

Fire and Life Safety

Kansas State University
Environmental Health and Safety
The following training program is courtesy of
the Kansas State Fire Marshal Office



FUNDAMENTALS OF FIRE AND LIFE SAFETY IN KANSAS

University Fire Marshal



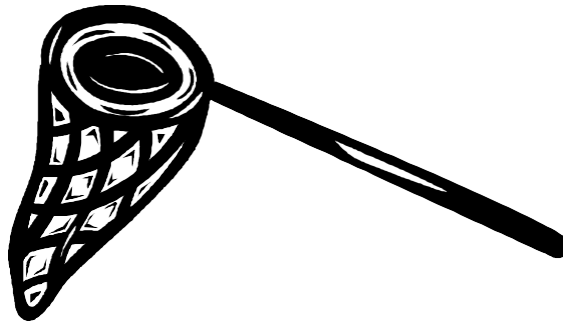
THE GOAL OF THIS TRAINING

To enlist ALL

- Building managers
- Faculty
- Staff, and
- Building occupants

**TO BECOME SHAREHOLDERS IN FIRE AND LIFE
SAFETY**

Kansas Fire Prevention Code is called Safety NET





Kansas fire Prevention Code includes:

Code violations

Exiting impediments

Dangerous conditions

KANSAS FIRE PREVENTION CODE INSTRUCTS...

- ❖ Policy and office practice
- ❖ Nationally promulgated codes
- ❖ Administrative Regs
- ❖ Statutes





CODE REQUIREMENTS

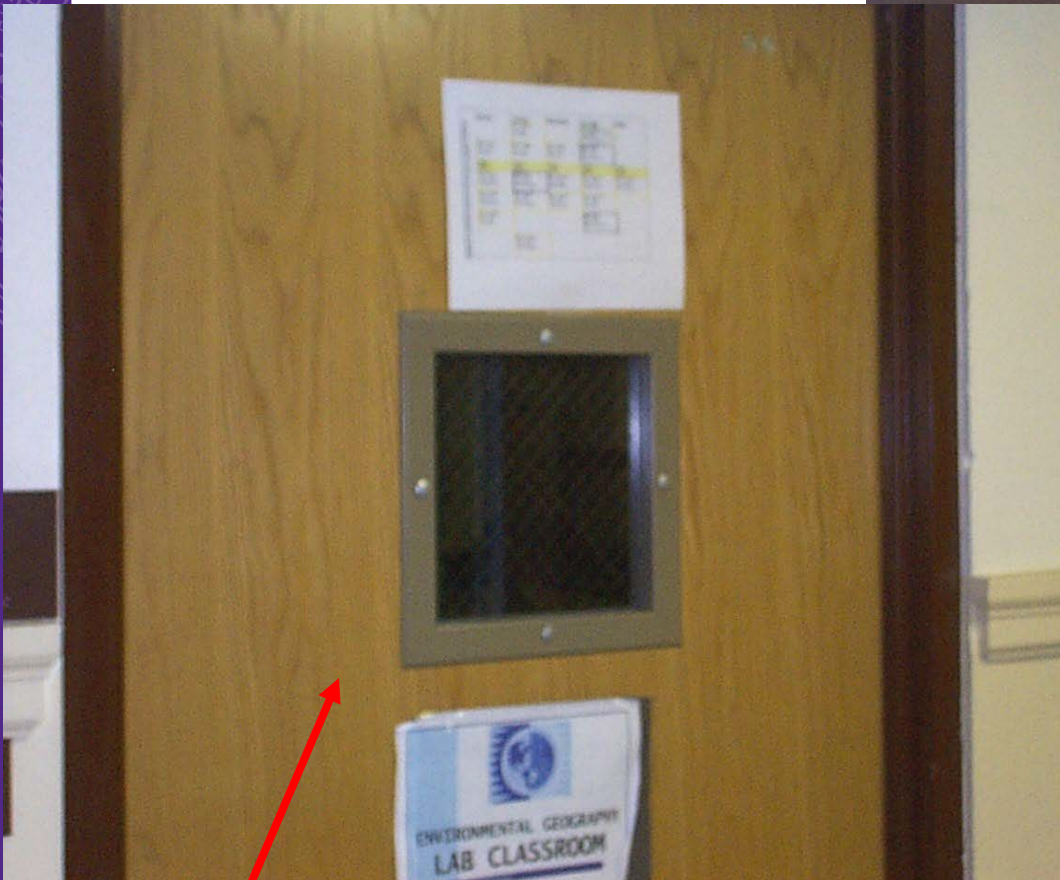
- Use or occupancy determines building's fire and life safety requirements
- When a building's use changes, it is considered **NEW**
- The exiting, fire alarm and automatic sprinkler requirements must meet those of a **new building**



Violation: Improper storage of compressed gas cylinders.

Compressed gas cylinders must be chained or belted to prevent falling.

Fire door identification label




Fire door

The glass' size is 100 sq. inches maximum



The Kansas Fire Marshal *recommends* that all NEW school buildings in Kansas be provided with an automatic sprinkler system.

The seal of Kansas State University is partially visible on the left side of the slide. It features a circular design with the text "KANSAS STATE UNIVERSITY" around the perimeter and "FEBRUARY 1863" at the bottom. In the center, there is a shield with a plow and a sheaf of wheat, with the motto "RULE BY BOOK" above it.

Kansas Fire Prevention Code prioritizes **People first** and then Property

KANSAS FIRE PREVENTION

Requires:

- Free access to **exits**
- Operational **fire alarms**
- Activation of **sprinkler systems** will sound alarm.





WHAT IS THE PROBLEM?

- o Unfortunately, building occupants do not respond **immediately** to emergency conditions



SPEED IS WHAT YOU NEED

- **Alarms are meant to alert occupants in the event of a fire.**
- Safety is best assured with **speedy exiting**



GRANDFATHER CLAUSE

- If the Kansas Fire Marshal identifies conditions which impede speedy exit or are dangerous, the building owner must comply.
- In Kansas there is NO “grandfather clause” for exiting.



- E** - EXITING
- N** - NOTIFICATION
- D** - DETECTION
- S** - SEPARATION
- S** - SUPPRESSION



MINIMUM REQUIREMENTS FOR EXITING

- **Clear hallways and stairways (no furniture, equipment or storage)**
- **Clear access inside and outside**
- **Less than 30% of the hallways or stairway walls may be covered by displays or decorations**
- **Doors may not be covered with combustibles**
- **Emergency lights in all exit paths**



Emergency lights





Violations:

Exit/egress obstructions

Improper storage in
hallways

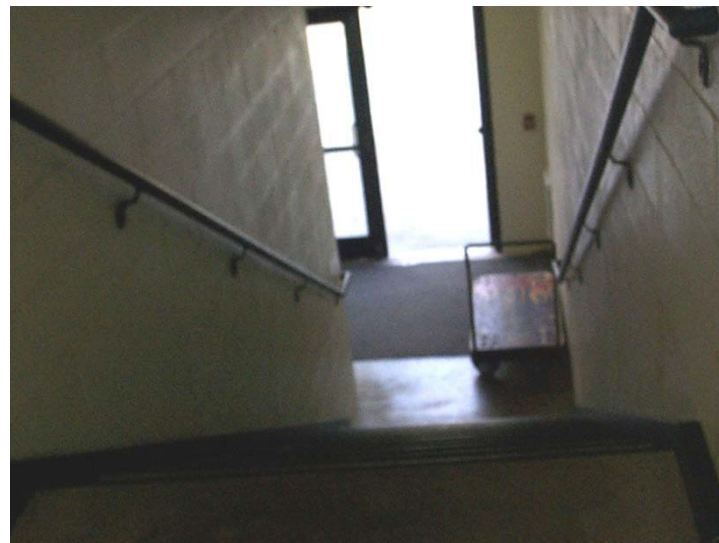




Violation:

Exit/egress
obstruction

Improper storage in
hallways





Proper construction site for EGRESS - open pathway with no trip hazards.

Violation:

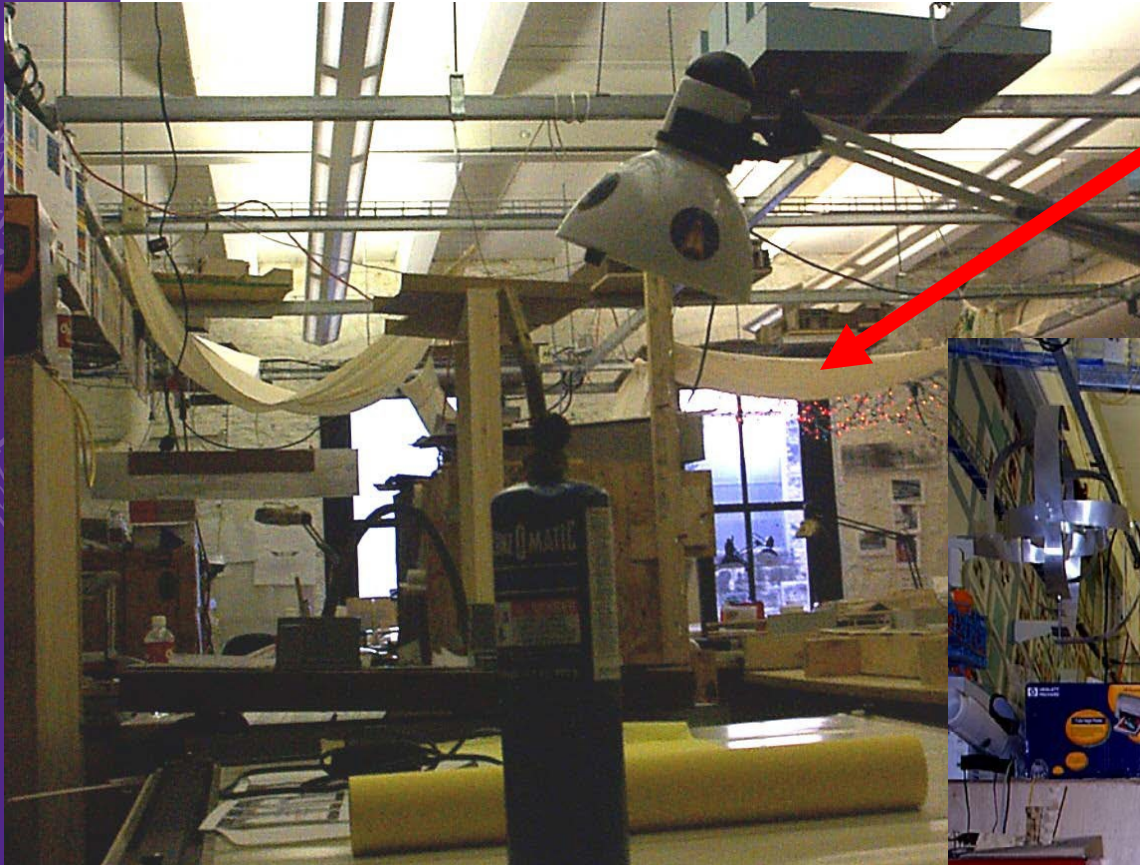
Construction blocking egress



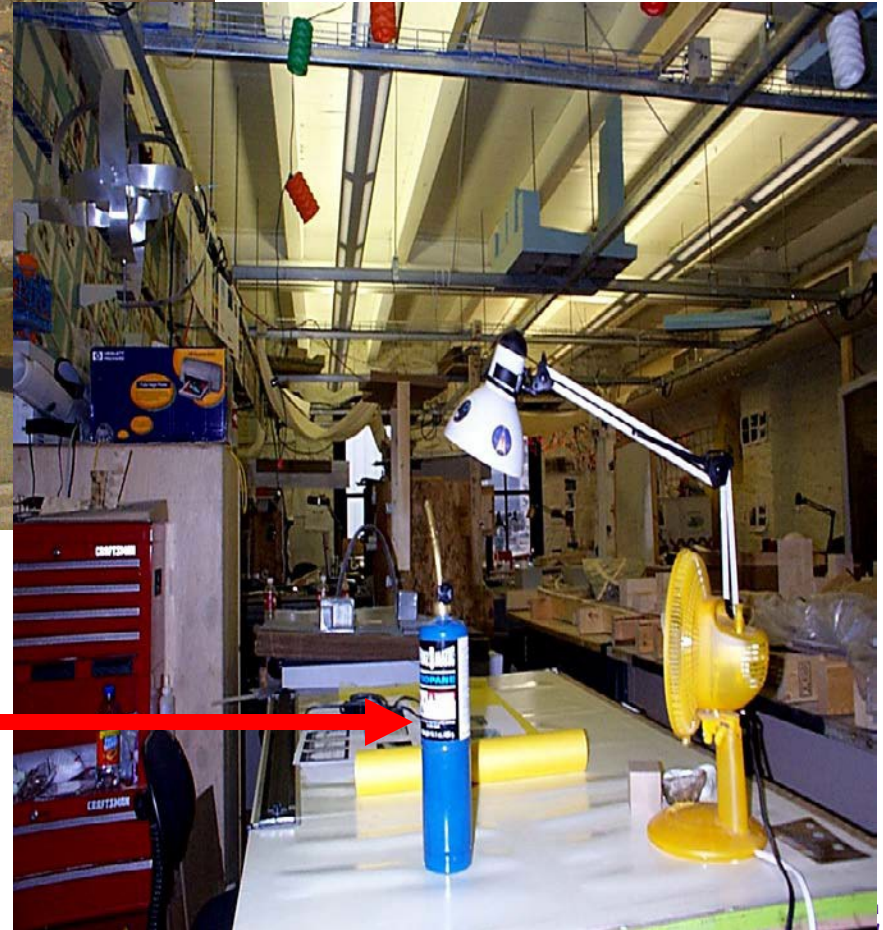


Violation:

Excessive decorations from ceiling



Violation:
excessive fire-
load



Violation:
Improper combustible/
flammable usage



MINIMUM REQUIREMENTS FOR EXITING

- **Exit doors not blocked**
- **Door closures**
- **Panic hardware**
- **Exit signs visible & illuminated**
- **No improper locks, such as chains and padlocks or drop-in devices**



Fire-door magnetic hold-open device

15-second time delayed
panic hardware on door



Magnetic locking devices.

Will automatically de-energize in case of fire



Violation:
covering EXIT
sign

Violation:
Door-closer with a fire-link



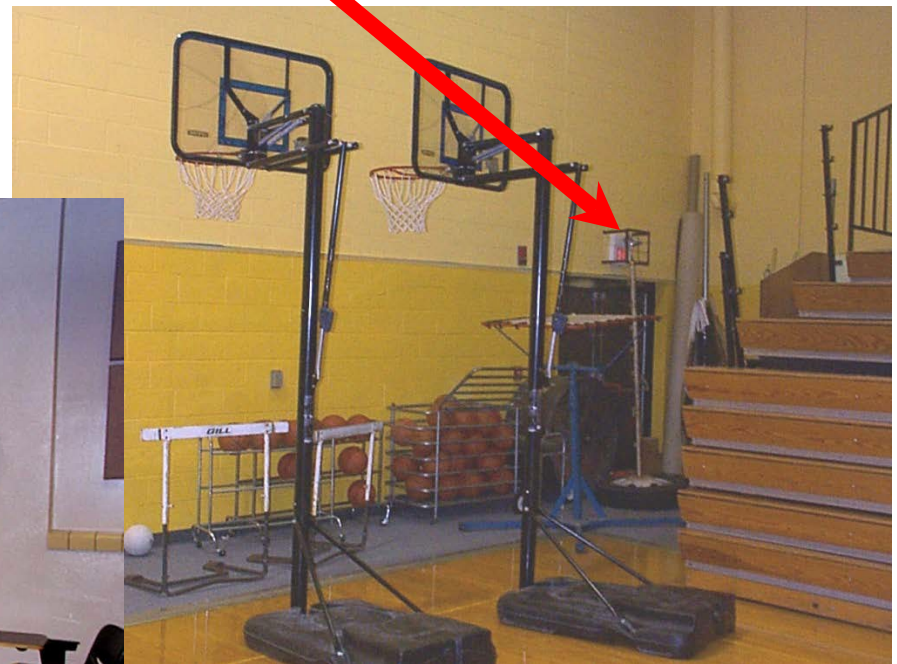


Violation:
Padlock on exit door



Violation:
Propped open fire-door

Violation:
Emergency exit
blocked



NOTIFICATION

In case of fire

- * Activate the fire alarm & evacuate the building
- * Call University Police to report the fire (911 or 2-6412)



NOTIFICATION

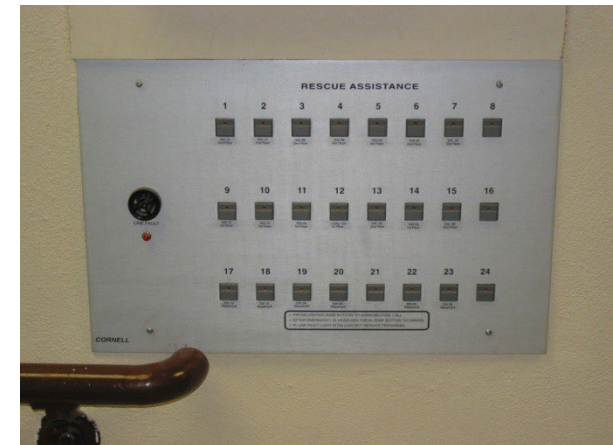
Pull stations are located at:

1. All **Required** exterior exits
2. At intervals of no more than 200 feet
3. At exits from all floor levels
4. In rooms with exterior exits **used** by building occupants.





Fire alarm panels



DETECTION



Smoke and/or Heat Detection is required for special areas:

- Childcare
 - Residence Halls
 - Buildings with Exiting Problems (open stairs, below grade occupancy, dead-end hallways, construction exiting)
 - Special Hazard Areas (labs, flammable storage areas)



Smoke (beam) detector



Fire and smoke detector



SEPARATION

- Proper fire separation doors
- Fire Doors kept closed **at all times!**
- Properly protected or sealed transoms
- No holes or missing tiles in ceiling
- No holes, grills, or openings in walls or floors
- Proper construction (sheetrock, masonry, or concrete)



Violation:

Improper storage in
boiler/furnace room.

DO NOT store materials
in these areas.



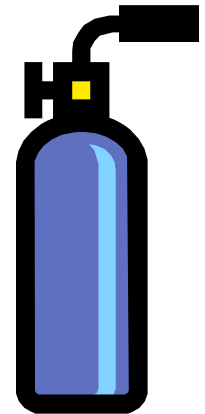


Violation:

Location of window, improper separation of lab
to egress path

SUPPRESSION

- * Automatic Sprinkler System – wet, dry or both
- * Standpipe Systems - wet, dry or both
- * Fixed Extinguishing Systems
 - Kitchen cooking equipment and hoods
 - Flammable finish and fume hoods



Standpipe system, hose connection for Fire Department use



Standpipe system, exterior fire department connections



Sprinkler head



Hood suppression system,
kitchen grease hood





The **N**ational **F**ire **P**rotection **A**ssociation (NFPA) has existed since 1896. NFPA has no record of a fire killing more than two people in a completely sprinkled public assembly, educational, institutional, or residential building, where the system was properly operating.

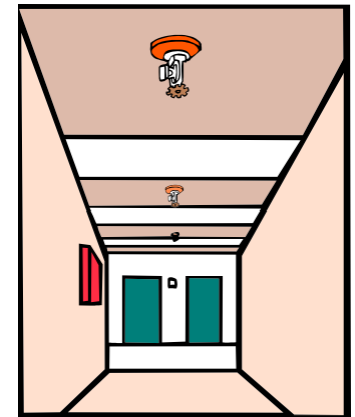
COMPENSATORY MEASURES FOR EXISTING BUILDINGS ONLY

- Compensatory measures are either qualitative or performance based.
- The Kansas Fire Marshal may recommend compensatory measures to correct existing conditions which impede speedy exiting.



PUBLIC SAFETY

All K-State safety systems (fire alarms, smoke detectors, heat detectors, and automatic sprinkler systems) are tested and maintained by Public Safety.





PUBLIC SAFETY

We ensure that:

- o Alarms are audible throughout the building
- o There is a sufficient number of safety devices
- o Safety devices are in the required locations
- o Written documentation is kept as required

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KANSAS STATUTE 31-144

The Kansas Fire Marshal performs annual inspections and requires correction of dangerous conditions and impeded exiting.




The...

Kansas Fire Marshal inspections take 15 minutes to 2 hours per building

Therefore -

Building occupants are essential to maintain fire safety



WHAT DOES IT MEAN?

- All of us at K-State are responsible for fire and life safety on a daily basis, NOT the AHJ.
- The AHJ (for K-state it is the Kansas Fire Marshal) ensures the checking, testing, and maintaining of the fire safety devices.



TRYING TO ELIMINATE VIOLATIONS

- Ignoring simple LIFE safety violations will compromise the value of your life

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WHAT IS THE KEY

Education

And

Cooperation