THE POPULAR MECHANICS **BY LARA SOROKANICH**

Introduction

Page 57 e secure? And

ATTACKS IN OUR SCHOOLS seem to be occurring with more frequency and with higher intensity. But the response among political and school-district leaders has often been confused and often been understandably inconsistent. Schools are not in fact more common targets for mass shootings than other public venues, but as free and open places for learning, creativity, and athletics, they are particularly vulnerable. And of course schools have a special obligation to keep the children in their care safe. The Protecting schools is a particularly terrible and vexing problem. But Popular Mechanics has always been about solving problems. This is not a story about guns or rights or control. Those debates will take a long time to play out. There will be no legislative solution tomorrow or the next day or by the end of this school year. In the meantime, we decided to apply our expertise to the physical structure of schools-how can we make these buildings a little more secure? And how can we do so without making schools feel like prisons? We consulted with building engineers, security experts, and leaders at schools that have suffered the awful trauma of a shooting and applied hard lessons from that experience. In this guide, you'll learn about some of the basic physical and organizational changes that any school can make in order to become safer and less fearful. It is designed so that any member of a school community wondering what measures they should consider-and also what they shouldn't-can find something useful. ¶ One other point: The likelihood of a person with a gun walking into any given school tomorrow or the next day is very, very low. As you'll see, some improvements that are designed to guard against such a horror can also have benefits in helping a school mitigate other common problems-and even improve its sense of community.

Before Schools Do Anything Else

We canvassed officials across the country about what to do first.

1

Get a Team Together

To make any school safer, you first have to identify all possible threats—everything from a school shooter to old electrical wiring. Assemble a team. It should be fairly large, with representatives not only from the obvious sectors—administration, faculty, parents, law enforcement, and local emergency personnel—but other important parts of the school community: coaches, bus drivers, after-school program staff, the IT department, custodians. Even the cafeteria staff. They sometimes leave doors open for deliveries or if the kitchen gets hot, according to Safe and Sound Schools, an initiative in Newtown, Connecticut, formed by parents after the Sandy Hook tragedy.

One more important constituency from which to draw: students.

2

Think About What Worries You Most

School shootings are terrifying and should be treated with proper caution and consideration. But your district is far more likely to face problems with trespassing, bullying, drugs and alcohol, noncustodial parents (it happens), and other common issues. So:

- Review all safety-related incidents from the last three years. What's been going on that should be addressed?
- Interview your counterparts in surrounding towns. Are there crime-related trends you should be aware of? Outside risks?
- Have each member of the team make a list of worst-case scenarios in their area.



Walk the Property

For each school in the district, walk the grounds, inside and out. Without getting paranoid about it, try hard to find potential threats. Imagine you're trying to break in to the school. Are the boundaries well-defined? What's the parking setup? Which areas have good or bad sightlines? Are there doors that shouldn't be open? If there was an emergency in a remote location in the building or on the grounds, who would see it and report it, and how?

Make a List of Questions

You need to determine how good the existing system is. Look for holes and weaknesses. The Parkland, Florida, school district had a solid system in place, and yet somehow its cracks were exploited. Ask things like: How does the school alert police, staff, students, and parents in an emergency? Where are students and staff supposed to go? How quickly can local authorities respond? Do all doors lock? When was the school's existing emergency plan last reviewed?



58

Bring In the Professionals

Enlist an outside agency to conduct a security audit of your school or district. See our Resource Guide on page 70 for a list of places that can help.

CAUTION

What Not to Do

School budgets are tight. So is time. Here are five lessons learned at U.S. schools.

Don't Assume We're Talking About a Huge Expense

"Don't let money stop you. Start knocking out some low-hanging fruit. One of the most important things is just having your doors locked, and getting people to buy in so they don't have rocks blocking doors open. There is so much stuff you can do that doesn't cost anything, and then just start chipping away each year." —Steven Forte, superintendent, Denville Township School District, New Jersey

Don't Think Locks and Bulletproof Glass Will Solve Everything

"You can change the front of your school, but if we don't address the mental-health issue, it's never going to stop. Kids need to know how to deal with loss, how to win and lose. Bullying is part but not the whole part. It's more than just add security and it's going to solve everything." —Newell Haffner, superintendent, Gresham School District, Wisconsin

Don't Be Swayed by Hype

"You don't want to buy something just because the school district next door got it. Try to avoid that impulse—make your own decisions. Right now, schools everywhere are getting just bombarded by vendors. A lot of this stuff is bleeding-edge technology and might seem simple, but pause and consider: Does that particular solution fit into your longer-term goals?" —Joe Balles, security coordinator, Madison Metropolitan School District, Wisconsin

CASE STUDY Madison, Wisconsin

Don't Act Too Quickly-Or You Could Overspend

"I think the hardest challenge that district superintendents are going to have is that everybody is going to want to sell you the latest and greatest. You have to have an evaluation team for any equipment you might be interested in buying. You have to be really smart, and it's hard, because people are scared. Metal detectors, in my opinion, are not the answer. But there are other answers." —Rita Bishop, superintendent, Roanoke City Schools, Virginia

Don't Invest Until You Know What You're Buying-And Whether It's Even Legal



After every school shooting, some security companies immediately start calling school districts trying to sell them all kinds of safety-related products—some worthwhile, some worthless, some of which are total overkill. In 2015, Southwest Licking Local School District in Ohio set off a statewide debate when parents raised and spent \$30,000 on barricade devices to be used in classrooms. The problem: The devices were found to violate building and fire codes and the Americans with Disabilities Act. The devices sat unused in closets for more than a year while outraged parents battled with the Ohio building standards board. State lawmakers eventually approved the devices, over the objections of the board, the local fire marshal, and the Ohio Disability Rights Law and Policy Center. Among the board's objections: The devices could cause difficulties for first responders; they could be used to trap students in classrooms; and the devices themselves were "unlisted, unlabeled, and untested."

How One School Got Started

School district: Madison Metropolitan

Location: **Madison, Wisconsin**

School buildings: 48

Students: 27,000

Staff: **5,000**

Estimated upgrade costs: **\$6 Million**

Joe Balles, a retired Madison police captain, has been the safety and security coordinator for Madison Metropolitan School District since April 2017. His district's post-Parkland efforts, in his own words.



After the February school shooting in Parkland,

Florida, this district

fast-tracked plans for

heightened security.

▶ Before the shooting in Parkland, Florida, in February, we were moving along, doing the things that everybody's doing. But when Parkland happened, it just resonated. Then in April, the Wisconsin legislature passed a huge school-safety grant, and the state Department of Justice was told to distribute that money quickly.

Our main request was door upgrades: automatically locking classroom doors, with pass-card access, and PIN pad and ID access for exterior doors. We're working with [lock companies] Schlage and Sargent over the summer to do a pilot test at one of our

high schools before we make a final decision. We also put in for glass-hardening film for our doors, which it makes it more difficult for a bullet to enter. And we're doing video-surveillance upgrades. We have about nine hundred cameras right now; we're looking at adding four hundred more and purchasing a large central server for backup.

Our chief of operations, head of building services, and general counsel worked on the list with me. We also contracted with the Wisconsin School Safety Coordinators Association, which sent in a two-person team for about \$1,500 per school. We're looking at using our insurer for additional assessments. They'll probably be even more comprehensive—getting into the boilers, the air conditioning, asbestos, everything.

The DOJ announced in June that we'll get \$993,033. That's the largest state grant to date, but we're looking at about \$6 million for everything. It's high—but doable. We've got some money in reserve. It's just time, we need to do this.

We had our own incident here after Parkland. A father came to his daughter's classroom in Shorewood Elementary in a ski mask, and gave the teacher a note that said G-U-N on it. Then he walked to the principal's office. He was yelling at her: "What kind of school are you running? How are you going to keep a real intruder out?" He was arrested. But we do have that contingent of parents—in their minds, it's not a matter of if, it's when.

It is a big responsibility. We have twenty-seven thousand souls that we need to get home again every single day. It takes more than police officers or active-shooter drills to make a school safe, secure, and welcoming. It's about culture, and change is not going to happen overnight. —*Additional reporting by Eleanor Hildebrandt*

"We Don't Want Kids Living in Fear"

In Littleton, Colorado, where two deadly school shootings occurred fourteen years apart but within just a few miles, the school district is a study in preparedness, compassion, and an intense focus on what might go wrong.





Guy Grace likes to give a warning before he sets off an alarm. Otherwise, you scare the bejeezus out of the neighbors.

It's 8:27 a.m. on a sunny Thursday morning in April, and Grace, the director of Security and Emergency Preparedness at Littleton Public Schools outside Denver, Colorado, is standing in the lobby of Goddard Middle School. Beside him are Derek, an armed school resource officer, and a handful of school administrators. Each is carrying a clunky gray radio.

"Base, go ahead and sound the test notification for the school please," Grace says into his.

Alarm lights begin to streak the halls, like the quick flash of a disposable camera. The once bustling middle school freezes. A calm, recorded male voice comes over the loudspeaker.

ATTENTION. ATTENTION. ATTENTION. THIS IS NOTIFI-CATION THAT A TEST OF THIS FACILITY'S MASS NOTIFICATION SYSTEM IS ABOUT TO BEGIN. THIS MESSAGE IS JUST A TEST.

Grace thinks a lot about the difference between preparing students and scaring the hell out of them. He will tell you, repeatedly, that he doesn't want kids to live in fear. Fear is terrible. But in the event of a disaster—at a school or mall or airport or anywhere in this crazy world we live in—he wants his students to know what to do. He wants them to know how to survive.

When he started at Littleton, in 1990, Grace was a security guard and a team of one. Back then, he protected school property from vandals and burglars. Then, on April 20, 1999, two students shot and killed thirteen classmates and teachers at Columbine High School, in nearby Jefferson County. ("About two miles up the road from here," Grace said, pointing, as he drove to Goddard this morning.) Grace's district had its own tragic shooting in 2013, when two students died at Arapahoe High School.

Today he has a team of twelve and handles security for the district's twentytwo schools, sixteen thousand students, twenty-five hundred employees, and five hundred to a thousand volunteers. He looks the part: a guy you'd call a *big dude*, six foot one and 240 pounds. Like a bodyguard. Someone who could tackle a kid or two, if he had to. He wears a baseball cap, and hustles around with a squawking radio holstered to his hip.

Grace's work requires monthly training, a dozen police officers, more than a thousand cameras, and poring over hundreds of anonymous tips each year. Someone sits in the district's security headquarters every hour of every day, Grace says. Even on summer break. Even at 4 a.m. Even on Christmas. But right now, he's got a drill to run.

This is one of three or four activeshooter drills (formally, a "Shelter, Evade, Defend, Care" drill) each school runs per school year. Today's was planned for when kids would be changing classes. "We want to cause this at an inconvenient time,"

BEST PRACTICES: Littleton

- A dedicated, centralized security team that runs drills and trainings and checks on students and staff daily
- Blanket camera and audio coverage accessible to security and police at any time
- Anonymous reporting channels that reduce incidents of bullying, vandalism, suicide, and drug problems
- Specialized alarm systems that give specific instructions for lockdowns, and can be triggered by any staff member or student in an emergency

Grace says. "Because an active shooter doesn't look at schedules."

If the timing has affected them, the students and staff of Goddard Middle School don't show it. They're already sliding into classrooms when the real alert starts.

LOCKDOWN. LOCKDOWN. LOCK-DOWN. ALERT OTHERS.

Within a minute, the hallways have emptied. The same calm male voice directs what's going on behind the closing doors.

SHELTER AND LOCK THE CLASS-ROOM DOORS. LIGHTS OUT. STAY QUIET AND OUT OF THE HALLWAY LINE OF SIGHT.

Grace's lobby group breaks, scattering down Goddard's maze of hallways to check for stray kids. The one Grace patrols is deserted. Every door is shut, and awhite paper shade coverseach door's windowpane.

IF YOUARE UNABLE TO GET TO A SECURE LOCATION, HIDE OR FLEE IMMEDIATELY TO THE NEAREST SAFELOCATIONAWAYFROMSCHOOL. IF YOU ARE OUTSIDE, ALERT OTH-ERS AND IMMEDIATELY FLEE FROM THE SCHOOL TO THE NEAREST SAFE LOCATION.

Occasionally Grace veers left or right, tugging on a door handle to check the lock. Protocol says they should always be prelocked, so teachers don't have to fumble with keys in an emergency. None open.

LOCKDOWN. LOCKDOWN. LOCKDOWN.

Grace continues until he reaches a perpendicular hall, the school's central artery. The other administrators reach it around the same time, dotting the long corridor with their radios in hand.

"All right base, go ahead and silence, don't put any other messages," Grace calls into his. The calm, male voice goes quiet. For a beat, the entire school is silent and motionless. Except for Grace and his team, it feels totally empty.

A single bell—*BING*—breaks the static. "Alright Goddard students and staff, good job," chirps a new human female voice. "We are now done with the drill, please resume your regular day. Thank you."

All around, doors open as students and staff emerge from hiding. Protocol ►

CASE STUDY Littleton, Colorado

says shooter drills can end when everybody is safely locked behind closed doors. It's 8:31 a.m.

It took them four minutes.

he thirteen elementary, five middle, and four high

schools Grace secures feel the same as the ones you may have grown up in. They're brown brick, and built in that low, sprawling style that was popular in the seventies. Their white halls and linoleum floors are made bright by papered bulletin boards and navy, turquoise, and purple lockers taped with flyers. They dot the rolling hills of suburban Denver, between low ranch houses and manicured lawns. Most are a ten-minute drive from Grace's security headquarters, housed in a central administration building. Five minutes, if it's an emergency.

Inside the schools, students wander freely, yelling and laughing and horsing around. The untrained eye would never notice the cameras scanning the halls and offices of Goddard Middle School, the mounted panic buttons at Eugene Field Elementary, the remote-lock doors at Arapahoe High. Not until you step into Grace's headquarters, the central nervous system for his elaborate network of security technology.

The first thing you notice about the security office—the only thing, really is the mammoth screen that occupies the front wall of the room. It glows with a patchwork of live feeds, streaming in from cameras all over the district. An empty parking lot, students bumbling in and out of an attendance office, children bouncing a ball around a blacktop. A tapestry of everything happening in every room of every school at this *exact* moment.

It's mesmerizing, and slightly eerie, when you realize that somebody has probably watched you, too, on a screen just like this. But in a country where more than twenty-seven public school students have been killed this year, these covert technologies make students safer, experts say, without breaking the sense of normalcy. Grace says few people in the district ever see this side of their safety system.

A single row of computers controls

William Cornforth, Dara Pechan, Guy Grace, and Leah Raymond are central figures of Littleton's security team. They're available to students 24 hours a day, 365 days a year.



the giant screen. At the click of a button, Grace and his team can bring up interactive floor plans of any school and see which doors are open or locked, or connect into live video and audio from any remote corner of school property. All teachers and staff in the district have access to their own school's maps. So does the local police department, in case of an emergency.

Littleton's security team doesn't just guard against shootings, which are still very unlikely. The day-to-day is more likely to bring in unstable parents, drug issues, bullying, partner abuse, selfharm, or suicide. Grace says they detect and diffuse dozens of potentially volatile situations every school year.

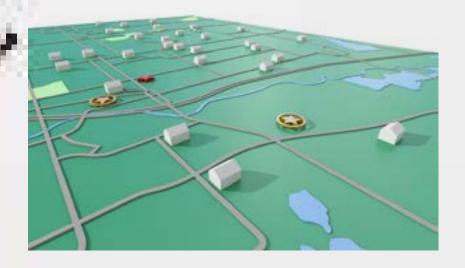
Take yesterday, for instance, when an aggressive parent who had previously been charged with trespassing showed up at two different schools, trying to enroll his child. Grace's team tracked the dad on security cameras, and radioed Grace live updates as he drove to the scene. The team notified all the other schools in the district, so their officers could monitor their doors, and sent photos of the dad grabbed from security cameras. By the time the man got to a third district building, police were waiting. They ticketed and escorted the parent off the property, without ever interrupting the regular school day.

"This kind of stuff isn't common, but it happens a couple times a month," Grace says.

Most members of Grace's central team are parents, with children still in the district. Leah Raymond is a former specialeducation aide with blond hair and a kind, round face. She now works as a districtwide school security officer, monitoring the cameras, radios, phones, and alarm systems in the security headquarters. Her oldest daughter just started college, and her second daughter is a sophomore at Arapahoe High. Dara Pechan, the security-

Central Command

► Littleton Public School District has 22 schools spanning 28 square miles. From their headquarters in an administration building (red star), LPS's security team can view live video and audio, see which doors are locked or open, and remotely trigger lockdown alarms for any school. In an emergency, the local police departments (gold stars) can also access the district's cameras and maps to get information about what's going on. Littleton's technology lets director of security Guy Grace and his team know what's happening at any school, instantly, and communicate to administrators and first responders.



training facilitator, is a bubbly mom of two elementary schoolers, who erupts into giggles telling stories about particularly bold kids they've had to handle. Grace has two children in elementary school, too, a girl and a boy.

That might explain how they maintain such good balance, between protocol and practicality. They want their children to be safe, but they also want them to have normal life experiences. There are no metal detectors in Littleton's schools. There are no surprise drills or scare tactics. They want to create a sense of well-being, Grace says. A sense that there's somebody watching out for you, so there's no need to be scared.

"When we go out and talk to the kids, we just emphasize that you can feel safe here. These are all the things we're doing to keep you guys safe at school," Pechan says. Then she laughs. "I have kids of my own, and I say to them, 'Somebody is always watching over you. You'll get away with nothing.'"

hen you talk to people about school safety, you hear one phrase repeated over and over and over again, as if parents and teachers, architects and security guards, academics and safety experts have all read the same book or sat in the same seminar: "We don't want our schools to feel like prisons."

There is something disconcerting about needing security cameras, panic buttons, and armed officers at schools. But if they're used to guard banks and stadiums and museums and subways and movie theaters, experts say, shouldn't they also be used to protect our children?

The sunny morning has given way to a sunny afternoon in Littleton, Colorado. Grace has stopped by Highland Elementary School, where his son, Guy Jr., is in the fifth grade. The exterior doors at elementary and middle schools in Littleton are always locked. Visitors have to press a button to buzz the office, where a receptionist will look through a video intercom before deciding whether to let them in.

At Highland, one of those receptionists is Margie Mutmansky, a small woman with a graying bob and the soothing voice of someone who talks to children all day. Mutmansky, it turns out, used to work at a prison, twelve or fifteen years ago.

She says there are some problems inherent in the security protocols. The children are so polite, theywant to let everyone in. They have to be taught not to open the front door. And then there are the parents who get personally offended that they can't wander into their children's classrooms unannounced, that they have to buzz in, and have their license scanned, and get a sticker before they can come in.

But mostly, Mutmansky thinks they all need to work together to make sure their children are safe. "When something happens like Parkland, I'm sure kids see news, they hear their parents talking, they have questions," she says. "The teachers do such a great job of answering them, and making them feel safe. They explain that we

have to be cautious, but that doesn't mean you can't trust anyone."

So, has Littleton turned its schools into prisons?

"To an outsider, they might say we're making it like a prison," Mutmansky says. "But what we're doing is allowing the children inside to have their freedom. We're allowing them to not live in fear."



race wouldn't make a very good prison warden. He looks

the part, but then he opens his mouth and out pours a chuckle, a disjointed string of thoughts, a sticky web of joy and earnestness and sadness and concern. His expressions change like the light on a partly sunny day, going bright with joy then clouding over with gloom, then breaking through with streaks of hope.

Something about him hints at a tremendous burden. The way his sentences **>**

CASE STUDY Littleton, Colorado

trail into darkness, *I had a kid try to kill himself by running into the highway down here, had to tackle him three times. Yep, that was a crazy day.* The way he tries to talk matter-of-factly about his own district's experience with a shooter five years ago, running the thick pad of his index finger over a map, *The shooter entered here,* even as his eyes turn big, and his mouth tugs down at the corners.

In an era of rampant, repeated school shootings, of heated arguments about whether there should be more guns or fewer, of name-calling and blame games and rallies and rage, Grace just wants his kids to be safe. And yours. Everybody's. After thirty years on the job, it's still an uphill battle. With every new shooting, it gets a little steeper.

Like many secure schools in the U.S., Littleton has a backstory. The skin broke and bled before a protective layer formed. It was traumatic for Grace and the community, making the abstract menace of a school shooting very real. On December 13, 2013, an eighteen-year-old student entered Arapahoe High School with a shotgun, a machete, three Molotov cocktails, and 125 rounds of ammunition. From what authorities have discerned through the student's Columbine-inspired manifestos and the items he brought with him—the student intended to kill many. In the end, he ended up killing one student, seventeen-year-old Claire Davis, who died of her injuries, and himself.

In some ways, the shooting at Arapahoe serves as a terrible cautionary tale. Even back then, their school security was more robust than is typical. They had a security director. They had the radio system. They had armed school officers. They were thinking about this stuff, actively. And yet, a student with horrible intentions still managed to wreak havoc. To take a life, and ruin many others.

The shooting ended quickly because a janitor saw the shooter walking in. He

shouted into his radio, "LOCKDOWN. LOCKDOWN. LOCKDOWN" before reverting to his native Spanish in his terror. Most students and staff in the vicinity had the presence of mind to run. Everyone acted quickly. An armed school resource officer ran to the scene, but by the time he got there the student had killed himself. The damage had been done.

Arapahoe is not often talked about in the national discussion of school shootings, next to "bigger" tragedies—Sandy Hook, Parkland, Santa Fe. But it has left its mark in Littleton, on its students and staff and security director. In the years since then, the district has spent \$11 million on school security. Grace has invested in more cameras and better communications systems and anonymous tip lines. He's quick to say that by no means is his school the safest or a perfect example. But he's always trying—to improve, to listen, and to intervene before something else terrible can happen.

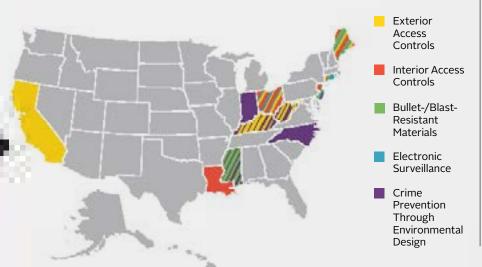
BREAKDOWN

How Much Does It Cost?

Sizefive specialty; 114,000 students38,000 studentsstudentsFunding for Security•\$10 million over five years for new cameras; annual school budget also includes \$800,000 for Department of School Safety. • Baltimore County Police Depart- ment covers cost of all officers.• About \$3 million per year for 42-officer district police force. • Requested \$160,000 grant from governor for bully-prevention program. Other funding secured through bond sales, local taxes. • Applying for federal matching grant from Stop School Violence Act for behavioral intervention and tech- nology improvements.• Sitae-of-the-art digital cameras • Buzz-in visitor entrance • Raptor background check and visitor-management system • Improved security vestibules • Additional psychologists and• Building new schools that have more security-minded architecture, including fewer entrances, emer- gency exits that can only be opened from the inside, less sprawling floor plans• Community-wide strategic sec rity plan • Security vestibules in all three schoolsWhat They Spent It On• Online emergency plans • Buzz-in visitor entrance • Raptor background check and visitor-management system • Additional psychologists and• Building new schools that have more security-minded architecture, including fewer entrances, emer- gency exits that can only be opened from the inside, less sprawling floor plans• Community-wide strategic sec rity plan • Security vestibules in all three schools • School resource officers • Additional psychologists and	School District	Baltimore County Public Schools Baltimore, Maryland	Corpus Christi Independent Schools Corpus Christi, Texas	Denville Township School District Denville, New Jersey
for Securitycameras; annual school budget also includes \$800,000 for Department of School Safety. • Baltimore County Police Depart- ment covers cost of all officers.42-officer district police force. • Requested \$160,000 grant from governor for bully-prevention program. Other funding secured through bond sales, local taxes. • Applying for federal matching grant from Stop School Violence Act for behavioral intervention and tech- nology improvements.year, taken from the standard scl budget. • \$300,000 for construction of r security vestibules.What They Spent It On• Online emergency plans • 19 drills a year for each school • State-of-the-art digital cameras 				Two elementary, one middle; 1,500 students
They Spent It On19 drills a year for each school State-of-the-art digital cameras Buzz-in visitor entrance Raptor background check and visitor-management system Improved security vestibules School resource officers Additional psychologists andDefinition background check and riculuting fewer entrances, emer- gency exits that can only be opened from the inside, less sprawling floor plansrity planSecurity vestibules in all three school School resource officers School resource officers School resource officers Additional psychologists andRetrofitting old schools with secu- rity vestibules and removing modular classroom buildingsSchool resource officers school resource and visitor-management system School resource officers School resource officers School resource officers School resource officersSchool resource officers school resource officers School resource officers School resource officers School resource officersSchool resource officers school resource officers School resource officers School resource officers School resource officersSchool resource officers school resource officers School resource officers School resource officers School resource officers School resource officersSchool resource officers school re	for	cameras; annual school budget also includes \$800,000 for Department of School Safety. • Baltimore County Police Depart-	 42-officer district police force. Requested \$160,000 grant from governor for bully-prevention program. Other funding secured through bond sales, local taxes. Applying for federal matching grant from Stop School Violence Act for behavioral intervention and tech- 	year, taken from the standard school budget. • \$300,000 for construction of new
ALICE active-shooter response team training	They Spent	 19 drills a year for each school State-of-the-art digital cameras Buzz-in visitor entrance Raptor background check and visitor-management system Improved security vestibules School resource officers Additional psychologists and counselors ALICE active-shooter response 	more security-minded architecture, including fewer entrances, emer- gency exits that can only be opened from the inside, less sprawling floor plans • Retrofitting old schools with secu- rity vestibules and removing modular classroom buildings • School-counselor-led intervention	 Security vestibules in all three schools School resource officers Licensed clinical social worker LobbyGuard background check and visitor-management system Share911 emergency alert system ALICE active-shooter response

What States Require

Several states have passed legislation mandating specific school-safety measures.





The Parkland Effect

Prior to the shooting at Marjory Stoneman Douglas High School in Parkland, Florida, on February 14, 2018, only twenty states (red) had statewide recommendations, guidelines, or resources for school safety infrastructure. Following the Parkland tragedy, twenty-one new states have begun discussing school security legislation, and seven states with existing resources have revisited their guidelines.

With thanks to Secure Schools Alliance/Police Foundation, June 2018.

Gresham School District Gresham, Wisconsin	Jay School Corporation Portland, Indiana	Marion City Schools Marion, Ohio
One building, classified as two schools, K–5 and 6–12; 300 students	Five elementary, two middle, one high; 3,300 students	Six elementary, one middle, one high; 5,000 students
 Spending about \$174,000 on physical improvements, financed by redirecting funds from maintenance budget and working with local com- panies to pay security measures off over time. Applying for Wisconsin school safety grants. 	 Spent \$232,000 in the 2017–18 school year. Received 50% matching grant from the Indiana Department of Homeland Security for school resource officer salaries. 	• Spent \$3 million in last four years, budgeted \$3 million over next three years.
 Security cameras Secure front entrance ALICE active-shooter response training Part-time school resource officer 	 3M shatterproof glass film for windows School resource officers NetTalon military-grade steel doors and windows Interior school doors with ballistic- resistant windows 	 Safer Schools Ohio Tipline MARCS multi-agency radios School resource officers Third-party safety audit Mental-health counselors 3M shatterproof glass film on all building entrances Raptor background check and visitor-management system

Best Practices

2

Some of the ways schools have stepped up security-without disrupting learning.

Here are some of the most innovative—and common-sense measures designed to guard against shooters, trespassers, and other dangers while maintaining a healthy environment. Most could be retrofitted to any existing school building.

3

- Only buses can pull up to the school in a dedicated lane; drop-off and visitor parking lanes are farther out.
- 2 Bollards keep vehicles from the main entrance.
- 3 Live-feed cameras can be accessed by security personnel, administrators, and emergency responders.
- 4 Locked double-door "mantrap" entrance allows visitors to speak to security—or drop off a forgotten lunch—without entering the building.
- 5 Retractable wall or gate can seal off communal spaces (gym, auditorium) from classrooms.
- 6 Magnetic doorstops keep doors open during the day but can be released remotely in an emergency to prevent an intruder from entering another wing of the school.

8

1

- 7 In a central security office, personnel can monitor camera feeds, check in visitors, make sure doors are locked, answer distress calls, and trigger emergency alerts.
- 8 Reinforced push-button locks can be engaged from inside a classroom or opened with a key from the outside. In an emergency, teachers don't have to fumble with keys or leave the room to lock it.
- 9 Classrooms and security can communicate directly with each other, or to the entire school, using a notification system.
- 10 Panic buttons notify security and first responders of an emergency.
- Film on classroom door windows prevents shattering.
- 12 Numbered windows and doors help first responders quickly identify the location of a problem.
- **13** Bulletproof glass on windows and doors.
- 14 Strategic landscaping a swale with rocks and shrubs—keeps visitors away from windows.
- **15** A manned or key-card access gate controls traffic through a single entrance.

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CASE STUDY Newtown, Connecticut



How Newtown Came Back

In the six years since the unbearable happened at Sandy Hook, the town has rebuilt the school and, slowly but surely, its community.



Mark Pompano refers to it as 12/14. Not "the tragedy," or "the shooting," or even "Sandy Hook." Just two numbers, short for December 14, 2012. A date—a terrible date. But a thing of the past.

Even in Newtown, Connecticut, life moves forward. A new Sandy Hook Elementary School has been built on the grounds where the old one stood. The old building was torn down in November 2013, and every brick was destroyed—a precaution that ensured pieces wouldn't be pawned off like souvenirs to internet sickos. Almost all the teachers and staff who were there that day have left the district. The youngest of the surviving students have all graduated to middle school.

"That's Shelly," Pompano says, pointing to a leaf-green turtle paddling around a tank in the school's lobby. "She was here on the day. But turtles live one hundred years, so..."

Pompano was here that day, too. The former LAPD cop became the security director for the Newtown School District in 2008. One of his first acts was to implement a policy of locking school doors during the day. Back then, locked doors were a progressive, if not over-thetop, suggestion. Then, in Pompano's fourth year on the job, a twenty-year-old man entered Sandy Hook, one of the district's four elementary schools, and killed twenty first-graders and six adults who tried to protect them. It was the shooting that shattered the sense of security at schools across America. After 12/14, a new mantra emerged in school safety discussions: "If it could happen at Sandy Hook, it could happen anywhere."

It's hard to imagine Newtown, a wellmanicured community dotted with Starbucks and athletic fields, as the backdrop for such prolific tragedy. The new Sandy Hook Elementary is beautiful and welcoming. It sits a quarter-mile back from Riverside Road, up a curved driveway with a low black, metal gate. It's covered in rich brown wood, and the facade, roof, and awnings slope up and down in squiggling waves from the main entrance. On a sunny, breezy day in early May, it looks like it could have grown out of the earth naturally, like a tree-covered hill in the Connecticut woods.

"This is the safest school in the country," Pompano says as he walks up to the entrance. "It took every cent of \$50 million to build this."

The main entrance of the school is over a footbridge and is bordered on both sides by a moat-like garden that turns into a creek in rainy weather. It has educational value for children to learn about biodiversity, but it also makes it difficult to get close to the school's windows. Which, by the way, are all ballistics glass. The welcoming glass front doors, too, are suspiciously heavy.

"As you can see, there's a ballistic quality to these," is all Pompano says as he heaves them open.

When you mention visiting Sandy Hook Elementary, and taking a security tour, the responses echo back in hushed tones. That must be so sad. It must be so hard. That community must feel broken. In some ways, yes. Of course. But the striking thing about Sandy Hook, and all the schools in the Newtown School District, isn't that you see outrageous, high-tech security features. It's that what you see are normal schools that feel like places of learning.

Inside Sandy Hook's ballistics-rated entryway, a bright blue and orange mural of flying geese decorates a wall of the front office. High ceilings and colored-glass windows in the school's lobby make it feel like a giant treehouse. Geometric shapes in moss green and dark orange trickle down the halls, and near the cafeteria a giant flowershaped mosaic proclaims, BE KIND. As Pompano walks around, he points out hidden features: doors that can be remotely closed and locked in an emergency, gates with alarms that need to be opened with a key card, large numbers on classroom windows so that emergency responders can locate a classroom quickly.

There are other technologies that, like the doors, Pompano will only talk about in vague terms. Are there panic buttons? A few, in "strategic locations." A mass notification system? Yes, but only select administrators can use it. Radios? Yes, for teachers and staff who elect to be on their school's emergency team. "But we don't require them to have the radios on all day. We try to keep distractions to a minimum."

Newtown's school-security systems are as robust as any in the country. But the most impressive aspect might be their restraint. After 12/14, Pompano says, he was bombarded with calls from security technology companies. With a \$50 million budget and dozens of companies offering free products, it would have been easy to go overboard. But the community needed to move on and heal. Newtown's security keeps students safe without making them feel like they're on guard against another attack.

Michele Gay, a Sandy Hook parent who lost her daughter Josephine in the shooting, was involved in Sandy Hook's rebuilding and now runs a school safety nonprofit called Safe and Sound Schools. After the tragedy, Gay says, her other children wanted and needed to go back to school. She and other parents of victims had to start asking questions about what kinds of precautions should-and shouldn't-betaken in the district. "Surely we don't have to make our schools into fortresses," she says. "After the tragedy, we started asking tough questions, and a whole world of possibilities opened up to us for reexamining our campuses."



BEST PRACTICES: Newtown

- Reinforced glass on all windows and doors to prevent intruders from breaking and entering
- Physical barriers and door-locking policies that keep community spaces separate from classrooms
- All entrances at all schools are kept locked during the school day

Many of Newtown's security solutions are surprisingly low-tech. While Sandy Hook has been built with ballistics glass in every door and window, the glass in the district's other schools has a ballistics film. Every classroom door now has reinforced locks that can't be shot through and can be locked from inside. Large concrete bollards stand outside all school entrances to keep potential intruders from ramming through with a car. All schools in the district have added more cameras, and they still keep their doors locked during the day.

Pompano speaks about the schools' safety in the matter-of-fact way of a cop who's weathered more dangerous climates. He sounds confident that the district will be safe from future incidents.

"I think we're at a good level of security," he says in Sandy Hook's lobby. "It's not too far out there and it's not nothing. It's somewhere in between. It feels like a school, because that's the way it's supposed to."

There's no sign of fear. Nothing about the security systems feels intrusive or complicated. Sandy Hook Elementary is not sad, or somber, or broken. It feels welcoming. Joyful. Safe. Newtown, it seems, has found a measure of peace in being prepared. And if they can do it, surely other schools can, too.

"You'll think this is cliché," Pompano says. "But I tell other schools there are two points to start: Are your doors locked? And do you have a See Something, Say Something tip line?"

Over his shoulder is a large, bronze plaque commemorating the victims of 12/14. Shelly, the turtle, is still swimming in her tank. The school's two-story windows, with squares of orange and red glass, let the lateafternoon sun through. In the quiet stillness, it feels a little like a cathedral.

Then a flock of children bumbles through, on the way back to class from the playground. Six- and seven-yearolds. They shout and laugh and bump into each other, a blur of arms and legs and smiles and untied shoelaces. "This side is for boys and that side's for girls," one boyyells. They drown Pompano out with their squeals and chatter.

In this moment, Sandy Hook Elementary feels like just about the best place in the world for a young and happy kid to be.

It feels like a school.

What's the Impact on School Life?

Dispatches from around the country.

Do Drills Scare Young Students?

▶ "We've conducted numerous parent forums to go over what we talk to their students about. We give families an age-appropriate script about exactly what we say, so parents can use the same language we use." —Steve Fujii, superintendent, Marion City School District, Ohio

Are All These Drills and Cameras Really Necessary? Shootings Are Still Quite Rare.

► We found that many school districts that implement security measures for one reason—fear of a potential shooting, for example—often end up relying on them to help with other problems. An anonymous tip line designed to find potential aggressors might also receive calls about drug use, or a suicide. And so-called active-shooter drills are useful in preparing for all kinds of emergencies.

Drills Help Address All Kinds of Problems

▶ "When we drill, we create all kinds of scenarios. It could be something like a truck with a chlorine leak, and they have to act on that based on the information we give them. We do four a year to keep them off balance." *—Richard Muth, Department of School Safety, Baltimore County Public Schools, Maryland*

▶ "Statistically speaking, most schools aren't going to have an active shooter. But they are going to have medical emergencies, a bus accident, a noncustodial parent—something that has the potential for students to be injured or killed, which is just as tragic. Drilling and training helps teachers better prevent and respond in any of those situations." —*Amy Klinger, cofounder, Educator's School Safety Network*

Cameras Reduce Misbehavior

▶ "It's amazing what you can find out just with cameras. Absolutely we've seen a reduction in vandalism. And an uptick in finding the little darlings who do something you don't want done. Everything is taken seriously, everything is investigated. It's not just kids being kids anymore." —*Rita Bishop, superintendent, Roanoke City Schools, Virginia*

 "Our security systems have basically knocked out vandalism we've seen a 98 percent reduction." —Guy Grace, director of security and emergency preparedness, Littleton Public Schools, Colorado

Most Parents Feel Reassured

▶ "The cameras, especially in our welcome centers, have been reassuring to parents, as has seeing more control over entrance and egress during the school day. That's what we're hearing: There's an expectation that we're on top of this, They don't want strangers walking into our schools." —Joe Balles, security coordinator, Madison Metropolitan School District, Wisconsin

▶ "Having a uniformed police officer in our high school or rotating through our other buildings—I think that provides a level of comfort. You have a police presence that you can see. I don't think that bothers people anymore." —Brad DeRome, business manager/treasurer, Jay School Corporation, Indiana

Resource Guide

The Partner Alliance for Safer Schools

Started by members of the Security Industry Association and the National Systems Contractors Associations, PASS provides a step-by-step map for assessing and outfitting schools with safety technology.

passk12.org

Secure Schools Alliance

A nonprofit advocacy group tackling school safety research and legislation, with particular interest in securing funding for security infrastructure improvements. Website includes information on state-specific resources.

secureschoolresources.org

Educator's School Safety Network

A school-safety nonprofit that addresses crisis management and infrastructure improvements from an educator-focused perspective.

eschoolsafety.org

Safe and Sound Schools

Founded by the mothers of two Sandy Hook victims. Provides free resources, including safety tool kits and primary research on school-safety practices. Backed by experts in security, psychology, and violence prevention.

safeandsoundschools.org

National School Security Information Sharing System

A secure forum for vetted school administrators and security personnel to share questions, tips, and useful information about safety programs with schools around the country. Founded by two police officers. nssiss.org