

Safe Work Practices for Wall & Ceiling Industry Construction Workers

AN AWC I SAFETY RESOURCE



AWCI

ASSOCIATION OF THE
WALL AND CEILING
INDUSTRY

Foreword

Safe Work Practices for Wall & Ceiling Industry Construction Workers was developed by AWCI's Safety Directors Committee to provide member firms with a set of industry safe work practices for their jobsite craft labor employees. The safe work practices are presented in simple bullets, which are easy to read and understand. Compliance with these safe work practices will help your employees comply with the existing OSHA standards that address the safety and health topics presented in this publication.

Disclaimer

“Safe Work Practices for Wall & Ceiling Industry Construction Workers: An AWCI Safety Resource” is only a summary and not a comprehensive safety guide, and is no substitute for thorough and independent safety analyses, training and judgment, including compliance with any applicable OSHA rules or standards. All who read or use this document agree that they are solely responsible for their own safety practices, and any shortcomings or problems, and release and hold AWCI harmless in that regard. AWCI does not guarantee the accuracy, relevance, timeliness or completeness of this information.

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Aerial Lifts



Aerial lifts are machines designed to elevate workers to overhead work areas. Examples are scissor lifts, extensible boom platforms and articulating boom platforms.

✓ Preparation

- Never operate a lift until you have received operation and safety training on the specific brand and model of lift that you will be using.
- Read the operator's manual before using the lift paying close attention to warnings and safety instructions.
- Obey operating instructions, warnings and cautions for each brand and model lift.
- Visually inspect the lift before using it and test the controls to ensure that it is in good condition and functioning properly.
- Determine the lift's load capacity, which will be posted on the work platform and in the operator's manual.
- Never exceed the lift's load capacity.

! Fall Prevention

- Enter and exit the platform or basket from the ground level only.
- Ensure that gates or chains are properly closed or latched.
- Use a personal fall restraint system whenever the manufacturer recommends it. The system should include a full-body harness and fall restraint lanyard or fall restraint self-retracting lifeline.
- Never attach the lanyard to anything other than the lift manufacturer's designated anchorage point on the lift.
- Always keep both feet planted firmly on the floor of the basket.
- Never use a ladder, bucket, or other objects to extend your reach.
- Never step up on the mid-rail or top rail to extend your reach.

✓ Operation

- Never operate a lift on unlevel surfaces or soft ground.

- When moving the lift, watch carefully for holes, rebar, pipe, conduit and other obstructions, including overhead obstructions, and cautiously avoid them.
- Use a spotter to help you move the lift safely whenever its needed.
- Check for overhead obstructions before positioning the basket or platform in the work area.
- Set the brakes before starting work (where applicable).
- Level and stabilize the lift by extending the outriggers (where applicable).
- Never move a lift with the outriggers extended (where applicable).
- Lower the basket or platform to the ground before moving the lift.

Asbestos



Asbestos is a heat-resistant fibrous silicate mineral used in fire-resistant and insulating building materials. It can be harmful to workers when it is inhaled or swallowed.

✓ General

- Never work around asbestos before receiving the appropriate level of safety training.
- When preparing to work with wall and ceiling patching compounds and textured paints, check the accompanying Safety Data Sheets to determine whether asbestos is present. If so, carefully follow the data sheet's recommendations for personal protection.
- Be suspicious of all building materials installed before 1980, especially insulating material, ceiling tiles, etc.
- Some newer building materials contain asbestos as well.
- If you come across building materials that are friable (easily crumble) leave the area immediately and let your supervisor know about it so that it can be properly evaluated.

Carbon Monoxide



Carbon monoxide is a hazardous gas generated by internal combustion engines and other sources. It is impossible to detect without specialized equipment because it is colorless, odorless, and tasteless.

✓ General

- When working around motor vehicles and other internal combustion engines where carbon monoxide is produced, ensure that the area is well ventilated.
- You will not be able to smell or otherwise sense that carbon monoxide is present, so if the area does not appear to be well ventilated, or if you are not sure, leave the area immediately and report the issue to your supervisor.

Compressed Air



Compressed air is air that has been forced into a container under pressure making the air molecules collide to generate more air molecules.

✓ General

- Never exceed 30 pounds per square inch (psi) when using compressed air for cleaning.
- Ensure that there are no hazardous substances in the area that could be released into the air when exposed to compressed air.
- Use chip guarding such as barriers, baffles or screens where appropriate.

! Personal Protective Equipment

- Safety goggles
- Gloves
- Dust masks

Confined Spaces



Confined spaces are spaces that can be entered but are not designed for continuous worker occupancy. They also have limited or restricted entrances and exits.

✓ Preparation

- Before entering any potential confined space, the space must be evaluated by a competent person to determine whether it must be deemed a confined space, the atmosphere inside is hazardous, and if an entry permit is required.
- Determine who has been designated as the competent person for the confined space where you will be working.
- Ensure that the competent person has tested the space for oxygen content, toxic gases, and flammable/explosive atmospheres.
- Obtain the necessary training before entering any confined space.

! Entry

- Never enter any confined space until your supervisor authorizes you to do so.
- Follow all the safe work practices covered in your training, especially the information covering the proper use of ventilation systems, air monitoring, monitor alarm systems, personal protective equipment, emergency egress equipment and procedures, and confined space attendants.
- Always wear the appropriate personal protective equipment:
 - Hard hat or helmet
 - Safety glasses
 - Gloves



- Respiratory protection (when appropriate)
- Hearing protection (when appropriate)

➕ Rescue

- If a fellow worker collapses inside a confined space, do not attempt a rescue unless you have received the proper training and have the equipment you need to perform the rescue safely. Leave the rescue to those who have received the appropriate training, and call 911 to report the emergency.

Damaged Equipment



Damaged equipment is any construction equipment that has been damaged badly enough that it could cause worker injury.

✔ General

- Carefully inspect construction equipment that you will be using each time before use.
- If there is no visual damage, test the equipment to ensure that it is functioning properly.
- If you do see damage, or if the equipment is not functioning properly, immediately follow your company's procedure for taking defective equipment out of service.
- Convey to affected workers that the equipment is unsafe to use by locking or tagging out the controls, or by tagging and physically removing the equipment from the job site.

Disposal Chutes



Disposal chutes are sloping slides for safely disposing of scrap material from upper levels of buildings under construction or extensive renovation. The chutes usually guide the scrap materials into a trash dumpster.

✔ General

- Use a disposal chute when scrap materials must be dropped more than 20 feet to a lower level outside the building.
- Place a barricade such as caution tape around the drop-receiving area to protect others working in or around that area.
- Post signs warning others about the overhead falling materials.

Drywall Benches



Drywall Benches are sturdy, movable, adjustable platforms that allow workers to reach areas on high walls and ceilings that are not reachable from ground level.

✔ General

- Never use a drywall bench until you have read and understand the manufacturer's instructions for safe use.
- Carefully follow all the manufacturer's instructions, especially warnings and cautions.
- Always inspect the bench you will be using before you start to work.
- Check for damaged parts and verify that the bench is operating properly and performing as intended.
- Never use a damaged bench. If you identify damage, immediately follow your company's procedures for taking defective equipment out of service.
- Inspect the work area before you start to work.
- Verify that the surface where you will be working is firm, level and capable of supporting the maximum load allowed for the bench.
- During the inspection, evaluate the work area for energized electrical conductors and circuit parts, and rotating machine parts that could be hazardous when you step up on the bench.

- Determine the rated load capacity of the bench before you start to work and make sure that you never exceed it. Include the weight of the tools, equipment, etc., that you will be using while working on the bench when making the total weight calculation.
- Never attempt to modify any drywall bench.
- Use the bench only for its intended purpose.
- Wear non-skid safety boots or shoes when using the bench.
- Distribute your weight evenly while working from the bench.
- Be sure not to overreach while working from a bench. Get down and move the bench closer to the work whenever it is necessary to prevent overreaching.

Drywall Carts



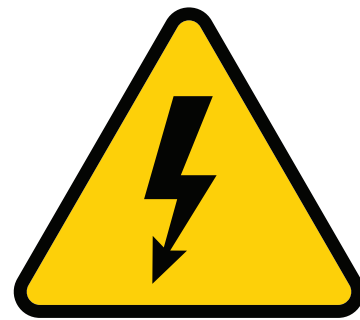
Rolling drywall carts have the potential to harm workers and bystanders in the cart's vicinity. Improperly maintained carts, improper use, improper loading, carelessness and horseplay may lead to accident and injury during use.

✓ General

- Carefully inspect carts each day or each shift before use. Check for cracked welds, worn or cut wheels, inoperative brakes and broken caster locks.
- Use two workers when moving carts: one in the front to watch for hazards and guide the cart, and one in the rear to push the cart.
- The swiveling wheels should be toward the person pushing the cart.
- Chock wheels or engage brakes when loading or unloading.
- Never walk backward with the cart.
- Make sure the pathway is clear. Avoid extension cords, depressions, trash, obstructions or uneven terrain. Avoid edges of sidewalks and walkways.
- Follow the manufacturer's instructions with respect to using carts on sloped surfaces or ramps.

- Do not exceed recommended grade.
- Consider reducing load when using carts on ramps.
- If the cart starts to fall or tip, get out of the way. Do not try to stop a falling or runaway cart with your body.
- Load carts so that sheets of material are horizontal, centered on the cart or slightly toward the non-swivel wheels, and flat against the sloped bars on the cart. Gaps between the load and the bottom of these bars can create a tipping hazard, as will loads much taller than 4 feet.
- When entering hoist elevators, use a transition plate.
- Use straps to anchor extremely bulky items to the cart.
- Keep the center of gravity as low as possible. Position heavier items below lighter items.

Electrical Safety



Electrical jobsite safety is the implementation of safe work practices for protection from electrocution, shock, burns and arc flash/arc blast.

✓ Preparation

- Use a ground fault circuit interrupter (GFCI) or implement an assured equipment grounding conductor program for all 120-volt, single phase, 15- and 20-amp receptacle outlets that are not part of the permanent wiring of the building or structure.
- When using an assured equipment grounding conductor program, make sure the program addresses all cord sets, receptacles and equipment connected by cords and plugs.
- When using double insulated tools or appliances verify that they are clearly marked as double insulated. Look for the words "Double Insulated" or the double insulation symbol, which is a small square inside a larger square.
- Make sure the extension cords you will be using are rated to accept the maximum current (amps) pulled by the power tools you will be operating.



- Visually inspect all tool and equipment cords, extension cords and plugs for damage and excessive wear. Look for broken, cut, frayed or abraded insulation, broken or exposed wires, missing ground terminals and any other damage.
- Refrain from repairing damaged cords with electrical tape or other materials.
- Never use electrical cords, tools or equipment that have been damaged. When you discover them, immediately follow your company's procedure for removing defective equipment from service.
- Verify that portable lights used in wet locations and/or other areas that are conductive are protected by a ground fault circuit interrupter, or are pulling only 12 volts or less.
- Be sure not to suspend temporary lights by their power cords, unless the cords are designed specifically by the manufacturer for that purpose.

! When Working

- Do whatever is necessary to protect extension cords, tool cords and equipment cords from damage from sharp-edged steel wall studs, door jambs with heavy closing doors, etc.
- If you must work in an area where exposed energized electrical conductors or circuit parts are present and contact with them is possible, ensure that the source of electricity has been de-energized and locked out by someone who is qualified to do it safely.

Emergency Action Plans

EMERGENCY ACTION PLAN

Emergency action plans are written plans describing how to properly respond to workplace emergencies.

✓ Preparation

- Familiarize yourself with your company's emergency action plans.
- Before starting work in any building, structure or facility, be sure to familiarize yourself with any existing emergency action plans.
- Understand how to effectively report severe injuries, fires, severe weather emergencies and other jobsite emergencies.

- Familiarize yourself with established emergency evacuation procedures, including learning the name of the person who would be coordinating an evacuation, and where to meet that person to account for all occupants.
- As soon as you arrive on the job site for the first time, determine whether you have an adequate mobile telephone connection. If not, determine where you can access the closest landline telephone.
- Memorize the address of the job site as soon as you arrive for the first time, and think through the landmarks that could help you guide emergency personnel to the location.

Ergonomics & Flexibility



Ergonomics is the study of worker safety and efficiency in the work environment. Workers are safer and more efficient when their work environment is adapted to them versus the workers having to adapt to the work environment.

✓ General

- Make sure you stay properly hydrated. For normal non-work-related activity you should consume half your body weight in ounces of water every day. When working, especially when it is hot, you will need even more.
- Stretch and flex each day before work and after extended breaks, such as lunch. Be sure not to lock your joints, bounce or force a stretch to the point of pain. At a minimum:
 - Loosen your lower back muscles by pointing your toes straight ahead and rotating your torso slowly to the left and back to the right several times.
 - Continue stretching your back by spreading your legs shoulder width apart, slightly bending your knees and bending over gently while reaching toward the ground. Then slowly straighten your knees without locking them and hold that position for a slow count to 15.
 - Stretch and flex your shoulders by extending your arms out to each side and slowly rotating them in large circles 15 times forward and 15 times backward.
- Whenever possible, use materials moving equipment to move

materials, such as forklifts, pallet jacks, wheelbarrows, hand trucks, carts, mobile tables, etc.

- When you must move materials by hand, be sure to use proper lifting techniques. (See the *Materials Handling* section.)
- Do whatever is necessary to reduce the number of times and/or the extent to which you bend, reach and perform work overhead for extended periods.

+ Reduce Bending

- Whenever possible, stage building materials between the mid-thigh level and lower chest in height. Use stacked pallets, mobile tables, job made tables, carts, racks, etc., to keep building materials off the ground.
- Set up your work area to reduce the number of times you'll need to bend. Use work tables, jack stands, support structures, etc., to keep your tools and the work close to waist height.

+ Reduce Reaching

- Whenever possible, set up your work area so that you won't have to extend your reach to the point that your hands are more than 20 inches out from your torso.
- The 20-inch rule applies to work from ladders, mobile scaffolds and aerial lifts as well. Whenever possible, reposition a ladder, mobile scaffold or lift to reduce the extent of your reach.

+ Overhead Work and Other Fixed Work Posture Positions

- Whenever possible, set up your work area so that you can maintain good body posture and limit twisting, bending and over-reaching. Try to work upright keeping the three natural curves in your back in their normal position.
- When working overhead or in other positions where your work posture is fixed, pause occasionally to stretch your body in the opposite direction of the fixed work posture.

Fall Prevention & Protection



Fall prevention refers to methods that prevent workers from falling to a lower level. Fall prevention methods include guardrail systems, fall restraint systems and hole covers.

✔ General

- Always use an effective fall prevention or fall protection method whenever you're working where you could fall more than 6 feet to a lower level. The 6-foot rule does not apply when you are working on ladders or scaffolds. See the sections covering ladder and scaffold safety in this publication.
- Verify that elevated ramps, runways and walkways that are 6 feet or more above a lower level are equipped with a guardrail system.
- Before you start work for the first time on elevated walking/working surfaces, ensure that they have the strength and structural integrity to support the full weight and force of all workers, equipment and materials that could be placed on them at any given time.

! Guardrail Systems

- When relying on guardrail systems for fall prevention, verify that the top edge members are between 39 and 45 inches above the walking/working surface.
- Verify that mid-rails are between the top edge members and the walking/working surface.
- Ensure that toeboards have been installed to keep tools and materials from falling to a lower level.
- Verify that the system was designed to withstand 200 pounds of force in any outward or downward direction.
- Use a personal fall arrest system when any part of a guardrail system must be removed to facilitate materials handling or for any other purpose.

! Personal Fall Arrest Systems

When using a personal fall arrest system for fall protection verify that you have all appropriate system parts, including:

- Full-body harness
- Personal Connectors
- Lanyard with built-in deceleration or self-retracting lifeline (SRL)
- Verify that the combination of personal fall arrest systems parts you will be using are compatible and suitable.
- Use only locking snaphooks.
- Make sure you have the proper training before using a personal fall arrest system for fall protection.
- Ensure that the anchorage point is not supporting or suspending a platform.
- Confirm that the anchorage point can support at least 5,000 pounds of force for each worker tied off to it, or that as part of a

complete personal fall arrest system, it maintains a safety factor of at least two.

- Verify that an effective fall rescue plan has been established and will be implemented immediately if you fall and are suspended from a fall arrest harness.

! Hole Covers

- When holes in walking/working surfaces or walls present potential slip, trip or fall hazards, make sure they are covered with an adequate hole cover.
- When vehicles will be driving over a hole cover, make sure the cover can withstand twice the maximum axle load of the largest vehicle you expect to drive across it.
- When hole covers will not be exposed to vehicular traffic, make sure they can safely support twice the aggregate weight of the workers, equipment and materials that could be placed upon them.
- Ensure that hole covers are secured in place and properly marked with the words “hole” or “cover.”

Falling Objects



Falling objects are objects, such as tools and building materials that could fall from an overhead work area. Falling objects fall from ladders, scaffolds, aerial lifts, rooftops, leading edges, etc.

! Toeboards

- Verify that toeboards have been installed on all guardrail systems, including aerial lift guardrails where tools or materials could be knocked off the surface to a lower level.
- Verify that the toeboards are at least 3 inches high and made from materials that are strong enough to support the force that could be placed upon them.
- Verify that there are no openings of more than 1 inch between the ends of toeboards.

! Tool Lanyards

- When working overhead where others could be exposed to tools dropped from above, use an appropriate shock absorbing tool lanyard for each affected tool.

! Barricades

- When working overhead where others could be exposed to object dropped from above, barricade the area underneath to keep others out from under the potential drop area. Caution tape makes an effective temporary barricade.

Fire Prevention & Protection



Fire prevention and protection is a pre-planning process to help prevent fires and to help protect workers and property if a fire does occur.

✓ General

- Smoke only in designated smoking areas.
- Become familiar with the fire alarm systems in your work areas where applicable.
- Identify all your emergency exit options before you start work.
- Frequently dispose of combustible items in your work area.
- Use approved metal containers with self-closing lids to dispose of combustible rags.
- Keep flammable/combustible liquids and materials in appropriate and properly labeled containers.
- Keep flammable/combustible liquids and materials away from ignition sources such as sparks, flames and excessive heat.
- Shut down internal combustion engines, such as those in vehicles, generators, compressors, etc., before refueling.
- Report potential fire hazards to an appropriate supervisor as soon as you identify them.
- Memorize the addresses and area landmarks at the places you will be working so that you can effectively guide emergency response teams to a fire.
- Learn the locations of the closest landline telephones in case mobile telephone access is unavailable.

! Fire Extinguishers

- Verify that there is at least one easily accessible Class ABC fire

extinguisher in your work area before you start work.

- In areas where there is more than 5 gallons of a flammable/combustible liquid or more than 5 pounds of a flammable gas, verify that there is at least one Class ABC fire extinguisher within 50 feet of each of these areas.

! When Fire Occurs

- Immediately alert everyone in the work area about the fire.
- When you can safely do so, extinguish smaller fires with the closest fire extinguisher.
- If a fire appears uncontrollable, and only if it is safe to do so, shut down electrical power to the work area.
- If a fire is large and/or uncontrollable, immediately activate the fire alarm where applicable and evacuate the building or structure.
- Call 911 and give accurate directions to the job site and fire location.
- Meet the emergency responders and direct them to the fire.

First Aid/CPR-AED



First aid is the immediate basic medical assistance provided to a sick or injured person.

- Cardiopulmonary resuscitation (CPR) is a medical technique for reviving someone whose heart has stopped working normally by using chest compressions and rescue breathing to mechanically perform what the heart can no longer do for itself.
- Automated external defibrillator (AED) is a portable electronic device used to correct the rhythm of a heart that is in a state of ventricular fibrillation (abnormal heart rhythm), or ventricular tachycardia (excessively rapid heartbeat).

+ Emergency First Aid Response

- When you identify a potential emergency situation, carefully survey the scene looking for hazards that could affect you as you approach a victim or victims.
- If it is not safe for you, do not approach the victim.

- Call 911 or send someone else to do so.
- If it is safe to approach, be sure to protect yourself against blood-borne pathogens with medical exam gloves and safety goggles.
- Do not move the victim unless it is absolutely necessary to do so for immediate safety purposes.
- Check for breathing and consciousness.
 - With your face near the victim's mouth, watch the victim's chest. Look, listen and feel for breathing for 5 to 10 seconds.
 - If the victim is not breathing, send someone for an AED and administer CPR immediately.

+ CPR

- Continue CPR until an AED arrives, the victim begins to move, or EMS arrives and takes over.
- If the victim is breathing look for signs of severe bleeding.
- Apply direct pressure to severe bleeding wounds with a clean bandage or clean material until the bleeding is stopped. Wrap the bandage or material to keep it in place.
- Treat the victim for shock by laying him/her flat on his/her back and keeping his/her body temperature as close to normal as possible.
- Do not give the victim anything to eat or drink, but try to keep him/her as comfortable as possible.

+ If You Have Not Been Trained to Administer CPR

- Check to see whether the victim is responsive.
- If the victim is not responsive call 911 and specifically request an AED.
- Check the victim for signs of breathing.
- If the victim is not breathing normally, or if he or she is gasping:
 - Send someone for a nearby AED where available.
 - Open the victim's clothing.
 - Place the heel of your hand in the center of the victim's chest and the heel of your other hand on top of, and parallel to the first hand.
 - Begin chest compressions by pressing down at least 2 inches in depth with each compression at the rate of 100 to 120 compressions each minute, which is about two compressions every second.
 - Continue the compressions until an AED arrives.



- Turn on the AED and follow the instructions.

⊕ **When a Conscious Victim Is Choking:**

- Send someone to call 911 for emergency medical services.
- Ask the victim whether he/she can speak or is choking. If the victim can't speak or nods yes, assume that he/she is choking.
- Stand behind the victim with one foot between his/her legs.
- Reach around the victim and place your fist with the thumb towards the victim just above the navel and below the rib cage thrusting inward and upward.

Note: *If the victim is pregnant or obese, place your fist in the center of the chest and thrust inward similar to a chest compression for CPR.*

- Continue thrusting until the victim is no longer choking or becomes unconscious.
- If a choking victim loses consciousness and is not breathing, begin CPR immediately.

Flammable/Combustible Liquids & Materials



Flammable and Combustible Materials are materials that have a low flash point, so they are easily ignited when exposed to ignition sources.

✓ **General**

- Post “No Smoking” signs where appropriate.
- Verify that flammable/combustible liquids are kept in approved, properly labeled containers with self-closing lids.
- When transferring a flammable/combustible liquid from a drum to a smaller container, start by grounding the drum. Next, bond the drum and the container by attaching a conductive wire to the drum and to the container.
- Be sure to keep flammable liquids more than 50 feet away from ignition sources.

- Be sure not to store more than 25 gallons of a flammable/combustible liquid in a room outside of an approved storage cabinet.
- Never allow more than three flammable/combustible liquid storage cabinets in a single storage area.
- When they are not being used, keep flammable/combustible liquids in closed containers.
- Verify that flammable/combustible waste materials are stored in approved containers with self-closing lids.
- Properly dispose of flammable/combustible waste materials regularly.

! **Storage Cabinets**

- Only use storage cabinets designed specifically for flammable/combustible liquids.
- Verify that the storage cabinets being used for flammable/combustible liquids are properly labeled as follows: “Flammable – Keep Fire Away.”
- Refer to Section 2 of any chemical substance’s Safety Data Sheet (SDS) to determine whether liquids are potentially flammable or combustible.
- Be sure not to store more than 60 gallons of a flammable liquid or 120 gallons of a combustible liquid in any single storage cabinet.

! **Inside Storage**

- Never smoke anywhere near flammable materials storage areas.
- Verify that any buildings where flammable/combustible materials will be stored inside are fire resistant, have self-closing doors at all openings and have at least 4-inch-high sills or depressed floors.
- Also verify that electrical wiring and equipment in any buildings where flammable/combustible materials will be stored inside are approved for flammable materials storage areas.
- Verify that there is a ventilation system in place and that it is providing complete air exchanges at least six times every hour.

! **Outside Storage**

- When flammable/combustible materials are stored outside, be sure to allow a 12-foot-wide access way for emergency fire control equipment.
- Ensure that flammable/combustible materials are never stored near exits or stairways.
- When stacking combustible materials, make sure the piles never exceed 20 feet in height.
- Make sure that outdoor storage containers never hold more than 60 gallons of flammable/combustible liquids.
- Ensure that outdoor storage areas never retain more than 1,100

gallons of flammable/combustible liquids in any single storage area.

- Separate flammable/combustible materials by at least 5 feet and store them at least 20 feet from any building.
- Verify that outside storage areas for flammable/combustible liquids are graded or diked so that any spills would flow away from buildings.
- Never smoke near outside flammable/combustible storage areas.

! **Liquified Petroleum (LP) Gas Storage**

- Make sure that “No Smoking” signs are displayed on LP storage tanks.
- When fueling equipment powered by LP gas be sure to shut the equipment off before fueling.
- Make sure that LP gas tanks are protected from vehicle traffic.
- Verify that all electrical connections involving LP gas tanks, including pumps and switches, are vapor and explosion proof.

Forklifts



Forklifts are specialized industrial trucks powered by internal combustion engines or electric motors. They are designed to lift, move and place materials and equipment.

✓ **General**

- Never operate any forklift until you receive the proper training and authorization from your company. There is no one-size-fits-all training for forklift operation. You will need operation and safety training specific to each model, type, style, size, etc., of forklift that you will be using.
- Shut down the forklift’s engine before refueling, or its motor before recharging.
- Evaluate the entire area where you will be operating the lift to determine surface conditions, locations of overhead powerlines, areas with obstructed views, etc.

✓ **Operation**

- Never position a load so that it obstructs your view.

- Maintain a safe speed at all times while operating a forklift.
- When starting or stopping a forklift, always do so slowly so that the load will not shift.
- Make turns slowly, smoothly and gradually as well.
- Evaluate the operating surface conditions and adjust your speed and driving performance accordingly.
- Operate the lift slower than usual in wet or muddy conditions, and allow more time and distance for stopping.
- Even when conditions are dry, maintain considerable distance between your lift and any vehicle ahead of you. Increase the following distance considerably on wet or muddy surfaces.
- Sound the lift’s horn whenever you approach an intersection or any other potentially hazardous locations.
- When operating a lift in an area where your visibility is obscured, install mirrors on the job site at appropriate locations so that you’ll be able to see pedestrians and oncoming traffic.
- Never permit any passengers on your lift.
- Do not raise or lower the load while the lift is moving.
- Determine the lift’s rated load capacity before you start work, and ensure that you never exceed that capacity.
- Watch out for overhead obstructions constantly while operating the lift.
- Make sure the lift is never used as an elevator.
- Always shut down the engine or motor before you vacate the seat on the lift.
- Never turn a lift sideways on a ramp or any other incline. Always keep it moving straight up or straight down the incline.
- If you must vacate a lift while it is on an incline, block or chock the wheels.
- Keep the load on the uphill side of any incline. Move the lift forward when headed uphill and backward when headed downhill.
- If the lift you are using has an internal combustion engine, never operate or allow it to idle in an enclosed area.
- Move the lift with the load tilted back and the forks raised just enough to clear the load, but never raised more than necessary.
- Always tie or strap down materials that could fall off the forks.
- Do not allow anyone to walk or stand under the elevated portion of a lift, even when there is no load on the forks.

Hand & Power Tools



Hand and power tools are specialized implements used to perform construction work. Power tools are generally powered by 110-volt electrical circuits or batteries pushing voltages that are appropriate for the tool. However, some power tools are actuated by explosive powder, pneumatic power or internal combustions engines.

✓ General

- Never remove or bypass any tool manufacturer's safety guards.
- Always read and follow the tool manufacturer's instructions for maintenance and repair.
- Carefully inspect all tools before using them.
- If you see damage, immediately follow your company's procedure for taking defective tools out of service.
- Use only the proper size and type of tool for each job.
- Never use impact tools such as drift pins, wedges and chisels if they have mushroomed heads.
- Clean and disinfect all tools when appropriate (see below).

! Power Tools

- Be sure to de-energize power tools before changing blades, bits, etc., or otherwise servicing the tools by removing batteries or unplugging the tools.
- Never use electrical cords to raise or lower tools.
- Never jerk electrical cords out of electrical receptacles to unplug a power tool. Grasp the plug and carefully remove it from the receptacle.
- Verify that tool guarding is properly secured in place before using the tool.
- Before use, verify that your tools are properly grounded or double insulated. Double insulated tools will either display the words "Double Insulated" or the double insulation symbol, which is a small square inside a larger square.

- Before plugging in a power tool, verify that the power switch is in the "off" position.
- Inspect the insulation on electrical cords, including extension cords, before using any plug-in power tool. If the insulation is damaged, immediately follow your company's procedure for taking defective tools and/or cords out of service.
- Verify that an appropriate, properly functioning ground fault circuit interrupter (GFCI) is in place when using plug-in power tools in damp locations.
- Ensure that anything that could get caught up in moving power tool parts, such as jewelry, loose clothing, long hair, etc., is removed or otherwise isolated from moving parts.
- Be sure to keep body parts, such as fingers, face, etc., as far away from moving tool parts as possible.
- Verify that power tools are off and moving parts have completely stopped before putting the tool down.

Hazard Communication



Hazard communication is a globally harmonized system (GHS) for communicating chemical hazards to workers. The system gives all workers the right to know what chemicals they're working with, the hazards associated with them, and how they can protect themselves from those hazards when working directly with or around them.

✓ General

- Always remember you have the right to know about the chemical substances that you are exposed to while working, the health hazards that are associated with those chemicals, and how to protect yourself from the accompanying hazards.
- Make sure you always know how to quickly access your company's written hazard communication program at each of your job sites.
- Obtain a copy of the program and read it carefully.
- Make sure you always know how to quickly access all applicable Safety Data Sheets (SDS) at each of your job sites.

- Learn how to quickly access the information you need from any SDS. These are the most important parts of an SDS regarding your health and safety:
 - Section 1 - Identifies the substance
 - Section 2 - Describes the hazards associated with the substance
 - Section 4 - Describes first aid procedures
 - Section 8 - Describes how to protect yourself from the hazards
- Establish understanding of the GHS for hazard warning labels on chemical substances.

✔ Labeling Requirements

- Make sure that all chemical containers in your work areas are properly labeled.
- Learn the required safety components for chemical container labels as follows:
 - Hazard Statement — A hazard statement is a statement assigned to a specific hazard class and category that describes the nature of the hazard.
 - Precautionary Statement — A precautionary statement is a phrase that describes the recommended measures to be taken to minimize or prevent adverse effects resulting from exposure to a chemical, or improper storage or handling of a hazardous chemical.
 - Signal Words — A signal word is one word used to indicate the severity of hazard and alert the reader to a potential hazard. The required signal words are “Danger” or “Warning.” “Danger” is used for more severe hazards. “Warning” is used for less severe hazards.
 - Pictograms — A pictogram is a symbol and other graphic elements intended to convey specific information about the hazards of a chemical. There are eight pictograms required for labels by the Occupational Safety and Health Administration (OSHA). The environmental pictogram is not required since environmental issues fall outside of OSHA’s jurisdiction.
- The only exception to the labeling requirements is when you transfer a chemical substance into a secondary container and the transferred substance will be used immediately and entirely.
- If you are ever in doubt about whether a secondary chemical container should be properly labeled, be sure to label it.

Heat Illness Prevention



Heat illness prevention is a process of planning, establishing and implementing procedures to prevent workers from enduring any of the following heat-related illnesses:

- Heat Stroke – loss of ability to sweat
 - Heat Exhaustion – extremely overheated – still able to sweat
 - Heat Syncope – heat induced blood pressure drop
 - Heat Cramps – painful muscle spasms
 - Heat Rash – red bumps on skin, discomfort
 - Rhabdomyolysis – muscle breakdown
 - Acute Kidney Injury – kidney damage, possible kidney failure
- ✔ **General**
- Pay attention to the weather forecasts for heat and humidity.
 - When extremely hot and/or humid weather is anticipated, plan ahead to protect yourself from overexposure.
 - Initially, acclimate gradually to hot environments.
 - Start hydrating several days ahead of work to be performed in hot environments.
 - Avoid drinking alcohol and other beverages that accelerate dehydration when work in hot environments is forthcoming.
 - Whenever possible, perform the most labor-intensive parts of the day’s work during the earlier morning hours.
 - Wear clothing that will keep you as cool as possible, such as lightweight cotton.
 - When needed, use commercial cooling products, such as hardhat cooling pads, cooling sweat bands, cooling vests, cooling towels, neck shades, etc.
 - Take breaks in cool locations whenever it is needed to prevent overexposure.

Heating Equipment (Temporary)



Heating equipment for temporary use refers to heaters used on jobsites to heat areas where permanent heating systems have not been installed. These temporary heaters are typically powered by 110-volt circuits, batteries or some type of heating fuel such as propane.

General

- Make sure that any area where a temporary heating device is being used has an adequate supply of fresh air.
- Verify that the LP gas heaters you are working around are equipped with an automatic shut-down that activates immediately if the flame fails.
- Always prevent solid fuel salamanders from being used inside buildings or on scaffolds.
- Ensure that all temporary heating equipment is positioned at least 10 feet away from combustible covers and similar combustible items, such as plastic and canvas tarps.
- Verify that all covers are properly secured so that they will not displace heaters and/or cause fires in windy environments.

Hoists for Personnel & Materials



Hoists for personnel and materials are powered machines that raise or lower personnel and building materials from one level to another.

General

- Before using a hoist, always obtain a copy of the manufacturer's specifications, hoist limitations and safety recommendations, and follow all of them carefully.
- Confirm that the manufacturer's recommended operating speeds, hazard warnings and any other special instructions are posted on the hoists' cars and platforms before using them.
- Verify that the entrances/exits to material hoists are equipped with full-length gates or bars marked with contrasting colors, such as black and yellow stripes.
- Verify that the doors or gates on personnel hoists are no less than 6 feet, 6 inches high and protected with mechanical locks that can't be operated from the landing side. The locks should be accessible only to the individuals on the car.
- Before entering a personnel hoist, ensure that overhead protective coverings are in place on top of the hoist's cage or platform.

Housekeeping



Housekeeping is the appropriate management of work areas to ensure that they are kept organized, tidy and safe to work in and around.

General

- Properly stage and organize materials in the work area.
- Dispose of trash, scrap materials, etc., throughout the workday.
- Consistently verify that potential walking/working surfaces' slip, trip and fall hazards, such as extension cords, equipment, tools, mud, water, etc., are kept away from stairways, walkways, ladder platforms, scaffolds, etc.
- Keep your tools off walking/working surfaces by placing them in your tool belt, a bucket or a toolbox instead of on the surface.
- As soon as you are finished using your tools for the day, put them away in a gangbox.
- Whenever possible, work to keep power cords, hoses and other tripping hazards away from heavily traveled walking surfaces.

- Properly dispose of combustible materials in approved containers with self-closing lids.

Illumination



Illumination is the action of providing light. It is expressed in foot-candles and can be measured with special instruments. Proper illumination in a work area is the amount of light necessary for the workers in that area to perform their work tasks safely.

General

- Determine whether your work area is lighted well enough for you to perform all your work tasks safely.
- If your work area is not adequately illuminated, establish adequate lighting before you start work.
- If you are unable to establish adequate lighting, inform your supervisor immediately.
- Adhere to the illumination recommendations for construction:
 - 5 foot-candles for general construction area lighting
 - 3 foot-candles for general construction areas, concrete placement, excavation and waste areas, access ways, active storage areas, loading platforms, refueling and field maintenance areas
 - 5 foot-candles for indoors: warehouses, corridors, hallways and exit ways
 - 5 foot-candles for tunnels, shafts, and general underground work areas
 - 10 foot-candles for general construction: plants and shops (e.g., batch plants, screening plants, mechanical and electrical equipment rooms, carpenter shops, rigging lofts and active storerooms, barracks or living quarters, locker or dressing rooms, mess halls, and indoor toilets and workrooms)
 - 30 foot-candles for first aid stations, infirmaries and offices.

Ladders



Ladders are implements designed to help workers reach overhead work areas that are not reachable from walking/working surfaces. The most common types of ladders used in construction are portable stepladders, straight ladders and platform ladders.

General

- Never use any ladder before receiving safety training that is specific to that type of ladder.
- Carefully inspect the ladder you will be using each time before using it.
- Refrain from using painted ladders since paint can hide ladder defects.
- If you identify any deficiencies while inspecting a ladder, do not use it. Follow your company's procedure for removing defective equipment from service.
- Before using any ladder determine its maximum load capacity and never exceed it. Be sure to consider your fully clothed body weight, the weight of your toolbelt, the weight of tools hanging from lanyards, etc. when calculating the load that will be placed on the ladder.
- Verify that the surface is level before using any ladder that is not specifically designed for use on non-level surfaces.
- No matter what type of ladder you are using, always face it when climbing.
- Maintain at least a three-point contact, such as two hands and one foot or two feet and one hand when climbing any ladder.
- Never carry anything in your hands when climbing a ladder.
- Be sure not to reach out too far while working from a ladder by keeping your body inside the ladder's side rails. If necessary, get down and move the ladder closer to the work area.
- Make sure all ladders are used only for their intended purpose.
- Use ladders with non-conductive side rails whenever possible,

and always when working near energized electrical conductors or circuit parts.

- Never allow any part of a ladder to contact overhead power lines.
- When using a ladder in a doorway or passageway where it could be disrupted, set up barricades and post signs to protect it.

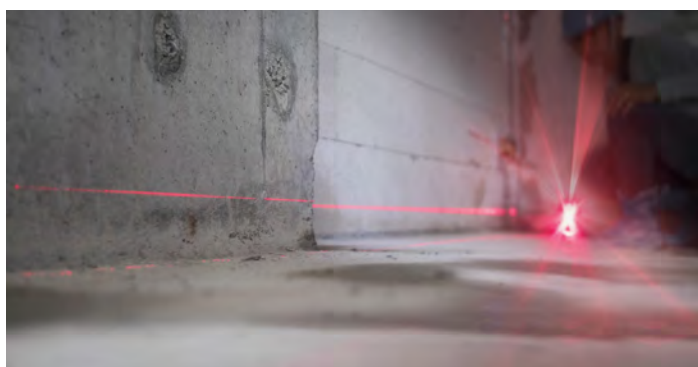
! Portable Straight Ladders

- Use straight ladders only on firm, level surfaces.
- Make sure straight ladders are properly secured in place by tying them to the structure at the top or adequately bracing them at the bottom when tying off is not possible.
- As part of your pre-use inspection, make sure the ladder is equipped with slip-resistant feet.
- When setting up, make sure the base of the ladder (foot) is pitched out from the vertical plane of its top support one-quarter the length of the ladder, measured from the ground at the foot of the ladder to the top support.
- Make sure the ladder extends at least 3 feet above the landing surface when using it to access an upper level.
- Do not step up on any rung higher than the third rung from the top of the ladder.

! Portable Stepladders

- Make sure stepladders are fully open and the spreader bars are properly locked in place.
- Do not use any stepladder as a straight ladder.
- Refrain from stepping up any higher than the second rung from the top of the stepladder.

Lasers



Lasers are visible radiation generating tools used in construction mostly for leveling and measuring.

✓ General

- Make sure you receive the proper training before using and working around lasers.

- Wear the appropriate safety glasses or safety goggles that are designed specifically for protection from direct laser light and reflected laser light.
- When you are not using the laser tool, shut it off or block the laser beams with shutters or caps.

Lead

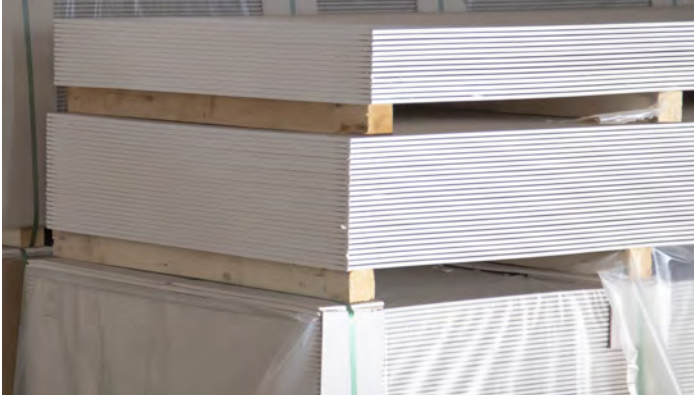


Lead is a heavy metal sometimes used in the production of building materials, such as lead lined gypsum board for protection from radiation. When lead is inhaled or ingested in significant concentrations it can result in chronic health effects, such as birth defects, reproductive system damage, seizures, coma and death.

✓ General

- Never work with or around lead without the proper level of safety training.
- Learn how to identify construction activities where lead dust could be emitted, such as cutting lead-lined boards.
- Obtain a copy of your company's lead compliance program, read it carefully, and follow its requirements to the letter.
- Make sure you have adequate, proper ventilation and that the system is working properly.
- Avoid working around lead dust and lead fumes without the proper respiratory protection.
- Never use a respirator without the proper medical evaluation, respiratory protection training, fit testing and approval from your supervisor.

Materials Handling



Materials handling is the movement, protection, storage and control of materials.

✔ General

- Ensure that your building materials are staged as close to your work area as possible.
- Whenever possible, stage the materials on tables, carts, stacked pallets, etc., somewhere between waist and chest high.
- Always use materials moving equipment when it is available.
- Plan ahead to have forklifts, pallet jacks, wheelbarrows, hand trucks, carts, mobile tables, etc., available for use.
- When you must lift and move materials by hand, be sure to use proper lifting techniques:
 - Move your body as close to the object as you can.
 - Place your feet about shoulder width apart.
 - Make sure you have a firm grip.
 - Keep the natural curves of your back by keeping your butt down and your head up throughout the lifting process.
 - Lift straight up using your legs for the power.
 - Keep the lifting motion slow and steady.
 - Be sure not to twist or turn while your feet are firmly planted.
 - When turning to move the elevated load, move your feet without twisting or turning your torso.
 - Use the exact procedure in reverse to place an object down.

✔ Materials Storage

- Ensure that materials stored in tiers are properly secured in place.

- Never store materials in any area where they could block an exit or impede an emergency evacuation.
- Keep the height of stacked materials short enough to keep them stable.
- Ensure that materials are never stored within 6 feet of any hoist areas or floor openings, or within 10 feet of any unfinished exterior wall in an unfinished building.
- Carefully consider the materials' flammability/combustibility traits and store them safely based on those traits.

Motor Vehicles & Mechanized Equipment



Motor vehicles are self-propelled vehicles used for earth moving and materials handling. Mechanized equipment is self-propelled mechanized equipment that is also used for earth moving and materials handling.

✔ General

- Carefully inspect any motor vehicle or mechanized equipment each day before using it.
- If you identify any problems, or if you are not sure whether it is safe to use, follow your company's procedure for taking defective vehicles/equipment out of service.
- If the rear view is obstructed, don't operate the vehicle or equipment unless it is equipped with a functional reverse signal alarm or there is an outside-the-vehicle/equipment observer signaling that it is safe to proceed.
- When machinery/ equipment is suspended, be sure to lower it, or block or crib it to prevent it from shifting or falling.
- When your vehicles or mechanized equipment are parked or stopped, always set the parking brake.
- When your vehicles or mechanized equipment are stopped on an incline, always set the parking brake and chock the wheels.
- Ensure that the windows and mirrors are clean and provide good visibility each time before operating the vehicle/equipment.



- Where applicable, ensure that everyone inside a vehicle has their seat belts fastened before the vehicle starts to move.
- When using mechanized equipment designed for seat belt use, always be sure to fasten your seat belt.

Noise



Noise is unwanted sound that is unpleasant, excessively loud or disruptive to hearing.

General

- When it becomes so noisy in your work area that you cannot understand a normal conversation within 3 feet from where you are working, the noise level could be harmful.
- Wear hearing protection such as earplugs or earmuffs when working with or near power tools or equipment that could be generating excessive noise.
- Determine whether the noise level in your work area is excessive by measuring the noise with a sound level meter, anticipating the length of time you will be exposed to the noise at that level, and referring to the chart at the end of this section.
- You can download an accurate noise level meter app, such as the NIOSH Noise Level Meter, to your mobile device at no cost.
- When selecting hearing protection look at the equipment packaging to determine the noise reduction ratings (NRR) for each of your options, and select noise protection equipment with an adequate NRR.
- Do not select noise protection equipment with an NRR that would prohibit you from hearing warnings such as fire alarms, equipment back-up alarms, etc.
- Make sure the protective equipment you choose for hearing protection will be comfortable throughout the time of use.
- Each time before use, verify that the earplugs you will be using are clean.
- Always discard disposable one-time-use earplugs immediately after use.

- Never exceed the recommended noise levels/limits for the construction industry, which are shown in the following chart:

PERMISSIBLE NOISE EXPOSURES CHART	
Duration Per Day/Hours	Sound Level in Decibels
8	90
6	92
4	95
3	97
2	100
1½	102
1	105
½	110
¼ or Less	115

Personal Protective Equipment (PPE)



Personal protective equipment, commonly referred to as PPE, is specialized equipment designed to protect workers from workplace hazards as a last resort, such as when a hazard cannot be eliminated or when a substitution, engineering control or administrative control to adequately minimize the hazard is not available or is infeasible.

Body Protection

- Wear a high visibility shirt or vest whenever its required, and when working in areas with motorized vehicles or equipment.
- Wear a flame-resistant coverall or apron when welding or flame torch cutting.

Eye and Face Protection

- Wear the appropriate ANSI compliant safety glasses or safety goggles at all times on the job site unless you are in a protected area like a trailer or a break room. If you're not sure what type of eye protection to wear, check with your supervisor.
- Always wear safety glasses under your welding helmet.
- Before welding or torch cutting verify that you have a properly shaded lens or lenses in your welding helmet or goggles.

- Always wear a face shield over your safety glasses when grinding.
- When working with hazardous chemicals wear a face shield over splashproof safety goggles.

⊕ Hand Protection

- Wear the appropriate ANSI rated cut-resistant gloves at all times while working on a job site.
- Cut resistant gloves are rated by the American National Standards Institute (ANSI). The ratings go from A-1 to A-9. The higher the number, the more cut resistance. However, the higher the number, the less dexterity.
- The ratings that are typically most applicable to wall and ceiling industry construction workers are A-3 through A-5.
 - A-3 – light to medium cut resistance
 - A-4 – medium cut resistance
 - A-5 – medium to high cut resistance
- Wear impermeable gloves that are appropriate for the chemical substances you will be using. Refer to the substance's Safety Data Sheet to determine the appropriate type of gloves for the task.

⊕ Head Protection

- Wear an approved helmet or hard hat at all times on the job site, unless you're in a protected area, such as a trailer or breakroom.
- Helmets have chin straps keeping them in place if an incident should occur and generally provide protection from falling objects and objects coming from a lateral direction.

⊕ Hearing Protection

- Wear hearing protection such as earplugs or earmuffs whenever you are exposed to excessive noise.
- Determine whether the noise level in your work area is excessive by measuring the noise with a sound level meter, anticipating the length of time you will be exposed to the noise at that level, and referring to the chart at the end of the Noise section in this publication.
- You can download an accurate noise level meter app, such as the NIOSH Noise Level Meter, to your mobile device at no cost. Use a noise level meter app on your mobile phone to determine whether the noise level is excessive.
- If you are unsure about whether noise level in your work area is excessive, wear hearing protection.

⊕ Respiratory Protection

- Never use a respirator before receiving the required medical evaluation and appropriate respiratory protection training.
- Obtain a copy of your company's written respiratory protection program and read it carefully.

- Become knowledgeable with the requirements on selection, fit testing, proper use and proper care and maintenance.
- Verify that you will be using the appropriate respirator for the task.
- Verify that the respirator you will be using has been approved by the National Institute for Occupational Safety and Health (NIOSH). Look for "NIOSH" on the respirator.
- Perform a negative and positive pressure check each time you put on an air purifying respirator.
- Perform a subsequent negative and positive pressure check each time before entering the contaminated area.
- Do not use the respirator if any pressure checks fail. Stay out of the contaminated area and obtain an appropriate proper fitting respirator.

Pneumatic Tools



Pneumatic tools are tools powered by compressed air, which is supplied by an air compressor.

✔ General

- Before using any power tool, check the operator's manual to determine the safe operating pressure established by the manufacturer for that tool.
- Never exceed the safe operating pressure for any tool or fitting.
- Verify that the hose is properly and securely attached to the compressor before attaching any tool or fitting to the hose.
- Verify that the tool is properly and securely attached to the hose before using it.
- When using pneumatic impact tools, confirm that safety clips or retainers are in place to keep the attachments from flying out.
- Verify that a pressure reduction device is in place at the source of supply or branch line anytime the hose diameter exceeds half an inch.

Powder Actuated Tools



Powder actuated tools are tools powered by an explosive force that propels or discharges a fastening device. The energy comes from an explosive powder that is detonated by a primer.

✔ General

- Never operate a powder actuated tool before receiving the proper training.
- Test the tool each day before you use it.
- If the tool is not working properly, don't use it. Follow your company's procedure for taking defective tools out of service.
- Do not load the tool until it is ready for immediate use.
- Never leave a loaded powder actuated tool unattended.
- Unload the tool immediately after you finish using it.
- Make sure that you always keep the tool's point of operation facing a safe direction.

Rigging



Rigging is the process of preparing loads of materials for lifting and moving by heavy equipment, such as cranes and derricks. Rigging materials can include slings, chains, wire ropes, hooks, shackles, turnbuckles, eyebolts, etc.

✔ General

- Determine whether weather conditions are adequate for a safe pick before rigging a load.

- Verify that there are no powerlines or other overhead obstructions anywhere near the path of the pick.
- Determine load capacities and safe operating speeds before using a hoist or other types of rigging equipment. Never exceed the manufacturer's designated load capacity or safe operating speed.
- Whenever possible, rig the load so that it will move straight up during the pick.
- Help the operator place the boom directly over the load by guiding him/her with the appropriate hand signals.
- Identify the potential pinch points and be sure to keep your hands away from them when the load starts to lift.
- Make sure you are never under the load once the pick begins.
- Attach a tagline to the load so that you can help control the moving load.
- When you receive a load be sure to keep your feet out from under it.
- If at any time during the pick something appears unsafe, immediately signal the operator to stop.

! Sling Angles

- Determine the horizontal sling angle that will occur during the lift and confirm that the sling is capable of supporting the load based on that angle.
- Be sure to calculate the sling tension that will occur during the lift and verify that the sling is capable of supporting the load.

! Chain Slings (Alloy Steel)

- Inspect the sling each time before you use it.
- Find the permanently attached tag that identifies the manufacturer and describes the sling's rated capacity, size, and grade. If the tag is not attached, do not use the sling. Follow your company's procedures for removing defective equipment from service.
- Never exceed the sling's rated capacity or deviate from the manufacturer's recommendations.
- If during the inspection you identify any signs of damage do not use the sling. Follow your company's procedures for removing defective equipment from service.

! Wire Rope Slings

- Inspect the sling each time before you use it.
- A wire rope sling is defective when there are five or more broken wires in one rope lay and/or there are three or more broken wires in one strand of one rope lay.
- If during the inspection you identify any signs of damage, do not use the sling. Follow your company's procedures for removing defective equipment from service.

- Determine the manufacturer's established load capacity before using the sling, and never exceed the stated load capacity.
- Confirm that the U-bolt wire rope clips are the correct size and that the appropriate number of clips are in place.
- Verify that the U-bolt wire rope clips have been properly attached.
- U-bolts must never be secured to the live end of the wire rope. Ensure that the saddle of the U-bolt clip is securely attached to the live end of the wire rope.

! Synthetic Fiber and Natural Rope Slings

- Inspect the sling each time before you use it.
- Look for variation in the size and roundness of the strands, broken fibers, discoloration, damaged/distorted hardware and any other signs of abnormal wear.
- If during the inspection you identify any signs of damage do not use the sling. Follow your company's procedures for removing defective equipment from service.
- Determine the manufacturer's established load capacity before using the sling and never exceed the stated load capacity.
- Verify that any splices made to rope slings are in accordance with the sling manufacturer's recommendations.

! Synthetic Webbing Slings

- Inspect the sling each time before you use it.
- Look for broken and worn stitches, tears, cuts, punctures, burn marks, melted material, charring, damaged/distorted hardware and any other abnormalities.
- If during the inspection you identify any signs of damage do not use the sling. Follow your company's procedures for removing defective equipment from service.
- Also look for markings or codes on the sling that identify the sling's manufacturer and trademark, and describe the rated capacity based on the type of hitch and the type of material used for the sling. If this information is not present, do not use the sling. Follow your company's procedures for removing defective equipment from service.

Scaffolds (Mobile)



Scaffolds are temporary elevated work platforms used by workers to safely reach working heights that cannot be reached from ground level.

✓ General

- Before working on any scaffold make sure you have the proper safety training that is specific to the type of scaffold you will be using.
- When working on a scaffold 10 feet or more above a lower level verify that there is an adequate guardrail system in place for fall prevention or use a fall arrest system for fall protection.

! Erection and Disassembly

- Never attempt to erect or disassemble a scaffold unless you are under the direct supervision of the designated competent person.

+ Safe Work Practices

- Before using the scaffold inspect the supporting surface to verify that it is firm, level, free of holes, materials, debris, unlevel or uneven surfaces, etc. If the surface cannot safely support the scaffold, do not use it.
- Also, before use, inspect the scaffold to verify that it is capable of supporting the intended load of workers, materials and equipment that will be placed on it.
- Use screw jacks or equivalent equipment to level the scaffold, if necessary.
- Confirm that the casters and wheels are locked before starting work.
- Apply force as close to the base as possible when moving the scaffold, and never apply the force more than 5 feet above the supporting surface.
- Make the scaffold as stable as possible before moving it.
- Ensure outriggers are used to support scaffold platforms that extend out beyond the scaffold's base support.
- Do not move a mobile scaffold while workers are on it unless:



- The supporting surface is firm, level and clear of obstructions.
- The height to base width ratio is 2:1 or less, unless the scaffold is designed and constructed to meet nationally recognized stability test requirements.
- The frames are installed on both sides of the scaffold when outrigger frames are in use.
- When a powered system is used to move the scaffold, the propelling force is applied directly to the wheels and does not produce a speed of more than 1 foot per second.
- Workers on the scaffold are inside all parts of the scaffold that extends out beyond the casters, wheels, or other supports.
- The workers on the scaffold are aware that the scaffold is about to be moved.

Signs, Signals & Barricades



Signs, signals and barricades are warning devices and protective barriers used to warn workers about potential hazards and detour them from hazardous areas.

✓ General

- Always watch for warning signs, signals and barricades while on the job site.
- Obey warning signs and signals and keep away from barricaded areas.
- Ensure that signs, signals and barricades that are your responsibility are clearly visible and easy to read.
- Keep in mind that danger signs refer to immediate/imminent hazards.
- Remember that caution signs typically refer to potential hazards, but they can also caution workers against unsafe work practices.
- Be aware that safety instruction signs are there for accident prevention.

- Understand that notice signs are used for instructional purposes.
- Know that accident prevention tags provide temporary warning. They are typically attached to defective tools or equipment. They can also be used to tagout sources of uncontrolled energy when it is not feasible to lock it out.

Silica



Silica is a natural mineral quartz, which is a component of sand and granite. It is harmful to humans when it is inhaled in significant concentrations for a long enough period.

✓ General

- Before you begin work where you could be exposed to airborne concentrations of silica, verify with your company's competent person for silica that you will not be overexposed to silica if you work in that environment without a respirator.
- If the work environment requires the use of a respirator, do not start work in the hazardous environment without wearing an adequate respirator.
- Confirm that you have received the appropriate medical clearance, respiratory protection training and proper fit testing before using any type of respirator.
- Whenever possible, be sure to implement engineering controls that are available in your work area, such as a high efficiency particulate air (HEPA) filtered dust collection systems, a local exhaust ventilation system and/or a wet method to prevent silica from becoming airborne.
- Never eat, drink, smoke or apply cosmetics in contaminated work areas.
- Do not use compressed air, dry sweeping or dry brushing to clean work surfaces or clothing in contaminated work areas.
- Wash your hands and face before eating, drinking, smoking or applying cosmetics.

Stairways



Stairways are sets of steps providing access to one level or another.

General

- Ensure that there is a stairway in place wherever there is a break in elevation of 19 inches or more, unless there is ramp or some other acceptable means of safe access available.
- Avoid using the skeleton frame structure of stairways and steps, unless temporary treads and landings have been installed.
- Also, avoid using metal pan landings and treads that are not filled in with concrete or other permanent materials, unless they have been filled in with wood or other materials for temporary use.
- Be sure not to use stairways and/or landings where fall prevention such as an adequate guardrail system or a permanent wall has not been installed.
- Before using any stairway, verify that a handrail has been installed.

Stilts



Stilts are pairs of upright aluminum or magnesium poles with supports at the feet that enable workers to move about while reaching ceilings and high walls.

General

- Check with your supervisor before using stilts to verify that their use is permitted in your state and/or local jurisdiction.

- Never attempt to use stilts until you have received the proper training.

- Never use stilts for the job when the ceiling height exceeds 9 ½ feet.

Preparation

- Verify that your stilts have been supplied by a recognized industry supplier.
- Carefully inspect the stilts prior to mounting.
- Do not use stilts if they are not in good condition and/or have not been maintained in accordance with the supplier's instructions.
- Verify that floor surfaces where you will be working are solid and level.
- Confirm that the floor surfaces are clear of objects, clean and dry.
- Ensure that lighting cables from existing ceilings and walls are secured.
- Verify that all electric leads, including those to working lights, are clear of the work area.
- Install guards at all voids that could be hazardous to any worker on stilts, such as open stairwells and windows.
- Install appropriate covers on all floor holes that could be hazardous to any worker on stilts.
- Mark all floor penetrations, such as mechanical pipes and electrical conduit, so that they will be easily identified/conspicuous to any worker on stilts.
- Verify that wall and ceiling work is the only work being performed in the immediate work area.
- Keep other workers/trades out of the immediate work area with barricades.
- Confirm that the tools to be used while on stilts are appropriate and compatible.
- Verify that the work can be performed without bending down below knee level or overreaching.
- Ensure that the equipment and materials needed for the job can be accessed from stilts without bending down below knee level or overreaching.
- Plan the work so that no more than 2 hours of work while on stilts will be performed at one time and no more than 6 hours of work on stilts will be performed in a single day.
- Establish a suitable, rigid mounting/dismounting platform to don and remove stilts. Stepladders are not stable enough to be used as mounting/dismounting platforms.

Welding & Cutting



Welding and cutting are methods for connecting or cutting metal objects using extreme heat produced by electrical current or compressed gases. The most common hazards associated with welding and cutting in the wall and ceiling industry are electrical shock (electric arc welding), respiratory hazards, eye injuries and fires.

✓ General

- Become familiar with the most common welding and cutting hazards.
- Learn and implement the best-known safe work practices to protect yourself from those hazards.
- Wear eye protection that is appropriate for the task, including the proper shade of lens or lenses.
- Never start welding or cutting without having an adequately sized Class ABC fire extinguisher close by.
- Make sure there are no flammable/combustible materials or chemicals present before you strike an arc or ignite a torch.

! Electric Arc Welding and Cutting

- Make sure the cables you will be using are rated for the electrical current required for the work.
- Use only manual electrode holders.
- Ensure the electrode holders you will be using are specifically designed for arc welding and cutting.
- Inspect the welding cables, electrode holders and other parts that will be carrying current to ensure that they are properly insulated and in good condition.
- If any of the components are inadequately insulated or otherwise damaged, follow your company's procedure for removing defective equipment from service.
- Never use damaged cables. Cables can often be repaired, but repairs must be performed by a properly qualified person.
- When using a cable that has been repaired, do not use it within

10 feet of the electrode holder. The only exception is when the material used for the repair has the same or better insulating properties than the original cable insulation.

- Be sure to verify that the ground return cable is rated to safely carry the maximum current generated by the arc welding unit.
- Each time before welding, ensure that all ground connections are properly attached and have adequate capacity for the maximum current.
- Each time before welding, confirm that the frame of the welding unit is properly grounded with a third wire in the cable containing the circuit conductor, or with a separate wire that is grounded at the source of the current.
- Verify that the work cable is attached directly to the work or the work table and confirm that it is attached as close to the weld as is practical.
- When appropriate, use non-combustible or flameproof screens to shield other workers' vision from arc welding and cutting operations.
- Never strike an arc by touching an electrode to a gas cylinder.

! Gas Welding and Cutting

- Before making any of the connections, inspect the cylinder valves, regulators, hoses and torches.
- If you identify any damage, follow your company's procedure for removing defective equipment from service.
- Be sure to inspect all hoses and torches at the start of each work shift, and if necessary, follow your company's procedure for removing defective equipment from service.
- Prior to connecting the regulators to the cylinders, stand to the side of the fuel gas cylinder valve, open it, and close it quickly (cracking). Crack the oxygen cylinder in precisely the same manner.
- Before cracking fuel gas or oxygen cylinders, ensure that the escaping gas will not be affected by any existing area ignition sources.
- Verify that you can properly identify the difference between fuel gas hoses and oxygen hoses.
- Confirm that all fittings will prevent improper connections to hoses, regulators and torches. Fuel gas components must be incompatible with oxygen components.
- Be sure to inspect the regulators, hoses, torches, and their connections again after the gas has been turned on to check carefully for leaks.
- If you detect a leak, immediately turn the gas off at the cylinder, bleed the hose, and repair the leak. Verify that the leak has been fixed as soon as you turn the gas back on.

- Only use a friction lighter to light a torch.

+ Ventilation

- Verify that ventilation in the welding/cutting area is adequate before you start to weld or cut.
- Check the Safety Data Sheets for the electrodes, gas weld materials, the metals you will be welding, etc. If any of them contain lead, chromium, cadmium, nickel zinc, mercury, beryllium bearing based or coated materials or stainless steel, carefully follow the Safety Data Sheet's recommendations for adequate ventilation and respiratory protection.

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Intended as a guide for the wall and ceiling construction industry, this resource will evolve with changing practices, equipment and technology. If there are any errors or suggestions, contact the AWCI director of technical services at safety@awci.org. Please reference the title of this guide, "Safe Work Practices for Wall & Ceiling Industry Construction Workers," in your email.

For additional resources on construction safety, including videos, webinars, technical documents, live presentations, toolbox talks and best-practice guides, visit www.awci.org.

