

Stone Security Engineering has put together two security vendor lists for your reference and future use. These lists include security vendors who provide blast-resistant curtainwalls, windows, and doors. This is followed by a similar list showing wall/wall products, building, and FRP vendors. Additionally, a link is provided to the list from the PDC for vehicle barriers that has passed ASTM F2656 during their testing. With over 100+ different products and a large suite of vendors, this is a great reference. While this document provides a robust overview of many vendors, it is not meant to be a complete list.

### Doors, Windows, Curtainwalls

Organization	Product				Brief Description From Vendor Website
	Film	Curtainwall	Window	Door	
<a href="#">3M</a>	X				Exceptional performance. The first of its kind, the 3M™ Ultra Series films are made from clear, tear-resistant film. This film delivers superior performance over standard polyester films in blast and impact events, yet still maintains a high level of optical clarity. Ultra Series films can also be combined with many 3M™ Sun Control Films to give you the best of both worlds.
<a href="#">ACE</a>	X				Applied to ordinary glass, ACE makes windows smash-resistant, bullet-resistant and bomb-resistant. A fraction of the cost and weight of conventional ballistic or reinforced glass, ACE can help you: <ul style="list-style-type: none"> <li>-Retrofit existing buildings and windows</li> <li>-Secure buildings quickly and discretely</li> <li>-Use the existing window framing and wall assembly without undertaking costly re-construction or reinforcing</li> <li>-Reduce costs</li> </ul>
<a href="#">Action Bullet Resistant</a>			X	X	ABR fabricates bullet resistant windows and doors, blast resistant windows and doors, and also non-bullet resistant storefronts and architectural metal systems. Our systems are designed to be installed in new or retrofit construction, for use in court houses, military bases, police stations, guard booths, banks, schools, gas stations, check cashing facility, convenience stores, or any other warranted application.

Organization	Product			Brief Description From Vendor Website	
	Film	Curtainwall	Window		
<a href="#">Ambico</a>			X	X	Ambico products can be configured into borrowed light and sidelight frames and has developed two distinct product lines: decorative and engineered. Acoustic door and frame products are designed to meet a wide range of STC standards. Bullet resistant items have been manufactured to withstand stringent ballistic attack including armor-piercing ammunition. Blast resistant products have been developed to survive a wide range of explosive pressures. Stainless steel products are fabricated to provide protection in a broad range of corrosive environments. All Ambico engineered products have been tested for performance at independent laboratories.
<a href="#">APSG</a>			X		American Physical Security Group provides a complete line of Anti-Ram vehicle barriers, as well as forced entry/ballistic resistant and blast mitigation doors, louvers, security stations and windows for governmental, commercial and architectural applications.
<a href="#">Armortex</a>			X	X	Armortex® blast resistant products are designed to meet government and private industry standards to address the threats to facilities and occupants. Though it is not always possible to control the setback or standoff distance, windows and doors can be designed to mitigate most blast incidences. With Armortex® designs blast mitigation can be achieved to lessen injury and loss of life.
<a href="#">Assa Abloy</a>			X		ASSA ABLOY Door Security Solutions provides end-users with unsurpassed security and life-safety solutions, and the essential support services to ensure well-functioning doorway systems. This is all accomplished by combining the strengths of industry-leading door and hardware brands.
<a href="#">Blue Ember Technologies</a>				X	Our proprietary door construction combines the latest in material science and production techniques to bring you a blast door that is: -Fully Tested [Live (Arena) Blast Tested from 3psi – 7psi] -Lightweight (75# per door leaf) -Low Cost -Supplied with a Lifetime Warranty -Non-corrosive (ideal for salt air and other harsh environments) -Full architectural flexibility (flush, vision, operable transoms) -Ideal for new and retrofit construction -Available in a variety of colors

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	Film	Curtainwall	Window	
<a href="#">Booth Industries Limited</a>			X	Booth is able to design doors to withstand in excess of 800 Bar pressure. It is fully conversant with all major design and construction codes, and it provides turnkey packages of design, fabrication, project management, supply, installation and commissioning. It is a long established provider of blast and radiation shielding doors to the MOD, including the Atomic Weapons Establishment, Aldermaston. Booth is also a long established provider to the global offshore oil and gas sector, and is a prominent supplier of fire and blast doors and walls for exploration platforms.
<a href="#">Boyd Aluminium</a>			X	Boyd offers a wide selection of blast resistant window systems. Each series is available with incredibly versatile installation options and meets requirements for GSA-TS01-2003, UFC 4-010-01 with changes 1, 22 2007, and Anti-Terrorism Force Protection. Boyd’s product lines include Certified Level 1 options—the safest rating available. We also offer Certified Level 2 options.
<a href="#">Cascade Coil</a>			X	GuardianCoil® is a woven wire blast mitigation product installed as a window covering or as in-wall shielding behind wallboard to capture and absorb airborne glass shards and fragments. GuardianCoil® also works as a safety guard around machinery, heavy equipment and testing apparatuses to contain high-powered energy impacts. The woven wire mesh collapses around the fragment projectile, safely dissipating its energy. This natural enveloping mechanism significantly reduces the chance of injury or damage to people and property. Cascade Coil custom manufactures our Guardian Coil® product in a wide variety of wire types, gauges and weave sizes.
<a href="#">Ceco Door</a>			X	Ceco Door has developed Blast Resistant Opening Solutions to meet US Government, Military, Embassy safety and security objectives for blast resistance. Providing extra protection against explosions and excessive force, our blast resistant openings meet or exceed the stringent manufacturing and performance requirements of the Department of Defense, Department of State, Department of Homeland Security and other regulatory groups.

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	Film	Curtainwall	Window	Door	
<a href="#">Curries</a>				X	CURRIES is able to provide Blast Resistant doors and frames with a number of options including glazed doors, borrowed lites, transoms, and pairs with increased requirements to meet UL Government, Military, and Embassy safety and security objectives for blast resistance.
<a href="#">DeanSteel</a>			X	X	Deansteel Manufacturing fabricates a complete line of independently tested and analyzed door, frame and fixed window products to withstand a wide variety of ballistic and blast threats. We also offer a wide variety of custom fabricated ballistic resistant products such as transaction windows with deal trays, package passers, and return fire, opening windows.
<a href="#">Eastman Chemical Company (LLumar)</a>	X				From bomb-blast protection to theft deterrence - LLumar security window film provides a line of defense against the unexpected
<a href="#">Electric Power Doors</a>				X	EPD has engineered doors to handle all situations from low to very high blast load ranges. The most common styles of blast doors are: -swinging, -horizontal sliding, and -vertical lifting doors. Blast Doors are custom designed and manufactured specifically for each customer's application.
<a href="#">Fabrication Design Inc.</a>				X	Contact FDI for additional information about their offering of blast resistant doors.
<a href="#">Fensys Middle East</a>			X	X	Fensys Middle East is the sole distributor and licensed installer of Action Bullet Resistant Inc, USA which is manufacturing high quality bullet and blast resistant windows, doors & curtainwall. The products are tested and approved for bullet resistance levels I to VIII, analytically tested to meet high levels of DoS standards and medium levels GSA/ISC, DoD minimum UFC. The aluminium/steel facades are also blast resistant and which can withstand high levels of blast pressures in different ballistic and industrial environments.

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	Film	Curtainwall	Window		
<a href="#">Fleming Door Products</a>			X	<p>Custom engineering allows aesthetic choices to be combined with technical requirements:</p> <ul style="list-style-type: none"> <li>-Made for exterior openings and high risk interior areas to resist pressure against a door</li> <li>-Certified and third-party tested to meet all nationally required guidelines and legal requirements</li> <li>-Pre-engineered products can resist +/-12 PSI force (per square inch); impulse load</li> <li>-Custom products can resist in upwards of 30 PSI (per square inch) and 80 impulse load, depending on requirements</li> </ul>	
<a href="#">France Metal Doors and Windows</a>			X	X	Contact France Metal for additional information about their offering of blast resistant doors and windows.
<a href="#">Graham Architectural Products</a>			X	X	Graham Architectural Products began manufacturing heavy commercial and architectural grade windows in York, Pennsylvania since 1972. For over 40 years, Graham has become known for its accurate reproductions of historical windows – down to the last detail. During that same time, Graham has added a wide variety of products to its line-up including standard windows and doors and blast resistant, hurricane resistant and acoustical specialty products.
<a href="#">GlassLock</a>	X		X		Recognized as one of the industry leader in the use and installation of Security Window Film as well as security glazing product retrofits for controlling glass failure caused by bomb blast, windstorm, earthquakes, spontaneous glass failure and forced entry. With years of developing , testing and installing security glazing products to meet Government Specifications GlassLock can meet all your protective glazing requirements.
<a href="#">Habersham</a>			X	X	Habersham has completed blast door (Singles and Pairs) and windows assemblies that are certified through structural analysis by reputable blast engineering firms.
<a href="#">Hanita Coatings</a>	X				SafetyZone Safety and Security window films hold shattered glass in place, delivering shard protection and minimizing the threat of glass-related injuries resulting from impact, collision, blast or natural disaster.
<a href="#">Haverkamp</a>	X				PROFILON® ER1 is a highly flexible, 4-ply security film with impact and explosion resistant properties.

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	Film	Curtainwall	Window	
<a href="#">Hopes Window</a>		X	X	X Hope's® Windows, Inc. is a manufacturer of custom steel and bronze windows and doors. Each window and door Hope's creates is proudly handcrafted to meet an owner's, architect's and builder's most exacting and demanding requirements. In addition to architectural products, Hope's offers a full line of windows and doors for detention and blast resistant applications, including 60, 90, and 120 minute fire rated wall systems.
<a href="#">International Door Incorporated</a>				X International Door Inc. offers a full line of single and pair swinging blast-resistant doors for 100 PSF and higher. Vision light configurations range from peep sites to dual glazed window systems. Single and bi-parting sliding door systems are also available with either manual or power controls. Tandem assemblies, as well as double egress options are available as well. Doors can also be fire-rated for up to 3 hours.
<a href="#">Jamison Door Company</a>				X Since 1906, Jamison has pioneered the cold storage door industry with innovative designs, unsurpassed product quality, and outstanding customer service.
<a href="#">JRJ Alum Fab Inc</a>				X Contact JRJ Alum Fab for additional information about their offering of blast resistant doors.
<a href="#">Kawneer</a>		X	X	X Our comprehensive offering of solutions, allow architects to design for the whole building. Our products conform to the range of government standards and beyond: DoD, ISC/GSA and DOS criteria as well as custom blast mitigation standards.
<a href="#">Krieger Specialty Products</a>			X	X Krieger's blast/pressure resistant doors and windows are used in commercial and industrial installations. The doors are designed to protect personnel and property from explosions and explosion borne missiles.
<a href="#">Madico</a>	X			

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<a href="#">Middle East Metal and Wood Industries, Co. LTD</a>			X	METALCO was founded on year 1997 and started as a door manufacturer for the local market in the Kingdom of Saudi Arabia. Through the years METALCO has expanded its horizons to the GCC, Middle East and Africa. METALCO is considered to be one of the leading door manufacturers in the Middle East. METALCO manufactures normal and fire rated hollow metal doors, normal and fire rated wooden doors and combination of wood leaf with steel frame. Metalco Blast Resistant Doors have a maximum blast load of 10 psi (70 Kpa) and was been tested in accordance with AISC (9th Edition) and K.S.C. Specification SPC-1427-SC-4100-02, Rev. 01	
<a href="#">Norshield</a>		X	X	X	Norshield manufactures a complete line of force protection doors, windows, guard booths, security louvers, storefront systems and other building facades to resist attack from ballistic, forced entry and bomb blast threats. Protection levels ranging from UL Level 1 to UL Level 10 ballistics, attack protection from 5 minutes to 60 minutes and blast mitigation up to 60 psi, including Level C and Level D of the GSA Security Criteria and any Level required under the Unified Facilities Criteria UFC-4-010-010.
<a href="#">Oldcastle Glass</a>		X	X	X	Oldcastle BuildingEnvelope® is an unquestionable leader in blast mitigation technology. Our products include blast mitigation architectural glass, blast mitigation curtain wall, windows, entrances and storefronts. Our exclusive BlastMax® meets the most stringent codes for blast resistance.
<a href="#">Overly Door Company</a>			X	X	We offer a full line of single and pair swinging blast-resistant doors. Vision light configurations range from peep sites to dual glazed window systems. Single and bi-parting sliding door systems are also available with either manual or power controls. Tandem assemblies, as well as double egress options are available as well.
<a href="#">Pittsburgh Corning</a>			X		Our patent-pending blast-resistant panels have been designed and tested to meet and exceed stringent government, military and international building requirements to give you the beauty of glass – with the utmost protection.

Organization	Product				Brief Description From Vendor Website
	Film	Curtainwall	Window	Door	
<a href="#">Protective Door Industries</a>			X	X	Protective Door Industries (PDI's) blast resistant doors and windows assure blast protection and dependable service under critical conditions for interior or exterior environments including: Chemical, paint or hazardous material storage rooms, Pharmaceutical, Bioscience, refineries, ammunition depots, missile tests and launch sites.
<a href="#">Ross Security Solutions</a>			X	X	Ross Security Systems is a manufacturer and integrator of physical security products designed to provide comprehensive <u>Anti-Terrorism / Force Protection (AT/FP)</u> solutions for government, military and homeland security applications. Ross works closely with its customers and strategic partners to design, implement and support site-specific security systems that are risk-level appropriate and affordable to purchase and maintain.
<a href="#">Security Metal Products Corp</a>				X	Started in 1955, Security Metal Products manufactures standard and custom hollow metal doors and frames for many applications including blast resistance.
<a href="#">SolarGard</a>	X				Solar Gard Armorcoat safety films help keep shattered glass intact and protect building occupants. Anything from a stray golf ball to severe weather can send dangerous shards of glass flying, subjecting people and property to serious damage, injury or worse. Armorcoat safety films help keep dangerous shards together on impact, whether due to accidents, acts of nature, attempted break-ins, vandalism or bomb blasts.
<a href="#">Sure Star</a>				X	Shure Star offers a complete line of blast & high pressure doors. We have existing designs up to 8000 psi, making our design capabilities virtually limitless. Designs can consider any combination of performance requirements including, fragmentation, seismic conditions, over pressure. Blast door options include sliding, swinging, and vertical lift. We offer many unique solutions for all your protective needs.
<a href="#">Tamcor</a>				X	Contact Tamcor for additional information about their offering of blast resistant doors.



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	Film	Curtainwall	Window		
<a href="#">TASK FZC</a>			X	TASK has the full engineering capability to design and manufacture blast resistant door systems to meet the safety requirements of the end user. We supply all components including the frame, anchorage, hinges, latching hardware, etc. Blast resistance refers to a high pressure shock of very short duration (milliseconds), with pressures decaying with distance and time. Our door systems (single and pair) can withstand the high impact of an explosion up to 43 psi. They are tested as low range / light door system to a high range / heavy door system. Door type construction is based on dynamic evaluation of the system as the pressure ranges from PSI 2 to PSI 35 while its impulse ranges to determine the level of damage from minimum peak deflection to non-catastrophic failure.	
<a href="#">Thermolite</a>			X	The Thermolite Window System is a state-of-the-art patented window system designed to provide protection against bomb blast, ballistic, hurricanes, audio espionage and create an immediate energy cost return on investment (ROI).	
<a href="#">Total Security Solutions</a>			X	X	Total Security Solutions offers you a complete line of superior quality products with which to create your custom-crafted, bullet-resistant barrier system. Calling on three decades of innovation and experience, and state-of-the-art fabrication and manufacturing processes, we'll quickly address your security challenges and design a system that meets your unique needs.
<a href="#">US Aluminum</a>			X		C.R. Laurence Co., Inc. (CRL) is the leading supplier to the glazing, architectural, railing, construction, industrial, and automotive industries. Offering more than 60,000 products, the company serves the industry from locations throughout North America, Europe, and Australia.
<a href="#">US Bulletproofing</a>		X	X	X	United States Bullet Proofing's product line consists of <b>Safe rooms, Guard booths, Doors, Windows, Wall Armor, and High Security Accessories</b> . Our products can meet UL 752 Level 8 Standards for Ballistic protection. With regard to Blast capability, our ballistic products meet or exceed GSA Level C or D blast criteria. Our Forced Entry Products have been tested to meet the 60 minute criteria of the Department of State standard.

Organization	Product			Brief Description From Vendor Website
	Film	Curtainwall	Window	
<a href="#">YKK AP Inc.</a>		X	X	YKK AP is a world leader in the manufacture of aluminum building products. Using only the best materials and technologies, YKK AP makes entrance, storefront, curtain-wall and window wall systems for the commercial building industry. To ensure control of quality, delivery, and cost, we have vertically integrated all manufacturing at our technologically advanced manufacturing facilities in Dublin, Georgia.
<a href="#">Wausau Window</a>			X	With more than ten years' experience in blast hazard mitigation, Wausau's expertise can be leveraged on your project, including: standard operable windows, fixed window wall or curtainwall, or systems custom-designed to your unique requirements.

### Walls and Structure Retrofits

Organization	Product			Brief Description by Company
	Walls	FRP	Buildings	
<a href="#">Cintec International</a>	X			Cintec International is a globally recognized leader in engineering research and development. Merging creative thinking with solid engineering principles, Cintec International has solved thousands of client problems all over the world with our innovative solutions for stabilizing historic and important structures with our Masonry Anchoring Systems and helping people survive in areas of conflict with our Explosion Blast Protection Mitigation solutions.
<a href="#">Defense Tech</a>	X			Defend-X® Blast Mitigating Structural Coating is strong yet flexible. Structures coated with Defend-X® can withstand blasts up to 20 times greater than an untreated structure can endure. Defend-X® can significantly increase the structural integrity of many common construction materials, for example; wood, steel, concrete, brick and many more. In the event of a blast, treated structural components will flex but stay together. Secondary fragmentation is one of the most lethal hazards during an explosion.

Organization	Product			Brief Description by Company
	Walls	FRP	Buildings	
<a href="#">Freyssinet</a>		X		Composite reinforcements bonded using resin to concrete, steel, masonry or timber structures provide a reliable, durable reinforcement solution. Freyssinet offers turnkey services that include the design, sizing and installation of Foreva® reinforcements: <ul style="list-style-type: none"> <li>- Carbon fibre fabric reinforcements,</li> <li>- Pultruded carbon fibre strips,</li> <li>- Pultruded carbon fibre rods,</li> <li>- Kevlar fibre fabric reinforcements.</li> </ul>
<a href="#">Fyfe</a>		X		Fyfe offers a variety of composite products for structural strengthening, including carbon fiber reinforced polymers (CFRP) and glass fiber reinforced products (GFRP).
<a href="#">Hesco</a>	X			HESCO Barriers Blast Wall Plus EEC has been a key component in providing Force Protection since 1991. HESCO Barriers Blast Wall is extensively used in the protection of personnel and key assets .
<a href="#">Hunter Buildings</a>			X	Hunter Buildings is uniquely equipped to custom design and manufacture blast-resistant buildings to meet your most detailed specifications.
<a href="#">Industrial Safety Modules</a>			X	These engineered personnel and storage blast resistant modules can be designed to meet your specific needs with configurations for Controlled Entry Point Offices, Equipment/Sensitive Substance Storage, Restrooms, and numerous other applications. All components were found to respond at or below "low-medium" range of damage when subjected to a 8 psi free-field blast load with 200 msec duration. Damage to non-structural components such as conduit pipes, light fixtures, HVAC unit and interior sheathing is expected to be minor under the 8 psi free-field blast load with 200 msec duration.
<a href="#">InterDAM</a>	X			This engineered wall product provides protection of both personnel and equipment from the effects of explosions, fire and impact, in hazardous environments such as offshore oil and gas platforms. Blast resistant and/or fire rated walls and cladding, engineered to suit the application.
<a href="#">Kalwall</a>	X			Blast resistant systems meet DOD UFC 4-010-01 Anti-Terrorism Force Protection (ATFP)

Organization	Product			Brief Description by Company
	Walls	FRP	Buildings	
<a href="#">LineX</a>	X			Known in research circles as an Energy Resistant Coating (ERC), the PAXCON coating is flexible, yet stronger than steel. This means that walls outfitted with the unique PX-3350 coating can withstand explosions up to 20 times greater than a normal, uncoated wall. In the event of an explosion, the PAXCON coated walls flex, but stay together. PX-3350 can be applied to numerous types of structural materials, including wood, steel, plasterboard, concrete, brick, block and more.
<a href="#">NDS Blast Services Limited</a>			X	NDS Blast Services Ltd. and its partnered companies combined have been manufacturing modular units for the past 30 years. NDS is Part-10 Certified and its manufacturing network has the ability to build 1 to 4.5 PSI heavy wood BRMs as well as 6 to 8 PSI steel BRMs.
<a href="#">RedGuard</a>			X	Engineered for blasts of 8 psi (200 msec in duration), blast-resistant buildings and adheres to API 753 and meet the criteria for a low to medium response rating by the American Society of Civil Engineers. Standard lease sizes are 8' x 10', 8' x 20' and 8' x 40'.
<a href="#">Ruskin</a>	X			The BL520DD "Blast Resistant" Louver is a Stationary Wind Driven Rain Louver 5" deep with horizontal sightproof blades. It features: -Independent 3rd Party Tested -Peak Pressure of 16.6 psi and an Impulse of 84 psi-ms Tested -ASTM "No Hazard" Hazard Rating -Meets GSA Performance Condition 2 or Better -Sight Proof Horizontal Aluminum Blade Construction -Excellent Pressure Drop Rating
<a href="#">Safe Haven Enterprises</a>			X	Safe Haven Enterprises custom fabricates Blast, Forced Entry and Ballistic Resistant modular buildings and portable units. Safe Haven units are designed to provide protection of personnel and equipment in any application.
<a href="#">Specialty-Products</a>	X			Dragonshield-BC polyurea consists of a plural-component spray applied polymer technology and developed for blast mitigation and fragmentation/spall containment. Properties include: Ultra high tensile strength, moderate elongation and hardness.

Organization	Product			Brief Description by Company
	Walls	FRP	Buildings	
<a href="#">Structural Group</a>	X	X		<p>STRUCTURAL TECHNOLOGIES' proprietary products are used to increase the load-carrying capacity of reinforced concrete and other structure types, including masonry, timber and steel. These systems may be used alone, or in any combination - including other commercially available products to solve complex structural load requirement changes:</p> <p>V-Wrap™ Carbon &amp; Glass FRP Composite Systems            DUCON® Micro-Reinforced Concrete Systems            VSL® External Post-Tensioning Systems</p>
<a href="#">Tata (Bi-Steel)</a>	X			<p>Bi-Steel provides superior performance to reinforced concrete in situations where structures need to be protected against explosive attack. This high performance steel/concrete composite material has been fully tested and meets the requirements of the UK and US Governments for protective structures.</p>
<a href="#">Tecdur</a>	X			<p>The bolted or welded wallpanel system 'IDM ProPanel' secures the safety of your environment. Lightweight wall systems of all fire ratings with blast rating if required. blast wall can be regarded as a firewall for which an additional functional requirement applies, i.e. that apart from the usual wind loading, the wall needs to be able to resist a certain blast overpressure. As a consequence the IDM Propanel and the IDM Panel Welded, in principle can be considered as a blast wall. To extend the favourable characteristics of our IDM-Propanel systems to blast wall applications with large spans and higher blast loads, a hybrid shape has been developed comprising columns integrated in the wall system at a relatively short spacing (2.0 - 3.0 metre), to carry the blast loads transferred from IDM-Propanel infill panels. In this hybrid shape a discrimination has been made between the load bearing function (hot rolled carbon steel columns) and the separating function, i.e. the infill panels. This 'best of both worlds' solution takes advantage of both the favourable high strength characteristics of hot rolled sections and the light weight, separating and insulating properties of the walls. Especially for walls that are required to have a stainless steel external skin this blast wall is a very competitive structure.</p>

### **DoD Barrier Anti-Ram Vehicle Barrier List (100+ products) Updated October 2015**

The DoD Anti-Ram Vehicle Barriers list includes vehicle barriers successfully tested in accordance with ASTM F2656, Standard Test Method for Vehicle Crash Testing of Perimeter Barriers or U.S. Department of State (DoS) SD-STD-02.01, Vehicle Crash Testing of Perimeter Barriers and Gates. Barriers on this list have been tested by certified testing facilities or laboratories and reports have been submitted, reviewed, and validated by the Protective Design Center (PDC) in the manner stated below. This list does not include any barrier, which allowed a dynamic penetration in excess of the distance associated with an ASTM F2653 P3 penetration rating during the test. [Link](#)