Since the 2012 mass shooting in Newtown, Conn., districts are increasingly considering the installation of safety and security window film. Working with local first responders will ensure the solution is implemented properly. *By George J. Tanber*

ON DEC. 14, 2014, two families of children killed in the 2012 Sandy Hook Elementary School shooting filed suit against the town of Newtown, Conn., and the Newtown Public Schools Board. The suit cited lax security on the day 20 students and six adults were shot and killed.

Among the issues raised in the complaint was the ability for gunman Adam Lanza to enter the school after shooting out front glass windows near the school's offices and the lack of bullet-proof windows in the building.

Sandy Hook has been the primary motivation for school districts nationwide to increase security in their buildings. The initiatives have included adding and upgrading surveillance cameras, improved phone systems, magnetic card entry systems and more secure entryways and other vulnerable building entry points.

Considerable discussion and debate has taken place among school officials over how best to secure entryways and other entry points from intruders. Installation of shatter-proof windows and entryway reconstruction has proven to be cost-prohibitive for many schools. Increasingly, they have turned to safety and security window film installation as a reliable and cost-effective alternative.

"There was no way we could afford to replace the windows, so film was the economical way to go," says Amy Campbell, safety coordinator at Geneva (Ill.) Community Unit School District 304. In February, the school district, located near Chicago, had safety and security window film installed in the entryways and on first-floor glass in nine school buildings.

Geneva is one of at least 22 known school districts around the country that have included safety and security window film as part of their security upgrades, but the number appears to be quickly growing.

"[Film] sales have just skyrocketed," says Mike Dorn, executive director of Safe Havens International, a nonprofit that advises school officials on safety. "We had some prior to Sandy Hook doing this, but it's much more predominant since."

Connecticut and Illinois are leading the way with 12 and seven, respectively. In the Chicago area, there appears to be a synergistic effect at work. Once Geneva schools announced they were installing safety and security window film in September, nearby Minooka, Lake Zurich and Barrington schools soon followed.

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Minooka school, pictured here, is just one of several K-12 campuses in Illinois that have installed window safety and security film.

FUNDING POSES CHALLENGES TO PROJECTS

As with any large school project, funding security upgrades has been the biggest barrier. Connecticut and Illinois are leading the way in safety and security film installation projects for good reason: Each state has provided significant funding to school districts for overall security upgrades.

Not surprisingly, it started in Connecticut soon after Sandy Hook. The state legislature quickly passed the Violence Prevention and Children's Safety Act, which led to the Competitive Grant Program for school security. In the 2013-14 school year, the state awarded \$21.1 million in grants to 111 districts impacting 604 school buildings. A required local match, tied to each district's resources, totaled \$19.4 million. The program was renewed for 2014-15, with the state awarding \$21.6 million to 98 districts and 445 school buildings. The local match was \$16.2 million.

"We all wish that this program was not needed, but unfortunately we must adapt to the new reality that Sandy Hook tragically brought to our state," said Lt. Governor Nancy Wyman when the grant program was announced. "This funding will not only make our schools more secure, but will give us the peace of mind that we are doing everything we can to live up to our obligation to provide a safe learning environment for our children."

In Illinois, \$25 million was awarded in May 2014 by the Illinois Emergency Management Agency to 448 districts involving security upgrades to 1,312 school buildings.

How and Why Safety and Security Film Works

Safety and security window films are an important component of security upgrades to school buildings because they significantly slow and often thwart any attempt to enter a building. Security film works because:

- It's thicker than regular window films — anywhere from 4 to 21 mils
- It increases the shatter resistance of glass

Proper installation of security film is essential to its success. For the best, most effective results:

- ◆ The film is first adhered to the inside of the glass
- ◆ A large bead of structural silicone, known as a wet glaze attachment system, is then applied around the perimeter of the glass, firmly securing the film in place
- ◆ The combination of the security film and the attachment system is what protects and strengthens the glass, making it difficult if not impossible for any intruder to enter

Which Schools Have Deployed Safety and Security Window Film?

Increasingly, safety and security window film installation has been included in security upgrades to school buildings. Campus officials are recognizing that securing entryway, first-floor and other exposable glass is critical in helping thwart intruders.

Not surprisingly, Connecticut — home to Sandy Hook Elementary School — leads the way, followed by Illinois. Both states, along with Maryland and Virginia, have initiated programs that fund school building security upgrades.

As other states implement similar funding programs and local communities take their own funding initiatives, the list of schools upgrading security in their buildings — including glass protection — is certain to grow.

Among the school districts that have included safety and security window film installation in their security upgrades since 2013 are:

Connecticut: Ansonia, Capitol Region Education Council, Glastonbury, Guilford, Hamden, Hartford, Naugatuck, Norwalk, Norwich, Shelton, Simsbury and Stratford

Illinois: Barrington, Country Club Hills, Geneva, Gurnee, Lake Zurich, Minooka and Rockford

Maryland: Calvert County

New York: Hewlett-Woodmere

Ohio: Lima Bath

This is an interior classroom door window protected by safety and security film at Bath Local Schools in Lima, Ohio.



DISTRICTS GET CREATIVE IN FINDING RESOURCES

School districts not receiving state funding have to tap into their own resources — or come up with a creative alternative — to support security projects. In Houston, the PTO at Barbara Bush Elementary School raised \$20,000 to have safety and security window film installed at the school.

Meanwhile, at nearby Cy-Fairbanks ISD, the state's third largest school district, voters last May approved a bond issue that includes \$55 million for security upgrades to 50 school buildings. Roy Sprague, associate superintendent for facilities, says glass protection is part of the six-year project and that he favors safety and security film installation over replacing the glass.

In Geneva, the state funding only covered film costs for school entryways of the nine buildings and first-floor windows of the high school. School officials wanted to have film installed on the first-floor windows at the other eight buildings, so they tapped a special school reserve fund to cover the remaining costs.

The federal government gave \$75 million last year to the National Institute of Justice for school security grants, but it appears the funding is tilted more toward research rather than security upgrade hardware. Other federal organizations such as Homeland Security and Department of Justice's Community Oriented Policing Services also say they have available funding for school security projects, but the process is somewhat muddled.

A number of self-help organizations, such TheGrantHelpers.com, can give school districts searching for security funding ideas on where to look for support.

FILM CAN DETER ATTACKS

Still, if the wish list is long and you can't afford everything but want to do something to protect your buildings, safety and security window films are a low-cost and efficient way to deter intruders. Also, the film is relatively easy and fast to install, provided the work is completed by an experienced installer.

The film, thicker than regular window films, is adhered to the inside of the glass and then — if installed properly — is firmly secured to the glass with a perimeter wet glaze attachment system. It's the combination of the film and attachment system that makes the solution so effective.

For many school districts, Geneva among them, the film provides an added safety benefit during severe weather.

"In the Midwest we're always concerned about high winds and tornadoes," says Campbell. "The film holds the glass in place and keeps it from shattering."

Schools in hurricane belts can achieve a similar benefit from safety and security window film installation.

BALANCE SAFETY WITH SECURITY

The Geneva project was notable for another reason. The school worked closely with local police and firefighters to make sure everyone was on the same page with the security upgrades and potential emergency situations. In particular, firefighters were concerned about gaining access to a school building through a filmed window or door in case of a fire or other emergency.

To make sure they have access, they carried out a test on a filmed 2-by-2-foot window at one of the schools, gaining access by using a Halligan bar. Although the test worked, Geneva firefighters say more testing is required. Fire officials continually try to find the balance between security and firefighter access.

In government buildings where film has been installed, the solution to this issue has sometimes been to choose one ground-floor window to have film installed without the wet glaze attachment, making for an easier entry. The designated window is known only to first responders and building officials.

One thing is certain: School building security improvements are just beginning, and safety and security film installation will be a major part of the process as campuses around the country share information and observe one another's security upgrades. **CS**

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