



# Build SAFE Field Guide

Staying Accident-Free Every Day

This field guide belongs to: \_\_\_\_\_

The Build SAFE Field Guide provides guidelines, tools and practices for Habitat for Humanity operations and should be consulted before performing any potentially hazardous work. This guide is not all-inclusive. Before performing tasks, consult your supervisor, policies, procedures or Habitat Competent Person for specific safety guidelines.

This guide has been developed as a tool to help support safety. It cannot replace the situational awareness and safety achieved by using the Hazard ID and Mitigation Process. That process helps systematically identify hazards and determine how to mitigate those hazards effectively.

At Habitat for Humanity, we prioritize people as our most valuable asset, encouraging and empowering everyone to work safe every day and speak up for the safety of those around them. Only through your personal commitment to this safety mindset will we achieve a workplace where incidents are prevented. Your willingness to follow the safety practices outlined in this guide is vital to preventing incidents. Through this guide and other Habitat safety resources, you will be able to identify hazards and take appropriate actions.

**I understand my personal responsibility to actively contribute to the safety culture of Habitat for Humanity and will commit to always ensuring the safety of myself and others.**

Signature: \_\_\_\_\_

To access a digital version of this guide and explore more safety resources online, please visit:

[Build SAFE](#)



## Emergency contact list

Leadership contact numbers	
Safety Committee contact	

Emergency	911
Local police non-emergency	
Local fire non-emergency	
Gas utilities	
Power utilities	
Water utilities	
Poison control	(800) 222-1222
Suicide and crisis hotline	988
Security/alarm	
Building owner	

Insurance company	
Company name	
Claims hotline	
Policy number	

## Table of contents

<b>Introduction .....</b>	<b>5</b>
Safety culture.....	5
Work SAFE — Staying accident-free every day .....	5
Roles and responsibilities for safety .....	6
Training .....	7
Incident prevention .....	8
Injury management and reporting.....	10
Raising concerns.....	12
Accountability .....	12
<b>Hazard ID and mitigation .....</b>	<b>13</b>
Overview .....	13
Hazard and control examples.....	16
<b>Construction tasks and hazards .....</b>	<b>17</b>
Bloodborne pathogens .....	17
Confined spaces.....	18
Electrical safety .....	18
Environmental hazards.....	19
Ergonomics.....	21
Fall protection.....	22
Fire safety.....	23
Hand and power tools.....	24
Hazard communication (hazcom or HCS) and chemical safety.....	26
Heat/cold protection.....	27
Infection control .....	29
Inspections .....	29
Ladder safety.....	30
Lock out tag out.....	30
Motorized equipment .....	31
PPE and hazard assessment .....	33
Signs, tags and barricades .....	34
Silica.....	34
Scaffolding.....	35
Slips, trips and falls.....	36
Trenching and excavation .....	37
Vehicle safety .....	38
Work on or near roadways .....	39
Working alone.....	39

## Introduction

### Safety culture

Our mission drives what we do at Habitat for Humanity, and safety is a critical value to our work — impacting those engaged in our operations and broader mission. Safety is integrated into all our work as we increase the number of families served, revenue in Habitat ReStores, and engagement of volunteers and partners.

Habitat’s most valuable asset is our people. We must take care of ourselves and others in order to serve our community. We empower everyone to take a proactive approach to safety by taking actions to keep ourselves and others safe every day, which reduces losses and drives continuous improvement.

<b>Empower everyone</b>	Everyone is empowered to speak up when they feel unsafe, see someone acting in an unsafe manner, or notice a hazard.
<b>Build trust</b>	The slogan “staying accident-free every day” is not about catching bad actors or assigning blame. It’s trusting that everyone will do their best to work safely and stay accident-free. Our volunteers and staff members know that we trust them to follow our safe operating procedures, and they can trust us to address any hazards brought to our attention.
<b>Acknowledge the risk</b>	Habitat’s work isn’t without risk; we operate in a high-hazard industry! By acknowledging and discussing near-misses, convening for daily safety huddles, and being transparent about the hazards in our work environments, we combat the dangers of overconfidence and complacency.
<b>Report, review and improve</b>	Methodically reviewing detailed reports and analyzing data summaries for trends is the best way to drive targeted improvements to safety practices.
<b>Celebrate success</b>	Celebrate the end of a day when there have been no incidents on site. Say a simple thank-you to volunteers and staff members who are making an effort to keep the workplace safe. Celebrating success is a vital step in shifting the mindset of safety to one that’s positive and appreciated.

### Work SAFE — Staying accident-free every day

The MyHabitat Knowledge Center has safety resources that are intended to be modified to suit your Habitat operations and assist you in building an effective safety program and culture. Scan the QR code at right or [access here](#) to learn more.



Work SAFE encompasses safety resources that apply to all affiliate operations.

- Injury and Illness Prevention Plan (IIPP)
- Safety standard templates
- Safety huddles
- Affiliate Hazard Communication Program
- Lockton Affinity — affiliate insurance
- Signs, posters and printables
- Driver safety toolkit

Build SAFE encompasses safety resources for affiliates engaged in construction.

- Habitat Competent Person e-Learning
- Build SAFE toolkit
- Construction contract management toolkit

Shop SAFE encompasses safety resources for affiliates operating ReStores.

- Habitat ReStore safety guide
- ReStore Safety e-Learning

## Roles and responsibilities for safety

### Leadership responsibilities

- Implementing and administering the safety program and periodic review.
- Monitoring compliance with the affiliate's safety requirements and regulations and the applicable safety and health standards of federal and state Occupational Safety and Health Acts.
- Investigating, correcting and eliminating unsafe working conditions or potential hazards that have been uncovered.
- Conducting periodic safety inspections of all work areas, equipment, ground and other potentially unsafe or hazardous areas.
- Training others on safety requirements and regulations to ensure they are performing assigned responsibilities.
- Investigating incidents and taking corrective action.
- Coaching and providing feedback before, during and after tasks, focusing on positive employee and volunteer actions when unsafe conditions or at-risk behaviors are observed.
- Providing the resources needed to perform tasks safely.

### Habitat Competent Person responsibilities

A Habitat Competent Person, or HCP, has completed the HCP e-Learning course and has been designated as such by leadership. When possible, the HCP

should be a staff member. It is recommended to always have an HCP on every active build site. The HCP is responsible for:

- Identifying existing and potentially hazardous working conditions.
- Taking prompt corrective measures to eliminate hazardous conditions.
- Performing regular inspections of the work site, materials and equipment.
- Overseeing certain operations, such as scaffolding, fall protection systems, training individuals on hazards and prevention, etc.
- Determining when a person has successfully demonstrated their ability and is considered a qualified person under the supervision of the HCP.

### **Employee responsibilities**

- Demonstrating safe work habits.
- Immediately reporting all incidents, near-misses and injuries to leadership.
- Looking for unsafe conditions that pose a hazard and reporting to leadership or an HCP.
- Cooperating with all incident investigations, providing incident details, written statements and any information pertaining to the incident.
- Responding to volunteer reports of hazards or unsafe conditions and taking concerns seriously.

### **Volunteer responsibilities**

- Demonstrating safe work habits to keep themselves and others safe.
- Immediately reporting all incidents, near-misses and injuries to leadership.
- Reporting unsafe conditions that pose a hazard to leadership or an HCP.
- Cooperating with all incident investigations, providing incident details, written statements and any information pertaining to the incident.

## **Training**

### **Required training**

Training is an important tool for informing workers about workplace hazards and controls. This enables all to work more safely and be more productive.

Another role of training is to provide a greater understanding of the safety and health program itself so employees can contribute to its development, implementation and improvement. Training provides leadership and workers with:

- Knowledge and skills needed to do their work safely and avoid creating hazards that could place themselves or others at risk.
- Awareness of hazards and how to identify, report and control them.
- Specialized training when their work involves unique hazards.

Effective training can be provided outside a formal classroom setting. Peer-to-peer training, on-the-job training, coaching in the moment, and on-site demonstrations can be effective. Training is not a one-time event but an ongoing opportunity; workers should be trained, supervised and retrained as needed.

*Before anyone starts a task, they must be trained to perform it safely.*

## Safety huddles

Safety huddles are an informal resource to be used internally by leadership to focus on specific safety hazards. Huddles are meant to be five- to 15-minute training sessions for staff members and volunteers. They are meant to enhance morning safety meetings or anytime your team gathers for training to reinforce the Work SAFE culture. Encourage participation and ask if there are any questions to ensure understanding. Record who has received the training.

There are more than [45 huddle topics](#) available on MyHabitat, along with a blank template to create your own. Email any huddles you create to [safety@habitat.org](mailto:safety@habitat.org) to be reviewed and published for others to use!



## Incident prevention

### Incidents

- **Injury:** Any harm or hurt, such as a cut, fracture, sprain, amputation, concussion, etc., that results from a work-related activity.
- **Illness:** Any abnormal condition or disorder resulting from a non-instantaneous exposure, such as skin diseases, heat-related illness, respiratory disorders or poisonings due to a work-related activity.
- **Near miss:** An event where, if given a slight shift in time or position, injury or property damage could easily have occurred — a “close call.”
- **Vehicle incident:** An event involving any motor vehicle or motorized equipment, including forklifts, man-lifts, automobiles, etc.
- **Property damage:** Property damage due to the affiliate’s activities or to weather, disasters or vandalism.
- **Security:** Theft, break-ins, harassment, workplace violence.
- **Fire:** Equipment or property fire.
- **Spill:** Release of oil, chemicals or other contaminants to the environment.

Workers must report incidents to leadership immediately. Report all incidents to Lockton Affinity or your insurance provider within 24 hours. As a leader, ask these questions after an incident:

- Is everyone okay? Is the site safe, secure and stable?
- Tell me the story of what happened.



- What could have happened? Where else could it happen?
- What factors led up to this event?
- What worked well? What didn't work?
- What else do I need to know?

### **Plan work**

Plan work to identify exposure to hazards and evaluate controls to prevent incidents from occurring. Work planning should be completed by the person or team performing the work and those who have experience in the work. Incident prevention relies on the exchange of knowledge. As a leader, you will need to communicate about safe work methods, requirements and procedures.

### **Job hazard analysis**

A job hazard analysis, or JHA, is a process of breaking down job tasks into steps, identifying hazards, and establishing controls to prevent incidents. When performing a JHA, consider the relationship between the worker, task, tools and equipment, and environment. **Involve those who will be doing the job; worker involvement is essential at Habitat.**

#### **Step 1: Break the job into steps**

To start, the task is broken down into a sequence of events. Begin by asking, "What step starts the task?" Then, "What is the next basic step?" and so on. If more than 10 steps, consider breaking that job into more than one task.

#### **Step 2: Identify the exposures for each step**

Begin the search for potential and existing hazards. Look at physical conditions, environmental factors, and actions or behaviors. Determine:

- What exposures exist before, during and after the task? What hazards exist within/around the task?
- How could you get hurt while doing this task?
- What are the potential consequences? What could go wrong?

#### **Step 3: Identify and implement preventive measures**

The last step in a JHA is to identify and implement control measures for each hazard. Some control measures may already exist, and some may be new.

- What can I/we do to eliminate the hazard? If it can't be eliminated, what can I/we do to control each hazard?
- What actions can you take to separate yourself and others from the hazard? Is it possible to eliminate the hazard or exposure? How?

If a hazard cannot be effectively eliminated or controlled, PAUSE and get others involved. Look for any changes in exposure during the task, such as changes in weather and your team members (even those coming back from a break). Look for anything that is not working. Pause the job when any changes in exposure are recognized and debrief. Repeat this process as many times as needed to complete the job safely.

Tasks with greater risk require more detailed planning, such as working at heights, working with motorized equipment, etc. Documenting the JHA helps to ensure that everyone involved understands what will happen, when and by whom. The JHA can serve as the plan for executing the work in a manner that will prevent the occurrence of incidents. When performing JHAs, refer to the Hazard ID and Mitigation process (Section 2).



## Injury management and reporting

### Before an injury

Know where the nearest hospital and preferred clinic are. Continually reinforce:

- Workers will immediately report injuries to a leader, regardless of severity, time or day of the week. This includes employee, customer, visitor, contractor and volunteer injuries.
- The injured will work with leadership to immediately report the incident to Lockton Affinity or insurance provider.
- The name and location of the clinic is available and familiar to workers.

### During an injury

When you are made aware of an injury or incident, follow these steps:

1. Determine if the scene is safe to approach. If it is not safe, stay away and call 911. If the scene is safe, approach.
2. Determine if emergency care is needed. Unless certified in first aid, do not attempt first aid. If non-emergency care is needed, transport the injured.
3. Gather information about what happened. Ask when exactly their injury occurred and what they believe caused it. Keep as much detail as you can.
4. When possible, speak to witnesses about what they saw and get their contact information if they are willing to share.
5. When possible, survey the scene to find the cause of injury. If you can, take pictures of the scene as you found it after the injury was reported.
6. When possible, review and save video footage of the incident.

- Report the injury as soon as possible to Lockton Affinity or insurance provider, preferably within 24 hours. Include all relevant information.

If the injured is an employee and the affiliate uses Lockton Affinity for worker's compensation, use [NurseLine](#) to report the claim. In an emergency, always call 911 first. For non-emergency injuries, call the NurseLine at **(833) 808-2106**, available 24/7. A nurse will recommend care for the injured and will create an insurance claim once reported.



### After an injury

After an incident has been investigated and reported to the insurance company, determine the root cause of the incident and any corrective actions needed.

Root cause analysis is a tool to identify underlying causes of an event. "The 5 Whys" is a method to help determine a root cause by asking what caused the problem. The answer to the first "why" will prompt another "why," and so on.

Once the root causes have been identified, corrective actions will be taken to prevent reoccurrence. Corrective actions include training, repairs, equipment, updating work processes, requiring PPE, etc.

### OSHA reporting

In addition to reporting incidents to leadership and insurance, **all employers are legally required** to notify OSHA when an **employee** is killed on the job or suffers a work-related hospitalization, amputation or loss of an eye.

- Report fatalities within **eight hours**.
- Report in-patient hospitalizations, amputation or eye loss within **24 hours**.
- In Alaska, California, Hawaii, Kentucky, Maryland, Oregon, Utah, Virginia or Washington, scan the QR code at right for reporting timelines in your state or [access here](#).



How to make a report:

- Call the nearest OSHA office.
- Call the 24-hour hotline, (800) 321-6742 (OSHA).
- [Report online](#) (scan the QR code at right).



### Reporting for employees and volunteers

Report **employee** serious injuries and fatalities, or SIFs, to OSHA first, then your insurance provider, and then the Habitat Ethics and Accountability Line, or HEAL, or the Affiliate Support Center, or ASC. For **volunteer** SIFs, report to insurance first and then to the HEAL or the ASC. If you are unsure if you need to report an incident, reach out to the ASC.

## Raising concerns

Habitat for Humanity is committed to an ethical workplace, safeguarding those we serve and properly stewarding donors' funds and resources.

When possible, always report concerns to leadership first. If concerns are not addressed or you are uncomfortable going to leadership, then concerns can be reported to Habitat for Humanity International as outlined below.

1. **Habitat Ethics and Accountability Line**, or HEAL, formerly known as MySafeWorkplace, where reports can be made online or by phone 24 hours a day, seven days a week:
  - Go to the [HEAL website](#) (use the QR code at right) and select "Get Started" under the "Report an Incident" section.
  - Call toll-free in the U.S.: **(800) 461-9330**.
2. **Affiliate Support Center**, or ASC:
  - Call **(877) 434-4435** 8 a.m. to 8 p.m. ET Monday through Thursday and 8 a.m. to 6 p.m. Friday.



## Accountability

Accountability starts with building trust, so that people feel safe. Leaders can strengthen trust among workers by asking for and valuing opinions, acting on those opinions when appropriate, and providing constructive feedback. Set expectations about required safety activities and safe working methods with ongoing discussion to keep workers aligned on what's OK and what's not for safety. Having ongoing safety conversations is key.

Ensure workers have what they need to execute work safely and meet goals. Monitor what's happening to understand how exposure to hazards is controlled and how safe work expectations are discussed. It is key to understand how workers discuss hazards and controls each day and if they pause when the exposure is high.

Feedback, positive or guidance coaching, is a part of accountability. Anything that comes after a behavior is an outcome that aims to align them with working safely.



# Hazard ID and mitigation

## Overview

### Step 1: Identify hazards

A hazard is any object, condition or behavior that has potential to cause injury, illness or damage to property or the environment. Exposure is the extent to which a person is subjected or exposed to a hazard. Exposure is a necessary condition for a hazard to become a risk.

$$\text{Risk} = \text{Hazard} \times \text{Exposure}$$



Chemical



Electrical



Mechanical



Pressure



Infectious Disease



Slip | Trip | Fall



Ergonomics



Health



Struck by or Against



Temperature



Vehicle

## Step 2: Assess hazards and exposure

Evaluate: How could the hazards affect safe completion of the task? How could I or my teammates get hurt or even killed? What hazards do you see at each level?

### Level 1: Knee and below

Knee and below-the-knee hazards could cause slips, trips and falls; crushing; pinching; or cutting.

### Level 2: Head level and above

At head level and above, hazards could fall, drop or strike from above.

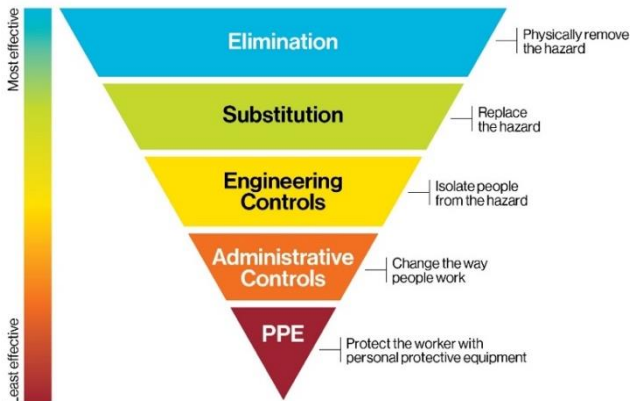
### Level 3: Knee to head

- Ergonomic hazards that have the potential to hurt one's back, shoulders, knees or elbows.
- Hazards that could crush, pinch or cut.
- Falling or rolling objects.
- Chemical, stored energy or extreme temperatures.



## Step 3: Establish controls

Evaluate: How can I guard myself and others from identified hazards? Use the hierarchy of controls — a method of identifying and ranking safeguards to reduce exposure and protect people from hazards, arranged from most to least effective:



**Often, multiple control methods can be combined for best protection.** For example, scaffolding (an engineering control) requires training, inspections, signage and preventive maintenance (administrative controls).

*Unsure how to control a hazard? PAUSE and discuss with leadership.*

## Elimination

**Elimination** makes sure the hazard no longer exists.

- Ending the use of hazardous material.
- Doing work at ground level rather than at heights.
- Removing a wire running through a walkway.

## Substitution

**Substitution** means changing out a material or process to reduce the hazard.

- Switching to a less hazardous material.
- Switching to a process that uses less force, speed, temperature or electrical current.
- Reducing noise by switching to a quieter tool.

## Engineering controls

**Engineering controls** reduce exposure by preventing hazards from coming into contact with workers.

- Noise enclosures.
- Guardrails.
- Ventilation.
- Machine guards.
- Interlocks.
- Scaffolds.

## Administrative controls

**Administrative controls** change the way work is done or give workers more information on relevant procedures, training or warnings. They are often used together with higher-level controls.

- **Procedures**, such as equipment inspections, preventive maintenance, checklists, lockout/tagout, changing work schedules, pre- and post- task reviews, and job rotation.
- **Training** on topics such as hazard communication, permit-required confined space entry, lockout/tagout, and procedures.
- **Warnings**, such as signs, backup alarms, smoke detectors, computer messages, mirrors, horns, labels and instructions.

## Personal protective equipment

**Personal protective equipment, PPE**, includes clothing and devices to protect workers. PPE needs constant effort and attention (including proper use and training) from workers. PPE will typically be needed in conjunction with other control measures.

- Protective clothing.
- Respirators.
- Hearing protection.
- Personal fall protection systems.

#### Step 4: Monitor effectiveness

Verify that controls are effective and feasible for the entire duration of the task.

- Make a plan to talk about exposures and controls with workers.
- Review the past to discuss what worked and what didn't.
- What could change later that we should be on guard for? What could trigger a PAUSE in work?

- Create engagement with questions so all feel empowered to speak up.
- Check in throughout the day to ensure exposures are controlled – look for opportunities to praise and coach.

## Hazard and control examples

Again, using multiple controls together is often the best protection.

Hazard examples	Hazard controls
<b>Slip, trip, fall</b>	
<ul style="list-style-type: none"> <li>• Fall from height.</li> <li>• Slippery surfaces.</li> <li>• Objects in walkway.</li> <li>• Changes in elevation.</li> </ul>	<ul style="list-style-type: none"> <li>• Guardrail.</li> <li>• Fall protection.</li> <li>• Barricading slippery area.</li> <li>• Good housekeeping.</li> </ul>
<b>Electrical</b>	
<ul style="list-style-type: none"> <li>• Exposed energized parts.</li> <li>• Damaged cords.</li> <li>• Powerlines (over/under).</li> </ul>	<ul style="list-style-type: none"> <li>• Lockout/tagout.</li> <li>• Inspect cords (remove/repair).</li> <li>• GFCI.</li> </ul>
<b>Pressure</b>	
<ul style="list-style-type: none"> <li>• Pneumatic tools.</li> <li>• Hydraulic equipment.</li> <li>• Residual energy.</li> <li>• Compressed gas and lines.</li> </ul>	<ul style="list-style-type: none"> <li>• Preventive maintenance.</li> <li>• Inspection.</li> <li>• Lockout/tagout.</li> <li>• Cable check and cable ties.</li> </ul>
<b>Mechanical</b>	
<ul style="list-style-type: none"> <li>• Rotating equipment.</li> <li>• Pinch points.</li> <li>• Missing guards.</li> </ul>	<ul style="list-style-type: none"> <li>• Preventive maintenance.</li> <li>• Lockout/tagout.</li> <li>• Machine guards.</li> </ul>
<b>Vehicle</b>	
<ul style="list-style-type: none"> <li>• Speed.</li> <li>• Restricted view.</li> <li>• Distractions.</li> </ul>	<ul style="list-style-type: none"> <li>• Back-up alarms/spotters.</li> <li>• High-visibility lights/PPE.</li> <li>• No mobile electronic device use.</li> </ul>
<b>Chemical</b>	
<ul style="list-style-type: none"> <li>• Toxicity.</li> <li>• Flammability.</li> <li>• Reactivity.</li> <li>• Other health hazards.</li> </ul>	<ul style="list-style-type: none"> <li>• Ventilation.</li> <li>• Proper use and storage.</li> <li>• Training.</li> <li>• PPE.</li> </ul>



Hazard examples	Hazard controls
<b>Temperature</b>	
<ul style="list-style-type: none"> <li>• Outdoor temperatures.</li> <li>• Ambient temperatures.</li> <li>• Hot work (welding, torch, etc.).</li> <li>• Hot/cold surfaces.</li> </ul>	<ul style="list-style-type: none"> <li>• Heat illness prevention program.</li> <li>• Hot work permits.</li> <li>• Signs and barricades.</li> <li>• PPE.</li> </ul>
<b>Health</b>	
<ul style="list-style-type: none"> <li>• Silica, asbestos, lead.</li> <li>• Noise.</li> <li>• Biological.</li> <li>• Welding.</li> </ul>	<ul style="list-style-type: none"> <li>• Abatement.</li> <li>• Ventilation.</li> <li>• Barriers.</li> <li>• PPE.</li> </ul>
<b>Ergonomics</b>	
<ul style="list-style-type: none"> <li>• Excessive force.</li> <li>• Repetitive motion.</li> <li>• Awkward posture.</li> </ul>	<ul style="list-style-type: none"> <li>• Right tool for the job.</li> <li>• Work/rest cycles.</li> <li>• Proper lifting.</li> </ul>
<b>Struck by or against</b>	
<ul style="list-style-type: none"> <li>• Falling objects.</li> <li>• Flying objects.</li> <li>• Limited space for work.</li> <li>• Excavation cave-in.</li> </ul>	<ul style="list-style-type: none"> <li>• Secure objects.</li> <li>• Barricades.</li> <li>• Bump protection.</li> <li>• Cave-in protection.</li> </ul>

## Construction tasks and hazards

### Bloodborne pathogens

Bloodborne pathogens, or BBP, are infectious microorganisms in human blood that can cause disease. These pathogens include but are not limited to hepatitis B and C and HIV. Lacerations and sharps-related injuries may expose you to BBPs.

How can you keep yourself and others safe? Everyone should be trained in the concept of universal precautions, which is an approach to infection control where all human blood and body fluids are treated as if they are infectious. Always wear PPE, such as gloves, when handling body fluids or sharps, and wash your hands after. BBP-contaminated materials must be disposed of in proper containers and where others cannot be exposed to them.

Workers with occupational exposure are required to be trained on BBPs annually and covered under a BBP exposure control plan. This includes workers designated as first responders for work. An exposure control plan is a site-specific, written document

that includes exposure determination, methods of compliance, hepatitis B vaccine, post-exposure evaluation, communication of hazards and recordkeeping.

## Confined spaces

Confined spaces, such as crawl spaces and attics, are not designed for continuous occupancy and are difficult to exit in the event of an emergency. Scan the QR code at right for [OSHA's Confined Space Quick Card](#). People working in confined spaces face life-threatening hazards, including toxic substances, electrocutions, explosions and asphyxiation. How can you keep yourself and others safe?



- A Habitat Competent Person must evaluate each work site and identify confined spaces.
- Post signs to identify the confined space and to warn workers and the public of the hazards involved. Physically block and restrict entry when possible.
- An attendant should remain outside the entrance of the confined space to monitor the safety of workers performing in work in a confined space.
- Never enter a confined space when working alone.
- Ensure other work being done nearby will not impact those doing work in a confined space, such as having a generator running nearby that can cause air quality and asphyxiation hazards.

## Electrical safety

Electricity is safe when installed, maintained and used correctly. When not, electricity is a serious hazard that could result in shock, burns, fire or explosions. Electricity travels through completed circuits, takes the path of least resistance, and seeks a path to ground. An electric shock can result in anything from a slight tingling sensation to immediate cardiac arrest. The severity depends on the amount of current, the current's path through the body, and the length of time the body remains in the circuit. How can you keep yourself and others safe?

- Inspect electrical tools and equipment before use.
- Extension cords must be at least 12-gauge, 3-wire type and properly rated for the service.
- Do not use worn, frayed or damaged cords. Use extension cords with a ground prong. Only qualified professionals should repair damaged electrical equipment. Tag damaged equipment.
- Power cables passing through work areas must be covered or elevated to protect from damage and eliminate tripping hazards. The cover should protect wires from crushing.

- Assume all exposed wires are live and notify a site supervisor to correct or appropriately cover them.
- Ensure designated covers prevent exposed wires.
- Receptacles present near a water supply or outdoors must be protected with a ground fault circuit interrupter, or GFCI, or use a portable GFCI when work may involve exposure to water or other conductive fluids.
- De-energize and follow lock out/tag out procedures when working with electrical equipment.
- Maintain adequate distance from overhead energized lines and equipment.
- Do not “daisy chain” or connect multiple power strips together, and do not overload circuits or power cords.
- Do not run extension cords through doorways, ceilings, walls or floors.

### Overhead power lines and equipment

Any overhead utility will be considered energized until the person owning or operating the line verifies the line is not energized and is visibly grounded at the work site. Never touch fallen overhead power lines. Call 911 or the electric utility to report fallen electrical lines. No work near overhead utilities will take place unless authorized through the utility owner in accordance with required safe work practices. Equipment (lifts with articulated upright booms, forklifts, scaffolding, excavators, etc.) may not be operated within **10 feet** of an overhead utility line with nominal voltage of less than 50kV while the boom is in the upright position. For lines more than 50kV, an additional distance of 4 inches for each 10 kV over 50kV will be maintained. This also applies when using ladders; always use a fiberglass ladder when working near electricity.

## Environmental hazards

### Asbestos

When asbestos fibers are inhaled, they may get trapped in the lungs and remain there for a long time. These fibers can accumulate and can affect breathing and lead to health problems, including cancer. There is no “safe” level of exposure for any type of asbestos fiber. Therefore, affiliates are strongly discouraged from performing remediation work themselves when asbestos is present.

Always use an asbestos professional for testing and abatement. Know when asbestos is likely present in a home:

- Homes built before 1980.
- Popcorn ceilings.
- “Dimpling” in products such as roofing materials, shingles or pipe insulation.
- Thermal System Insulation and surfacing materials built before 1980.
- Asphalt and vinyl flooring material installed before 1980.

The only way to know if asbestos is present is professional testing. Presumed asbestos-containing material, or PACM, refers to thermal system insulation and surfacing material in buildings built before 1980. When PACMs are present, treat them as if they contain asbestos until testing. Notify anyone who may be in or near a location with PACM/ACMs. Signs must be posted at the area entrance.

## Lead

Lead is a toxic heavy metal that can damage the central nervous system, cardiovascular system, reproductive system, blood and kidneys. Lead is commonly found in paints and plumbing materials. Inhaling or digesting lead are the two common routes of exposure.

Use a lead professional to test for lead in paint and drinking water. Always use a lead professional to remove the lead. Know when lead is likely to be in a home:

- Homes built before 1978 are more likely to have used lead-based paints.
- Homes built before 1986 are likely to have lead pipes, fixtures and solder.

Lead is particularly hazardous when the paint is deteriorating in any way — chipping, cracking, peeling, etc.

## Outdoor air quality

Outdoor air quality is impacted by several factors, including wildfires. The main hazard from wildfire smoke is particulate matter — particles less than 2.5 µm in diameter (PM2.5) can enter the lungs and blood, causing health issues. Workers exposed to smoke-polluted air may experience heat stress or eye and respiratory tract irritation. Certain states, like California and Oregon, have outdoor air quality regulations.

- Check outdoor air quality before work by going to [AirNow.gov](https://www.airnow.gov) and following recommendations for outdoor activities.
- Relocate or reschedule work tasks to smoke-free areas.
- Reduce levels of physical activity, especially strenuous and heavy work.
- Require workers to take breaks in smoke-free places when possible.
- When possible, make accommodations for workers to work inside with proper HVAC systems and high-efficiency air filters.
- When allowing voluntary use of respirators, you must provide employees with the information in [Appendix D of OSHA's Respirator Protection Standard](#). Scan the QR code at right.



## Mold

Molds are microscopic organisms found everywhere. Molds grow where excess moisture is present. They typically appear as colored, woolly mats and usually produce a foul, musty, earthy smell. Most molds are harmless, but some can

cause infections or allergy symptoms. Inhalation is the route of most concern.

Scan the QR code at right for [OSHA's Mold Quick Card](#).



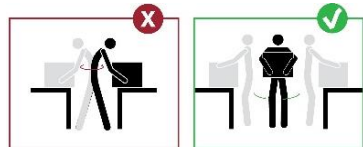
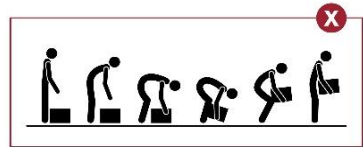
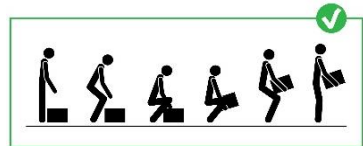
Keep yourself and others safe by following these guidelines:

- Ensure the work area is well-ventilated.
- Use PPE: non-vented goggles; gloves; protective clothing to prevent contamination and skin contact; and N-, R- or P-95 respirators (when area is <math>< 100 \text{ ft}^2</math>).
- Re-wet materials with a mist of water to suppress spores, dust and debris.
- Vacuum areas that are clean and dry with a HEPA vacuum.
- Do not eat, drink or smoke in work areas. Avoid breathing dusts, and after working, wash thoroughly, including your hair, scalp and nails.
- When mold contamination is extensive, use a mold removal professional.

## Ergonomics

Ergonomics helps lessen muscle fatigue, increases productivity, and reduces the number and severity of work-related musculoskeletal disorders, or MSDs. MSDs affect the muscles, nerves, blood vessels, ligaments and tendons.

Workers in construction can be exposed to risk factors when lifting heavy items, bending, twisting, reaching overhead, pulling/pushing heavy loads, working in awkward body postures, and performing the tasks repetitively.



- **Repetitive motion:** Many work tasks are repetitive. High task repetition, when combined with other risk factors such as high force or awkward posture, can contribute to MSDs.
- **Excessive force:** Tasks can require high force loads on the body. Muscle effort increases in response to high force, increasing fatigue.
- **Awkward posture:** Awkward postures place excessive force on joints and overload the muscles and tendons around the affected joint. Risk of MSDs increases when joints are worked outside of a midrange motion of the joint or for sustained periods without recovery.

## Safe lifting

Always ensure your path is clear of obstacles before lifting. Stand as close to the load as possible. Bend with your legs, not your back. Estimate the item's weight

and dimensions. If the load seems too heavy or you need to travel a long distance, pause to either ask for help and perform a team lift or use a tool such as a cart or dolly. Avoid reaching overhead, and when possible, grab a co-worker and use a ladder to keep the load to the center of your body instead of above the shoulders. Avoid placing heavier objects higher up on shelves.

How can you keep yourself and others safe?

- Stretch and walk around regularly; do not remain sedentary.
- Do not rush the task.
- Do not ignore pain. Inform leadership of discomfort on the job.
- Do not carry loads that are too heavy or bulky. Grab a partner for a team lift or use tools such as a cart or hand truck.
- Avoid twisting and instead move your body with the load.
- Wear comfortable, closed-toe footwear.

## Fall protection

A fall hazard is any condition on a walking-working surface that exposes a worker to a risk of fall on the same or to a lower level. Preventing falls on the same level requires keeping walking-working surfaces clear of slip and trip hazards. Preventing or protecting falls from height may be necessary at any height given the circumstances but is required when a worker is **6 feet** or more above a lower level.

Each worker engaged in construction activities 6 feet or more above lower levels shall be protected by guardrail systems, safety nets or personal fall arrest systems. Those who work at unprotected heights greater than 6 feet are required to be trained in fall prevention. All fall protection systems should be inspected before use.

### Guardrail system

A guardrail system provides the highest level of protection and is preferred. The system must be able to support 200 pounds in any direction and maintain its integrity. The components must conform to the minimum standards:

- The top rail must be at a height of 42 inches (plus or minus 3 inches).
- The midrail must be at a height of 21 inches (plus or minus 3 inches).
- Protect workers below by having a toe board with a minimum vertical height of 3.5 inches on the guardrail system or a barricade on the ground.

If guardrails cannot be constructed, a personal fall arrest system must be used.

### Personal fall protection systems

“Personal fall protection systems” refers to all components that provide protection from falling or that safely arrest a fall. Examples include travel restraint and personal fall arrest. All components shall meet the requirements of OSHA 1926

or ANSI Z359. All components will be inspected by the wearer before each use for wear, damage or other deterioration, and annually by a Competent Person. No worker may use a personal fall protection system without training and understanding the safe use of the system.

### **Travel restraint system**

A travel restraint system is a combination of an anchorage, anchorage connector, lanyard (or other connection) and body support that the wearer uses to eliminate the possibility of going over the edge of a walking-working surface. Anchorages for travel restraint systems shall have a strength capable of sustaining loads of at least 1,000 pounds per person or two times the foreseeable forces for certified anchorages. The system is installed so that a fall cannot occur, so a rescue plan is not required.

### **Personal fall arrest system**

A PFAS is a system used to arrest a user in a fall. It includes an anchorage, anchorage connector and a full-body harness. The means of connection may include a lanyard, deceleration device, lifeline or a suitable combination. All components will be inspected by the wearer before each use for damage, deterioration or defects, and at least annually by a Competent Person. A PFAS must be worn and used in accordance with the manufacturer's requirements.

Anchorages for PFAS will have a strength capable of sustaining static loads of at least 5,000 pounds per person or two times the maximum arresting force for certified anchorages. The PFAS will be installed so that if a fall occurs, the wearer will not contact the lower level or any obstruction. Account for shock-absorbing lanyards, as they need more distance. To prevent swing, decrease the distance to an anchor point. A rescue plan written by a qualified person is required to ensure a quick rescue. Consider suspension trauma relief straps on harnesses to alleviate the pressure.

### **Overhead protection**

Whenever there is overhead work at elevated levels, toe boards and hard hats will be implemented, or barricades on the ground area to prevent entrance.

Anyone working at elevated levels will keep tools, materials and equipment away from the edge to keep objects from falling over the side. Where practical, tools and other objects shall be secured with rope, wire, etc., to keep them from falling.

## **Fire safety**

### **Fire prevention**

- Do not allow paper, cardboard or combustible products to pile up.
- Never leave portable heating devices unattended.

- Follow the guidelines in the Electrical Safety section.
- Keep any designated smoking area away from buildings.
- Use Safety Data Sheets for chemical safety information to prevent fires.
- Properly dispose of oily rags. Dry out in open air, then dispose of them or use a fire-safe disposal container.

*Portable fire extinguishers are necessary on a build site.*

## Fire preparation

The most common fire extinguisher is an ABC extinguisher — meant to extinguish class A (ordinary combustibles such as paper and wood), B (flammable liquids), and C (electrical) fires. Fire extinguishers are mounted 4 feet from the floor, always kept clear for access, and have a sign in view. Access to fire extinguishers in any given location should not be more than 50 feet away.

Fire extinguishers should be checked monthly by a member of the safety committee and checked annually by a professional, with documentation on the extinguisher's tag. Make sure the pressure gauge is in the green zone, that the fire extinguisher is properly mounted, the pin is in place, and that the nozzle is clear. Any defective fire extinguisher should be taken out of service and replaced.

Fire extinguishers should be used when the fire is small and not uncontrolled.

Workers should be trained on their proper use. Remember PASS:

- **Pull** the pin. There is a small pin that prevents the fire extinguisher from accidentally being discharged.
- **Aim** the nozzle low at the base of the fire.
- **Squeeze** the trigger that the pin was pulled out of.
- **Sweep** the nozzle side to side to cover areas the fire may have spread to.

Workers should be trained on the above and emergency evacuation, including exit locations, egress routes and fire protection equipment.

## Hand and power tools

Hand and power tools can cause lacerations, punctures, burns, electrical shock, etc., if not used and maintained properly. Hand tools are manually powered, such as a screwdriver, hammer or wrench. Power tools can have the following power source: electric, pneumatic, liquid fuel, hydraulic and powder actuated. Hand tools should be fiberglass when possible, avoid tools with wooden handles.

All hand/power tools shall be visually inspected before use for any defects. Tools with defects shall be tagged out of service and not used. Personnel shall only use tools for which they have been trained and in accordance with



manufacturer's requirements. This means that we cannot modify a tool or otherwise use it in a way that was not intended.

- Power tools shall not be used if safety equipment, such as shields, tool rests, hoods and guards, has been removed or rendered inoperative.
- Workers using tools under conditions that expose them to the risk of flying objects, harmful dust and/or noise shall be provided with the required PPE.
- All electrically powered tools shall be properly grounded. Outlets for 110-volt tools shall be protected by GFCI devices whenever used in outdoor or wet environments, and an assured grounding program shall be used. Double-insulated electrical hand tools are recommended.
- The use of trigger locks, which can lock the trigger in the "on" position, on power tools is discouraged.
- Portable grinders will be provided with hood-type guards with side enclosures that cover the spindle and at least 50% of the wheel. All wheels will be inspected regularly for signs of fracture and that those wheels are rated for the grinder's RPM.
- Hoses supplying pneumatic tools shall have couplings secured to prevent accidental disconnection. "Push, twist, click" locking connection disconnects shall be used. Where those cam lock connectors are not used, a safety pin and whip check must be used. Quick disconnects larger than 3/4-inch inside diameter must have safety pins and whip cables attached to the hose, pipe connection and between connected hoses, unless automatic shutoff valves are used. Whip checks are required for air hoses 3/4-inch or larger.
- Air supply lines will be protected from damage, inspected regularly, and maintained in good condition. Air supplying hoses exceeding 1/2-inch in diameter shall be protected by excess flow valves to prevent whipping in the event of hose separation or failure.
- The pressure of compressed air used for cleaning purposes will be reduced to 30 psi or less. Hose extensions will always be used. At no time shall compressed air be directed toward a person.
- Pause. Rushing through a job is one of the major causes of accidents.

Tasks often require cutting of items such as rope, packaging or drywall. Care should be exercised in using knives or cutting implements.

- Workers should cut down and away from their body and other people.
- The item being cut should be braced or secured from movement.

### **Powder-actuated tools**

- Only trained and certified workers shall be permitted to operate a powder-actuated tool.

- These tools shall be operated in strict compliance with the manufacturer's instructions and PPE requirements for eyes, face and hearing.
- Whenever these tools are used, the area must be controlled to allow only authorized personnel. Signs will be posted throughout the area, warning that powder-actuated tools are in use.

### **Inspections**

Tools must be inspected before each use. The inspection for hand tools can include items such as broken, chipped or splintered handles; mushroomed heads; or loose-fitting parts. These defects must be fixed in the right way and not made worse by temporary or inadequate methods. Any defects found during a visual inspection should be noted, and the tool should be taken out of service. In addition, the electrical cords or air hoses on all power or air tools must be inspected before each use. These areas cannot be fixed with tape or other inadequate methods -- the tool must be placed out of service with a tag.

### **Guarding**

No tool equipped with a guard or protective device should be used without that guard in place. Items such as grinders, saws and some drills are considered unusable if the guard is broken, cracked or missing. Sometimes this means the tool itself should be discarded, and in other cases it can be repaired. Always ensure a tool is either replaced or repaired instead of using any defective tools. Feed material into the machine with push sticks, not your hands.

### **Hazard communication (hazcom or HCS) and chemical safety**

OSHA's HCS states that all workers have a right to know the specific health hazard information of any chemical they could be exposed to at work. Having a written hazard communication program is part of HCS, so that information about chemical hazards at work and protective measures is distributed to workers.

All workers who are asked to work with a chemical that could create a hazard must be trained on the hazards and the best methods to prevent exposure. This training must be provided and documented before chemicals are used.

### **Container labeling**

All containers must be labeled as to their contents so you can be sure what is inside and take the necessary precautions. If a task involves using material from an unlabeled container, that task should be stopped until proper precautions are taken. This includes materials that are transferred from a larger container to a

smaller one. Information about chemicals and their hazards must be available and understandable to workers.

### Safety Data Sheets

Safety Data Sheets, or SDSs, of potentially harmful chemicals must be available for workers. These sheets are sent from the manufacturer and contain the name, properties, potential hazards and safety measures for the chemical. Every worker has the right to access SDSs at any time. Our no-cost [SDS database](#) is available on MyHabitat; scan the QR code at right.



If you are unsure of the identity, proper use or hazards of a chemical, then stop and ask leadership before using it.

## Heat/cold protection

### Heat-related emergencies

There are stages or levels of heat-related emergencies and corresponding treatments. Always take proper precautions, and never attempt to “work through” or allow others to work through these symptoms.

- **Heat stroke** symptoms include confusion; fainting; seizures; very high body temperature and excessive sweating; or red, hot, dry skin.
- **Heat exhaustion** symptoms include cool, moist skin; heavy sweating; headache; nausea or vomiting; dizziness; lightheadedness; weakness; thirst; irritability or fast heartbeat.
- **Heat cramp** symptoms include muscle spasms or pain, usually in the abdomen, arms or legs.
- **Heat rash** symptoms include clusters of red bumps on skin that often appear on the neck, upper chest or skin folds.

If a worker experiences headaches or nausea, weakness or dizziness, heavy sweating, hot/dry skin, elevated body temperature, or thirst, take these actions:

- Give them cool water to drink.
- Move them to a cooler area.
- Cool them with water, ice or a fan.
- Seek medical care; do not leave them alone.

Abnormal thinking or behavior, slurred speech, seizures, and loss of consciousness are signs of a medical emergency. Call 911 immediately, cool the worker right away with water or ice, and stay with the worker until help arrives.

How can you keep yourself and others safe?

- Create a heat illness prevention plan.
- Drink cool water. Even if you aren't thirsty, drink water every 20 minutes.

- Take rest breaks as needed.
- Find shade or a cool area.
- Dress for the heat. Wear a hat and light-colored, loose-fitting, breathable clothing if possible.
- Watch out for each other. Monitor yourself and others for signs of heat illness.

Nearly 3 out of 4 heat illness fatalities happen during the first week of work. New and returning workers need to build tolerance to heat by taking frequent breaks and working shorter shifts in the heat to start.

### Hot work

Hot work — jobs that involve burning, welding or fire/spark-producing tools like grinders — can result in fires, explosions and burns. Perform hot work in locations away from fire hazards, such as where flammable vapors or combustible materials exist. Use guards to confine the heat/sparks and to protect immovable fire hazards. Have fire-extinguishing equipment on hand. Use a hot work permit system.

### Cold illness

Low temperatures and increased wind speed (wind chill) cause heat to leave the body more quickly. Anyone working in the cold may be at risk. To protect yourself and others, know and monitor for the symptoms. Dress properly with layers of loose-fitting, insulating (and waterproof if necessary) clothes, including a jacket, gloves, a hat and boots. Stay dry.

In **hypothermia**, normal body temperature (98.6°F) drops to 95°F or less. If mild, the person is alert but shivering. If moderate or severe, the shivering stops. There is confusion, slurred speech, slow heart rate and breathing, loss of consciousness or death. Call 911 immediately in an emergency. To prevent further heat loss:

- Move the worker to a warm place.
- Change them into dry clothes.
- Cover their body (including their head and neck) with blankets and something to block the cold (e.g., a tarp or garbage bag). Do not cover their face.

**Frostbite** occurs when body tissues freeze. This can occur at temperatures above freezing because of wind chill. Symptoms include numbness and skin that appears reddened with gray or white patches and may feel firm or hard or blister.

- Follow the recommendations above for hypothermia.
- Do not rub the frostbitten area.
- Loosely cover and protect areas from contact.
- Do not try to rewarm the area unless so directed by medical personnel.

## Infection control

Infectious agents include bacteria, viruses and other microbes.

- Understand how infection can spread. Infectious agents may be transmitted when an infected person's respiratory droplets travel and land in the mouths, noses or eyes of another nearby or are inhaled. It can also occur when a person touches their mouth, nose or eyes after coming into contact with an infected person or an object with the infectious agent on it.
- Wash hands thoroughly for at least 20 seconds. If soap isn't available, use alcohol-based hand-sanitizer (at least 60% alcohol).
- People who are sick must stay away from others or stay home. Stay at least 6 feet away from another person who exhibits symptoms.
- Cover your mouth and nose with a tissue/elbow when coughing/sneezing.
- Disinfect surfaces and items, particularly if they are frequently touched or used.
- During an outbreak, enhanced prevention methods must be implemented:
  - Procedures for prompt identification and isolation of sick people.
  - Procedures for flexible work schedules and remote working.
  - Engineering controls: HVAC adjustments, physical barriers, etc.
  - Administrative: modified shifts, hand washing, working remotely, etc.
  - PPE: respirators, masks, gloves, eye protection, etc.

## Inspections

Safety inspections include a walkthrough of an area or site to identify and correct any hazards. Safety committee members should inspect assigned areas monthly.

Every inspection should address who, what, where, when and how. Examine all areas of the location, including those where work might not be done regularly, such as the rest areas and parking lots. Look at all workplace elements: the people, environment, equipment, materials and the process. Consider different types of workplace hazards, such as those outlined in this guide.

Develop an inspection checklist for all areas and use it to guide your inspections. Scan the QR code at right for available [checklists](#) on MyHabitat. Note any hazards found. If you can correct the hazard at



the time of inspection, then do so and note that as well. Alert the supervisor of the area if help is needed to correct the hazard. If the hazard is high-risk and poses an immediate threat, alert those in the area to move away to eliminate the exposure and tell your supervisor. Any notes should be discussed at the following safety committee meeting. Discuss as a group:

- Can a problem, hazard or incident be generated from this situation?
- Do any safety regulations apply? Determine what corrections or controls are appropriate.

## Ladder safety

Ladders can cause fall and struck-by hazards. Always comply with the ladder manufacturer's requirements. Before using a ladder, consider whether alternative methods — aerial lifts, scissor platforms, scaffolding, etc. — might provide a safer means to conduct work.

- Only use ladders in good condition and designed to handle the job.
- Use type IA and type IIA ladders.
- Ensure that workers are trained in proper ladder use.
- Complete an inspection before each use.
- Be sure stepladders are fully open and locked before climbing them. Do not climb any higher than the second step from the top.
- Place the ladder on a flat, non-movable, secure surface.
- Place the ladder on a hard surface; it will sink into a soft surface.
- Do not place a ladder in front of a door.
- Face the ladder when climbing and maintain three-point contact.
- Carry tools in pockets or in a bag attached to a belt or raise and lower them by rope.
- Work facing the ladder.
- Do not overreach. Always keep your torso between the ladder rails.

### Straight ladders and extension ladders

- Lean the ladder against a secure surface, not straddling a corner or stud.
- Use a 4:1 ratio for setting straight ladders. For every 4 feet in height at the resting point, the base should be moved out 1 foot.
- Ladder rails should extend at least 3 feet above the top landing if being used as an access point.
- Check shoes to ensure they are free of grease or mud.
- A ladder placed in any location where it can be displaced by other work activities must be secured to prevent displacement or a barricade must be erected to keep traffic away from the ladder.
- Mount the ladder from the center, not from the side.



Scan the QR code at right for [OSHA's Portable Ladder Quick Card](#).

## Lock out tag out

Lock out tag out, or LOTO, safeguards workers from the unexpected energization or startup of machinery and equipment, or the release of hazardous energy while performing service or maintenance activities. LOTO involves eliminating or controlling energy sources using an energy-isolating device and positively controlling those devices using a lock out and/or tag out device.

- **Affected worker:** A worker whose job requires them to operate or use equipment on which maintenance is being performed under LOTO, or whose job requires them to work in the area.
- **Authorized worker:** A person who locks out or tags out equipment to perform service or maintenance on them.
- **Energy-isolating device:** A device that physically prevents the transmission of energy, such as a manually operated electrical circuit breaker or disconnect switch.
- **Lock out device:** A device that uses a lock to hold an energy-isolating device in a safe position and prevent a machine or equipment being energized.
- **Tag:** A warning device that can be fastened to an energy-isolating device that indicates equipment may not be operated until the device is removed.
- **Examples of hazardous energy sources:** Electric, pneumatic pressure, thermal, kinetic (motion), compressed gas/air/liquid, chemical, etc.

Anyone performing service and maintenance activities must follow LOTO procedures: Notify affected workers. Isolate the energy by turning the breaker to OFF. Lock out and tag out the breaker using a breaker lock or lock out the entire panel using a panel lock. Verify isolation by testing the receptacle with a meter to verify 0 voltage, then perform work. It is important to lock the breaker so that workers in another room do not turn it to ON, not knowing work is being performed in another room.

Once work is complete, clear the work area of personnel and tools. Verify controls and remove the lockout device. Re-energize by turning the breaker to ON and notify affected workers.

### LOTO program requirements

- Every authorized worker must work under the protection of LOTO.
- Every authorized worker shall work under the protection of their own lock.
- Complete written LOTO procedures for each piece of equipment. Include specific procedural steps to shut down and isolate each energy source, along with safe LOTO device application.

### Motorized equipment

Motorized equipment includes cranes, front-end loaders, dump trucks, mowing equipment, powered industrial trucks, skid steers, garbage trucks, aerial lifts, scissor lifts or other equipment designed to move dirt, material or equipment. Scan the QR code at right for [OSHA's "Using Aerial Lifts" fact sheet](#).



All operators shall be trained to operate mobile equipment. All mobile equipment shall be operated in compliance with the manufacturer's instructions, along with any

applicable regulations. Pre-operation inspections must be performed daily at each shift by each operator. Inspections must be documented using a proper form that is applicable to the piece of equipment being inspected. Deficiencies that affect safe operation of the equipment must be resolved before use.

- Always use safe operating practices, including observing the speed limit.
- If equipped, seat belt use is required while the equipment is energized.
- Vehicles must have the emergency brake set if parked on a grade.
- All mobile equipment shall be equipped with a functioning back-up alarm audible above the surrounding noise level.
- Workers are not permitted under any suspended loads unless the equipment/load has been properly blocked and placed in a safe condition.
- Engines shall be shut off and the parking brake engaged during fueling, maintenance operations or when left unattended.

### Spotting for mobile equipment

A spotter is a person designated to assist the operator in the safe movement of heavy equipment by making sure it does not inadvertently damage people, property, equipment or vehicles. Generally, spotters are required when:

- The operator's view of any part of its travel is obstructed (e.g., reversing)
- Operating equipment is in a location in which a person may be endangered by the path of travel.

This list is not all inclusive. Operators may identify other situations where the use of a spotter will help prevent an incident.

### Operator responsibilities

- Identifying when a spotter is required for the movement of equipment.
- Communicating with the spotter and following their signals.
- Being aware of the surroundings (e.g., workers near the equipment).
- Knowing the blind spots of their equipment.

### Spotter responsibilities

- Continuously scanning the area for obstructions and personnel.
- Continuously monitoring the clearances between the equipment and stationary objects.
- Understanding the signals to be used and how to perform them.
- Giving clear and understandable hand signals.

**WARNING:** Spotters are a proven method of reducing incidents, but spotters themselves can be at risk for injury. They must receive effective training to safely do this important task. A safety vest is always required when spotting.



## PPE and hazard assessment

Always use the hierarchy of controls. Where higher methods are not appropriate or sufficient to control the hazard, PPE is required.

### Eye and face protection

Eye and face protection (ANSI Z87) must be worn when workers are exposed to eye and face hazards from flying objects/particles, liquid chemicals, hazardous light radiation or other hazards. Tasks that require eye or face protection include using hand and power tools and using and handling chemicals. Eye protection must include side protection. If you wear prescription glasses, you must either use prescription safety eyewear or over-the-glasses safety eyewear.

### Head protection

Head protection (ANSI Z89) must be worn when there is a potential for injury from falling objects. This includes hard hats with at least a front brim. Bump caps do not offer the protection needed in most construction tasks.

### Hand protection

Appropriate hand protection is required around hazards such as those from cuts or lacerations, abrasions, punctures, chemical burns, thermal burns, absorption of harmful substances, and harmful temperature extremes.

### Respiratory protection

Workers must be protected from breathing air with harmful dusts, fog, fumes, mists, gases, smoke or vapors. When eliminating exposure or controlling with engineering is not feasible, workers must wear appropriate respiratory protection. Workers who wear respirators will be included in the respiratory protection program, which includes medical surveillance, fit testing, and training. Using filtering facepiece respirators is voluntary during work involving exposures to nuisance-level particulates; when they are required, all elements of the respiratory protection program apply.

### Foot protection

Protective footwear is required in areas where there is a danger of foot injuries caused by falling or rolling objects or objects piercing the sole; or when the use of protective footwear will protect from an electrical hazard.

A hazard assessment is required to determine the potential hazards and select the appropriate PPE for adequate protection. Train workers on the proper PPE

for the job; when PPE must be worn; the limitations of the PPE; and how to wear, adjust, maintain and discard this equipment. All training should be documented.

## Signs, tags and barricades

### Signs and tags

Each sign/tag should include a signal word and text. If a symbol is relevant, it helps bridge any language barriers. Signs/tags should be used when there is a serious risk of injury to workers. Signs must be used to deter access to hazardous areas, such as confined spaces and overhead work areas.

Exits need to be marked by a readily visible sign. Access to exits needs to be marked by readily visible signs in all cases where the exit or the way to reach it is not immediately visible to the occupants.

Scan the QR code at right for the collection of [safety signs and posters](#) available on MyHabitat.



### Barricades

A barricade is an obstruction to deter people or vehicles from an area. The purpose of the barricade is to reduce the risks of injury to people when a potentially hazardous situation is present in an area.

It should be clear that a barricade is there to prevent access to the area; use a sign as well. Barricades are used to prevent access to confined spaces, overhead work areas, build sites, and where hazardous work is being performed.

## Silica

Silica dust contains particles that can be inhaled deep into the lungs, which may contribute to chronic illness with long-term exposure. The most common form of crystalline silica is quartz. Crystalline silica is typically found in sand, concrete, brick and mortar, soil, artificial stone, granite and other materials.

Activities that can lead to exposure of silica dust include:

- Drywall sanding.
- Fiber cement siding cutting.
- Drilling, cutting or breaking up concrete.
- Mixing concrete or joint compound.
- Excavating and truck-loading activities.

Affiliates are required to limit workers' exposure to respirable crystalline silica and to take other steps to protect workers.

- Establish a written exposure control plan that identifies tasks that involve exposure and methods used to protect workers, including procedures to restrict access to work areas where high exposures may occur.
- Restrict housekeeping practices that expose workers to silica, such as activities that disturb dust, making it airborne. Instead:
  - Use ventilation systems and regularly inspect filters.
  - Use bags in shop vacuums to collect dust.
  - Use a floor sweep compound when sweeping.
- Train workers on the health effects of silica exposure, workplace tasks that can expose them to silica, and ways to limit exposure.
- Require medical exams every three years for workers who are required to wear a respirator for 30 or more days per year and keep records.
- A dust mask does not protect against silica exposure. At a minimum, a half-face respirator, like an N-95 respirator, will be needed.



OSHA Standard 1926.1153 (Respirable crystalline silica) includes [Table 1](#), which outlines control measures based on the equipment or task being performed. Find Table 1 by scanning the QR code and scrolling through the standard. The second QR code is an example of [how to use Table 1](#).

## Scaffolding

A scaffold is a temporary platform that supports workers, tools and materials during construction, repair or maintenance tasks. Common hazards from scaffolds include:

- Falls from elevation, caused by lack of fall protection.
- Collapse of the scaffold, caused by instability or overloading.
- Being struck by falling tools, work materials or debris.
- Electrocuting, due to the proximity of the scaffold to overhead power lines.

Scaffolding must be designed by a **qualified** person and inspected by a **Competent** Person. Requirements for scaffolding include:

- Fall protection or fall arrest systems for 10 feet or more above a lower level.
- Guardrail height: The height of the toprail must be between 38 and 45 inches.
- Platform and walkway must be at least 18 inches wide and have gaps no larger than 1 inch. Toe boards must be used to prevent objects from falling.
- Crossbracing: When the crosspoint of crossbracing is used as a toprail, it must be between 38 and 48 inches above the work platform.

- Midrails must be installed halfway between the top rail and the platform surface. When a crosspoint of crossbracing is used as a midrail, it must be between 20 and 30 inches above the work platform.
- Footings must be level and capable of supporting the loaded scaffold.
- Scaffold platforms must be fully planked or decked.
- Supported scaffold with a height-to-base ratio of more than 4:1 must be restrained from tipping by guying, tying, bracing or an equivalent.
- Scaffolds and components must support at least four times the maximum intended load.
- A Competent Person must train all workers who work on a scaffold on the hazards and procedures. This includes fall hazards, falling object hazards, electrical hazards, proper use of a scaffold, and handling of materials.
- Inspections: Before each work shift and after any occurrence that could affect the scaffold's integrity (high winds, etc.), a Competent Person must inspect the scaffold and components for visible defects. Tags should be used to confirm the inspection to indicate the scaffold is safe to use.
- When erecting and dismantling scaffolds, a Competent Person must determine safe means of access and fall protection for the operations.
- The Electrical Safety section of this guide has power line clearance distances.
- Use barricades and hard hats or install a toe board to prevent struck-by injuries and keep all materials away from the edge and/or secured.

## Slips, trips and falls

To help prevent accidents:

- Wear proper footwear. On smooth or wet surfaces, wear slip-resistant.
- Slow down and shorten your stride when walking on slippery surfaces.
- Poor lighting impairs vision and increases the likelihood of slipping, tripping and falling. Report non-functioning lights and work areas that are too dark.
- Be alert for uneven surfaces (potholes, speed bumps, platforms, doorways, cover plates, soft patches, curbs and elevator thresholds, etc.).
- Never leave water or oil spills unattended. If they can't be cleaned up immediately, set up a barrier so that people know about the hazard.
- Always use a ladder or step stool. Never stand on a chair, desk, shelf, crate, box or any other unstable item to reach something. If you must routinely reach items in high locations, purchase a ladder or step stool.
- Don't leave loose objects on walking or working surfaces or stairways.
- Report or repair loose or damaged handrails, stairway treads, mats and walkway runners. Even a small worn spot can cause a trip.
- When walking, don't carry loads that block your vision. If you can't see where you are going, a trip and fall is far more likely.

- Post signs to warn of hazardous areas.
- Use handrails in stairways.
- Report unprotected floor openings; these can cause very serious falls.

## Trenching and excavation

Excavation is any man-made cut, cavity, trench or depression in an earth surface, formed by earth removal. A trench is a narrow excavation made below the surface of the ground. Hazards of trenching and excavation include cave-in, heavy machinery, manual handling, working near traffic, electrical hazards from overhead and underground power lines, and underground utilities (natural gas).

Call before you dig so that underground facilities can be identified and avoided. Dial 811 or go to [call811.com](http://call811.com) for more information.

### Competent Person responsibilities

Trench and excavation work must be directed by a Competent Person who is designated by the employer, can identify existing and predictable hazards in the area or working conditions, and is authorized to take corrective actions to eliminate those hazards. Responsibilities include classifying soil, inspecting protective systems, monitoring water removal and performing inspections.

**Note:** These responsibilities are out of scope for an HCP. The HCP should know enough about the hazards to notify the contractor's Competent Person to make a correction. The HCP should know when imminent danger is present and can stop work immediately if issues are found. "Imminent danger" is defined as any condition or practice in place of employment in which danger exists that could reasonably be expected to cause death or serious physical harm immediately or before the danger can be eliminated through enforcement procedures.

### Cave-in protection systems

OSHA requires a protective system for trenches and excavations that are 5 feet or deeper OR if the contractor's Competent Person has examined the ground and finds indication of a potential cave-in. Protective systems typically include sloping/benching, shoring or shielding. To determine what systems are appropriate, the Competent Person must first determine the soil type: Stable Rock, Type A, Type B or Type C. Type C soil is the least cohesive and the least stable. The HCP should ask the contractor's Competent Person about soil types and risks.

Daylight foundation can start as an excavation where sloping is commonly used. Once the wall is placed, a trench is created and must be sloped, shored or shielded. Some states have laws around unattended trenches, which address

measures to take when the site is left unattended. Another example of a trench is a French drain, where a warning line is recommended.

- **Sloping:** The sides of an excavation can be sloped based on soil type.
- **Benching:** The sides of an excavation can be benched at a specified angle of repose, resembling “steps.” (Benching is not permitted in Type C soils.)
- **Shoring:** Shoring is the provision of a support system for trench faces used to prevent movement of soil, underground utilities, roadways and foundations. Shoring systems consist of posts, wales, struts and sheeting. There are two basic types of shoring: timber and aluminum hydraulic.
- **Shielding:** Shields (trench boxes) are different from shoring because they are intended primarily to protect workers from cave-ins. The area between the outside of the trench box and the face of the trench should be as small as possible. The space between the trench boxes and the excavation side are backfilled to prevent lateral movement of the box.

### Other general safety requirements

- Excavations that are deeper than 20 feet or cannot comply with OSHA requirements require written approval by a registered professional engineer.
- A ladder, stairway or other means of access when deeper than 4 feet.
- No work shall be permitted in excavations where water has accumulated unless the integrity of the excavation has been protected.
- All utilities must be identified, located and protected before excavating.
- Barricades (stop-logs) shall be provided where vehicles or mobile equipment are used near or adjacent to excavations.
- Spoil piles must be placed a minimum of 2 feet from the edge.
- Air monitoring must be performed if the excavation is greater than 4 feet in depth and there is a potential for a hazardous atmosphere to exist.

## Vehicle safety

### Before driving

- Always inspect the vehicle and report any issues to leadership.
- Check any weather or road conditions, inform leadership of any concerns.
- Program your GPS device to avoid distracted driving.
- Adjust vehicle controls such as seats, mirrors, radio, etc.

### While driving

- Only workers who are authorized to drive and are reported to your insurance company should drive affiliate-owned, -leased or -rented vehicles.
- Follow all local laws. Posted speed limits, stop signs, stoplights, seatbelt laws, pedestrian rules, etc., must be observed.

- Avoid driving while distracted. This includes using phones, eating, programming your GPS, etc. Technology allows for hands-free communication. These safety features should be used, or communication should be put on hold until driving has stopped.
- Avoid aggressive driving such as tailgating or cutting other drivers off.
- Never drive while under the influence or tired. Inform leadership if you are on a prescription that may impact your ability to drive.
- Practice defensive driving techniques. Maintain a safe following distance, use turn signals, scan the road, etc.
- When backing vehicles, use a second person as a spotter if they are available. When alone, drivers should get out and look before backing out.

### If an accident occurs

- Safely remove the vehicle from the road, turn the vehicle off, and call medical care if necessary.
- Notify law enforcement.
- Secure and photograph the scene.
- Collect vehicle registration, insurance and driver's license information if another driver is involved and is willing to provide it.
- Report any work-related accidents and injuries immediately to leadership.

A [Driver Safety Toolkit](#) is on MyHabitat. Scan the QR code at right.



### Work on or near roadways

It is important to be conscious of all traffic that may be present during work.

- Wear a high-visibility safety vest (ANSI Class 2 or 3).
- Use caution tape, barricades, signs or safety cones to denote the work area and alert vehicle operators to the presence of operations.
- Use the flashing amber/yellow light on top of your vehicle to alert traffic.
- Be careful when exiting the work area to avoid vehicular traffic. Try to never turn your back to oncoming traffic.

### Working alone

A person is “alone” at work when they cannot be seen or heard by another person. Working alone on a build site or other work area is discouraged. Leadership and the safety committee will determine which activities should never be done alone.

These activities may include but are not limited to working with equipment in which moving machine parts that can cause injuries, such as crushed hands or amputation; working on energized electrical circuits; confined spaces; working at elevated heights with fall protection; or using chemicals with potential for hazard.

every  
hand  
makes a difference



285 Peachtree Center Ave. NE, Suite 2700, Atlanta, GA 30303-1220 USA  
322 W. Lamar St., Americus, GA 31709-3543 USA  
(800) 422-4828 fax (229) 928-8811 [publicinfo@habitat.org](mailto:publicinfo@habitat.org) [habitat.org](http://habitat.org)

24-89113/50/USS/02-2024/ARS