



ARCHITECTURAL PRODUCTS + SERVICES

Featuring
**SEVES
GLASS
BLOCK**



Knapp Centre - Lansing, MI
Architect: Quinn Evans
Contractor: Schiffer Mason Contractors

GBA Architectural Products + Services

GBA Architectural Products + Services was founded in 1985 by Jeff Boesch of Medina, Ohio in his family's garage. A couple years later he was joined by his younger brother Steve and his older brother Chuck. Together, the three brothers used their different skill sets to make GBA the highly respected and successful company that it is today.

GBA began as a small business focused on supplying and installing glass block basement windows in Northeast Ohio. Over the years, our scope of work has broadened to include high performance glass block, structural glass and walkable skylights.

We are a specialty contractor that has the ability and expertise to complete any size glass block or structural glass project. We concentrate on high-end homes and commercial buildings across the United States and beyond.



We are extremely proud of where our business began and where it is now. Throughout our history as a company, we have maintained the small business mentality of treating our customers with the utmost respect. We begin every thought, conversation and project with our clients in mind. We are always searching for new ways to improve all aspects of our business - products, installations and project management - so we can tailor our services to you.



Stillwell Avenue Station - New York, NY
Architect: DI Domenico + Partners, LLP

Recipient of the "2004 Circle of Design Excellence" award for the Coney Island - Stillwell Terminal Wall Art. This prestigious award is presented to architectural firms for extraordinary designs utilizing glass block.

GBA was the first non-architectural firm recognized as the world leader in their design and installation of glass block.

**VISIT OUR WEBSITE FOR
MORE INFORMATION**
www.gbaproducts.com



GBA Architectural Products + Services

Glass Block Benefits & Applications



Beauty and Versatility

Extraordinarily versatile and available in many aesthetically pleasing sizes and styles, glass block offers virtually limitless design possibilities. Glass block walls, partitions and windows combine the delicate beauty and light transmission of glass with the strength of glass block.



Visibility/ Light Transmission

Glass block provides exceptional visibility in compliance with ADA guidelines for enclosed areas and has a dynamic relationship with light, both natural and artificial. As light changes, so does the appearance of the material and its surrounding environment. It is also scratch-resistant and transmits up to 80% of available light in both directions without any yellowing, clouding or weathering.



Security

When top architects need to add security to their projects, GBA answers with a range of solutions listed below.



Premiere Series

Available in the widest range of sizes, shapes and patterns, these blocks offer enhanced resistance to impact, fire, sound transmission, graffiti and weather.

THICKSET® Series

These thicker-faced blocks offer all the performance features of the Premiere Series but with an extra reduction in sound transmission and increased fire resistance available in 60- or 90- minute ratings.

VISTABRIK® Glass Block

Three inches of solid glass block make this a top-performing product. VISTABRIK® offers the highest ballistic ratings as well as resistance to impact and sound transmission while still transmitting 80% of available light.

Impact and Ballistic Resistant

SEVES glass blocks are inherently stronger than conventional glass because of the thickness of not only the faces, but also the mortar that binds them together. As a result, the glass blocks are more durable and provide resistance and a deterrent to forced entry. Our solid 3" VISTABRIK® glass blocks are UL® tested and component recognized for ballistic levels 1, 2 and 6.

Ask about our Laminated VISTABRIK® that achieves levels 1-6.



Glass Block Benefits & Applications



Energy Conservation

Glass block can provide more than two times the thermal resistance (R-Value) of single-glaze 1/8" thick plate glass. The differences between the shading coefficient of glass block and flat sheet glass are also significant. Contributing to this is the louvering effect of glass block's horizontal mortar joints, which helps reduce light transmission from the higher summer sun. The size and orientation of the block can greatly affect the amount of shading that can occur.



Graffiti Resistant

Glass block resists damage and is easy to clean.



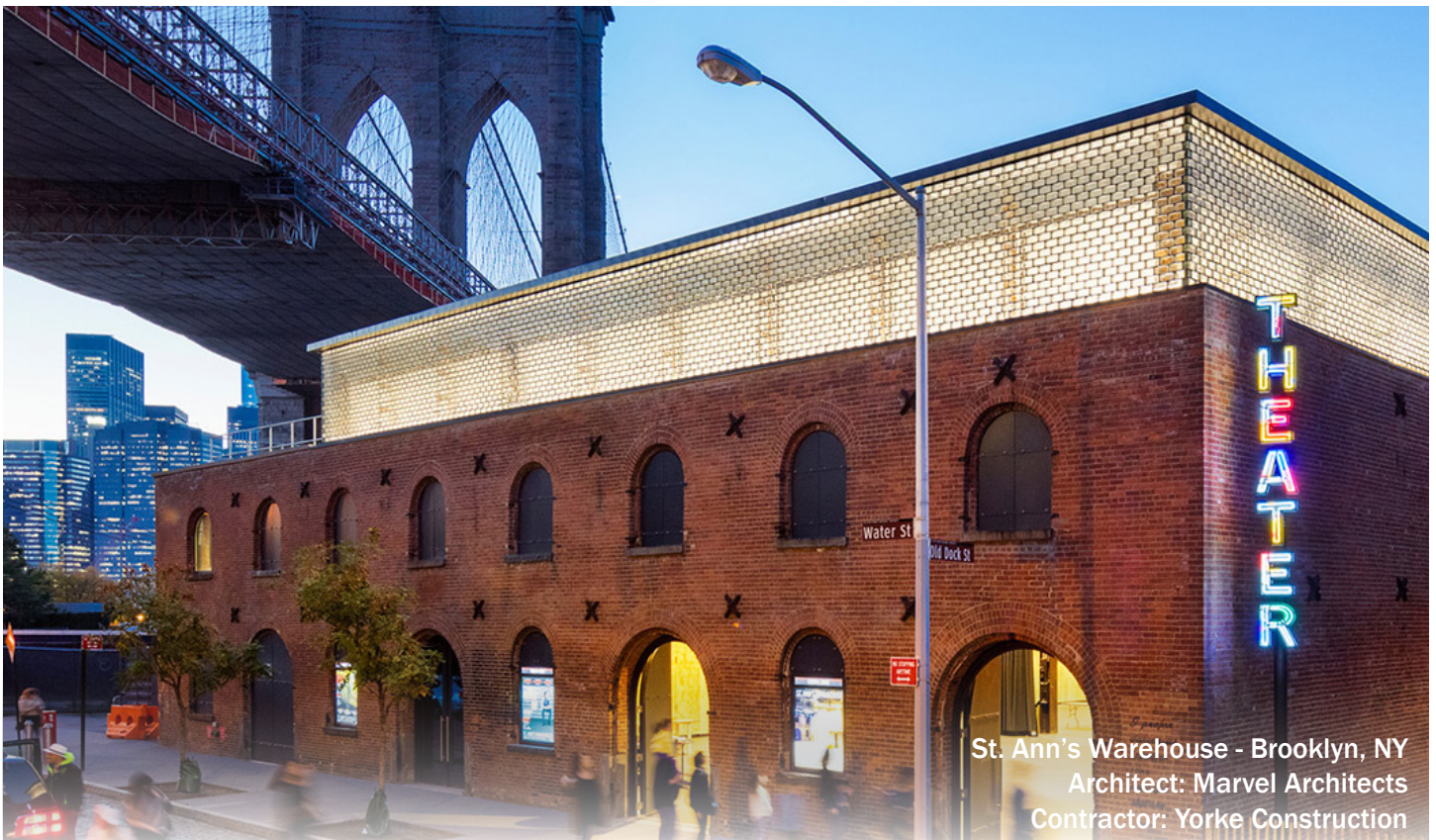
Noise Resistant

Three inches of solid glass makes VISTABRIK® a dense barrier to sounds from trains, traffic, crowds, sirens, and machinery with a 53 STC level. THICKSET® Series Block STC ranges between 48-50, and a Premiere Series Glass Block 35 to 40.



Sustainable Design

Glass block, made largely from sand and limestone, is 100 percent recyclable, inert and low maintenance. Additionally, glass block is highly durable, lasting 50 years or more. Its dynamic relationship with light gives architects the opportunity to create both aesthetically pleasing and energy efficient spaces.



St. Ann's Warehouse - Brooklyn, NY
Architect: Marvel Architects
Contractor: Yorke Construction

Fire Resistant Glass Block

An important feature of glass block is the product's inherent fire-resistance property. This is crucial to safe building design. By varying the face thickness of the product and conforming to installation specifications, SEVES Glass Block is able to offer a family of fire rated products approved and rated according to Underwriters Laboratory (UL®) standards. Glass block are available in 45-, 60-, or 90- minute ratings for window assemblies.

VISTABRIK® Solid Glass Block



- The ultimate glass block solution, 3 solid inches of glass which resists bullets, fire, noise and graffiti
- Classified by UL®, for use as a 45-, 60- or 90- minute rated window assemblies
- Actual face thickness: 3.0"

THICKSET 90®



- Classified by UL®, for use as a 45-, 60- or 90- minute rated window assembly
- Normal face thickness: 0.75"

THICKSET 60®



- Classified by UL®, for use as a 45- or 60- minute rated window assemblies
- Normal face thickness: 0.375"

Premiere Series



- Includes the largest selection of patterns and sizes for the utmost in design flexibility
- All patterns are classified by UL®, for use in 45-minute rated window assemblies
- All sizes available are rated except 12" x 12" and shapes
- Normal face thickness: 0.25"



SEVES Glass Block Products



21C Museum Hotel - Oklahoma City, OK
Architect: Hornbeek Blatt Architects
Contractor: Advanced Masonry

High Performance Line

SEVES Glass Block's High Performance Line of glass block products are comprised of products that offer the highest value, performance features and benefits related to improved safety, aesthetics and decorative choices.

THICKSET® 90 Nubio



Provides a 90-minute fire rating and maximum light transmission with subtle visual distortion. The non-directional faces make installation quick.

THICKSET® 90 Clarity



Provides a 90-minute fire rating. The Clarity pattern transmits maximum light and allows ultimate visibility.

THICKSET® 90 Endura



Provides a 90-minute fire rating. Endura pattern's narrow flutes provide moderate light transmission/ maximum privacy.

THICKSET® 60 Nubio



Provides a 60-minute fire rating. The Nubio pattern provides maximum light transmission with subtle visual distortion. The non-directional faces make installation quick.

THICKSET® 60 Clarity



Provides a 60-minute fire rating. The Clarity pattern transmits maximum light and allows ultimate visibility.

THICKSET® 60 Spray



Provides a 60-minute fire rating. Provides moderate light transmission while still providing privacy.

VISTABRIK® Solid Glass Block

3" solid glass block. VISTABRIK® is impact, vandal and bullet resistant, low maintenance, durable and aesthetically attractive. Excellent light transmission. Available in transparent, translucent via stipple pattern or sandblast pattern.



883 Clear



683 Clear



483 Clear



883 Stippled



883 Clear
Sandblasted One Side

Also available in 6" x 8" x 3"
and 4" x 8" x 3"

Glass Block Solar Wall Tubes

An easy way to let light into a structure that is built with multi-wythe walls. The Solar Wall Tubes replace standard masonry units and allow light transmission. Improved thermal performance. Available in various patterns with choice of privacy levels.



884 Alpha

SEVES Glass Block Premiere Series

Premiere Series

SEVES Glass Block's Premiere Series glass block products are comprised of high quality products and the largest selection of patterns, sizes and shapes. This line has become the standard in the industry and provides the most design flexibility in the selection and use of glass block for walls, windows, partitions, and showers in residential and commercial applications.

Cross Ribbed



Rounded perpendicular flutes diffuse light while allowing maximum light transmission and a medium degree of privacy.

Nubio



The trademark wavy undulations of this pattern provides maximum light transmission with subtle visual distortion.

Light Diffusing



The fine grid design of the closely spaced ridges in this pattern offers moderate light transmission and a maximum degree of privacy.

Alpha



This new circular pattern gives an exciting new way to bring more light and drama to any project.

Cortina



Non-directional pattern lets light in without sacrificing privacy. Maximum light transmission and maximum privacy.

Clarity



Faces are smooth and undistorted to transmit the most light and allow ultimate visibility. This is your best choice for passive solar collection and visual clarity.

Opal Silk



This fine grid pattern on the inner surface provides an elegant setting as it gently spreads light.

Opal Clarity



With a smooth finish both inside and out, this style emits a softly diffused light over an entire area.

Regent



Multifaceted diamond pattern creates a unique effect of shadows and sparkles. Maximum light transmission with moderate privacy.

Arctic



Frosted glass appearance yields excellent privacy with no pattern and moderate light transmission.

Special Shapes

Available in Cortina and Nubio



884
EndBlock
Nubio



884
Double-End
Nubio



Cut 45° Tridron
Nubio



484
Allbend
Nubio



484
Corner Nubio

Nubio



Clarity



Energy Saving Glass Block

Blocks out the sun's heat and ultraviolet light to help keep interiors cooler in the summer. In winter, improved insulating ability helps keep interiors warmer.

U-Value .19/SHGC .42

SEVES Glass Block Design Line

Vetropieno

Vetropieno is a solid glass block that combines all of the appeal of traditional bricks with the transparency and illumination of glass.

This completely unique design solution can be used in place of traditional bricks to create dramatic interior or exterior walls or partitions that maximize the passage of light from room to room — or as subtle design accents that add a touch of style, character and color.

Its standard shape and size make it a versatile building element that can be installed horizontally or vertically to achieve desired effects: traditional patterns, continuous surfaces, subtle outlines, or colorful light reflections.

Unlike the classic glass block, Vetropieno is smaller in height and can be used to obtain thinner glass structures that optimize space and add depth to interiors.

Rettangolare



Neutro



Blue



Nordica



Siena

Quadrato



Neutro



Blue



Nordica



Siena

Vetropieno is available in both metric and imperial sizes to meet the needs of any project.

Vetropieno

Metric sizes - available in all colors.

Rettangolare

Dimensions (in)	9.25 x 42.125 x 4.5
Weight (lb)	7.71

Quadrato

Dimensions (in)	4.7 x 4.6 x 2.1
Weight (lb)	3.74

Vetropieno Americano

Imperial sizes - only available in Neutro.

Rectangular

Dimensions (in)	7 ⁵ / ₈ " x 3 ⁵ / ₈ " x 2 ¹ / ₄ "
Weight (lb)	5.29

Square

Dimensions (in)	3 ³ / ₄ " x 3 ⁵ / ₈ " x 2 ¹ / ₄ "
Weight (lb)	2.64

Physical & Design Data

Glass Block	Actual Size	Weight of Glass Block (lb)	Approximate Installed Weight s/(lb/ft²)	Number Pieces/sq. ft.	Heat Transmission U-Value (BTU/hr ft² °F)	Thermal Resistance R-Value (hr ft² °F/BTU)	Visible Light Transmission (%)	Shading Coefficient	Sound Transmission S.T.C. (dB)	Solar Heat Gain Coefficient (%)	Fire Rating
High Performance Products											
60 to 90 minutes Fire rated- Impact strength											
8x8x4 Nubio Thickset 60	7-3/4" x 7-3/4"x3-7/8"	7.8	22.7	2.25	0.51	1.96	75	0.65	48	.66-.68 ⁵	60
8x8x4 Spray Thickset 60	7-3/4" x 7-3/4"x3-7/8"	7.8	22.7	2.25	0.51	1.96	75	0.65	48	.66-.68 ⁵	60
8x8x4 Clarity Thickset 60	7-3/4" x 7-3/4"x3-7/8"	7.8	22.7	2.25	0.51	1.96	75	0.65	48	.66-.68 ⁵	60
6x6x4 Clarity Thickset 90	5-3/4"x5-3/4"x3-7/8"	5.5	17.2	4	0.51	1.96	75	0.65	48	.66-.68 ⁵	90
8x8x4 Nubio Thickset 90	7-3/4" x 7-3/4"x3-7/8"	10.6	25.5	2.25	0.51	1.96	75	0.65	50	.66-.68 ⁵	90
8x8x4 Clarity Thickset 90	7-3/4" x 7-3/4"x3-7/8"	10.6	25.5	2.25	0.51	1.96	75	0.65	50	.66-.68 ⁵	90
8x8x4 Endura Thickset 90	7-3/4" x 7-3/4"x3-7/8"	10.6	25.5	2.25	0.51	1.96	75	0.65	50	.66-.68 ⁵	90
Solid Block											
8x8x3 VistaBrik	7-5/8"x7-5/8"x3"	15.4	17.6	2.25	0.7	1.42	90	49.4	53	.75-.78 ⁵	90
8x8x3 VistaBrik Stipple	7-5/8"x7-5/8"x3"	15.4	17.6	2.25	0.7	1.42	83	49.4	53	.75-.78 ⁵	90
6x8x3 VistaBrik	5-5/8"x7-5/8"x3"	9.9	32.35	3	0.7	1.42	90	49.4	53	.75-.78 ⁵	90
4x8x3 VistaBrik	3-5/8"x7-5/8"x3"	7.9	39.24	4.5	0.7	1.42	90	49.4	53	.75-.78 ⁵	90
Vetropieno											
Neutro Rettangolare	9-1/4"x2-1/8"x4-1/2"	7.7	51.8	6.4	0.62	1.61	44	58.6	43	51	90
Neutro Quadrato	4-7/8"x2-1/8"x4-1/2"	3.7	51.2	12.6	0.62	1.61	44	58.6	43	51	90
Blu Rettangolare	9-1/4"x2-1/8"x4-1/2"	7.7	51.8	6.4	0.62	1.61		42.5	43	37	90
Blu Quadrato	4-7/8"x2-1/8"x4-1/2"	3.7	51.2	12.6	0.62	1.61		42.5	43	37	90
Nordica Rettangolare	9-1/4"x2-1/8"x4-1/2"	7.7	51.8	6.4	0.62	1.61		39.1	43	34	90
Nordica Quadrato	4-7/8"x2-1/8"x4-1/2"	3.7	51.2	12.6	0.62	1.61		39.1	43	34	90
Siena Rettangolare	9-1/4"x2-1/8"x4-1/2"	7.7	51.8	6.4	0.62	1.61		40.2	43	35	90
Siena Quadrato	4-7/8"x2-1/8"x4-1/2"	3.7	51.2	12.6	0.62	1.61		40.2	43	35	90
Vetropieno Americano											
Neutro Rectangular	7-5/8"x3-5/8"x2-1/4"	5.29	51.8	7.4	7.4	1.61		40.2	43	35	90
Neutro Square	3-3/4"x3-5/8"x2-1/4"	2.64	51.2	14.6	14.6	1.61		40.2	43	35	90
Premiere Series											
12x12x4 Nubio	11-3/4"x11-3/4"x3-7/8"	15.7	23.3	1	0.53	1.89	75	0.63	35	.66-.68 ⁵	N/A
12x12x4 Cross Large	11-3/4"x11-3/4"x3-7/8"	15.7	23.3	1	0.53	1.89	55	0.63	35	.66-.68 ⁵	N/A
12x12x4 Icescape	11-3/4"x11-3/4"x3-7/8"	15.7	23.3	1	0.53	1.89	67	0.63	35	.66-.68 ⁵	N/A
12x12x4 Clarity	11-3/4"x11-3/4"x3-7/8"	15.7	23.3	2.25	0.53	1.89	91	0.63	35	.66-.68 ⁵	N/A
8x8x4 Nubio	7-3/4"x7-3/4"x3-7/8"	5.7	19.5	2.25	0.53	1.89	75	0.65	39	.66-.68 ⁵	45
8x8x4 Cortina	7-3/4"x7-3/4"x3-7/8"	5.7	19.5	2.25	0.53	1.89	67	0.65	39	.66-.68 ⁵	45
8x8x4 Cross Ribbed	7-3/4"x7-3/4"x3-7/8"	5.7	19.5	2.25	0.53	1.89	55	0.65	39	.66-.68 ⁵	45
8x8x4 Light Diffusing	7-3/4"x7-3/4"x3-7/8"	5.7	19.5	2.25	0.53	1.89	51	0.65	39	.66-.68 ⁵	45
8x8x4 Regent	7-3/4"x7-3/4"x3-7/8"	5.7	19.5	2.25	0.53	1.89	67	0.65	39	.66-.68 ⁵	45
8x8x4 Arctic	7-3/4"x7-3/4"x3-7/8"	5.7	19.5	2.25	0.53	1.89	67	0.65	39	.66-.68 ⁵	45
8x8x4 Alpha	7-3/4"x7-3/4"x3-7/8"	5.7	19.5	2.25	0.53	1.89	92	0.65	39	.66-.68 ⁵	45
8x8x4 Clarity	7-3/4"x7-3/4"x3-7/8"	5.7	19.5	2.25	0.53	1.89	91	0.65	39	.66-.68 ⁵	45
8x8x4 Opal Plain	7-3/4"x7-3/4"x3-7/8"	5.7	19.5	2.25	N/A	N/A	19	N/A	N/A	N/A	N/A
8x8x4 Opal Silk	7-3/4"x7-3/4"x3-7/8"	5.7	19.5	2.25	N/A	N/A	17	N/A	N/A	N/A	N/A
6x6x4 Nubio	5-3/4"x7-3/4"x3-7/8"	4.9	20.1	3	0.53	1.89	75	0.65	41	.66-.68 ⁵	45
6x6x4 Cortina	5-3/4"x7-3/4"x3-7/8"	4.9	20.1	3	0.53	1.89	75	0.65	41	.66-.68 ⁵	45
6x6x4 Clarity	5-3/4"x7-3/4"x3-7/8"	4.9	20.1	3	0.53	1.89	91	0.65	41	.66-.68 ⁵	45
6x6x4 Nubio	5-3/4"x7-3/4"x3-7/8"	3.8	20.8	4	0.53	1.89	75	0.65	37	.66-.68 ⁵	45
6x6x4 Cortina	5-3/4"x7-3/4"x3-7/8"	3.8	20.8	4	0.53	1.89	67	0.65	37	.66-.68 ⁵	45
6x6x4 Clarity	5-3/4"x7-3/4"x3-7/8"	3.8	20.8	4	0.53	1.89	91	0.65	37	.66-.68 ⁵	45
4x8x4 Nubio	3-3/4"x7-3/4"x3-7/8"	3.6	20.8	4.5	0.53	1.89	75	0.65	41	.66-.68 ⁵	45
4x8x4 Cortina	3-3/4"x7-3/4"x3-7/8"	3.6	20.8	4.5	0.53	1.89	67	0.65	41	.66-.68 ⁵	45
4x8x4 Clarity	3-3/4"x7-3/4"x3-7/8"	3.6	20.8	4.5	0.53	1.89	91	0.65	41	.66-.68 ⁵	45

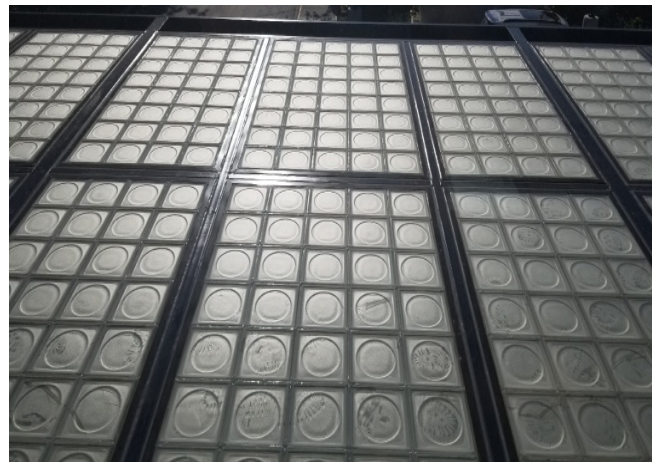
IBP Glass Block Canopies

IBP systems can be used to create dynamic and functional canopy or awning structures with the durability and beauty of aluminum and glass block. Several standard aluminum grid finishes and more than 14 glass patterns and colors provide a wide range of design flexibility.

By selecting various block patterns and colors, designers can customize an IBP grid to meet the aesthetic and lighting requirements of any project.



Nassau County 8th Precinct Police Station - Levittown, NY
Architect: LiRo Architects + Planners P.C.
Contractor: VRD Construction, Inc.



IBP Glass Block Grid System

The IBP Glass Block Grid System provides a cost-effective glass block installation without mortar. The system is proven in hundreds of thousands of installations worldwide.

The IBP system assures a proper, uniformly spaced glass block installation without the time-consuming process of using mortar and spacers. IBP window installations compare favorably with conventional windows in terms of thermal efficiency, air infiltration, water penetration and security.



COACH - New York, NY
Architect: Archytecx PLLC



Texas School for the Deaf - Austin, TX
Architect: Parkhill, Smith and Cooper Inc.
Contractor: Flintco LLC

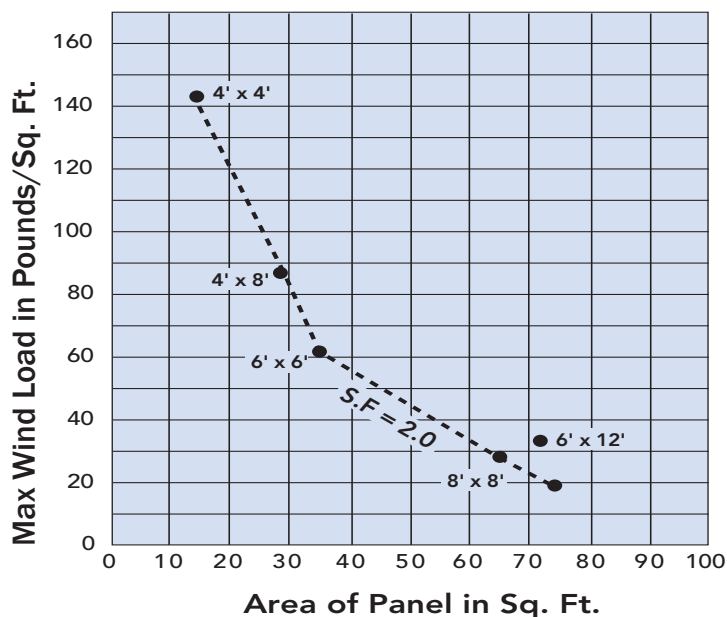
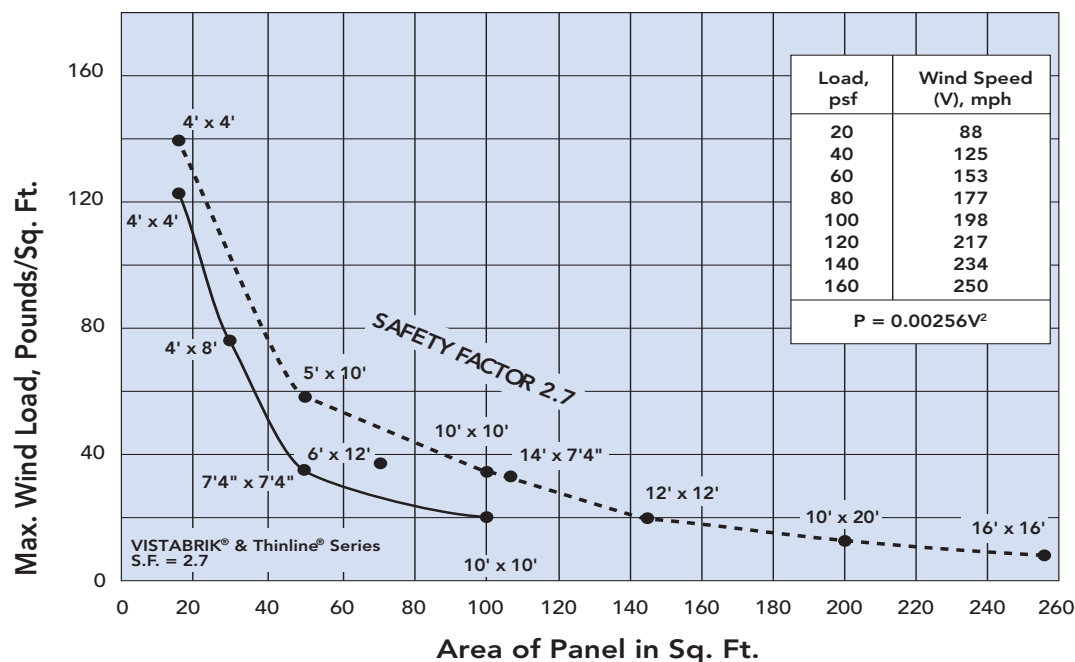
ONE SYSTEM, ENDLESS POSSIBILITIES.

The versatility of the IBP Glass Block Grid System extends far beyond standard window installations.

Stair-stepped windows can be created, as well as straight or separate interior wall partitions. Other applications include workspace enclosures, curtain walls, and room dividers.

WIND LOAD RESISTANCE – MORTAR SYSTEM

(Based on Standard Nominal 4" Thick Premiere Series Glass Block.
Installed with mortar. Based on 2.7 Safety Factor)



WIND LOAD RESISTANCE – PROVANTAGE® SYSTEM

(Based on Standard Nominal 4" Thick Premiere Series Glass Block Installed with ProVantage® Silicone System).
Based on 2.0 Safety Factor.

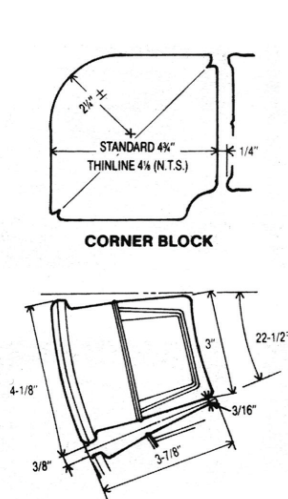
Maximum Panel Dimensions

	Premiere Series			Thinline® Series			VISTABRIK®		
	A (Sq.Ft.)	H (Ft.)	W (Ft.)	A (Sq.Ft.)	H (Ft.)	W (Ft.)	A (Sq.Ft.)	H (Ft.)	W (Ft.)
EXTERIOR*	144	20	25	100	10	15	100	10	10
INTERIOR	250	20	25	150	10	15	150	10	15

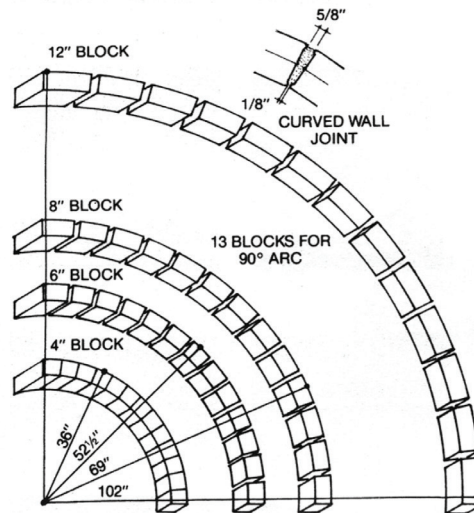
A = Area H = Height W = Width

* All exterior areas and dimensions are based on 20 psf design windload with 2.7 safety factor.

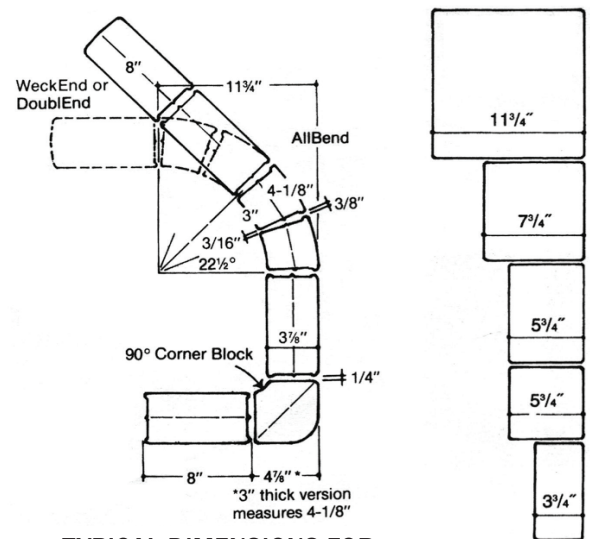
Typical Detail Information



ALLBEND 22 1/2"



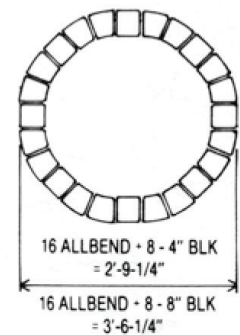
TYPICAL DIMENSIONS FOR CURVED WALL



TYPICAL DIMENSIONS FOR 22 1/2°, 46°, 67 1/2° AND 90° CORNERS

RADIUS OPTIONS

Blocks	AllBend	Outside Radius inches
1 piece 4" x 8" per	4	14.5
1 piece 4" x 8" per	2	16.7
1 piece 8" x 8" per	4	17.5
1 piece 4" x 8" per	1	21.6
1 piece 8" x 8" per	2	21.7
1 piece 8" x 8" per	1	31.9
2 pieces 4" x 8" per	1	32.5



SEVES Glass Block Products

- Hollow glass blocks, Standard Series – 3 7/8 thick, Thinline Series – 3 1/8 thick and special shapes. All blocks are designed for a modular face dimension of 4", 6", 8" and 12" using 1/4 thick mortar joints.
- Mortar shall conform to ASTM C270 Type 'S' for maximum bond strength.
- Horizontal reinforcing to be 1 5/8" wide of two 9 gauge parallel wires with cross ties at 16" on center. All reinforcing to be stainless steel or hot dipped galvanized for interior applications. Horizontal reinforcing to have a maximum spacing of 18" on center, i.e. every third joint for 6" block, every other joint at 8" block and every joint at 12" block.
- Panel anchors to be 1 3/4" x 16" x 20 gauge stainless steel or hot dipped galvanized for interior applications with elongated perforations. Locate panel anchors in same joint as horizontal reinforcing. Panel anchor to be installed in horizontal joint of masonry wall if possible and embedded 12". For alternate connection, return panel anchor up face of jamb and add two 1/4" anchors with washers just above bend of anchor. Anchors to be in horizontal alignment.
- Aluminum channels in lieu of panel anchors are an acceptable alternate.
- Head and jamb channel to be 1 1/2" x 4 1/2" x 14

- gauge for Standard Series and 1 1/2" x 3 3/4" x 14 gauge for Thinline Series. Channels used for exterior installations should have hot dipped zinc coating, or be non-ferrous metal. For non fire-rated applications, aluminum channel with 2" legs is a good option.
- All glass block panels to be non-load bearing and isolated from surrounding structures/walls with 3/8" thick glass fiber or white polyethylene foam expansion strips at jambs and head. Sill to be coated with asphalt emulsion to serve as a bond breaker.
- Structural members around glass block panels shall be limited to a deflection of L/600.
- Provide for vertical expansion joints where straight walls and curved walls (radius larger than 24") intersect or at a reversal of the curved wall.
- Expansion material at jambs may be omitted for panels with areas of 25 sq. ft. or less. Expansion joint at head must be maintained.
- All steel on the outside, within the wall system and adjacent to wall on inside, should have a coating of hot dipped zinc or be stainless steel to minimize rust staining.
- Silicone sealant may be used in lieu of mortar in which the exposed joints are approximately 1/8" thick and panels are limited to 25 square feet on exterior and 85 square feet on interior installations.

M. Limitation of panel sizes:

- Exterior wall panels using Standard Series (3 7/8" thick) block exposed to 20 lbs./square foot wind load or greater to be limited to 144 square feet when supported on all four sides. Area may be increased to 250 square feet when an intermediate stiffener is incorporated as an additional supporting member near the middle of the panel and span is not longer than 10 feet. Maximum height to be 20 feet and maximum width to be 25 feet except where the Uniform Building Code limits height and width to 15 feet.
- Interior wall panels using Standard Series (3 7/8" thick) block to be limited to 250 square feet. Max. height to be 25 feet and max. width to be 25 feet except where the Uniform Building Code limits height and width to 15 feet.
- Exterior or interior wall panels using Thinline Series (3 1/8" thick) block, exposed to 20 lbs./square foot wind load or greater to be limited to 85 square feet when supported on all four sides. Area may be increased to 150 square feet when an intermediate stiffener is incorporated as an additional supporting member near the middle of the panel. Maximum height is limited to 10 feet for exterior and 20 feet for interior installations. Maximum width is limited to 25 feet for exterior and interior.
- Check governing building code for additional details.

Fire Ratings & Code Information

All sizes (exceptions listed below) of Premiere Series and Thinline® Series glass block have at least a 45 minute fire rating when used as a window assembly within a one hour fire-rated wall assembly. All THICKSET® 90 (thick-faced) and solid glass blocks have fire ratings of up to 90 minutes, and the THICKSET® 60 and Spray Pattern glass blocks have fire ratings of up to 60 minutes, when used as window assemblies and where permitted by code.

SEVES Glass Block Glass Block units that are not fire rated:

- All 12" by 12" sizes
- All corner block, Double EndBlock and AllBend
- All paver units

PANEL SIZES AND DIMENSION LIMITATIONS

SEVES Glass Block listed above have been tested and classified by Underwriters Laboratories® (UL®) for use as fire-rated window assemblies to panel sizes and dimension limitations listed below:

- With the exception of all 12" x 12" sizes, finishing blocks, corner blocks, all Premiere Series and Thinline® Series glass block in panels up to 120 square feet in masonry walls or 94 square feet in non-masonry walls are classified by Underwriters Laboratories®, for use as 45-minute rated window assemblies.
- These panels are usually acceptable as window assemblies for use in fire separation walls that are rated one hour or less.
- THICKSET® 60 Block are listed for use as 45-or 60-minute fire rated window assemblies in panels up to 100 square feet
- THICKSET® 90 Block and VISTABRIK® Solid Glass Block are all listed for use as 45-, 60- or 90-minute fire-rated window assemblies in panels up to 100 square feet.
- Where permitted by building codes, glass block fire-rated window assemblies having a fire resistance rating of not less than 45 minutes may be used as "opening protectives." These assemblies shall not exceed 25% of the wall areas separating a tenancy from a corridor or a corridor from an enclosed vertical opening or one fire-rated area from another fire-rated area.
- Exception: Although glass block masonry systems have been tested as window assemblies (not wall assemblies), they may be used as one hour fire partitions as required for corridors in the enclosure of atriums only when sprinkler protection is provided on occupied sides.

45- AND 60-MINUTE RATED CONSTRUCTION

- All 45- and 60-minuted rated SEVES Glass Block may be used in both masonry and non-masonry (steel or wood stud framing with gypsum board) walls.
- These rated glass block windows may be framed and anchored with either Panel Anchor construction or channel-type restraints.
- The use of a fire retardant type sealant for head and jamb locations is required.
- Specifications and construction details for such panels are as per SEVES Glass Block recommendations.
- Non-masonry, fire-rated steel stud with gypsum board wall assemblies must confirm to UL® listed wall assembly #U465.
- Framing and support of the rated glass block window assembly shall be provided with double-studding at the jamb locations with height of supporting wall limited to no more than 3 feet.

90-MINUTE RATED CONSTRUCTION

- Where permitted by building codes, all 90-minute rated SEVES Glass Block may be used in masonry walls only.
- 90-minute rated glass block window assemblies must be framed and anchored with 1/4" thick steel (not aluminum) channel-type restraints or masonry chases. The use of panel anchor construction is not permitted.
- The use of a fire retardant type sealant for head and jamb locations is required.
- Specifications and construction details of such panels are as per SEVES Glass Block recommendations.
- Twice the typical thickness (3/4" total) of expansion material is required at head and jamb locations.

45-MINUTE RATED CURVED CONSTRUCTION

- The glass blocks noted under 90-minute rating and those 8" x 8" x 4" sized glass block noted under 45-minute rating are classified for use in masonry walls as curved window assemblies, provided that the radius of the assembly is at least twice the opening width (i.e. chord length).

CODE COMPLIANCE

All of our fire-rated glass block products are listed in the Underwriters Laboratories. A listing of our products can also be viewed on the Underwriters Laboratories website at www.ul.com.

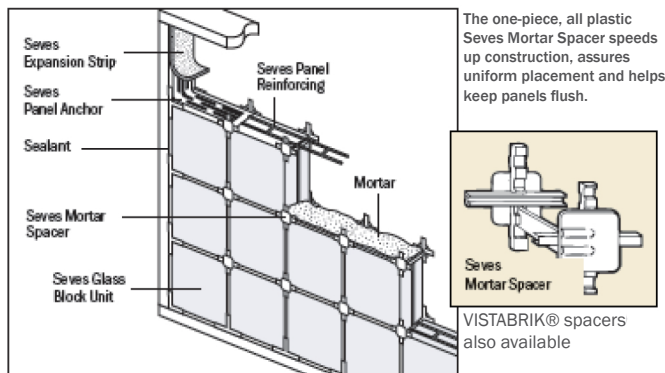
Fire Ratings - Glass Block Assemblies									
Premiere Series Glass Blocks, THICKSET® 60 Block, THICKSET® 90 Blocks and 3" thick VISTABRIK® Solid Glass Block units have been tested and classified by Underwriters Laboratories (UL®) for use in fire-rated window assemblies to panel sizes and dimension limitations as listed.									
Masonry Wall Construction						Non-Masonry Wall Construction			
Product	Panel Limitations		Fire Ratings			Panel Limitations		Fire Rating	
	Max. Area/Panel	Max Ht. or Width	45 Min.	60 Min.	90 Min.	Max. Area/Panel	Max Ht. or Width	45 Min.	60 Min.
Thinline® Series	120	12	X			94	10.75	X	
Premiere Series	120	12	X			94	10.75	X	
Premiere THICKSET® 60 & Spray Pattern	100	10	X	X		94	10.75	X	X
THICKSET® 90	100	10	X	X	X*	94	10.75	X	X
VISTABRIK®	100	10	X	X	X*	94	10.75	X	X

*1/4" steel channel, 3/4" thick expansion material at head and jambs, and fire retardant sealant are required.

Typical Construction Details

Panel Anchor Construction

Panel Construction Using Seves Spacers



Glass Block Panel Reinforcing

Panel Reinforcing is embedded horizontally in mortar joints every 16" or less. Stainless steel ladder type reinforcing is formed of two parallel wires 1 5/8" on-center with butt-welded cross-wires every 16" or 12". Available in various lengths.

Glass Block Panel Anchors

Panel Anchors are used to tie Glass Block panels into the surrounding framework when channels are not used. Formed from 20 gauge perforated stainless steel, these anchors are available in 1 3/4" widths x 16" lengths.

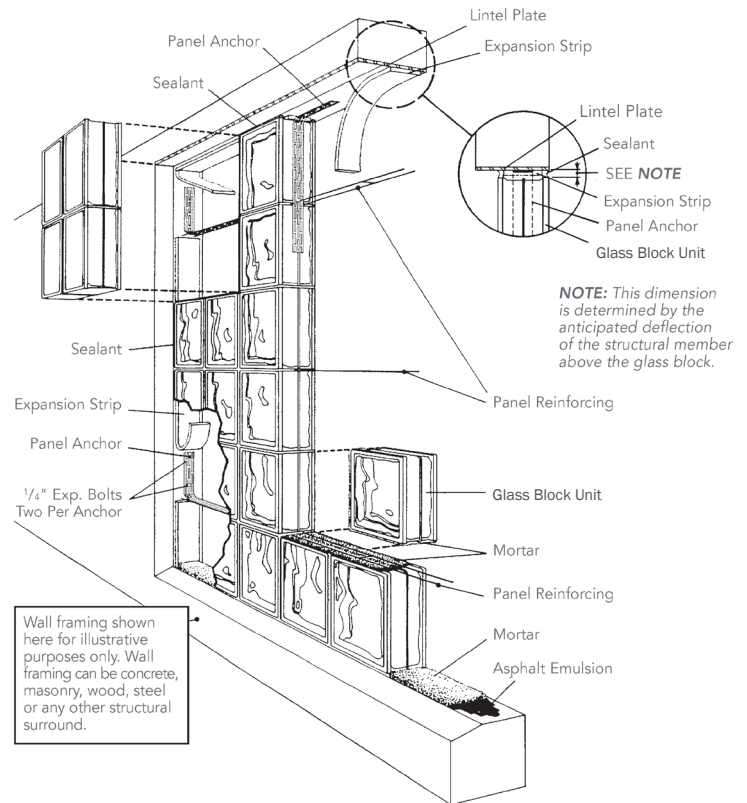
Glass Block Expansion Strips

Expansion Strips are made of white polyethylene and inserted at the heads and jambs. The strips replace the mortar at these points to cushion the glass block and allow the panel to expand and contract freely. The Expansion Strips are available 3/8" thick x 50' rolls.

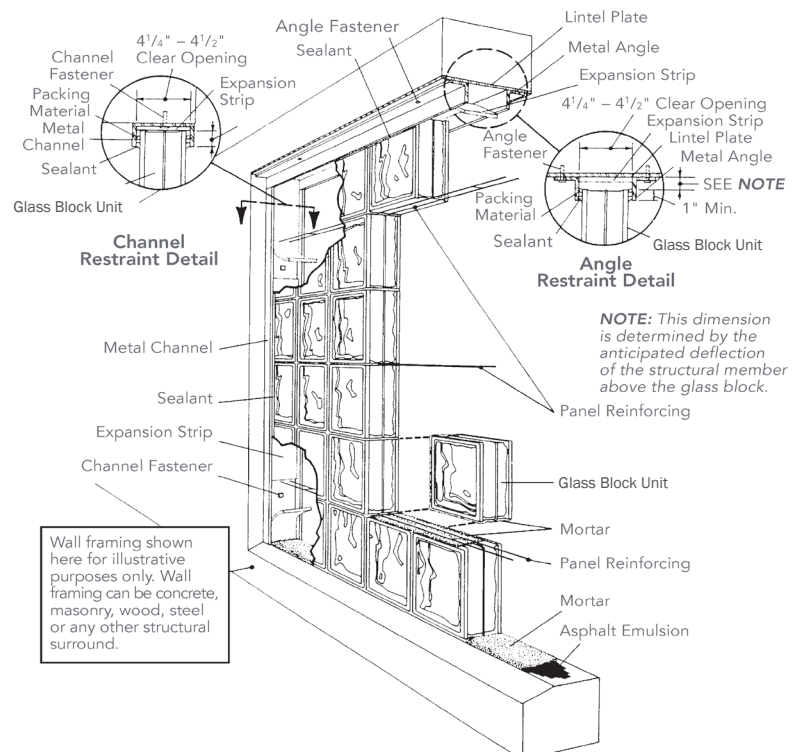
Other Accessories

Additional materials - such as channels or framing, packing, sealants and asphalt emulsion are available from GBA.

Panel Anchor Construction

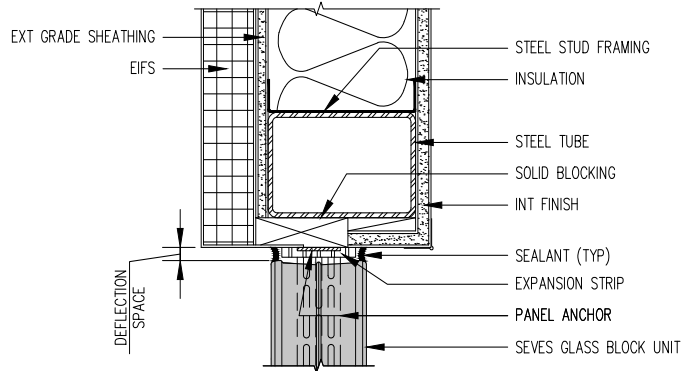


Channel or Angle Restraining Construction

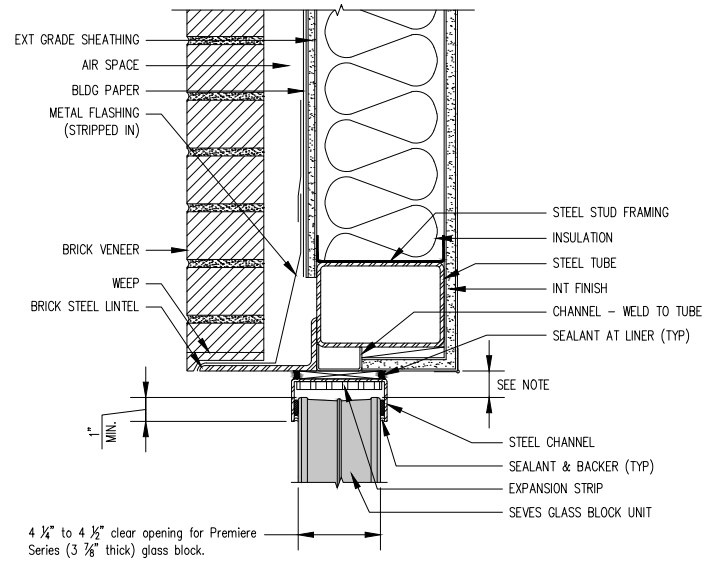


Typical Head Details

Exterior Openings



(SGBH-D002) HEAD – GLASS BLOCK IN STEEL STUD WALL WITH SYNTHETIC PLASTER FINISH

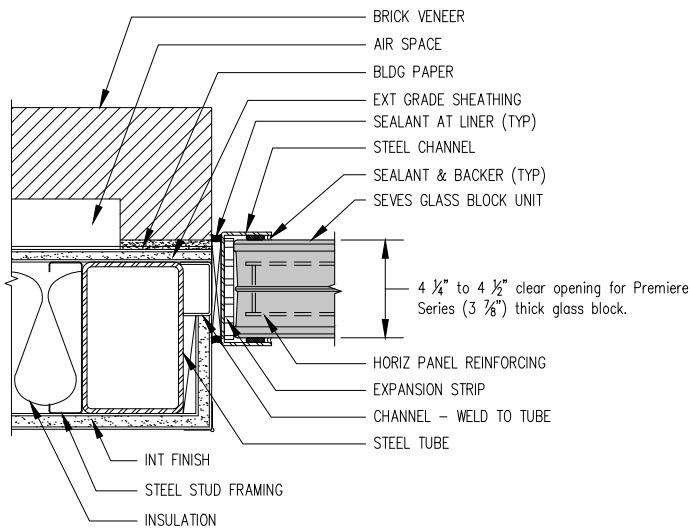


NOTE: This dimension is determined by the anticipated deflection of the structural member above the glass block.

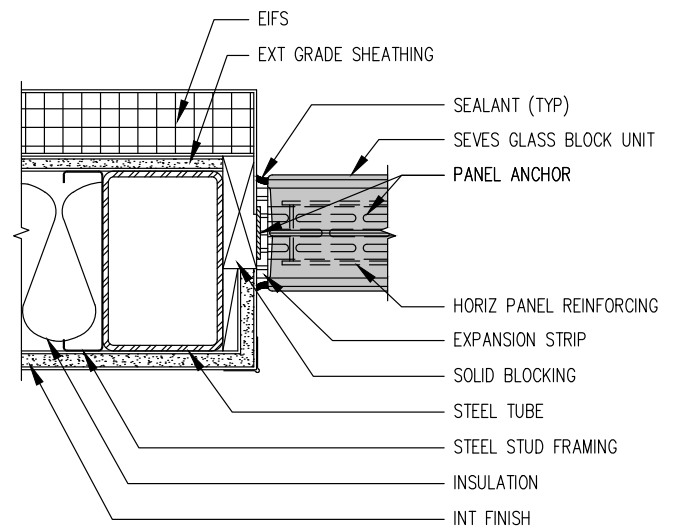
(SGBH-D0031) HEAD – GLASS BLOCK IN STEEL STUD WALL WITH BRICK VENEER

Typical Jamb Details

Exterior Openings



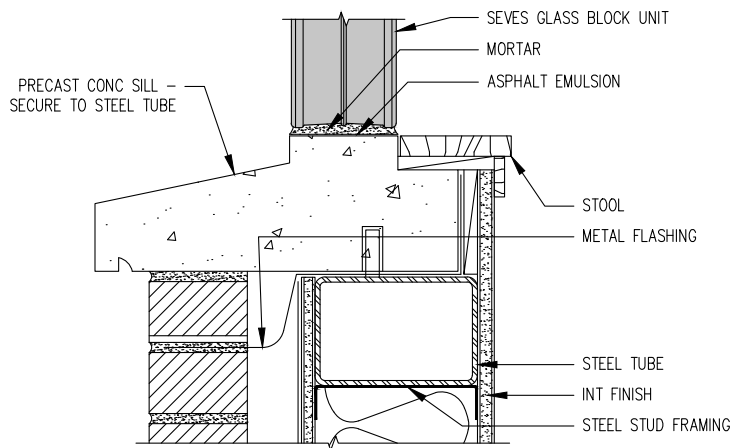
(SGBJ-D021) JAMB – GLASS BLOCK IN STEEL STUD WALL WITH BRICK VENEER



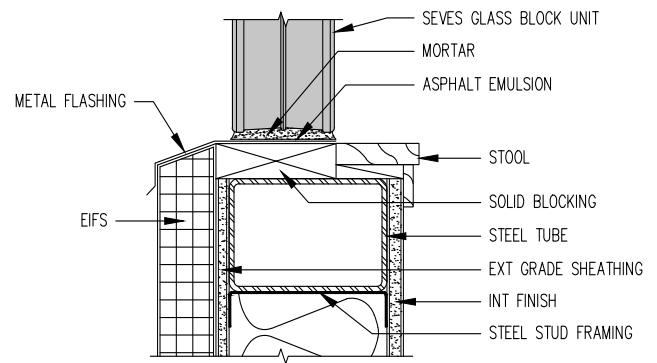
(SGBJ-D016) JAMB – GLASS BLOCK IN STEEL STUD WALL WITH SYNTHETIC PLASTER FINISH

Typical Sill Details

Continuous Panels ≤ 144 Sq. Ft. Each



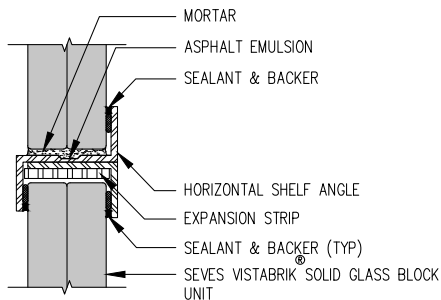
(SGBS-D028) SILL - GLASS BLOCK IN STEEL STUD WALL WITH BRICK VENEER



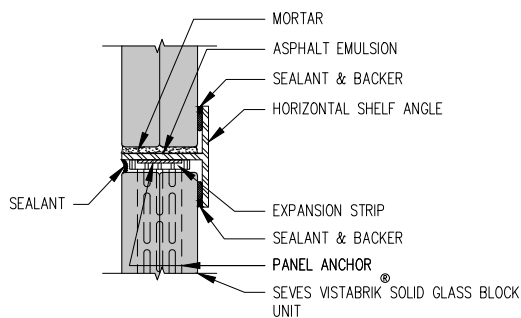
(SGBS-D026) SILL - GLASS BLOCK IN STEEL STUD WALL WITH SYNTHETIC PLASTER FINISH

Typical Shelf Angle Details for VISTABRIK® Panels

Continuous Panels ≤ 100 Sq. Ft. Each



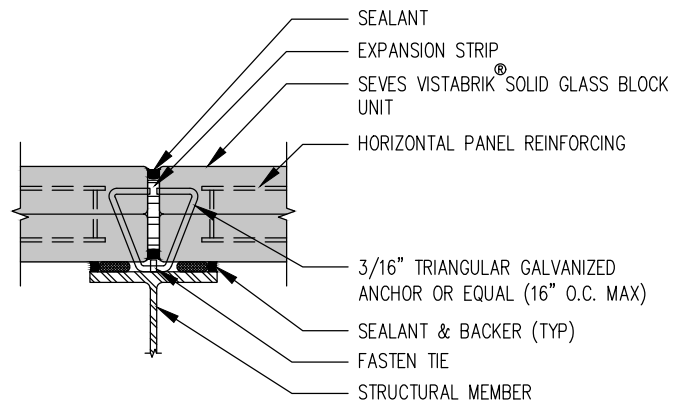
(SGBX-D035A) INTERMEDIATE HORIZONTAL SUPPORT IN MULTIPLE VERTICAL PANELS



(SGBX-D035B1) INTERMEDIATE HORIZONTAL SUPPORT IN MULTIPLE VERTICAL PANELS

Typical Stiffener Details for VISTABRIK® Panels

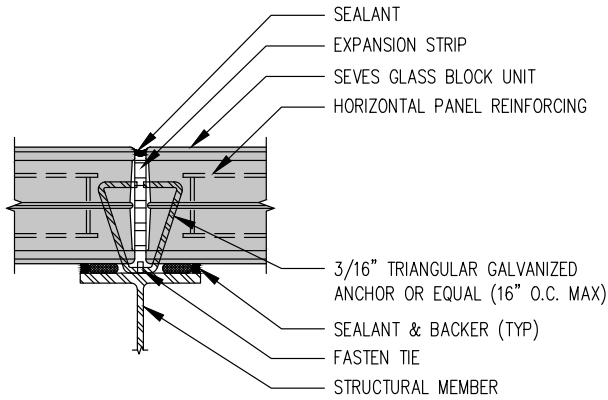
Continuous Panels ≤ 100 Sq. Ft. Each



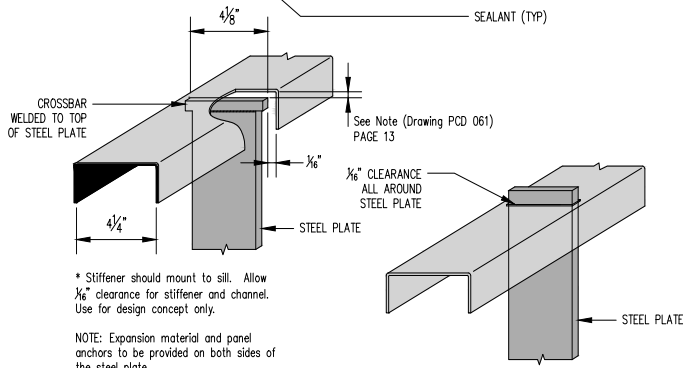
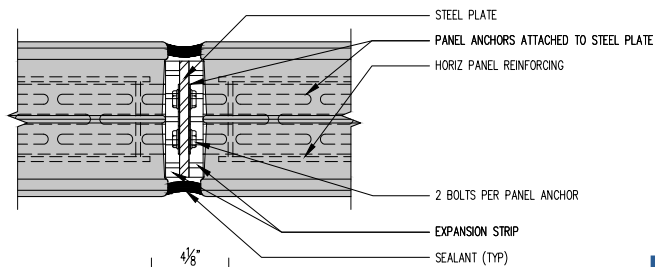
(SGBX-D035C) INTERMEDIATE VERTICAL SUPPORT IN MULTIPLE HORIZONTAL PANELS

Typical Stiffener Details

Continuous Panels ≤ 144 Sq. Ft. Each



(SGBX-D036) INTERMEDIATE VERTICAL SUPPORT
IN MULTIPLE HORIZONTAL PANELS

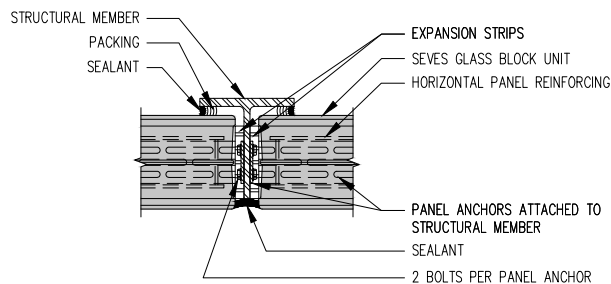


* Stiffener should mount to sill. Allow $\frac{1}{8}$ " clearance for stiffener and channel. Use for design concept only.

NOTE: Expansion material and panel anchors to be provided on both sides of the steel plate.

NOTE: Panels with an expansion joint stiffener incorporating a vertical hidden plate should be limited to a maximum 10' in height.

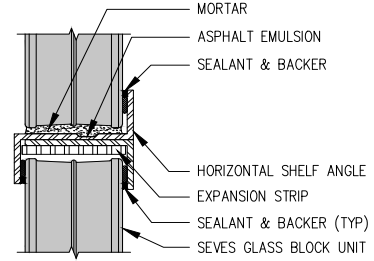
(SGBX-D033B) INTERMEDIATE
SUPPORT IN MULTIPLE HORIZONTAL
PANELS



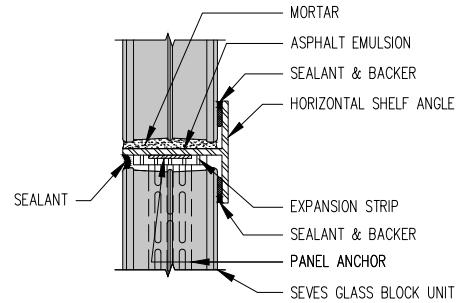
(SGBX-D033B) INTERMEDIATE SUPPORT IN MULTIPLE HORIZONTAL PANELS

Typical Shelf Angle Details

Continuous Panels ≤ 144 Sq. Ft. Each

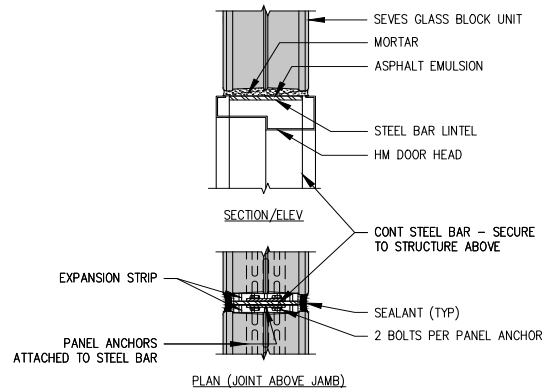


(SGBX-D037A) INTERMEDIATE HORIZONTAL
SUPPORT IN MULTIPLE VERTICAL PANELS

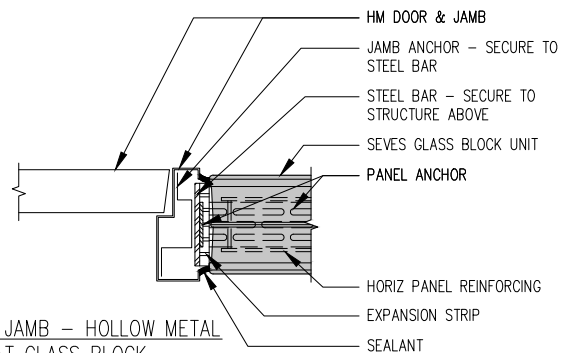


(SGBX-D037B) INTERMEDIATE HORIZONTAL
SUPPORT IN MULTIPLE VERTICAL PANELS

Hollow Metal Door Frame Details

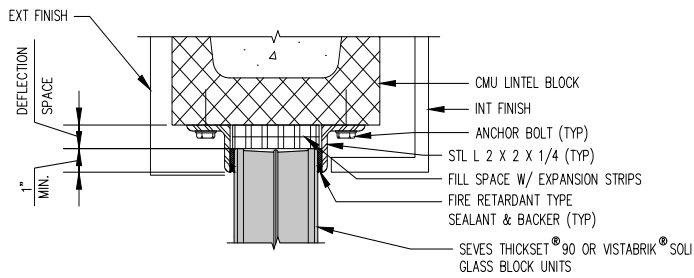


(SGBH-D019B) HEAD - HOLLOW METAL
DOOR FRAME AT GLASS BLOCK

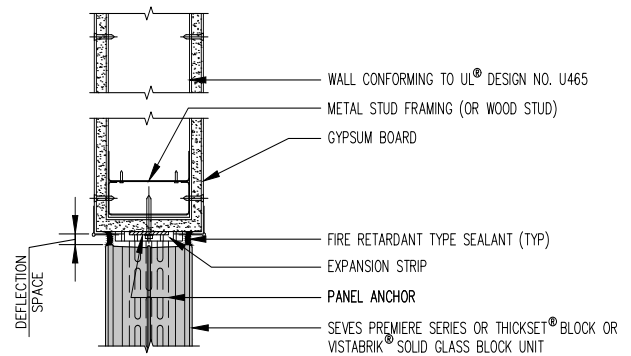


(SGBJ-D019A) JAMB - HOLLOW METAL
DOOR FRAME AT GLASS BLOCK

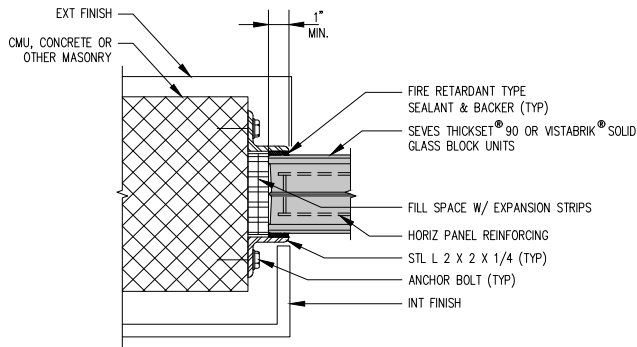
Details for Fire Rated Construction



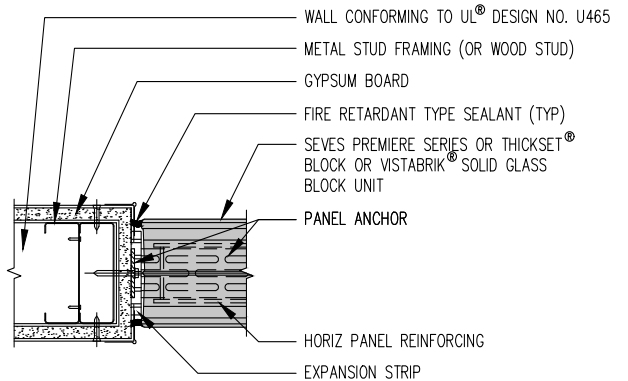
(SGBH-D007) HEAD - 90 MINUTE FIRE RATED GLASS BLOCK IN CMU WALL



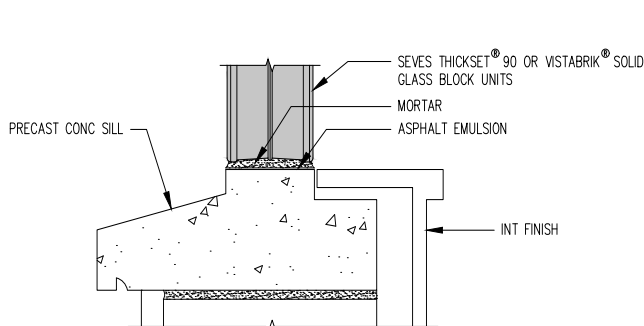
(SGBH-D004) HEAD - 45 & 60 MINUTE FIRE RATED GLASS BLOCK PANEL



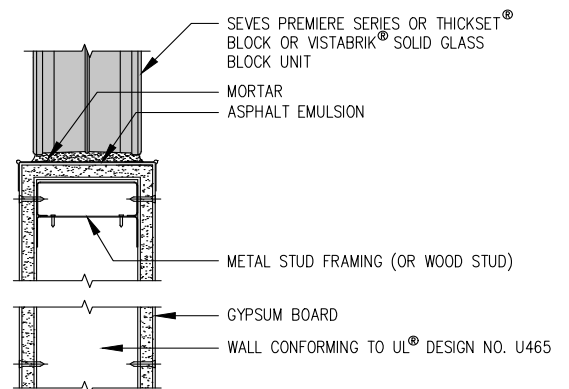
(SGBJ-D014) JAMB - 90 MINUTE FIRE RATED GLASS BLOCK IN CMU WALL



(SGBJ-D017) JAMB - 45 & 60 MINUTE FIRE RATED GLASS BLOCK PANEL

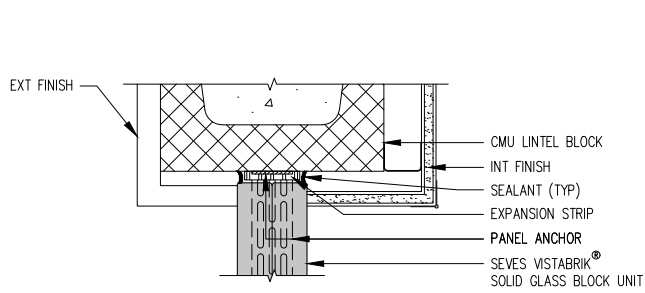


(SGBS-D025) SILL - 90 MINUTE FIRE RATED GLASS BLOCK IN CMU WALL

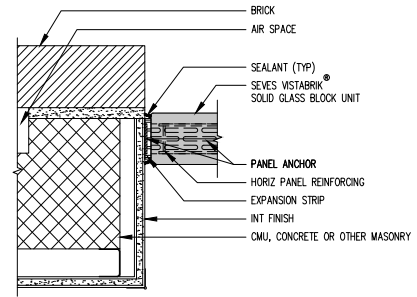


(SGBS-D034) SILL - 45 & 60 MINUTE FIRE RATED GLASS BLOCK PANEL

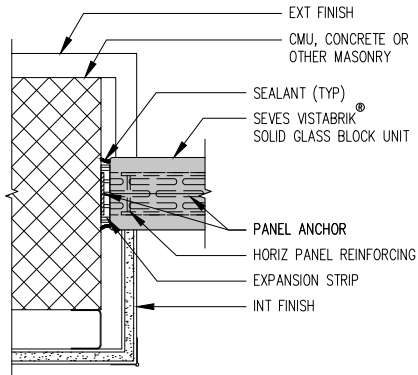
VISTABRIK® Solid Glass Block Details



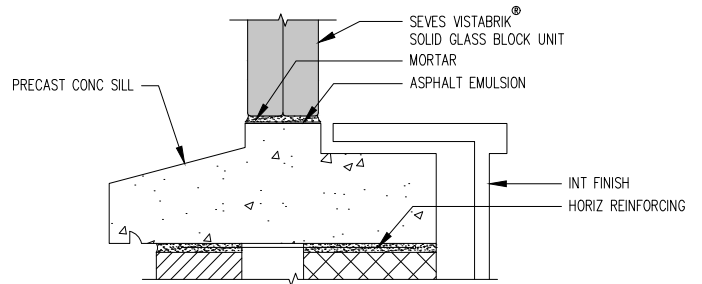
(SGBH-D012) HEAD – SOLID GLASS BLOCK IN CMU WALL



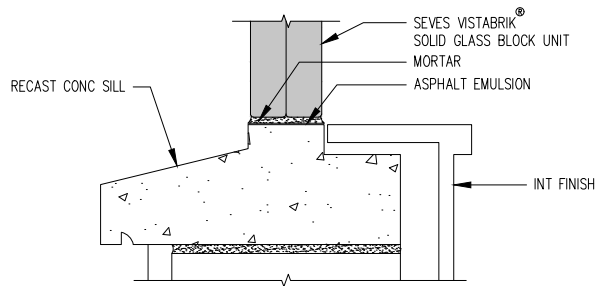
(SGBJ-D018) JAMB – SOLID GLASS BLOCK IN BRICK MASONRY CAVITY WALL



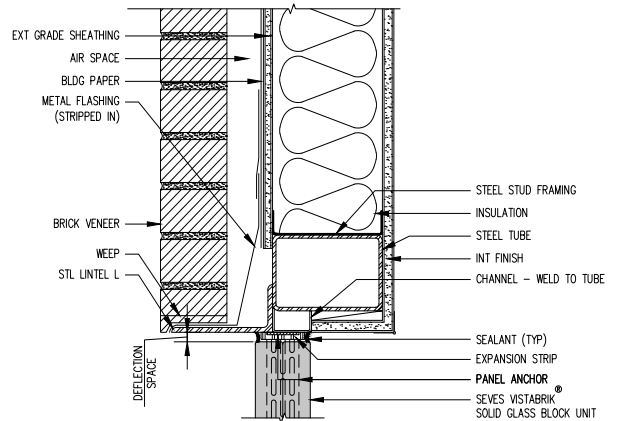
(SGBJ-D013) JAMB – SOLID GLASS BLOCK IN CMU WALL



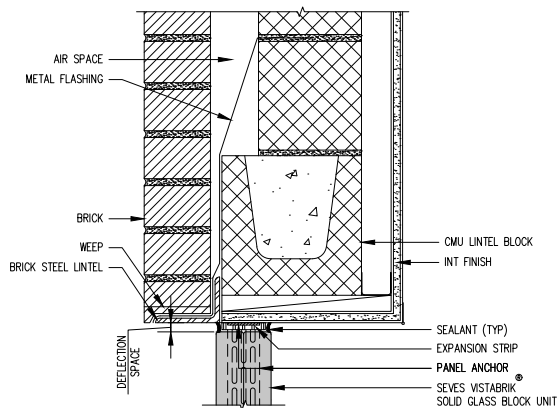
(SGBS-D032) SILL – SOLID GLASS BLOCK IN BRICK MASONRY CAVITY WALL



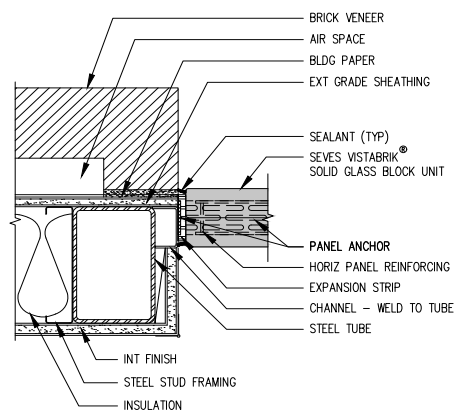
(SGBS-D024) SILL – SOLID GLASS BLOCK IN CMU WALL



(SGBH-D009) HEAD – SOLID GLASS BLOCK IN STEEL STUD WALL WITH BRICK VENEER



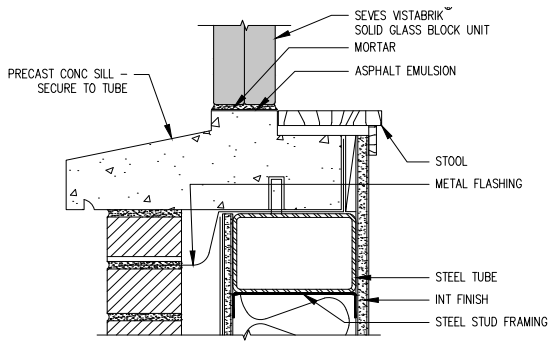
(SGBH-D010) HEAD – SOLID GLASS BLOCK IN BRICK MASONRY CAVITY WALL



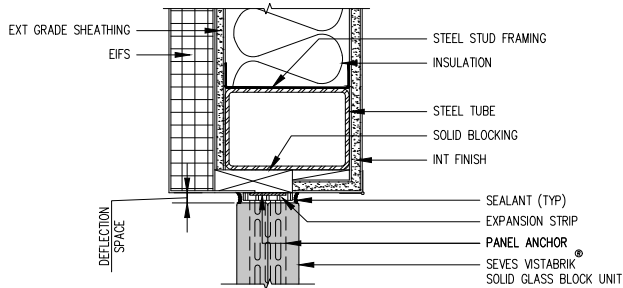
(PCD 044) JAMB – SOLID GLASS BLOCK IN STEEL STUD WALL WITH BRICK VENEER

VISTABRIK® Solid Glass Block Details

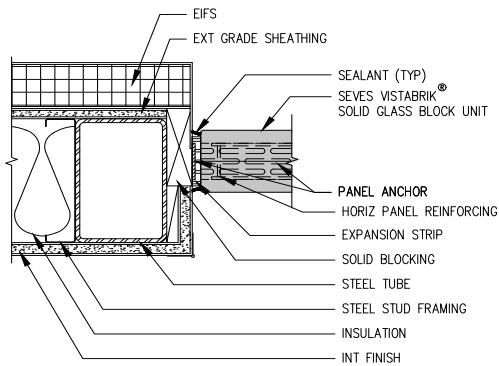
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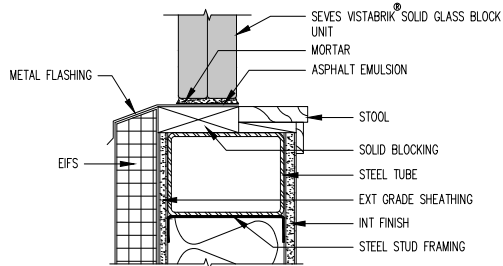
(SGBS-D029) SILL - SOLID GLASS BLOCK IN STEEL STUD WALL WITH BRICK VENEER



(SGBH-D008) HEAD - SOLID GLASS BLOCK IN STEEL STUD WALL WITH SYNTHETIC PLASTER FINISH

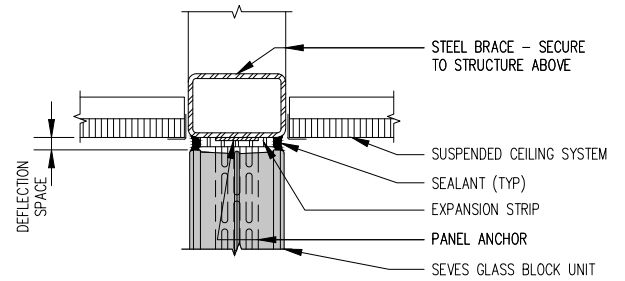


(SGBJ-D023) JAMB - SOLID GLASS BLOCK IN STEEL STUD WALL WITH SYNTHETIC PLASTER

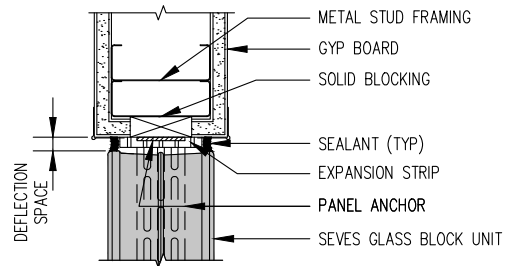


(SGBS-D030) SILL - SOLID GLASS BLOCK IN STEEL STUD WALL WITH SYNTHETIC PLASTER FINISH

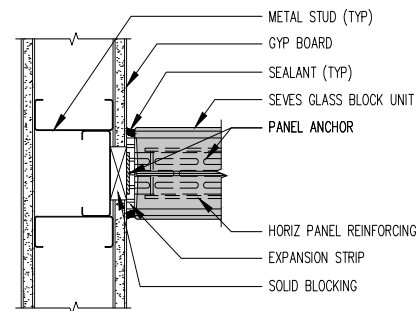
Miscellaneous Interior Details



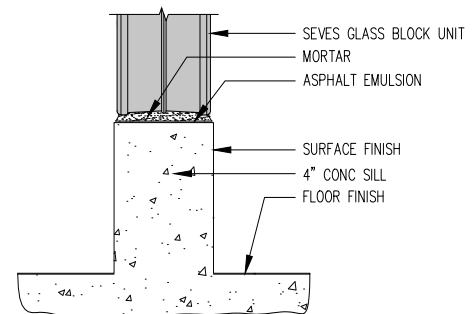
(SGBH-D006) HEAD - GLASS BLOCK IN SUSPENDED CEILING



(SGBH-D011) HEAD - GLASS BLOCK IN PARTITION



(SGBJ-D020) JAMB - GLASS BLOCK PERPENDICULAR TO PARTITION



(SGBS-D031) SILL - INTERIOR CONCRETE FLOOR SLAB

Specifications

1.01 Summary

This specification has been prepared by Seves Glass Block using generally accepted and appropriate technical information but is not intended to be solely relied upon for the specification design or technical applications.

Having no control over the elements of design, installation, workmanship or site conditions, Seves Glass Block assumes that the actual design choices and installation will be made by persons trained and qualified in the appropriate disciplines. Therefore, Seves Glass Block disclaims all liability potentially arising from the use or misuse of this specification.

1.02 Section Includes

- A. Glass Block Units, hollow or solid
- B. Integral Joint Reinforcement and Anchoring
- C. Mortar

1.03 Related Sections

- A. Steel Channels
- B. Sills, lintels, jambs
- C. Sealant (caulk)
- D. Packing Material

1.04 References

- A. ASTM A82 - Spec. for Cold Drawn Steel Wire
- B. ASTM A153 - Class B-2, Spec. Zinc Coating (hot dip) on Iron and Steel Hardware (Canada same)
- C. ASTM A167, Spec. for Stainless and Heat-Resisting Chromium-Nickel Steel Plate, Sheet and Strip
- D. ASTM A580, Spec. for Stainless Steel Wire
- E. ASTM C144, Spec. for Aggregate for Masonry (Canada - A179-94)
- F. ASTM C150, Spec. for Portland Cement (Canada-CAN CSA-A5-93)
- G. ASTM E2010 and NFPA 257, Fire Test of Window Assemblies (equivalent to UL® 9 and CAN 4-S106-M80)
- H. ASTM C207, Spec. for Hydrated Lime for Masonry Purposes (Canada same)
- I. ASTM C270, Spec. for Mortar for Unit Masonry (Canada - A179-94)
- J. ASTM D1187, Type II - Spec. for Asphalt-Base Emulsions (For Metal Surfaces)
- K. ASTM D1227, Type III - Spec. for Emulsified Asphalt (For Porous Surfaces)

1.05 System Description Knowledge of the following basic information is essential for proper installation of Seves Glass Block units:

- 1. Glass block panels shall not be designed to support structural loads.
- 2. Maximum deflection of structural members supporting glass block panels shall not exceed L/600

- 3. Sills of all panels must be painted with a heavy coat of asphalt emulsion and must cure for two hours before first mortar bed is placed.
- 4. Provision for expansion, movement and isolation of the glass units from the surrounding frame, must be made at jambs and heads of all panels. Mortar must not bridge expansion spaces.
- 5. Mortar should be mixed and applied in accordance with the recommendations of Seves Glass Block. See Mortar Materials. Because glass block will not absorb water, mortar must be considerably stiffer than mortar for ordinary masonry. The consistency can be described as "mashed potatoes" or "peanut butter" and be clay-like. The joints must be full and struck smooth, not sponged. Using a sponge to create a rough porous joint will void any warranty and provide for water leakage.
- 6. Design and installation of glass block projects should be done by whole units since cutting glass block is not recommended.

1.06 Submittals

- A. Product Data
Submit two (2) copies of manufacturer's literature and two (2) copies of manufacturer's installation instructions.
- B. Samples
Submit two (2) glass block units of each type specified, showing size, design and pattern of faces.
- C. Test Reports - Fire Tests
Submit documents verifying glass block units are classified for a 3/4, 1 or 1-1/2 hour fire exposure according to ASTM E2010, Underwriters Laboratories of Canada CAN 4-S106-M80, UL® 9, or NFPA 257 "Fire Tests of Window Assemblies."

1.07 Storage and Protection

- A. Store unopened cartons of glass block in a clean, cool, dry area.
- B. Protect opened cartons of glass block against windblown rain or water run-off with tarpaulins or plastic covering.

1.08 Project/Site Conditions

- A. Do not install glass block units when temperature is 40F (4C) and falling. Maintain the temperature of glass unit masonry above 40F (4C) for the first 48 hours after construction.

1.09 Warranty

- A. Seves Glass Block offers a Limited 5-year warranty on Seves

Glass Block units. Written copies of Full Warranty are available upon request.

PART 2 - PRODUCTS

2.01 Acceptable Manufacturers

- A. The drawings and specifications are based on catalog data, specifications and products of Seves Glass Block and designate the type and quality of work intended under this section.
 - 1. Products of other manufactures proposed as equivalent quality must be submitted through the bidding contractors for written approval of the architect ten days prior to the bid date.
 - 2. Supporting technical data, samples, published specifications and the like must be submitted for comparison.
 - 3. Contractor shall warrant that proposed substitutions, if accepted, will provide performance equivalent to the materials specified herein.
 - 4. These specifications have been developed by Seves Glass Block based on extensive tests of panels composed of Seves Glass Block Premiere Series Glass Block masonry units as manufactured by Seves Glass Block. These specifications do not apply to panels made from glass block masonry units produced by any other manufacturer.

2.02 Seves Glass Block Units
Distributed by GBA Architectural Products + Services; contact Steve Boesch at steveb@gbaproducts.com 877-200-7700.

- A. Glass block units, nominally ____ inch x ____ inch x ____ inch thick shall be partially evacuated hollow units made of clear, colorless glass or full bodied color glass with a latex based or polyvinyl butyral edge coating. Pattern type: _____
- B. Thick faced glass block units, nominally ____ inch x ____ inch x ____ inch thick shall be partially evacuated hollow units made of clear, colorless glass with a latex based or polyvinyl butyral edge coating. Pattern type: THICKSET® 60 or 90
- C. Solid glass units, nominally ____ inch x ____ inch x ____ inch made of clear glass with a polyvinyl butyral edge coating. Pattern type: VISTABRIK Solid Glass Block.

2.03 Accessories

- A. Panel Reinforcing: two parallel 9 gauge wires either 1 5/8 inch or 2 inch on center with electrically butt-welded cross wires spaced at regular intervals. Type 304 stainless steel, by Seves Glass Block.
- B. Panel Anchors: 22 gauge by 16 inches long by 1 3/4 inches wide of Type 304 stainless steel, by Seves Glass Block.
- C. Expansion Strips: made of polyethylene foam with a thickness of 3/8 inch, by Seves Glass Block.
- D. Asphalt Emulsion: a water-based asphalt emulsion, by Karnak Chemical Corp. (The Glass Block Supply Co., 1.877-427-8775), or equal.
- E. Sealant (caulk): non-staining, waterproof mastic, (silicone), (urethane), (_____) type.
 - Tremco Incorporated, 1.800.321.7906 in Beachwood, OH. Below is information on the fire retardant sealant used on glass block fire tests:
 - Fyre-Sil Silicone Sealant (for fire-rated construction), by Tremco, Inc. 1.800.321.7906
- F. Packing (Backer Rods): polyethylene foam, neoprene, fibrous glass or equal as approved by sealant manufacturer.
- G. Channels (Aluminum): Available from The Glass Block Supply Co 1.877-427-8775
 - Premiere Series (4" Glass Block) Use: 4 1/2" x 2" x 1/8" size.
 - VISTABRIK® and Thinline® Series (3" Glass Block) Use: 3 3/4" x 2" x 1/8" size.

2.04 Mortar Materials

- Mortar: Limit cementitious materials in mortar to Portland Cement and lime. Type S in accordance with ASTM C270. Mortar shall be 1 part Portland Cement, 1/2 part lime, and sand equal to 2 1/4 to 3 times the amount of cementitious material (cement plus lime), all measured by volume. (For exterior glass block panels, an integral type water proofer should be added to the mortar mix.)
- No antifreeze compounds or accelerators allowed.
- NOTE: All model building codes also accept the use of Type N mortar.
 - 1. Portland Cement: Type 1 in accordance with ASTM C150. If a waterproof Portland Cement is used, an integral type waterproofer shall still be used. (Masonry Cement is not recommended.)

Specifications

Stearate type by The Euclid Chemical Company (Integral Waterpeller® Powder, Not Liquid, 1.800.321.7628), or approved equal. Note: Add Integral Waterpeller® powder to dry mortar mix. Do not add powder to wet mortar mix.

5. External Type Water proofer: Water based silane sealer type by BASF Corporation (HYDROZO ENVIROSEAL™ 40, 1.800.243.6739). Note: Remove excess sealer from glass surfaces soon after application.

PART 3 - EXECUTION

3.01 Preparation

- A. Verify that (channels), (panel anchors) have been provided at head and jambs for the purpose of providing panel support within the opening.
- B. Mix all mortar components to a consistency that is drier than mortar for ordinary masonry. (See Section 1.05, Item 5). Re-tempering the mortar after it has taken its initial set shall not be permitted. Do not use antifreeze compounds or accelerators.
- C. Freshly mixed mortar may create skin irritation. Avoid direct contact where possible and wash exposed skin areas promptly with water. If any mortar gets into the eyes, rinse immediately with water and get prompt medical attention.

3.02 Installation

- A. Cover sill area with a heavy coat of asphalt emulsion. Allow emulsion to cure at least 2 hours before placing mortar.
- B. Where panel anchors are used at jambs and heads in lieu of channel or chase surrounds, install panel anchors in the same joints (16 inches o.c. maximum starting after first course) where panel reinforcing will be laid. Panel anchors are to be embedded a minimum of 12 inches into the mortar joints.
- C. Place or adhere expansion strips to jambs and head. Make certain expansion strip extends to sill and covers leg of panel anchor that is attached to jambs and head.
- D. Set a full mortar bed joint, applied to sill.
- E. Set lower course of block. Maintain a uniform joint width of 1/4 to 3/8 inch plus or minus 1/8 inch. All mortar joints must be full and not furrowed. Furrowing joints will void warranty. Steel tools must not be used to tap blocks into position. (Place a rubber crutch tip on end

of trowel to tap block into position.) Do not realign, tap or otherwise move block after initial placement For VISTABRIK®, spacers that provide a 3/8 inch thick mortar joint are available.

- F. Install panel reinforcing every 16 inches o.c. maximum (starting after the first course) in the horizontal mortar joints. Run reinforcing continuously from end to end of panels. Lap reinforcing not less than 6 inches whenever it is necessary to use more than one length. NOTE: In corrosive atmospheres (i.e. saline air, chlorine, air, etc.), the use of stainless steel channels, reinforcing and panel anchors should be used. Consult local building codes in coastal areas. For VISTABRIK® Solid Glass Block, use 1-5/8 inch wide reinforcing (same as Thinline® Series glass block). Do not bridge expansion joints with reinforcing. Install reinforcing as follows:
- Place lower half of mortar in bed joint. Do not furrow.
 - Press panel reinforcing into place.
 - Cover panel reinforcing with upper half of mortar bed and trowel smooth. Do not furrow.

- G. Place full mortar bed for joints not requiring panel reinforcing - do not furrow. Maintain uniform joint width.

- H. Set succeeding courses of block. Spaces at head of panel and jambs must remain free of mortar for caulking with sealant.

- I. Use only wooden or rubber tipped tools when tapping glass blocks into place.

- J. Strike joints smooth while mortar is still plastic and before final set. Roughly tooled joints can leak. Remove surplus mortar from faces of glass blocks and wipe dry. (See Section 3.03). Tool joints smooth and concave before mortar takes final set. At this time, remove and clean out all excess mortar from jambs, head and other locations.

- K. After final mortar set (approximately 24 hours), install packing tightly between glass block panel and jamb and head locations. Leave space for sealant.

- L. Apply sealant evenly to the full depth of recesses as indicated on the drawings and in accordance with the manufacturers' published application manual and instructions.

- M. All exterior glass block panels shall be well sealed to prevent water entry.

3.03 Cleaning

- A. Remove surplus mortar from the faces of the glass block at the time joints are struck or tooled. Mortar should be removed while it is still plastic using a clean, wet sponge or an ordinary household scrub brush with stiff bristles.

- B. Do not use harsh cleaners, acids (of any strength), abrasives or alkaline materials while cleaning glass block. Never use a wire brush to remove mortar from glass block surfaces.

- C. Final mortar removal is accomplished with a clean, wet sponge or cloth. Rinse sponge or cloth frequently in clean water to remove abrasive particles that could scratch glass surfaces. Allow any remaining film on the block to dry to a powder.

- D. After all sealants, caulking, etc., have been applied, remove excess caulking materials with commercial solvents such as xylene, toluene, mineral spirits or naphtha and follow with normal wash and rinse. Be careful not to damage caulking by overgenerous application of strong solvents. Comply with solvent manufacturers' printed directions on label for toxicity and flammability warnings.

- E. Final cleaning of glass block panels is accomplished after they are completely installed. Wait until panels are not exposed to direct sunlight. Start at the top of the panel and wash with generous amounts of clean water. Dry all water from the glass block surface. Change cloth frequently to eliminate dried mortar particles or aggregate that could scratch the glass surface. To remove the dry powder from the glass surfaces, use a clean, dry, soft cloth. For stubborn or hard to remove powder or stains, the use of an "extra fine" steel wool (grades 000 or 0000) is suggested. Try this first in an unobtrusive area.

MISSION STATEMENT

We are committed to providing our clients with the finest quality products and services. We strive to be the foremost authority in our industry by promoting constant improvement and creative innovations coupled with undying dedication and unwavering commitment.

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