



Safety Training – Monthly Modules

2022

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Module 1: Housekeeping

Company Name: _____ Date: _____

C3 Project Name: _____

Slips, trips, and falls due to poor housekeeping on a construction are an all too frequent occurrence that can be prevented through good housekeeping practices. In addition to preventing injuries, good housekeeping practices increase efficiency, reduces vermin and snake problems, reduces fire hazards, and presents the worksite as a safe, professional operation. Good housekeeping practices also help establish a better relationship with people who live, and work, near the construction site.

- Each person is responsible for making sure their work area remains clean and well-kept.
- Keep floors, stairways, ramps, and other travel areas dry, clean, and clear of waste. Clean up all spills immediately.
- Keep hoses, power cords, and welding leads out of walkways and paths of travel.
- Don't store materials in aisle and walkways. Remove obstacles from walkways and keep walkways free of clutter.
- Ensure trash bins in eating, drinking, and break areas are provided and are emptied daily.
- Properly stack and store materials in designated areas.
- Ensure appropriate containers are provided for trash and waste, including approved containers for hazardous waste such as oily rags and flammable waste.
- Remove combustible rubbish and debris immediately from the vicinity of any hot work or ignition sources and dispose of properly.
- Maintain a clean work area and clean up as work proceeds. Ensure the area is cleaned before releasing the area to another trade.
- Remove trash, scrap, and unused materials. Dispose of them or properly store them away.
- Clean toilets are available and are serviced regularly. Do your part to ensure they are kept cleaned for the next user.
- Don't throw materials, waste, or tools from buildings or structures. Use an enclosed chute or lower the materials in a container when disposing of materials from upper levels of a structure.
- Dispose of trash in the proper receptacles, not on the ground or 'out of sight'
- Let you supervisor know if you see signs of rodents, insects, and other vermin infestation.
- Don't track debris and mud into walkways, roadways and public areas.
- Don't block emergency exits, fire equipment, or first aid stations.
- Keep chemicals and flammable materials away from heat sources and electrical equipment.
- When sweeping work areas, determine whether the dust may contain respirable crystalline silica and follow safety requirement as outlined in the silica control plan.
- Secure loose materials on roofs and open floors to prevent it from blowing away in the wind.
- Keep materials away from floor and roof openings and leading edges.
- Establish laydown yards for material storage and equipment. Store materials so they won't slide, roll, or topple over. Use blocking if necessary.
- Remove or bend nails from materials such as lumber prior to handling and/or discarding.



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Module 2: Fall Protection

Company Name: _____ Date: _____

C3 Project Name: _____

In the construction industry in the United States, falls are the leading cause of worker fatalities. The standard for fall protection deals with both the human and equipment-related issues in protecting workers from fall hazards.

Each employee on a walking/working surface (horizontal and vertical surface) with an unprotected side or edge which is within 6 feet of the edge or lower level shall be protected from falling by the use of guardrails, safety net systems or personal fall arrest systems.

Examples of Fall Protection Requirements for Certain Construction Activities:

- **Leading Edge**
 - Each worker constructing a leading edge 6 feet or more above a lower level must be protected by guardrail systems, safety net systems, or personal fall arrest systems.
- **Overhead Bricklaying and Related Work**
 - All workers reaching more than 10 inches below the level of the walking or working surface on which they are working must be protected by a guardrail system, safety net system or personal fall arrest systems.
- **Roofing Work on Low-Slope Roofs** less than or equal to 4 in 12 (vertical to horizontal) must be protected by
 - Guardrail, safety net, personal fall arrest system, a combination of conventional fall protection systems and warning line, or a warning line system and a safety monitoring system.
- **Working on steep roofs** greater than 4 in 12 (vertical to horizontal).
 - Guardrail, safety net, personal fall arrest system, or a combination of conventional fall protection systems.
- **Other walking or working surfaces**
 - As a general matter, each worker on a walking or working surface 6 feet or more above a lower level must be protected from falling by a guardrail system, a safety net system or a personal fall arrest system.
- **Guardrail Systems**
 - Guardrail systems are barriers erected to prevent workers from falling to lower levels. If the employer chooses to use guardrail systems to protect workers from falls, the guardrail must have the following:
 - Top Rail
 - Mid Rail
 - Toe Board

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- **Holes**
 - Each worker on walking or working surfaces must be protected from falling through holes including skylights that are more than 6 feet above lower levels by personal fall arrest systems, covers, or guardrail system erected around such holes.
 - Each worker on a walking working surface must be protected from tripping into or stepping through holes by covers.
- If you are at risk for falling 6 feet or more, you must use appropriate fall protection equipment. One type of appropriate fall protection equipment is the personal fall arrest system. The entire personal fall arrest system must be capable of withstanding the impact force involved in a fall. A person without protection will free fall 4 feet in ½ second and 16 feet in 1 second. A personal fall arrest system includes a full body harness, a shock absorbing lanyard or a rope grab and vertical lifeline with sound anchorage able to support a dynamic load of 5,000 pounds.
- **Fall Arrest** – Do these things to avoid falls and injuries.
 - Inspect all fall protection equipment prior to use.
 - Pick an anchorage point that will support 5,000 lbs. per worker (strong enough to support a pickup truck)
 - Fall arrest systems should be rigged so employees can't free fall more than 6 feet or contact any lower level.
 - Tie off above your head. A six foot person who ties off at their feet could free-fall as far as 12 feet.
 - Place anchorage directly above/behind your work area to avoid potential swing fall hazards.
 - Use the shortest lanyard possible. The shorter the tie-off, the shorter the fall.
 - Have anchorage points selected by a trained competent person.
- **Be Aware**
 - Identify all potential tripping and falling hazards before work
 - Never jump from any height
 - Look for fall hazards such as unprotected floor openings or edges, shafts, skylights, stairwells, and roof openings.



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Module 3: Hand & Power Tools

Company Name: _____ Date: _____

C3 Project Name: _____

Hand and power tools are a common part of our everyday lives and are present in nearly every industry. These tools help us to easily perform tasks that otherwise would be difficult or impossible. However, these simple tools can be hazardous and have the potential for causing severe injuries or even death when not properly used or maintained.

- Workers who use hand and power tools and may be exposed to the hazards of falling, flying, abrasive, or splashing material, and harmful dusts, fumes, mists, vapors, and gases. Workers must be provided with the appropriate Personal Protective Equipment (PPE) according to the task and tool at hand.
- Power tools must be fitted with guards and safety switches; they are extremely hazardous when used improperly. The types of power tools are determined by their power source: electric, pneumatic, liquid fuel, hydraulic, and powder-actuated.
- All electrical connections for these tools must be suitable for the type of tool and the working conditions (wet, dusty, flammable vapors). When a temporary power source is used for construction, a ground-fault circuit interrupter should be used.
- **Employees should be trained in the proper use of all tools.** Workers should be able to recognize the hazards associated with the different types of tools and the safety precautions necessary when using each of them.
- To prevent hazards associated with the use of power tools, workers should observe the following general precautions:
 - Operate tools according to the manufacturers' instructions.
 - Use the right tool for the job. Never use any accessory except those specifically supplied or recommended by the manufacturer.
 - Inspect each tool for damage before use and do not use damaged tools. Keep all tools in good condition with regular maintenance.
 - Remove all damaged power tools from use and tag them: "Do Not Use."
 - Use electrical tools that are either double-insulated or grounded (three-pronged); Use a GFCI when necessary.
 - Properly wear the correct PPE for the tool being used and task being done.
 - Never carry a tool by the cord or hose.
 - Never pull the cord or the hose to disconnect it from the receptacle.
 - Keep cords and hoses away from heat, oil and sharp edges.



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- Disconnect tools when you are not using them. “Lock-out Tag-out” tools before servicing, cleaning, or changing accessories such as blades, bits, and cutters.
- Keep all people not involved with the work at a safe distance from the work area.
- Secure work with clamps or a vise, freeing both hands to operate the tool.
- When using hand-held power tools, always keep a firm grip with both hands. Losing control creates a hazardous situation. Do not use any tool that is too heavy for you to easily control.
- Avoid accidental starting. Do not hold fingers on the power switch/trigger while carrying a power tool.
- Never overreach when using power tools. Be sure to keep good footing and maintain good balance when operating power tools.
- Wear proper work attire for the task. Loose clothing, oversized gloves, and/or jewelry can become caught in moving parts.

Workers and employers have a responsibility to work together to establish safe working environment. If you encounter a hazardous situation or you do not know how to properly use a tool, it should immediately be brought to the attention of the on-site supervisor or competent person.



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Module 4: PPE

Company Name: _____ Date: _____

C3 Project Name: _____

- PPE is Personal Protective Equipment.
- PPE is the equipment that workers wear to protect themselves from hazards in their work environment.
- Examples of PPE
 - Eye and face protection
 - Head protection
 - Foot protection
 - Hand protection and body protection
 - Respiratory protection
 - Hearing protection
 - Fall protection
 - Protective clothing
- Employers will provide specific instructions on which PPE will be required at your workplace.
- Employers must inform employees of the PPE selection, provide the PPE to the employees and ensure that the PPE fits properly.
- Employers must provide the required PPE at no cost to the employees, except under certain conditions outlined in the standard.
- Employers are responsible for ensuring that the PPE is properly used and maintained in a sanitary and reliable condition. The employer will also be responsible for the adequacy, maintenance and sanitation of any employee-owned PPE.
- Workers are responsible for inspecting, maintaining, and wearing PPE when needed.
- Workers are also responsible to inform their supervisor if PPE is lost or damaged.
- Workers shall be trained in the: selection, use, maintenance, and inspection of PPE.
- Instructors will demonstrate at least 4 from the following list:
 - Eye and face protection
 - Head protection
 - Foot protection
 - Hand protection and body protection
 - Respiratory protection
 - Hearing protection
 - Fall protection
 - Protective clothing

Note: Fall protection (this will be demonstrated in the December Monthly Module)



C3 Safety Training: Monthly Module

Module 5: Material Handling

Company Name: _____ Date: _____

C3 Project Name: _____

In our construction work, manual handling of tools and materials are critical to getting the job done. This could be tools, lumber, steel, stone, bagged material and all the other items that have to be moved on any construction job. We are exposed more times, in more ways, to more different sizes, shapes and weights than men in most other occupations.

Let's review some proper manual material handling methods to help to reduce these injuries and deaths:

- Don't try to carry too bulky or too heavy of a load. Get help. Always be sure you can see where you're going.
- Make sure you have a firm grip on material before lifting it.
- Before you set material down, be sure that your fingers and toes are in the clear.
- Watch out for sharp rough edges. When handling sharp edges, protect your hands with gloves.
- Use proper lifting techniques to reduce risk of back injuries.
- Lift gradually — do not jerk.
- Avoid twisting when carrying a heavy load — if you have to turn, do so by shifting your feet.
- When carrying loads, keep them as close to your body as possible.
- When carrying long pieces, look out for other workers. As a general rule, the leading end of long pieces should be high and the trailing end should be low.
- When carrying boxes and/or material make sure you can see in the direction of your travel.
- Maintain good housekeeping of aisles, passageways and work areas at ALL times.
- Do not store non-compatible material together. For example, gas containers and bulk lumber do not mix.
- Do not store material near openings in floors, landings or the exterior of building under construction
- Know the intended loads and the floors maximum capacity rating.
- If a load shifts, never try to stop the falling load. Get clear of the load to avoid injury.
- When staging material, never stack materials too high. As a general rule, heavier material always on bottom and lighter material on top.
- If you slip or trip while carrying material, let the material drop.

In this short discussion, we can't go into all the lifting and carrying situations that we may come up against. Just remember, there's a right way and a wrong way to do any manual handling job. Figure out the right way, then proceed with your task.



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Remember: There is a place for everything and everything needs to be in its place. The proper storage of work materials will make your job easier. Proper lifting and handling, with help if needed, will keep you from being injured on the job.

What are you doing to make sure it doesn't happen on your shift?



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Module 6: Ladder Safety

Company Name: _____ Date: _____

C3 Project Name: _____

- Ladders include but not limited to step, straight, combination and extension.
- Avoid electrical hazards! Make an assessment for overhead lines before handling a ladder. Never use metal ladders near power lines or exposed energized electrical equipment.
- Ladder inspection starts by checking that all labels and markings are legible.
- Inspection Process
 - Inspect Foot Pads (Anti-slip)
 - Front side rails
 - Clean and free from slippery material on rungs and or components
 - Steps/rungs
 - Rung bracing
 - Locking spreader bars
 - Rear non-climbing rails
- Damaged ladders shall be tagged and removed from jobsite.
- When climbing always maintain a 3-point of contact (two hands one foot, or two feet and one hand) on the ladder. Position your body so that it is centered and facing ladder.
- Do not use the top step/rung of the ladder as a step unless it is designed for that purpose.
- Use ladder on a level and stable surface, unless it has been secured (top or bottom) to prevent displacement.
- Do not place ladders on boxes, barrels or on any unstable base in order to increase additional height.
- Do not use step ladders as a single ladder or in a partially closed position.
- Do not move or shift a ladder while a person or equipment is on it.
- An extension or straight ladder used to access an elevated surface shall extend at least 3 feet above the point of support.
- The proper angle for setting up a ladder is 4 to 1.
- Place the ladder in a location where it can be barricaded to keep traffic away from the ladder.
- Do not exceed the maximum load rating of a ladder.



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Module 7: Excavation

Company Name: _____ Date: _____

C3 Project Name: _____

Fatalities occur each year on unsafe jobsites during excavation activities from:

1. Cave-ins
 2. Falls
 3. Falling Objects
 4. Hazardous Atmospheres
 5. Machinery/Vehicle Traffic
 6. Underground Utilities
- **Cave-ins** – most common cause of excavation fatalities. One cubic foot of dirt can weigh between 80 and 140 pounds. One cubic yard (3'x3'x3') could weigh between 2160 and 3780 pounds. Cave-ins happen very quickly – you will not have time to get out of the way.
 - Excavations over 5 feet in depth (or shallower in some circumstances) must be protected by shoring, shielding, or sloping/benching. A trained competent person must decide which system to use on each excavation and ensure that it is used correctly. Anyone entering an excavation must receive detailed training (NOT just this overview.)
 - A trained competent person must inspect excavations before each shift or whenever conditions (rain, etc.) change
 - Proper access (ladders, ramps, etc.) must be provided for all excavations.
 - DO NOT enter an excavation without training and authorization from a trained competent person.
 - Be alert for cracks, fissures, standing water, or other signs of danger when working in or around a trench or an excavation.
 - **Other hazards:**
 - **Falls** – Open excavations should be barricaded to prevent workers or pedestrians from falling into the excavation.
 - **Falling Objects** – Workers inside a trench are often injured or even killed by falling objects such as dirt or rock, pipe, tools, equipment, etc. Take proper care to prevent falling objects while workers are in the trench. This care includes keeping debris piles and materials away from the edge of the trench, not allowing anyone to walk or stand under suspended loads, and requiring workers in the trench to wear hardhats.
 - **Hazardous Atmospheres** – Some excavations could contain hazardous atmospheres, either naturally occurring or human caused. Examples include oxygen-deficient, flammable, or toxic atmospheres. These can occur due to naturally decaying materials in the soil (especially around swampy areas) or can be caused by human activities such as landfills, underground utilities, or exhaust fumes from nearby equipment or vehicles.
 - **Machinery/Vehicle Traffic** – Workers near excavations are often standing or walking in proximity to moving machinery or vehicles, and care should be taken to ensure that they



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are protected from being struck by a vehicle or other equipment. Machinery or vehicles could also fall into the excavation, injuring both workers and operators or passengers.

- **Underground Utilities** – Electrical, gas, water, and other underground utilities can be extremely dangerous for people working in or around excavations. Always call the local utility companies or 1 call service to have utilities located PRIOR to digging or excavating.



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Module 8: Heat

Company Name:_____Date:_____

C3 Project Name:_____

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- Heat Illness can be deadly. Thousands suffer heat illness per year and several result in death related to heat related causes on the job
- A heat wave is a prolonged period of excessive heat, generally 10 degrees or more above normal average.
- Examples of Heat related illness:
 - Heat exhaustion
 - Heat stroke
- Employers must protect workers from excessive heat on the jobsite.
- Signs of heat exhaustion
 - Dizziness
 - Headache
 - Sweaty skin
 - Weakness
- Signs of Heat Stroke:
 - Red, hot, dry skin
 - High body temperature
 - Confusion
 - Dehydration
- Provide workers with water, rest, and shade
- Listen to local weather forecast and stay aware of upcoming temp changes.
- Explain the following heat forecast:
 - Excessive Heat Advisory (forecast of excessive heat in the next 24-48 hours)
 - Heat advisory (forecast of heat of 100-105 Degrees for 1-2 days)
 - Excessive Heat warning – (Heat index to meet 105-110 degrees for 2 days)
- Explain the following Heat Suggestions
 - OSHA guidelines suggest each worker drink 1 pint of water per hour.
 - Avoid energy drinks (Approx. 1 gallon of water to make up one energy drink)



C3 Safety Training: Monthly Module

Module 9: Mobile Equipment/Struck By

Company Name: _____ Date: _____

C3 Project Name: _____

- “Struck By” accidents can be caused by vehicles, falling debris/material, moving equipment, faulty equipment and more. The key to avoiding these accidents is by staying cautious, knowing your surroundings, and making sure to stay out of harm’s way.
- **“Struck by” incidents involving mobile equipment is one leading causes of fatalities on the job.** When construction equipment is rumbling around a project, you need to be aware of your surroundings. If both construction workers and equipment operators keep their eyes open and stay attentive, these “struck by” hazards can be eliminated.
- The following are ways to help you stay safe and to maintain a healthy respect for mobile equipment:
 - Always make sure equipment operators see you before entering any area where heavy equipment is being used. If possible, make eye contact with the equipment operator and never take for granted that equipment operators see you.
 - We recommended that all personnel wear high visibility clothing.
 - Use established walkways and avoid shortcuts.
 - Recognize route patterns of equipment on the jobsite.
 - Stay away from ongoing operations unless they are needed for the work.
 - Never depend on hearing a horn or other warning signals; they might be lost in the general noise around a project.
 - Never use cell phones or headphones that may cause a distraction or limit your ability to hear warning signals.
 - Equipment shouldn't be backed up without someone to check the blind spots and give signals; nevertheless, keep in the clear whenever equipment is traveling backwards, as that is when most equipment accidents happen.
 - Swinging counterweights often create a dangerous pinch-point. The swing radius of equipment must be barricaded to prevent exposure and possible injury
 - Never hitch a ride on equipment - it's fatally easy to fall under moving equipment.
 - Do not ride on top of loads
 - Never walk alongside moving equipment unless you are the authorized “spotter”. Keep in the clear in case the unit suddenly turns your way, or slides, or the load shifts.
 - Keep clear of suspended loads.
 - Do not approach the cab of any equipment while in use until seen by operator.
- Construction equipment is loud, heavy, and extremely dangerous. Always assume that the operator doesn't see you and doesn't know that you are around. To be safe around mobile equipment, the equipment operator must know where you are. Therefore, you should use any and all methods of communication to ensure your safety. Always assume that it's up to **YOU** to keep in the clear. **BE SEEN AND BE SAFE.**



C3 Safety Training: Monthly Module

Module 10: Scaffolds/Lifts

Company Name: _____ Date: _____

C3 Project Name: _____

- Scaffolds are very common construction tools on the jobsite, but can be very dangerous if not used properly.
- Fatalities and serious injuries involving scaffolds and lifts occur each year, and citations related to scaffolding are typically high on OSHA's Most Frequently Cited lists.
- Most fatalities come from falls, but other hazards include electricity, falling objects, and incorrectly stored materials.
- Many types of scaffolds exist, including supported scaffolds, suspended scaffolds, rolling scaffolds, scissor lifts, and even stilts. (Explain different types of scaffolds and give examples)
- Falls are usually caused by inadequate fall protection or scaffold collapse.
- Working levels of a scaffold should be fully planked and have a complete guardrail system prior to use. If this is not possible, additional fall protection like tie-offs are required.
- Additional fall protection may be required at all times on certain types of scaffolding, such as suspended scaffolds (swing stages).
- Proper access and egress must be provided to reach working levels. This includes ladders, stairwells, or ramps that meet regulatory guidelines. (No climbing the X-braces!!)
- Scaffolds should be erected and modified only under the supervision of a trained Competent Person, and only by trained Scaffold Erectors.
- Anyone using a scaffold should have Scaffold User Training with a curriculum that far exceeds this class.(
- Before each use, scaffolds should be inspected by a trained Competent Person
- Use scaffold tags to document inspections, and communicate the condition of a scaffold.
- Scaffolds should have adequate support, and should be level and plumb. Scaffolds need additional support if they exceed certain heights (outriggers, tie-backs, etc)
- Rolling scaffolds should have all wheels locked while in use.
- Scaffolds are designed to hold a certain amount of weight, and care must be taken not to overload the scaffold with material and/or workers. Overloading can cause the scaffold to collapse.
- Scaffolds should not be erected in close proximity to overhead power lines.
- Workers should not be allowed to work on or walk under scaffolds unless falling object/overhead protection is provided.



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- Materials stored on scaffolds must be stored in a manner that prevents them from falling from the scaffold deck.
- Scaffolds should not be used when inclement weather such as lightning, rain, ice, or high winds cause additional fall hazards.
- Aerial (Scissor) lifts are considered scaffolds. The operators must be trained, must follow manufacturers' guidelines, and must follow fall protection guidelines that allow no more than a 2' fall.
- Do not stand or climb on handrails of a lift at any time.
- Use caution when walking or working near lifts. Falling object and crush hazards exist.



C3 Safety Training: Monthly Module

Module 11: Electrical Safety

Company Name: _____ Date: _____

C3 Project Name: _____

- Electrical shock injuries are a result of DIRECT or INDIRECT electrical contact.
- Circuit is simply the flow of electrical charge.
- Low voltage does not mean Low Hazard.
- Electrical hazards include:
 - Failure to utilize proper Lockout/tag out procedures
 - Unauthorized work on energized circuits
 - Use of materials too close to energized circuits
 - Use of defective equipment or tools
 - Not using Ground Fault Circuit Interrupter (GFCI) A GFCI is a device that monitors the current flowing from hot to neutral. An imbalance will trip the circuit.
 - Not observing WARNING Signs
- Only qualified workers should test circuits and electrical parts to insure that they are isolated and equipment will not operate.
- Energized Equipment is connected to a LIVE energy source. De-energized has circuit or equipment disconnected from ALL power sources. This includes extension cords.
- Temporary wiring (Extension cords) in GFCI.
- Inspect electrical equipment daily. If found defective, equipment must be tagged and removed from service.
- Never reach blindly into areas containing energized parts.
- Only authorized personnel shall enter high voltage area.
- Inspect work areas for standing water. The area should be clean and dry.
- Workers shall be trained in Lockout/Tag out procedures.
- Demonstrate 4 from the following list:
 - How to inspect tools
 - How to inspect cords and insure ground is intact
 - How to inspect full length of cords
 - How to use and inspect GFCI

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Module 12: JSA

Company Name: _____ Date: _____

C3 Project Name: _____

Workers can be injured and killed at the jobsite. JSA's can add value to your project, your task, and your life. You can help prevent workplace injuries and illnesses by looking at your workplace operations, establishing proper job procedures, and ensuring that all employees are made aware of the job site hazards. One of the best ways to determine and establish proper work procedures is to conduct a JSA (Job Safety Analysis).

- **What is a JSA?**

A Job Safety Analysis (JSA) is a technique that focuses on job tasks to identify hazards before they occur. It focuses on the relationship between the worker, the task, the tools, and the work environment. Ideally, after you identify uncontrolled hazards, you will take steps to eliminate or reduce them to an acceptable risk level

- **What are the basic steps for conducting a Job Safety Analysis?**

1. Breaking the job down into a sequence of steps.
2. Identifying potential hazards.
3. Determining preventive measures to overcome these hazards.

- **Sequence of Steps – Define the task in detail?**

TASK	HAZARDS	ELIMINATING HAZARDS

- **Identifying Hazards**

The goal here is to try to be as objective as possible and look at the job as if seeing it for the first time. As you perform your tasks, you would mentally do the same thing. In order to identify hazards, you have to ask questions about each part of the job and answer those questions honestly!

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- **Example of questions you might ask:**

- Is all protective clothing and equipment inspected before use to be sure it's in good condition?
- Is Personal Protective Equipment, such as hard hats, safety glasses, goggles and work boots being used by everyone on the job?
- Is the machine or tool operator wearing any loose clothing or jewelry that could get caught in the machinery?
- Is the machinery adequately guarded? What about any open areas or work positions around the equipment?
- Is the machine locked or tagged out when repair or maintenance work is being performed?
- Does the machine have any exposed parts, such as sharp edges, that could cause injury?
- Is there any possibility of getting caught in or between machine parts?
- Is there a risk of being injured while reaching over moving machinery or materials when the job is performed?
- Is the job organized in a way that demands moving faster than is comfortable?
- Does the task ever place the operator in an off-balance position?
- Are materials located in places of demand lifting that could cause back strain or injury?
- Could the way materials are placed, or operations conducted, cause objects to fall or fly across the room?
- Does the job include movements that could cause hand or foot injuries?
- Are there any risks of falling to another level?
- Does the job create dust, chemicals, heat, excessive noise, or other hazards?

- **Protection against Hazards**

Once you have looked at every possible aspect of the job and listed every hazard or potential hazard, it's time to figure out what to do about these problems. In this part of the analysis, you carefully study each identified hazard, along with the job step associated with it. Sometimes you may be able to figure out a different way to perform the job, one that would eliminate the hazard. You might, for instance, be able to combine several steps or perform the steps in a different order that would be less hazardous. Other ways of reducing hazards might include changing tools, adding machine guards, ventilation, or making other physical changes.

- **Safety Procedure**

Job Safety Analysis (JSA) is an excellent way to identify hazards and reduce the chance of accidents and injuries in a particular job or task. It is also a technique that you can adapt and use on the job all the time. If you learn to look objectively at your work and workplace, you can find, and fix, hazards to improve safety and avoid injuries even without a checklist.

As you go through each workday, keep asking yourself:

“What could go wrong here?” “How can I get hurt?”



C3 Safety Training: Monthly Module

Module 13: Fire Protection, Prevention Safety/Housekeeping

Company Name: _____ Date: _____

C3 Project Name: _____

Firefighting Equipment

1. Access to all firefighting equipment and job site egress shall be maintained at all times.
2. Become familiar with the locations of firefighting equipment.
3. All firefighting equipment shall be clearly and distinctly identified and conspicuously located.
4. All firefighting equipment shall be inspected monthly and maintained. Defective or discharged equipment shall be immediately replaced. Each fire extinguisher shall be serviced and tagged annually by a licensed individual.
5. During welding, cutting or grinding operations, there shall be a fire extinguisher readily available.
6. Fire extinguishers used to protect areas involving welding, cutting, or grinding shall be checked daily prior to start of the operation.

Fire Prevention

1. All Employees shall be made familiar with the general principles of fire extinguisher use and the hazards.
2. Smoking is prohibited at or in the vicinity of operations that constitute a fire hazard, and shall be conspicuously posted: "NO SMOKING OR OPEN FLAME."
3. Areas where cutting and welding are performed shall be kept clean, and any accumulation of trash, rags, etc. shall be removed. Consideration shall be given to the distance that sparks or slag can travel.
4. When welding, cutting or grinding operations are to be performed above gratings, decks or near floor or wall openings, a non-combustible covering shall be placed over deck or openings.
5. Sparks and slag must be contained in congested work areas. When it is impossible to contain sparks and slag, the danger area must be barricaded
6. Never leave equipment that uses an open flame unguarded.

Fire Extinguishers

The fire extinguisher inspection will include:

1. Pressure gauge - pressure satisfactory (in green zone).
2. Retainer pin - in place and secured by breakaway safety plastic tie.
3. Damage - no external damage to shell.
4. Inspection tag - in place and current (inspected within last 12 months.)

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Damaged or discharged fire extinguishers will be removed and replaced.

Training

All Employees shall be properly trained in the proper use of fire extinguishers.
That training includes:

1. Identification of fire extinguisher types
2. Fire extinguisher components
3. Fire extinguisher locations
4. PASS (point, aim, squeeze, sweep)
5. Damage, replacement: Are you doing everything to make sure it doesn't happen on your shift?

Housekeeping Review

Potential Hazards:

Cluttered work areas can lead to accidents and cause worker injuries, that are the result of:

1. Slips, trips, and falls,
2. Being struck by falling objects,
3. Impeded access to exit routes and firefighting equipment,
4. Fires resulting from improper disposal of flammable/combustible materials (such as rags, paper, cardboard)

Requirements for Safe Housekeeping include:

1. Daily jobsite cleanup program
2. Disposal of rubbish
3. Materials to be piled, stacked, or otherwise stored in a way to prevent tipping and collapse
4. Materials to be stored away from overhead power lines or other energy sources
5. Work and travel areas to be kept tidy, well-lit
6. Signs posted to warn workers of hazardous areas or conditions

Specific Requirements

1. Keep equipment and areas around equipment clear of scrap and waste.
2. Keep stairways, passageways, and gangways free of material, supplies, or obstructions at all times.

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3. Do not drop material or rubbish freely from any level; use chutes or other approved devices.
4. Workplaces and passageways that are slippery due to oil or other causes should be cleaned up or covered with sand, sawdust, or the like.
5. Keep electrical cords away from areas where people could trip over them.
6. Means of egress must be maintained at all times to all exits and to all fire-alarm boxes or fire-extinguishing equipment.
7. Oils, paints thinners, solvents, waste, rags, or other flammable substances must be kept in fire-resistant ventilated covered containers when not in use.
8. Questions or concerns about any housekeeping issue should be brought to the attention of your immediate supervisor.



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Module 14: Competent Person

Company Name: _____ Date: _____

C3 Project Name: _____

•A "**Competent person**" is someone who is capable of identifying **existing** and **predictable** hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

•The definition of a "competent person" compels the employer to select an employee based upon his or her **capability** to identify hazards.

•A competent person must have **training or knowledge** in these areas in order to identify and correct hazards encountered in their type of work.

•Finally, the definition of a competent person requires the individual to have the authority to take prompt corrective action. No course can provide that authority since it can only be provided by the employer.

•Examples of different areas requiring competent person training

- Scaffolding
- Excavations

•With respect to scaffolding and excavations, persons with the appropriate skill and knowledge, who are considered to be competent maintain control and safety of the scaffolds and excavations. What makes the competent person unique is the level of control this person has. The competent person has the authority to take immediate measures to take prompt corrective action to remedy an unsafe situation.

•Some standards add additional specific requirements which must be met by the competent person.

•Employers are responsible for knowing what tasks and operations require a competent person and are also responsible for providing the proper training and evaluation of that person's skills and knowledge to label them a competent person.

•As always if there are any questions regarding this, refer to your employer for clarification and/or requirements for competent person training and designation.

•[Competent Person - Standards | Occupational Safety and Health Administration \(osha.gov\)](https://www.osha-slc.gov/standards/competent-person-standards)



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Module 15: Respirable Crystalline Silica

Company Name: _____ Date: _____

C3 Project Name: _____

- **What is Respirable Crystalline Silica?**

- Crystalline silica is a common mineral found in many naturally occurring and man-made materials used at construction sites. It is also used to make products such as glass, pottery, ceramics, bricks, and artificial stone.
- Respirable crystalline silica – very small particles typically at least 100 times smaller than ordinary sand found on beaches or playgrounds.
- Respirable crystalline silica is created by high-energy operations / work-tasks in conjunction with materials that contain crystalline silica.

- **Construction materials containing Crystalline Silica:**

- sand
- concrete
- brick
- block
- stone
- mortar

- **Work tasks that generated Respirable Crystalline Silica:**

- cutting
- sawing
- grinding
- drilling
- crushing

- **Hazards of exposure to Respirable Crystalline Silica**

Workers who inhale these very small crystalline silica particles are at increased risk of developing serious silica-related diseases, including:

- Silicosis, an incurable lung disease that can lead to disability and death
- Lung cancer
- Chronic obstructive pulmonary disease (COPD); and
- Kidney disease.

- **Construction employers covered by the standard are required to:**

- Establish and implement a written exposure control plan that identifies tasks that involve exposure and methods used to protect workers
- Designate a competent person to implement the written exposure control plan.
- Restrict housekeeping practices that expose workers to silica
-



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- Offer medical exams when required by the standard to wear a respirator for 30 or more days per year.
- Train workers on work operations that result in silica exposure and ways to limit exposure.
- Keep records of exposure measurements, objective data, and medical exams.