

**YOUR VISION. OUR EXPERIENCE.™**





# YOUR VISION.

# OUR EXPERIENCE.™

525@VINE  
WINSTON-SALEM, NC  
ARCHITECT: GAUDREAU, INC.

*It's our experience and expertise — broadened over decades — that enables us to bring your vision to life.*

*We've built our reputation one custom-engineered solution at a time over a wide variety of architectural applications. As a result, we are able to resolve your most difficult challenges with beautiful, functional, energy efficient windows, doors and curtain wall systems that draw upon hundreds of models and accessories and, yes, more than a bit of human ingenuity to deliver the solution that is uniquely yours.*



**CORPORATE OFFICE**  
1551 Mount Rose Avenue  
York, Pennsylvania 17403-2909  
717-849-8100  
Toll Free: (800) 755-6274



**GRAHAM CURTAIN WALL SOLUTIONS**  
1101 North Mill Street  
Merrill, Wisconsin 54452  
715-536-4927



**MANUFACTURING FACILITY**  
105 Mahoning Avenue  
New Castle, PA 16102  
724-658-0500



**CONTINENTAL GLASS SYSTEMS**  
325 W 74th Pl  
Hialeah, FL 33014  
305-231-1101  
www.cgsfl.com

**WWW.GRAHAMWINDOWS.COM – MORE INFO, MORE VALUE**

Visit our website for a wealth of resources including detailed product information, case studies, important forms for getting your project started with Graham, company and industry news, educational training courses, and more. Each of the more than 200 product pages on our website has a data sheet with up-to-date information in a manageable single-page format.

In this brochure: When you see the CS icon  look for the full case study on our website.

**OUR COMPANY**

**Our Vision**

Graham Architectural Products is the company architects seek first when faced with large, complex fenestration challenges. We earn their trust and by demonstrating our experience, expertise and collaborative spirit, while providing innovative solutions to their most difficult problems.

**Our Mission**

Graham Architectural Products manufactures the most innovative and highest quality products in the fenestration industry. We achieve this by developing customized, performance-based products, and by providing solutions to architects' fenestration challenges. We earn and retain the architectural community's trust by virtue of our experience, expertise, collaborative spirit and our reputation that we stand behind our work.

**Our Position**

For ARCHITECTS, BUILDING OWNERS, INSTALLERS, GENERAL CONTRACTORS, and DEALERS, Graham Architectural Products is the commercial and architectural grade window manufacturer that leading architects around the U.S. turn to when facing their most innovative design projects.

For more than 40 years, we have been producing, delivering and standing behind the highest quality and most innovative products in the fenestration industry. Nobody in the industry has more experience, is more reliable, or commands a higher level of trust than Graham Architectural Products.



**CORE COMPETENCIES**

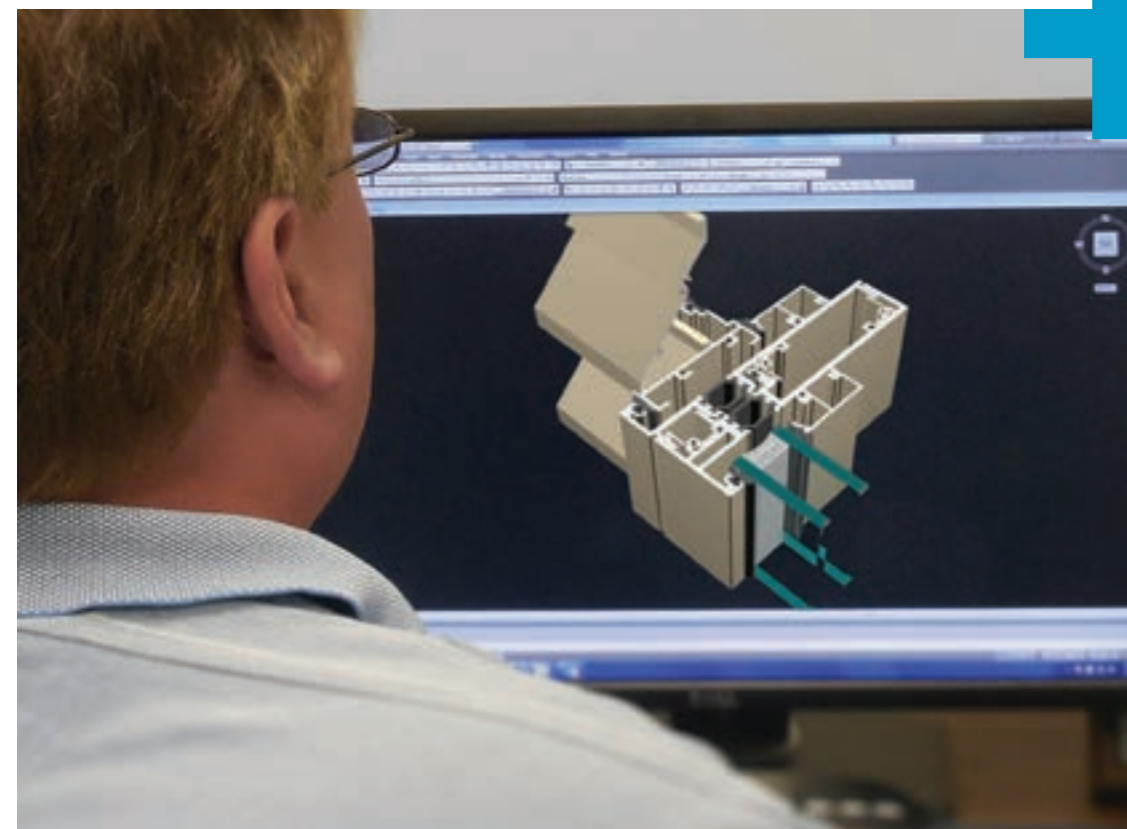
- Energy efficiency
- Historical preservation and renovations
- New construction and replacement systems
- Schools and universities
- Blast mitigation, ballistic resistant, & hurricane impact
- Office structures and medical buildings
- Condominiums and apartment buildings
- Government buildings
- Acoustic

**PRODUCTS**

- |                            |                                   |                                     |
|----------------------------|-----------------------------------|-------------------------------------|
| • Advanced thermal windows | • Self-balanced DH windows        | • Acoustic sound abatement windows  |
| • Euro-style windows       | • Terrace Doors                   | • Pressure wall                     |
| • Projected windows        | • Security screens                | • Horizontal & vertical sunshades   |
| • Fixed windows            | • Emergency egress windows        | • Light shelves                     |
| • Casement windows         | • Historical replication windows  | • Zero sightline vents              |
| • Hung windows             | • Hurricane-impact windows        | • Window wall systems               |
| • Sliding windows          | • Blast-resistant windows & doors | • Unitized curtain wall             |
| • Sliding doors            | • Ballistic-resistant windows     | • Custom engineered framing systems |

**APPROVALS & CERTIFICATIONS**

- AAMA tested and certified for commercial and architectural grade windows
- Blast tested windows and doors to GSA and UFC/DOD blast loading up to 33 PSI
- Ballistic tested windows to UL 752, level III
- LEED certified projects
- Florida HVHZ state-wide approval program
- IGCC insulated glass certification
- NFRC thermal certification program
- NYC Falls Prevention
- Miami-Dade County NOA's
- National Park Service project approvals





Graham engineers designing prototype system

**ADVANCING THE INDUSTRY THROUGH OUR EXPERIENCE & INGENUITY**

We've been solving fenestration's toughest challenges for more than four decades. We have been producing, delivering and standing behind the highest quality and most innovative commercial and architectural grade products since 1972.



**WINDOW WALL**

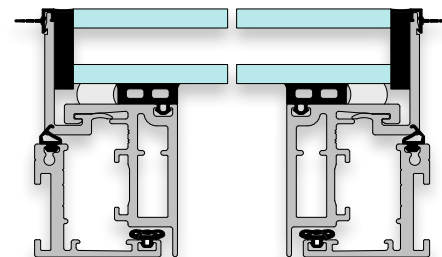
Graham has developed a window wall system as a design alternative to conventional curtain wall. Window walls can offer design features to meet these expectations such as various ventilating styles from projected and casement to sliding windows, as well as terrace and sliding glass doors, all seamlessly integrated in the design.



**GT6200 SL SINGLE-LEVER OPERATOR**

Graham Architectural Products' Single-Lever Operator Window is an out-swing casement with unique hardware designed to meet minimal operating force and limited motion requirements as required by AAMA 513-12 (less than 5 lbs. operational force). The single-point, multi-functioning handle allows locking, unlocking, opening and closing, with minimal force, while also functioning as a limit device. This window option is the perfect choice for operable windows in accessible spaces.

**ZERO SIGHTLINE VENT**



Our concealed vent has a zero sightline for a seamless fit into your curtainwall system. This allows ventilation options while maintaining the desired aesthetics of an all-glass wall.

**CAST ALUMINUM REPLICATION**

Unique and challenging shapes can be overcome with creative solutions. Here Graham provided cast aluminum pieces to exactly replicate the original wood windows.



Hughes High School — Cincinnati, OH, exterior and interior view



Convention Hall — Asbury Park, NJ

**TRIPLE HUNG**

Graham is one of the very few manufacturers that can fabricate a fully functional aluminum triple hung window. All three sash can open and close which truly replicates the original windows.

**STEEL REPLICATION WINDOW**

Designed to replicate the original steel windows used in many buildings, the innovative SR6700 Series window features a "floating vent" and large openings with minimal sight lines. Historic concave true muntins and applied grids add to the authentic steel window look. The SR6700's one-of-a-kind design has even been approved by the National Park Service on several projects.



**HIGHLY ENERGY EFFICIENT DESIGNS**

Graham windows utilize the most thermally efficient designs in the industry. A polyamide strut thermal break allows for increased airspace and aluminum separation, while providing an additional hollow for increased strength.

Casement

Fixed

Projected

Double & Single Hung

Horizontal Sliding

Terrace & Sliding Doors

Security Screens

Sunshades

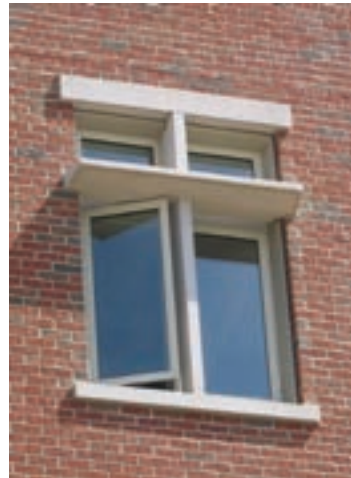
Curtain Wall

Window Wall

Blast-Resistant

Hurricane-Resistant

Acoustical



# CASEMENT/PROJECTED/FIXED



**VILLAGE AT 115, CASE WESTERN RESERVE UNIVERSITY**  
Cleveland, OH  
Series: GT6200

Our thermally superior GT6200 Series casement contributed to the Silver LEED rating awarded to this beautiful residence hall complex.



**BALTIMORE CITY COLLEGE**  
Baltimore, MD  
Series: 6700

Narrow sightlines and large openings made the 6700 Series projected window a natural fit for this historic campus building.



**EMORY UNIVERSITY SCHOOL OF MEDICINE**  
Atlanta, GA  
Series: 6900

This new construction facility serves as an anchor between two historic buildings. The 6900 Series satisfied the LEED energy requirements as well as the atrium fixed window area.

## CASEMENT/PROJECTED/FIXED


SERIES	FRAME DEPTH (inches)	TYPE	AAMA RATING	AAMA TEST SIZE (inches)	AIR (cfm/ft <sup>2</sup> )	WATER (psf)	DESIGN PRESSURE (psf)	STRUCTURAL OVERLOAD (psf)	U-VALUE (Btu/hr/ft <sup>2</sup> /°F) <sup>1</sup>	
GT6200	2-3/4 - 3-3/8	CASEMENT	AW-PG75	42 x 72	0.06	20.05	75.19	112.78	0.30 - 0.42	
			AW-PG90	36 x 74	0.09	15.04	90.23	135.34	0.30 - 0.42	
		PROJECTED	AP-AW90	60 x 72	0.10	12	90	142	112.5	0.29 - 0.38
S6300	4	CASEMENT	AW-PG75	60 x 36	0.10	15	75	112.5	0.36 - 0.42	
			AW-PG55	60 x 99	0.01	15	55	82.5	127.5	0.27 - 0.35
		FIXED	AW-PG130	36 x 60	0.05	15	130	195	142.5	0.39
6500	2 1/4	CASEMENT	AW-PG95	62 x 99	0.10	12	95	142.5	0.39	
			C-HC80	42 x 66	0.05	12	80	120	120	0.48 - 0.63
		PROJECTED	AW-PG80	42 x 66	0.05	12	80	120	120	0.48 - 0.63
S6500	2 1/4	PROJECTED	AP-HC90	66 x 42	0.01	15	90.23	135.34	0.40 - 0.59	
			AW-PG90	66 x 42	0.01	15	90.23	135.34	180	0.34 - 0.54
		FIXED	AW-PG120	60 x 99	0.01	20	120	180	180	0.34 - 0.54
6600	2 1/4	CASEMENT	AW-PG80	42 x 66	0.01	12	80	120	0.44 - 0.59	
			AP-HC100	66 x 42	0.04	15	100	105	105	0.41 - 0.56
		PROJECTED	AP-AW105	66 x 42	0.04	15	158	158	158	0.41 - 0.56
6700	2 1/4	FIXED	F-HC85	60 x 99	0.01	12	85	127.5	0.33 - 0.50	
			F-AW85	60 x 99	0.01	12	85	127.5	127.5	0.33 - 0.50
		CASEMENT	C-HC80	42 x 66	0.05	12	80	120	120	0.43 - 0.58
SR6700	3 1/4	PROJECTED	AW-PG80	42 x 66	0.05	12	80	120	0.43 - 0.58	
			AP-HC90	66 x 42	0.01	15	90.23	135.34	135.34	0.44 - 0.59
		FIXED	AW-PG90	66 x 42	0.01	15	90.23	135.34	180	0.35 - 0.54
6800	3 1/2	CASEMENT	CW-PG100	36 x 60	0.03	15.04	120.3	150.38	0.48 - 0.67	
			CW-PG100	60 x 36	0.01	12	100	150	150	0.46 - 0.65
		PROJECTED	AW-PG130	60 x 99	0.01	15.04	135.34	195.49	195.49	0.33 - 0.55
S6800	3 1/2	FIXED	AW-PG100	60 x 99	0.01	15.04	100	150	0.32	
			FLOATING VENT	CW-PG40	93 x 98	0.03	10	40	60	60
		CASEMENT	C-HC95	42 x 66	0.01	15	95	143	143	0.54 - 0.65
6800	3 1/2	PROJECTED	AW-PG95	42 x 66	0.01	15	105	143	0.54 - 0.65	
			AP-HC100	66 x 42	0.01	12	100	150	150	0.52 - 0.63
		FIXED over AWNING	AW-PG100	60 x 99	0.01	15.04	100.25	150.38	150.38	0.52 - 0.63
S6800	3 1/2	FIXED over HOPPER	AW-PG100	60 x 99	0.01	15.04	100.25	150.38	0.52 - 0.63	
			FIXED	FW-HC95	62 x 99	0.01	15	95	142.5	142.5
		CASEMENT	AW-PG95	62 x 99	0.01	15	95	142.5	143	0.43 - 0.58
6900	4 1/2	PROJECTED	C-HC95	42 x 66	0.01	15	105	143	0.54 - 0.65	
			AW-PG95	42 x 66	0.01	15	105	143	143	0.54 - 0.65
		FIXED	AP-HC105	66 x 42	0.01	12	105	157.5	157.5	0.48 - 0.62
S6900	4 1/2	CASEMENT	AP-AW105	66 x 42	0.01	12	105	157.5	0.48 - 0.62	
			FW-HC100	60 x 99	0.01	15	100	150	150	0.37 - 0.53
		PROJECTED	AW-PG100	62 x 99	0.01	15	100	150	150	0.37 - 0.53
6900	4 1/2	FIXED	C-HC80	42 x 66	0.02	12	80	120	0.50 - 0.64	
			AW-PG80	36 x 60	0.05	15.04	80.2	120.3	120.3	0.50 - 0.64
		FIXED over HOPPER	AP-HC90	66 x 42	0.03	15	90	135	135	0.47 - 0.62
911	2-3/4 - 3-3/8	CASEMENT / SH	AP-AW90	66 x 42	0.03	15	90	135	0.47 - 0.62	
			AW-PG60	60 x 99	0.01	15.04	60.15	105.26	105.26	N/A
		FIXED	FW-HC85	60 x 99	0.01	12	85	127.5	127.5	0.36 - 0.58
GT1000	3-3/8 - 3-1/2	FIXED	AW-PG85	60 x 99	0.01	12	85	127.5	0.36 - 0.58	
			AW-PG90	36 x 60	0.01	20	100.25	150.38	150.38	0.47 - 0.50
911	2-3/4 - 3-3/8	CASEMENT / SH	N/A	48 x 72	0.23	6	40	60	0.38 - 0.42	
GT1000	3-3/8 - 3-1/2	FIXED	AW-PG90	60 x 99	0.01	20	90.23	135.34	N/A	

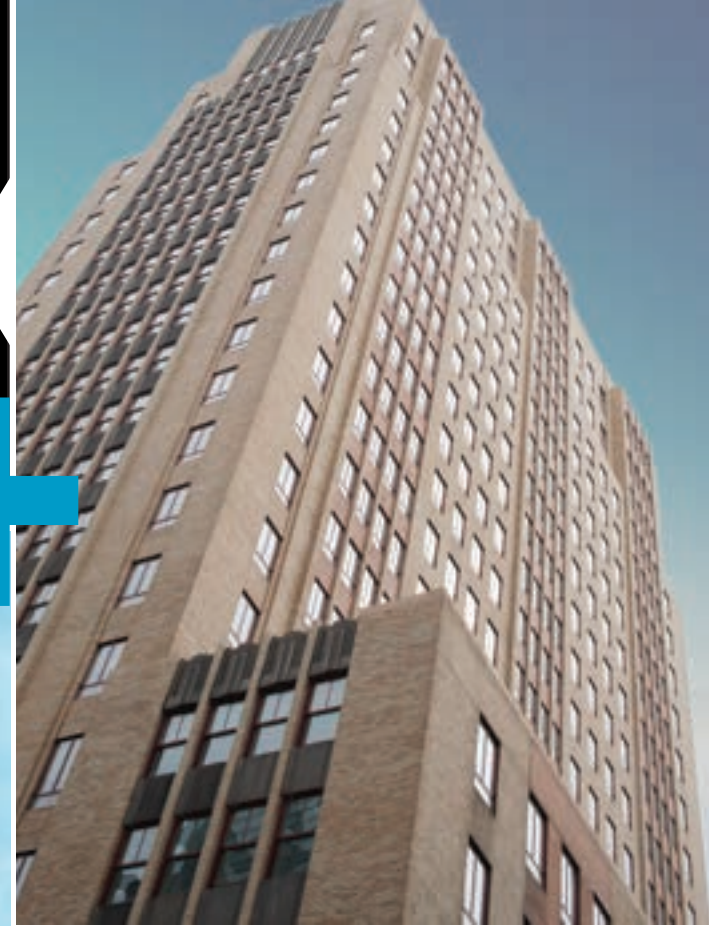
<sup>1</sup>U-values will vary depending upon glazing selected. The information on this page is current at the time of publication. Please contact Graham for the latest data.

# HUNG & SLIDING

## ICON, 1616 WALNUT ST.


Philadelphia, PA  
Series: S2200

Utilizing the S2200 Series double hung, Graham was able to replicate the original steel windows while satisfying the National Parks Service standards. 




## 1500 LOCUST STREET

Philadelphia, PA  
Series: 0200

The 0200 Series was a perfect match for the large opening horizontal sliding windows. 

## HUGHES HIGH SCHOOL

Cincinnati, OH  
Series: 2500

This historic school required matching original sightline details, and included integral blinds on the 2500 Series double hung. 



## DOUBLE & SINGLE HUNG

SERIES	FRAME DEPTH (inches)	TYPE	AAMA RATING	AAMA TEST SIZE (inches)	AIR (cfm/ft <sup>2</sup> )	WATER (psf)	DESIGN PRESSURE (psf)	STRUCTURAL OVERLOAD (psf)	U-VALUE (Btu/hr/ft <sup>2</sup> /°F) <sup>1</sup>
2000	3 ¼	SINGLE HUNG-SIDE LOAD	H-AW55	56 x 91	0.15	11	55	82.5	0.40 - 0.61
			H-HC45	60 x 99	0.07	10.03	45.11	67.67	0.40 - 0.61
			H-AW45	60 x 99	0.15	11	45	67.5	0.40 - 0.61
			AW-PG55	60 x 99	0.20	11.07	60.15	90.23	0.40 - 0.61
2200	4	SINGLE HUNG-SIDE LOAD	H-HC65	60 x 99	0.17	9.8	65	97.74	0.55 - 0.67
			AW-PG45	60 x 99	0.20	9.8	45	67.74	0.55 - 0.67
GT2200	4	DOUBLE HUNG-SIDE LOAD	AW-PG50	60 x 99	0.25	12	50	75	0.30 - 0.44
2200	4		H-HC65	60 x 99	0.07	9.8	65	97.74	0.39 - 0.68
			H-AW45	60 x 99	0.21	9.8	45	67.67	0.39 - 0.68
S2200	4		H-HC75	60 x 99	0.20	12	75	112.5	0.46 - 0.57
			H-AW75	60 x 99	0.20	12	75	112.5	0.46 - 0.57
GT2200	4		AW-PG40	60 x 99	0.27	12	40	60	0.32 - 0.45
			AW-PG50	60 x 99	0.27	12	50	75	0.32 - 0.45
			AW-PG90	60 x 99	0.27	12	90	135	0.32 - 0.45
2500	4 ½		H-HC65	60 x 99	0.25	9.8	65	98	0.49 - 0.60
			H-AW45	60 x 99	0.30	9.8	45	98	0.49 - 0.60
S2500	4 ½	CW-PG70	56 x 91	0.30	12	70	105	0.49 - 0.63	
		AW-PG80	60 x 99	0.30	12	80	120	0.49 - 0.63	
2200 OHB	4	DOUBLE HUNG-SIDE LOAD (OHB)	AW-PG45	60 x 99	0.25	9.82	45.11	67.67	0.39 - 0.68
S2200 OHB			AW-PG75	60 x 99	0.27	12.11	75.19	112.78	0.48 - 0.64
3000	3 ¼	DOUBLE HUNG-TILT SASH	H-HC60	60 x 99	0.15	11	60	150	0.44 - 0.58
			H-AW55	60 x 99	0.15	11	60	150	0.44 - 0.58
S3000	3 ¼		H-AW50	60 x 99	0.13	12	50	75	0.43 - 0.51
			H-AW65	53 x 79	0.13	12	65	97.5	0.43 - 0.51
			H-AW75	60 x 99	0.13	12	75	112.5	0.43 - 0.51


## HORIZONTAL SLIDING

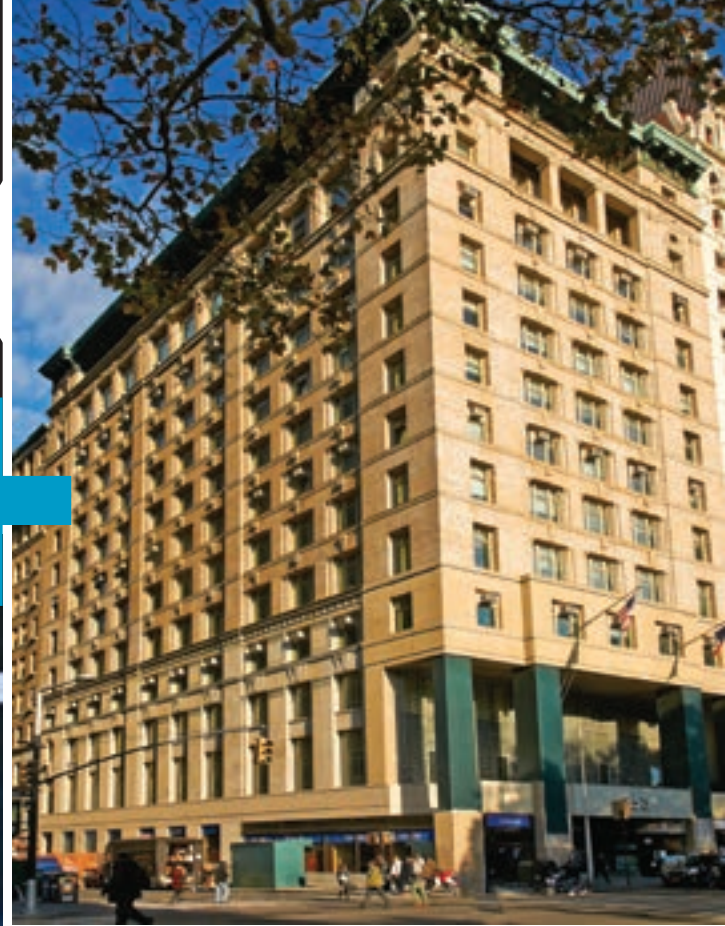
SERIES	FRAME DEPTH (inches)	TYPE	AAMA RATING	AAMA TEST SIZE (inches)	AIR (cfm/ft <sup>2</sup> )	WATER (psf)	DESIGN PRESSURE (psf)	STRUCTURAL OVERLOAD (psf)	U-VALUE (Btu/hr/ft <sup>2</sup> /°F) <sup>1</sup>
0200	4	HORIZ. SLIDING Dual Slide	HS-HC60	99 x 79	0.25	12	60	97.5	0.51 - 0.60
			CW-PG65	71 x 61	0.25	12	65	97.5	0.51 - 0.60
			AW-PG65	99 x 79	0.19	12.11	65.16	97.74	0.51 - 0.60
GT0200	4	HORIZ. SLIDING Single Slide	AW-PG50	99 x 79	0.25	12	50	75	0.32 - 0.45
0300	3 ¼		HS-HC40	99 x 79	0.10	10	40	60	0.44 - 0.62
			HS-AW40	99 x 79	0.10	10	40	60	0.44 - 0.62
			HS-AW50	80 x 61	0.27	10	50	75	0.44 - 0.62

<sup>1</sup>U-values will vary depending upon glazing selected. The information on this page is current at the time of publication. Please contact Graham for the latest data.



253-256 BROADWAY  
New York, NY  
Series: Custom Product

Graham provided an innovative solution to the New York City Landmark Preservation Conservancy requirements by designing a new and unique dual-action window system for this Moses Preservation award winning building. 



ONE PARK CREST  
Baltimore, MD  
Series: GT7700

The GT7700 Series terrace door was selected for its high thermal efficiency and its seamless mulling capabilities.

THE DUMONT  
Washington, DC  
Series: 1200

Floor-to-slab 1200 Series fixed windows in conjunction with floor slab covers give this impressive building the appearance of a curtain wall.



# FIXED, DUAL-ACTION, & DOORS

## FIXED WINDOWS

SERIES	FRAME DEPTH (inches)	AAMA RATING	AAMA TEST SIZE (inches)	AIR (cfm/ft <sup>2</sup> )	WATER (psf)	DESIGN PRESSURE (psf)	STRUCTURAL OVERLOAD (psf)	U-VALUE (Btu/hr/ft <sup>2</sup> /°F) <sup>1</sup>
1200	3 ¼	FW-HC90	60 x 99	0.01	15	90	135	0.35 - 0.57
		FW-AW-PG120	60 x 99	0.01	15	90	135	0.35 - 0.57
1400	4	HC-PG100	60 x 99	0.01	12	100	150	0.34 - 0.54
		AW-PG100	60 x 99	0.01	12	100	150	0.34 - 0.54
S1400	4	AW-PG90	60 x 99	0.01	15	90	135	0.35 - 0.53
GT1400	4	AW-PG100	60 x 99	0.01	20.05	100.25	150.38	0.35 - 0.53
1500	4 ½	FW-HC90	72 x 72	0.01	12	90	135	0.34 - 0.55
		FW-AW70	60 x 99	0.01	25	90	105	0.34 - 0.55
S1500	4 ½	FW-HC85	60 x 99	0.01	12	85	127.5	0.35 - 0.53
		FW-AW85	60 x 99	0.01	12	85	127.5	0.35 - 0.53

## DUAL-ACTION (Tilt-Turn)

SERIES	FRAME DEPTH (inches)	AAMA RATING	AAMA TEST SIZE (inches)	AIR (cfm/ft <sup>2</sup> )	WATER (psf)	DESIGN PRESSURE (psf)	STRUCTURAL OVERLOAD (psf)	U-VALUE (Btu/hr/ft <sup>2</sup> /°F) <sup>1</sup>
GT7800	2-3/4 - 3-3/8	DAW-HC95	60 x 99	0.05	12.12	95.3	143	0.29 - 0.38

## SLIDING GLASS DOORS

SERIES	FRAME DEPTH (inches)	AAMA RATING	AAMA TEST SIZE (inches)	AIR (cfm/ft <sup>2</sup> )	WATER (psf)	DESIGN PRESSURE (psf)	STRUCTURAL OVERLOAD (psf)	U-VALUE (Btu/hr/ft <sup>2</sup> /°F) <sup>1</sup>
0900 (XO)	4	AW-PG45	122 x 96	0.17	12.11	45.11	67.67	0.44 - 0.62
0900 (OXO)		AW-PG65	124 x 95	0.20	12	65	97.5	0.44 - 0.62
900LC (XO)	4	AW-PG65	144 x 96	0.10	12	50	75	0.44 - 0.62
S0900(XO)		LC-PG35	87 x 83	0.10	5.43	35.09	52.63	0.36 - 0.54
S0900(XO)	4	AW-PG50	123 x 95	0.15	12	50	75	0.39 - 0.59
S0900(OXO)		AW-PG65	144 x 96	0.13	12.11	70.18	105.26	0.39 - 0.59

## TERRACE DOORS

SERIES	FRAME DEPTH (inches)	AAMA RATING	AAMA TEST SIZE (inches)	AIR (cfm/ft <sup>2</sup> )	WATER (psf)	DESIGN PRESSURE (psf)	STRUCTURAL OVERLOAD (psf)	U-VALUE (Btu/hr/ft <sup>2</sup> /°F) <sup>1</sup>
GT7700	2-3/4 - 3-3/8	ATD-AW70	48 x 96	0.03	12	70	105	0.31 - 0.39

<sup>1</sup>U-values will vary depending upon glazing selected. The information on this page is current at the time of publication. Please contact Graham for the latest data.

# BLAST & HURRICANE-RESISTANT



## VILLAGE OF IMAGINE

Orlando, FL  
Series: HI0900

Hurricane impact rated 0900 Series sliding glass doors rated up to +70 psf and -100 psf were used for these upscale condominiums.



## DOBBINS AFB

Atlanta, GA  
Series: B1400

Blast-resistant B1400 Series fixed windows with mulling options were used to fill these large openings.



## CONSERVATORY AT HAMMOCK BEACH

Palm Coast, FL  
Series: HI6800

Hurricane-resistant HI6800 Series fixed windows adorn this private clubhouse on the exclusive Hammock Beach resort golf course.

## BLAST-RESISTANT PRODUCTS

TYPE	FRAME DEPTH (inches)	SERIES	CONDITION/HAZARD RESPONSE	DESIGNED BLAST PRESSURE (psi)	POSITIVE PHASE IMPULSE (psi-msec)	WINDOW SIZE (inches)	TEST METHOD	
Horizontal Slider	4	B0300	Minimal	6 PSI	42 psi-msec	66 x 48	ASTM F1642	
Fixed - Aluminum	3 1/4	B1200	Minimal	6.1 PSI	41 psi-msec	48 x 66	ASTM F1642	
Fixed With Nail Fin			N/A	Minimum UFC 4-010-01	Minimum UFC	49-3/4 x 67-3/4	UFC Calculation	
Fixed Historic	4	B1400H	Minimal	6.7 PSI	47 psi-msec	48 x 66	ASTM F1642	
Single Hung - Side Load	3 1/4	B2000	Minimal	4.4 PSI	34.3 PSI-msec	48 x 66	ASTM F1642	
Single Hung With Nail Fin - Side Load				6.6 PSI	48 psi-msec	45-1/2 x 63-3/8	ASTM F1642	
Double Hung Historic - Side Load	4	B2200H	Low	6.2 PSI	42 psi-msec	49-3/4 x 67-3/4	ASTM F1642	
Single Hung Historic - Side Load				7 PSI	46 psi-msec	48 x 66	ASTM F1642	
Double Hung - Tilt	3 1/4	B3000	N/A	Minimum UFC 4-010-01	Minimum UFC	36 x 72	UFC Calculation	
Casement (Twin)	2 1/4	B6500 IBG	No break	5.3 PSI	32.8 psi-msec	88 x 96-3/4	ASTM F1642	
Casement (Single)			Minimal	7 PSI	44 psi-msec	48 x 85	ASTM F1642	
Fixed	2 1/4	B6500	N/A	4 PSI	28 psi-msec	48 x 85	UFC Calculation	
Casement/Projected			Minimal	5.9 PSI	48 psi-msec	48 x 66	ASTM F1642	
Fixed	2 1/4	B6600	Minimal	6.4 PSI	48 psi-msec	48 x 66	ASTM F1642	
Casement/Projected				6.5 PSI	48 psi-msec	48 x 66	ASTM F1642	
Fixed	3 1/2	B6800	Minimal	6.1 PSI	46 psi-msec	48 x 66	ASTM F1642	
Casement/Projected				6 PSI	42 psi-msec	49-3/4 x 67-3/4	ASTM F1642	
Fixed	3 1/2	B6800HP	Low	5.8 PSI	41 psi-msec	49-3/4 x 67-3/4	ASTM F1642	
Casement/Projected				No break	10.4 PSI	91 psi-msec	49-3/4 x 67-3/4	ASTM F1642
				24.2 PSI	116 psi-msec	49-3/4 x 67-3/4	ASTM F1642	
				10.8 PSI	96 psi-msec	49-3/4 x 67-3/4	ASTM F1642	
23.5 PSI	100 psi-msec	49-3/4 x 67-3/4	ASTM F1642					
Sliding Glass Doors	4	B0900	N/A	Minimum UFC 4-010-01	Minimum UFC	72 x 84	UFC Calculation	
Entry Doors (Single)	6-3/8"	B7600	Minimal	6.4 PSI	50 psi-msec	44-1/2 x 88-1/4	ASTM F1642	
Entry Doors (Double)			Very Low	6.9 PSI	45 psi-msec	82-1/4 x 89	ASTM F1642	

## HURRICANE-RESISTANT PRODUCTS

TYPE	FRAME DEPTH (inches)	SERIES	TEST SIZE (inches)	POSITIVE DESIGN PRESSURE (psf)	NEGATIVE DESIGN PRESSURE (psf)	WATER TEST PRESSURE (psf)	
Horiz. Sliding	4 1/2	HI0400	144 x 62	40	40	9	
	5	HI0400	107 x 72	60	60	9	
Horiz. Sliding (Slider over Fixed)		HI0400/HI1100	111 x 87.5	70	70	12	
	158.25 x 77		70	70	12		
Fixed	5	HI1100	72 x 74	40	40	12	
			50 x 79	60	60	9	
	4	HI1400	60 x 60	50	90	15	
			48 x 72	100	150	15	
	HI1400 hist.	42 x 42	43	61	6.45		
		58 x 73 1/2	70	100	12		
	Single Hung Side Load	4	HI2000	45-7/8 x 41-5/8	56	70	10
				48 x 72	70	100	10.5
Double Hung Side Load	4 1/2	HI2200	48 x 102	45	65	9.75	
			HI2400	57 x 74	40	40	9
Double Hung Side Load (Triple)	5	HI2400	48 x 72	60	60	9	
			161.5 x 77	70	70	12	
Projected-Hopper	3 3/8	HI6200	60 x 108	60	60	12	
Fixed			60 x 108	60	60	12	
Fixed-over-Hopper	2 1/4	HI6500	45-1/4 x 33-1/8	50	50	12	
Casement (Triple Glazed)	3 1/2	HI6800	48 x 48	60	60	9	
Casement (Triple Glazed)			45 x 48	70	70	10.65	
Projected			42 x 72	90	120	13.5	
Fixed			48 x 72	90	120	12	
Sliding Glass Door	4	HIS0900	144 x 96	70	70	12	
		HI0900	72 x 84	70	100	11	
Storefront & Entrance Doors	6-3/8"	HI7600	129 1/2 x 107 1/2	45	45	0	

The information on this page is current at the time of publication. Please contact Graham for the latest data.



## INTERCONTINENTAL HOTEL

Miami, FL  
Series: HI1100

*These hurricane-resistant HI1100 Series fixed windows not only provide hurricane protection, but reduce overall sound transmission for a quiet interior.*



## WELSH VALLEY MIDDLE SCHOOL

Ardmore, PA  
Series: 6800

*These triple-glazed 6800 Series projected windows include between glass blinds for increased thermal efficiency and sound reduction.*



## L HAUS

New York, NY  
Series: 6800

*This project required extremely low U-values and between glass blinds. The 6800 Series fixed windows provide both.*

## ACOUSTICAL

SERIES	FRAME DEPTH (inches)	TYPE	AAMA RATING	AAMA TEST SIZE (inches)	AIR (cfm/ft <sup>2</sup> )	WATER (psf)	DESIGN PRESSURE (psf)	STRUCTURAL OVERLOAD (psf)	U-VALUE (Btu/hr/ft <sup>2</sup> /°F) <sup>1</sup>
<b>ALUMINUM FRAME</b>									
0400	4 ½ - 5	Acoustical Aluminum Horizontal Slider	LC-PG60	71 x 56	0.14	9	60	90	0.41 - 0.53
1100	4 ½ - 5	Acoustical Aluminum Fixed	LC-PG65	56 x 56	0.01	12	65	97.5	0.32 - 0.56
2255	8 ½	Acoustical Aluminum DH-Sideload	H-DW-HC45	60 x 99	0.10	10	55	83	N/A
2400	4 ½ - 5		LC-PG55	44 x 75	0.11	8.35	55.14	82.71	0.44 - 0.56
25N22	9		H-DW-HC65	60 x 99	0.10	10	65	97.5	N/A
6500	2 ¼		C-HC80	42 x 66	0.05	12	80	120	0.48 - 0.63
		AW-PG80	42 x 66	0.05	12	80	120	0.48 - 0.63	
		AP-HC90	66 x 42	0.01	15	90.23	135.34	0.40 - 0.59	
0900LC	4	Acoustical Aluminum Sliding Glass Door	AW-PG90	66 x 42	0.01	15	90.23	135.34	0.40 - 0.59
			LC-PG35	87 x 83	0.10	5.43	35.09	52.63	0.36 - 0.54
<b>VINYL FRAME</b>									
V-0400	4 ½	Acoustical Vinyl Horizontal Slider	LC-PG40	71 x 56	0.10	6	40	60	0.21 - 0.29
V-1100	4 ½	Acoustical Vinyl Fixed	LC-PG60	56 x 56	0.01	9	60	90	0.16 - 0.28
V-3900	4 ½	Acoustical Vinyl DH-Tilt	LC-PG40	44 x 75	0.12	6	40	60	0.23 - 0.29
V-6900	4 ½	Acoustical Vinyl Casement	CW-PG50	32 x 60	0.01	9.19	50	75	0.20 - 0.23
V-0800	6	Acoustical Vinyl Sliding Glass Door	SD-C35	95 x 83	0.10	7	35	52.5	0.34 - 0.52



<sup>1</sup>U-values will vary depending upon glazing selected. The information on this page is current at the time of publication. Please contact Graham for the latest data.

# CURTAIN WALL

## UNIVERSITY OF NEBRASKA DURHAM RESEARCH CENTER

Omaha, NE  
Series: 2500 Captured & Structurally Glazed Curtain Wall

The Durham research center includes some 50,000 square feet of Graham curtain wall, has 10 levels, 95 laboratories, and 252,179 gross square feet.



## THE TOWER AT CORPORATE COVE

Wausau, WI  
Series: 2506 Curtain Wall & 450-T Fixed

This project consisted of approximately 12,000 square feet of curtain wall and 4,000 square feet of 450-T fixed windows. All of the curtain wall framing and windows were assembled by Graham prior to shipping.



## MILWAUKEE MEDICAL CENTER

Milwaukee, WI  
Series: 2510S Curtain Wall

This project consisted of approximately 70,000 square feet of unitized curtain wall with painted shadow boxes, back pans, and insulation in all floor slab locations.

## CAPTURED SYSTEMS

TYPE	SIGHTLINE	DESCRIPTION
Series 2006C	2"	6¼" depth captured curtain wall
Series 2505C	2½"	5¼" depth captured curtain wall
Series 2506C	2½"	6¼" depth captured curtain wall
Series 2507C	2½"	7¼" depth captured curtain wall
Series 2508C	2½"	8¼" depth captured curtain wall
Series 2510C	2½"	10¼" depth captured curtain wall
Series 3010C	3"	10¼" depth captured curtain wall

## STRUCTURALLY GLAZED SYSTEMS

TYPE	SIGHTLINE	DESCRIPTION
Series 2506S	2½"	6¼" depth structurally glazed curtain wall
Series 2507S	2½"	7¼" depth structurally glazed curtain wall
Series 2508S	2½"	8¼" depth structurally glazed curtain wall
Series 2510S	2½"	10¼" depth structurally glazed curtain wall

## CARRIER FRAME SYSTEMS

TYPE	SIGHTLINE	DESCRIPTION
Series 0675-CF	3"	6¾" depth carrier frame wall
Series 0825-CF	3"	8¼" depth carrier frame wall
Series 1200-CF	3"	12" depth carrier frame wall

## UNITIZED SYSTEMS

TYPE	SIGHTLINE	DESCRIPTION
Series US8375C	2½"	8-38" depth captured unitized wall
Series US8375S	2½"	8-38" depth structurally glazed unitized wall

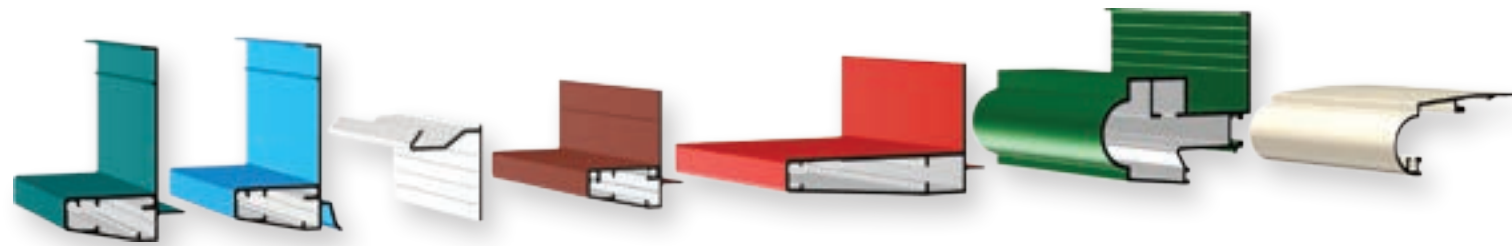
## OTHER PRODUCTS

TYPE	SIGHTLINE	DESCRIPTION
Store Fronts & Doors	Varies	Aluminum & glass store front entry systems
Standard Entrances	Varies	Single and double doors, transom options
Monumental Entrances	Varies	Single and double doors
Sunshades	N/A	Standard and custom profile sunshades outriggers, fascia, louvers, and attachment options
Series 450-T	2"	½" inside glazed fixed window
Integral Blind Unit	N/A	Integral blinds to compliment curtain wall systems

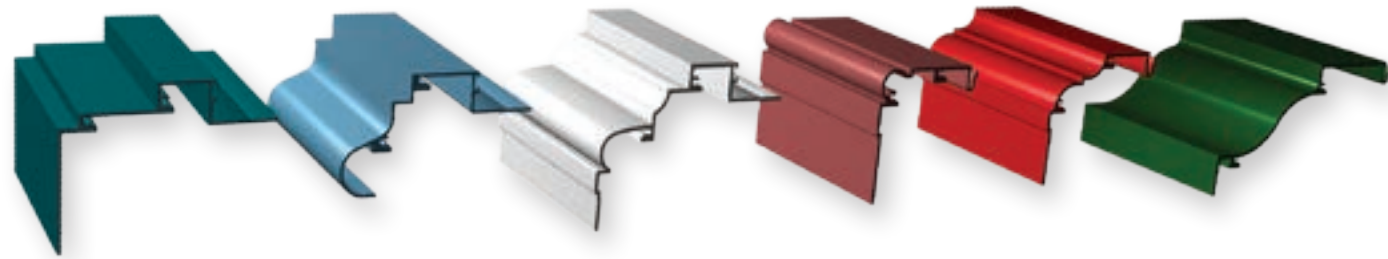
The information on this page is current at the time of publication. Please contact Graham for the latest data.

## ACCESSORIES FOR EVERY SITUATION

Below is a sampling of the vast array of options you have when you choose Graham Architectural Products. Please visit [www.grahamwindows.com](http://www.grahamwindows.com) for more detail

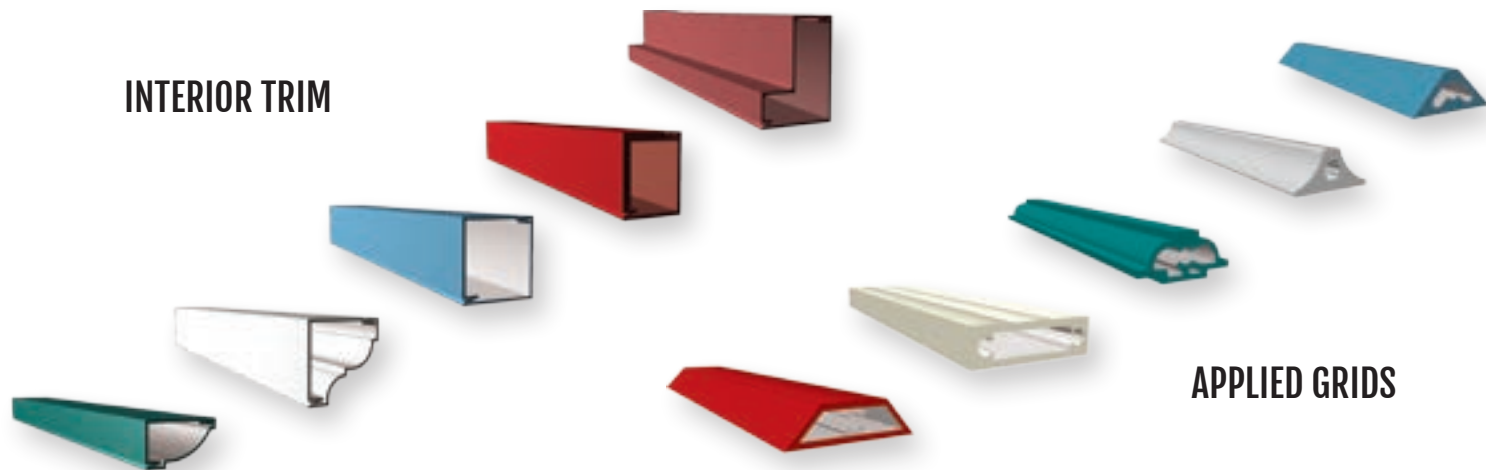


**NAIL FINs**

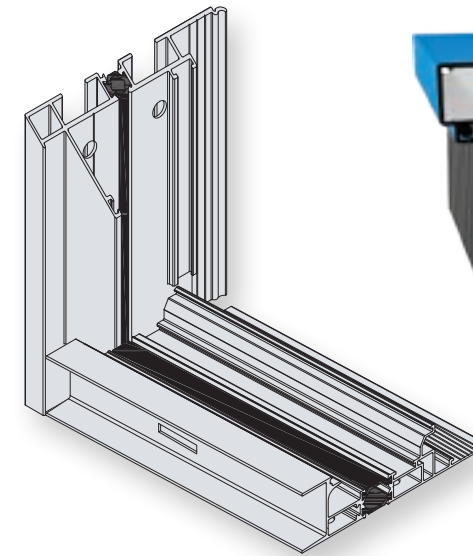


**PRE-SET AND APPLIED PANNING**

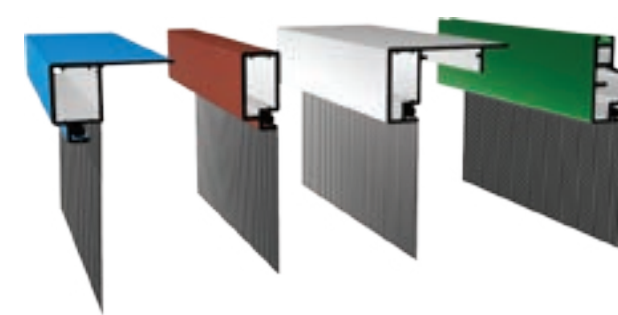
**INTERIOR TRIM**



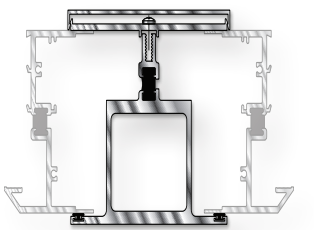
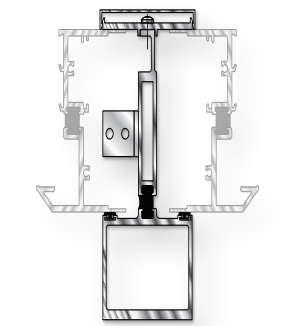
**APPLIED GRIDS**



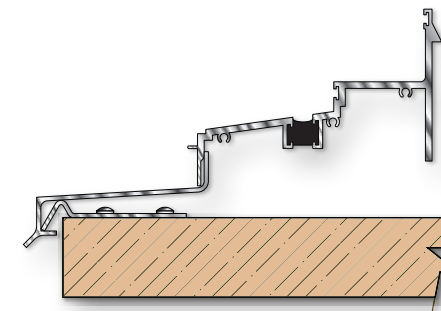
**RECEPTOR SYSTEMS**



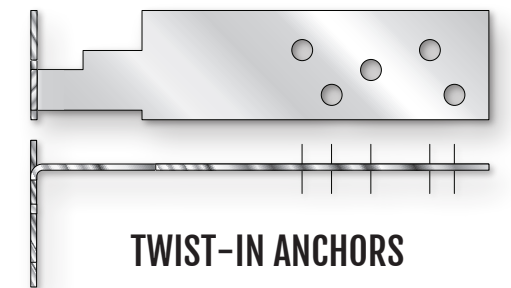
**INSECT SCREENS**



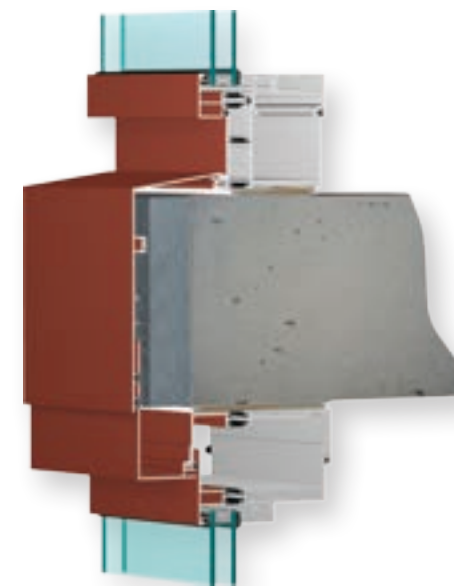
**MULLIONS**



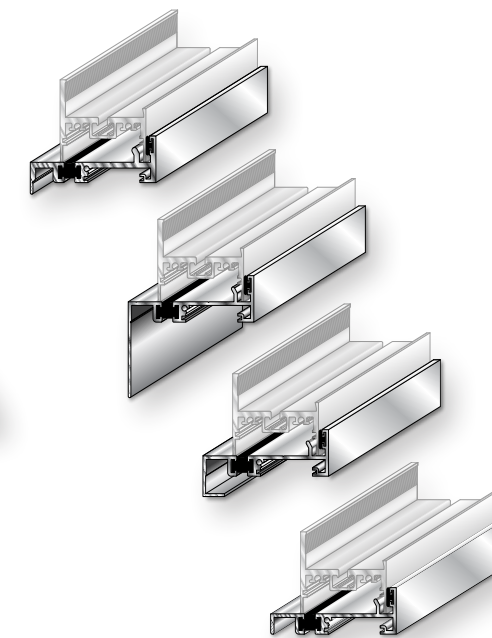
**ALCOA SILLS**



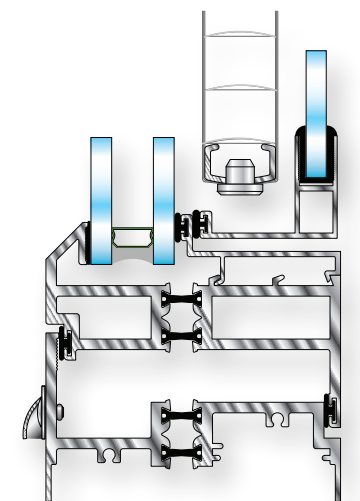
**TWIST-IN ANCHORS**



**SLAB COVER SYSTEMS**



**SILL STARTERS**



**BETWEEN GLASS BLINDS**

**WHATEVER YOUR NEED, GRAHAM HAS A CUSTOM SOLUTION FOR YOU**



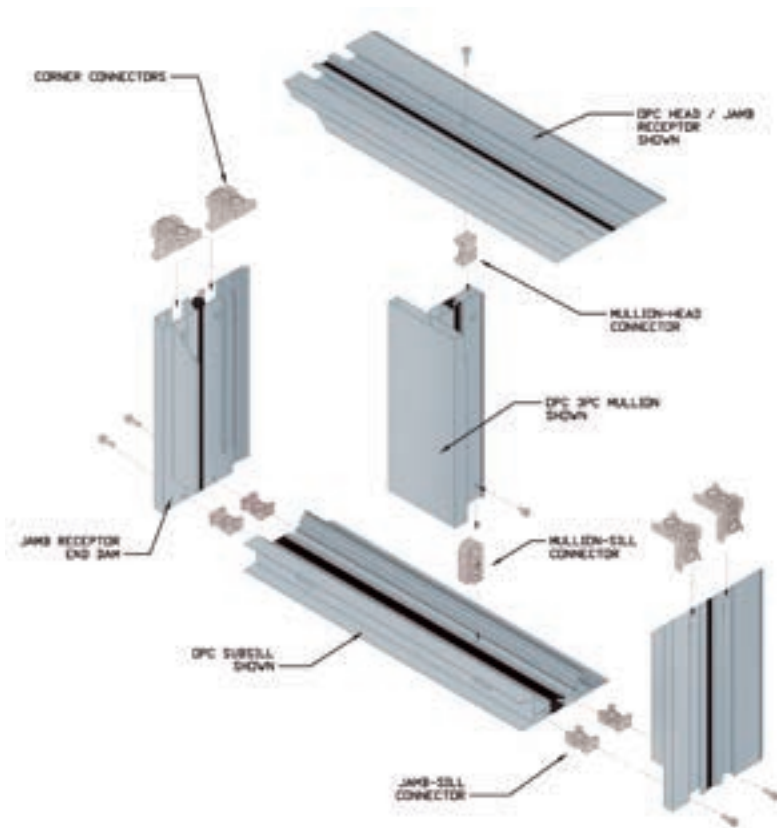
**HUMAN IMPACT WINDOW**

A thermally strutted human impact casement window with specially designed hardware and glazing system for hospitals and psychiatric applications (maintenance personnel access only). Tested to withstand three 2000 ft-lb impacts and still operate.



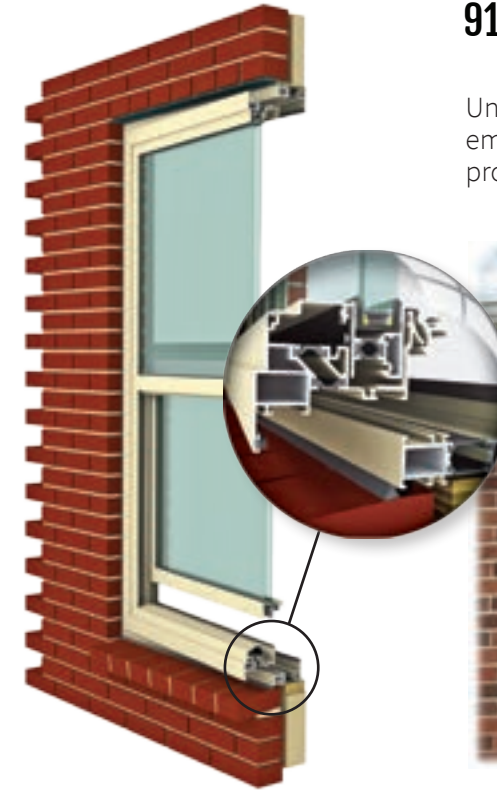
**OVERHEAD PULLEY COUNTER-BALANCED WINDOW**

A counter-balanced double hung window with simultaneously operating sash using concealed pulleys. Eliminates the sash-weight design limitations and maintenance involved with traditional balancing hardware.



**UNITIZED RECEPTOR**

A unitized receptor system designed for cost effective ease of installation. Can be shipped KD, fully fabricated, or factory preassembled.



**911 EMERGENCY EGRESS WINDOW**

Under normal conditions this product functions as a single hung window. When the emergency release is thrown, the entire fixed and operable area swings outward to provide an egress opening.



**Pictured:** A 911 egress window beside a standard hung window. Matching sightlines between the two products make for a seamless appearance from the exterior of the building.

**VANDAL RESISTANT & SECURITY SCREEN PRODUCTS**

Medium and heavy-duty security screens with your choice of steel mesh or perforated steel plating. Custodial and anti-burglar hardware options are available. Can be field or factory installed on windows.



Standard Steel Mesh



Perforated Steel Plating



Removable Handle



The steel mesh features a 1/2", 90° bend at all edges to ensure tensile strength.



Graham provides custom designed solutions coast to coast and abroad to meet your project needs.

**WEST**

- SAN FRANCISCO, CA
- LONG BEACH, CA
- HOLLYWOOD, CA

**MIDWEST**

- DENVER, CO
- CHICAGO, IL
- ST. LOUIS, MO
- FT. WORTH, TX

**SOUTHEAST**

- ATLANTA, GA

**NORTHEAST**

- BOSTON, MA

**METRO NY**

- NEW YORK, NY

**MID-ATLANTIC**

- COLLEGE PARK, MD

**INTERNATIONAL**

- OAHU, HI
- Afghanistan:**  
CMU Barracks Bagram AFB, B6500 casements  
160 Man Barracks Bagram AFB, B6500 casements  
Threat Support Facility Bagram AFB, B0300
- Honduras:**  
Armed Forces HQ Soto Cano AFB, B2000 & B0300  
Finance Bldg Soto Cano AFB, B1200  
TECSA & J6 Bldg Soto Cano AFB, B2000
- Japan:**  
Kadena Middle School Okinawa, B/HI6800 fixed  
JK Mendle Elementary School Yokota AFB Japan, B6500 fixed & 7600  
BEQ P353 Camp Shields Okinawa, B0200 & B7600
- Africa:**  
P920 BEQ P944 Lodge Camp Lemonnier Djibout Africa, B6800 fixed & B7600
- Diego Garcia:**  
NGIS 10 B0900
- India:**  
N500 HP Paradip India, B1200 & B0300
- Spain:**  
BEQ 32, 34, 569 Rota Spain, B6500 fixed & awning
- Romania:**  
Dining & Housing Deveselu Romania, B1200, B7500, B7600
- PUNTA GORDA, FL



## PRESERVING TRADITION. EMBRACING INNOVATION.

Graham is America's premier historic preservation window company, manufacturing and supplying windows of classic beauty and substance for buildings of stature. That's a reputation worth keeping, as Graham goes forward to embrace innovation in window design and performance.

Many of our projects have met the demanding scrutiny of the National Parks Service and other preservation jurisdictions, preserving the original aesthetics while providing improved thermal efficiency and structural integrity to countless buildings across America. We take pride in knowing that we helped to restore these buildings to their former glory.

YONKERS CITY HALL — YONKERS, NY  
GT6200 Series Tilt-and-Turn/Fixed



THE ATHENAEUM — CINCINNATI, OH  
GT2200 Series Single Hung/6700 Fixed & Casement



253-256 BROADWAY — NEW YORK, NY  
Hybrid Series 2500 & 7500 Tilt-and-Turn







UNIVERSITY OF MICHIGAN LAW SCHOOL — ANN ARBOR, MI  
Custom 6800 Series



## SCHOOLS & UNIVERSITIES

We are proud to have supplied hundreds of school districts, colleges and universities across the country with our products. Educational applications have specific demands in terms of function and durability that continue to point architects and building owners toward a Graham solution.

At Graham we understand the stringent requirements for these buildings that must stand the test of time. We're also acutely aware of limited timelines available to retro fit buildings during downtime and strive to satisfy the entire scope in order to achieve the customers' goals.

Many prestigious educational facilities have chosen the Graham brand.



HUGHES HIGH SCHOOL — CINCINNATI, OH  
2500 Series Double Hung



UNIVERSITY OF CINCINNATI TEACHERS COLLEGE — CINCINNATI, OH  
2200 Series Hung & 1400 Series Fixed



KEAN UNIVERSITY GREEN LANE BUILDING, COLLEGE PARK — CLEVELAND, OH  
US8375S Structurally Glazed Curtain Wall





RIVERGATE APTS. — NEW YORK, NY  
GT6200 Series Casement



## HIGH-RISE RESIDENTIAL

Although residential in nature, high-rise apartment and condo conversions require special considerations to ensure proper performance in a durable design.

Graham has a solution for all multi-family housing projects regardless of the location, size or design. Whether it is a custom designed system, historical renovation or replication, or simply punched window openings, we have an extensive product line and the expertise to accommodate your design.



ICON, 1616 WALNUT STREET — PHILADELPHIA, PA  
S6700 Series Awning/S2200 Hung



ONE PARK CREST, TYSONS-MCLEAN, VA  
GT7800 Series Tilt-and-Turn and Fixed windows



CHICAGO ART INSTITUTE — CHICAGO, IL  
6600 Series Fixed & Projected

## GOVERNMENT & MUNICIPAL

Few customers have more specific and demanding requirements than those of our government, whether local or national. Whether it is a historic court house or a new government office facility, Graham has the answer.

Working with project officials and the design teams, we have successfully completed a wide range of government and municipal projects. A vast majority in recent years have required blast-resistant products which is also one of our specialties.



US DEPARTMENT OF COMMERCE BUILDING — WASHINGTON, DC  
B6500 IBG Series (Interior Blast Guard)

US POST OFFICE — NEW YORK, NY  
6800 Series Fixed





RED CROSS BUILDING — WASHINGTON, D.C.  
1000 Series Fixed

## HEALTH CARE

Providing hospitals, clinics, and other health care facilities with our highly engineered windows, doors and curtain wall products is another Graham's specialty.

We can custom design and manufacture a window or curtain wall system to meet the needs of health care facilities at all levels. Whether it's our standard architectural grade windows, security products or even a human impact resistant system, Graham stand ready to meet the needs of the facility.



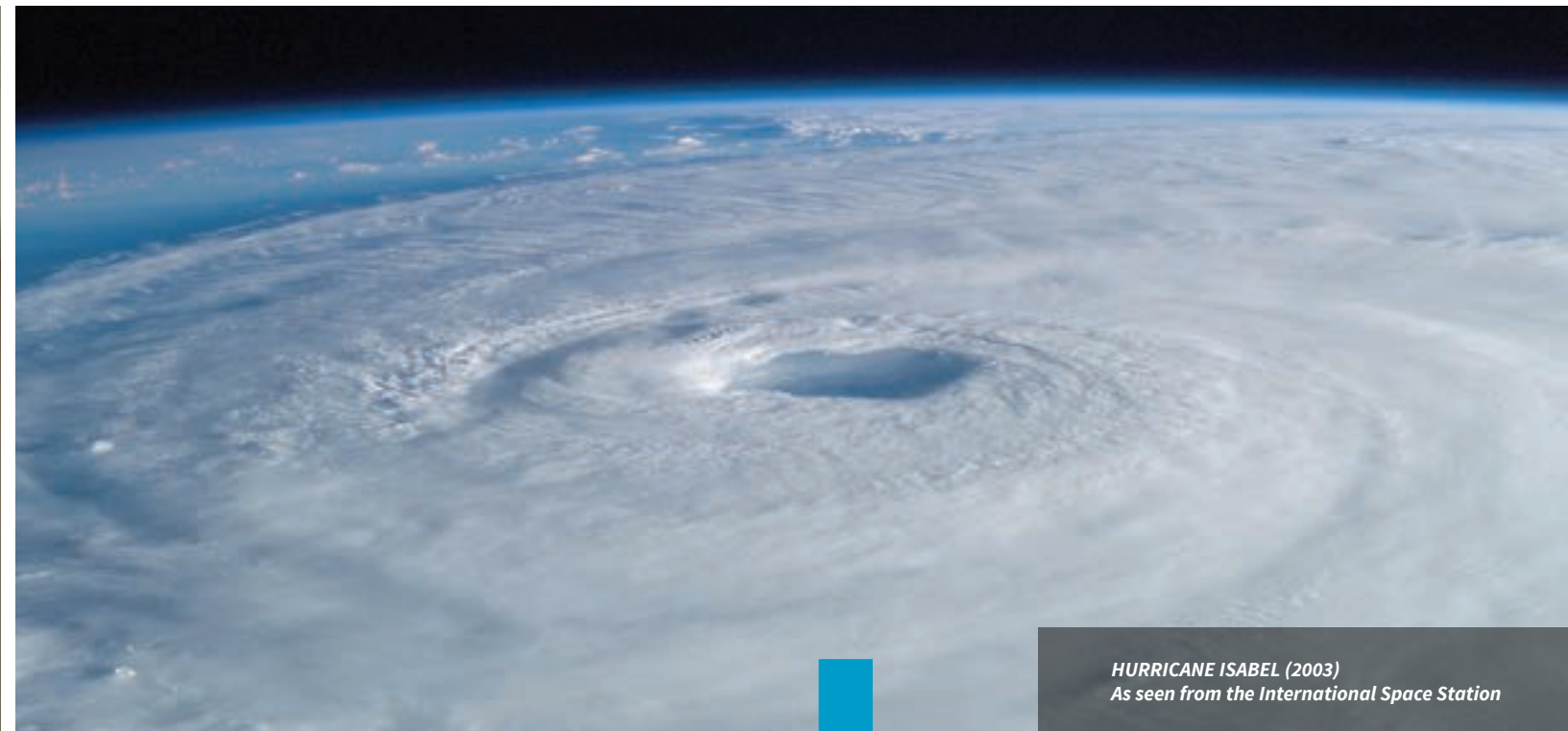
NORTON WOMEN'S & KOSAIR CHILDREN'S HOSPITAL — LOUISVILLE, KY  
Custom Unitized Curtain Wall



MANHATTAN VA HOSPITAL — NEW YORK, NY  
S6300 Series Casement



FLORIDA STATE UNIVERSITY — TALLAHASSEE, FL  
1500 Series Fixed & S7400 Series Terrace Door



HURRICANE ISABEL (2003)  
As seen from the International Space Station

## PROTECTING LIFE & PROPERTY

Blast-resistant windows are a key factor in mitigating unnecessary injuries in the event of an accidental or intentional explosion. Graham was a pioneer in designing and manufacturing blast-resistant windows following the events of September 11, 2001. We offer a full line of blast-resistant windows and doors for all project applications at various protection levels along with the expertise to deliver the appropriate product for the job.

Hurricane-resistant windows and doors provide life and property protection from hurricanes and typhoons. Graham's Hurricane-resistant windows and doors are tested to the Florida building code for high-velocity hurricane zones.



FPED Demo Testing -- Quantico, VA



FORT SAM HUSTON — HUSTON, TX  
B2000 Series Single Hung

## CONTACT US

Let us help you make your next project everything you imagined. Remember, "Your Vision. Our Experience." is not just a slogan, it is a way of doing business at Graham.

By leveraging our expertise, our pioneering solutions and our unrivaled reputation, we have continuously expanded our reach, enjoying strong working relationships with our partners and customers throughout North America. Contact your local Graham representative by visiting [www.grahamwindows.com](http://www.grahamwindows.com) and using the Find Your Rep feature, or call us at 800-755-6274.

**YOUR VISION. OUR EXPERIENCE.™**



MAXWELL PLACE — HOBOKEN, NY  
GT2200 Series Single Hung

