

EMERGENCY PLANNING **IN CONSTRUCTION**

COURSE OUTLINE

- **It is often said that if something can go wrong... one day it will. So we need to plan for that day.**
- **Accidents will happen. Emergencies do occur. But they don't have to become disasters. Not if we're ready.**
 - Because what we know and do... what we anticipate, plan for and practice... can keep injuries and damage to a minimum.
- **Emergencies can come at us from any direction... at any time. They can stem from natural causes... or human error... and can include...**
 - Medical problems.
 - Gas leaks.
 - Fires and explosions.
 - Hurricanes and floods.
 - Riots and acts of terrorism.
 - ...and even an “active shooter”.
- **The effects of an emergency can be devastating.**
 - People can be hurt... even killed.
 - Your worksite can suffer serious physical damage, and so can the surrounding community.
 - Your company's reputation could be damaged as well... even when the emergency isn't your “fault”.
- **Fortunately, there are steps we can take to reduce the potential of an emergency occurring... and avoid “worst-case” outcomes if one does occur.**
 - Of course we can't prepare for all potential emergencies, and we can't prevent every incident.

- **But planning enables us to get a “head start” on most of them, so that we can minimize their effect on our jobsites and the people who work there.**
 - For example, one common factor that emergency planning must address is stopping the “domino effect”.
 - That’s when an emergency spreads, as events move from one area to another, intensifying and picking up speed as they go.
 - If we’re prepared, we can shut this process down and keep things from growing worse.
- **It’s planning ahead that enables us to act quickly and effectively in situations like these.**
 - The best way to do this is to create an Emergency Action Plan that lays out the procedures that should be followed when an emergency happens.
- **Typically, an Emergency Action Plan is assembled by a company’s “Crisis Management Team”.**
 - Members of this team should come from a number of different trades, so the team has an assortment of useful skills and experience to draw on.
 - Input should also be solicited from representatives of local emergency response groups like the police and fire departments.
 - Your community may also have its own Emergency Management group that coordinates response operations. If so, they should be involved in creating your Emergency Action Plan as well.
- **What all these people have in common is that they bring valuable information to the planning process... information that can help your jobsite deal effectively with emergencies.**
- **An Emergency Action Plan needs to be a very comprehensive document, and should contain information such as...**
 - The types of emergencies that could occur at your jobsite.
 - The strategies that can be used to combat these situations.
 - ...as well as the names and telephone numbers of company representatives who should be contacted if an emergency occurs.

- **The Plan should also list...**
 - Groups within your jobsite that can provide emergency assistance and equipment... as well as community groups and other “outside” resources that can be of help.
 - Detailed descriptions of all of your site’s warning sirens and alarms also need to be included (it’s critical to be able to recognize these sounds and know what they mean, so you can take immediate action if you hear one).
 - Information on evacuation routes and procedures is extremely important, as are procedures for the emergency shutdown of activities on the site.
- **As you can see, an Emergency Action Plan is a very comprehensive document.**
- **Terrorist activity is one type of problem that many construction companies are focusing more on in their emergency planning now-a-days.**
 - To help companies that want to protect themselves from a terrorist attack, OSHA has developed a planning tool called the “Evacuation Planning Matrix”.
- **The matrix helps you estimate the likelihood of terrorists attacking your jobsite by considering three “risk factors”...**
 - How vulnerable the jobsite is to an attack.
 - Whether the site would be a terrorist’s “preferred target”.
 - ...and how serious any damage or disruption would be... not only to your site, but to other businesses and the community at large.
- **To determine how these factors apply to you, you need to answer questions such as whether your project...**
 - Uses, handles, stores or transports hazardous materials...
 - Will provide essential services when it’s completed...
 - Has a large number of workers on site...
 - ...and has limited means of egress.
- **Other questions include whether the project...**
 - Has a high volume of incoming materials...
 - Is considered a “high profile” site...
 - ...or is part of your area’s transportation or communication systems.

- **Based on these considerations, the matrix places jobsites in one of three “risk zones”.**
 - The Green Zone includes workplaces that are not likely to be a terrorist target, either because their vulnerability is limited, an attack wouldn’t be particularly damaging, or little disruption would occur even if an attack were successful.
 - The Yellow Zone includes workplaces that may be attractive targets for terrorist because one, but only one, of the three risk factors is high.
 - The Red Zone includes workplaces for which two or all three of the risk factors are high.
- **So if your project is classified as a Yellow or Red Zone location, your Emergency Action Plan needs to address how to respond to a terrorist incident.**
 - In this case, the “Evacuation Planning Matrix” can also provide guidance regarding the emergency planning process since it includes planning considerations as well as possible preparedness measures.
- **Active Shooter incidents are a relatively new situation that companies have to address in their Emergency Action Plans.**
 - Sometimes these situations can be tied to a specific company or jobsite. Other times they appear to be completely random.
- **The one constant about active shooter attacks is that they are unpredictable... which means that a jobsite and the people in it must be prepared to protect themselves at all times.**
- **As with terrorist attacks, one key to this is to control the “access points” to your jobsite.**
 - So a Crisis Management Team will make sure that all entrances are identified and either require passcodes or keys to enter or are monitored in some way.
- **One of the things that all employees should do is to start practicing “situational awareness.” This means that everyone should...**
 - Be aware of their environment, including where all of the available exits are.
 - Pay attention to what is going on around them.
 - ...and look for things that seem odd or out of place.

- **Employees should also be provided with information regarding what to do if a shooter does appear, so this should be included in your jobsite’s Emergency Action Plan as well.**
- **Studies have shown that if a location is “under attack,” the best options for survival are “run,” “hide,” and “fight”... in that order, which is why everyone needs to know where their closest exits are.**
- **If there is no good way to escape, the next alternative is to “hide”. A room with a door to lock or barricade is best.**
 - Shut off the lights and turn off any sources of noise, such as a radio or television, which would attract a shooter’s attention.
- **If closing themselves in a room isn’t possible, hiding behind a large piece of equipment or other object is the next best thing.**
 - They should try to find something heavy and solid, that looks like it could stop a bullet.
 - If it can be done without the shooter hearing, 911 should be called as soon as possible.
 - The police need to be advised that there is an “active shooter situation”, where your jobsite is located and where the shooter appears to be.
 - Then everyone’s phones should be put on “vibrate” or shut off.
- **If “running” or “hiding” are not viable options, employees should be prepared to fight.**
 - People are often reluctant to consider this, but the alternative can be to surrender your life to the shooter, so they need to know some of the “basics”.
 - The shooter should be attacked with whatever weapons are available...a piece of wood, a pipe, even your fists.
 - Blows should be aimed at the shooter’s face, eyes, neck, shoulders and arms. If there are multiple people in the area everyone should attack the shooter together.
 - Once a shooter is subdued, everyone should run to safety.
- **Information about how employees should relate to the police as they arrive at your jobsite should be included in your Emergency Action Plan too.**
 - The police will have only “sketchy” information about the situation, and it will not necessarily be clear to them as to “who’s who”.

- **Employees should always put their hands in the air, empty and with their fingers spread, when they approach responding officers.**
 - The police will want to know as much as people can tell them about the situation, but the conversations will need to be brief.
 - Any questions that they have need to be answered quickly and concisely.
 - Once they have “debriefed” everyone, people should move to a “safe” area and stay out of the police’s way.
- **Effective emergency planning requires the input and participation of everyone on your jobsite, including you. So start thinking like an emergency planner!**
 - Figure out what needs to be done in the event of an emergency in your work area... and how you can help to stop events from moving from one location to another.
- **Remember to ask yourself “What if” questions, such as...**
 - “What if a fire spread into my area?”
 - ...or “What if an active shooter came onto our jobsite?”
- **These are the same types of questions that a Crisis Management Team will have asked themselves when they put your Emergency Action Plan together, and will help you to do two things:**
 - Prepare to take action if an emergency occurs.
 - ...and spot potential hazards before things become dangerous.
- **For example, once you start thinking like this you will recognize that signs of future trouble could include...**
 - A loose electrical connection...
 - A pile of flammable materials...
 - A broken lock on a security door...
 - ... all of which could eventually result in an emergency situation.
- **Maintaining a rigorous monitoring and preventative maintenance program is another important facet of emergency planning. Making sure things are “shipshape” can prevent a lot of problems.**
 - This includes keeping accurate records of any repair work, because for a Plan to be effective, the information it contains must be up-to-date.

- **Your Crisis Management Team must be made aware of any physical changes that are made in the work area as well.**
 - Expansion, equipment modifications, new roads or rail lines... things like these can significantly alter how an emergency should be handled.
 - So because this information is vital to effective emergency planning, you need to be aware of the proper channels and procedures for reporting changes... or any potential problems that you notice.
- **You know how they say “Practice makes perfect”? This is especially important with emergency planning**
 - Once an Emergency Action Plan is in place, it should be tested in at least two ways.
- **The first approach is to stage “tabletop” drills, using diagrams or models to simulate a crisis at your jobsite.**
 - “Complications”, such as the spread of a fire to other areas, can be introduced into the exercise to make the emergency more challenging.
- **Key site personnel as well as people from outside agencies, such as local police and fire departments, should participate in the drills.**
 - This will enable everyone to learn more about potential problems that could occur and become familiar with their emergency response roles.
 - Most importantly, these exercises give people a chance to practice working together.
 - Afterwards, everyone should critique how well their strategies worked. Studying how things unfolded helps to determine what parts of the Plan may need to be adjusted.
- **While tabletop drills like this are useful, the best way to judge your “real-world readiness” is through a live exercise.**
 - Site-wide drills allow people to physically interact in a setting that closely mirrors a real emergency.
 - With live exercises, participants get more of a taste of what things would really be like. They work on the same kinds of problems found on a “tabletop”, but on the actual jobsite, with their coworkers, in real time.

- **At the beginning of the exercise, key personnel report to their assigned areas, where they are briefed on the emergency, just as in a real crisis.**
 - Fire brigades and emergency response teams are dispatched on rescue missions (efficient communication between them and jobsite personnel is crucial).
 - News reporters are often invited to take part in the exercise, as well (in a real incident, your communications people will need to know how to deal effectively with the press).
- **As with tabletop drills, after any live exercises how people responded and what occurred as a result need to be reviewed, and any necessary adjustments made to your company's Plan.**
- **One of the major benefits of a full-scale emergency exercise is that it shows you what your responsibilities are.**
 - For instance, it can remind us that we need to know the sounds of alarms and the locations of fire extinguishers and exits.
 - In some situations, you may need to cut power to entire areas on the site to prevent an emergency from escalating.
 - In the event of a fire, a wireless fire alarm system will work even if the power is cut and will alert workers to evacuate the jobsite.
- **You might also see situations where you would have to put hazardous materials that you're working with into safety containers and secure storage areas.**
 - If a chemical spill could happen in your work area, you will see where clean-up procedures need to be instituted.
- **A live exercise will also point out where you need to keep access points and roads clear, so that rescue teams and emergency vehicles will have the fast, easy access that they need in an emergency.**

- **Practicing evacuation procedures is another major goal of an emergency exercise, because it's crucial that everyone knows how to leave their work areas quickly and in an orderly fashion.**
 - So you will need to know what your alternate escape routes are if you discover the main ones are blocked.
 - Once evacuees have reached a pre-planned “safe area” or “marshalling point” during the exercise, someone will also need to be responsible for taking a “head count”.
 - If all personnel cannot be accounted for, the Crisis Management Team will normally order a search and rescue attempt. You may need to help determine if everyone from your work area made it out safely.
- **A live exercise also helps to prepare you for interacting with the news media.**
 - If on-the-scene reporters ask you for comment during an exercise or in a real-world emergency you should avoid talking to them.
 - Though they may press you, rumors and speculation can create complications, both during and after an emergency situation.
 - So you should refer all reporters to the company's official communications people. That way you can help to make sure only the real story gets out.
- **One of the most important things drills and exercises do is to remind us of the important part each of us plays in handling an emergency situation.**
 - So it's crucial that everyone participates.

*** * * SUMMARY * * ***

- **Emergencies almost always catch us by surprise. But if we've done our "homework", they don't have to result in disaster. Let's review...**
- **Remember that cooperation is the key to creating and executing a successful Emergency Action Plan.**
- **Ask yourself "What if"? questions. They can help to identify potential problems.**
- **Make sure to do regular preventative maintenance on machinery and systems... so that they won't create an emergency.**
- **Report any physical changes to your jobsite that might require an Emergency Action Plan to be revised.**
- **Be sure you know the meaning of alarms, the location of fire extinguishers and the best evacuation routes.**
- **Above all, get involved! You should take your jobsite's Emergency Action Plan seriously, and participate in keeping it up-to-date and practicing its procedures.**
- **The best way to ensure everyone's safety in an emergency is by preparing for it before it happens!**