

Curtain Wall Systems

The Fusion Of Strength And Efficiency

- *Advanced Composite Design*
- *U Values as low as 0.21*
- *CRF (frame) up to 90*
- *20 PSF Water Tested/Certified*
- *60 PSF Design Pressure*



Finally, a curtain wall framing system that equals the thermal performance of glass.



FM Graham's GThurm™ curtain wall provides unsurpassed thermal resistance in an engineered composite design using continuous strand glass reinforcement to match the strength of aluminum.

Using our decades of combined engineering experience with aluminum curtain wall, we designed our GThurm fiberglass composite curtain wall to match aluminum's strength while far surpassing it in thermal performance.



GThurm curtain wall uses the same sound principles of weathering and anchorage proven in our aluminum products.

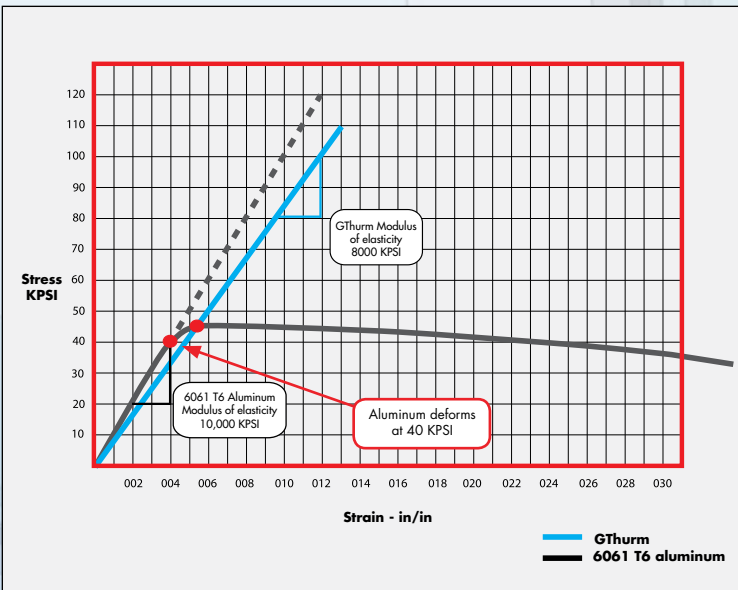
We pultrude GThurm curtain wall using our revolutionary G2RP process, featuring continuous stranded glass fiber embedded in polyurethane. G2RP exhibits extraordinarily high thermal resistance, high strength, and it's highly resistant to condensation.

Our GThurm curtain wall was designed to equal the structural performance of our aluminum products.


"G2RP has 700 times less thermal conductivity than aluminum"

GThurm framing is essentially all thermal break. Aluminum framing must compromise the structure by incorporating supplemental thermal breaks to separate warm and cold surfaces.

GThurm curtain wall is nearly immune from typical aluminum system problems like thermal "short circuits" and thermal expansion in the "warm side" of systems. GThurm is 700 times less conductive than aluminum, virtually eliminating the cold spots that can lead to damaging condensation problems.

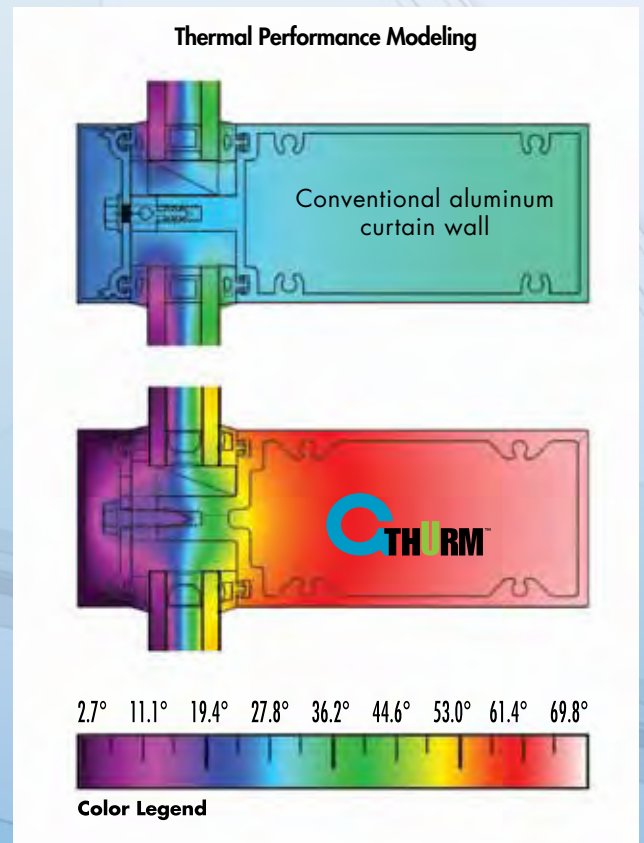


Modulus of elasticity comparisons of GThurm and aluminum show that while the initial strength of aluminum is greater, GThurm continues to exhibit high strength long after aluminum deflects.



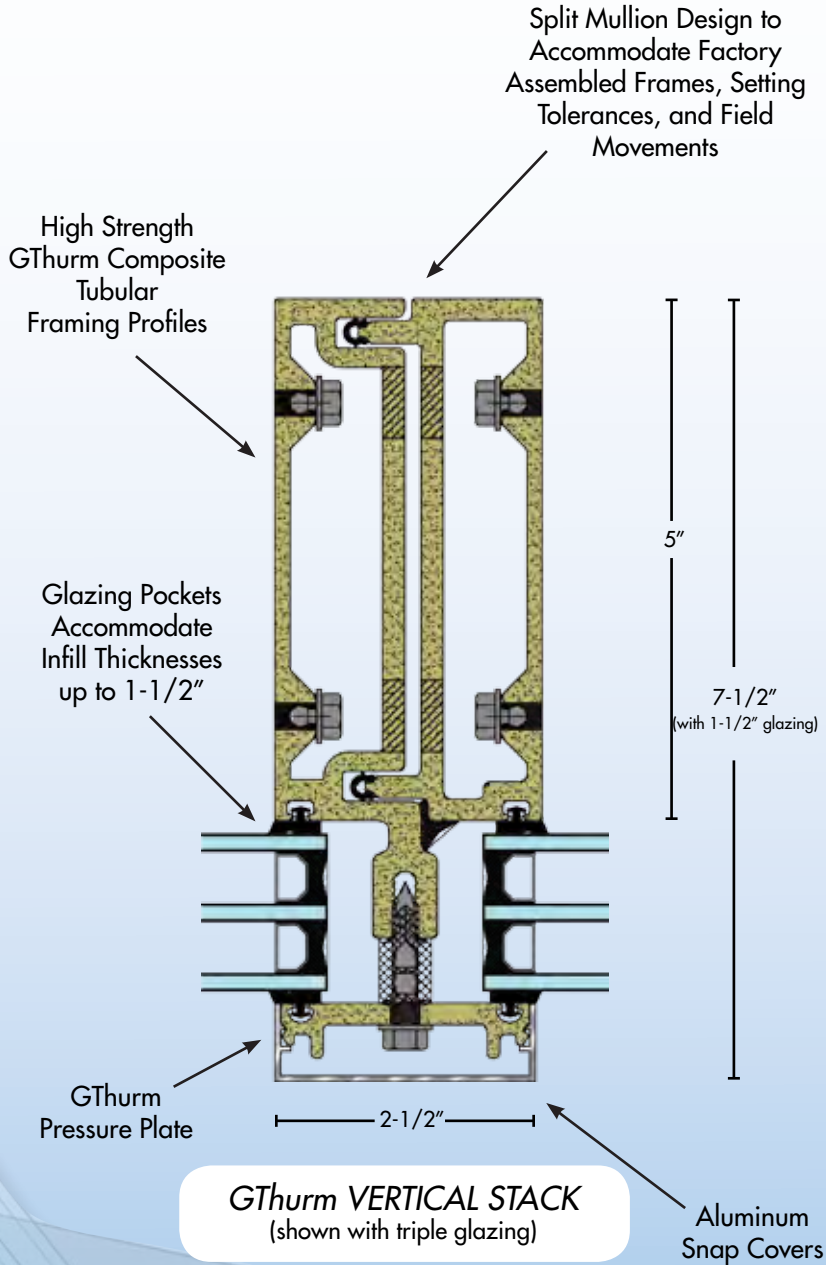
G2RP is an advanced fiberglass composite consisting of 80% continuous glass fiber thermally set with 20% Bayer® Baydur® polyurethane resin. G2RP exhibits a flexural strength of nearly 300% higher than typical polyester and vinyl ester fiberglass.

The G2RP framing components virtually eliminate the thermal conductivity issues experienced with aluminum framing. Our 80% glass G2RP framing creates a homogenous relationship with the glass it encases.



Actual Therm 6.3 thermal modeling results showing a comparison between conventional aluminum and GThurm.

TYPE	TEST SIZE	AIR (cfm/ft ²) at 50 mph	WATER (psf)	DESIGN PRES- SURE (psf)	UNIFORM LOAD STRUCTURAL (psf)	U-VALUE		CRF Frame
						Dbl IG Glass	Triple IG Glass	
GThurm Curtain Wall	80 x 80	0.01	20	60	90	0.34	0.21	90



GThurm HIGHLIGHTS

- U values as low as 0.21
- CRF (frame) up to 90
- Low embodied energy
- Installs using the same anchorage designs as our aluminum systems
- Engineered profiles use continuous strand glass reinforced composite to equal aluminum structural performance

STANDARD FEATURES

- 10 - Year limited warranty
- Fully captured or vertically butt glazed
- Split finish
 - Exterior finish - 2605 or anodized
 - Interior finish 624*
- Stainless steel fasteners
- Isolator gasket installed at factory
- GThurm pressure plate pre-drilled and weeped to reduce field labor
- EPDM glazing gaskets
- Factory fabricated and assembled frames
- Snap covers available in various depths and profiles

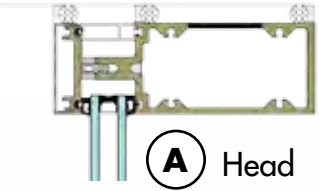
OPTIONAL FEATURES

- Sunshades
- Light shelves
- Zero sight line vent

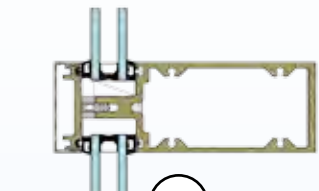
GLAZING OPTIONS

- Single, double, or triple insulated glass
- Insulating glass units up to 1 1/2" thick

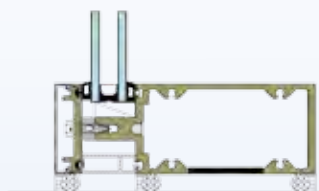
* AAMA 624 finish for fiberglass is comparable to AAMA 2604 for aluminum



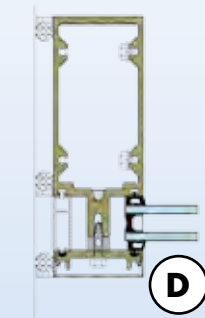
Head



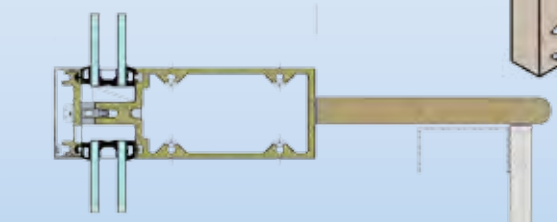
Horizontal



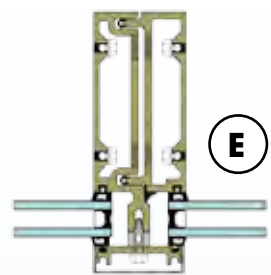
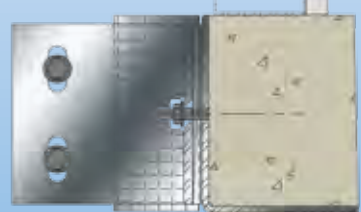
Sill



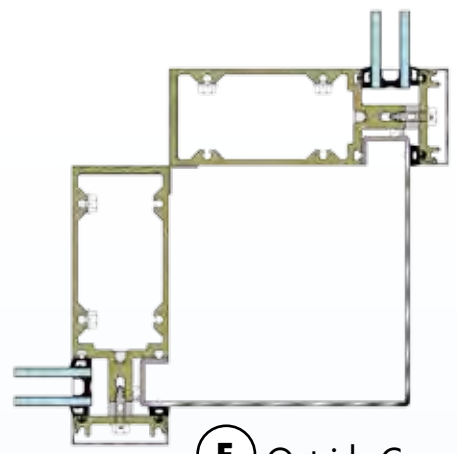
Jamb



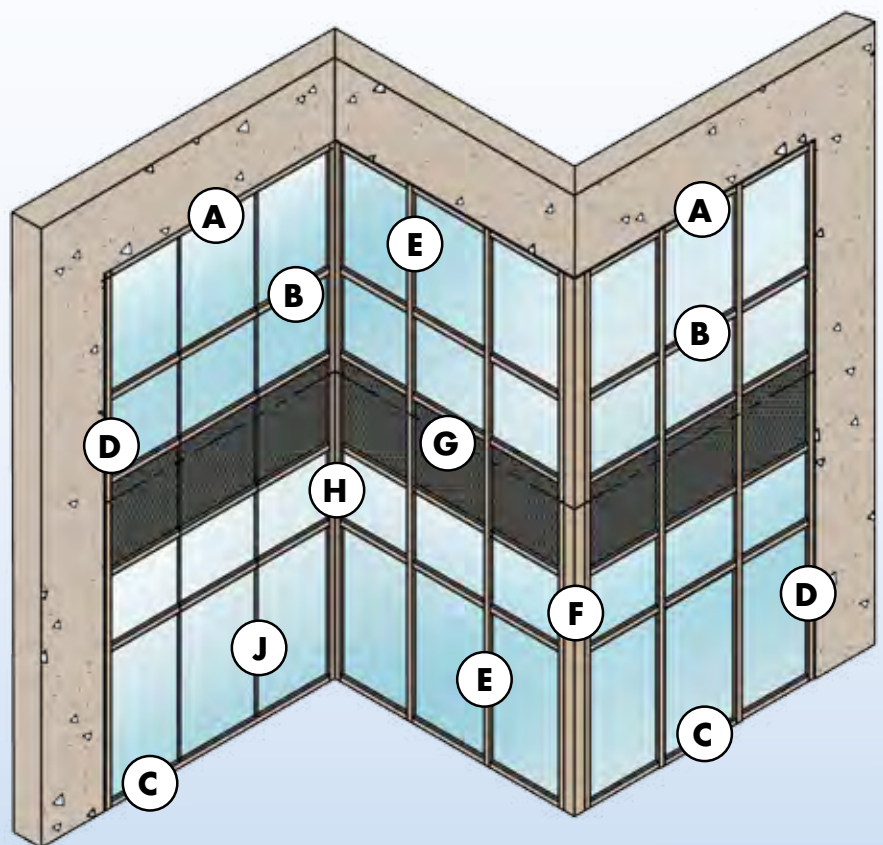
Horizontal @ Floor



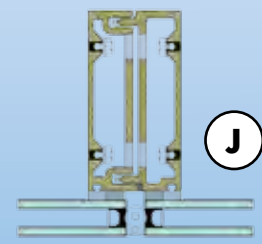
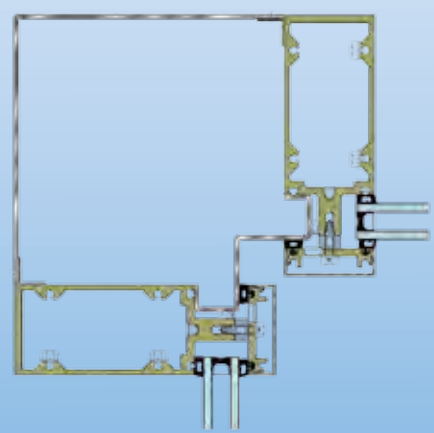
Vertical Stack



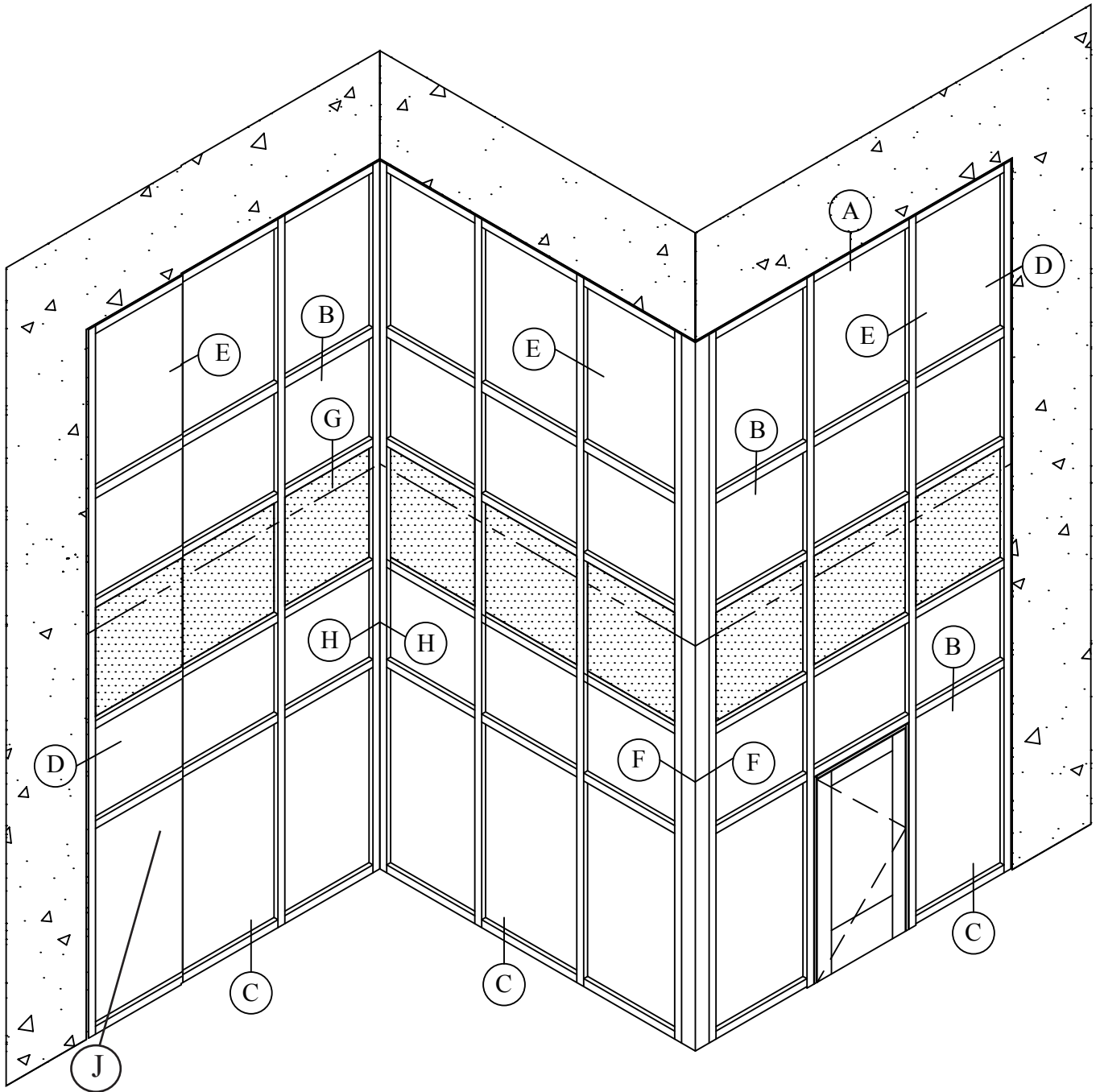
Outside Corner



Inside Corner



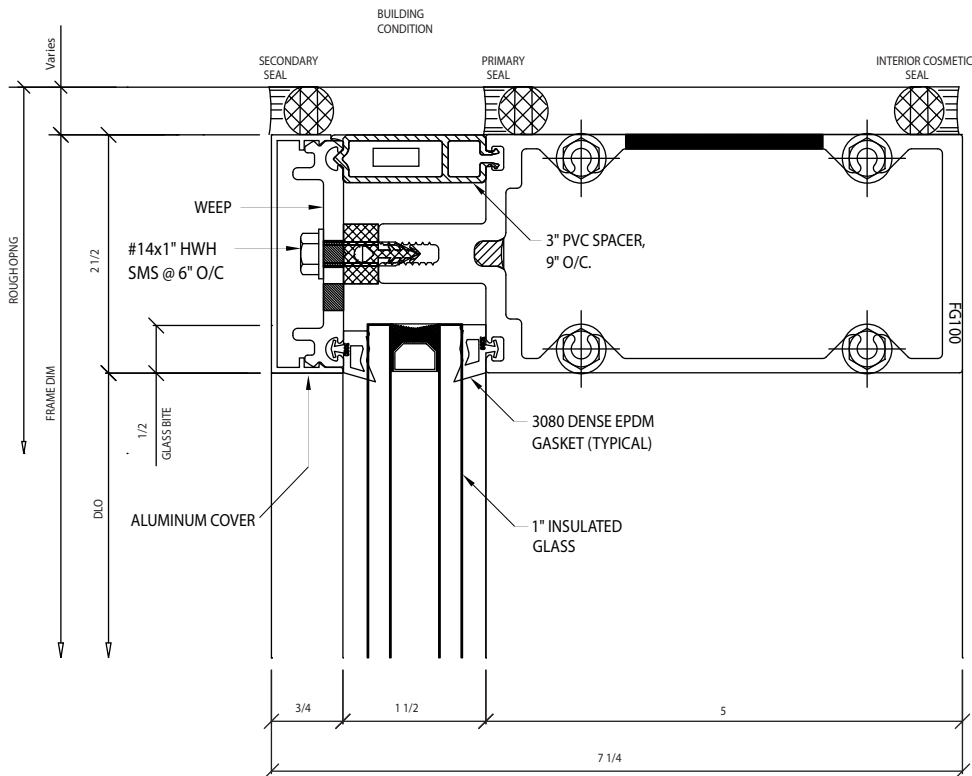
Butt Glazed Vertical



For butt glazed vertical
see detail "J"

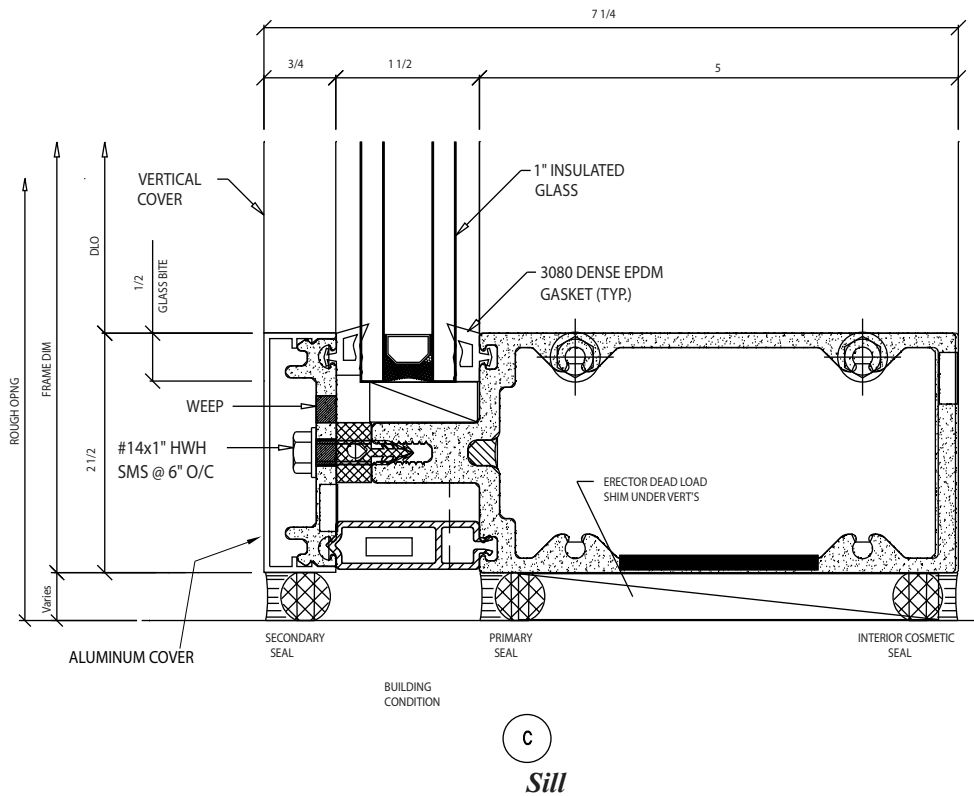
Elevation of Typical Captured Wall

FM Graham
GThurm™ Composite Curtain Wall
 Standard Details, 1/2 Scale

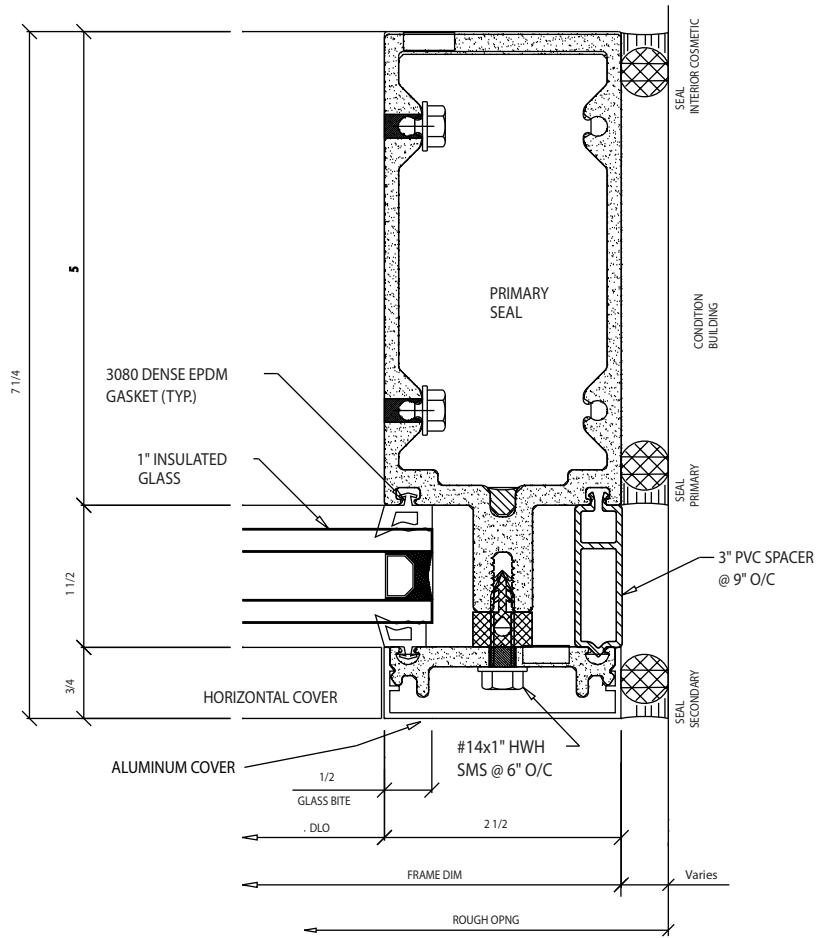


A
Head

FM Graham
GThurm™ Composite Curtain Wall
 Standard Details, 1/2 Scale

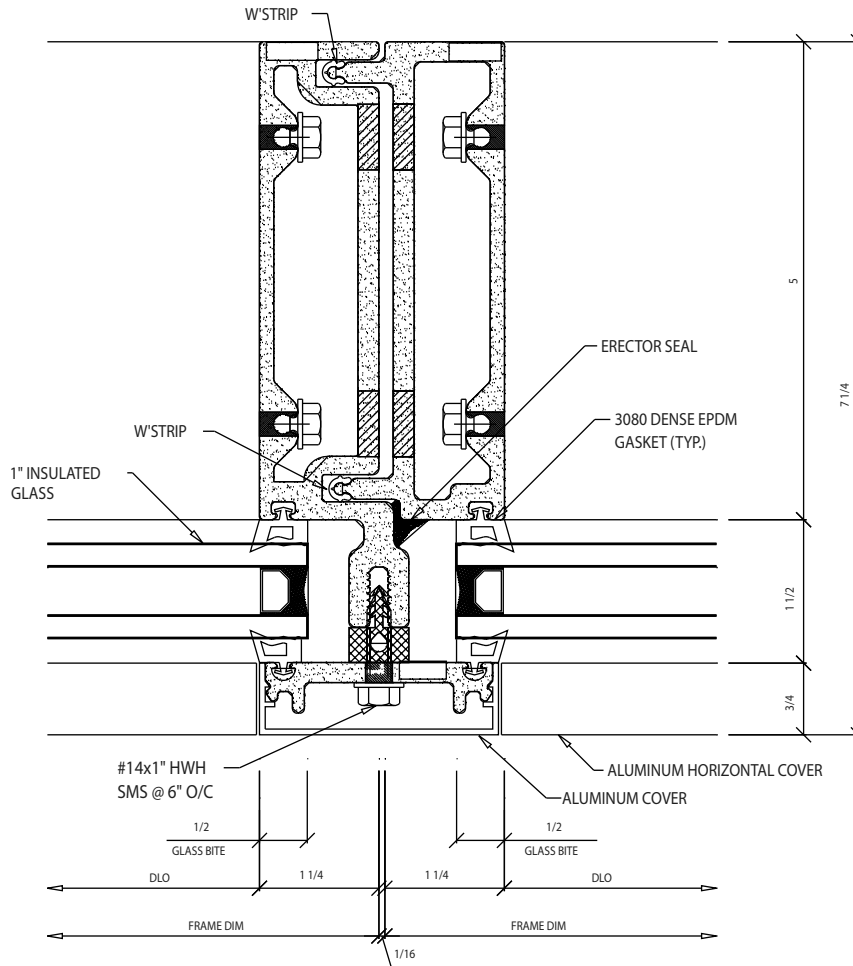


FM Graham
GThurm™ Composite Curtain Wall
 Standard Details, 1/2 Scale



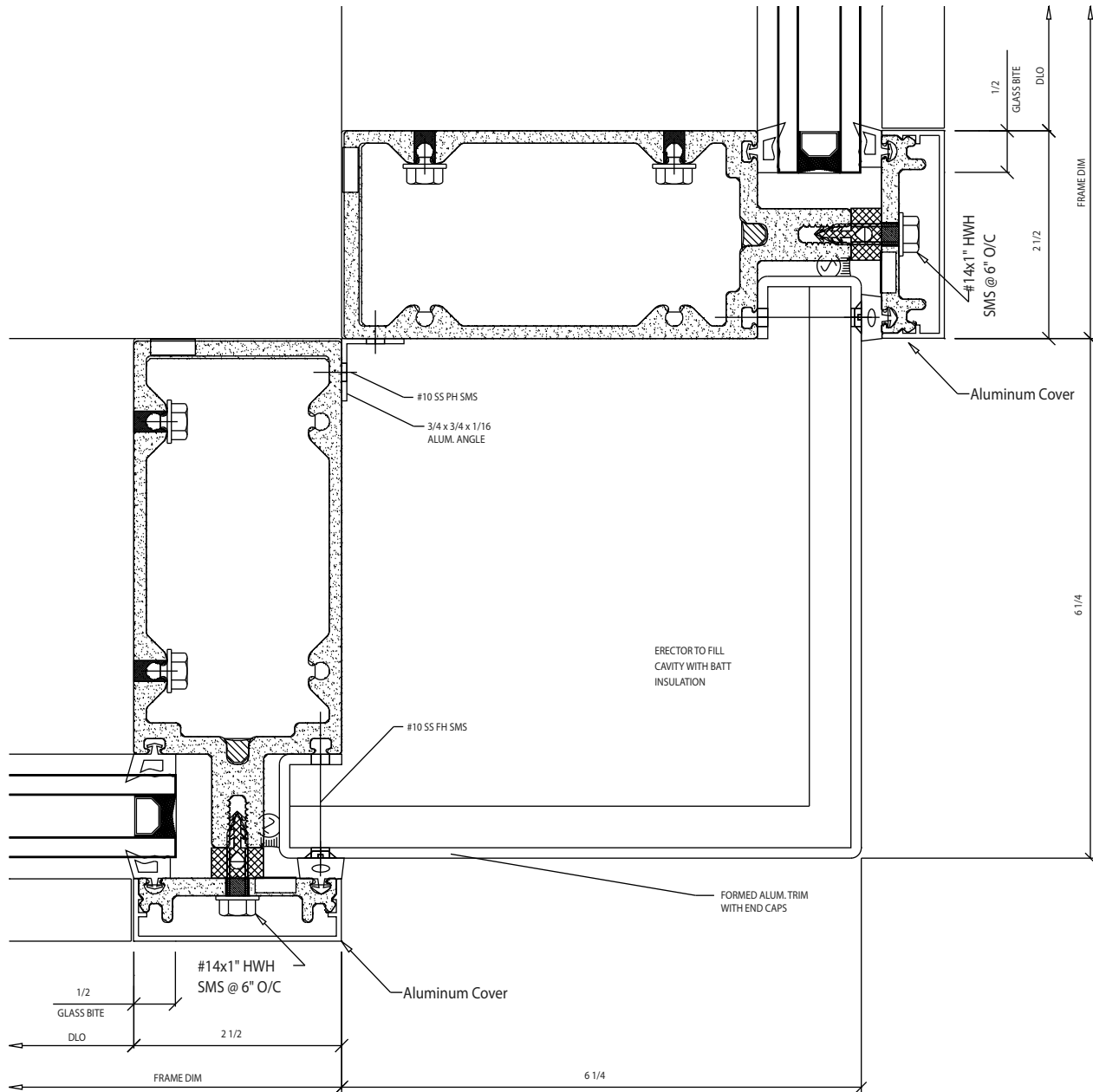
D
Jamb

FM Graham
GThurm™ Composite Curtain Wall
Standard Details, 1/2 Scale



E

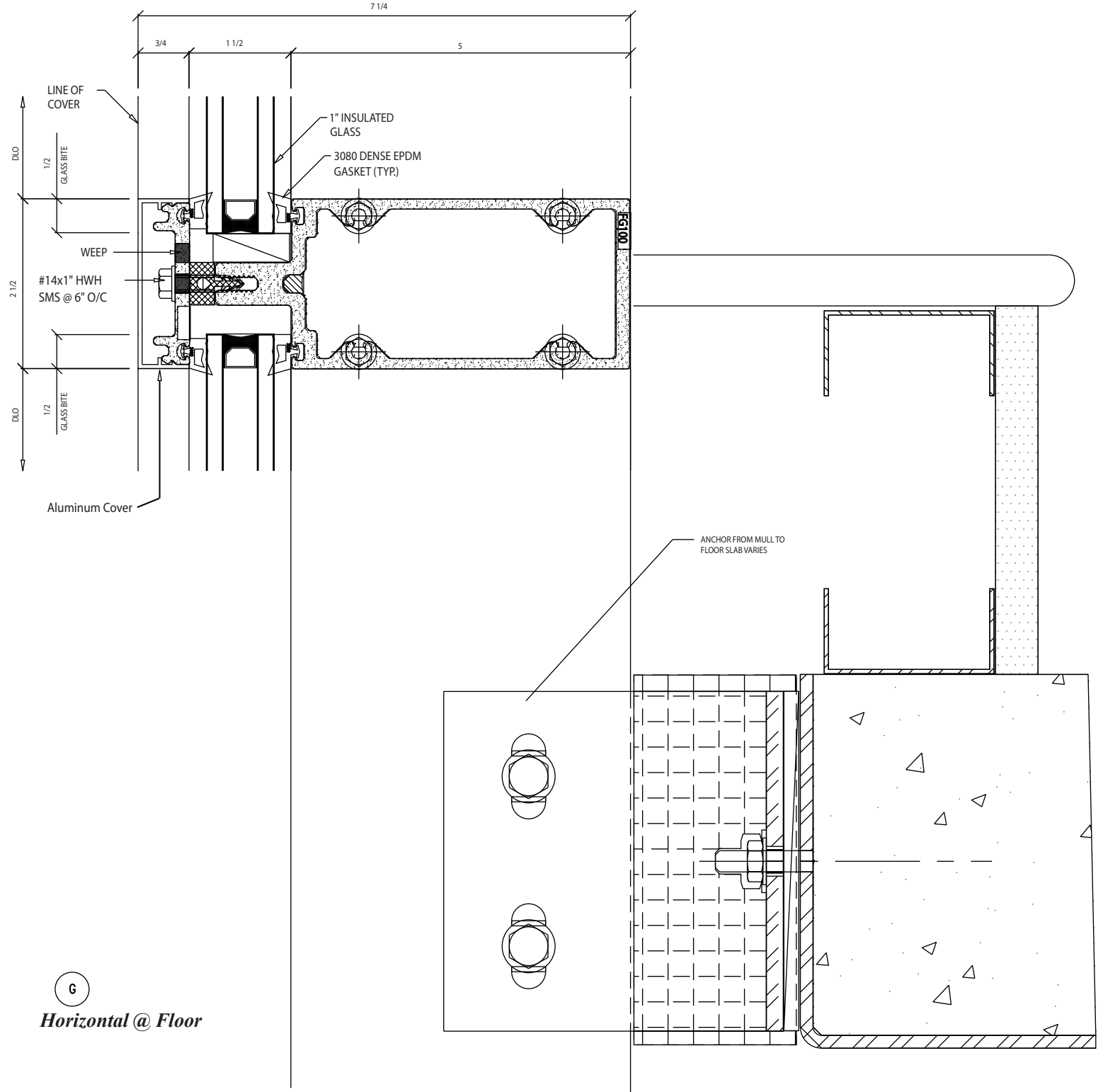
Vertical Stack



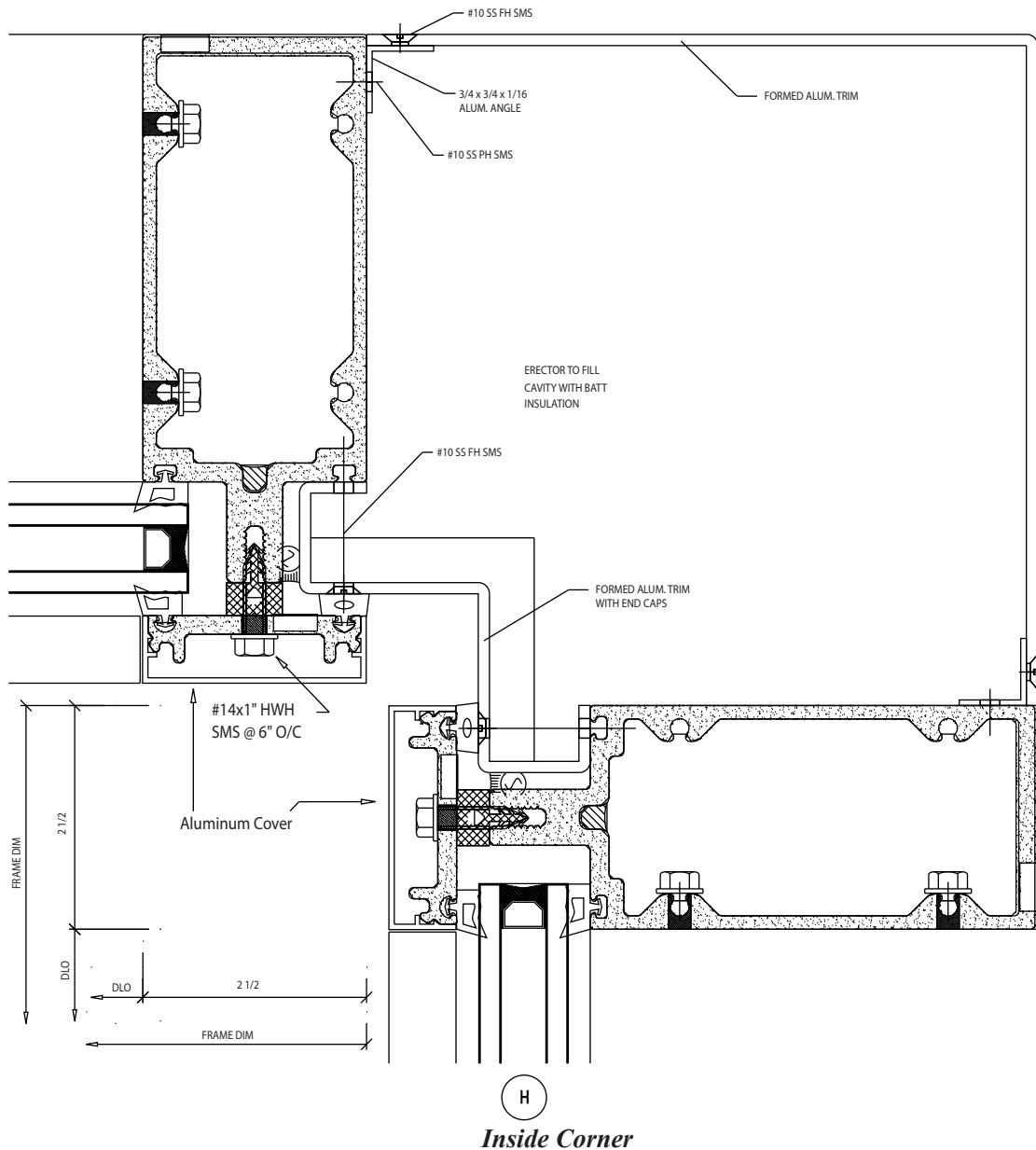
F

Outside Corner

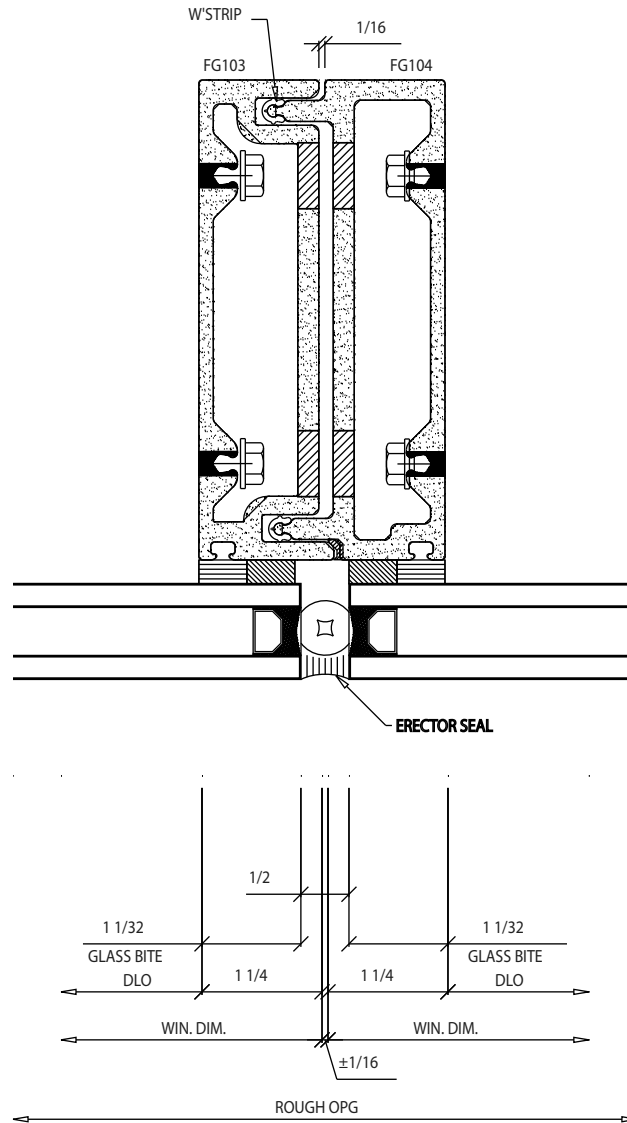
Standard Details, 1/2 Scale



G
Horizontal @ Floor



FM Graham
GThurm™ Composite Curtain Wall
 Standard Details, 1/2 Scale



J

Butt Glazed Vertical