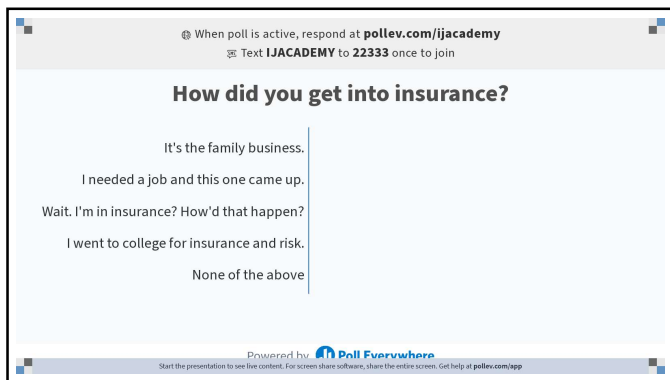
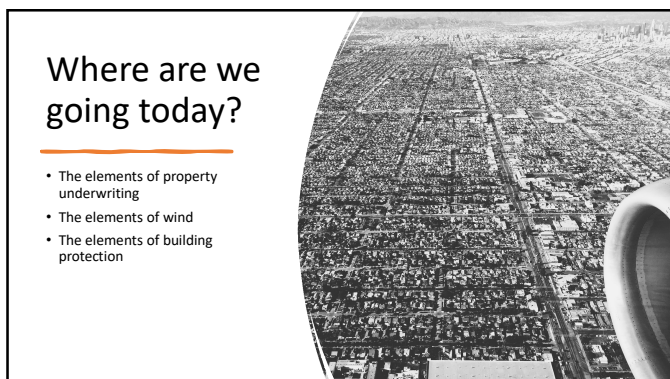




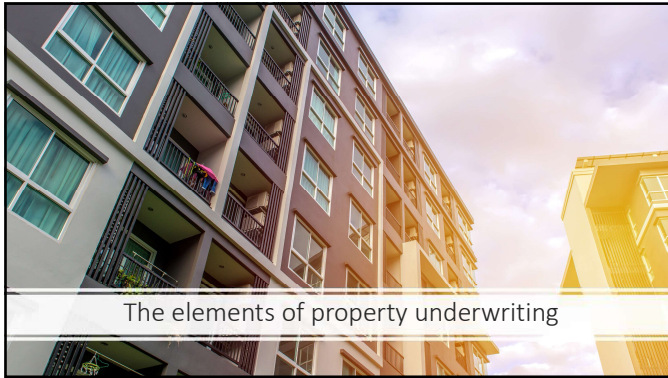
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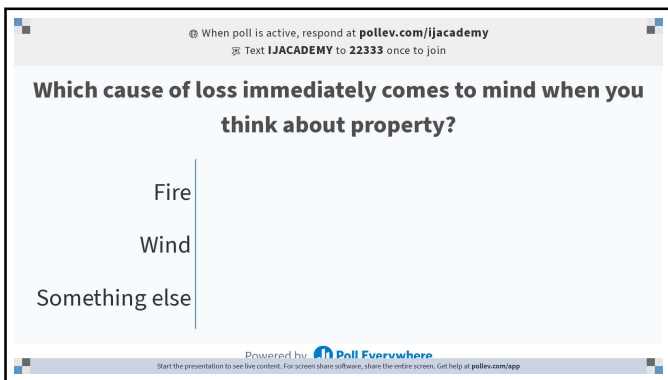
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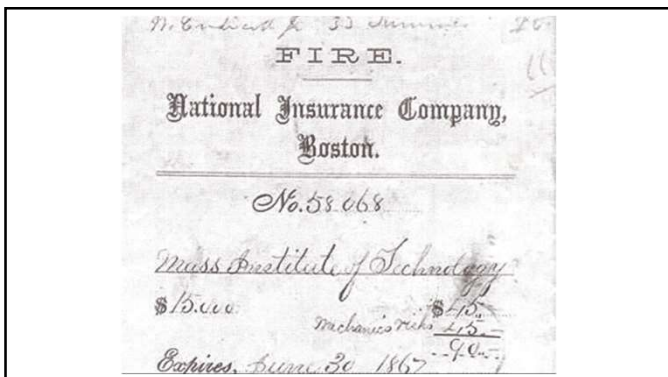
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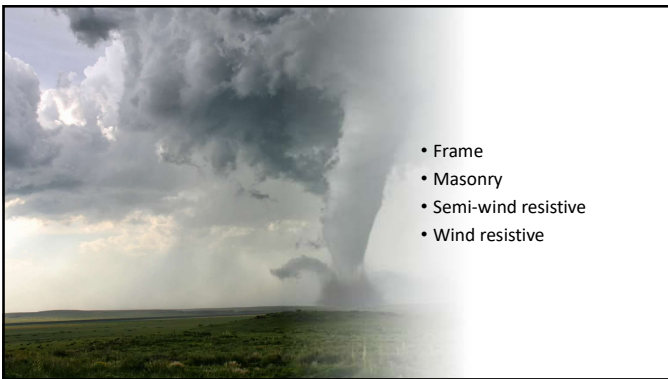
Construction



7

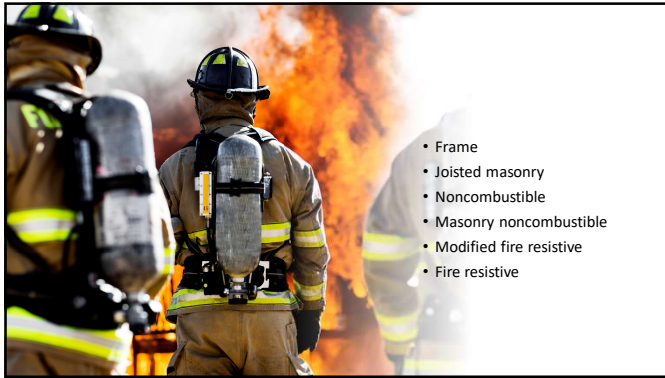


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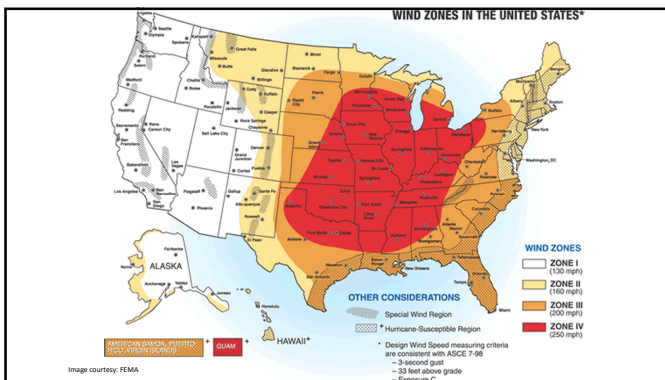


- Frame
- Masonry
- Semi-wind resistive
- Wind resistive

9



10



11



12

Joisted Masonry/ Masonry

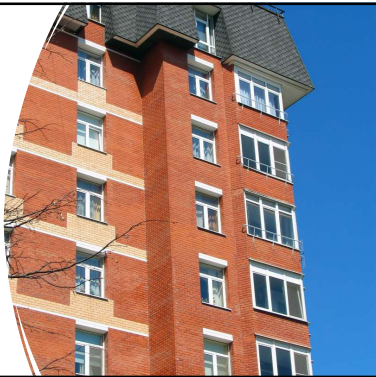
- Exterior walls – masonry
- Floor – combustible
- Roof Structure – combustible



13

Noncombustible/ Masonry

- Exterior walls, floors & roof structure – noncombustible
- Not brick veneer
- No fire rating



14

Masonry Non- Combustible/ Semi- Wind Resistive

- Exterior walls, floors, & roof structures – masonry
- Structural steel



15

Masonry Non-Combustible/ Semi-Wind Resistive

- Flat roof systems
- Built-up roof
- Single-ply membrane
- Spray-in roofing



16

Masonry Non-Combustible/ Semi-Wind Resistive

- Masonry wall systems
- Up to 1 hour fire rating
- Concrete block
- Reinforced masonry
- Tilt-up concrete



17

Modified Fire Resistive/ Wind Resistive

- Heavy steel frame w/poured in concrete
- Precast concrete panels
- Flat roofing systems
- Fireproof exposed steel
- Walls similar to MNC
- Fire resistance 1-2 hours



18

Fire Resistive/ Wind Resistive

- Fire resistance over 2 hours
- Masonry > 4 inches
- Hollow masonry > 8 inches
- Floors/roof > 4 inches



19



Mixed Construction

20

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The building we were just talking about has sprinklers. How does that affect the mixed construction rule?

It doesn't affect the rule. It's going to be SWR.

It makes the building Wind Resistive.

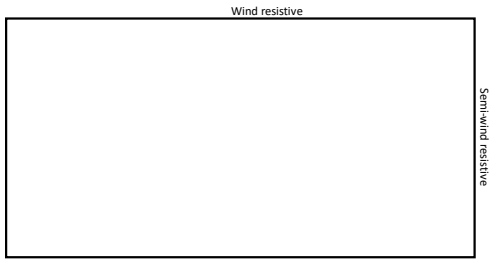
It means the building should be specific rated so the class rate for construction doesn't apply.

None of the above

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21

Mixed Construction



22

What's an odd food combination that you love?

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23



24



25



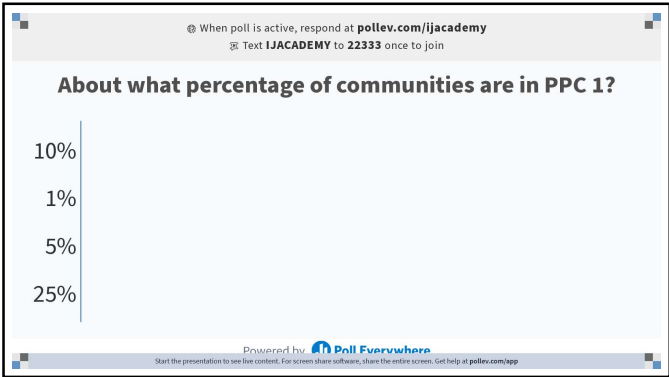
26



27



28



29



30


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What does BCEGS stand for?

- Building Code Environment
Guessing System
- Building Compliance
Engineering Grading System
- Building Code Effectiveness
Grading System
- Building Code Engineering
Grading System

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Protection

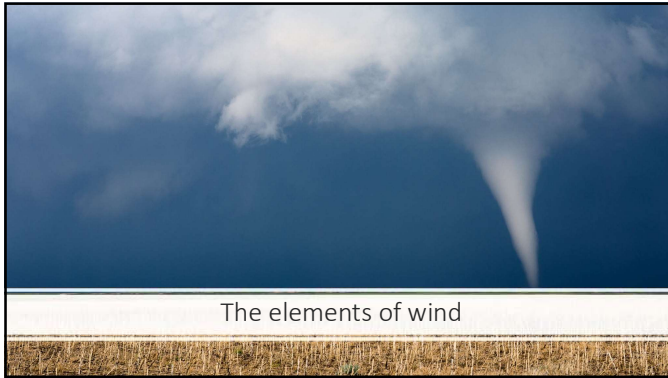
- Voluntary program
- Building code evaluation
- Building code enforcement

32

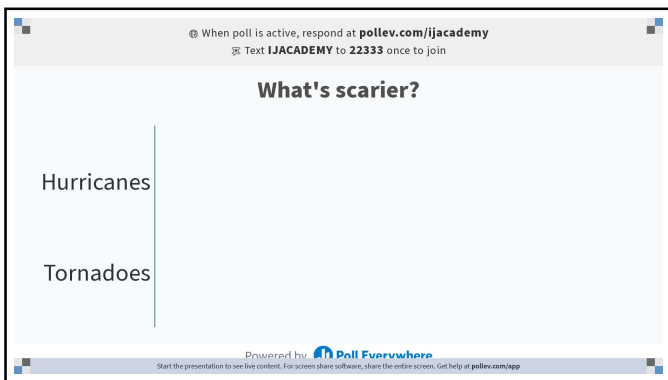


Exposures

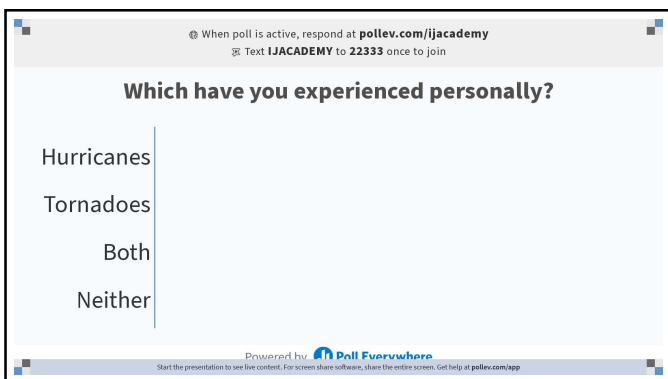
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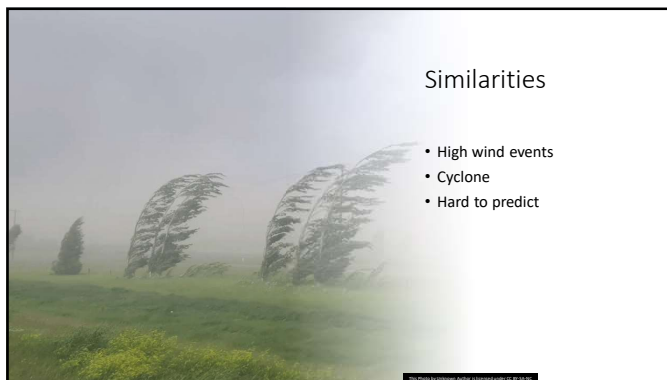
36



The elements of wind

- The differences between hurricanes and tornadoes
- Wind forces that act on buildings

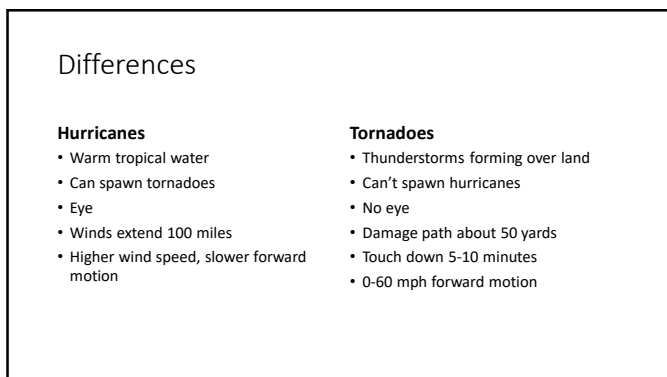
37



Similarities

- High wind events
- Cyclone
- Hard to predict

38



Differences

Hurricanes

- Warm tropical water
- Can spawn tornadoes
- Eye
- Winds extend 100 miles
- Higher wind speed, slower forward motion

Tornadoes

- Thunderstorms forming over land
- Can't spawn hurricanes
- No eye
- Damage path about 50 yards
- Touch down 5-10 minutes
- 0-60 mph forward motion

39

Wind speed comparisons

Hurricanes

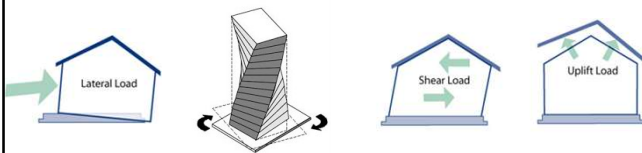
- Tropical depression: <38 mph
 - Tropical storm: 39-74 mph
 - Cat 1 Hurricane: 75-95 mph
 - Cat 2 Hurricane: 96-110 mph
 - Cat 3 Hurricane: 111-129 mph**
 - Cat 4 Hurricane: 130-156 mph
 - Cat 5 Hurricane: >157mph
- **Major hurricane

Tornadoes

- F0 tornado (weak): 40-72 mph
- F1 tornado (weak): 73-112 mph
- F2 tornado (strong): 113-157
- F3 tornado (strong): 158-206
- F4 tornado (violent): 207-260
- F5 tornado (violent): 261-318

40

Wind forces



41



Why do we care?

42



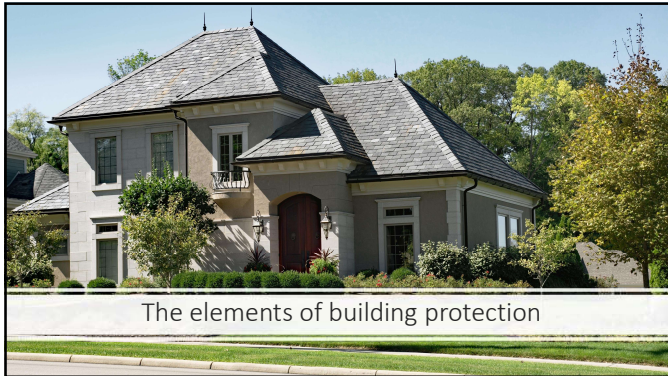
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44



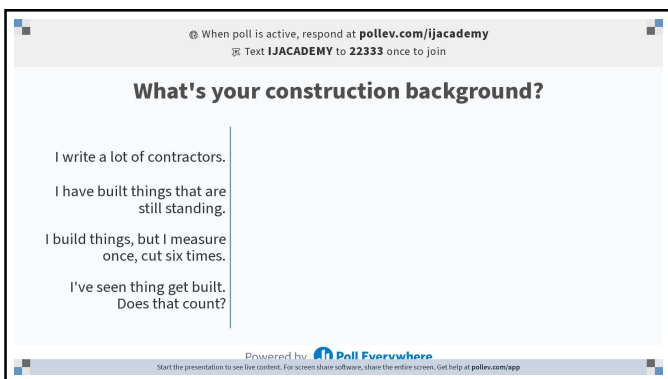
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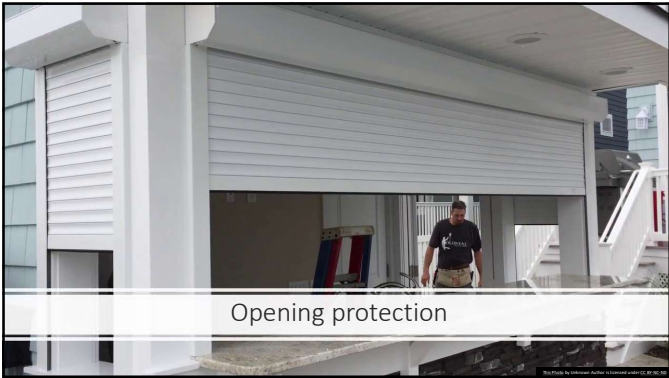
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56



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