

Today's Agenda:

- **safe schools presentation**
- **project examples**
- **secure schools presentation**
- **hands-on exercise**
 - intruder experience
 - secure building designer
- **hands-on group presentations**

safe and secure buildings:
**a brief
introduction**



FEMA Shelters



External Safety



Storm Shelters



Internal Safety

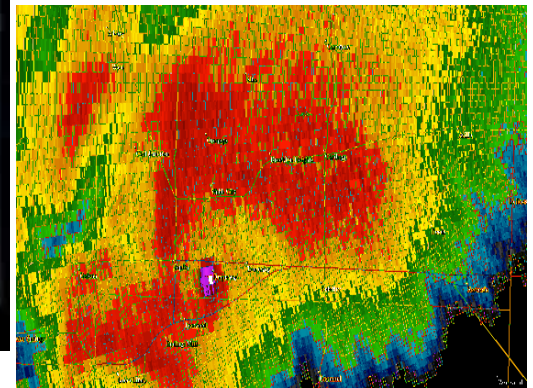


ourchallenge

what would it look like if...?

- Good access to space within the building
- Safe areas that are multifunctional
- Public sign that is visible and understandable
- Emergency provisions for safe areas
- Multiple areas in building for sheltering
- Relieve the fear of the unknown in design ideation
- Understand the context of the climate you are designing the facility in

US Department of Education
C3/SC3 Regional Conference



US Department of Education C3/SC3 Regional Conference

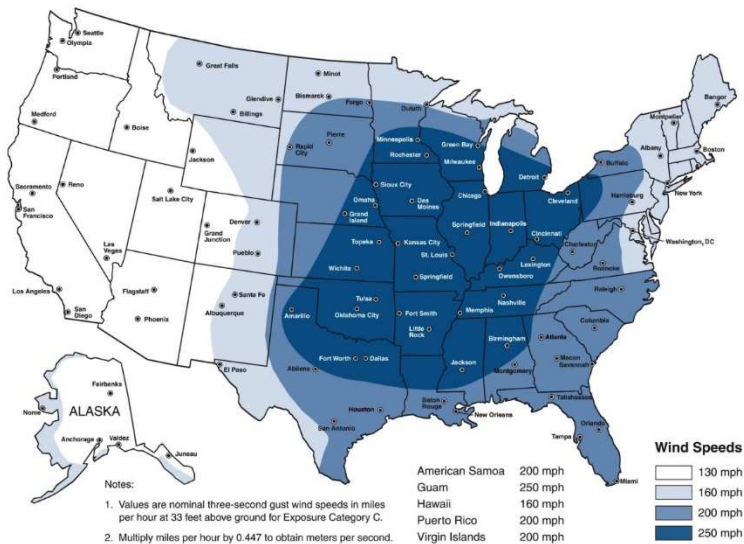
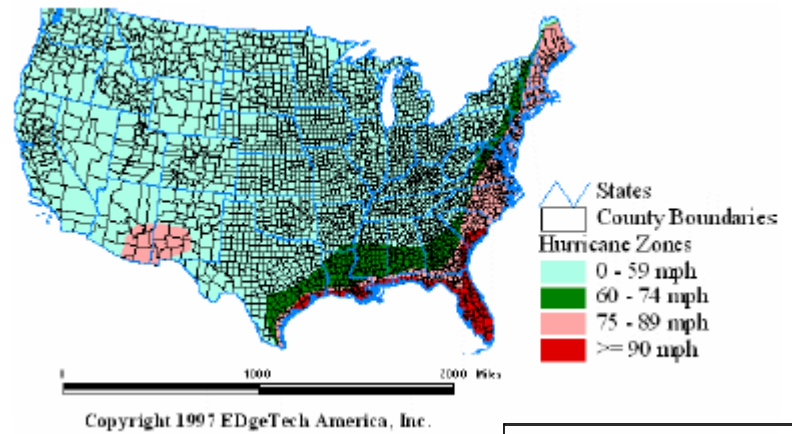


Figure 3-1. Tornado Safe Room Design Wind Speed Map (consistent with ICC-500 Tornado Hazard Map)

Original F Scale		Enhanced F Scale	
Rating	3 second gust (mph)	Rating	3 second gust speed (mph)
F0	45-78	EF0	65-85
F1	79-117	EF1	86-110
F2	118-161	EF2	111-135
F3	162-209	EF3	136-165
F4	210-281	EF4	166-200
F5	262-317	EF5	>200



Saffir-Simpson Hurricane Scale	
Storm Classification	Wind Speed (mph)
Tropical Depression	0-38
Tropical Storm	39-73
Hurricanes	
Category 1	74-95
Category 2	96-110
Category 3	111-130
Category 4	131-155
Category 5	>155



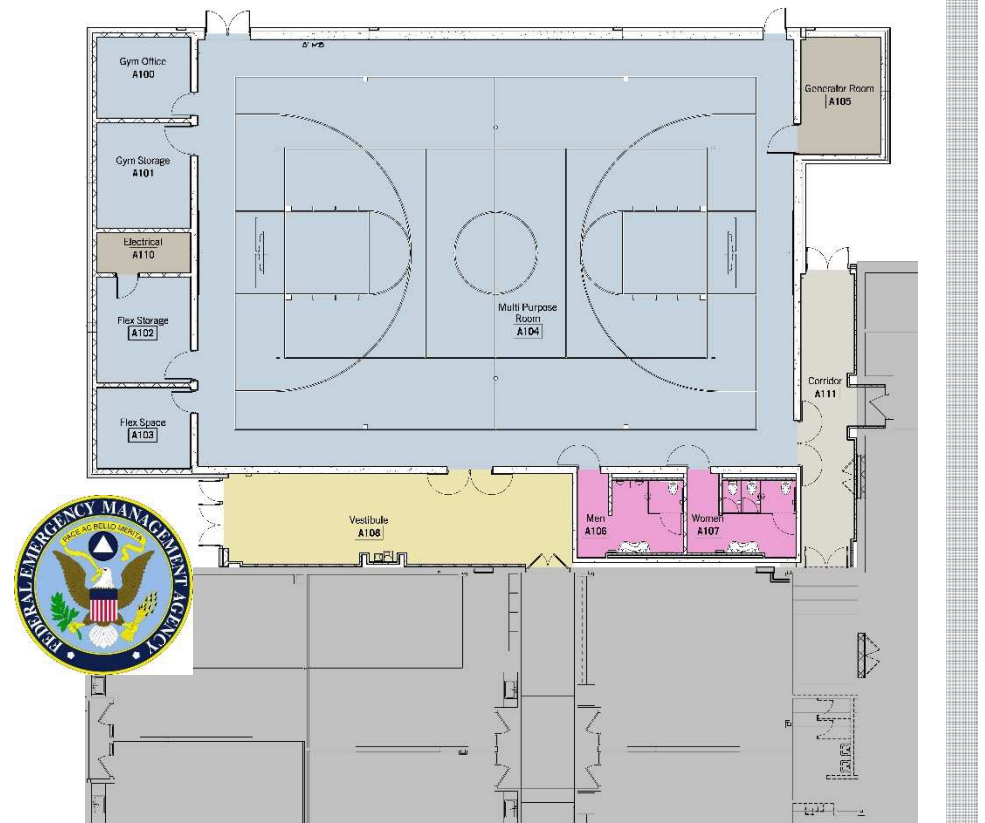




US Department of Education
C3/SC3 Regional Conference

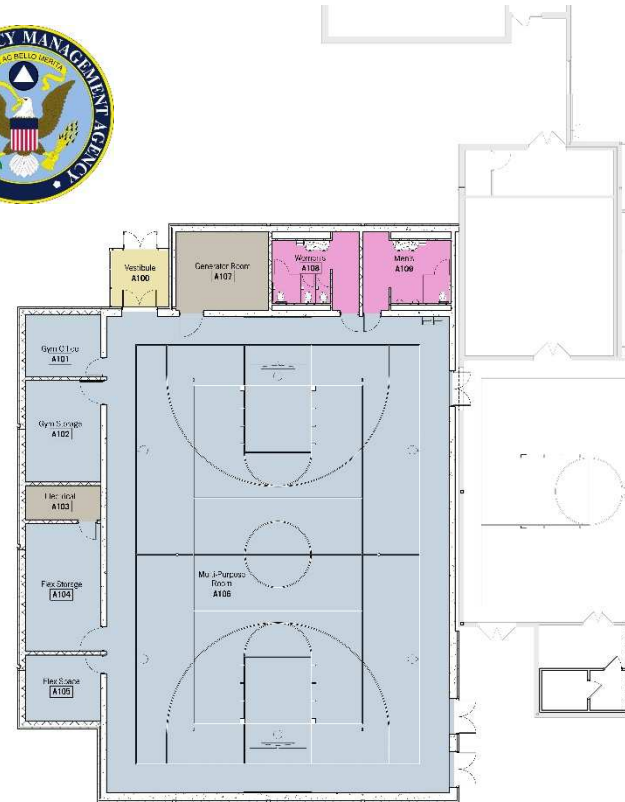
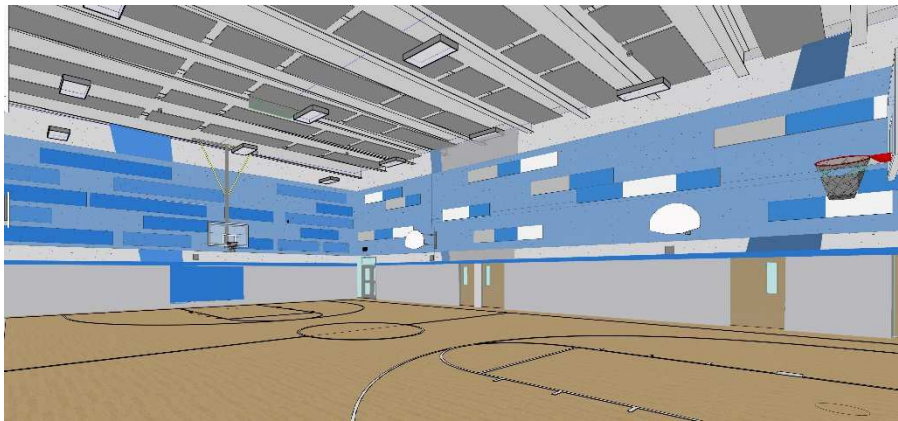
Evidence of Destruction





US Department of Education
C3/SC3 Regional Conference

Project Examples of Solutions



Safe and Secure Presentation

406 Safe Room #2



404 Safe Room

406 Safe Room #1



US Department of Education
C3/SC3 Regional Conference

Project Examples of Solutions





US Department of Education
C3/SC3 Regional Conference

Project Examples of Solutions



capacity: approx. 1300
construction: precast or cast in place
conc.





Pre-Cast Concrete



Concrete Tilt Wall



Monolithic Dome



Cast in Place



Concrete Masonry



ICP Panels

Acts of Nature

(Security Strategies)

- Wind
- Multi-Use
- Size
- Construction**

US Department of Education

C3/SC3 Regional Conference

Option 1:

Premium for:

Hardened “High Wind” Shelter

in comparison to Standard Construction

15-20% for that given area

Option 2:

Premium for:

FEMA 361 Shelter in comparison to
Hardened “High Wind” Shelter:

15-20% for that given area

Option 3:

Premium for:

FEMA 361 Shelter in
comparison to Standard Construction:

30-40% for that given area

Acts of Nature

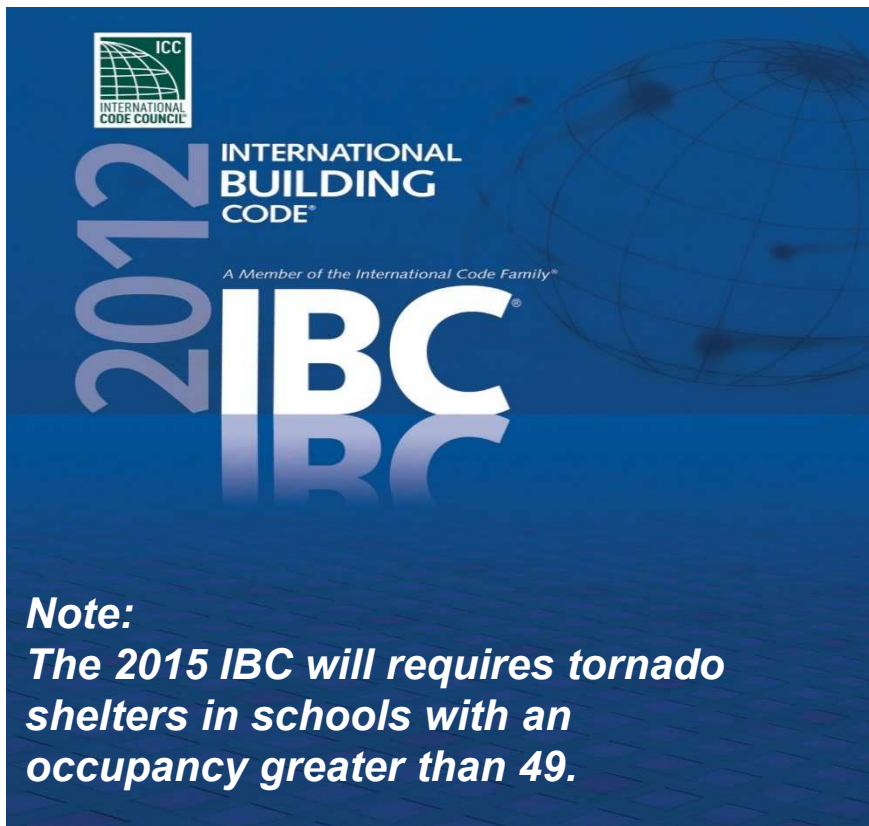
(Security Strategies)

- Wind
- Multi-Use
- Size
- Construction
- Cost**

Acts of Nature

(Security Strategies)

- Wind
- Multi-Use
- Size
- Construction
- Cost
- Code**





Acts of Nature

(Security Strategies)

- Wind
- Multi-Use
- Size
- Construction
- Cost
- Code
- Alternatives**

US Department of Education
C3/SC3 Regional Conference

Joplin Missouri - FEMA Shelters



Acts of Nature

(Security Strategies)

FEMA Shelters

VS.

Non-FEMA Shelters:

Major Differences

- Funding
- Building Usage
- MEP Systems
- Openings



Herington Elementary - FEMA Shelters



Design and Construction Guidance for Community Safe Rooms

FEMA P-361, Second Edition / August 2008



Acts of Nature

(Security Strategies)

- Wind
- Multi-Use
- Size
- Construction
- Cost
- Code
- Alternatives
- Resources**



Intermission



Acts of People

(Security Strategies)

US Department of Education
C3/SC3 Regional Conference



Acts of People

Discussing Threats + Solutions

US Department of Education
C3/SC3 Regional Conference



Unfortunately
the reality is
many different
specific types
of threats exist.

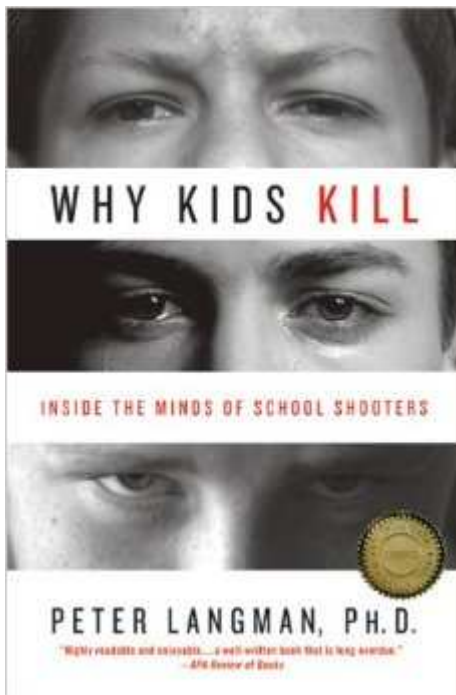
And no threat is any more substantial than the next.

US Department of Education
C3/SC3 Regional Conference



Prevention is a Myth

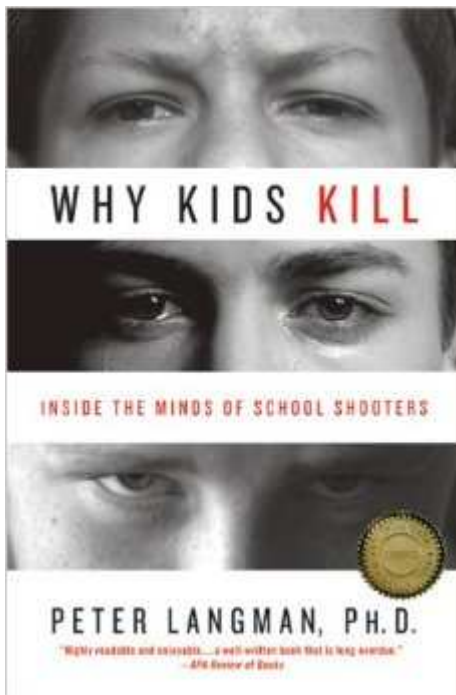
Inside The Mind of A School Shooter



3 Categories of Shooters:

- Psychopathic
 - Psychotic
 - Traumatized
- (not all shooters fit this typology)

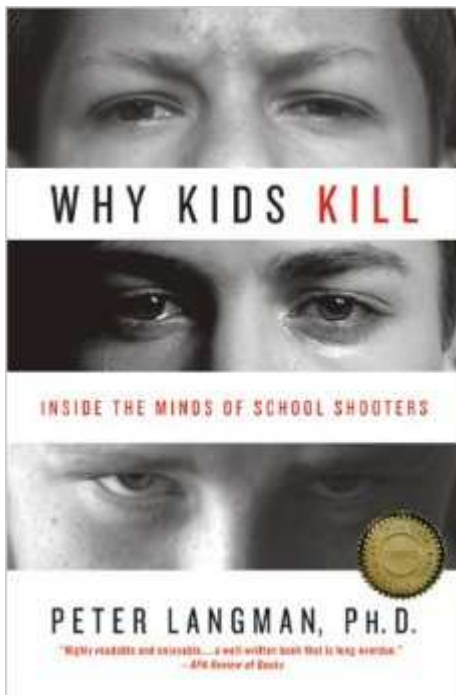
Inside The Mind of A School Shooter



We Need To Look Beyond The Typology For Additional Factors

- Sadism
- Weapons are part of the family fabric
- Substance Abuse
- Lack of Compliance in taking antipsychotic medication
- Youth (the studied shooters were all the youngest children in their families)

Inside The Mind of A School Shooter

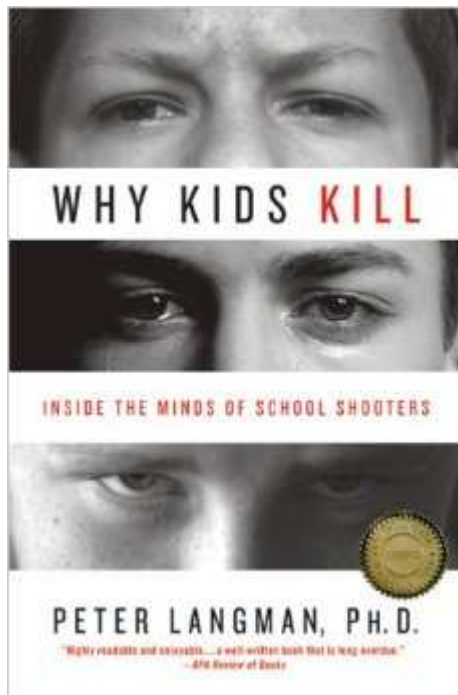


What Do the 3 Typology's have in Common?

- Sadism
- Anger(Existential Rage)
- Failure of Empathy
- Desperate Insecurity
- Shame, Envy, and the Failure of Manhood

The murders they committed were not inevitable outcomes of their personalities but actions they committed in a state of crisis

Inside The Mind of A School Shooter

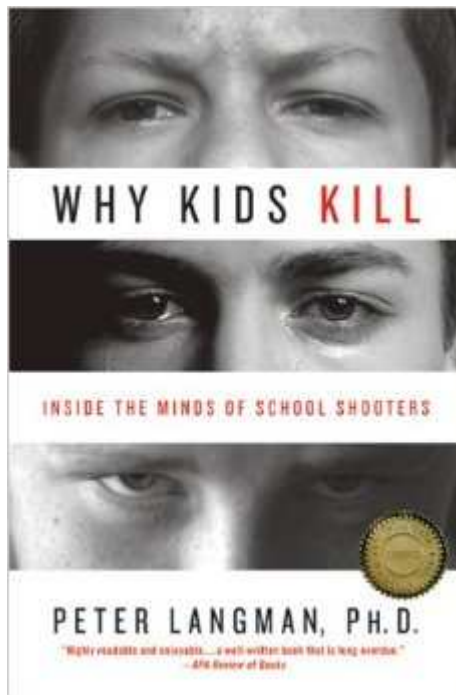


What Can Be Done To Prevent School Shootings?

- Lesson # 1: The Limits of Privacy
- Lesson # 2: Do Not Lie to Protect Your Child
- Lesson # 3: Follow Through with Due Process, No Matter Who is Involved
- Lesson # 4: If the School is Concerned about your Child, Pay Attention
- Lesson # 5: Eliminate Easy Access to Guns
- Lesson # 6: Assume Threats Are Serious until Proven Otherwise
- Lesson #7 : Anyone Can Stop a School Shooting
- Lesson # 8: Recognize Possible Rehearsals of Attacks
- Lesson # 9: Punishment is Not Prevention
- Lesson # 10: The Limits of Physical Security

Inside The Mind of A School Shooter

What Does This Mean for the Rest of Our Presentation?



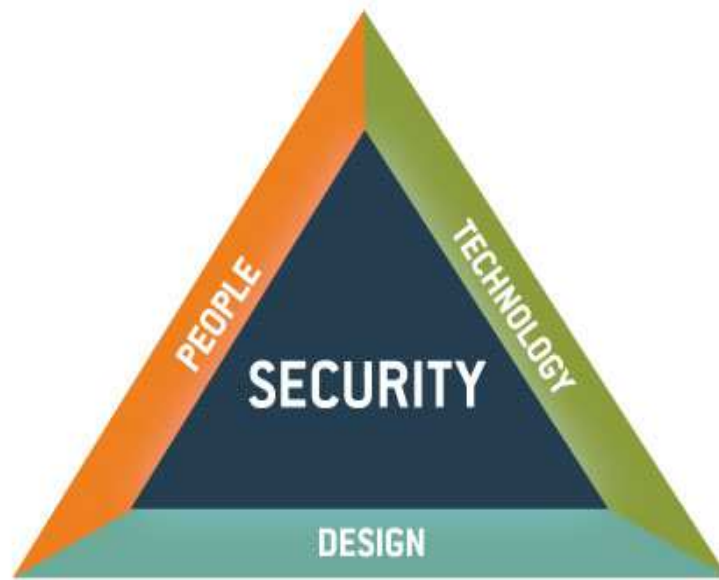
"Kids are suspended and/or expelled, sent away from us, and I think rejecting them is a huge piece (of their anger and pain). Gathering them in makes more sense."

Brenda Cumming

- Passive Visual Awareness
- Non-Direct Paths of Entries
- Multiple Layers of Obstruction
- Easy Classroom Security
- Classroom Visual Barriers
- Administration Strategically Located Throughout the Building
- Limit Points of Access to Site and Building
- Good Visual to the Exterior Site
- Panic Devices For Reception Tied to Entire Building and 911

Acts of People

(Security Strategies)



- Comprehensive Approach
- No single or simple solution
- Always consider all elements
 - -People
 - -Technology
 - -Design



Acts of People

(Security Strategies)

Passive:

-Perimeter Security



US Department of Education
C3/SC3 Regional Conference



Acts of People

(Security Strategies)

Passive:

-Perimeter Security

-Secure Vestibule (limited entry)

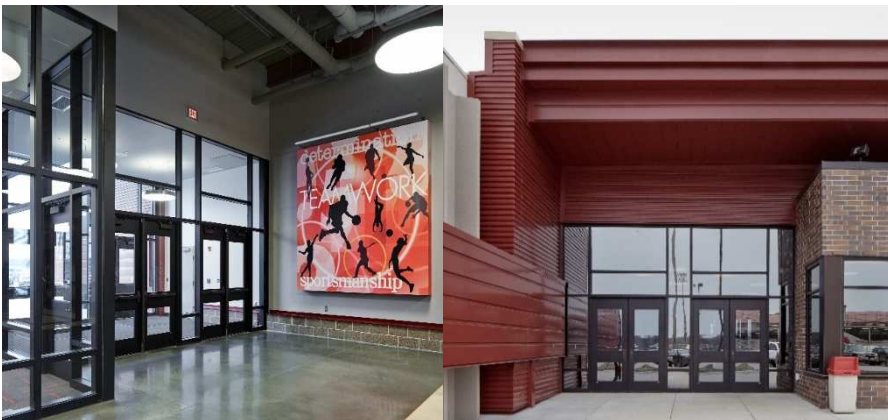
US Department of Education
C3/SC3 Regional Conference

Acts of People

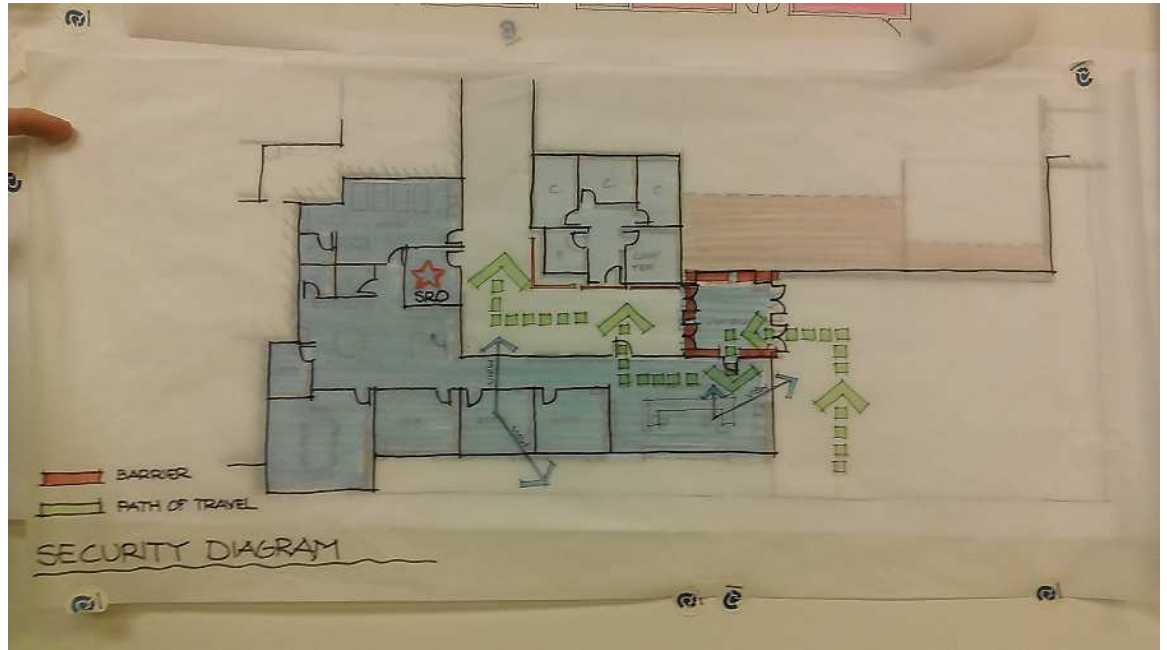
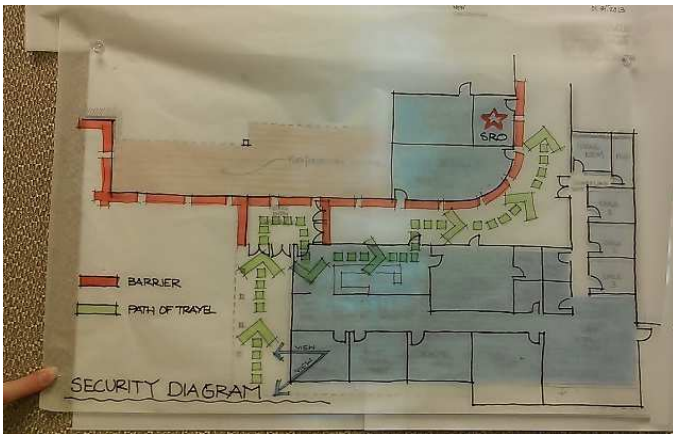
(Security Strategies)

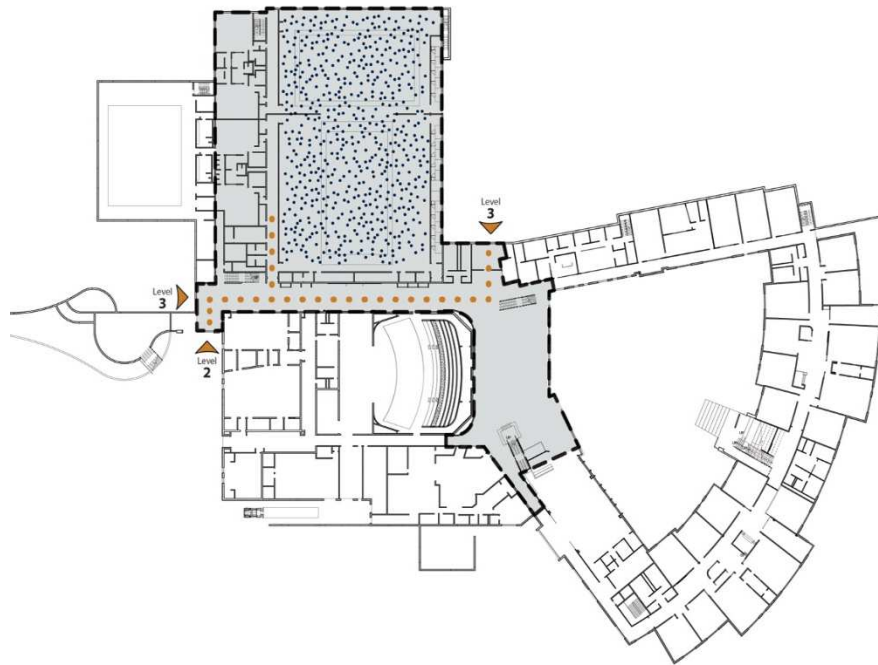
Passive:

- Perimeter Security
- Secure Vestibule (limited entry)
- Visibility (pros + cons)**



US Department of Education C3/SC3 Regional Conference





Acts of People

(Security Strategies)

Passive:

- Perimeter Security
- Secure Vestibule (limited entry)
- Visibility (pros + cons)
- Building Layout**



Acts of People

(Security Strategies)

Passive:

- Perimeter Security
- Secure Vestibule (limited entry)
- Visibility (pros + cons)
- Building Layout
- Building Zoning**

Acts of People

(Security Strategies)

- **Active:**
- **-Preparedness Drills + Training**





Acts of People

(Security Strategies)

- **Active:**
- -Preparedness (RSD Example)
- **-Monitoring Arrival + Dismissal**

Acts of People

(Security Strategies)



- **Active:**

- -Preparedness (RSD Example)
- -Staff Monitoring Arrival + Dismissal
- **-Visitor Check in Procedures**



Acts of People

(Security Strategies)

- **Active:**
 - -Preparedness (RSD Example)
 - -Staff Monitoring Arrival and Dismissal
 - -Visitor Check in Procedures
 - **-Digital Campus Monitoring**





Acts of People

(Security Strategies)

- **Active:**
 - -Preparedness (RSD Example)
 - -Staff Monitoring Arrival +Dismissal
 - -Visitor Check in Procedures
 - -Digital Campus Monitoring
 - **-Security Systems + Locks**
 - -Closed Circuit TV
 - -Mass Notification System (MNS)
 - -Panic Button

US Department of Education

C3/SC3 Regional Conference

Door Example 1:

\$1900 per door w/**Self-Contained System**
local to door.

\$1000 to add Visual Intercom to same door

\$2900 Total per door

Door Example 2:

\$3000 per door with **Access Controlled System**

\$1500 to add Visual Intercom to same door

\$4500 Total per door

Window Security Film Example:

\$15 per area square foot

Acts of People

(Security Strategies)

Cost Premium: Doors & Windows

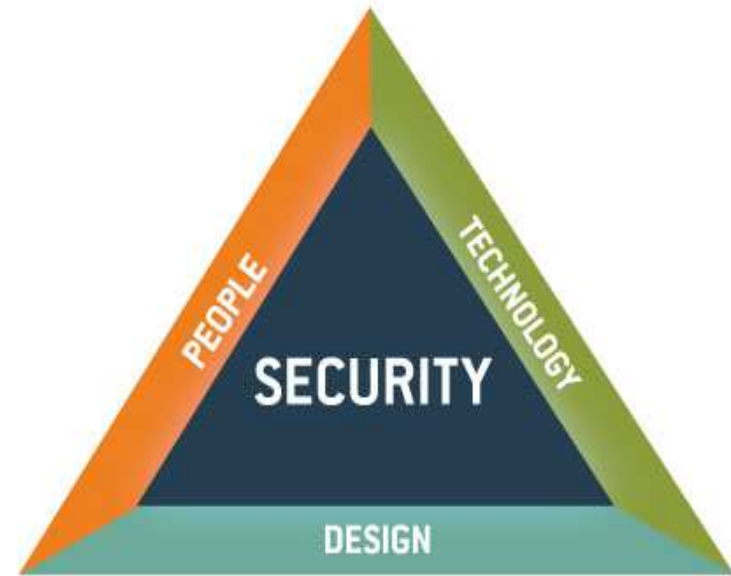
Take Away



- 1** No one is ever immune . . .
Set your priorities
- 2** When it comes to “Acts by People”
find strategies to buy time
- 3** Find a balance that gives you
security + the right environment
- 4** Cost: Investigate all your options
to find a solution you can afford
- 5** Tailor your strategies to your
Community + School District



Clarifications Questions Discussions



“Schools would derive greater benefit from employing more mental health staff and school resource officers. These are the people who combine the functions of maintaining security and enhancing communication between students and staff.” Dr. Katherine Newman

surprise!!

GROUP ASSIGNMENT

GROUP PRESENTATIONS



Thank You!

August 7, 2104

US Department of Education
C3/SC3 Regional Conference

For More Information



John G. Brown, AIA, DBIA

EDS/Hollis + Miller Architects
P: 816.525.5600
E: jbrownr@hollisandmiller.com

Keegan Jackson, AIA

EDS/Hollis + Miller Architects
P: 816.525.5600
E: kjackson@hollisandmiller.com

Ryan Walters, LEED AP

EDS/Hollis + Miller Architects
P: 816.525.5600
E: rwalters@hollisandmiller.com

Christina Hoehn, M. Ed., Assoc. AIA. IIDA

EDS/ Frankfurt Short Bruza /Hollis + Miller Architects
P: 405.840.2931
E: choehn@fsb-ae.com