

SMASH AND GRAB CRIME

Security Hurdles Retailers Face



**Retrofit Security Glazing Systems
Address Today's Challenges**

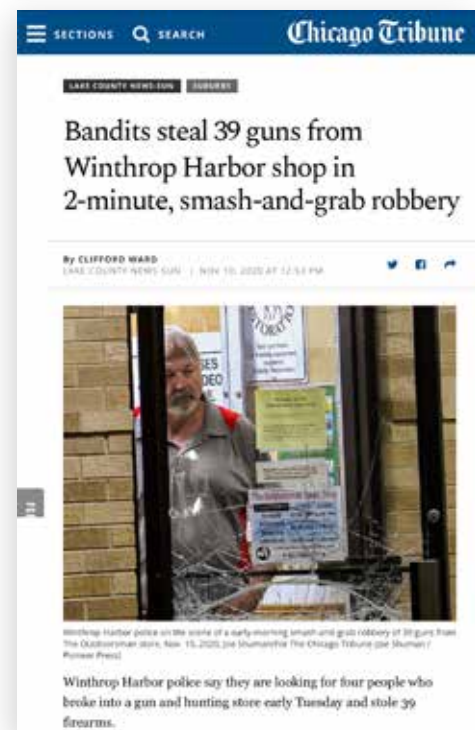
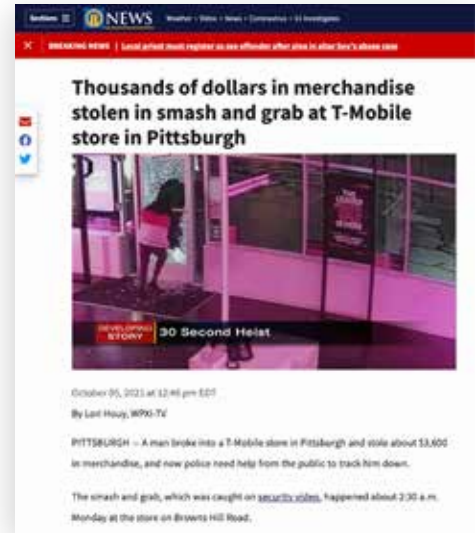
INTRODUCTION

Glass doors, windows, and storefronts remain the most vulnerable point of entry to a building's structure. This is especially true in an age of growing civil unrest. Over the past few years, there have been an increasing number of riots, not to mention the growing prevalence of active shooter incidents, both in conjunction with the forced entry and smash-and-grab crimes that have always plagued business owners and security professionals.

Retailers already face an uphill battle regarding loss prevention. With most burglaries remaining unsolved, the onus falls on the business owner to ensure the protection of their premises, employees, customers, and inventory. For retail environments, security solutions need to satisfy several requirements: they need to be cost-efficient, unobtrusive so as not to dissuade or discourage customer engagement, and provide an effective performance each time it is put to the test.

While there are multiple options available to meet these needs, most fall short of what is needed to effectively reinforce the physical security of retail and other at-risk businesses. Retrofit security glazing systems, which utilize heavy-gauge, architectural-grade polycarbonate and extruded framing are designed to resist forced entry and ballistic attacks. Commonly referred to as "overglaze systems", these systems protect against vandalism and other forms of destruction— without modifying the physical appearance of storefronts, glass doors, and windows, giving business owners the aesthetic benefits of glass with none of the hazards or security concerns typically associated.

Traditional storefront and curtain wall glazing systems are designed to meet specific building code requirements and aesthetics, but typically offer little to no value when it comes to discouraging incidents of crime and vandalism. Furthermore, glazing systems installed in older structures simply were not engineered to withstand the threat levels that exist today. As such, these buildings remain vulnerable to forced entry, smash and grab crime, and ballistic attacks. Retrofit security systems are designed specifically to prevent these crimes from occurring without the exorbitant cost associated with removing and replacing the existing glazing. In addition, the overglaze system serves to protect the existing glazing.





Challenges Faced by Retailers

Smash and grab incidents bring business momentum to a grinding halt. Not only has inventory been stolen or vandalized, but the resulting damage to the storefront requires time and attention, resulting in fewer customers and fewer sales, in addition to the hard costs associated with materials and labor. After the glass and debris has been addressed, costly emergency board-up services are necessary to reinforce the damaged points of entry. Unfortunately, these unattractive, temporary solutions not only announce the incident to all potential customers, planting the suggestion of unsafe premises, but they also broadcast the business' vulnerability to those who might seize advantage. Customers are less likely to shop in places that appear unsafe, if indeed the business can remain open at all while awaiting repairs.

Replacement glass can also be a costly investment—more so based on the glass type, and repairs can take weeks to complete. In the interim, business owners are left with an unattractive storefront that either slows down or halts business altogether.

While larceny is something that will unfortunately always be a risk to retailers, business owners can mitigate, if not outright prevent, any potential loss associated with forced-entry crimes. In many instances, glass windows and storefront doors are the building's weakest link, and some of the most cost-effective to reinforce. Retrofit security glazing systems can effectively halt damage before it can be sustained and reduces loss due to shrinkage, expensive repairs or replacements, and recovery time.



A Look at Crime Statistics

Burglary is an alarmingly frequent occurrence. In fact, a new burglary happens once every 26 seconds¹ with most commercial burglaries occurring when a business is closed nights, weekends, and holidays. According to the annual FBI Unified Crime Report, 55.7% of burglaries involve forcible entry and 6.5% involve attempted forcible entry². In terms of businesses, this amounts to property damage in addition to the value of whatever has been destroyed or stolen within the premises.

Smash-and-grab crime is likewise increasing at a rate of 20-30% annually, according to the National Retail Federation, costing retailers more than \$1B annually in direct expenses. While most perpetrators are amateur, their means are highly effective—typically by smashing a brick, hammer, crowbar, or any other handheld tool widely available at hardware stores through glass fronts. This gives them an easy point of entry to do further damage inside, take what they want, and then leave before authorities arrive, as it takes police anywhere from eleven minutes to more than an hour to respond to most reported burglaries and other non-life-threatening crimes.

Even if the response time is quick, most burglaries, according to the FBI, are committed in a timespan ranging from ninety seconds to twelve minutes. Therefore, the minimal average response time from police is just barely inside the maximum average time it takes a burglary to occur. Often by the time officers are on scene, the damage has been done and the perpetrators long gone.

Unfortunately, 87% of burglaries go unsolved³, leaving the business owner to absorb whatever is not covered by insurance, as well as the cost of loss of business while necessary repairs are implemented.

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¹ <https://www.bankrate.com/insurance/homeowners-insurance/house-burglary-statistics/#2021>

² <https://ucr.fbi.gov/crime-in-the-u.s/2019/crime-in-the-u.s.-2019/topic-pages/burglary>

³ <https://www.pewresearch.org/fact-tank/2017/03/01/most-violent-and-property-crimes-in-the-u-s-go-unsolved/>

An Overview of Available Solutions

Given the myriad of security threats that exist today, it is no wonder that there is a range of solutions to protect building occupants and properties.

The typical storefront and entrance doors are comprised of tempered glass. In some instances, retailers may opt to use laminated glass as a deterrent. Others choose security bars and grilles to send a clear message to criminals.

Protective glazing materials are typically not specified for new construction unless required by code based on the type of facility—such as a government facility, or a building located in a coastal area that requires hurricane impact glass. A threat level assessment, however, will identify the value of a retrofit glazing system that allows building owners and developers to improve the safety of their properties based on the resultant threat level.

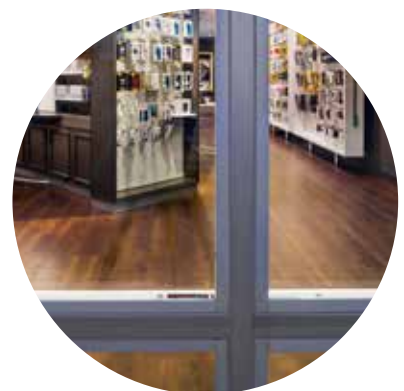
The threat level assessment and budget may lead to the selection of more than one type of security glazing solution on a project. As with all considerations, each come with their own set of benefits and disadvantages.



SECURITY BARS & GRILLES



WINDOW FILM



RETROFIT SECURITY SYSTEMS



Laminated Glass

Removing and replacing, referred to as re-glazing or “R & R,” the existing glass in doors, windows, and storefronts is an option. Installing laminated glass is best suited during the new construction process, but is cost prohibitive as a retrofit solution. Costs associated with the removal and reglazing process, include the:

- Labor to remove the existing glazing
- Transport and disposal of glazing removed (glass type may or may not be recyclable)
- Expense of the new glazing, and
- Labor and materials required to install the new glazing.

Other considerations include: What is the existing glass type? What is the applicable building code requirements? Does the new glass have to match existing glass that is not being replaced? What are the potential threats? Upon impact, traditional laminated glass, made using a .030 polyvinylbutyral (PVB) interlayer, can slump in the opening, giving entry to intruders. Small or large missile impact glazing may be considered to protect the opening.

In a situation, you may be faced with replacing the glass with low-e impact laminated glass with .060 or .090 interlayers made into insulating glass units. The new framing must be able to accommodate the proposed glazing solution.

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Security Bars, Gates & Grilles

Generally used in ground-floor windows to deter potential intruders, security bars, gates, and grilles provide a sense of security to building occupants and are most often used in malls and parking garages. Made mostly of steel or lightweight aluminum, most security bars cannot be easily cut or damaged. However, security grilles and gates are “operable,” have moving parts, and often require expensive repairs and service over time.

Security bars yield an unattractive bulky appearance, and as such, their unfriendly, defensive aesthetic acts as a psychological deterrent to burglars. Unfortunately, security bars send the message to employees and customers that the area is unsafe, and may instill a sense of fear.

Grilles often offer more design variety than bars but still share the same shortcomings listed below.

- In the event of an emergency, security bars and grilles potentially block the entry point for first responders or limit egress options for the building occupants, even when equipped with a quick-release mechanism.
- Security bars and grilles impact visibility and are not bullet resistant.
- Glazing can still be broken; ropes can be used to wrap around the door stiles and the grilles/bars can be pulled off.
- Security bars and grilles have limited applications as they are not considered suitable for schools or large display windows and may not be permitted on historic buildings or in retail-zoned areas.
- Retractable products only work when the businesses are closed, so they offer no protection during business hours.
- Security bars and grilles often have repair needs due to the moving components associated with the products:
 - Locks can become difficult to operate or fail completely.
 - Electrical issues can ensue during power outages.

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Security Window Film

Window films are available to serve a range of purposes, including solar control, privacy, energy savings, safety, and security.

Safety and security window film provides much-needed resilience to help protect a building's weakest link—glass windows, doors, and storefronts.

Safety and security window film products include anti-smash-and-grab, active shooter mitigation, blast mitigation, and radio frequency (RF) films designed to meet the stringent security requirements of facilities managing sensitive or classified information.

Installed properly, most security films will slow an intruder and delay entry for 15–45 seconds, giving occupants time to call police and escape. Often, security films can be breached in under one minute, and given enough time and effort, a motivated attacker will eventually gain entry.

Similar to laminated glass, glass treated with security film will not typically vacate the opening upon light to moderate attack.

Security films do not offer ballistic protection, although windows under ballistic attack may remain in place to slow or prevent entry.

Designed to control glass failure, security window film applied to tempered glass offers a cost-effective approach to retrofit security glazing, but will not prevent forced entry.


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The Superior Solution: Retrofit Security Glazing Systems

A retrofit security system, sometimes referred to as an “overglaze” or “overmount” polycarbonate system, anchors to existing window frames (on the interior or exterior depending on the existing conditions), creating an airspace between the primary glass and the clear shield. Upon attack, the entire system flexes and absorbs and deflects energy away from the primary glazing, preventing forced entry, theft, and further harm to the premises or its occupants. The systems are specifically designed to:

- Keep attackers on the outside of your building
- Give building owners, developers, and facility managers a cost-effective alternative for forced entry protection without replacing the existing glazing
- Protect the occupants and property of retail, educational, and other at-risk facilities
- Help mitigate smash-and-grab crime
- Protect the primary glazing and eliminate the need for emergency board-up service and R & R
- Provide more time during an attack for first responders to arrive



*“Retrofit security
glazing systems are
designed to keep
attackers out of
your building.”*



Anatomy of Patented Retrofit Security Glazing System

- 1 Patented vented extrusion mounts to the existing glazing frame creating standoff for the polycarbonate shield from primary glass
- 2 “Super bond” anchoring method secures the engineered system to the existing glazing providing for unmatched flex, tensile and tear strength upon attack
- 3 “Unbreachable” UV capped, clear polycarbonate shield is secured to the vented extrusion with security “flex” screws and elastomeric VHB tapes
- 4 Customized powder-coating creates full aesthetic integration with existing glazing upon retrofit installation



Retrofit security “overglaze” systems help allay hazards from shattered glass while holding windows and doors in place, and have been independently tested with different blunt force objects, including hammers, hatchets, and crowbars, with excellent results. Typically, the system will defeat most attacks while protecting the primary glass from breaking.

Comparisons of retrofit security systems to the other available options favor retrofit security “overmount” glazing systems for multiple reasons. For example, unlike laminated glass and traditional security window films, retrofit security glazing systems will not fracture or break under attack and the sacrificial film can be replaced easily and cost-effectively if needed.

Likewise, retrofit security glazing systems install quickly and do not interfere with a building’s operation or require maintenance aside from occasional cleaning. There are no associated operational issues, as a retrofit security glazing system is a static product mounted to the existing glazing on the storefront. Conversely, security grilles and gates result in added cost to maintain over time—and only work when deployed.

Retrofit security glazing systems are cost-effective and offer a seamless aesthetic, unlike security bars, grilles, and gates. According to research, traditional storefront and curtain wall glazing systems average \$90 per square foot with protective glazings being significantly more expensive, and even more with cost of retrofitting. Retrofit security glazing systems average between 10-15% in savings and there is no cost incurred for removal and replacement of the primary glazing.

Retrofit security glazing systems are constantly put to the test and continue to exceed expectations. In 2020, a gun retailer in Chicago captured security footage of an attempted smash-and-grab that was deterred as a result of the retrofit security glazing system previously installed. At a time when gun sales were hitting record highs, driven by the pandemic, protests, and politics, the retailer was able to protect their “high-demand” inventory of guns and ammunition.

This is hardly an isolated instance. A convenience store in the southwest implemented a retrofit security glazing system after grilles were disallowed. Since the upgrade, there have been five confirmed smash-and-grab attempts to breach the system and gain entry. All failed thanks to the retrofit security glazing. There are numerous examples of prevented loss and damage due to a criminal’s inability to take advantage of a structure’s vulnerable access points, all without compromising on the aesthetic and wellness benefits of glass.

In every measurable capacity, from cost to performance, these systems are vastly superior to all available alternatives. Impact Security, engineers of the patented DefenseLite® and BulletShield™ retrofit security glazing systems, has fabrication and dealer partners across the US to provide security solutions for retailers, municipal buildings, schools, and other at-risk property.

	SECURITY WINDOW FILM	DEFENSELITE®	BULLETSHIELD™
Vandalism	Better	Best	NA
Small Objects (Rocks)	Better	Best	NA
Blunt Objects (Hammer)	Better	Best	NA
Smash & Grab	Better	Best	NA
Riot Mitigation	Better	Best	NA
Firearms	Good	Better	Best
Explosion	Good	Better	Best
Ballistic Security	Good	Better	Best

Determining What Solution is Best

Which security option is best suited for each unique application? To answer this question, current risk factors must be determined. This requires rigorously evaluating all parts of the storefront and the building’s various elevations, as the threat level may vary from one elevation to another.

Both retrofit security glazing options will delay entry and prevent robbery. For maximum fortification, retrofit security glazing systems designed for forced-entry protection are the best solution. However, if ballistic attack is a concern and human lives are at stake, a ballistic retrofit security glazing system is the only solution that will protect both people and property.

1. A qualified retrofit security glazing professional that offers multiple solutions will be helpful in performing a threat level assessment which may result in more than one recommended solution for the most effective and economical approach.
2. The manufacturer engineering your system should factor in local climate conditions to mitigate the potential for long term moisture and condensation issues.
3. Check to see if the overmount system incorporates built-in ventilation in the design. A vented system will dynamically eliminate moisture in the air captured in the newly created void, minimizing the likelihood of pillowing or distortion that is prevalent in rigid, non-vented overglaze systems.



Conclusion

Today's volatile world provides no shortage of challenges for retailers and other at-risk businesses, and loss prevention remains a chronic concern. When loss prevention involves smash-and-grabs or other instances of forced-entry crime, retailers are left grappling not only with the loss of inventory, but with the costs associated with repairs and replacements, downtime, customer confidence, and much more. Glass doors, windows, and storefronts are the most vulnerable points of entry, resulting in more than a billion dollars of loss for retailers each year. Reinforcing these exposed areas is essential to prevent crime and damage. Business owners must remain proactive to keep their property, premises, and inventory protected from loss prevention and organized retail crime.

There is no single solution to retail loss prevention. However, when it comes to protecting people and property from intruders, the performance or cost-effectiveness of retrofit security glazing is second to none. Not only does retrofit glazing preserve the aesthetic benefits of glass, but it also serves as an impenetrable barrier between businesses and those who would wish to take advantage of vulnerable entry points. Where implemented, retrofit glazing has actively prevented incidents of vandalism and smash-and-grab crime across the country, no matter how frequently it is put to the test. And unlike select alternatives, it is easy to maintain and always in place, regardless of time of day.

Collaboration with Impact Security, through their patented DefenseLite and BulletShield options, brings the protection of the leading retrofit security glazing systems to business owners nationwide. DefenseLite and BulletShield dealers are trained and certified to ensure quality performance.



About Our Company

Impact Security, LLC. (IS) was established in 2016 as a manufacturer of critically needed security solutions to solve the age-old problem of glazed openings [the glass] being the building's weakest link. Headquartered in Atlanta, Ga. and having fabrication and dealer partners across the US, IS exists to engineer forced-entry and bullet resistant retrofit glazing products designed to keep the bad guys outside.

Impact Security offers its patented products under the DefenseLite and BulletShield brands for installation at schools, retailers, municipal buildings and other at-risk property in the US and Canada. For more information about the complete range of patented DefenseLite solutions, or to request a threat level assessment, visit www.defenselite.com.



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