

PACIFIC ADA CENTER  
ADA NATIONAL NETWORK LEARNING SESSION:  
ACCESSIBLE MEANS OF EGRESS/EMERGENCY EVACUATION  
Thursday, February 11, 2016  
2:30 p.m. – 4:00 p.m.

### Remote CART Captioning

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>> *Lewis Kraus*: Welcome to the Emergency Management and Preparedness Inclusion of Persons with Disabilities Webinar Series. I'm Lewis Kraus from the Pacific ADA Center, your moderator for this series. This series of webinars is brought to you by the Pacific ADA Center as a collaborative effort between the ADA National Network and FEMA's Office of Disability Integration and Coordination. The ADA National Network is made up of 10 regional centers that are federally funded to provide training, technical assistance, and other information as needed on the Americans with Disabilities Act. You can reach your regional ADA Center by dialing 1-800-949-4232. FEMA's ODIC covers the same regions. For more information about FEMA, it be found at [www.fema.gov](http://www.fema.gov) then type ODIC into the FEMA website search.

This is the third year of this webinar series which shares issues and promising practices in emergency management inclusive of people with disabilities and others with access and functional needs. The webinars provide an opportunity for emergency managers, people with disabilities, and others with access and functional needs, first responders, planners, community organizations, and other community partners to exchange knowledge and information on promising practices in inclusive emergency preparedness and management for the whole community.

The series topics will cover emergency preparedness and disaster response, recovery, and mitigation, as well as accessibility and reasonable accommodation issues under the Rehabilitation Act

of 1973, the Americans with Disabilities Act of 1990, the ADA, and other relevant laws. The series alternates monthly between ADA National Network learning sessions and FEMA Promising Practices. We encourage you to review the series website and familiarize yourself with the full array of sessions available in this year's series at [www.adapresentations.org/schedule.php](http://www.adapresentations.org/schedule.php).

These monthly webinars occur on the second Thursday of the month at 2:30 p.m. Eastern, 1:30:00 p.m. Central, 12:30 p.m. Mountain, and 11:30 a.m. Pacific time. By being here, you are on the list to receive notices for future webinars in this series. The notices go out two to three weeks before the next webinar and open that webinar to registration.

For those of you who are new to this webinar series and its software, we will now review some of the features in the webinar platform before we begin the session today.

In this session, only the speakers will have audio. The audio for today's webinar is being broadcast through your computer. Make sure your speakers are turned on or your head phones are plugged in. You can adjust the sound by sliding the sound bar left or right in the Audio & Video panel, and that is represented on your screen right now. If you are having sound quality problems, go through the audio wizard which is accessed by selecting the microphone icon with the red gear symbol in the Audio & Video panel.

If you do not have sound capabilities on your computer or prefer to listen by phone, you can dial 1-805-309-2350 and use the pass code 555-2153. Note, this is not a toll-free number but your local numbers can be found at [www.adapresentations.org/local\\_numbers.php](http://www.adapresentations.org/local_numbers.php). Also note that this webinar is being recorded and can be accessed on the [www.adapresentations.org/archives.php](http://www.adapresentations.org/archives.php) website next week.

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The Whiteboard where the presentation slides are shown can be resized smaller or larger by choosing the dropdown menu located above and to the left of this Whiteboard. The default is Fit Page. You can resize or reposition the chat windows, the participant windows, the captioning window, the audio and video window by detaching and using your mouse to reposition or to stretch/shrink. Each panel may be detached using the icon with several lines and the little arrow in the upper right-hand corner of each panel.

At the conclusion of today's presentation there will be an opportunity for everyone to ask questions. You may submit your questions using the chat area within the webinar platform. The speakers and I will address them at the end of the session, so feel free to submit them as they come to your mind during the presentation. You can type and submit the questions in that box that's there or press control m and enter text in the chat area. If you are listening by phone and not logged into the webinar, you can ask your questions by e-mailing them to [adatech@adapacific.org](mailto:adatech@adapacific.org).

If you experience any technical difficulties during the webinar, send a private chat message to the host by double clicking Pacific ADA Center in that participant's list. A tab titled Pacific ADA Center will appear in the chat panel. Type your comment in the text box and enter. You can also keyboard by using F6, arrow up and down to locate Pacific ADA Center, and select to send a message. You can also e-mail, again, to that [adatech@adapacific.org](mailto:adatech@adapacific.org) address or you can call 510-285-5600.

Today's ADA National Network Learning Session is titled "Accessible means of egress/Emergency Evacuation." The way someone enters and moves into a building is not always the same way they move to evacuate a building in an emergency. In addition to accessible entry, persons with disabilities must be considered when designing plans and building systems used for emergency evacuation.

The Accessible means of egress provisions from the International Building Code, IBC, are now referenced in the Federal Design regulations and will be required for all new construction. Today's session will introduce the concepts, details, and application of existing provisions and assist in understanding how the codes and federal regulations are now working to harmonize the national

response to designing a building not only for ingress but for egress as well. The session will also discuss operational safety plans, fire drills, notification communication for occupants in a building during an emergency, and physical building requirements.

The information presented in this webinar is intended solely as informal guidance and is neither a determination of legal rights or responsibilities by NIDILRR or FEMA.

Our speaker today is Kimberly Paarlberg. She is a Senior Staff Architect in Technical Services with the International Code Council, the ICC. Her experience with ICC includes work in the plan review and code development departments with responsibilities for code development, plan reviews, providing code interpretations, instructing technical seminars and authoring and reviewing instruction materials, code commentary and publication articles. Kimberly serves as a code development secretary for the IBC means of egress/Accessibility and ICC Administration committees. She is ICC representative for development of referenced technical standard, ICC/ANSI A117.1 "Accessible and Useable Building and Facilities." Before joining ICC, Kimberly worked as a structural engineer and architect. She is a licensed architect in Illinois and holds an Accessibility Inspector/Plans Examiner certification.

Kim, off to you.

>> *Kimberly Paarlberg*: Good morning or good afternoon, everybody, depending on where you are at. Hopefully I will provide some good information to help you learn a little bit today about how the building codes can support the federal law that Lewis talked about earlier and everything that's being covered in the seminar series. So let's get started.

So the basic main topic of this presentation today is going to be about accessible means of egress or how people with any type of mobility impairment would need assistance or notification, a little bit different for emergency evacuation. Most of the time we're talking about fire. But sometimes you can be talking about lockdown plans, hurricanes, tornado shelters, access to those. There is a lot of different things that the building code works with. Mostly we're going to concentrate on evacuation

during fires this time but I will give you the general overview of the other aspects covered in the international codes.

So pretty much what's international codes? What does it mean? How does it affect what I'm doing? What types of disasters are addressed within these documents?

[No Audio]

>> *Lewis Kraus*: Kim, we lost your audio. Did you possibly click on your talk button?

[No Audible Response]

Ok, everyone. Hold on one second while we try to get Kim back on.

[Webinar paused. Please stand by]

Ok, everyone. Hang on for one second. Kim seems to have lost connection. We'll get her right back in as soon as she comes back in. Hold on one second.

[Webinar paused. Please stand by]

Sorry about the technical difficulties, everyone. I'm not sure why Kim lost connection but we are just awaiting her reconnection so that she can continue with her talk. We'll just wait for a moment until she gets back in.

Thanks.

[Webinar paused. Please stand by]

Once again, for anyone who has just joined us, we have had a technical difficulty with Kim's connection into the system. We seemed to have lost her. She is attempting to reconnect. We are just waiting for her to get back into the system. Sorry for the delay. We will be right back in as soon as she can connect in.

Thank you for your patience.

[Webinar paused. Please stand by]

Well, as we have mentioned, we are waiting for Kim to rejoin the session. Ahh. There. We finally got her. Hang on one second, everyone.

Ok, Kim. We have re-established with you. Can you hear us? Can you say something?

>> *Kimberly Paarlberg*: Hello.

>> *Lewis Kraus*: Hi, Kim. Good. We've got you back.

>> *Kimberly Paarlberg*: I'm sorry. I do not know what happened. I'm not exactly sure where I cut out.

>> *Lewis Kraus*: You basically start pretty much from your beginning. I don't know that we got much farther than you're still on your first slide here.

>> *Kimberly Paarlberg*: Ok. Starting over. Sorry.

The agenda, basically what is the International Building Code? What types of disasters do we cover? And when you're doing an emergency planning specific to fire, how do you plan for that emergency? How do you notify everybody? How do you communicate what's going on in the event? And in a plan for that event, means of egress is how you evacuate everybody in the building. There's also conditional concerns based on people's needs for accessible means of egress. People that use mobility devices, walkers, canes, crutches, wheelchairs can't always use the stairways which is typically used for general means of egress. So how are those needs addressed? We're also going to talk about new technology that's become developed with the fire code official and the elevator industry and how you can patch through the elevator systems more extensively to help people with evacuations.

So the International Building Code is a model building code that's developed by our company, the International Code Council. It's a family of codes, a group of codes that work together. So there are special books for plumbing, mechanical, fire officials to use. They all work together as a package. It has been adopted by the International Building Code by all 50 states and international residential code by 49 of the 50 states. And so basically what that means is that the state adopts in some jurisdictions, like Illinois, for example, it goes town by town. But basically they, through a local or federal -- sorry, local or state law, they referenced International Building Code as the document for how to meet minimum requirements for public health and safety. States can make amendments to that. Many of them do. It depends on which state and how many amendments that they do make. We do publish every three years so that we can stay current with the industry. Some states adopt every three

years. Some states adopt every six years. So you need to communicate with your local building official to see what issue of the building code that they are currently using.

The building code is applicable for new construction and when somebody is doing an alteration. So basically, if you've got a contractor, you apply for a building permit or if you're balancing new building, doing alterations within your build, that's when the building code is applicable.

The fire code addresses operational issues. So if you're working with a school, for example, the firemen will be there to check out the school when they're going through some of their emergency evacuation practice drills. So the fire code involved with the operation of the building. How often they're in there depends on the requirements for evacuation planning and how big the building is, what type of services are available in your community for them to work with you, check records. They will be in the hospitals and schools a lot. Nursing homes should see them there all the time.

But, for example, the building code sets the criteria for the number of exits, how wide they have to be, how far apart they can be, how they have to be signed. And then the fire code official will come in periodically and look at the buildings to make sure that those are maintained, that they are not blocked, the exit signs have their lights on, all different things like that.

Buildings including people with impairments. The building code talks about getting people with mobility impairments both into a building and out of a building during emergency event. The fire code mostly works with means of egress and leaving the building.

Now, the fire code officials and the building code officials are enforcing the state and local laws but the architect, contractors, building owners, they are required to comply with both federal and state regulations. So that's where there's a little bit of a difference here. The code official cannot enforce a federal law but they can go in and help enforce the state law that's aiming towards the same target to make sure that you have equal access to services for everybody and also that you can make sure that everybody evacuates during the fire event. So not exactly coming from the same source but trying to meet the same requirements.

It's really -- you'll see -- we don't try to go overboard and require fire escapes from everything but everybody's got to have a little levity here. So to describe what -- means of egress is basically it's the ability to exit a structure. Usually it's during an emergency event but also your normal circulation path. That means of egress is basically spoken about in three different parts that work together. The parts of travel from wherever you are, anywhere in the building, to an exit. And that's called exit access. The exit itself is typically a stair tower. It can be an elevator if it has provided standby power for emergency evacuation with the fire department. It can be exterior exit door. It is also another example of an exit. So basically you move from your general circulation routes into someplace that's protected or you've moved out of the building. And then the last part, the path to a safe area outside or to the public way is called the exit discharge.

So the requirements for the means of egress will tell you the number of exits required for a structure, so how many different ways off of each floor. And that varies depending on its intended use and the number of people. So, for example, a single family home is required to have one exit. But an assembly space, depending on how many people are in, once you get over 50 people, you have to have at least two. When you get up to 1,000 people, you have to have at least four. They also have to be staged at certain locations so that a fire at one location won't block access to more than one exit in assembly spaces because most people panic and try to go out the way they came in. At least 50% of the entrances or exits have to be the main way you came in. And the other balance has to be equal to at least 50% so there's no way people are getting trapped. It's really the idea is to always have two ways out when you get more than 50 people.

There are all sorts of unique concerns, though. For example, in a hospital, you don't necessarily want to evacuate people right away during an emergency. Because, say you're in Minnesota and there's winter outside, you don't want to move people because of a small fire in a remote corner of the hospital to make the entire building evacuate because taking people outside could be detrimental to their health. So hospitals, nursing homes, prisons, they will be subdivided into different compartments where people are protected from smoke and fumes, the most hazard during a

fire event. Or staff is trained to move people from one small compartment to another. So you do have special types of buildings where you're not talking about full building evacuation right with a but you're moving to protected areas. And then there are special hazard areas as well. Usually in industry where they are dealing with chemicals or explosives, toxic materials where there will be special contained areas. You're not allowed to have evacuation from other areas through that, just to try to address the special needs.

The 2010 ADA standard does reference the International Building Code for accessible means of egress. And they referenced the 2003 International Building Code and the 2000 International Building Code with the supplement that came out in 2001. The reason they referenced these two documents is because effectively work on the 2010 ADA standard was completed in 2004 and those were the two additions of the International Building Code that were in place at that time.

So one of the most common questions I get from a building industry standard is: If my jurisdiction is on a 2006 International Building Code, 2009, 2012, 2015, is it still ok? Under ADA Section 103, it does say that you are allowed to comply with something that has equivalent facilitation. So, in other words, it meets or exceeds something that's specifically approved.

All the documents following the 2003 IBC have made improvements to the requirements for accessible means of egress. For example, the International Building Code added a requirement for two-way communication to be provided in all buildings regardless if there are sprinklers or not at the elevator lobby so that if you're in a building and you do need assistance to evacuate, you've got a good way to communicate with emergency responders. So there's been improvements in the later editions of codes to address the specific situation that come up. That's one of the advantages of our update cycles. So we feel that using a later edition of the building code would meet or exceed the documents that are referenced in the 2010 ADA standard. So if your jurisdiction is on a 2012, 2015 International Building Code, you don't have to go back and look at the older requirements to comply. You can use the new ones and know that you meet or exceed what's permitted.

Real quickly, before we get heavily into the accessible means of egress, I would like to tell you just briefly what the building code does address. There's all kinds of different disasters your community has to prepare for. While the main concentration of the building code most often is fire, we also have provisions to help people -- protect people from earthquakes, wildfires, and different kinds of severe weather including snow and ice, flood and storm surge, as well as tornado, hurricane, high wind regions.

We always try to encourage people while the building code is supporting what you're trying to do and the firemen are there to help you, no one can prevent a disaster. So really what we're trying to do is make sure that that impact is less devastating for you and your family. So we always encourage people to be proactive rather than reactive. Every home or you and your place of business should always make sure you have an evacuation plan, how are you going to communicate both that plan and when there's an emergency and when necessary that you have an emergency supply kit.

So the building code does have a special code for wildfires. Just quickly, there is a map here that shows the wildfire potential in the United States. So anyplace on the West Coast you have a high potential for wildfires. We have a document called the International Wildland-Urban Interface Code which contains requirements for fire service access to different properties, premise identification, so if somebody reports a fire, the firemen know where they need to go, access and water to their equipment. So this is mainly a community planning initiative as well as people working with their own homes.

So if you're looking at your house, you might be talking about planting fire-prone trees and shrubs far enough apart that they won't ignite each other, far away from the home so they don't grow under your eaves. If you have sockets, install mesh screening. You want to maintain a defensible area around your home so that you don't have highly flammable materials immediately adjacent to your house.

If you are in an extremely high-hazard wildfire area, you might consider installing protective shuttering or heavy fire resistant drapes within your home. It depends on what you feel your area and community would be prone to, what would be required. So this document, the IWUIC provides

guidelines for people's homes as well as the community. It also has allowances to try to help people with earthquakes.

Here's a map of the earthquake hazards in the United States. You can see everybody's familiar with the fault lines along the West Coast but if you notice, there's also some pretty big fault areas around St. Louis, and also in South Carolina. So depending on how high the hazardous for your building or facility to be in an earthquake-prone region, the International Building Code includes requirements to help your building stay not damage-free but reduce the damage that would happen in different types of earthquakes. So we have seismic resistance systems to improve your building. We want to make sure that we reduce the risk for your building as well as minimizing as much as possible the loss of life or injury for the occupants with the requirements for structural base, seismic resistance materials, everything from sheer walls to strapping, to isolator pads.

There's a lot of different options available for buildings in seismic areas. And, again, based on the type of building you have, like, for example, hospitals, 911 centers, where you want to make sure those are operational after an earthquake, that importance factor is figured into the IBC requirement. So those types of buildings would have higher resistance requirements than a farm building, say.

What you can do when you're looking at your own home is to make sure that your home is securely anchored to its foundation. So that's how your home will resist the earthquake the most. You can strap water heaters, appliances, TVs to wall studs to make sure bookcases, heavy furnitures are attached to the wall. You can secure mirrors, anything that's breakable. And please know how to shut off your gas, electric, and water service so immediately following an earthquake event, in case there's a crack somewhere, that you can make sure you can make your home as safe as you can.

Building code also is working with FEMA for floods and storm surge areas. So floods are a pretty big hazard. You can see this is all over the United States, a lot in the Midwest, and repeated events. A lot of times people talk about the 100-year flood but that means there's a 1% chance of that flood happening in your area. It could happen in the spring and in the fall in the same year. It doesn't mean once it happens, it's not going to happen for another 100 years.

We've been working with FEMA to make sure that the IBC contains requirements for both flooding along rivers and streams as well as coastal areas. We're trying to make sure that our requirements are consistent with the National Flood Insurance program and FEMA's been very proactive in helping working with the building code to make sure that those provisions work together. We put in requirements for elevating the home above the base flood elevation. Some communities have added additional free boards to make your house as a little bit higher. We have requirements for dry flood proofing for businesses, wet flood proofing. So there are a variety of options available if you happen to be in a flood area.

Again, if you're in a flood hazard area and there's a flood emergency called, evacuate. Your life is very important. You can also make your home more flood resistant by elevating mechanical equipment such as water heaters, air-conditioner units, circuit breaker board boxes, anchor propane tanks so that they don't float around and cause a hazard during a flood event. Again, know where your gas and water shutoffs are located.

There is even provisions for Tsunamis in the building code. When I was in Seattle, I saw the sign for a Tsunami hazard zone. There was provisions. You can't design a building so that it's going to resist a Tsunami but you can do community planning so that perhaps when you're looking at new location for your hospital or fire stations, you place those above where you might expect a Tsunami elevation to come in. So it's an appendix. In the building code if we have an appendix, it means even though the building code is adopted, the community specifically has to adopt that appendix to make it applicable. The Tsunami appendix is intended to reduce the high risk and high hazards of structures.

One of the things we don't have just yet is volcanos. Although, I did find a volcano evacuation sign again when I was out near Seattle. The picture on the left, that is my daughter. She is working on her Ph.D. And she is studying how to predict volcanoes as her Ph.D. study program. That's her planting some sensors to monitor volcanic activity so we can learn how to predict for volcanoes and hopefully be safer in the future.

If you want to help your community right now, probably that appendix, and for Tsunami, as far as recognizing the zones and the hazards, and not putting the buildings that you have to have in place within those zones, is the best practice. And hopefully when she finishes her Ph.D., I can get her involved in the process to address this.

Building code also covers high winds. High winds requirements are for basically wind and weather protection. The provisions are to help make sure that your roof doesn't fly off in a high wind, that you limit the chances of your siding coming off or shingles coming off your home. So there's patterns, nailing patterns, required. However, the provisions for high winds in the building code are not enough to protect you from a tornado or hurricane. They're designed for anticipated high winds in your region then based on the importance factor of your building to the exposure. If you've got a big plain or open water next to you versus a forested or hilly area, a lot of different impact on your wind resistance.

Individual homeowners, what can you do? You can install permanent shutters to protect your windows or install plywood panels, especially if you're, say, on the East Coast in the areas where you might have tornadoes or hurricane winds. You can reinforce the construction of your home. Very, very inexpensive to get in hurricane straps that strap your rafters to your roof and roof to the walls and walls to the foundation. You can make your home as act as a unit to be more resistant.

The big failing points in a lot of houses is a lot of people don't think of because they don't think of it as an opening is actually double entry front doors or garage doors. If you can install a type of system that might help brace those if you have high wind areas near you, if you're close to the shore, that's a great way to help make your home stay intact. Make sure you don't have any dead trees or weak branches near your home because, again, it's the impact of things blowing around that's going to have the biggest devastating effect on your home and property.

The building code does recognize tornadoes and hurricanes and where they're most prevalent. We do provide criteria for how to protect yourself from most types of devastating forms. Again, it's like a Tsunami. You can't design a building to totally resist but we have identified hurricane regions, which is the top map. You can see anywhere along the Gulf Coast and East Coast is a

hurricane region. And we have designated high tornado areas. So there's, I believe, 14 states in what is known as tornado alley. So if you want to design a safe place within your home, we do have technical criteria for hurricanes shelters and tornado shelters. The primary difference between a tornado and a hurricane shelter is the hurricane shelter is set up for 24-hour stay versus a tornado shelter we're filling a maximum time of two hours.

Believe it or not, the tornado forces are actually stronger than hurricane forces. We have criteria for community shelters, which might be, say, a shelter in a school or a church or a fire station, police station. We also have accommodations -- or requirements for residential shelters which is more than 16 occupants. So it can be for a residence or small group of residences. If you're going a shelter for an apartment building, that would be a community shelter because more than 16 of occupants.

We've worked this out working with FEMA and several different organizations to comply with an ICC standard for designing construction of storm shelters for ICC 500. You can do a separate shelter or you can do a safe room in your own home. A lot of times if you looked at the criteria, for example, you could design one in your bathroom that didn't have any windows or the area under your stairs to be a safe -- meet the criteria for a storm shelter, giving you a safe place to go during an event.

Which brings us around to the last one that I want to talk about, fire evacuation. The building code has a lot of criteria for fires to both help the buildings resist fire and to warn people and help with putting the fire out. So we will talk about passive systems and active systems.

The building code has requirements for fire-related construction, the bigger the building, the more fire resistant the materials have to be. There are limitations on height as well as area. Requirements for sprinklers: When can you use different types of sprinkler systems? You'll hear somebody talk about a 13R, or a 13D sprinkler system. When do you have to have general building alarms? When do you have to have alarms on your sprinkler system? What's the difference between a building evacuation alarm and smoke detectors? Smoke detectors are typically in places where you sleep. So you'll see a smoke detector in your bedroom, in the areas of your bedroom, on each floor, in a residence.

Requirements coming from the building code help to keep people safe but if you have a system, you have to keep it operational. So, please, if you're in your home, make sure you have batteries in your smoke detectors. Have that fire safety evacuation plan, both for yourself at work and at home. And practice it. And really, planning and practice is the two things that help people learn what to do in an emergency and keep to it.

If you want some additional supporting information, ICC has been working with United Spinal Association. They have developed a fire safety for wheelchair users both at work and at home. Basically it's ways to prepare yourself, to participate in planning where you live and where you work. It's a great resource developed by the United Spinal that we would like to support. There's a website there if you would like to have access to that document. FEMA also has a lot of information on their websites. Red Cross. There's lots of good resources. This is just one that can help you prepare for an emergency both at work and at home, fire, flood, earthquake, whatever you're having to deal with.

Planning, in the building code and fire code there are requirements for planning for an emergency. Everybody's seen that sign next to the elevator that says in case of fire do not use the elevator, use the stair. And the main goal for that really is if you're in a building that's on fire and you don't know where that fire event is, they don't want you to either be in the shaft and have the elevator break down so that you're trapped between floors or have you get in the elevator and deliver yourself to the fire where if you stayed where you were, would have been safe. So without having that kind of information -- basically there are situations where you can use the elevator but the fire department wants to decide when and how that's done because when they come into the building during an emergency event, they take over and take control. And that's how they're going to make everything happen safely.

As far as general planning, the fire code has requirements for pre-planning for emergencies. Depending on the size of your building, how many people you have, you're going to have requirements for a fire evacuation plan, a fire safety plan. Some buildings, especially like schools, federal office buildings, courthouses, have lockdown plans for other types of emergencies. All of these have to have

associated drills. And there's requirements for how often this has to be practiced. They need to be worked out with the building owner and the fire department. Typically they're updated annually but when necessity changes, if you have a major tenant move out and in, you might be doing that at different times. They are available for review. They are public record.

So when those are being developed, if you have some type of people that are in the office or different concerns that you might be looking at to functional needs for somebody who is vision impaired, hearing impaired, mobility devices, make sure you involve everybody in these fire and safety evacuation plans because they are specifically required to include anybody who has any type of disability, mobility impairment, hearing impairment, vision impairment, in those plans to make sure that everybody is able to evacuate safely during the fire event.

And those are required in all assembly buildings, in churches with over 2,000 occupants, in schools, college dormitories, anything that has high hazard which would be chemicals or explosives. Institutional means hospitals, nursing homes, jails, all types of hotels, all types of group homes, all high-rise buildings, which is any building over 75 feet, with an occupied floor above 75 feet is a high-rise building. All covered malls greater than 50,000 square feet. Mercantile and factory, there's limits that are just one floor or two or more stories. Any building that's underground. Any building with a large atrium. All of these buildings have to have both fire safety, fire evacuation plans and fire safety plans.

Fire evacuation plan has to include emergency routes. It has to say are you going to evacuate the building, like most places do, or are you going to do defend in place like a hospital does. Is there critical equipment operation? A large assembly space, the fire department might be looking for providing notification on the jumbotron in the middle for how people should be able to move. So who operates that? How is it done? Who is going to apply -- provide assisted rescue and how are the procedures going to happen? Yes, it's going to involve the fire department but depending on, say, a hospital, all staff is trained and they're required to be retrained annually. They have to practice drills on every shift to make sure that the staff is able to also help in the defend in place or assistive

evacuations. Are there ways to verify full evacuations? Do you have areas outside to concentrate in? Make it count. You might have seen that when you go to schools. You go out to where your classroom is supposed to be and the teacher counts for who has been there, making sure every kid is out of the building. Who is your emergency responders? Is this the fire department, police, Army base or a large factory? Maybe you've got your own emergency responders on site. Who is going to notify the occupants? How are they going to be notified? Who is going to notify the fire department? And how is that information going to be relayed to people in the building for emergency voice/alarm and communication systems? So that's your fire evacuation plans.

Your fire safety plans involves the reporting and emergency, the evacuation or relocation of occupants. It has a site plan, showing where your assembly points are outside, where your fire hydrants are, how the fire trucks are going to be able to access your building. Maybe you see around the building "Fire route, do not park." That's if there is a fire, that's where the fire trucks are coming in. So you really don't want to park there. It has to have floor plans., not necessarily every wall but it has to show the exits, the routes out. If you have areas of refuge inside the building, where are they? How do the fire alarms work? Where are the fire extinguishers, fire hoses? Are there any major fire hazards in the building, flammable materials, oxygen, explosive materials stored anyplace? Who is responsible for all of this information, maintaining it? So a lot of information provided to allow both the fire department and people in the building to respond appropriately to the fire event by thinking about it ahead of time.

The lock-down plans are basically when you have emergency situations like -- I'll just use an example of our local school. My daughter's talked to me about that they have green, yellow, and red in their school plans. And basically if you have green, that means the police have said maybe somebody robbed a store on the other side of the town and they want all the schools to basically go into a warning mode so that if somebody was fleeing from the police, they couldn't try to go into the school to get hostages. So the school locks down from the outside but the school operates normally inside. A yellow means that there's emergency closer to the school, maybe the chase is proceeding near the school

building. Then the kids are told to go back to their homeroom and they lock down. A red means there's an emergency in the building right now, go to the nearest classroom and lock-down.

So they have different levels. They have communicated this with the kids. They have worked with emergency responders, the police and the fire department for how to do it. How are you recalled? After the police chase is done, who notifies the schools? How is everything communicated and coordinated? And the kids practice the plans, too. So training staff and training the people in the building is very important for those lock-down plans. I've talked to people in the government service administration for the government office buildings and courthouses. They all have lock-down plans in case a prisoner breaks out during a trial or something like that. So there's a lot of different places that might have lock-down plans in addition to their normal fire evacuations.

Once you have all of these wonderful plans, the real key is how do you practice them. If you have an assembly building, quarterly, you're expected to practice these emergency drills quarterly, businesses are supposed to practice once a year. The schools where you see this happen most often, the fire departments, in there monthly. Factories are supposed to do it annually. Institutional, like hospitals, nursing home, jail, supposed to practice this quarterly on every shift, not necessarily always involving the people that are there because you don't want to have somebody get upset or worried if they're in the hospital for a heart condition but the staff has to be trained for what's going to happen and with how it's going to go through. Court, hotels, apartments, dorms, four times annually. Group homes are supposed to be quarterly on every shift, high rises annually. These practice drills are often with the fire department. They can be from the building owner's perspective. They have to keep a record so the fire department can track. That's the preplanning.

Once you have the pre-plan, then you've got the notification and communication. And that's very important to go with a lot of information on signage. The biggest thing you'll look for first is you can have an evacuation plan at the elevator showing where everybody should go. So if you want people to use the elevator system with fire department assisted rescue then that information should be on that sign by the elevator. If you want people to move to the stairways, you should have directional

exit signage, tactile exit signage at the stairs, to let everybody know what's the plan and where they should go. Visual exit signs are at the building up high so everybody can see them. But also, there's criteria for once you get to that exit door for people with vision impairments trying to find the right door. There's requirements for tactile and Braille and raised letters at the exit doors telling people, hey, this is the door to the outside or this is the door into the stairway.

Once you're inside that stairway, there's visual signage for the fire department coming in saying, hey, I'm in this stair tower, I do have access to the roof, but also visual signage above the heads of people coming down so they know what floor they're on as they're trying to get down to evacuate. But then there's also requirements for vision impaired persons to have tactile signs on each floor on the inside of the stair explaining what floor they're on and when they get to the bottom, which leads out of the stairway.

I mentioned earlier that as of 2009 there's two-way communication required in the elevator lobbies in sprinkler buildings. There's always -- if you don't have a sprinkler in your building, you have areas of refuge. And there's communication systems there to call and say, hey, I'm on the fifth floor, I need help down. Well, a sprinkler building you don't have areas of refuge but you still need a way to communicate. And it was decided in the high-rise buildings, because a lot of times they have the standby power and preferable way is to be able to go out with your mobility device using the elevator, both because it gets everybody out faster, you go out with your mobility device, and it lets the fire department take out more people. One person running the elevator rather than having multiple firemen carry carrying people down the stairs.

It would be better to have a consistent location for people to be able go to that phone. So even in a low-rise building where the elevator doesn't have standby power, you should still have the phone at the elevator. And then that person who you're talking to might say, ok, go to the north stairs evacuation plan in front of you. So that's really the best way to help people find out what's going on, to be able to communicate, and know what their options are.

Working in conjunction with NFPA, there's requirements for fire alarms within certain buildings, where you have your pull stations have to be accessible. For people with hearing impairments, you want to have visible alarms in all public spaces and all common spaces. If you go into a hotel, you're going to be able to have a certain number of rooms that will also have visible alarms. So you can ask for -- I believe the term they use is hearing impaired room. I don't know if that's politically correct but that's how often they are referred to.

Basically, if you're hearing impaired, at night you take your hearing aid out or you are in the shower you take your hearing aid out, you would be in a room where it would have a visible so you would know if there was something going on in the hallway. There is also criteria for future expansion for individual employee work areas as part of reasonable accommodation for employee. And also, to be connected to your smoke alarms, the building evacuation systems, if you're in a large apartment building.

If you have a sprinkler system, the sprinkler systems are also supposed to have a way to automatically notify the fire department when they activate or some type of 24-hour manned station in the building. They want to have that information also on a fire sprinkler panel. So when the fire department shows up, they can look at the sprinkler panel and find out exactly what was activated and where so they can move to that fire the quickest. And they also want to have standby power on the elevators when five stories or taller so you can make sure that you can get to that floor to offer assistance. So by the nature of having the sprinkler system, the notification is faster, there's water on the fire right away and once the fire department gets there they also know where to go quicker. So that's also a great asset -- a great addition in a fire protection system.

Now we move from the requirements for planning and notification to the physical means of egress within the building. So like I mentioned before, there's three parts, exit access, access, and exit discharge. So the definition is an unobstructed path from anyplace in the building that's occupied to leave the building to the public way. So exit access, that's the yellow part in diagram. Anyplace could be anywhere in my building to the exit themselves. That's my exit access. And that exit access can be

ramps, it can be flat floors, or if you're in a raised or lower area like on the stage, you could have a platform lift with standby power. So the platform lift safety standards requires the platform at least five cycles on a battery so that people that were on the stage could get down to the main floor and then move to the exits.

Exits are most often doors to the outside and stair towers. But there's also a way to subdivide a building with fire walls and fire barriers to create what they call horizontal exits so that you can move from one side of that wall to the other so you're protected from smoke and fumes. That's what harms most people. So defend in place. We'll talk about smoke compartments quite a bit. So when you get to that exit, again, some quick pictures for you. Exit stairways, elevators with standby power, moving through a wall through a protected area on the other side, horizontal exits, or moving to the outside.

Exit discharge is once you get out of those doors or out of that stairway down to the ground, what's the path to get you the public way? The reason we say public way, sometimes a building, if -- you'll be stepping out the front door. We don't expect you stop there. But the building owner only has control over their property. We get the building owners responsible for getting everybody in the building to a public way and then they can leave the sights far enough away using the sidewalks, streets, or alleys.

And ideal world, you would have an accessible exit discharge out of all exits. But sometimes there's a little bit of a problem, as you can see in this picture here. That's quite a hefty ramp out the back. So that's why we try to take a look at some of the special requirements in the building code for accessible means of egress.

The difference between a means of egress and an accessible means of egress is it's still a continuous and unobstructed path but it has to be accessible from any point in the building preferably outside into a public way but at least to an area where you can hook up with the fire department the fastest.

If you're in a sprinkler building to the exits, if you're in a non-sprinkler building to an area refuge immediately adjacent to the exit so that they are protected from smoke and fumes until the firemen gets there.

So, again, self-evacuation. Ideal when possible from the exits. But when necessary, assisted evacuation, sometimes that's defend in place, like we talked about with the hospital or jails. It could be assisted evacuation at the stairways. It could be assisted evacuation using the elevator with standby power.

The building code does not require evacuation chairs at this point. Previously there was -- there wasn't a standard available for evacuation chairs but I understand there now is one that was recently completed with NFPA. So hopefully we'll get evacuation chairs that have a consistent level of safety use and application.

Right now -- well, in the past we had a little bit of a concern because these chairs were so different and you didn't necessarily know how to use all of them if you hadn't been trained on them. So it required training. It required proper placement. So you had places that you could shift people to the evacuation chairs. And then when you left and their mobility device stayed there, that that become an obstruction for other people that were trying to evacuate.

How did that all work together? Hopefully in the future, that will become more and better understood. The requirement right now is in buildings that have one means of egress. That means of egress has to be accessible. And since you also have to have accessible routes into a space, that's almost always the way in is the way out. That's pretty easy.

If you have two or more means of egress required, there are some situations where it's not possible to provide an accessible route all the way to a public way. You're in a steep hill, you're on a site that goes to gravel, grass, snow. So what's the best way? What are some alternative? So you always have to have at least two. You never want to get anybody trapped.

So we needed to look at some different options for how you could protect people so they could connect with the fire department. Right now there are exceptions for existing facilities because

these are fairly extensive criteria that have to be met and existing buildings at this point; there hasn't been a really good solution for how you would mandate, have this in every scenario. For example, stairways are required to be wider, you have to have areas of refuge. If you're in an older building with three-foot wide stairways, that would be extensive structural modification to provide accessible means of egress.

But we always encourage people if you can provide accessible means of egress in your existing building, you should try to do so as much as possible. It's just not required at this point when you're doing alterations. It's also not required in areas not required to be accessible. So say [Inaudible]. It has to have a means of egress because if there's somebody in there working, they have to be able to get out. But since areas that are occupied only by service personnel for maintenance and repair are not required to be accessible, since we don't have an accessible route into it, we want to have -- expect to have an accessible means of egress away from it.

So let's run through a couple of quick examples. Here's a building where you have on the first floor, two or more means of egress required. You want to make sure that you can evacuate from that building through those exit doors at the first floor, either directly outside or through an exit stairway to a door leading to the outside, always at least two.

Please remember it's not only the building, it's also the space. If I have something like this that's several large banquet rooms with a common lobby area, every time you go passed 50 people, you have to have two ways out. And the doors have to swing in the direction of egress travel so that you don't have people backing up against a door that's opening in the panic scenario.

So in this example, every single room here would have to have two accessible means of egress out. So in this particular scenario, while the accessible means of egress would be all the doors for evacuating, the accessible route into the building would only go after the two front doors. So in this scenario, the accessible means of egress is actually more restrictive or requiring more doors to have an accessible route from them than the entrance requirements would.

Also, please remember that you have to figure out different scenarios. So moveable partitions or permanent walls. You have to consider it in every scenario so that this same building would have the same criteria with moveable walls as it would with fixed walls. So you come in the front door, do your shopping, move out the same way, but in an emergency evacuation, you would be able to get out backdoor as well, hopefully to be able to get away on its own but there are a couple of options we're going to show.

Here's an example for one means of egress. Just to show you what the limitations are. If you're talking about mercantile occupancy, space of fewer than 49 people, a maximum of 75-foot travel distance. So if you are a longer travel distance to get out of the building or if you have more than 50 people, you can't do one means of egress anymore. You can have one from the space but then once you get into the hallway, you have to have two ways to go. So two ways to go is pretty much a requirement in all buildings except for single family homes. Very, very few public buildings have just one exit.

So when you have that exit discharge where you have to have an accessible route from the public way and it's not accessible because you can't do a ramp, then you have a choice of an interior area of refuge, which would be the room inside to protect you from smoke or an exterior area for assisted rescue. And this is required whether there's building sprinklers or not.

This is exit discharge as accessible. I go out. I've got a way to get away. This is showing a building two ways out required and an interior area of refuge. So you move into an area near the back door. Yes, you have steps out that back door because you've got a loading dock back there, gravel, lots of reasons where you couldn't provide an accessible route to the public way.

So you have this option. But actually, when we talked to a lot of different people, they prefer this option, the exterior area for assisted rescue. What this does is it provides for a safe place to wait outside the building. Like I mentioned before, most people -- almost everybody dies in a fire event from smoke and fumes not from the fire itself. So by being outside, you're protected from smoke and fumes. By being outside this area typically doesn't get filled up with stuff, like somebody starts to use

[Inaudible] they don't understand what the interior refuge is for. It doesn't take away space from the interior rental space for the building. So this seems to be positive aspect for everybody both from the fire department, for maintenance questions, from the building owners, for not losing what they consider rentable space or useable space. But, you know, the building is on fire, I would like to be outside where people can see me rather than inside in the building. So I would rather be out here, too.

And the wall behind you, including openings, are required to have a one-hour protection, with three quarter-hour limitations on the opening as well. So metal doors, protected windows, fire shutters, [Inaudible] walls, 10 feet up and 10 feet to both sides. You've got a safe place to wait for the fire department to come and get you. Because once they get a fire alarm notification, the very first thing they do is come and circle the building and see the best way to get to the fire. Plus this area is required to be on your fire and safety evacuation plan so they will know exactly where it is. It's required to be signed so people don't have to put stuff here. And it's outside so it's obvious. It's I think a good way to go.

With adding the 2012, there was a concern if you had a loading dock area that you were coming out and that door -- maybe the loading dock was where the fire was. How do you guarantee the door comes down? What happens if something is blocking the door? So they came up with some new provisions for providing a wing wall to protect from a very large opening immediately adjacent to that exterior area. So this is just one example in addition to the two-way communication in the building where you have an elevator that if you go outside and you can't guarantee that I'd get to a public way on the outside, I'm going to have this protected place to wait.

Now, when you're in upper floors, you still have that criteria for two ways to go. Typically that's to the stair towers, in the low-rise building. If your sprinklers -- I don't have to have areas of refuge. If there are not sprinklers, you have areas of refuge at the stairway.

As you get taller, you get to that five-story building, then you're still going to be able to get to the stairs but in addition, because the fire department has asked for the standby power, if you have any type of mobility impairment issues, you broke your leg last week, you have a heart condition, you have

wheelchairs, walkers, canes, crutches. If you can't use the normal stairway to evacuate, you can move to the elevator and with that standby power the fire department will be able to offer assisted rescue for up to 90 minutes. So right now there's not any building that would take more than -- longer -- even close to that long to evacuate. So it's both for them to evacuate everybody and also to stage to fight the fires. So it serves a dual purpose.

If you have multiple elevators, it has to be switchable between the elevators so the fire department can keep operational during most of those times.

By literal language is four more stories above the level of exit of discharge. In a flat site that is [Inaudible]. But what that means in detail is that your first floor -- they taught me how to use the arrow here. Hopefully I can get this to work.

In your first floor is your little exit discharge. That's the level you're leaving the building. So the first floor above the level of exit discharge is your second floor. And then your third floor is your two floors above level of exit discharge. Here's your third floor. So fourth floor above the level of exit discharge is actually a five-story building. When you get that tall, that's when your elevator has to have standby power.

If you have a sprinkler building with horizontal exits like a hospital, again, that's your defend in place. Move from this side to that side. You don't have to have standby power on the elevator because it is a very expensive feature. Or if you have a ramp from every level, which happens a lot in, say, parking garages or big sports stadiums where they have the big ramps for everybody to go down. If you have the ramp so people can evacuate down the ramp, you don't have to have the elevator with standby power.

Again, if it's a non-sprinklered building, areas of refuge at the stairs; in a sprinkle building you don't have to have areas of refuge at the stairs.

>> *Lewis Kraus*: Kim, this is Lewis. Can I pause you for one second and let people know that we are about 20 minutes before the end of the session. I know that Kim got a late start. Nobody's really been asking any questions yet because it is so compelling what you're talking about but I do want to invite

people now is the time if you have a question, start writing them now so that we can be efficient in getting them in as Kim continues.

Go ahead, Kim, and continue on. We'll pick up the questions when we can.

>> *Kimberly Paarlberg*: Ok. If you have a non-sprinkler building and you want areas of refuge, while most people would say sprinklers is always better, if you have an area of refuge, because maybe you don't have sufficient water supply or you're a low-rise building, that area of refuge has to be on an accessible route, it has to be separated from smoke barriers, so protected from smoke and fumes. It has to have direct access to either an exit stairway or an elevator with standby power. Usually it's adjacent to the exit stairway because then if the fire department comes in, they don't want to have to take you out of that protected room by going to the stairways. So they want to have direct access.

Again, the building is on fire. There's not a sprinkler system here. So they want 48 inches minimum clear down the stairway so they can do fire department carry to get people out. They want to have at least one wheelchair space, 30 by 48-inch wheelchair space for every 200 occupants that can use that stairway. It has to have two-way communication system. It has to have instructional planning in how to use that two-way communication system. This is an area of refuge so everybody knows exactly what's going to happen. Again, listed technically, an alternative is horizontal exit. If you move into that perfected building, you have a giant area of refuge.

So here's a quick picture. If you're using any type of mobility device, you can move into these places to wait. You've got a way to call. You want to make sure that that's passed the general evacuation route because you want the other people in the building to leave so the fire department can get in to offer help for any type of emergency responders. And you don't want to get -- you know, bumping people when everybody is trying to run down the stairway. So get that path for everybody.

Two choices, inside the stairway, which is what you see most commonly. You want to make sure that the door's not going to open and hit anybody that's waiting. And like I mentioned before, the general evacuations. Or technically you could do it immediately outside the stairway. But, again, you

have to make sure your evacuation route is around those areas. You don't need that [Inaudible] so people won't get bumped, the two-way communication system.

This is literally permitted but I haven't seen it happen very often. That area of refuge is not required in sprinkler buildings because of that sprinkler activation, keeping that smoke down. Hopefully putting the fire out even before the fire department shows up. And automatic notification of the fire department.

Open parking garage doesn't need to have areas of refuge even if it's not sprinklered. They typically don't want to put in sprinklers because they're exposed to the weather so the pipes might freeze. But with an open parking garage it has limit requirements for how much has to be open. So if there is a fire, the smoke is going out the side. It's not going to accumulate and be a hazard inside the building.

And there is an allowance for two-story buildings to have open stairways between the two floors. You don't have to put an area refuge next to a stairway that's open because there's not really a good, clear place where you would put it or that it would be attached to a protect area for the fire department.

The stairway connected to those areas of refuge do start out with the requirements to be 48 inches between hand rails. But when you put in the sprinkler system or when you provide horizontal exit, then it lets you go to a narrower stairway. The typical stairway is 44-inches with the hand rails coming into that. And even the 36-inch stairway works with the evacuation chairs. So the 48-inch is required when you're assuming you're going to have to do fire department emergency evacuation carry drills.

And the last thing that I wanted to tell you about is there's some brand new technology available in the code. It started in 2009 but got more extensive, and then 2012 and 2015.

If you have a building that's more than 120 feet for occupied floor, you have to have something called a fire service access elevator. This isn't limited to the fire service. Basically it's for the fire service to have something that they are comfortable with using for a longer period of time to

fight the fire and to offer assisted evacuation. It has to have a lobby in front of it that's protected. It has to have direct access to the stairway. It has a lot of different requirements for the lobby size, standby power, protection and wiring in the elevator shaft, be able to monitor from the fire command center, a way to protect water from getting into the shaft.

So basically, an extra protection level worked out with the elevator industry and the fire service so that they can do their fire service -- they will take the elevator to the floor below or two floors below where the fire is, move into the stair tower, connect their hoses, and then go up to fight the fire. So this offers a better way for the firemen to fight the fire and also offers protected areas on each floor for people with mobility impairments to be able to wait for fire department assisted rescue.

And then the last one is actually something that everybody is going to use, the elevators to evacuate. Again, this is not a replacement for the stairways ever. This is in addition to the regular stairways. But in building 40 stories or taller they have shown through studies that they can actually do a full building evacuation using the elevator systems faster than if they send people downstairs. So some of these super high-rises you're starting to see, this might be a good alternative for emergency evacuation from other floors.

Now, this is very, very high technology and very costly. So you're not going to see this as a viable option for low-rise buildings. But the higher up you go, the more people you have that might need assistance to evacuate. So this has requirements for elevator lobbies, ways for the firemen on the first floor to communicate with people in the lobbies, lobby protection, lobby size, elevator status indicators. Basically the fire service access elevator on steroids. This is going to allow everybody to evacuate using the elevator system if they want to. But it's going to be a smart elevator. And one of the things -- in a 100-story building and the fire is on the 75th floor, as soon as the fire is declared, the elevator goes to the 75th floor and pull people from the lobby and zone it up. It's going straight down, let everybody out. No matter whoever is pushing buttons. Go back up to the 75, load up, back down. It will continue to do that until it doesn't get any more calls from the 75th floor. Then it starts on the 76th floor and evacuates that floor. Then it's going to the floor below and evacuate from there. Then it's

going two floors up and evacuate from there. So it's going to be a smart elevator that will zone itself to evacuate the fire floor on adjacent floors. When the fire department gets there and shows up, hopefully the floor where the fire is are already totally evacuated. They can take over however many elevators they want and let the rest of the elevators run on the elevator system.

So it's set up to work with the fire department assisted rescue as well as allowing everybody to evacuate using the elevator system. Great benefit for people with disabilities but also for the general population. I don't know if you ever tried to go down a really tall building but the first time they started talking about these evacuation elevators, we were in a big high-rise building in Atlanta, Georgia, and we were in a conference room on the top floor. We all decided we would take the stairs down to see how hard it would be. Even the firefighters and fire chiefs with us were just like, oh, please. How tiring it is to go down. You just can't grasp that until you've tried it. So this will be a great system for those taller buildings. I know that it's already being used in Japan, Dubai, China. I believe there's a building in Seattle that's doing it, another one in Los Angeles. So it is starting to show up. But, again, it's high-tech. But it's something we're working on to stay ahead of the industry.

I am going to take questions now. I just wanted to give you some phone numbers for technical assistance. ICC, that's their phone number at the top. Anybody who has ever talked to the Access Board with their Technical Assistance Center, there's a great resource. My favorite and yours, too, if you're on this call, is the ADA Information Center. I work with [Inaudible] quite a bit. They are also a great resource. Every one of them just outstanding with what they can do to provide us with access.

If you're interested, we're going to be at the ADA symposium in Denver this year in June. I will be there along with a lot of other great class and researchers again offered by the ADA Center. And then the last one there is Fair Housing First. If you have some good questions about Fair Housing Act.

I apologize for running a little bit long. I don't know what our technical glitch was.

Got any questions for me?

>> *Lewis Kraus*: Thanks so much, Kim. Anybody who has questions, please enter them. We are running out time.

Here's one for you, Kim. This was not in the smart elevator section. It was before that. Is it wise to wait for the fire department to use elevators for evacuation? You may lose critical minutes waiting for them to arrive and they may need to use the elevators for bringing people or equipment up into the building. There's often an opportunity with good planning and dynamic risk assessment to use elevators to get people with disabilities out of the building before the fire department arrives.

>> *Kimberly Paarlberg*: It's got to be a balance. Like I mentioned before. There is a safety feature on elevators. But if smoke gets into the elevator, the elevators will turn themselves off. It was basically they will go down to the first floor and stop.

There is also a standard fire department procedure when they show up. They take control of the building and one of the first things they typically do, whether it's advisable -- in all cases or not, hopefully you can address that in the fire and safety evacuation plan. But standard practice is to take over the elevators. But then they're already there to help you out. So hopefully that would not be an issue.

What I'm always afraid of is people that say, well, yes, you can take the elevator. Nobody's going to stop you from taking the elevator but if you don't know where the fire is, you got to balance the risk of I get in the elevator, it starts down, and then the elevator -- the fire is in the elevator pit or machine room and the elevator breaks down between floors. Or the fire is on the first floor and I go down to the first floor and the doors open up and now I'm right at the fire. Where if I stayed where I was, I would have been safe from the fire. So it's a case-by-case basis. Really something you can address in the fire and safety evacuation planning, practice drills.

I hate to tell people -- I definitely don't want to tell people they should rely on that but at the same time if you get out there and get going, maybe it will work. It's a tough call. It's a tough balance between life safety [Inaudible]. I know that for sure. Please try and address that on a case-by-case basis.

Do you have another one, Lewis?

[No Audible Response]

>> *Kimberly Paarlberg*: Please don't tell me I lost you again.

[CART/Captions Standing By]

>> *Kimberly Paarlberg*: I'm sorry. I'm not hearing Lewis anymore. Perhaps if he could type questions into the chat window I would at least be able to answer it.

>> *Lewis Kraus*: Sorry about that everyone. Yes, I am here.

The next question I wanted to just make sure everybody realized that there was the evacuation information posted on the main page. And if you wanted to listen or go back and look, there was a presentation on evacuation chairs. You can find it [www.adapresentations.org](http://www.adapresentations.org) on the archives page. It's titled evacuation chairs.

>> [Multi-voice overlap]

>> *Lewis Kraus*: Next. How do you manage unplanned visitors to a building? You can't really know if people have a particular evacuation need due to deafness or asthma, for example, unless you ask every visitor about their evacuation needs on arrival.

>> *Kimberly Paarlberg*: Well, you do try to make your fire and safety evacuation plans generic enough that you could address visitors as well as employees or patients, especially in hospitals, that you would be aware of.

Also, publishing your evacuation plan in your elevator lobby or finding other ways to publish it so that if you don't have an elevator in your building, to make sure everybody knows how to get out. The exit signage is very important to be maintained and in place. So hopefully the signage and the free planning are going to be your biggest assets to address visitors.

>> *Lewis Kraus*: All right. I think that is going to do it. We realize that many of you may still have questions for our speakers and I apologize if you were not able to get a chance to ask your question. You can use the contact information that Kim put up there for you if you'd like, especially our ADA

Technical Assistance Centers, 800-949-4232. And please ask your question. You may end up with a question sometime after we're done so that would be a good place to ask that question.

I also wanted to let you know that you're going to receive an e-mail with a link to an online session evaluation. Please complete that evaluation for our program as we really value your input and we want to demonstrate to our funders the impact of our presentations.

I want to thank Kimberly today for sharing her time and knowledge with us. It was a great presentation.

A reminder to all of you, it was recorded. This session was recorded. And it will be available for reviewing next week at [www.adapresentations.org](http://www.adapresentations.org) on the archives page.

Thank you for attending today's session, everyone. We look forward to seeing you on March 10 for our next webinar, FEMA Promising Practice "Establishing Disability Community Preparedness Through State and Local Efforts."

Have a good rest of your day, everyone.

Bye-bye.