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**CampusSafety** PARTNER SERIES

# Hiring a Window Security Vendor? Watch Out for These 7 Red Flags

**NGS**



## Hiring a Window Security Vendor? Watch Out for These 7 Red Flags

Glass windows and doors are the most vulnerable areas of a building. When reinforcing the glass on your campus, be sure to hire the right vendor for the job.

Glass windows and doors are inviting targets for criminals, be they thieves, rioters, vandals, or active assailants. That vulnerability was clearly evident in March when an active shooter killed three students and three adults at the **Covenant School** in Nashville, Tennessee. The perpetrator shot through the glass and entered the building's locked doors within seconds.

**Click here** to watch the security camera footage from the Nashville tragedy to see how quickly the perpetrator gained entry through the glass. (Viewer discretion advised).

Eleven years earlier, the gunman responsible for the 2012 Sandy Hook Elementary School mass shooting gained access to that campus by smashing his way through the locked glass front entrance doors. Twenty students and six adults lost their lives that terrible day.



Glass window and door reinforcement products can delay forced entry, while reducing an intruder's ability to see inside a building and containing flying shards of glass from bomb blasts, gunshots, windstorms, seismic events, and human impact.

In both of these cases, had the glass been hardened with security window film or another glazing security product, the perpetrators would have been delayed, giving first responders precious time to arrive at the scene and potentially save lives. Reinforcing the glass windows and doors also would have given students and staff members more time to lockdown and shelter in place or evacuate.

### **Reinforcing Glass Windows and Doors Saves Lives**

Thankfully, there are cost-effective solutions that can harden glass and improve campus safety and security. When installed properly, these products can save lives by delaying forced entry, reducing the perpetrator's ability to see his targets, and containing flying pieces of glass from bomb blasts, gunshots, windstorms, earthquakes, and human impact.

For example, the gunman responsible for the 2018 Marjorie Stoneman Douglas High School mass shooting in Parkland, Florida, was prevented from setting up a sniper position on the third floor of his school because hurricane-resistant windows were installed. Although the Parkland mass shooting still resulted in 17 fatalities, the death toll could have been much higher if the gunman had been able to accurately shoot at students through glass that wasn't hurricane resistant. Fortunately, the reinforced glass prevented him from doing so.

The benefits of glass-reinforcement solutions are compelling... so compelling in fact that the **Federal Commission on School Safety** and the **Sandy Hook Advisory Commission** report both recommended security window film for schools. Following the Uvalde tragedy, the **Texas Education Agency (TEA) mandated safety and security window film in schools.**

## **Watch Out for These 7 Red Flags When Considering Vendors**

Although the many benefits to reinforcing the glass openings on campus are obvious, finding a qualified vendor for the installation of security window solution can be challenging.

If your organization encounters any one of these seven red flags when vetting a window security installer, it would be wise to move on and look elsewhere.

### **1. The vendor claims their window film is “bullet-proof.”**

No window film is bullet-proof, but some vendors mislead potential customers by conducting tests utilizing window and glass types that normally aren't used in schools and other buildings.

For example, the vast majority of public buildings and K-12 campuses don't have half-inch plate glass installed. They normally have quarter-inch single panes or one-inch

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IGU units on their buildings, neither of which become bullet-proof when security film is applied. However, some companies take 15-mil thick polyester film and laminate it to half-inch plate glass.

Not only are the tests by these unscrupulous vendors being done on glass that is practically never installed on campuses, half-inch plate glass, under the right test conditions, can achieve a Level 1 or Level 2 ballistic performance without any film. The film installed on half-inch glass has nothing to do with that window's ballistic performance.

To read the International Window Film Association's stance on this topic, click **here**.

### **2. The vendor doesn't test the frame holding the glass to ensure it meets your desired ballistic performance criteria.**

In order for a glass window or door to be a ballistic-rated system, the frame and glass



must both be ballistic rated. If the glass is reinforced but the frame holding it is not, the glass would probably hold up during an intrusion attempt, but the frame could fail, allowing an intruder access to your facility.

### **3. The vendor doesn't take into consideration how first responders will be able to access the building.**

Products that deny access to intruders might sound like better solutions than products that only delay access, but school officials must consider the possibility that an active shooter/active assailant could be inside the building rather than an intruder. Additionally, campus officials must consider other potential situations that could occur, such as a fire or HAZMAT emergency.

In all of these cases, ballistic solutions that deny access would prevent first responders, such as law enforcement and the local fire department, from getting into the building to either take out the assailant, put out the fire, and/or help the victims.

The right solution for most schools delays an intruder long enough so that people inside the building can lockdown or evacuate to a safe location, while still enabling law enforcement and other first responders to breach the reinforced openings with their equipment.

(Note: Some locations, such as transaction windows and public reception areas, might require ballistic solutions that deny access.)

It's also important to communicate and work with first responders before an incident happens so they know about the glass window and door reinforcement measures that have been installed. They will then know to bring the right equipment when responding to a call from your campus.

### **4. The vendor tells you to adopt Level-7 or Level-8 ballistic window/glass opening glazing.**

Although these types of glazings are designed to deny entry of an intruder and stop penetration of an AR-15 round, they are extremely expensive, costing \$300-\$400 per square foot to install and may require additional structural engineering and construction to support the weight of the ballistic-rated materials. Most K-12 campuses, as well as other facilities, don't have the budget for this type of expenditure.

However, security film with an attachment system that can delay intruders for up to two to six minutes is much less expensive, costing about \$14-\$16 per square foot to install. Another challenge with Level-7 or Level-8 ballistic window reinforcement solutions is the time it takes for installers to stock these products. The lead time is much longer than that of window film that can delay but not deny intruder access. This lead time is a significant challenge for the many schools currently scrambling to quickly reinforce their glass windows and doors.

### **5. The vendor doesn't test their products, they only test their products in-house, or the tests they conduct don't reflect (or actually misrepresent) real-life conditions or situations.**

Make sure the product you're considering has been tested and will perform as promised by your vendor.

Credible manufacturers have the products they sell tested by an accredited

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independent laboratory that tests using ASTM, NIJ, or UL752 criteria and test methods. These manufacturers have their films tested on quarter-inch tempered glass or quarter-inch annealed glass and insulated/dual-pane glazed units, which is normally what's installed in schools.

Some vendors, however, claim their film is bullet-proof, but the fine print in their contract says it's been tested on half-inch plate glass (see red flag no. 1). Schools, as well as most other facilities for that matter, don't have this type of glass installed, so the vendor's claims are very misleading.

Of course, if a glass reinforcement solution hasn't been tested at all or has only been tested in-house, that's a big red flag.

### **6. The vendor is not an authorized dealer/installer for the manufacturer's products they sell, or they sell their own products.**

Virtually no window security installation companies make their own products. Manufacturers such as DuPont, 3M, and Eastman Chemical generally make the products, and vendors do the installations.

Buyers should be wary of small to medium-sized vendors that claim they make their own products. If the big window security solutions manufacturers haven't come out with it, ask yourself "Why?"

If you do decide to go with a product that's made by a vendor/installer, be sure it meets the test criteria for the intended performance as published by ASTM, UL752, or NIJ and has been tested and certified by an independent, reputable lab (see red flag no. 5).

Additionally, be certain the vendor you hire is authorized to sell the products you are buying. Doing so usually means the product is covered by the manufacturer's warranty. Additionally, most manufacturers vet their authorized dealers to ensure they are qualified, reputable, and reliable.

## **7. The vendor claims reinforcing glass openings is cheap and easy.**

Although glass window and door security and safety sounds like it would be simple to achieve, it's not. There are many solutions available on the market today, and selecting the right ones for your organization requires a thorough assessment by a qualified, experienced professional.

Additionally, a school, university, or healthcare facility will most likely require different types of solutions for different areas of the campus. For example, the glass windows and doors on the ground floor might require film that delays intruder access, while a cash transaction window might require a solution that denies access. Meanwhile, the priorities for glass openings on the second and third floors of a building might be energy conservation and to guard against flying glass shards from high winds or seismic events.

Fortunately, there are window solutions on the market today that can address all of these concerns. However, an unqualified vendor might not recognize the various needs of your organization and make inappropriate product and installation recommendations.

### **How to Select a Vendor**

It's critical for a campus to select the right vendor to install its window security and safety solutions. Due diligence is critical. School, hospital, and university officials must verify the credentials of any window security/safety vendor. Do they have references? Have the products they are representing been tested, and are they appropriate for your particular application? Is the vendor an authorized dealer/installer for the



This is the 3M impact protection adhesive installed on the 3M S25 tinted (dual function solar and safety) ultra 800 safety film at Forsyth County Schools in Georgia as part of their building perimeter hardening.

manufacturer's products they are selling? Have they been awarded and successfully completed contracts for other organizations like yours?

In addition to checking references, a campus should consider calling the window security and safety product manufacturer and ask for a recommendation on who should install their product.

Because most buildings require multiple types of glass security or safety products, it's wise to hire a vendor that can offer a tiered approach utilizing various solutions to achieve various performance levels for areas that require varying degrees of protection... essentially a vendor that uses a "zoned" approach to identify higher areas of risk that mirrors the Federal Commission on School Safety's guidance.



In essence, entrances are the highest risk and thus ZONE 1. Other exterior glazing for non-entrance areas are ZONE 2, and interior door windows are ZONE 3. This approach helps facilities and security professionals identify where the highest priority areas are and where to prioritize the budget.

It should also be noted that the building and glass/window type should be considered in the vendor's product recommendation. One size does not fit all. For example, a product installed in a secure front vestibule might not be appropriate for a classroom.

### **Be Realistic in Your Approach to Installation**

According to NGS CEO and Co-founder James Beale, the most practical approach to reinforcing glass windows and doors in most buildings is an applied film that's attached on both sides of the glass.

"We recommend installing film inside and outside with an anchoring system so that you get the appropriate level of fragmentation retention and protection for your facility," he says. "You can cover more glass with the money you have and achieve anywhere from a two- to six-minute delay, which will be suitable in most scenarios, depending on what the local police force's response time is."

Keep in mind the performance of these products depends on the window system construction that they are applied to.

There may be some areas on campus, such as reception or transaction windows, that should be hardened with ballistic solutions that deny entry. Campuses might also want to harden safe rooms designed as shelter locations. A reputable vendor should be able to accurately assess your glass reinforcement needs and make the appropriate recommendations.

### **How Security Window Film Works**

So, circling back to the Nashville school mass shooting, how would have reinforced glass worked had it been installed?

"If they had fragment retention film on that glass that was 8-, 10-, 14- or 15-mil thick with a structural adhesive, the gunman would have shot the glass, and the glass would have stayed in place," says Beale. "Then the shooter would have tried to beat that glass, and the glass would have stayed in place. The assailant would have eventually gotten through, but every minute that they were stuck outside of that door is another precious

minute that people inside the building could have locked down. It also would have given law enforcement more time to respond. Law enforcement did an outstanding job in Nashville, but if the shooter had been kept outside of campus for six minutes, would anyone have died? We don't know, but it's a good question."

"Also, the shooter might have gotten frustrated and just given up, especially knowing how quickly law enforcement would arrive at the school," adds Beale. "Anytime you can delay an active shooter from getting inside, the better the chance that lives will be saved." +

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