

BOARD OF COMMISSIONERS

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DEPARTMENT OF FINANCE
MARK LEWIS, FINANCE DIRECTOR
TELEPHONE: 770-278-7555
FACSIMILE: 770- 278-8910

Addendum No. 2

RFP No. 22-27

**REMOVE AND REPLACE WINDOWS & STOREFRONT DOOR AT THE
ROCKDALE COUNTY COURTHOUSE ANNEX**

August 1, 2022

RFP #22-27 is hereby amended as follows:

1. Below are questions received and corresponding answers:

A. Question: The existing windows only have “grids” on the exterior glass surface. The installed “new” storefront windows have “grids” on the interior and exterior glass surface. Advise if “grids” are required on both the interior and exterior glass surface of the new storefront windows.

Answer: See question A in Addendum 1 – grids shall be provided on interior and exterior.

B. Question: At the ballistic rated glass, advise if a Low E fill is required.

Answer: Low E is not required in ballistic glass

C. Question: See attached page #4 “Edge Engagement” paragraph of Oldcastle Glass. The ballistic rated glass requires a minimum of 1” edge engagement, without the proper “edge engagement” glass manufacturer of the ballistic glass advises the test certificate may no longer be applicable.

Answer: Ballistic windows shall be provided with test certificate according to manufacturer's specifications.

D. Question: See attached page #4 “edge engagement” detail of EFCO. The EFCO “edge engagement” storefront will only allow an engagement of 3/8”.

Answer: Ballistic windows shall be provided with test certificate according to manufacturer's specifications.

E. Question: Please review and advise if the reduced “edge engagement” is acceptable.

Answer: Ballistic windows shall be provided with test certificate according to manufacturer's specifications.

F. Question: Confirm that materials that are properly stored on site, can be billed as “stored materials” and will be paid as “stored materials”.

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Answer: Yes. Materials stored on site can be billed as stored materials.

G. Question: Confirm if storage "conex" box (2 each) can be stored on site to secure the stored materials on site.

Answer: Yes. The county will make accommodations to store on site for a short period of time while windows are being installed.

H. Question: If available, can the original construction plans and details of the installed windows be provided?

Answer: No details are available.

I. Question: On the window storefront, 1st Floor, are the aluminum frames for the 1st floor windows required to carry a ballistic rating?

Answer: Yes. The window assembly (glass & frame) shall meet ballistic rating per manufacturers specifications.

2. All other conditions remain in full force and effect.
3. If a Proposal has been submitted and anything in this Addendum causes the bidder to change the item offered or to increase or decrease the Proposal Price, the new price and/or changes will be inserted below:

4. All bidders under this Request for Proposal are kindly requested to acknowledge receipt of this Addendum on page 19 of the RFP Package.

Tina Malone

Tina Malone, CPPB CPPO
Procurement Manager
Department of Finance, Purchasing Division

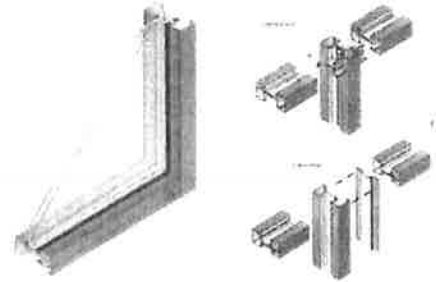
EFCO

SERIES 403 STOREFRONT FRAMING



Shear Block • Screw Spline

This economical 2" X 4-1/2" flush glaze system is available in both shear block and screw spline fabrication methods. Series 403 Storefront can accommodate all standard 1 3/4" Entrances as well as WV410 vents. This series is thermally broken, enhancing energy savings potential. Vertical mullions will accept steel reinforcement to enhance structural performance.



STRUCTURAL LOAD (ASTM E330)

VISIT EFCOCORP.COM



AIR INFILTRATION (ASTM E283)

0.06 CFM/FT²



U-FACTOR* (ANSI/NFRC 100/200)

SCREW SPLINE 0.34-0.55



STC* (ASTM E90 & E413)

SCREW SPLINE 34



WATER RESISTANCE (ASTM E547 & E331)

12 PSF



CRF (AAMA 1503)

SCREW SPLINE 57



OITC* (ASTM E90 & E413)

SCREW SPLINE 30



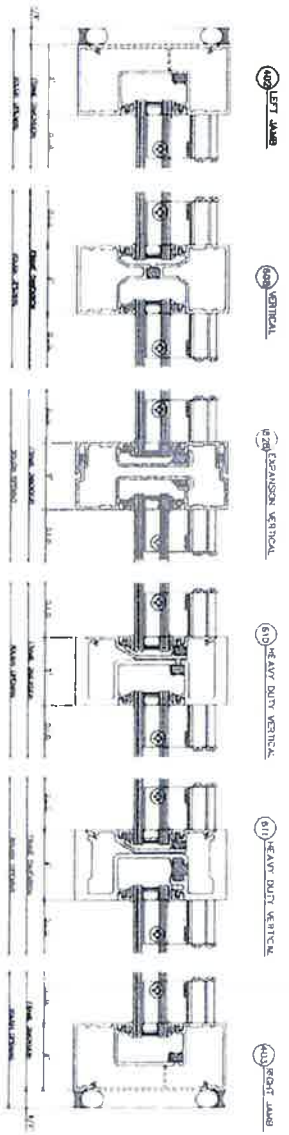
STANDARD FEATURES

- Thermally broken frames
- Screw spline construction
- Shear block construction
- The optional Roto-Vent ventilator
- 2-way corner mullions (90° & 135°)
- 3-way corner mullions (T-mullions)
- 0° - 15° and 15° - 30° variable mullions
- Accommodates up to 1-1/16" glazing
- Uniform glazing gasket is used for exterior and interior
- Various height intermediate horizontals and sills
- Accessory line of perimeter anchors, pocket fillers, door adaptors, etc.
- Anodized or painted finished available

* Performance dependent on glass selection. Please contact your EFCO sales rep for project specific performance.

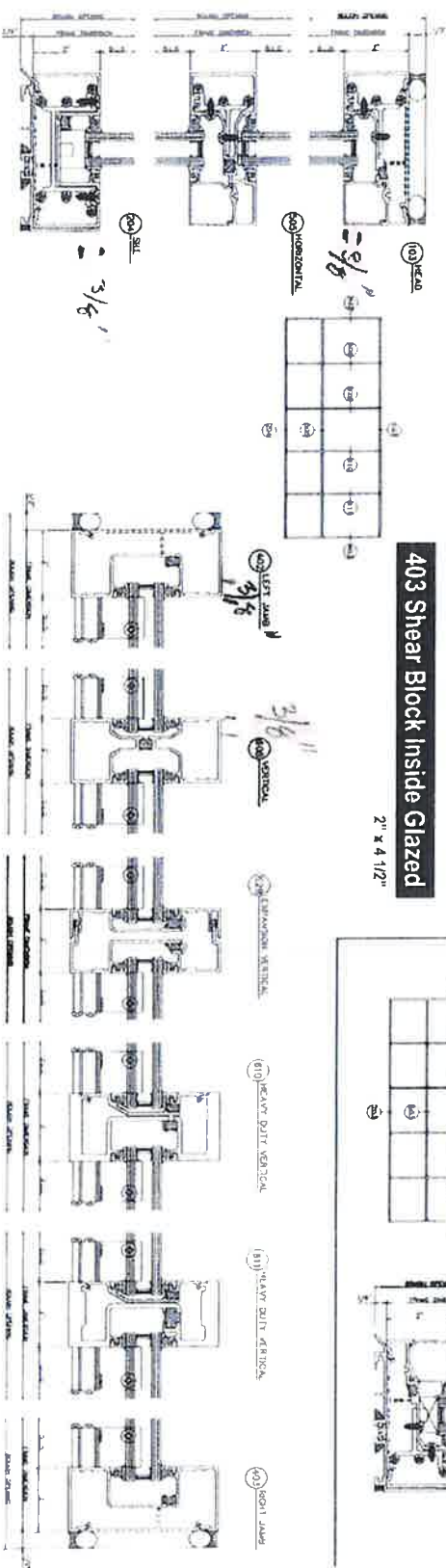
403 Shear Block Outside Glazed

2" x 4 1/2"

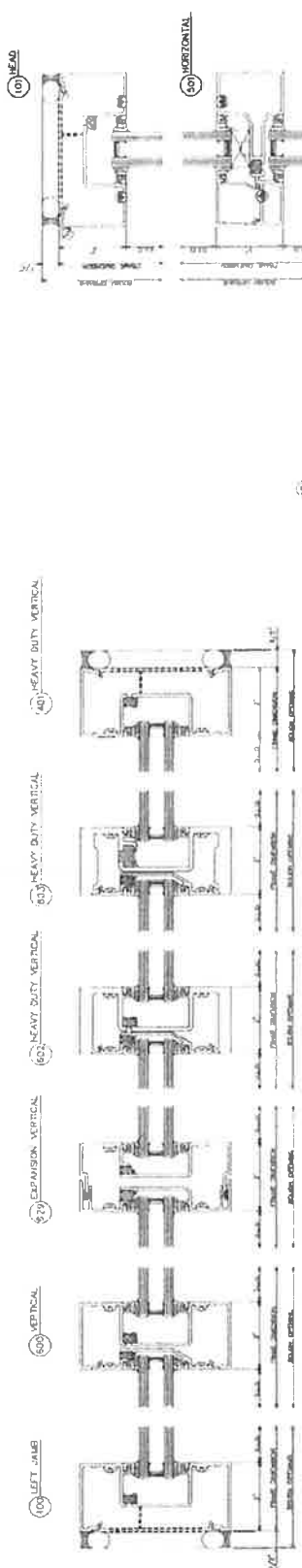


403 Shear Block Inside Glazed

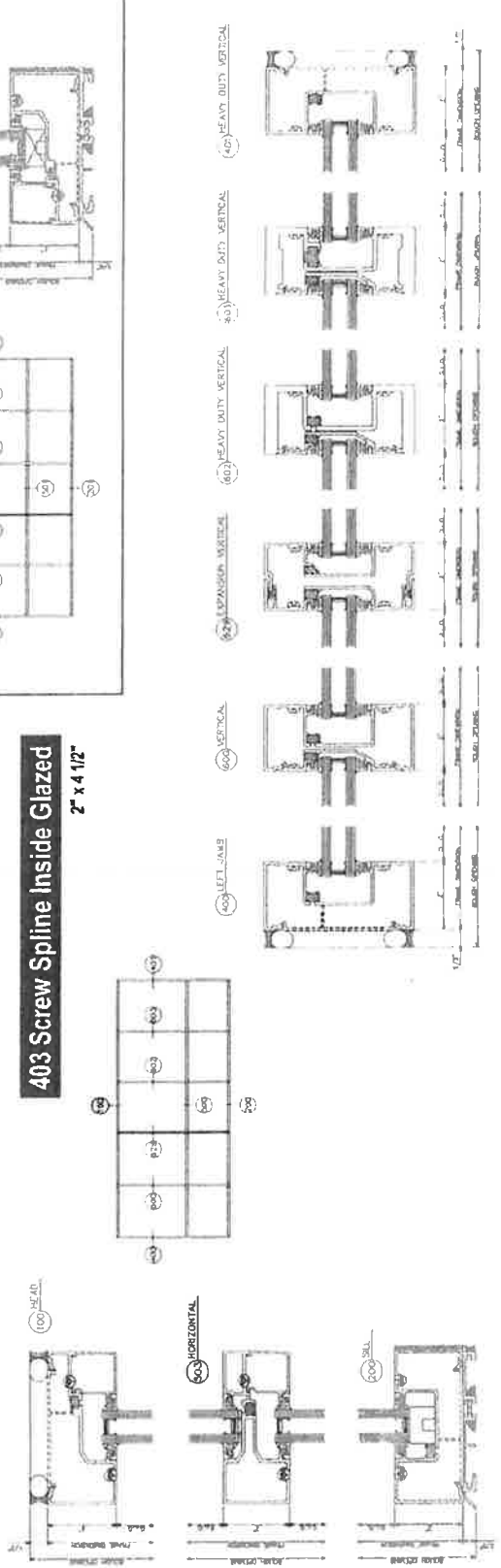
2" x 4 1/2"

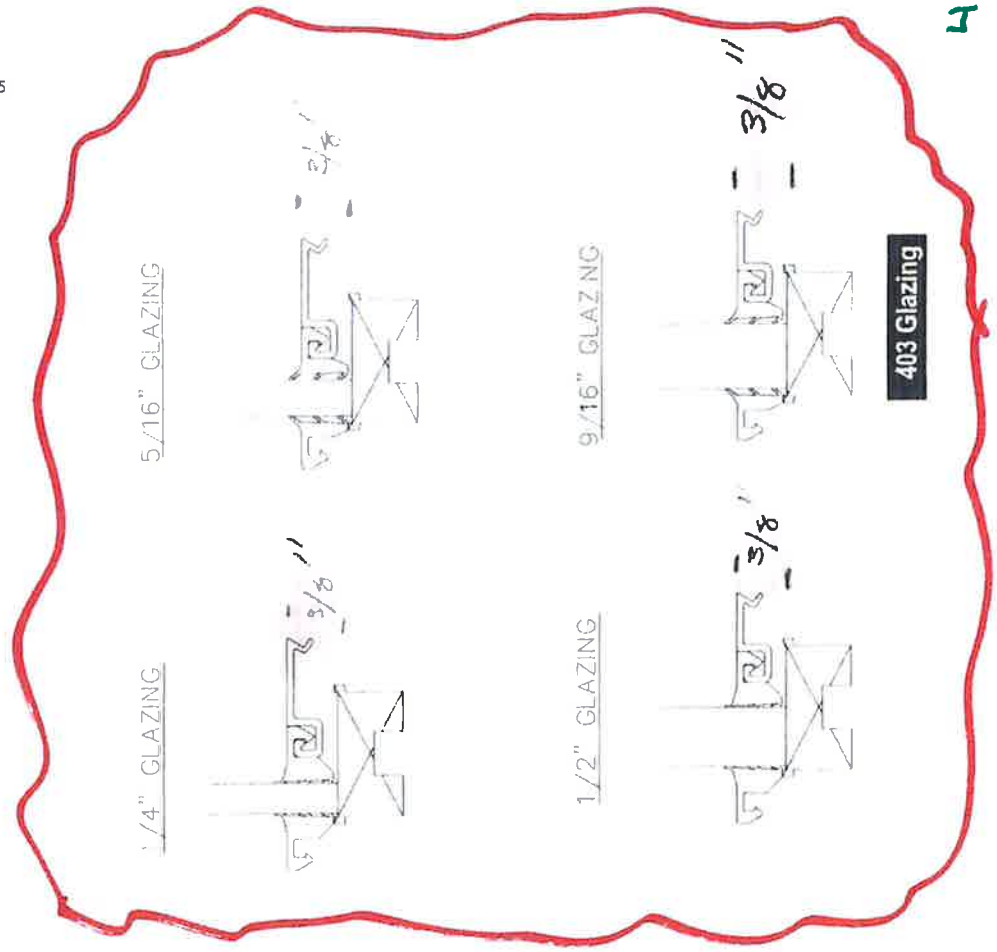


403 Screw Spline Outside Glazed
2" x 4 1/2"

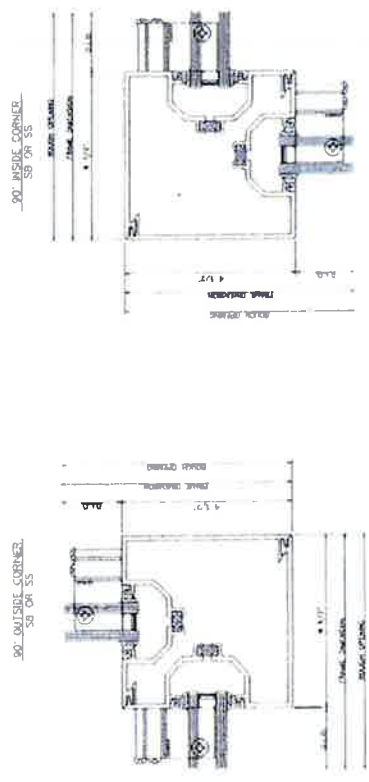


403 Screw Spline Inside Glazed
2" x 4 1/2"

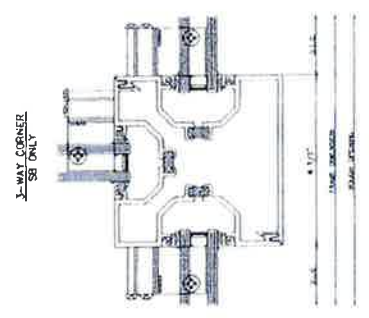


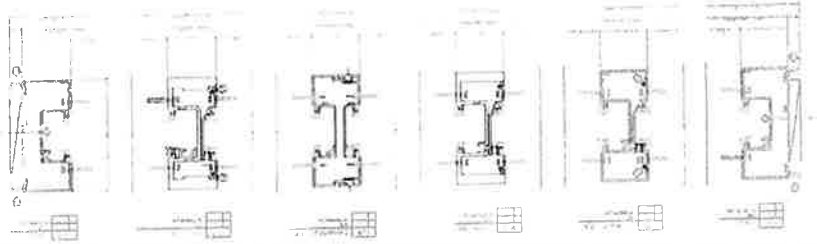
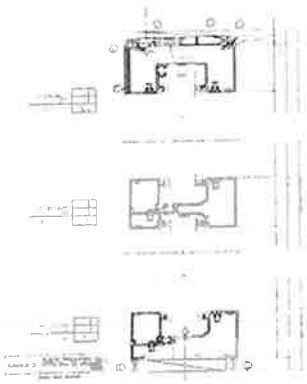


403 Glazing

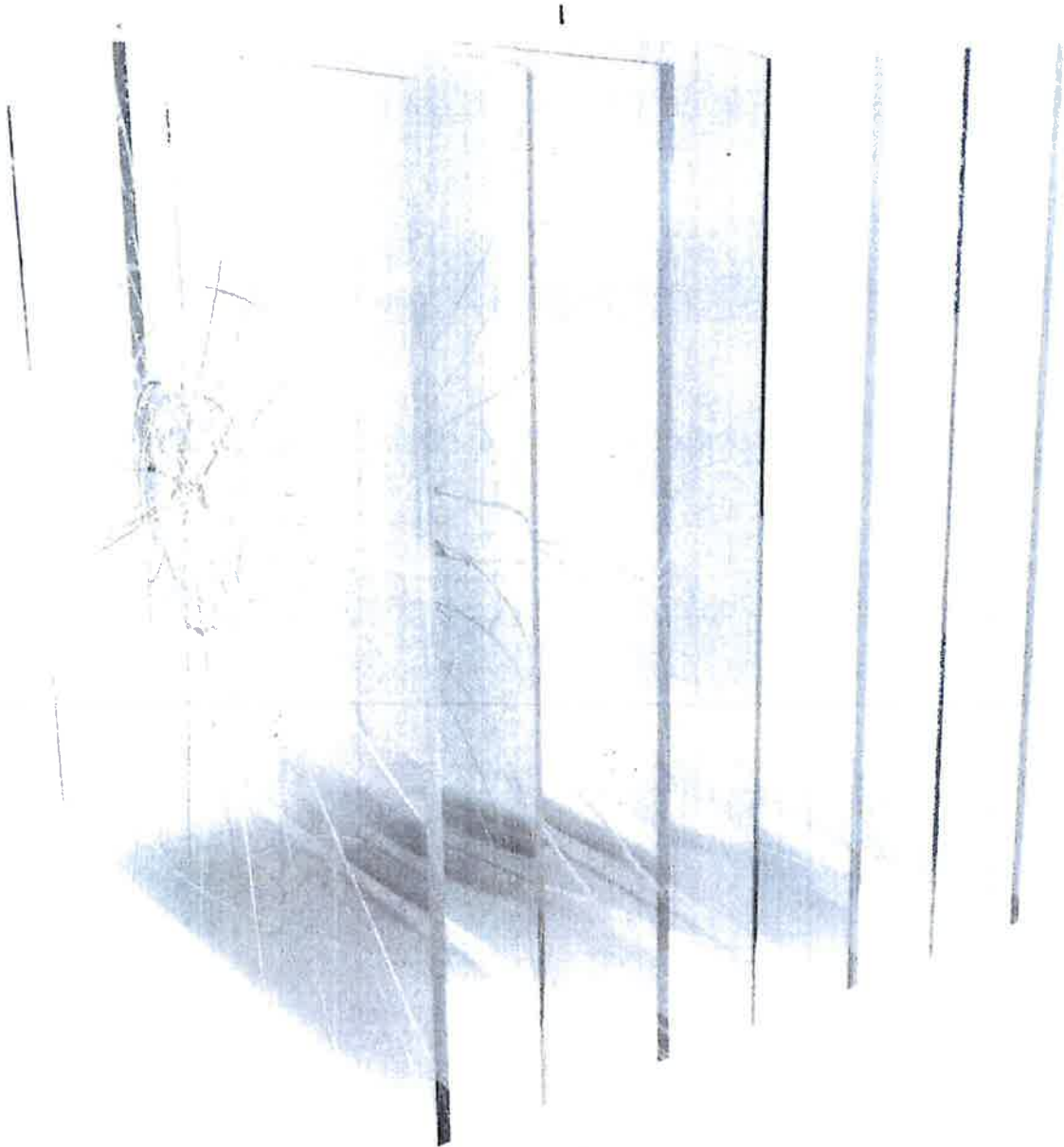


403 Corners





Architectural Glass



Bullet Resistant, ArmorResist®

Laminated glass can be designed to resist attacks by a wide range of weapons. There are many standards and test methods available. Almost all of these have two main requirements: (1) the glazing must resist penetration by a specified bullet and (2); the spall or flying shards of glass leaving the rear face, as a result of the impact, must be eliminated. Bullet-resistant laminated glass can meet both of these requirements. It is important to note that ArmorResist® glazing materials are not classified as forced-entry resistant.

Capabilities [-]

Bullet Resistant, ArmorResist® Capabilities

Bullet-resistant glazing is not necessarily resistant to a sustained physical attack or forced-entry; however, some glazing is designed to be resistant to both forms of attack. Products which have been designed to resist both forced-entry and ballistic attacks are to be found in Forced-Entry, ArmorProtect®.

Oldcastle BuildingEnvelope® Security Laminates for Use in Bullet-Resistant Applications

Trade Name	Product Code	Ballistic Rating	Resistance to Forced Entry	Thickness (inches)	Weight (lb/ft ²)	Resistance to Sustained Physical Attack	Application
ArmorResist®	211000	1 ⁽¹⁾	—	1-3/16	14.7	500LBS ⁽²⁾	AGL
ArmorResist®	211100	1 ⁽¹⁾	—	1-5/16	15.5	500LBS ⁽²⁾	AGL
ArmorResist®	212000	2 ⁽¹⁾	—	1-1/2	19.3	500LBS ⁽²⁾	AGL
ArmorResist®	213000	3 ⁽⁴⁾	—	1-3/4	24.2	500LBS ⁽²⁾	AGL
ArmorResist®	214000	4 ⁽¹⁾	—	2	25.8	500LBS ⁽²⁾	AGL
ArmorResist®	215000	5 ⁽¹⁾	—	2	25.8	500LBS ⁽²⁾	AGL
ArmorResist®	216000	6 ⁽¹⁾	—	1-13/16	22.6	500LBS ⁽²⁾	AGL
ArmorResist®	212100	—	2A	1-3/16	14.7	500LBS ⁽²⁾	AGL
ArmorResist®	212200	—	2	1-1/2	19.1	500LBS ⁽²⁾	AGL
ArmorResist®	213100	—	3A	1-3/4	22.7	500LBS ⁽²⁾	AGL
ArmorResist® Plus	221000	1 ⁽¹⁾	—	0.81	8.4	60×96	GP
ArmorResist® Plus	222000	2 ⁽¹⁾	—	1.03	11.2	60×96	GP
ArmorResist® Plus	223000	3 ⁽¹⁾	—	1.22	13.5	60×96	GP
ArmorResist® Plus	223100	3	—	0.93	11.2	60×96	GP
ArmorResist® Plus	224200	4 ⁽¹⁾	—	1.22	13.5	60×96	GP
ArmorResist® Plus	225000	5 ⁽¹⁾	—	1.28	13.6	60×96	GP
ArmorResist® Plus	226000	6 ⁽¹⁾	—	1.04	10.0	60×96	GP
ArmorResist® Plus	227100	7 ⁽¹⁾	—	1.64	18.5	60×96	GP

ArmorResist® Plus	228000	8 ⁽¹⁾	–	2.17	25.1	60×96	GP
ArmorResist® Plus	223010	–	3	1.68	18.5	60×96	GP
ArmorResist® Plus	224100	–	4	2.27	26.6	60×96	GP

(1) Indicates UL certification and permanent UL logo.

(2) Maximum size is limited by the listed weight.

(3) **GP**-glass-clad polycarbonate with exposed polycarbonate; **AGL**-all-glass laminate.

Description [-]

Bullet Resistant, ArmorResist® Description

ArmorResist® is a multi-ply laminated glass having multiple layers of glass and PVB bonded together into a monolithic unit. The rear most lite of glass is usually a thin glass that eliminates spall and therefore allows the glass to meet all the requirements of UL 752. This range of products is the most economical and durable range of bullet-resistant glasses manufactured by Oldcastle BuildingEnvelope®.

ArmorResist® Plus is a combination of glass and polycarbonate. PVB and/or a Thermo Plastic Urethane (TPU) is used as the interlayer in this product range. Polycarbonate is one of the toughest clear plastics, having 250 times the impact strength of glass and is used toward the rear of the laminate to flex and absorb the energy of the bullet. The rear face is always exposed polycarbonate with a scratch-resistant coating.

Glass Colors [-]

ArmorResist® Glass Colors

Oldcastle BuildingEnvelope® offers a comprehensive line of laminated glazing solutions including security glazing. The glass types listed below are included in the Laminated Glass offering. Oldcastle BuildingEnvelope® offers a variety of glass products to meet your architectural glazing design needs. Please contact Oldcastle BuildingEnvelope® for product availability and performance data as this information is subject to change without notice.

Laminated architectural glass can be fabricated using various glass types, including low-e, clear, low-iron, tinted, reflective, patterned or wired glass to achieve desired aesthetics or to improve solar control and thermal performance. Mass pigmented and decorative interlayers can also be used to provide a wide range of effects.

For monolithic, laminated or insulating glass unit performance data, please go to SystemSelect™, our on-line glass performance calculator.

For full details of the decorative interlayers including Vanceva® Color, Pattern, Metallic and Image see the decorative section.

Assistance Options:

3

1. Call toll-free, 866-653-2278.
2. Send e-mail to Technical Support.

Installation Guidelines [-]

Bullet Resistant, ArmorResist® Installation Guidelines

These guidelines are to be used in addition to, and in conjunction with, the guidelines in the latest edition of the Glazing Manual published by the Glass Association of North America and Oldcastle BuildingEnvelope® Glazing Instructions. These should be included as part of the glazing specifications. Failure to follow these guidelines may result in voiding of the warranty.

Setting Blocks

All laminated glass should be installed on setting blocks positioned on the lower edge at the quarter points. The setting block should have a Shore A durometer of 85 ± 5 , support the entire thickness of the glass and be 0.1" long, per square foot of glazing, but not less than 4" in length. Ensure that the setting blocks are manufactured from Santoprene, Silicone, EPDM or any other material compatible with silicone and the rest of the glazing components. Pay particular attention to compatibility when the laminated glass contains a polycarbonate.

Clearances

Adequate clearances must be maintained to prevent glass damage or breakage as a result of glass-to-metal contact. A minimum of a 1/8" face clearance should be maintained using a cushioning material. Edge clearance should be a minimum of 1/4"; however, due to the expansion of polycarbonate, any laminate containing this material should have a 1/16" edge clearance per foot of glass length. To reduce in-service breakage, avoid excessive clamping pressures, especially on thin annealed glass.

Edge Engagement

ArmorResist® and ArmorResist® Plus must have a minimum of a 1" edge engagement. Clearances and setting block allowances are in addition to this engagement. Any reduction in this edge engagement can cause the performance of the product to be reduced and the test certificate may no longer be applicable.

Weep System

The edges of laminated glass must not be exposed to standing water. All framing systems must be designed to accommodate a reliable weep system, as no cap seal is 100% reliable. In addition, it is extremely important that any cleaning solutions used on either face of the glass be allowed to drain out of the frame. It is the responsibility of the designer and the installer to ensure that the weep system works correctly. Do not glaze any laminated glass in a system without adequate drainage.

Sealants and Caulking

An appropriate sealant should be used to seal the glazing to the frame. Sealant and caulking manufacturers regularly change their products' raw materials. Therefore, it is essential that the installer checks with the appropriate manufacturer for compatibility of any product, before use. This is particularly important for security glazing containing polycarbonate, as some solvents used in sealants can cause crazing and ultimate failure of the product. This warning also applies to any varnishes, primers or paints used on the framing system. These finishes should be allowed to fully dry before glazing commences.

Threat Surface

Most bullet-resistant glazing products and some forced-entry products are not symmetrical and have a threat side, attack face or impact face. All glass of this type supplied by Oldcastle BuildingEnvelope® is shipped with a removable label specifying the impact face. This side **MUST** be installed toward the threat side. Failure to do this can seriously affect the ability of the product to resist the specified threat. This label should be left on until final inspection and/or sign-off occurs.

Storage

Shipments should be scheduled so that glass is stored on the site for a maximum of 30 days. If the glass is to be stored for longer than this, it should be removed from the construction site to a controlled environment. When on the site, store crates indoors and keep them dry. Ensure that the stored glass remains above the dew point at all times; otherwise, condensation and staining can occur. Protect the crates from exposure and possible damage from the practices of other construction trades.

Handling

Only remove the glass from the crates when it is ready to be installed. Remove glass from the front of the crate—never by sliding to the side. On security glass with exposed polycarbonate, pay particular attention to this face. Never allow glass to rest on uncushioned surfaces. When exposed polycarbonate is supplied with a protective removable sheet, this must be removed immediately after the installation. Never allow the sun to bake this protective film on to the glazing. Never allow anything to rest against the glass. **DO NOT** install any glass that has been damaged, however slightly. Even small cracks at the edges can ultimately "run" due to thermal expansion while in service. Oldcastle BuildingEnvelope® does not warrant glass breakage.

Cleaning

Do not expose the edges of any laminated glass to organic solvents, acids or any cleaner containing ammonia, which can react with the plastic components. Once the glazing is installed, the glazing contractor should ensure that the glazing is protected from possible damage caused by the construction practices of other trades. Take particular care during the initial cleaning, especially if the surfaces are severely soiled. Never attempt to remove dry deposits. **NEVER** use

a sharp blade or scraper to remove deposits or clean the glass.

First flush with water to soften and remove as many contaminants as possible. Then use a clean squeegee to remove excess water, ensuring that abrasive deposits do not get trapped between the squeegee and the glass surface. Then use a mild nonabrasive, nonalkaline cleaner and a soft, grit-free cloth to clean the glass. Rinse immediately with water, removing excess water with a squeegee.

For routine cleaning, a mild soap or detergent, with lukewarm water, can be used with a clean, grit-free cloth. Dry the surface immediately and never allow metallic or hard objects, such as razor blades or scrapers, to come into contact with the glass.

Cleaning Exposed Polycarbonate

All exposed polycarbonate has a mar-resistant coating; however, extra care must be taken to avoid scratching or other damage. Do not use any abrasive cleaners or solvents. Wash with a mild detergent and lukewarm water, using a clean, grit-free cloth. Rinse immediately with clean water and dry with a chamois or moist cellulose sponge to avoid water spots. Fresh paint, grease and smeared glazing compounds can be removed using isopropyl alcohol. Afterward, wash with warm water and a mild detergent, as noted above.

Test Standards [-]

Bullet Resistant, ArmorResist® Test Standards

Rating	Ammunition	Projectile Weight		Minimum Velocity(1)		No. of Shots
		Grain	grams	ft/sec	m/sec	
Level 1	9 mm Full Metal, Copper Jacket with Lead Core	124	8.0	1,175	358	3
Level 2	357 Magnum Jacketed Lead, Soft Point	158	10.2	1,250	381	3
Level 3	.44 Magnum Lead Semi-Wadcutter, Gas Checked	240	15.6	1,350	411	3
Level 4	.30 Caliber Rifle, Lead Core, Soft Point	180	11.7	2,540	774	1
Level 5	7.62 mm Rifle, Lead Core, Full Metal, Copper Jacket, Military Ball	150	9.7	2,750	838	1
Level 6	9 mm Full Metal, Copper	124	8.0	1,400	427	5

	Jacket with Lead Core						
Level 7	5.56 mm Rifle, Full Metal, Copper Jacket with Lead Core	55	3.56	3,080	939	5	
Level 8	7.62 mm Rifle, Lead Core, Full Metal, Copper Jacket, Military Ball	150	9.7	2,750	838	5	
Level 9	.30 Caliber Rifle, Armor Piercing, Steel Core, Lead Point Filler, Full Metal Jacket	166	10.8	2,715	828	1	
Level 10	.50 Caliber Rifle, Lead Core, Full Metal, Copper Jacket, Military Ball	710	45.9	2,810	856	1	
Supplementary Shotgun	12-Gauge Rifled, Lead Slug, and 12-Gauge 00 Lead Buckshot (12 pellets)	437	28.3	1,585	483	3	
		650	42	1,200	366	3	

(1) Maximum velocity is 110 % of the minimum velocity.

Armor Type	Test Ammunition(1)	Test Variables			Performance Requirements		
		Nominal Bullet Mass	Suggested Barrel Length	Required Bullet Velocity	Required Hits Per Armor Specimen	Permit Penetration	
I	22 LRHV Lead	2.6g 40gr	15 to 16.5cm 6 to 6.5in	320– 12m/s 1050– 40ft/s	5	0	
	.38 Special RN Lead	10.2g 158gr	15 to 16.5cm 6 to 6.5 in	259– 15m/s 850– 50ft/s	5	0	
II-A	.357 Magnum JSP	10.2g 158gr	10 to 12 cm 4 to 4.75 in	381– 15m/s 1250– 50ft/s	5	0	
	9 mm FMJ	8.0g 124gr	10 to 12cm 4 to 4.75in	332– 12m/s	5	0	

				1090– 40ft/s		
II	.357 Magnum JSP	10.2g 158gr	15 to 16.5cm 6 to 6.5in	425– 15m/s 1395– 50ft/s	5	0
	9mm FMJ	8.0g 124gr	10 to 12cm 4 to 4.75in	358– 12m/s 1175– 40ft/s	5	0
III-A	.44 Magnum LeadSWC GasChecked	15.55g 240gr	14 to 16cm 5.5 to 6.25in	426– 15m/s 1400– 50ft/s	5	0
	9 mm FMJ	8.0g 124gr	24 to 26cm 9.5 to 10.25in	426– 15m/s 1400– 50ft/s	5	0
III	7.62 mm (308 Winchester) FMJ	9.7g 150gr	56cm 22in	838– 15m/s 2750– 50ft/s	5	0
IV	.30-06 AP	10.8g 166gr	56cm 22in	868– 15m/s 2850– 50ft/s	1	0
	Special requirement (See Sec. 2.2.7 of standard)	(2)	(2)	(2)	(2)	0

(2) These items must be specified by the user.

Product Details

Click to expand [+] / collapse [-]. Click link on right to download file.

CAD Details

BIM Models

Specs

Structural Charts

Description

Download

Bullet Resistant, ArmorResist Sell Sheet [PDF]

SELECT ALL

Architectural Glass Projects