



# Product Evaluation

WIN62 | 0218

Engineering Services Program

*The following product has been evaluated for compliance with the wind loads specified in the International Residential Code (IRC) and the International Building Code (IBC).*

*This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.*

*This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.*

*For more information, contact TDI Engineering Services Program at (800) 248-6032.*

**Evaluation ID:** WIN-62 **Effective Date:** February 1, 2018  
**Re-evaluation Date:** February 2022

**Product Name:** Residential Hurricane Resistant Windows with THICKSET® 90 Series Glass Block and ProVantage® Silicone System, Impact Resistant

**Manufacturer:** Seves Glass Block, Inc.  
10576 Broadview Road  
Broadview Heights, OH 44147  
(330) 419-0989

## General Description:

The THICKSET® 90 Series glass block windows are installed in place, block by block using vinyl (PVC) plastic spacers and silicone. The product is intended solely for residential installations. The glass block windows are anchored to the structure with a rigid vinyl (PVC) channel. This evaluation report includes the following THICKSET® 90 Series glass block windows:

### Window Dimensions:

- 4' x 4' window
- 4' x 8' window

### Glass Block Patterns and Dimensions:

- Nubio®; 8" x 8" x 4"; 3/4" face thickness
- Nubio®; 6" x 6" x 4"; 3/4" face thickness
- Clarity®; 8" x 8" x 4"; 3/4" face thickness
- Clarity®; 6" x 6" x 4"; 3/4" face thickness
- Endura®; 8" x 8" x 4"; 3/4" face thickness

**Product Identification:** The glass block windows are identified from the carton label. The words THICKSET® or THICKSET® 90 follow the name of the pattern.

**Limitations:****Design Drawings:**

Glass block window assemblies must comply and be installed in accordance with the following design drawing:

Drawing No. RHRW-001; "Residential Hurricane Resistant Windows with THICKSET® 90 Series Glass Block and ProVantage® Silicone System;" Sheets 1 thru 3 of 3; dated November 17, 2015; signed and sealed by Hermes F. Norero, P.E on March 08, 2017. This evaluation report refers to the stated drawings as the approved drawings.

**Fabrication and Assembly:** The glass block assemblies are fabricated in the factory. The glass block assemblies are installed at the jobsite block by block.

**Design pressure (DP):**

- The allowable design pressure rating for the glass block assemblies is specified on the design drawing. The maximum allowable design pressure rating is +100 / -100 psf. Refer to approved drawing for specific design pressure requirements.

**Impact Resistance:**

- The glass block assemblies satisfies the TDI's criteria for protection from windborne debris in both the **Inland I** and **Seaward** zones. The assemblies passed a large missile impact test equivalent to Missile Level D specified in ASTM E 1996. Install these assemblies at any height on the structure that does not exceed the assembly's design pressure rating. These assemblies do not require protection with an impact protective system when installed in areas that require windborne debris protection.

**Acceptance of Other Assemblies:**

- The approved drawings specify the allowable dimensions for the glass block assemblies.
- Assemblies with rectangular dimension smaller than the dimension listed in the approved drawings are acceptable at the design pressure rating listed in the approved drawings.

**Installation Instructions:**

**General:** Prepare and install the assembly in accordance with the approved drawings and the manufacturer's installation instructions. Detailed installation instructions are available from the manufacturer.

**Installation:**

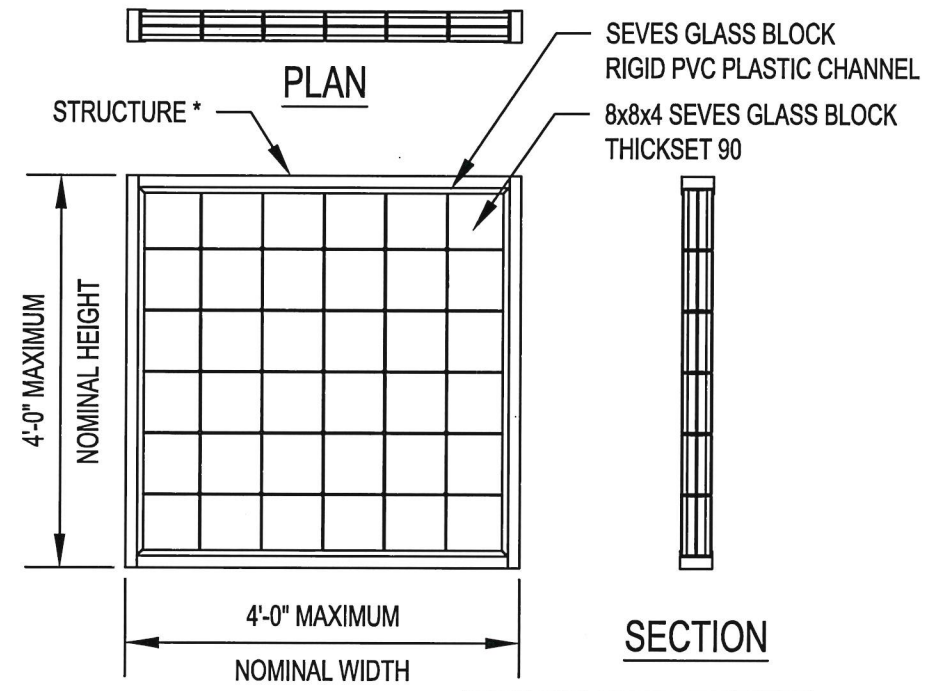
**Wall Framing Construction:** The glass block assemblies must be secured to the wall framing as specified in the approved drawings.

**Fastener Requirements:**

- Refer to the approved drawings for the anchor requirements and notes.
- Refer to the approved drawings for the minimum embedment depths for the fasteners and the minimum edge distances (minimum distance fastener must be from the edge of the substrate material) for the fasteners.

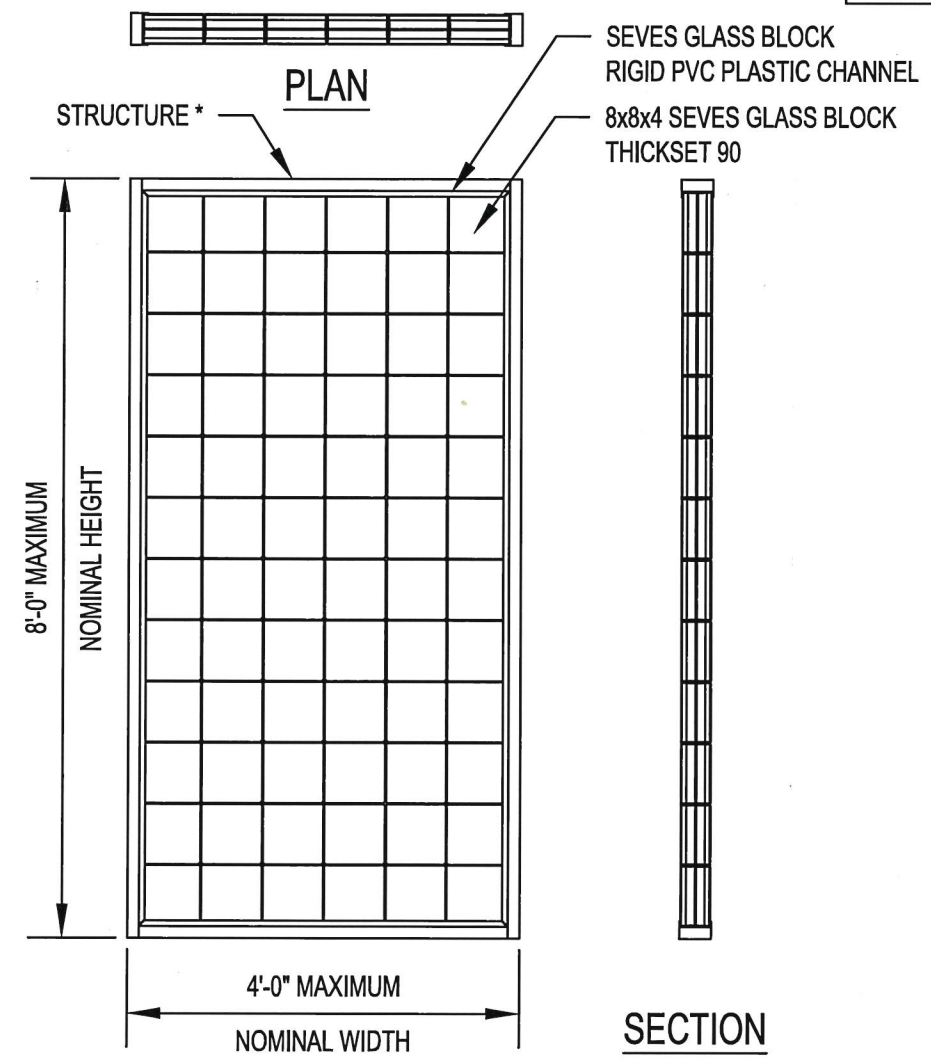
**Note:** Keep the manufacturer's installation instructions and the approved drawings available at the job site during installation. Use corrosion resistant fasteners as specified in the IRC, the IBC, and the Texas Revisions.

REVISIONS		
REV	DESCRIPTION	DATE
-	-	-



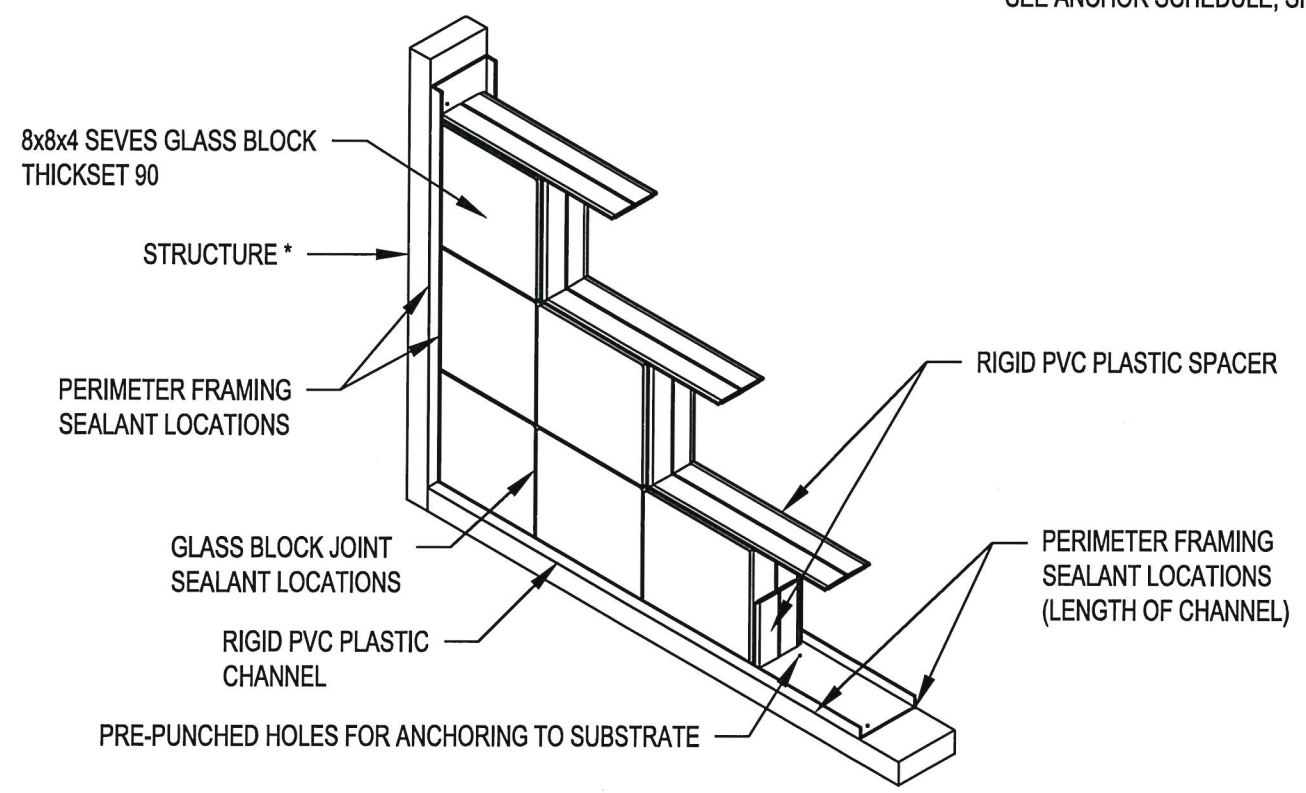
<b>IMPACT RESISTANT</b>
<b>DESIGN PRESSURE RATING</b>
<b>± 100.0 PSF</b>

\* SEE ANCHOR SCHEDULE, SHEET 3.



<b>IMPACT RESISTANT</b>
<b>DESIGN PRESSURE RATING</b>
<b>± 80.0 PSF</b>

Digitally signed by Hermes F. Norero, P.E.  
Reason: I am approving this document  
Date: 2017.03.08 16:47:37 -05'00'



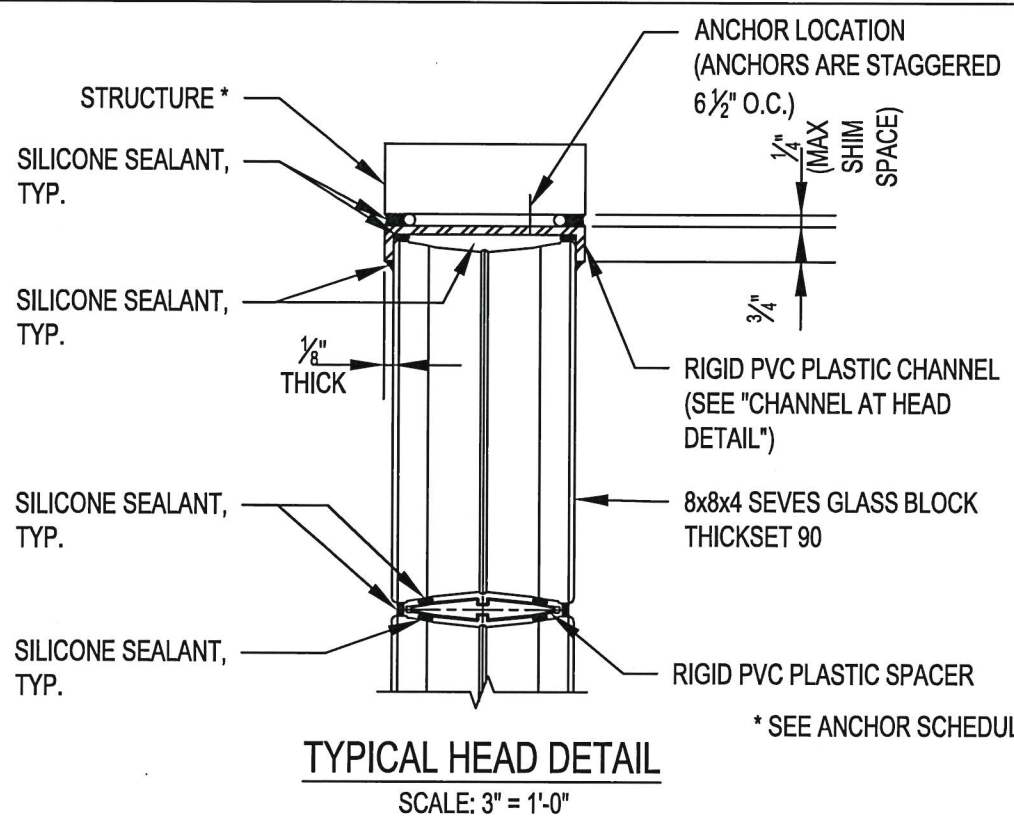
HERMES F. NORERO, P.E.  
TEXAS P.E. NO. 118471  
398 E. DANIA BEACH BLVD., STE. 338  
DANIA BEACH, FL 33004  
TBPE FIRM NO. 13734

TITLE  
**Residential Hurricane Resistant Windows  
With THICKSET® 90 Series Glass Block  
And ProVantage® Silicone System**

**SEVES GLASS BLOCK, INC.**  
10576 BROADVIEW ROAD  
BROADVIEW HEIGHTS, OH 44147

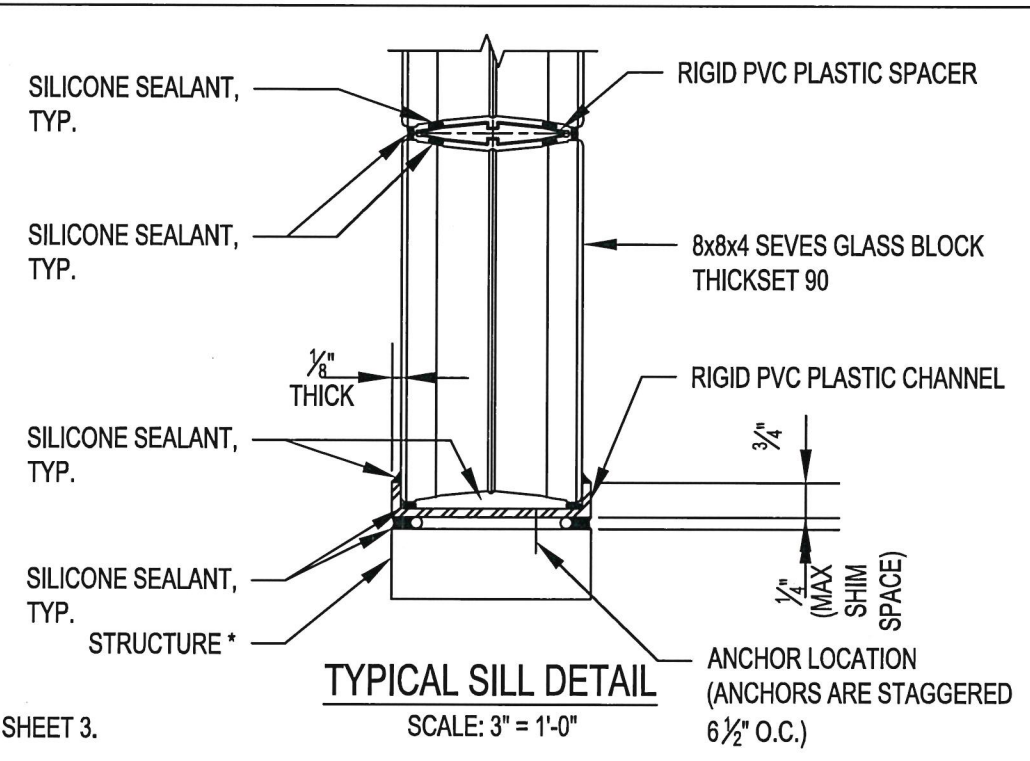
SCALE 1/2" = 1'-0"	DWG. NO. RHRW-001	REV 0
BY LMS	DATE 11/17/2015	SHEET 1 OF 3





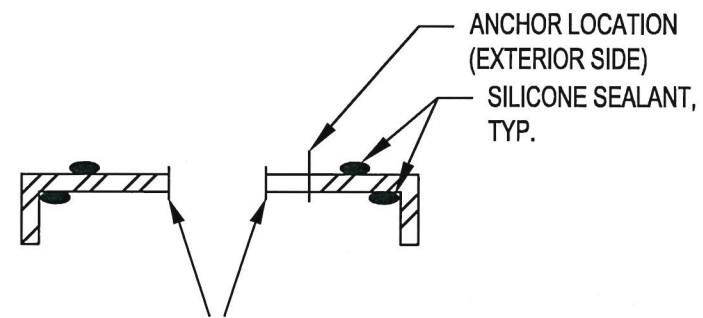
**TYPICAL HEAD DETAIL**  
SCALE: 3" = 1'-0"

\* SEE ANCHOR SCHEDULE, SHEET 3.



**TYPICAL SILL DETAIL**  
SCALE: 3" = 1'-0"

REVISIONS		
REV	DESCRIPTION	DATE
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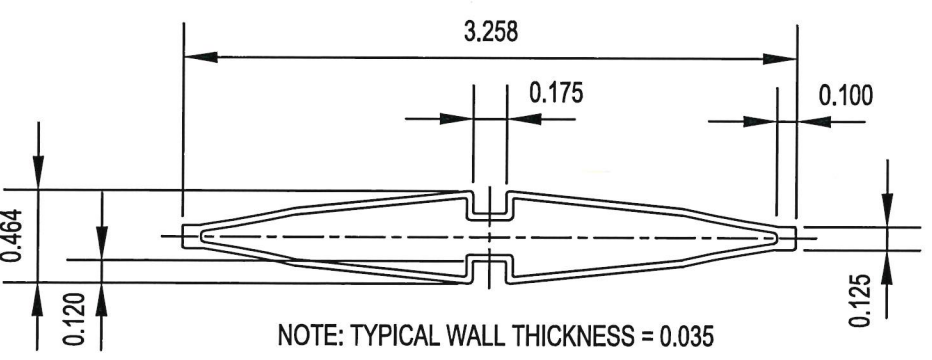


PERIMETER CHANNEL, AT HEAD, TO BE CUT LENGTHWISE DOWN THE CENTER FOR INSTALLATION OF LAST ROW OF GLASS BLOCK.

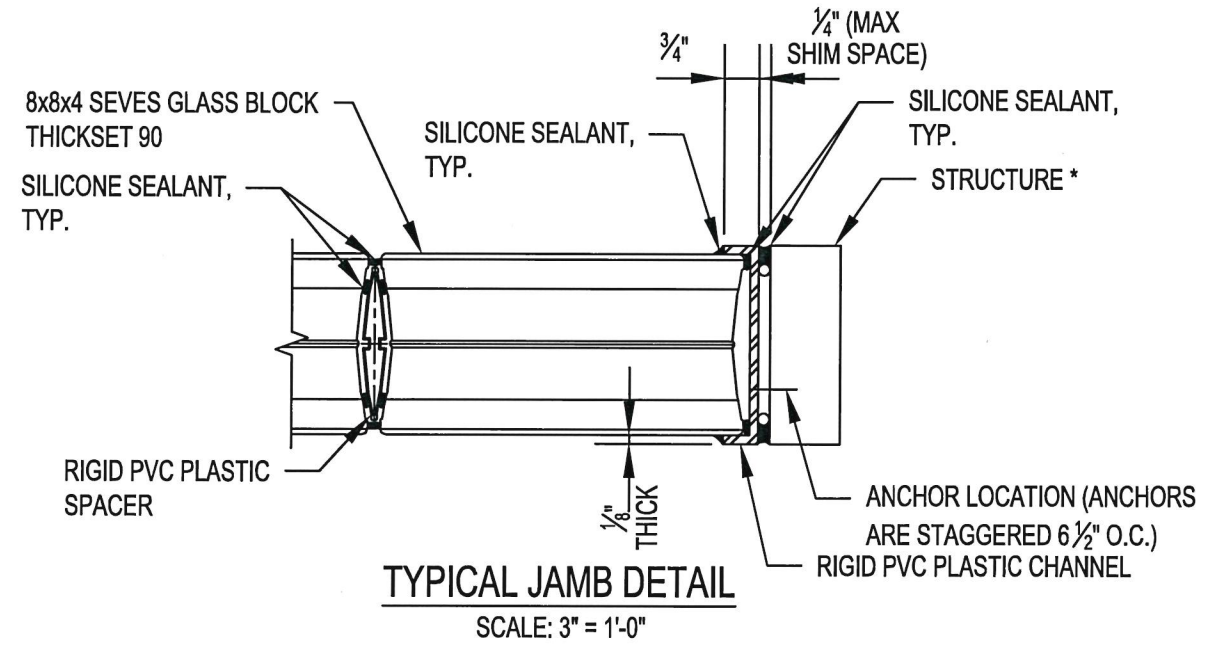
HALF CHANNEL PIECE THAT IS SECURED WITH SCREWS, SHOULD BE ON THE EXTERIOR SIDE.

1/4" BEAD OF SEALANT APPLIED HORIZONTALLY ACROSS THE TOP INSIDE CORNERS OF CHANNEL HALVES.

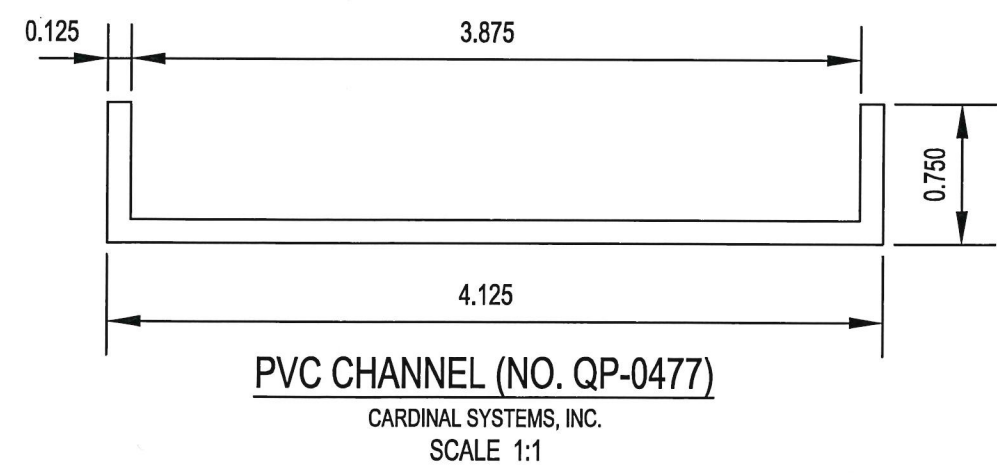
**CHANNEL AT HEAD DETAIL**  
SCALE: 1/2" = 1"



NOTE: TYPICAL WALL THICKNESS = 0.035  
**PVC SPACER (NO. QP-0514)**  
CARDINAL SYSTEMS, INC.  
SCALE 1:1



**TYPICAL JAMB DETAIL**  
SCALE: 3" = 1'-0"



**PVC CHANNEL (NO. QP-0477)**  
CARDINAL SYSTEMS, INC.  
SCALE 1:1



TITLE			
Residential Hurricane Resistant Windows With THICKSET® 90 Series Glass Block And ProVantage® Silicone System			
SEVES GLASS BLOCK, INC. 10576 BROADVIEW ROAD BROADVIEW HEIGHTS, OH 44147			
SCALE	DWG. NO.	REV	
VARIABLES	RHRW-001	0	
BY	DATE	SHEET	
LMS	11/17/2015	2 OF 3	

REVISIONS		
REV	DESCRIPTION	DATE
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**SPECIFICATION NOTES:**

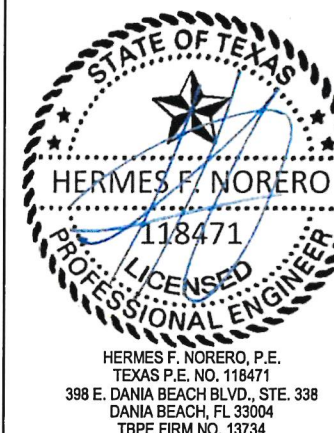
- **GLASS BLOCK UNITS:** Thickset® 90 Series 8"x8"x4" or 6"x6"x4" (nominal size).
- **FRAME AND SPACERS:** Extruded white rigid PVC. Frame corners are cut square or mitered and are silicone sealed. Extruded by Cardinal Systems, Inc.
- **SEALANT:** Seves Glass Block Sealant. One part neutral fast curing structural silicone sealant.
- **SEALANT LOCATIONS:** All horizontal and vertical glass block joints; inside corners of perimeter channels; two beads (1/2" from each edge) between back of perimeter channels and framing members; two beads each above and below "long" horizontal spacer and "short" vertical spacers; perimeter joints between glass block and channel legs; and perimeter joints between channels and framing members.
- **REINFORCEMENT:** PVC spacers between all horizontal and vertical joints. Spacers in channels are not required.
- **SHIM SPACES:** Maximum 1/4" shim space between the perimeter channel and wood frame.
- **FIELD INSTALLATION:** Loose materials (glass block, spacers, channels and sealant) are available from Seves Glass Block authorized distributors, dealers and home centers for on-site installation. Complete window units, framed within 2x6 treated lumber, and pre-fabricated by Seves Glass Block in accordance with these instructions, are also available from authorized distributors, dealers and home centers. **NOTE:** These windows are recommended for **RESIDENTIAL APPLICATIONS ONLY.**

**ANCHORAGE SCHEDULE**

SUBSTRATE	MATERIAL DATA	FASTENER	SPACING	MIN. EMBEDMENT (E)	MIN. EDGE DISTANCE (E.D.)
STEEL	MIN. 18 GA. f <sub>y</sub> = 33 KSI	#10 SDS SAE GR. 5 SCREW (FLAT HEAD)	2" FROM CORNER, 6 1/2" O.C.	3 THREADS PENETRATION BEYOND STEEL FRAMING	3/4"
CONCRETE	MIN. f <sub>c</sub> = 3000 PSI	3/16"Ø HILTI KWIK CON II+ (FLAT HEAD)	2" FROM CORNER, 6 1/2" O.C.	1"	2 1/2"
		3/16" ITW TAPCONS	2" FROM CORNER, 6 1/2" O.C.	1 1/4"	2 1/2"
MASONRY	CONFORMS TO ASTM C90 GROUT CONFORMS TO ASTM C476 MIN. GROUT f <sub>c</sub> = 2000 PSI	3/16"Ø HILTI KWIK CON II+ (FLAT HEAD)	2" FROM CORNER, 6 1/2" O.C.	1"	2 1/2"
		3/16" ITW TAPCONS	2" FROM CORNER, 6 1/2" O.C.	1 1/4"	2 1/2"
WOOD	MIN. S.G. = 0.42	#8 WOOD SCREW (FLAT HEAD)	2" FROM CORNER, 6 1/2" O.C.	1"	3/4"

**SEVES GLASS BLOCK**

SERIES	PATTERN	NOMINAL DIM.	MIN. FACE THICKNESS
THICKSET® 90	NUBIO®	8"x8"x4"	0.75 IN.
		6"x6"x4"	0.75 IN.
THICKSET® 90	CLARITY®	8"x8"x4"	0.75 IN.
		6"x6"x4"	0.75 IN.
THICKSET® 90	ENDURA®	8"x8"x4"	0.75 IN.



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SCALE	NTS	DWG. NO.	RHRW-001	REV	0
BY	LMS	DATE	11/17/2015	SHEET	3 OF 3