

TURNKEY SERVICES

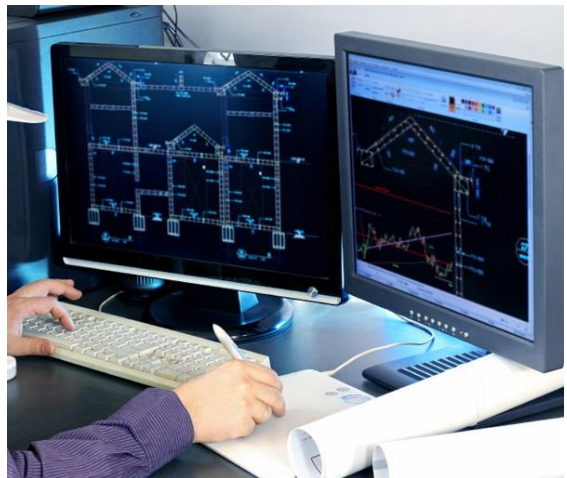
DUO-GARD DESIGN TEAM

- Cross-functional review of your design
- Performance analysis
- VE options
- Environmental opportunity
 - Energy use
 - Materials use
- Daylighting design
- Alternative technologies for enhanced performance
- LEED points
- Estimating and budget preparation



ENGINEERING

- Sealed drawings in all 50 states
- Structural engineering and calculations
- Performance engineering
- Building code compliance
- Collaboration with project team
- All project drawings including submittals, shop drawings and installation instructions



FABRICATION

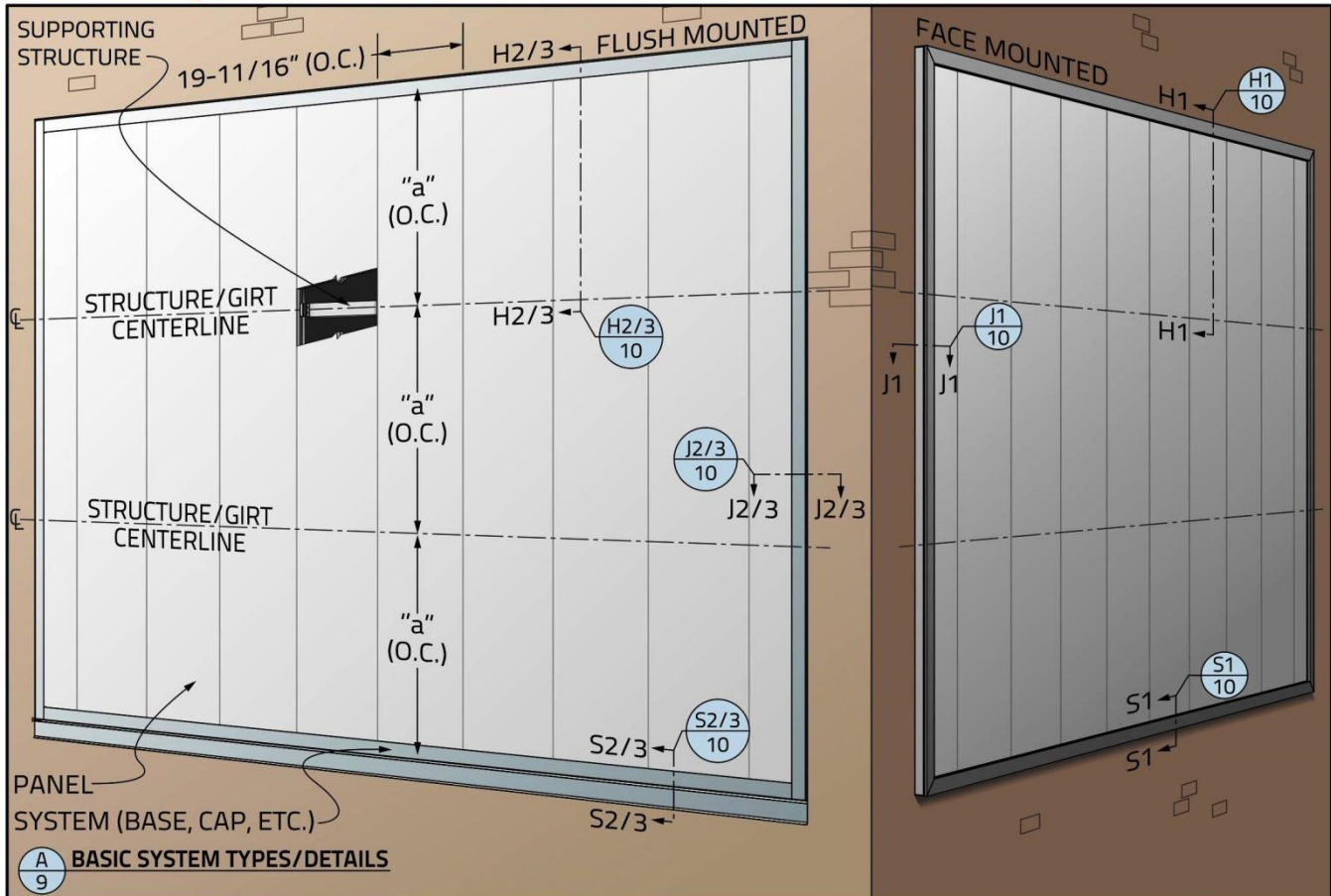
- Complete system fabrication
- Fabrication of both steel and aluminum structure
- Certified welders
- AISC compliant

INSTALLATION

- Installations in all 50 states
- Installation support both offsite and onsite
- Installation training and certification
- Technical support
- Field solutions and modifications if required



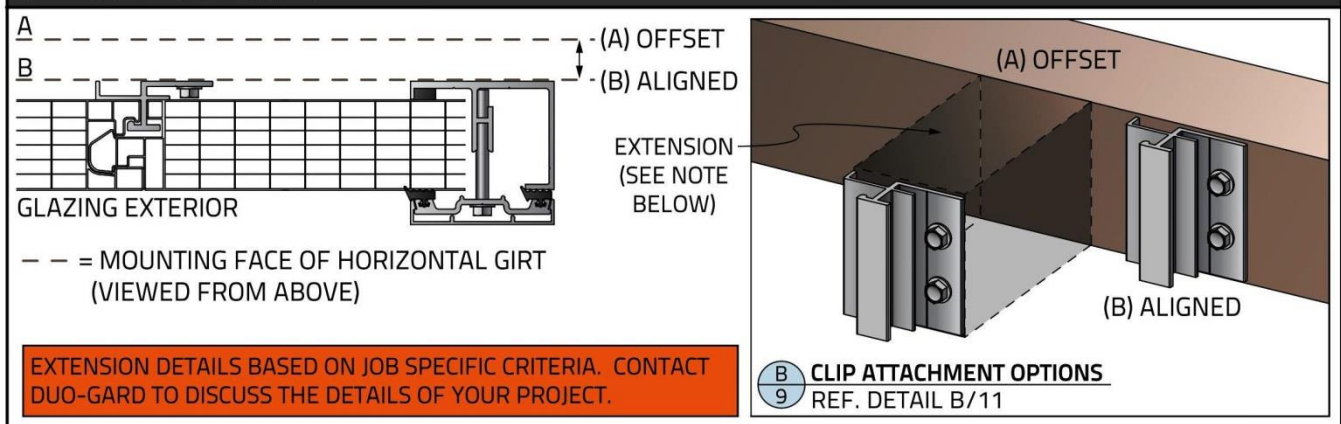
3500 System Details



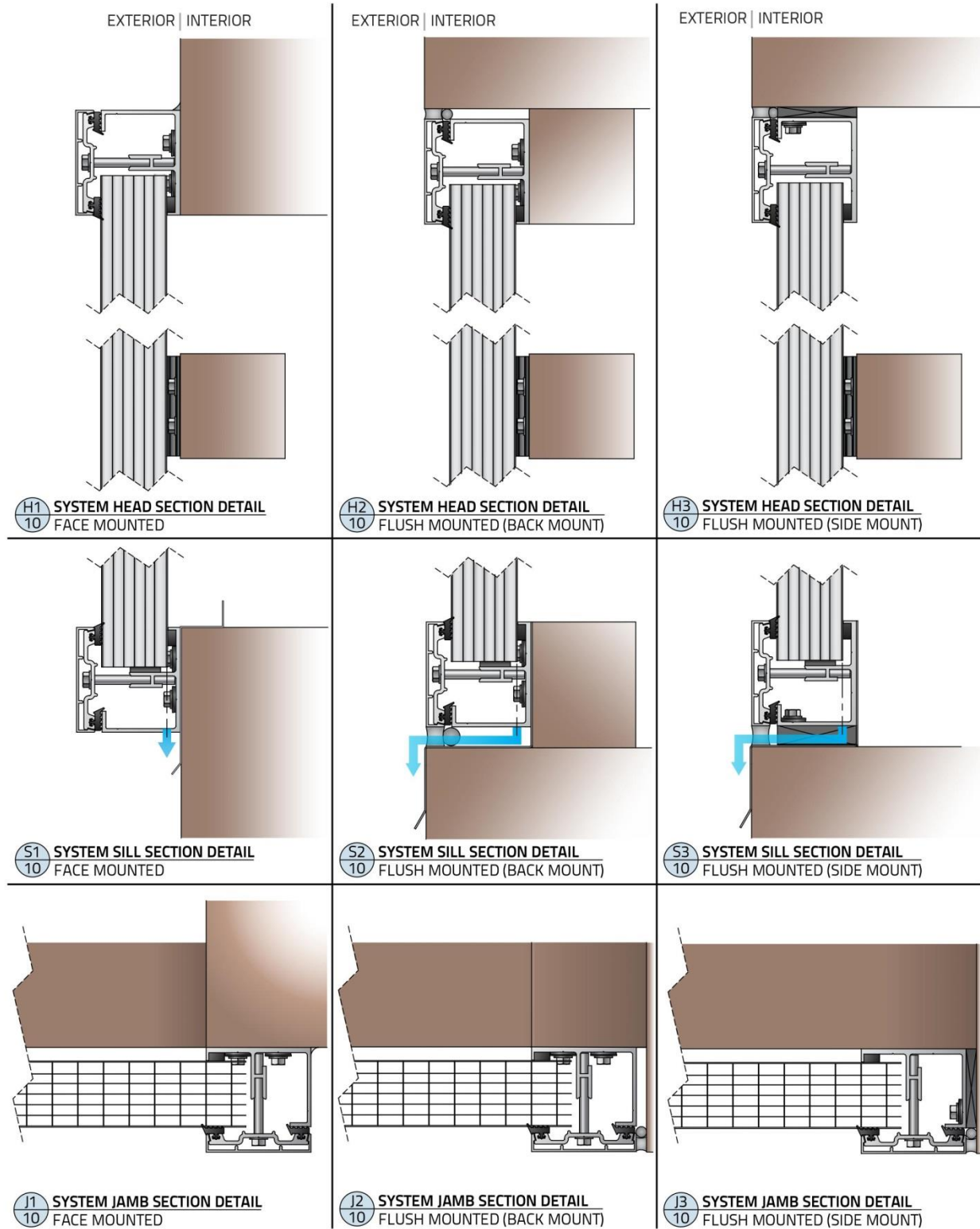
GIRT SPACING & GENERAL REQUIREMENTS | REF. A/9 (ABOVE) & B/9 (BELOW) - REVISED 6/6/18

DESIGN LOAD (p.s.f.)	MAXIMUM GIRT SPACING "a"	GIRT GENERAL REQUIREMENTS
≤ 20	72"	<ul style="list-style-type: none"> - GIRT SPACING BASED ON ASCE 7-10 DESIGN STANDARD. - GIRTS MUST BE HORIZONTAL, CONTINUOUS, AND VALIDATED (BY OTHERS) TO SUPPORT SYSTEM. - GIRT MUST HAVE A MINIMUM 3" TALL MOUNTING SURFACE (VERTICAL, FACING THE EXTERIOR) FOR CLIP ATTACHMENT. <p>MOUNTING SURFACE OF GIRT SHOULD BE ALIGNED WITH BACK FACE OF THE BASE CHANNEL (SEE "B" BELOW). IF THE GIRT FACE IS OFFSET (SEE "A" BELOW), SHIMS OR EXTENSIONS WILL BE REQUIRED AT PANEL CLIPS. SEE DETAIL B/9</p>
21-26	66"	
27-30	60"	
31-33	54"	
34-37	48"	
> 37	CONTACT DGI	

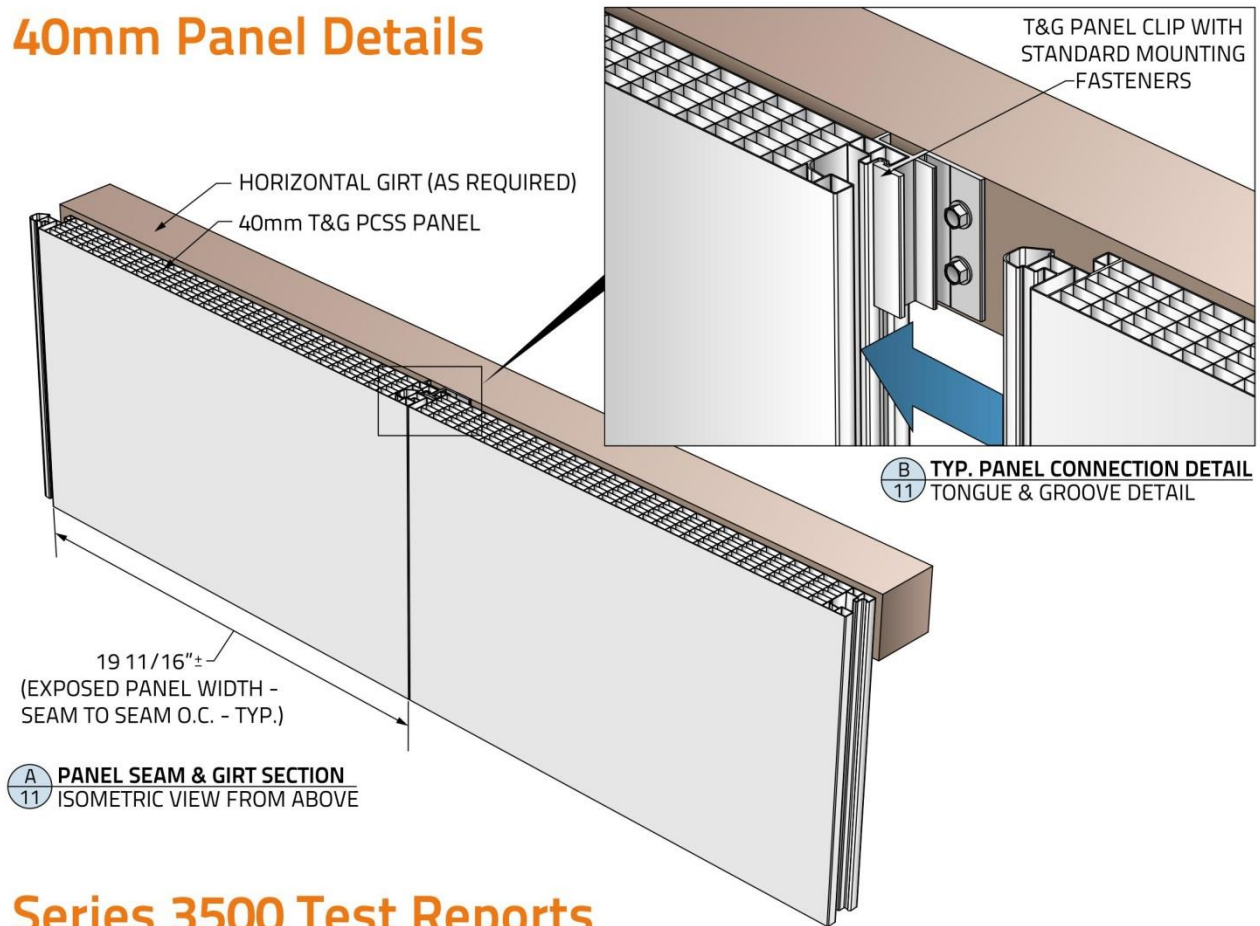
GIRT LOCATION DETAILS



System Section Details



40mm Panel Details



Series 3500 Test Reports

TEST REPORT CERTIFICATION		
TEST STANDARD	TEST DESCRIPTION	RESULTS
FLAMMABILITY		
ASTM D1929	IGNITION TEMPERATURE	896 DEGREES FAHRENHEIT
ASTM D2843	DENSITY OF SMOKE	71%
ASTM D635	BURN EXTENT	CC1 RATING: LESS THAN 1" BURN EXTENT
ASTM E84	FLAME SPREAD	CLASS A: 15
	SMOKE DEVELOPED	CLASS A: 235
WEATHERING		
ASTM E308	COLOR CHANGE	4,500 HOURS OF EXPOSURE
ASTM E313	YELLOWNESS	4,500 HOURS OF EXPOSURE
AIR & WATER PENETRATION		
ASTM E331	WATER PENETRATION	NO LEAKAGE AT 7.5 p.s.f.
ASTM E283	AIR LEAKAGE	NOT TO EXCEED 0.07 AT 6.24 p.s.f.
IMPACT RESISTANCE/STRUCTURAL		
ASTM E1996	SMALL MISSILE IMPACT	NO RIPS, TEARS, OR PENETRATIONS
ASTM E1886	AIR PRESSURE CYCLING	NO RIPS, TEARS, OR PENETRATIONS AT 65 p.s.f.
ASTM E330	STRUCTURAL PERFORMANCE	NO DAMAGE AT 75 p.s.f.
PERFORMANCE		
NFRC 102	U-FACTOR	0.29 ON SYSTEM
NFRC 201	SOLAR HEAT GAIN COEFFICIENT	0.39 ON SYSTEM WITH OPAL PANEL
NFRC 202	VISIBLE LIGHT TRANSMISSION	30% OPAL, 49% CLEAR, ON PANEL



40442 Koppernick Road
Canton, MI 48187
734.207.9700
www.duo-gard.com

Your design sets you apart. Our reputation as a resource sets Duo-Gard apart. Join the design community that knows the difference Duo-Gard makes. Bring us together and we'll open a creative tool box to help you make responsible, valuable choices.

David Miller, President

AWARDS



AFFILIATIONS



Member of
The American
Institute of Architects

