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Course Description

Emergency Preparedness Matters

40%

The percentage of businesses that do not reopen immediately following a disaster.

25%

The percentage of businesses that fail within one year after being disrupted by a disaster.

Wherever you live and work, your firm is exposed to emergency situations. They include natural disasters like pandemics, windstorms, floods, earthquakes, or winter storms. Emergency situations also involve man-made disasters like fires, chemical emergencies, or episodes of terrorism on varying scales. This course will review different emergency preparedness tips to enable design firms to minimize their losses and facilitate the rapid restoration of their services in the event of a disaster. We will also consider the role design professionals can play in a community’s resilience and recovery efforts through smart design decisions and volunteer services.
Participants in this session will:

1. Review common reasons design professionals fail to adequately prepare for a disaster;
2. Identify preventative measure design professionals can take to minimize their losses in the event of a disaster;
3. Consider important legal considerations for design firms in preparing an emergency action plan; and
4. Discuss things to consider when providing assistance and other services in the aftermath of a disaster.
The Basics of Being Prepared
Reasons For Not Being Prepared

Top reasons organizations don’t prepare:

- **10%**
  - “It costs too much”

- **24%**
  - “I don’t want to think about it”

- **12%**
  - “I just don’t have the time”/
    - “I don’t know what I’m supposed to do”

- **42%**
  - “I don’t think my business is in threat of a disaster”
# Things to Do

## If your Construction Projects are Stopped

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<th>Business Development</th>
<th>Research New Markets and Clients</th>
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<td>Call Existing Clients to Check In/Offer Consulting</td>
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<tr>
<td>Volunteer</td>
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<td>Support Clients</td>
<td>Support Your Community</td>
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<td>Learn/Update Skills</td>
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<td>Strategic Planning—Workflows and Financial</td>
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Mitigation is about saving *people, property, and profits.*

1. The number of times it takes for a disaster to cause devastating damage

The percentage of small businesses that have no written disaster recovery plan in place: **50-75%**

$6 saved for every $1 spent on mitigation
“Emergency” Defined

Any situation that threatens workers, customers, or the public;

Disrupts or shuts down operations; or

Causes physical or environmental damage

https://www.osha.gov/SLTC/emergencypreparedness/gettingstarted.html
Types of Disasters

- Fire/Wildfire
- Earthquake
- Hurricane/Tornado/Seasonal Storm/Flood
- Chemical Spill/Release
- Disease Outbreak/Release of Biological Agent
- Explosion
Types of Disasters

2 Categories:

1. Natural Hazards
   - Hurricanes, earthquakes, fires, floods – can result in a loss of power, facilities, or personnel.

2. Man-made Hazards
   - Explosions, mechanical failures, power outages, workplace violence, chemical spills – can have the same consequences as a natural disaster, or worse.
Prepare, Plan, and Practice to Protect

3 Steps:

1. Assess preparedness level
2. Create/update plan of action
3. Implement and practice your plan
Emergency Action Plan (EAP)

Factors for Consideration:

1. **Prepare**
   - **What are the greatest threats to you and your firm?**
     This depends on a variety of factors like geographic location, unique risk factors of your firm and industry, and the types of equipment and facilities that are critical to your operations.

2. **Plan**
   - **What is your plan of action?**
     Outline your prevention, response, and recovery efforts—what to do before, during, and after an emergency.

3. **Practice**
   - **What training and practice drills are required?**
     Make sure everyone receives proper training to execute assigned tasks.
More EAP Considerations

1. **Instruct on what to do in an emergency**

   - **Responsibilities** – who will do what, when, and how?
   - **Communication** – how will information be communicated to employees and customers?
   - **Evacuation** – escape routes, including for those with disabilities
   - **Alternate workspaces, etc.** – short term and long term alternatives
   - **Rendering assistance** – know what your liability is and what protections exist

2. **Meet regulatory requirements**

   - **OSHA** – safety
   - **Wage and labor laws** – pay, leave, and other benefits
Resources for Being Prepared
OSHA EAP Requirement

29 CFR § 1910 Emergency Action Plans (EAP)

§ 1910.38(c) An emergency action plan must include at a minimum:

(1) Procedures for reporting a fire or other emergency;
(2) Procedures emergency evacuation, including type of evacuation and exit route assignments;
(3) Procedures to be followed by employees who remain to operate critical plant operations before they evacuate;
(4) Procedures to account for all employees after evacuation;
(5) Procedures to be followed by employees performing rescue or medical duties; and
(6) The name and title of every employee who may be contacted by employees who need more information about the plan or an explanation of their duties under the plan.
Visit The OSHA Website

Find out if an EAP is required for your firm

Source: https://www.osha.gov/SLTC/e tools/evacuation/require_eap.html
Other Concerns

Pay, Leave, and Benefits

Does your policy comply with state and/or federal laws regarding pay, leave, and benefits?

✓ Fair Labor Standards Act (FLSA)
✓ Americans with Disabilities Act (ADA)
✓ Family and Medical Leave Act (FMLA)
Additional Resources for Planning

Red Cross
Department of Homeland Security
FEMA
Federal Emergency Mgt. Agency
Law Enforcement

Source: https://www.readyrating.org
Updating Your EAP Following a Disaster

- Incorporate lessons learned
- Incorporate changes in laws, codes, and regulations
Insurance Considerations

1. **Review and assess your insurance policies**
   Understand the terms and conditions. Are you properly insured for your exposures?

2. **Maintain an inventory**
   Document your firm’s assets, billings, expenses and cash flow in the event you need to file a claim.

3. **Gather important paperwork**
   Keep important contact information and papers where you can access them easily in the event of an emergency.

Source: http://www.pciaa.net/docs/default-source/industry-issues/hurricanestats.pdf
Designing with Disasters in Mind
Resilient Design Defined

Preparation EAPs informs disaster resilient design

Definition

As defined by the Resilient Design Institute

Resilient design is the intentional design of buildings, landscapes, communities, and regions in order to respond to natural and manmade disasters and disturbances— as well as long-term changes resulting from climate change—including sea level rise, increased frequency of heat waves, and regional drought.

“We underattend to the future, we too quickly forget the past and we too readily follow the lead of people who are no less myopic than we are.”

— Robert Meyer, Professor of Marketing
University of Pennsylvania
Response to Superstorm Sandy

http://www.resilientdesign.org
Flooding
The most common natural disaster type

Occurrences of natural disasters
By disaster type (1995-2015)

Image source: http://www.weforum.org/agenda/2016/01/which-natural-disasters-hit-most-frequently/
Exceeding Codes, Standards, Regulations

Building codes, standards, and regulations are minimum requirements.

brettzamoredesign Looking from the Arnold Home in Braeswood along Braes Bayou. Water has reached 2 steps below the 1st level. House was built 16″ above FEMA’s requirements in a 100 year flood zone. The Arnold’s have taken in 19 of their neighbors who have lost their homes to the flood. Amazing people to shelter so many. Praying for their safety and their home to withstand such devastation. #harvey #houstonfloods #helpingothersinneed
Weather Resistant and Durable Material

Some examples include:

- Use water and flood resistant material on lower levels and basements.
- Consider the placement of vital systems.

Image source: www.actromegialli.it/interior-1/san-giobbe-160
Minimize Storm Run-Off

Use materials and designs that absorb and/or minimize storm water runoff.
Innovative Design

Implement innovative design. For instance, experimenting with the concept of structures that rise with water levels.

Pictured is the Float House, designed by Thom Mayne and his students at UCLA.

Professional Ethics
American Institute of Architects (AIA)

**Ethical Standard 6.5**

Members should incorporate adaptation strategies with their clients to anticipate extreme weather events and minimize adverse effects on the environment, economy and public health.

**Rule 6.501**

Members shall consider with their clients the environmental effects of their project decisions.
Volunteering

Helping out in the wake of disaster

What liability do design professionals face by volunteering?
Volunteer Liability

What everyone wants to avoid is what happened after the terrorist attacks of 9/11, when dozens of firms and individual designers pitched in at Ground Zero to help with the recovery effort. Among other things, they provided guidance on how to dig out debris without destabilizing it and possibly causing injury. Later, though, numerous lawsuits were filed, many of them multimillion-dollar class-action suits, which held design professionals partly responsible for everything from failure to save those who were buried to worsening the release of toxic dust.

Manage Volunteer Liability

1. Understand the parameters of the laws that limit your liability.
   Volunteer Protection Act, Good Samaritan Laws, etc...

2. Determine what is covered by your insurance policy.
   Is there coverage for volunteer services? If not, consider procuring the necessary insurance.

3. Have a written contract.
   At a minimum, clarify your scope of services, and limit your liability.
Good Samaritan Laws By State

Image source: https://www.aia.org/resources/71641-good-samaritan-state-statute-compendium
Good Samaritan Law Analysis

1. **Covered Parties**
   - Does it apply only to licensed professionals or “any individual working under the supervision of a licensed individual”? Does it apply specifically to Architects? Engineers? Surveyors?

2. **Covered Acts**
   - Does it apply to “all acts” or are there limitations for “acts or omissions constituting gross negligence or wanton/willful misconduct”?

3. **Covered Timeframes**
   - Does it only cover activity within a specified number of days following the end of a disaster? If so, what is that timeframe?
California’s Good Samaritan Law

CA BPC § 5536.27

(a) An architect who voluntarily, without compensation or expectation of compensation, provides structural inspection services at the scene of a declared national, state, or local emergency caused by a major earthquake, flood, riot, or fire at the request of a public official, public safety officer, or city or county building inspector acting in an official capacity shall not be liable in negligence for any personal injury, wrongful death, or property damage caused by the architect’s good faith but negligent inspection of a structure used for human habitation or a structure owned by a public entity for structural integrity or nonstructural elements affecting life and safety.

The immunity provided by this section shall apply only for an inspection that occurs within 30 days of the declared emergency.

Nothing in this section shall provide immunity for gross negligence or willful misconduct.
Other Considerations

1. **Insurance**
   
   Do you have coverage for company sponsored volunteer activity? Coverage exists under RLI’s Professional Liability Insurance so long as employees are providing “services they are legally qualified to perform, on behalf of your firm.”

2. **Policy**

   Create policy that addresses employee moonlighting and volunteer services that are not company sponsored. Will they be prohibited? Will they be allowed? Or allowed only with approval from management?
Don’t Forget Contracts
Written Contracts

AIA® Document B106™ – 2010

Standard Form of Agreement Between Owner and Architect for Pro Bono Services

AGREEMENT made as of the day of in the year
(In words, indicate day, month and year.)

BETWEEN the Architect’s client identified as the Owner:
(Name, legal status, address and other information)

and the Architect:
(Name, legal status, address and other information)

Available for free at https://documentsondemand.aia.org/

Helpful provisions to address include:

- Scope of services
- Right to rely
- Copyright and licenses
- Limitation of liability
Time is of the essence. Design Professional shall provide the Services required by this Agreement in a timely manner at such times as will enable the Design-Builder to complete its work in conformance with the most recent Project schedule established by Design-Builder.

A time is of the essence clause adds urgency to the contract to ensure that the parties abide by the timeline the contract is attempting to enforce.

Possible Alternative

“Time limits established by the schedule shall not, except for reasonable cause, be exceeded by the [Design Professional] or Owner.”
Provisions to Watch Out for

Liquidated Damages

*Predetermined amount of damages in the event of a breach of contract, used where actual damages are difficult or impossible to prove.*

If the Contractor fails to achieve Substantial Completion within the Contract Time, the Contractor shall be liable for the sum of ________ dollars ($_____) as liquidated damages, and not as a penalty, for each calendar day beginning on the first day after the Contractor fails to achieve Substantial Completion within the Contract Time until the date that Substantial Completion is achieved.

Possible Alternative

[Design Professional] shall perform its services as expeditiously as is consistent with such professional skill and care and the orderly progress of the Project.
The Owner may, at any time, terminate the Contract for the Owner’s convenience and without cause.

**Suspension and Termination**
provisions shouldn’t be one-sided in favor of the Owner

**Possible Alternative**

...If [Design Professional] elects to suspend services, the [Design Professional] shall give seven days’ written notice to the Owner before suspending services. In the event of a suspension of services, the [Design Professional] shall have no liability to the Owner for delays or damage caused the Owner because of such suspension of services.
Things turn out for the best for those who make the best out of the way things turn out.

-- The Park Forest/Homewood-Flossmoor Star (1961)
Thank you for your time!

QUESTIONS?

This concludes The American Institute of Architects
Continuing Education Systems Program

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