# Development Services

## From Concept to Construction

Phone: 503-823-7300 Email: bds@portlandoregon.gov 1900 SW 4th Ave, Portland, OR 97201
More Contact Info (http://www.portlandoregon.gov//bds/article/519984)

## APPEAL SUMMARY

**Status:** Decision Rendered - Held over from ID 20673 (7/31/19) for additional information

| | |
|---|---|
| **Appeal ID:** 21919 | **Project Address:** 2112 NE 51st Ave |
| **Hearing Date:** 9/25/19 | **Appellant Name:** Geoff Slater |
| **Case No.:** B-013 | **Appellant Phone:** 2123350688 |
| **Appeal Type:** Building | **Plans Examiner/Inspector:** Guy Altman |
| **Project Type:** residential | **Stories:** 1 **Occupancy:** X **Construction Type:** wood |
| **Building/Business Name:** | **Fire Sprinklers:** No |
| **Appeal Involves:** Erection of a new structure,Reconsideration of appeal | **LUR or Permit Application No.:** 18-168890-RS |
| **Plan Submitted Option:** pdf [File 1] [File 2] | **Proposed use:** ADU |

## APPEAL INFORMATION SHEET

### Appeal item 1

| | |
|---|---|
| **Code Section** | Table R302.1 & section 703.2 - no wall openings within 3 feet of property line |
| **Requires** | Table R302.1 & section 703.2 - no wall openings within 3 feet of property line. Table R302.1 allows penetrations of a wall that complies with R302.4. What is proposed are two UL listed glass brick forming the wall or equivalent UL listed glazing in a UL listed frame within 3 feet of the property line rated for a minimum of 1 hour. There is no opening within the meaning of the table |
| **Proposed Design** | Regulation Requirement:<br><br>Table R302.1 & section 703.2 - no wall openings within 3 feet of property line. Table R302.1 allows penetrations of a wall that complies with R302.4. What is proposed are two UL listed glass brick forming the wall or equivalent UL listed glazing in a UL listed frame within 3 feet of the property line rated for a minimum of 1 hour. There is no opening within the meaning of the table.<br><br>Proposed Design:<br><br>The wall has no openings, and in part consists of two (3) proposed glass brick panels will not exceed 6'x2' (12 square feet) for light. I am requesting permission for fire resistive glass, as opposed to thermally resistive glass under ASTM E119 set out in section 703.2. The design is rated as a minimum of 1 hour against smoke or flame penetration. This will be achieved by following the design<br>of Pittsburgh Corning Corp "EXHIBIT A - Fire Rated Glass Block Construction PCD-161" or equivalent rated alternative manufacturer. This structure will use a heavy wood 8"x6" header covered on all sides by fire rated gypsum<br>wall and a gypsum bottom sill plate with impervious fire rated coating) that otherwise conforms |

with UL No. U465. Caulking will use 3M CP25WB.
Enclosed is the Pittsburgh Corning Corp design specifically for this application.

**Reason for alternative**

Reason for Alternate:

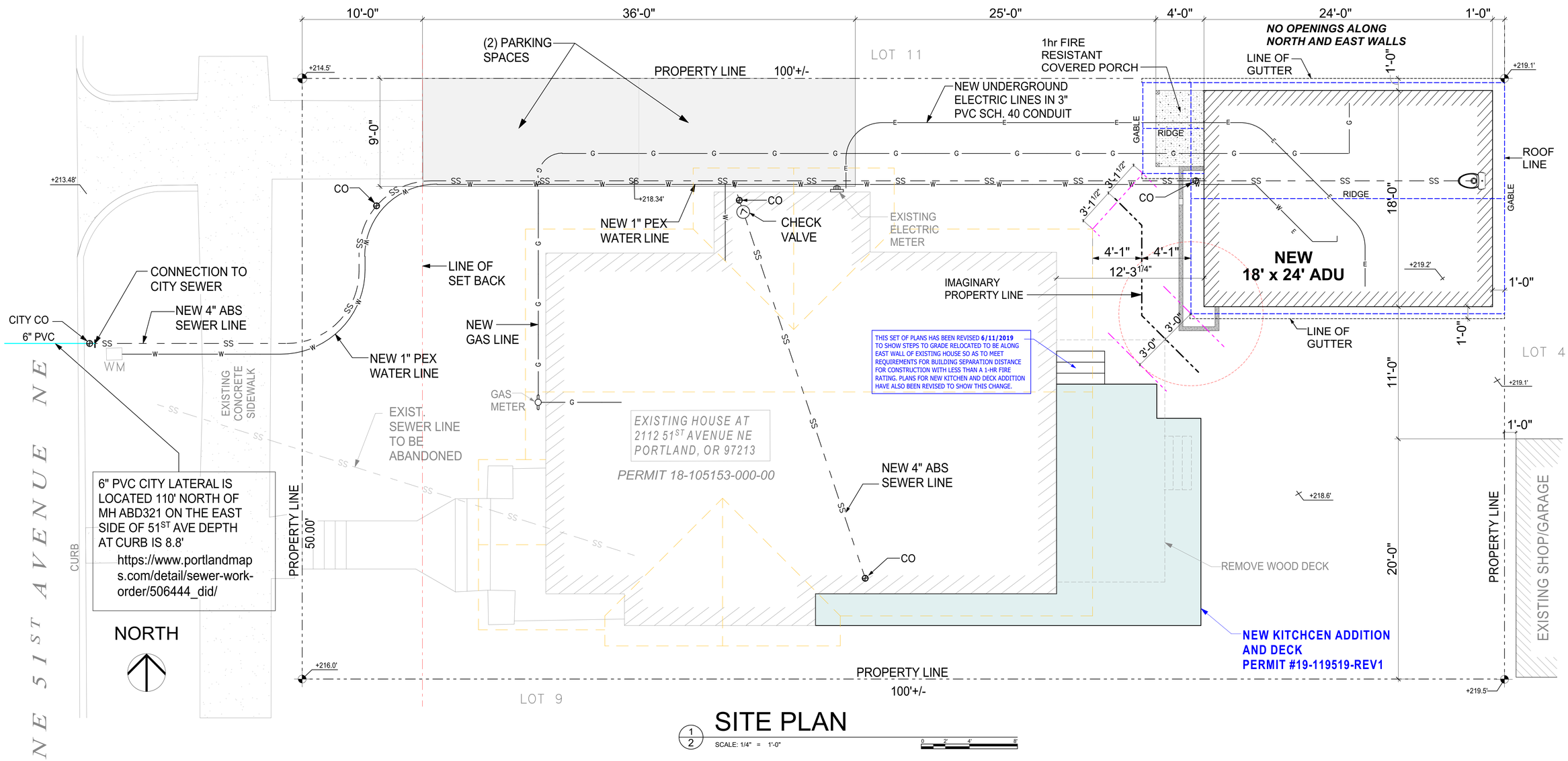
The property lies in a 2'6" grade depression with light from the south severely degraded from the drop, the neighbors wall and heavy foliage on the south. Getting light into an ADU is challenging, and so I am seeking two (2) non-operable, opaque or rippled glass brick panels not exceeding 3'x4' (12 square feet) on both the north and east side of the proposed ADU that allows natural light. Both glass walls are within 3' of the property line, and nothing about this design constitutes a wall opening or allows fire or ventilation to feed a fire.

The walls are already rated 1 hour gypsum X inside and out. What is sought is adding three glass block panels for light that would form part of the wall rather than a opening. The proposed design does not significantly impact on load structure or privacy because glass bricks are opaque/rippled. It is the equivalent of a continuous fire rated external wall.

## APPEAL DECISION

**Alternate 1 hour wall assembly: Denied. Proposal does not provide equivalent Life Safety protection. Appellant may contact John Butler (503 823-7339) with questions.**

Pursuant to City Code Chapter 24.10, you may appeal this decision to the Building Code Board of Appeal within 90 calendar days of the date this decision is published. For information on the appeals process, go to www.portlandoregon.gov/bds/appealsinfo, call (503) 823-7300 or come in to the Development Services Center.




# SITE PLAN

1/2 SCALE: 1/4" = 1'-0"

0 2' 4' 8'

THIS SET OF PLANS WAS MADE BY:


JEPSON DESIGN
4380 KALE STREET NE SALEM, OREGON 97305
PHONE: 503-932-7854
jepsondesign@comcast.net


N · C · B · D · C
NATIONAL COUNCIL OF BUILDING DESIGNER CERTIFICATION
STEVEN B. JEPSON
CERTIFICATION NO. 38-594

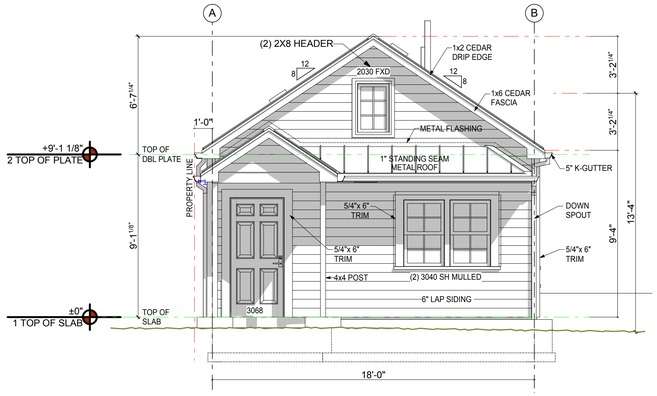

The National Council of Building Designer Certification
2962 Saklan Indian Drive
Walnut Creek, CALIFORNIA 94595
Toll Free: (888) 726-7659
information@ncbdc.com


NEW ADU FOR
GEOFFREY SLATER
2112 NE 51ST AVE
PORTLAND, OR 97213

DATE: 7/8/2019

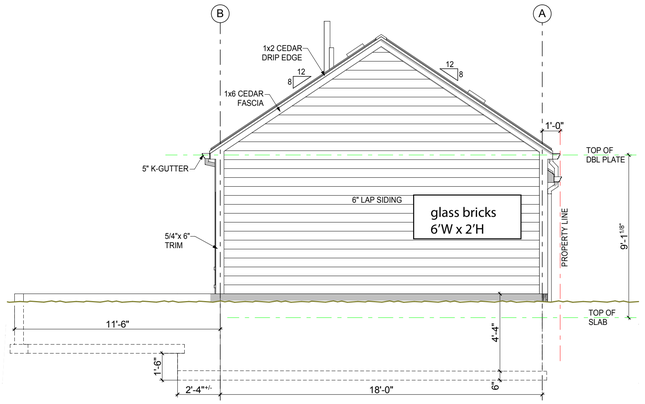
SITE PLAN

2



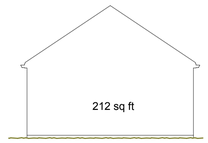

3/5 WEST ELEVATION *

SCALE: 1/4" = 1'-0"



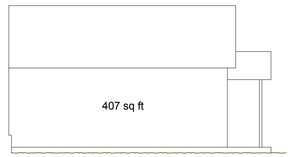

5/5 EAST ELEVATION

SCALE: 1/4" = 1'-0"




EAST WIND LOAD AREA

SCALE: 1/8" = 1'-0"

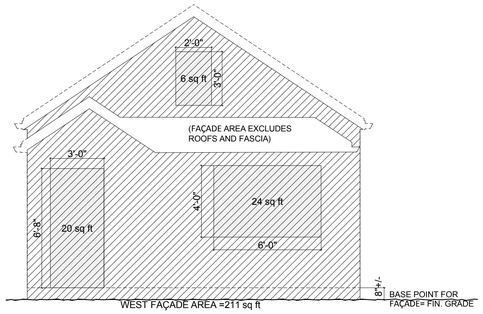



NORTH WIND LOAD AREA

SCALE: 1/8" = 1'-0"


SOUTH WIND LOAD AREA

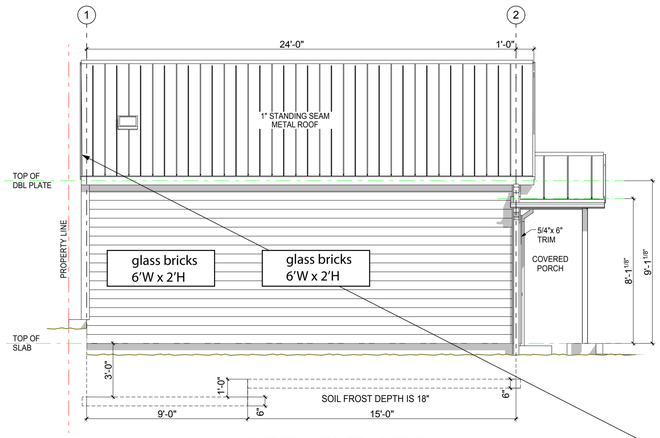
SCALE: 1/8" = 1'-0"




198.24 sq ft x .15 = 29.736 sq ft = MIN. REQUIRED OPENINGS AREA
20+24+6 = 50 sq ft
WIND LOAD AREA TO TOP OF FOUNDATION WALL=238 sq ft

2/5 WEST FAÇADE AND WIND LOAD AREA

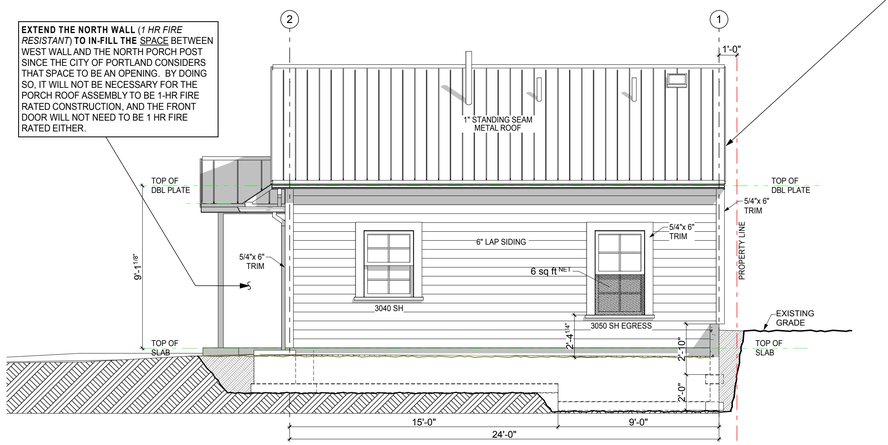
SCALE: 1/4" = 1'-0"




6/5 NORTH ELEVATION *

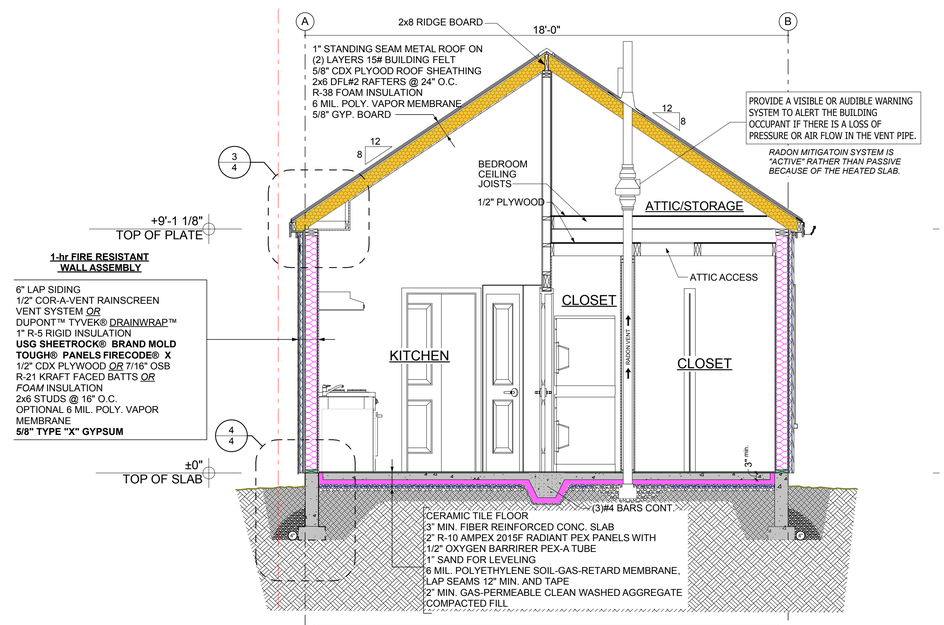
SCALE: 1/4" = 1'-0"

THESE PLAS HAVE BEEN REVISED TO SHOW NO OVERHANG/EAVE/SOFFIT AT EAST GABLE




3/5 SOUTH ELEVATION *

SCALE: 1/4" = 1'-0"




**RADON ABATEMENT** will be an **"ACTIVE"** sub-slab depressurization system" per 2017 Oregon Residential Specialty Code Appendix F. Vent Pipe per AF103.6.1, Soil-gas-retard per AF103.3.

9/5 BUILDING SECTION - LOOKING EAST

SCALE: 3/8" = 1'-0"


THIS SET OF PLANS WAS MADE BY:

JEPSON DESIGN

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PHONE: 503-932-7854
jepsondesign@comcast.net

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Toll Free: (888) 726-7659
nifomation@ncbdc.com


# NEW ADU FOR GEOFFREY SLATER

2112 NE 51ST AVE
PORTLAND, OR 97213

DATE: 7/8/2019

ELEVATIONS AND BUILDING SECTION

5

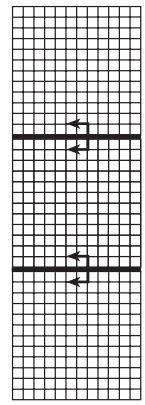
**Glass bricks in ADU**

The areas do not exceed 12 square feet each.

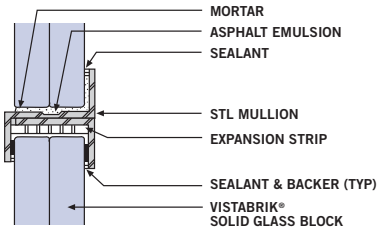
Glass blocks are permitted as a vertical wall opening under section 2110 of the IBC provided glass-block assemblies having a fire protection rating of not less than 3/4 hour shall be permitted as opening protectives in accordance with Section 715 in fire barriers and fire partitions that have a required fire-resistance rating of 1 hour or less and do not enclose exit stairways or exit passageways.

The bricks to be used are rated under ASTM E-119/NFPA 251/UL 263 as per the manufacturers framing (enclosed) that will include top, side and bottom ¾" fire retardant gypsum sills and fire retardant sealant to edge of fire rated wall vertical wall with metal "L" channel as further protection.

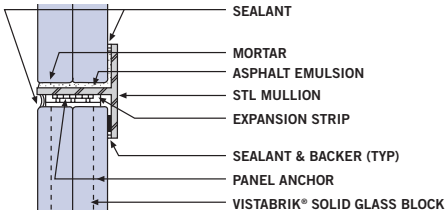
## TYPICAL SHELF ANGLE DETAILS – FOR VISTABRIK® PANELS
### Continuous Panels ≤ 100 Sq. Ft. Each



Horizontal Stiffener

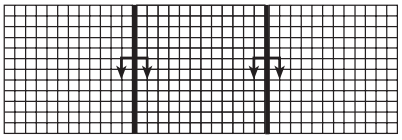



(PCD 130) Intermediate Horizontal Support in Multiple Vertical Panels

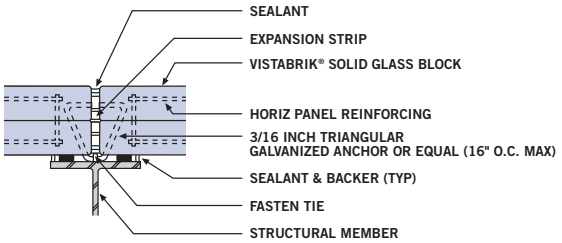



(PCD 131) Intermediate Horizontal Support in Multiple Vertical Panels

## TYPICAL STIFFENER DETAILS – FOR VISTABRIK® PANELS
### Continuous Panels ≤ 100 Sq. Ft. Each

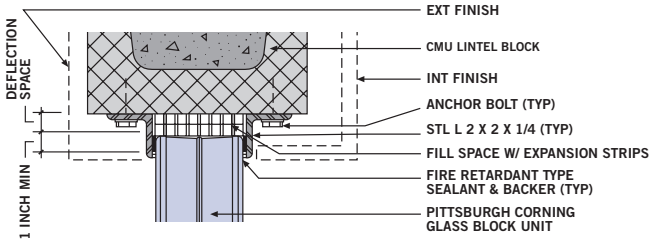


Vertical Stiffener

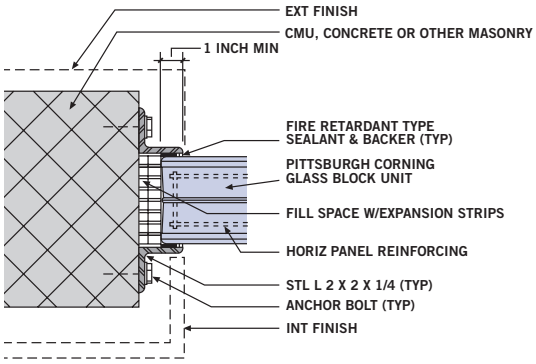



(PCD 133) Intermediate Vertical Support in Multiple Horizontal Panels

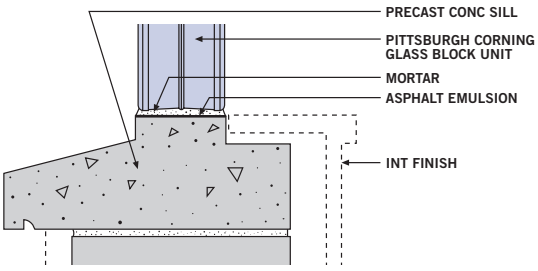
## DETAILS FOR FIRE RATED CONSTRUCTION



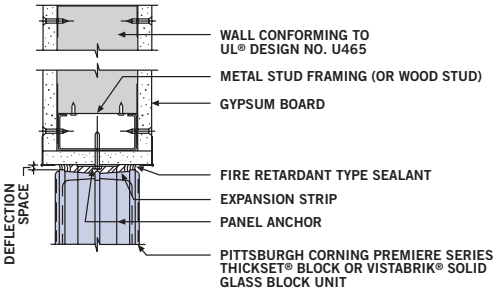

(PCD 004) Head – 90 Minute Fire Rated Glass Block in CMU Wall



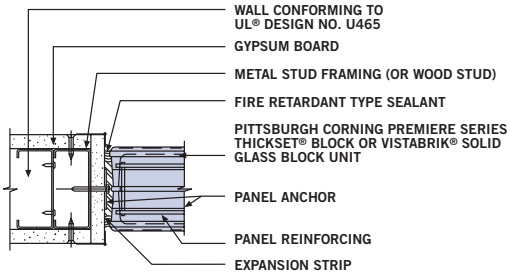

(PCD 005) Jamb – 90 Minute Fire Rated Glass Block in CMU Wall



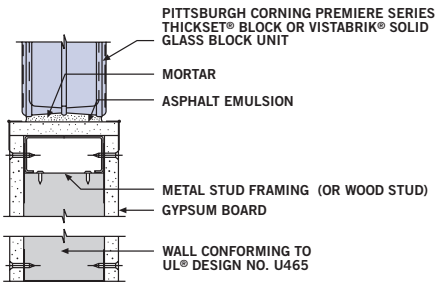

(PCD 006) Sill – 90 Minute Fire Rated Glass Block in CMU Wall




(PCD 159) Head – 45 & 60 Minute Fire Rated Glass Block Panel




(PCD 160) Jamb – 45 & 60 Minute Fire Rated Glass Block Panel




(PCD 161) Sill – 45 & 60 Minute Fire Rated Glass Block Panel

# PITTSBURGH CORNING GLASS BLOCK PRODUCTS

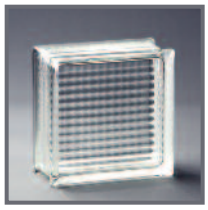
**HIGH PERFORMANCE LINE** – Pittsburgh Corning's High Performance Line of glass block products is comprised of products that offer the highest value, performance features and benefits related to improved safety, energy efficiency, aesthetics and decorative choices.

### THICKSET® Block

Cutaways show the greater face thickness of the THICKSET® Series Block. THICKSET® 60 Block on left vs. the THICKSET® 90 Block on right.

### THICKSET® 90 Block DECORA® Pattern

THICKSET® 90 block provides a 90-minute fire rating. The DECORA® pattern provides maximum light transmission with subtle visual distortion. The nondirectional faces make installation quick.



### THICKSET® 90 Block ENDURA™ Pattern

THICKSET® 90 block provides a 90-minute fire rating. The ENDURA™ pattern's narrow flutes provide moderate light transmission/maximum privacy.

### THICKSET® 90 Block VUE® Pattern

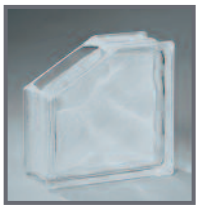
THICKSET® 90 block provides a 90-minute fire rating. The VUE® pattern transmits maximum light and allows ultimate visibility.

### THICKSET® 60 Block DECORA® Pattern

THICKSET® 60 block provides a 60-minute fire rating. The DECORA® pattern provides maximum light transmission with subtle visual distortion. The nondirectional faces make installation quick.

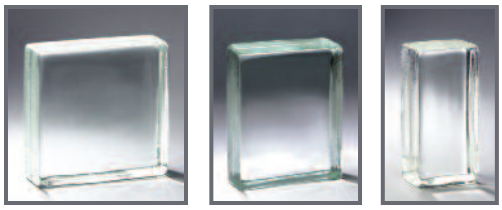
### THICKSET® 60 Block VUE® Pattern

THICKSET® 60 block provides 60-minute fire rating. The VUE® pattern transmits maximum light and allows ultimate visibility.



### DECORA® LX Pattern

Fibrous glass insert adds moderate thermal and light characteristics. Maximum privacy. *Please note: The "LX" fibrous glass insert is available in other patterns and sizes by special order. Minimum order quantities apply.*

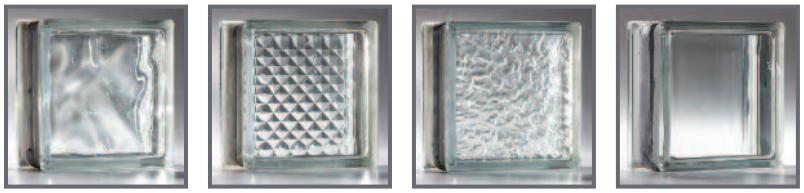


### VISTABRIK® Solid Glass Block

3" solid glass block. Clear visibility, durable, impact, vandal and bullet resistant, low maintanance and aesthetically attractive. Excellent light transmission. Available in 8" x 8", 6" x 8" and 4" x 8" sizes.

### 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 transmissin for LEED contribution. Improved thermal performance. Available in various sizes with choice of privacy levels.

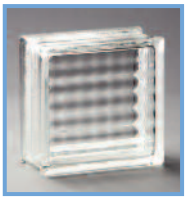


### Energy Efficient Glass Block

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. The blocks are available in DECORA®, DELPHI®, IceScapes®, and VUE® patterns.

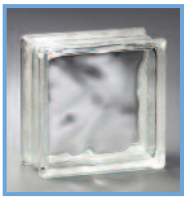
**SIGNATURE LINE** – Pittsburgh Corning's Signature Line of glass block products is comprised of high quality Premiere Series products and the largest selection of patterns and shapes. This line has become the standard in the industry and provides the most design flexibility in the selection and use of glass block for walls, windows, partitions, and showers in residential and commercial applications.

## Premiere Series Glass Block



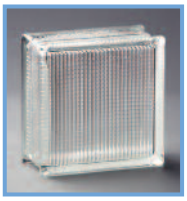
### ARGUS® Pattern

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



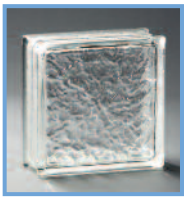
### DECORA® Pattern

The trademark wavy undulations of this pattern provides maximum light transmission with subtle visual distortion. The nondirectional faces make installation quick.



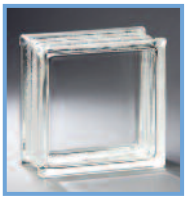
### ESSEX® AA Pattern

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



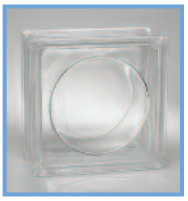
### IceScapes® Pattern

Non-directional pattern lets light in without sacrificing privacy. Maximum light transmission/medium to maximum privacy.



### VUE® Pattern

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.

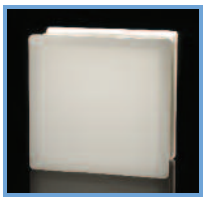


### FOCUS™ Pattern

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

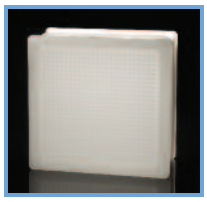
## SIGNATURE LINE – (continued)

### Premiere Series Glass Block (continued)



Opal Plain

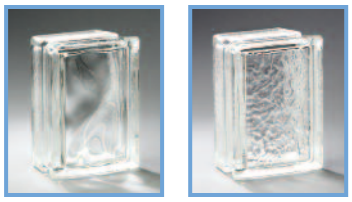
With a smooth finish both inside and out, this style emits a softly diffused light over an entire area.



Opal Silk

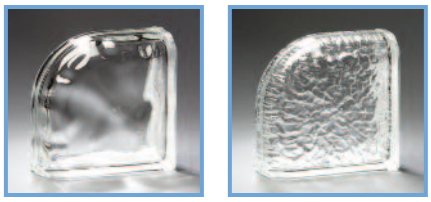
This fine grid pattern on the inner surface provides an elegant setting as it gently spreads light.

### Shapes and Finishing Units



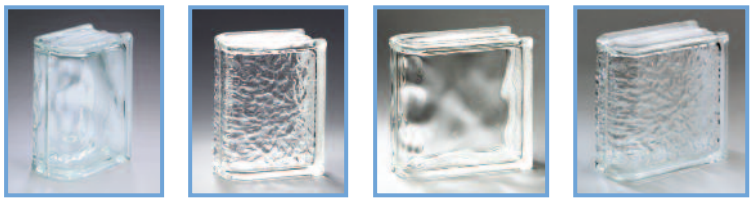
ARQUE® Block
DECORA® and IceScapes® Patterns

ARQUE® Block is a brilliant way to create smooth, graceful curves and columns. ARQUE® Block forms a consistent, tight curve ideally suited for columns.



ENCURVE® Block,
DECORA® and IceScapes® Patterns

Arched, soft edges to round out your design options or finish panels. Use with 8" x 8" EndBlock™ Finishing Units for a stepped panel.



EndBlock™ Finishing Unit DECORA® and IceScapes® Patterns 6" x 8" and 8" x 8"

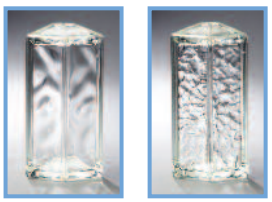
The rounded, finished surface on one edge of these blocks makes them virtually disappear when used vertically or horizontally on the edges of panels, walls or dividers.

**possibilitiesbegin.com**

Visit our new website which was designed specifically to help you to imagine the possibilities.

HEDRON® Corner Block
DECORA® and IceScapes® Patterns

Hexagonal corner unit allows you to form 90-degree corners resulting in a gently rounded continuous glass face.

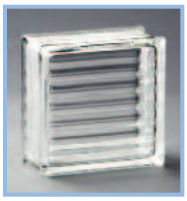


TRIDRON 45° Block®
DECORA® and IceScapes® Patterns

The unique shape of this block lets you create everything from 45-degree angles to full circles.

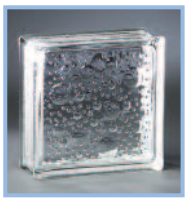
## MADE TO ORDER PRODUCTS – Items listed below are subject to minimum order quantities and lead times.

### Premiere Series Glass Block



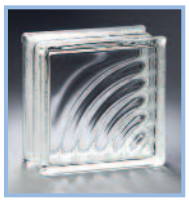
ARGUS® Parallel Fluted Pattern

Rounded parallel flutes on each face diffuse light while allowing maximum light transmission and a medium degree of privacy. Compliments the SPYRA® pattern.



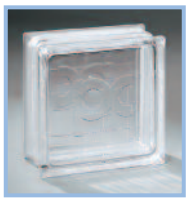
SeaScapes™ Pattern

The three dimensional circles appear to float within the glass block. The pattern lets in light and also provides a degree of privacy.



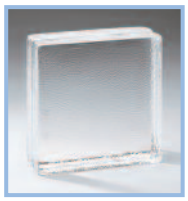
SPYRA® Pattern

SPYRA® Pattern gives you many options for decorative patterns, such as bold circles, rounded corners and the illusions of waves. Maximum light transmission and minimal privacy.



PC® Custom Signature Block

Custom manufactured with your corporate logo or other design pressed into one or both inside surfaces of an eight inch square, standard unit.



VISTABRIK® Stippled Glass Block

Solid 3" thickness of glass with a stippled finish to add privacy. Durable, impact, vandal and bullet resistant, low maintenance and aesthetically attractive. Good light transition/ medium privacy.

HEDRON® LX Corner Block, DECORA® Pattern

Hexagonal corner unit allows you to form 90-degree corners resulting in a gently rounded continuous glass face.

# PHYSICAL & DESIGN DATA

## PITTSBURGH CORNING GLASS BLOCK PRODUCTS

| | Pattern | Nominal Size[1] (Actual size is 1/4" less than nominal; mm shown is actual) | Weight (lb/ft²) installed with mortar | Heat Transmission[2] U Value (Btu/hr ft² °F) | Thermal Resistance[2] R Value (hr ft² °F/Btu) | Visible Light Transmission[3] (%) | Shading Coef.[4] | Sound Transmission S.T.C. | Solar Heat Gain Coefficient[5] |
|---|---|---|---|---|---|---|---|---|---|
| HIGH PERFORMANCE LINE | **THICKSET® Block — Nominal Thickness = 4"; Actual Thickness = 3⅞" (98mm)** | | | | | | | | |
| | THICKSET® 60 Block— DECORA® & VUE® | 8" x 8" (197mm) | 25 | 0.51 | 1.96 | VUE®=75<br>DECORA®=49 | 0.65 | 48 | .66-.68[5] |
| | THICKSET® 90 Block— DECORA® & VUE® | 8" x 8" (197mm) | 30 | 0.51 | 1.96 | VUE®=70<br>DECORA®=38 | 0.65 | 50 | .66-.68[5] |
| | THICKSET® 90 Block— ENDURA™ | 8" x 8" (197mm) | 30 | 0.51 | 1.96 | 38 | 0.65 | 50 | .66-.68[5] |
| | **Glass Block with "LX" Fibrous Glass Inserts — Nominal Thickness = 4"; Actual Thickness = 3⅞" (98mm)** | | | | | | | | |
| | DECORA® "LX" Filter | 6" x 6" (146mm) † | 20 | 0.48 | 2.06 | 44 | 0.45[4] | | .56 |
| | | 8" x 8" (197mm) | 20 | 0.48 | 2.06 | 44 | 0.45[4] | 40 | .56 |
| | | 12" x 12" (299mm) † | 20 | 0.48 | 2.06 | 44 | 0.45[4] | | .56 |
| | **VISTABRIK® Solid Glass Block — See Nominal/Actual Sizes Listed** | | | | | | | | |
| | VISTABRIK® Solid Glass Block | 8" x 8" x 3" Nominal 7⅞" x 7⅞" x 3" Actual (194mm x 194mm x 76mm) | 40 | 0.87 | 1.15 | 90 | | 53 (NRC=0.05) | .75-.78[5] |
| | | 6" x 8" x 3" Nominal 5⅝" x 7⅞" x 3" Actual (143mm x 194mm x 76mm) | 40 | 0.87 | 1.15 | 90 | | | .75-.78[5] |
| | | 4" x 8" x 3" Nominal 3⅝" x 7⅞" x 3" Actual (92mm x 194mm x 76mm) | 40 | 0.87 | 1.15 | 90 | | | .75-.78[5] |
| | STIPPLE Finish | 8" x 8" x 3" Nominal 7⅞" x 7⅞" x 3" Actual (194mm x 194mm x 76mm) † | 40 | 0.87 | 1.15 | 83 | | 53 (NRC=0.05) | .75-.78[5] |
| | **Energy Efficient Glass Block — See Nominal/Actual Sizes Listed** | | | | | | | | |
| | DECORA®, DELPHI®, Ice Scapes®, and VUE® | 8" x 8" x 3½" Nominal 7 ¾" x 7 ¾" x 3½" Actual (197mm x 197mm x 89mm) | 40 | .45 | 2.22 | 63<br>33<br>50<br>76 | | | .32 |
| SIGNATURE LINE | **Standard Premiere Series Block — Nominal Thickness = 4"; Actual Thickness = 3⅞" (98mm)** | | | | | | | | |
| | ARGUS® | 6" x 6" (146mm) | 20 | 0.51 | 1.96 | 55 | 0.65 | 37 | .66-.68[5] |
| | | 8" x 8" (197mm) | 20 | 0.51 | 1.96 | 55 | 0.65 | 39 | .66-.68[5] |
| | | 12" x 12" (299mm) | 20 | 0.51 | 1.96 | 55 | 0.65 | 35 | .66-.68[5] |
| | DECORA® | 6" x 6" (146mm) | 20 | 0.51 | 1.96 | 75 | 0.65 | 37 | .66-.68[5] |
| | | 8" x 8" (197mm) | 20 | 0.51 | 1.96 | 75 | 0.65 | 39 | .66-.68[5] |
| | | 12" x 12" (299mm) | 20 | 0.51 | 1.96 | 75 | 0.65 | 35 | .66-.68[5] |
| | | 4" x 8" (95 x 197mm) | 20 | 0.51 | 1.96 | 75 | 0.65 | | .66-.68[v] |
| | | 6" x 8" (146 x 197mm) | 20 | 0.51 | 1.96 | 75 | 0.65 | | .66-.68[5] |
| | ESSEX® AA | 8" x 8" (197mm) | 20 | 0.51 | 1.96 | 45 | 0.45 | 39 | .66-.68[5] |
| | FOCUS™ | 8" x 8" (197mm) | 20 | 0.51 | 1.96 | 92 | 0.65 | 39 | .66-.68[5] |
| | IceScapes® | 8" x 8" (197mm) | 20 | 0.51 | 1.96 | 67 | 0.65 | 39 | .66-.68[5] |
| | | 12" x 12" (299mm) | 20 | 0.51 | 1.96 | 67 | 0.65 | 35 | .66-.68[5] |
| | | 4" x 8" (95 x 197mm) | 20 | 0.51 | 1.96 | 67 | 0.65 | | .66-.68[5] |
| | | 6" x 8" (146 x 197mm) | 20 | 0.51 | 1.96 | 67 | 0.65 | | .66-.68[v] |
| | Opal Plain | 8" x 8" (197mm) | 20 | | | 19 | | | |
| | Opal Silk | 8" x 8" (197mm) | 20 | | | 17 | | | |
| | SeaScapes™ | 8" x 8" (197mm) † | 20 | 0.51 | 1.96 | 64 | 0.65 | 39 | .66-.68[5] |
| | VUE® | 6" x 6" (146mm) | 20 | 0.51 | 1.96 | 91 | 0.65 | 37 | .66-.68[5] |
| | | 8" x 8" (197mm) | 20 | 0.51 | 1.96 | 91 | 0.65 | 39 | .66-.68[v] |
| | | 12" x 12" (299mm) | 20 | 0.51 | 1.96 | 91 | 0.65 | 35 | .66-.68[5] |
| | | 4" x 8" (95 x 197mm) | 20 | 0.51 | 1.96 | 91 | 0.65 | | .66-.68[5] |
| | | 6" x 8" (146 x 197mm) | 20 | 0.51 | 1.96 | 91 | 0.65 | | .66-.68[5] |
| | 1/8" FLAT SHEET GLASS COMPARISON (3mm) | | | 1.04 | 0.96 | 90 | 1.00 | 28 | |

**1 Size:** Block are manufactured to a ± 1/16" (2mm) tolerance.

**2 Heat Transmission/Thermal Transmission:** Winter night values. To calculate instantaneous heat gain through glass panels, see ASHRAE HANDBOOK OF FUNDAMENTALS, 2005, Section 31.3.

**3 Light Transmission:** Based on test results.

**4 Shading Coefficient:** Estimated figures based on accumulated data.

**5 SHGC:** Default values as interpreted from International Energy Conservation Code.

† **MTO** – *Made to Order items subject to minimum order quantities and lead times.*

## Installed Panel Weight

Refer to Table on page 8 for weight of panels installed with mortar. Glass block panels installed with the ProVantage® Glass Block Installation System are up to 25% lighter per square foot than panels installed with mortar. Local building codes should be consulted for any limits on panel sizes or installation details.

## Non-load Bearing

Glass block panels are non-load bearing; adequate provisions must be made for support of construction above these panels. Panels are mortared at the sill, with jamb and head details designed to accommodate for building movement and lintel deflection. The compressive strength (for information purposes only) of all hollow glass block is 400 to 600 psi.; THICKSET® Series Glass Block is 2500 psi.; and VISTABRIK® Series is 80,000 psi.

## Thermal Expansion Coefficient

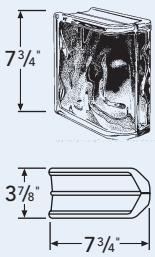
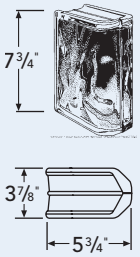
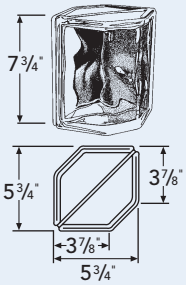
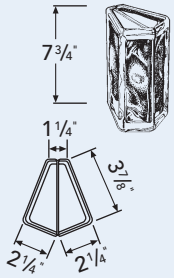
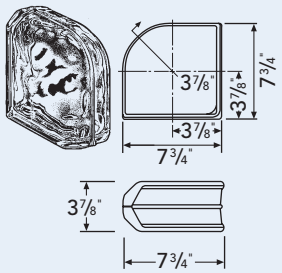
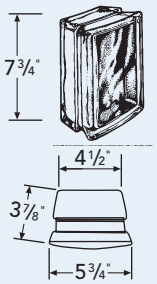
The thermal expansion coefficient of glass block is 47 x $10^{-7}$ /(°F).

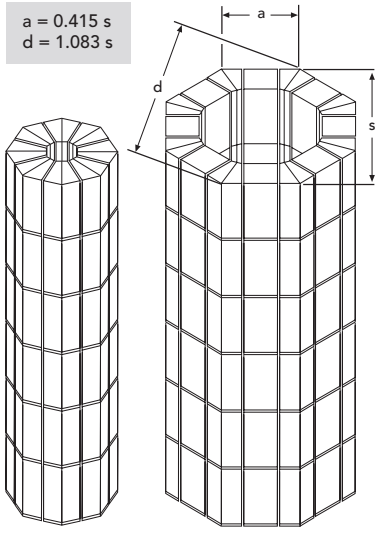
## Detailed Drawings

Structural members illustrated on page 14 and other "detail" pages indicate general principles of construction. Member sizes should be determined by structural analysis to avoid excessive deflections. Maximum deflection for supports shall not exceed L/600.

## FINISHING UNITS

### PREMIERE SERIES

| EndBlock™ Finishing Units | | HEDRON® Corner Unit | TRIDRON 45° Block® Unit | ENCURVE® Finishing Unit | ARQUE® Block Unit |
|---|---|---|---|---|---|
|  |  |  |  |  |  |
| DECORA® & IceScapes® Patterns 8" High Premiere Series | DECORA® & IceScapes® Patterns 8" High Premiere Series | DECORA® & IceScapes® Patterns 8" High Premiere Series | DECORA® & IceScapes® Patterns 8" High Premiere Series | DECORA® & IceScapes® Patterns 8" Square Premiere Series | DECORA® & IceScapes® Patterns 8" High Premiere Series |




**Columns can be All-TRIDRON 45° Block® (left) or interspersed with 4" x 8" or 8" x 8" glass block.**

NOTE: All mortar joints are 1/4".

## Glass Block between TRIDRON 45° Block®

| | a (in.) | s (in.) | d (in.) |
|---|---|---|---|
| None | 4.75 | 11.45 | 12.40 |
| 1-4"x8"x4" | 8.75 | 21.08 | 22.83 |
| 1-6"x8"x4" | 10.75 | 25.90 | 28.05 |
| 1-8"x8"x4" | 12.75 | 30.72 | 33.27 |
| 1-4"x8"x4" + 1-8"x8"x4" | 16.75 | 40.36 | 43.71 |
| 2-8"x8"x4" | 20.75 | 50.00 | 54.15 |
| 1-4"x8"x4" + 2-8"x8"x4" | 24.75 | 59.64 | 64.59 |
| 3-8"x8"x4" | 28.75 | 69.28 | 75.03 |

## 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.

## Mortar Mix and Estimating Tables

An optimum mortar mix for installing Pittsburgh Corning Glass Block is:

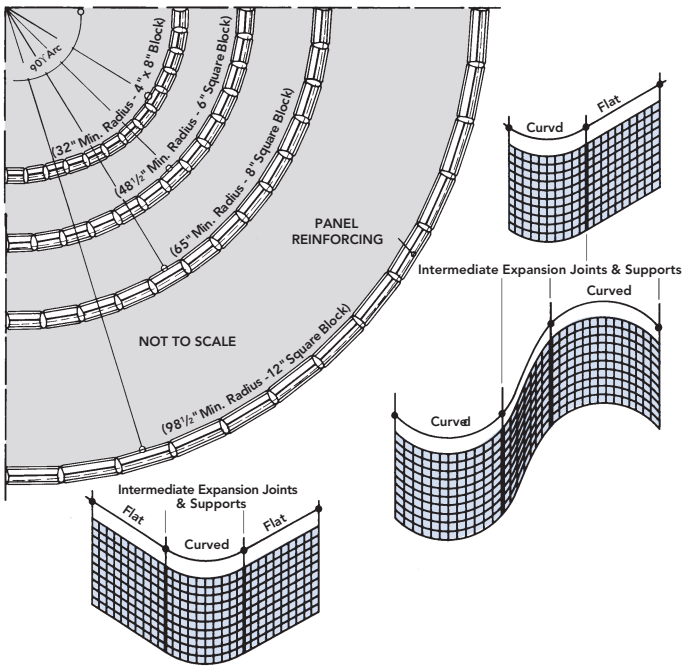
| Portland Cement | Lime | Sand |
|---|---|---|
| 1 Part | ½ Part | 3.4 Parts |
| 1.0 cubic foot | 0.5 cubic foot | 3.4 cubic feet |

## Number of Block for 100 Sq. Ft. Panel

| Block Sizes (Nominal) | 6" | 8" | 12" | 4" x 8" | 6" x 8" |
|---|---|---|---|---|---|
| Number of Block | 400 | 225 | 100 | 450 | 300 |

# PHYSICAL & DESIGN DATA

## INSIDE RADIUS MINIMUMS FOR CURVED PANEL CONSTRUCTION

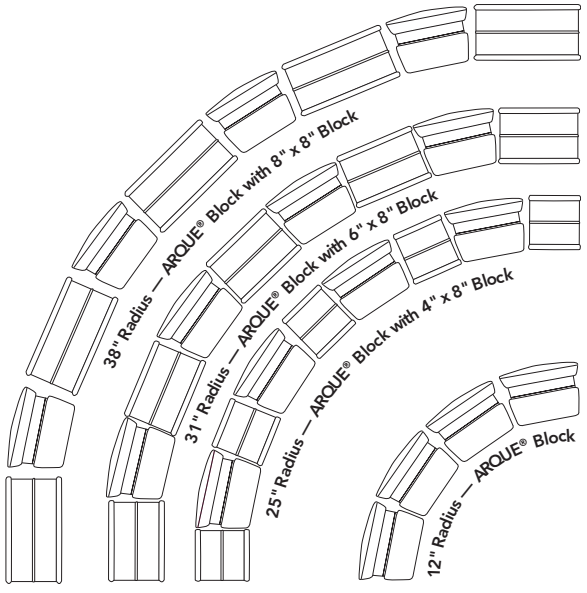



### RADIUS MINIMUMS FOR CURVED PANEL CONSTRUCTION

| Block Size | Inside Radius Inches | Number of Blocks in 90° Arc | Vertical Joint Thickness In Inches | |
|---|---|---|---|---|
| | | | Inside | Outside |
| 4" x 8" | 32 | 13 | 1/8 | 5/8 |
| 6" x 6" | 48½ | 13 | 1/8 | 5/8 |
| 8" x 8" | 65 | 13 | 1/8 | 5/8 |
| 12" x 12" | 98½ | 13 | 1/8 | 5/8 |

NOTES:

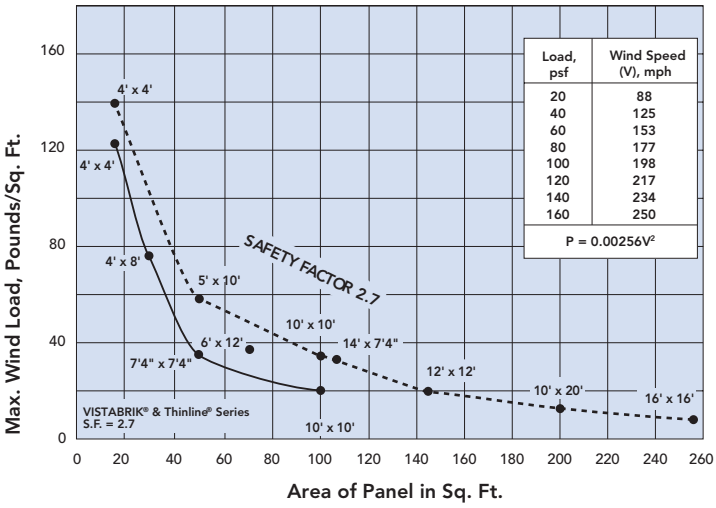
1. It is suggested that curved areas be separated from flat areas by intermediate expansion joints and supports, as indicated in these drawings.
2. When straight, ladder-type reinforcing is used on curved walls, the innermost parallel wire may be cut periodically and/or bent to accommodate the curvature of the wall.

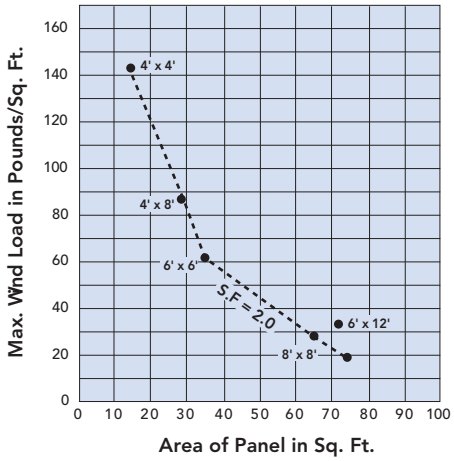



ARQUE® Block used along with other Pittsburgh Corning Block sizes, allows you to form consistent curves of various radii. Radii shown are to inside face of curve.

## WIND LOAD RESISTANCE – MORTAR SYSTEM

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

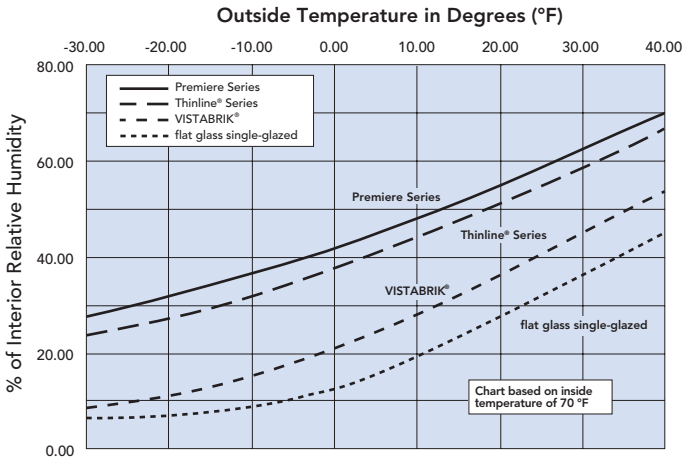



## WIND LOAD RESISTANCE – PROVANTAGE® SYSTEM

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

## RESISTANCE TO SURFACE CONDENSATION




**Example:** At a relative humidity of 40%, an outside temperature of approximately -3 °F will cause condensation on Premiere Series Glass Block or approximately 3 °F above zero on Thinline® Series block. Under the same conditions, condensation will form on a single-glazed flat glass window at 34 °F above zero.

# FIRE RATINGS & CODE INFORMATION

All sizes (exceptions listed below) of Premiere Series and Thinline® Series glass blocks 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 ESSEX® AA Pattern glass blocks have fire ratings of up to 60 minutes, when used as window assemblies and where permitted by code.

**Pittsburgh Corning Glass Block units that are not fire-rated:**

- All 12" x 12" sizes
- All DELPHI®, pattern block
- All HEDRON® Corner block, TRIDRON 45° Block® units, EndBlock®, ENCURVE® and ARQUE® finishing units
- All paver units
- VISTABRIK® Corner Block

## PANEL SIZES AND DIMENSION LIMITATIONS

Pittsburgh Corning 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 and the DELPHI® pattern block, all Premiere Series and Thinline® Series glass blocks 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-minute rated Pittsburgh Corning 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 PC® 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 Pittsburgh Corning Corporation recommendations.
- Non-masonry, fire-rated steel stud with gypsum board wall assemblies must conform 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 Pittsburgh Corning 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 Pittsburgh Corning Corporation 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 current issue of the Fire Resistance Directory – Volume 3. A listing of our products can also be viewed on the Underwriters Laboratories Website at www.ul.com.

- U.L. Classification: R2556 (For Glass Block)
- U.L. Classification: R18572 (For Plastic Spacers)
- In accordance with NFPA 80, Chapter 14

## CITY CODE APPROVALS

- New York City Materials and Equipment Acceptance MEA 406- 90-M. Vol.IV
- Los Angeles Research Report RR-24486
- Dade County Acceptance
  07-0626.10
  04-0301.01
  04-0824.01
  05-1107.02
  08-0731.08
- State of Florida Approvals
  FL 1363
  FL 1366
  FL 5357
  FL 8039
  FL 11669
- Texas Department of Insurance WIN #s 62, 63, 64, and 540

## BUILDING CODE AND NATIONAL STANDARDS REFERENCES:

- International Building Code (IBC)
- International Residential Code (IRC)
- Canadian Standards Association (CSA) A371-94 "Masonry Construction for Buildings"
- Canadian Standards Association (CSA) S304.1-94 "Masonry Design for Buildings"
- TMS 402/ACI 530/ASCE 5 "Building Code Requirements and Specification for Masonry Structures"

## Fire Ratings — Glass Block Assemblies

**Premiere Series Glass Blocks, THICKSET® 60 Blocks, 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 | | | |
|---|---|---|---|---|---|---|---|---|---|
| | Panel Limitations | | Fire Rating | | | Panel Limitations | | Fire Rating | |
| Product | 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 | |
| THICKSET® 60 and ESSEX® AA 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.
** Includes "LX" option.

# NOTICE OF PRODUCT CERTIFICATION

| | |
|---|---|
| **CERTIFICATION NO:** | **NI013737** |
| **DATE:** | **06/01/2017** |
| **CERTIFICATION PROGRAM:** | **Structural** |
| **COMPANY:** | **Seves Glass** |
| **CODE:** | **2322-1** |
| **EXPIRATION DATE:** | **06/30/2021** |

To verify that the "Notice of Product Certification" is valid, please visit www.NAMICertification.com to assure that the product is active and currently listed. This certification represents product conformity to the applicable specification and that certification criteria has been satisfied. A NAMI approved certification label must be applied to the product to claim certification status. Please review and advise NAMI if any corrections are required to this document

| COMPANY NAME AND ADDRESS | PRODUCT DESCRIPTION |
|---|---|
| **Seves Glass Block, Inc.**<br>**10576 Broadview Road**<br>**Broadview Heights, OH 44147** | **Series "Nubio Thickset 60"**<br>**Fire-Rated Glass Block**<br>Manufacturer Specific Glass Blocks for Installation in 60 Minute Locations<br>Max Opening: 94ft$^2$ or W-128.5" or H-104.5"<br>Glass Block Weight: 6.8 lb<br>**Glass Block Size: 8" x 8"**<br>**Minimum Thickness: 4"**<br>**Minimum Face Thickness: 7/16"** |

| SPECIFICATION | PRODUCT RATING |
|---|---|
| **ANSI/UL 9** | **60 Minutes**<br>**With Hose Stream** |

| TEST REPORT |
|---|
| **Underwriters Laboratory Test Report No: R2556 02NK10299, R2556 79NK1, R2556 91NK10106, R2556 95NK20176** |

Administrator's Signature: _____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