

**TOOL BOX TALKS:
A YEAR'S WORTH OF WEEKLY SAFETY MEETING SUBJECTS**

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TOOL BOX TALKS

Introduction: Why This Project?

WHY TRAINING?

An insightful contractor commented that if everyone used their common sense, we wouldn't have injuries or accidents on or off the job. Workers need to be trained in the recognition and avoidance of unsafe conditions as part of company profitability and professional development. Using common sense is only part of the solution in preventing injuries or accidents.

Safety Committee

There is a Safety Committee factor involved in training. Employers in the construction trades are required to have a Safety Committee. A purpose of a Safety Committee is to identify hazards in the workplace (generally through quarterly inspections) and "make recommendations to the employer regarding corrections of the hazards." A second purpose is to "establish procedures for investigating all safety-related incidents..." Topics in this document are intended to help in having a viable Safety Committee by providing a quick reference guide to build on to accomplish both these important tasks.

SELECTING TOPIC'S

Use common sense in selecting a topic. You wouldn't want to present "Dressing For Winter Work" at the start of summer. "Heat Exhaustion/Sunstroke" is more appropriate to the season. Failure on your part to select an appropriate topic to present will result in uninterested workers, a waste of everyone's time and a loss of credibility on the part of company management.

Observe job-safety techniques. Focus on what is important (and mandatory). Listen to and follow up on company Safety Committee and employee recommendations. Identify what poor work practices are causing injuries or accidents on the job. Plan for and schedule out for a month so you have time to research and possibly modify your company policy.

INSTRUCTION GUIDE

Each of the "tool box talks" has an introductory statement, a guide for discussion, and space for additional discussion notes. Some have some reminders for the instructor on subjects to research and discuss; others require knowing company policy. We recommend employees signing the page; the company then maintains the topic as a record on file.

Training Records

In selected situations, you should have and maintain an individual training record on each employee. Included is Competent Person training for employee's using ladders and stairways, to recognize and minimize fall hazards and actions to take in fall protection. These are compliance actions as well as "common sense" to protect the contractor. See the Reference Section for more information on mandatory training subjects.

CUSTOMIZING

The following are some of the talks that require some sort of company specific information:

Page 9	Recognizing Unsafe Conditions	Requires specific name(s)
Page 13	Care For The Injured	Requires 1 st Aid information
Page 15	Listening Safety	Address policy issue
Page 16	Accident/Incident Reporting	Requires specific names
Page 19	Keeping In Shape	Address policy issue
Page 24	Protecting the Public	Address policy issue
Page 29	Effects of Weather	Address policy issue
Page 32	Construction Clothing	Address policy issue
Page 33	Head Protection – Hard Hats	Address policy issue
Page 35	Foot Protection	Address policy issue
Page 39	Respirators	Address policy issues
Page 50	Hammers/Chisels	Address policy issue
Page 53	Portable Electric Tools	Address policy issues
Page 57	Chain Saws	Address policy issues (PPE)
Page 65	Full Body Harnesses/Lifelines	Address policy issues
Page 73	Heavy Equipment Hazards	Requires specific names
Page 75	Electrical Hazards	Address policy issue
Page 76	Assured Grounding Program	Address location issue
Page 78	Fire Protection and Control	Address location/policy issue
Page 79	Fire Extinguishers	Requires specific names

DESIGNING YOUR OWN

When you design your own specialized tool box talks, remember some basic principals in giving instruction: Introduce what you are going to explain them, the body or key points you want to cover, and a conclusion. Ask for questions. Conclude with a reminder; the key point you tried to get across in the first place.

Supervisor Training

The importance of training supervisors in their responsibilities is an important management function as well as lawfully required when others are placed in charge of workers. They know the most about the people they work with daily, the equipment, materials and environment because of first-line supervisory responsibilities. Therefore it makes sense to train supervisors and is why the two are separated into the two subjects.

Whose Responsibility Is It?

After an accident has occurred, it is not unusual for those who were around the injured worker to feel guilty. This guilt is part of each person's inner awareness that there was possibly something they could or should have done to prevent the accident. Sometimes the accident is the result of someone else's mistakes. But who causes the accident is not as important as who is responsible for the accident, and what steps will be taken to correct future similar accidents from happening. The following is a partial list of responsibilities for safety on the job.

Guide for Discussion

Who's Responsible? (Discussion Points)

- Senior company management?
- Crew supervisor?
- Each person on the job?
- Trained safety professionals?
- Company safety committee?

Some Responsibility Rules for Everyone

If it's unsafe for you then it's unsafe for the next person and the hazard should be corrected.

Safety doesn't belong to any one construction craft; rather it is part of every construction craft to be responsible.

If safety doesn't begin with you, it won't begin at all.

An Individual's Responsibility

- To yourself
- To your family
- To your co-workers
- To your company

Additional Discussion Notes: (See Pages 6A and 6B)

Remember: Workers' compensation checks won't pay all the bills nor will they replace the self-esteem one has from being a good provider to their families. Without complete cooperation from everyone on the worksite, it just will not be as safe as it should be.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

**Supplemental Information For
Whose Responsibility Is It
A Tool Box Talk**

Instructor Note: This written test can be given to employees, supervisors, the employer and the company safety committee to reinforce training in “Whose Responsibility Is It.” An answer sheet and a discussion topic is found on page 6B.

In our company, who is primarily responsible for the following safety activities?

- E = Employee
- SC = Safety Committee
- S = Supervisor
- EMP = Employer

- _____ Complying with Safety Rules
- _____ Conducting Safety Training
- _____ Recognizing Others for Safety Performances (Good or Bad)
- _____ Reporting Injuries or Illnesses
- _____ Providing Feedback About Safe Work Procedures
- _____ Enforcing Safety Rules
- _____ Conducting Area Safety Inspections
- _____ Selecting Personal Protective Equipment (PPE)
- _____ Assessing Workplace Hazards
- _____ Reporting Hazards
- _____ Conducting Accident Investigations
- _____ Rewarding Incentives
- _____ Recommending Corrective Actions to Eliminate Hazards
- _____ Demonstrating Safe Work Practices
- _____ Training Safe Work Procedures to New Employees
- _____ Ensuring Safe and Healthful Work Areas
- _____ Monitoring Safety and Health Programs
- _____ Showing Others How to Use Personal Protective Equipment
- _____ Reporting Incidents or Near Misses
- _____ Eliminating or Reducing Hazards
- _____ Developing Safe Work Procedures
- _____ Conducting Job Hazard Analyses

**Supplemental Information For: Whose Responsibility Is It, Continued
Answer Sheet**

Choices

- E = Employee
- SC = Safety Committee
- S = Supervisor
- EMP = Employer

Because each company is different, there are no single correct answers. However, one perspective of primary responsibility recommends one of the following answers:

- E, SC, S, EMP Complying with Safety Rules
- SC, S, EMP Conducting Safety Training
- SC, S, EMP Recognizing Others for Safety Performances (Good or Bad)
- E, S Reporting Injuries or Illnesses
- E, SC Providing Feedback About Safe Work Procedures
- SC, S, EMP Enforcing Safety Rules
- SC, S, EMP Conducting Area Safety Inspections
- SC, EMP Selecting Personal Protective Equipment (PPE)
- SC, EMP Assessing Workplace Hazards
- SC Reporting Hazards
- SC, S, EMP Conducting Accident Investigations
- SC, EMP Reward Incentives
- E, SC, S Recommending Corrective Actions to Eliminate Hazards
- SC, S, EMP Demonstrating Safe Work Practices
- SC, S, EMP Training Safe Work Procedures to New Employees
- SC, S, EMP Ensuring Safe and Healthful Work Areas
- SC, S, EMP Monitoring Safety and Health Programs
- SC, S, EMP Showing Others How to Use Personal Protective Equipment
- E, S Reporting Incidents or Near Misses
- E, SC, S, EMP Eliminating or Reducing Hazards
- SC, S, EMP Developing Safe Work Procedures
- S, EMP Conducting Job Hazard Analyses

Why such emphasis on Supervisors?

WAC 296-800-14020

The employer shall instruct each employee in the recognition and avoidance of unsafe conditions and the regulations applicable to his/her work environment to control or eliminate any hazards or other exposure to illness or injury.

Past WISHA rulings have indicated that:

“Any supervisor or persons in charge of work are held to be agents of the employer in the discharge of their authorized duties.”

Authorized duties include:

- (a) The execution in a safe manner of the work under their supervision;
- (b) The safe conduct of their crew while under their supervision; and
- (c) The safety of all workers under their supervision.”

It makes good sense to hold supervisors responsible for the employees placed under their charge. It builds a sense of teamwork and shared responsibility for safe productivity. Supervisors are generally closer to the employees under their charge and better able to positively influence positive behavioral change.

The Deadly Dozen

We all know that there must be a cause for an accident to happen. In order to avoid accidents, we must remove the cause. Every cause is a result of an unsafe act or unsafe condition. By recognizing the unsafe act or condition, we can effectively remove the exposure to them. The following “deadly dozen” are reminders to help you recognize unsafe acts or conditions.

Guide for Discussion

Unsafe Acts

1. Unauthorized use or operation of equipment.
2. Failure to secure or tie down materials to prevent unexpected movement.
3. Working or operating equipment too fast.
4. Failure to issue warnings or signals as required.
5. Using defective tools or equipment.
6. Removing guards.
7. Improperly using tools or equipment.
8. Standing in an unsafe place or assuming an improper posture (as in lifting).
9. Servicing moving equipment.
10. Riding equipment not designed for passengers.
11. Horseplay.
12. Failure to wear the proper personal protective equipment.

Unsafe Conditions

1. Lack of proper guards.
2. Lack of a proper warning system.
3. Fire and explosion hazards.
4. Poor housekeeping.
5. Unexpected movements.
6. Protruding objects such as nails, wire, or other metals.
7. Improper clearance or congestion at aisles or passageways.
8. Poor placement, storage or arrangement of materials.
9. Hazardous tools, equipment or materials.
10. Poor lighting, high noise levels.
11. Hazardous atmospheric conditions.
12. Improper personal attire.

Additional Discussion Notes:

Remember: Be able to recognize the conditions or acts we just discussed, you can effectively correct or avoid them and reduce your personal exposure to the general causes of accidents.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Why Accidents Occur

Every accident is caused by a breakdown in one of four areas: the worker, the tools used, the materials used, or the methods used. Often there is a breakdown in at least two areas; one being the worker and the other coming from one of the three other areas. The accident's cause usually results from an unsafe act or an unsafe condition. Today we will review some types of unsafe acts, the results from, and unsafe conditions.

Guide for Discussion

Types of Unsafe Acts:

- Operating a tool or some equipment without authority.
- Working at an unsafe speed.
- Using unsafe or defective equipment or using equipment in an unsafe manner.
- Disconnecting safety devices.
- Unsafe unloading, placing or mixing materials.
- Assuming an unsafe position or posture.
- Working on moving equipment.
- Horseplay or distractions; taking shortcuts.
- Failure to wear and use personal protective equipment.

Unsafe Acts Result From:

- An improper attitude.
- Lack of knowledge or skills.
- Reduced mental or physical capacities.

Unsafe Conditions:

- Improper guarding.
- Defective equipment or materials.
- Unsafe working procedures.
- Improper housekeeping.
- Poor lighting or ventilation.
- Improper personal attire (Poor dress).
- No or improper evaluation of site conditions.

Additional Discussion Notes:

Remember: With the issuance of WISHA citations, many of the routine hazards on job sites thirty years ago have been corrected. For example, machines are now significantly protected with guards. However, the bottom line is still the use by each worker of their common sense by avoiding contact with unsafe conditions and by avoiding unsafe acts.

Attendee's:

Reference: ANSI Z16.2-1962 (R1969) code.

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Recognizing Unsafe Conditions

Recognizing unsafe conditions, or hazards in the workplace, is not just a Safety Committee responsibility. It is everyone's responsibility from the most junior employee to the company president to identify hazards and make suggestions on how to fix the problem.

Guide for Discussion

Causes of unsafe conditions or actions:

- Poor housekeeping.
- Horseplay.
- Confused material storage.
- Careless handling of materials.
- Improper or defective tools
- Lack of machine guarding; failure to install warning systems.
- Lack of or failure to wear proper personal protection equipment.
- Weather.
- Worker not dressing for the job to be done.
- Failure to follow instructions.

Steps to take once an unsafe condition is found:

- If possible, correct the condition yourself immediately.
- Report any major unsafe condition or action to the appropriate company authority.
- Follow-up – report the condition again if it is not corrected.

Additional Discussion Notes:

Remember: There are three steps to follow in recognizing unsafe conditions. Look for trouble (the unsafe condition), report it, and act to prevent it from happening again.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Shop Safety

Instructor Note: Perform a self-inspection prior to making a shop safety presentation. Look for anything that is out of place. Check against the Guide for Discussion for items to point out.

Introduction: The safe work practices we do in our shop are often the same practices we take out of our shop and into our homes. What we want to talk about today is what makes shop safety a little different than what we normally do.

Guide for Discussion

Discuss in-shop procedures initiated to ensure that frequent and regular inspections are conducted to identify potential hazards in materials and equipment in the shop by:

- Individuals
- Supervisors
- Safety Committee

Based on self-inspection, identify and point out slip, trip hazards on walking/working surfaces; overhead dangers (like cranes), moving equipment (like forklifts), and general good housekeeping (like slip, trip or fall hazards).

Discuss location of key information including emergency medical plan, hazard communications (MSDS binder), fire extinguishers, fire evacuation signs and routes. Employer posters, Safety Committee meeting minutes posted.

Discuss power operated tools and equipment machine guarding, anti-kickback devices, personal protective equipment that is required to be worn when operating machinery.

Additional Discussion Notes:

Employee qualification program to operate machines requirements (if any).

Self-inspection checklists

Remember: The safe work practices we bring into the shop are often the same safe work practices we take out of the shop onto the job and then into our homes. For example: Just as you wouldn't want a slipping/tripping hazard on a set of stairs, you don't want the same hazard on our shop floor. Think safety.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

What Does An Accident Cost?

Every accident has something in common: It costs everyone involved something. There are direct and indirect costs, both to the employee who was injured and the employer who eventually will pay for the accident. The costs are more than dollars.

Guide for Discussion

Employee Direct Costs

- Lost regular wages and overtime

Employee Indirect Costs

- Mental anguish, physical pain and suffering
- Decreased active participation with their family and friends (It's tough to be at a ball game when laying up in a hospital bed)
- Inability to be productive on or off the job

Employer Direct Costs

- Workers' Compensation claim
- Medical bills
- Associated legal and possible increased insurance costs
- Uninsured property damage costs

Employer Indirect Costs

- Loss of valuable employee with a result of lost efficiency on the job
- Managerial and clerical time expended to handle injury claims
- Time loss wages paid with no work performed
- Hiring and training replacement
- Damaged or destroyed equipment, materials or tools

Additional Discussion Notes:

Remember: The indirect (or hidden) cost in an accident is between three and ten times the actual cost of the claim. But it is not the costs, direct or indirect, that totals the most. More often than not it is the loss of a valuable co-worker or member of a family that causes the most problems for our company.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Near Misses

Most accidents occur as a result of an unsafe condition or unsafe action coming together with a person. The end result is the person gets injured. Often unsafe acts or unsafe conditions have several misfires and the result is a near miss accident or incident. The only difference between a near miss and an accident is luck. Safety conscious companies make a near miss a big deal – so do we.

Guide for Discussion

- Near misses are injuries without people.
- Near misses are not funny; they are often deadly.
- Always report a near miss.
- Take immediate action to prevent a similar near miss.
- If you did not cause a near miss but saw it, discuss it with those involved and your supervisor.
- Obey safety rules and you will decrease the number of near misses around you.

Additional Discussion Notes:

Near miss reporting procedures to the company safety committee. (*) Describe.

Company safety committee responsibility to investigate near miss accidents and make corrective recommendations to management. (*) Describe:

(*) State-mandated requirements.

Remember: Near misses are warnings that something or someone is not performing the job correctly. Always pay attention to near misses. Don't let near misses repeat themselves or you may find yourself or a co-worker being treated for an injury that could have been avoided.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Care For The Injured

The following points should be covered on how to care for the injured after a careful review of your Emergency Response Plan.

Guide for Discussion

Determine the seriousness of the injury:

If Serious:

- Contact Emergency Response Team(s).
- Do not move the injured person.
- Get First Aid trained personnel assistance; ask them to help.
- Keep the injured person from standing.
- In case of bleeding—apply pressure to the wound. Do not use a tourniquet except in cases of excessive bleeding.
- If the injured person has stopped breathing, get someone who has been trained in CPR to help restore the breathing.
- Try to keep the injured person warm.

If Non-Serious:

- Contact the supervisor immediately.
- Do not try to get the injured person to move if a fall is involved.
- Get any First Aid treatment that may be needed. Be sure you know the location(s) of the nearest First Aid kit on the job.

Other Items to be Aware of:

- Report all injuries—even minor ones may become major ones.
- Seek first aid for even minor injuries.
- Be sure the emergency telephone numbers and the location of the nearest cross street are posted in a conspicuous place on the job. Know them.

Additional Discussion Notes:

- Company Emergency Medical Plan including location of nearest telephone, 911 or other system, and nearest cross-street.
- Who is First Aid/CPR trained on the job? *INSERT NAME*
- The First Aid kit is kept where? *INSERT LOCATION*
- The Supervisory person to contact on all accidents/injuries is? *INSERT NAME*

Remember: Be sure to review the locations of First Aid kit(s) and emergency numbers on the jobsite.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Accidents Are Avoidable

Each time someone is injured, we need to ask ourselves “how did it happen?” Accidents just don’t happen, they are caused. Accidents are usually a result of someone not paying attention or not knowing how to recognize a job (or home or automobile) safety hazard. Jobs with effective safety attitudes have about a fifth as many injuries compared to those without the safety attitude. Today we will discuss some general rules to follow and the four hazard avoidance rules.

Guide for Discussion

General Rules

- Learn the safe way to do your job.
- Don’t jump from one elevation to another.
- Don’t work under suspended loads.
- Remove protruding nails or bend them over.
- Keep the work area clear of debris.
- Use the personal protective equipment required for the job.
- Treat all electrical wires as being “live.”
- Use the right tool for the right job.
- Be sure all tools are in good shape.

Four Hazard Avoidance Rules

- Know the safe way to work, and then follow the safe way all the time.
- Maintain safe working conditions – for yourself and others around you.
- Work safely, setting the example, and encourage others to do so.
- Report all accidents and near misses.

Additional Discussion Notes:

- Keep scaffolds free of excess weight.
- Other ways to avoid hazards.
- Report accidents and near misses to Employer.

Remember: Remember to ask yourself if you are following the basic common sense rules? If you aren’t following them, then take the chance and you will have or cause an accident. Keep asking yourself “how can I make my work safer?” Doing so and you’ll probably not have a serious accident, and help prevent a serious accident for a fellow worker.

Attendee’s:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don’t hesitate to contact your Employer.

Listening Safety

Nearly all construction sites are filled with various sounds and noises. Each sound we hear is the result of an action of a worker using a tool or a piece of equipment. In nearly every case, a tool or piece of equipment will signal its breakdown by a change in the normal operating sound. Everyone on site should condition himself or herself to be able to pick up these advance warning signals even when wearing ear plugs or earmuffs. Your individual safety could easily be dependent on your ability to hear approaching danger.

Guide for Discussion

Things Decreasing Listening Safety

- Over concentration on work
- Lack of sleep
- Improper over eating habits
- Use of alcohol or drugs (both legal and illegal)
- Poor work place ventilation
- Loud radio's; individual radio with ear plugs

How to Improve Listening Safety Habits

- Become acquainted with the proper operational sounds of equipment and tools
- Listen closely to instructions. Ask questions if instructions are unclear or confusing
- Stay alert

Additional Discussion Notes:

Company policy on job site radio's *Insert Company Policy.*

Remember: Although it may be easier to see danger than it is to hear it, your ears are able to perceive warning signals from all around you. Your eyes are only good in the direction you are looking. Fine tune your ears and you can fine tune your exposure to danger and injury.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Accident/Incident Reporting

Instructor Note: Before you start to talk, determine who the accident or incident information should be reported to (don't forget the company Safety Committee) and who will fill out the Injury Report in the company office.

The following points should be covered in discussing the importance of reporting and investigating accidents, incidents or near miss accidents:

Guide for Discussion

Always report any accidents or near misses to Employer.

Any injuries needing first aid or medical attention should be reported to Employer.

What employees do in the case of an emergency (first aid and calling for an ambulance)?

Where is the nearest hospital? What is the nearest cross street? (**Note:** Discuss the information necessary to direct an ambulance to the worksite.)

Who are the first aid qualified people on the job site?

Anyone witnessing an accident should report what he or she saw to Employer.

All accidents involving medical treatment should have an investigation conducted to determine the cause.

Additional Discussion Notes:

Remember: Always report any unsafe condition or unsafe acts, no matter how minor, to your Employer. It's far better to prevent accidents than it is to report, investigate, deal with the workers' compensation carrier, and have the loss of a valuable employee.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact *Employer*.

Incident/Accident Report

Immediate Supervisor should complete this form properly with worker input.
Please print clearly and report all incidents as soon as possible.

Injured Worker: _____

Occupation: _____

Where Injury Occurred: _____

Date/Time: _____ (AM/PM)

Type of Injury: _____

Treatment: _____ None _____ 1st Aid _____ Doctor _____ Hospital

Witnesses: _____

Describe Incident/Injury: _____

Identify Cause: _____ Work Habit _____ Rule Violation _____ Other (If Other, Describe)

Caused by Faulty Equipment? If So, Identify:

Did Previous Injury/Condition of Worker Contribute? Explain:

If Incident Was Caused By A Person Not Employed By Us, Who?

Name: _____

Phone: _____

Address: _____

Action Taken to Prevent Similar Occurrence:

Date: _____ Injured Worker Signature: _____

(If Available)

Date: _____ Supervisor's Signature: _____

Safety Is Common Sense

According to safety professionals, four of five serious injuries are the result of workers not being sensible on the job and taking unnecessary chances. Common sense on the job is irreplaceable. Most of us have worked around people that are accident prone. They aren't jinxed; they aren't very common sense smart. Today we want to talk about using common sense to avoid accidents in the workplace.

Guide for Discussion

Common Sense "Smarts"

- Always wear the proper personal protective equipment.
- Don't over exert yourself – get help with heavy tasks.
- Don't over extend yourself when on ladders – and risk losing your balance.
- Always use the proper tool for the job.
- Concentrate on your work.
- Look for unsafe acts or unsafe working conditions – and then report them.
- Watch out for others – remember you are part of a team.

Ask the following questions before you begin to work:

- Are the conditions safe to do the work?
- Are the methods we are going to use safe?
- Does everyone know what to do?
- Does everyone know how to do it?
- Can I fall, get struck by, get caught between or under, or get electrocuted on this job?

Additional Discussion Notes:

Remember: By remembering and following common sense rules and by asking yourself about the conditions, methods, job site hazards and knowing what to do, you should be able to decrease your chances of being injured. Be "common sense smart" and prevent accidents, not cause them.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Keeping In Shape

Staying in shape is one subject that is rarely discussed when safety is the topic. However, a person who stays in good physical condition is less likely to be involved in an accident. They are usually more alert, less subject to the adverse effects of weather and generally able to react more quickly to changing conditions on the job. That is why this is an important subject.

Guide for Discussion:

Staying in Shape Reduces Injuries by:

- Reducing the effect that adverse weather has on your body.
- Reducing the effect of minor injuries. A body in good condition will usually repair itself much faster.
- Substantially reducing exposure to minor sprains, strains and muscle pulls. Most people in good shape rarely strain or pull muscles.
- Cutting down the exposure to normal illnesses. The percentages of those people who are in good shape getting colds and the flu are lower. A person in good shape can better fight the germs causing the illnesses.
- Being more alert to job site conditions.

How To Stay In Shape:

Exercise regularly.
Eat right.
Get plenty of rest.
Avoid overindulging in sweets, alcohol or food.
Diet when needed to maintain recommended body weight.
Avoid smoking. Smoking cuts down circulation making cold colder, hot hotter, and injury recovery longer.

Additional Discussion Notes:

- The importance of eating breakfast; having a snack around mid-morning to be alert.
- *Insert Company Policy* on smoking on the job.

Remember: Few people will dispute the fact that when you physically feel good, your attitude is also good. You are able to avoid illness and can react quicker to dangerous situations. It is far better on your body to stay in shape since it places less strain on your muscles and your heart. Keeping in good shape makes good sense, and good sense is the cornerstone to safety.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Warming Up

Introduction: “Construction is an athletic event” The importance of being warmed up prior to starting construction work (or any work involving heavy lifting) is just like getting ready for a sporting event. Stretching is a means to avoid the most common body sprain/strain injuries. Stretching before lifting is especially helpful to avoid back injuries. According to safety experts, over half of all workers’ compensation claims and costs were due to sprain/strains.

Guide for Discussion

Overexertion effects:

Backs; Trunks (Waist, Hips); Knees; Shoulders, Arms and Elbows

The hardest injury to live with is a back injury; once you are injured expect repeat injuries. One professional study indicates that once you do injure your back, you are five times more likely to suffer a re-injury.

Stretching: Brick masons working a major project (Intel Ronda Acres in Hillsboro, Or.) demonstrated that those who stretched before starting work didn’t have any back sprain/strain or lifting injuries.

Helpful Hints:

Go into stretching with a relaxed and open mind.

Stretch to the point where it is comfortable, not painful.

Do not strain when you stretch – straining keeps the muscle from relaxing.

Concentrate on the muscle being stretched – think about the good feeling of a proper stretch.

As the feeling of the stretch changes to a mild stretch, stretch a little further, comfortable with no pain.

Don’t bounce when you stretch. That can cause injuries.

Always stretch to the tight side first.

Breathe with a slow, normal rhythm. Do not hold your breath.

Additional Discussion Notes:

Demonstrate proper stretching exercises.

Remember: Construction is an athletic event. Stretching before you start work will make your job easier and helps prevent injuries on the job. Try it at home too.

Attendee’s:

NOTE: Always promote a discussion of any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don’t hesitate to contact your Employer.

Proper Lifting

Introduction: Most of us forget the importance of our backs for the enjoyment of a normal, happy and successful life. However, the back contains one of the most critical muscle groups in the body, as well as the spinal cord and associated vertebrae and disks. Everyone working in the building industry must lift materials to either put them into place or to expedite from one location to another. Back injuries are cumulative; a lot of small injuries lead up to the big one. It is, therefore, important to remember the key elements of proper lifting.

Guide for Discussion

Preparing to Lift

- Do you need help? Get help if needed (more people, lift equipment).
- Do you need to stretch before preparing to lift?
- Determine the load capacity.
- Determine your ability to handle the load.
- Wear safe shoes.
- Wear gloves to protect your hands if the surface is rough.
- Make sure you have a clear walkway.

Making the Lift

- Center the load between your legs or shoulders
- Always bend with your legs.
- Keep your back straight.
- Lift with your legs (You can feel your leg muscles doing the work).
- Keep the load close to your body. (Hug the object you are lifting.)

Moving the Load

- Keep your back as vertical as possible.
- Keep the load close to you.
- Don't twist your body – move your feet.
- When lowering your load, bend with the knees and keep the back straight.

Remember to follow these rules of lifting and you will give your back a break rather than breaking your back.

Additional Discussion Notes:

Remember: The only thing you'll prove by lifting more than you should is that your back is a poor substitute for a forklift. Think before you lift—everytime.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Horseplay

Introduction: Nearly everyone has heard a practical joker say “This one is gonna kill ya.” Well, hopefully it never will. However, practical jokes invite danger. The building trades industry is potentially dangerous and anything that unnecessarily increases the chance of an injury must be eliminated. Horseplay benefits no one and usually only builds up resentment and fosters retaliation. Practical jokes should be discouraged. At some point, if they continue they need to be reported.

Guide for Discussion

Examples of Horseplay

- Scaring someone.
- Air hosing someone.
- Wrestling with someone.
- Boxing.
- Goosing.
- Dropping objects next to someone.
- Throwing water on someone.
- Throwing objects or tools at someone.
- Placing tacks under someone.

Additional Discussion Notes:

Can you think of other examples?

What are the adverse (bad) consequences of horseplay?

When is it appropriate to report horseplay to supervisors?

Remember: Practical jokers can not guarantee the success of their jokes. They can guarantee that they increase the chance of an accident occurring. Imagine a joke that backfires, resulting in an injury or death to a co-worker. Do you want any part of that? It's easy enough to get hurt on the job as it is. Let's not increase anyone's chances.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Short Cuts

Question: (Yes/No answer) Nearly everyone we know uses short cuts to get the job done?
Answer: Generally yes.

However, there are some reasons not to use short cuts. As we all know, a project is completed by use of certain construction methods. Short cuts usually modify methods and as a result, decrease the safety built into proven methods.

Guide for Discussion

What are some ideas to keep in mind when doing short cuts?

- Everyone uses short cuts
- They can be dangerous
- Sometimes they are deadly
- Our company is willing to take the time necessary to do a job properly
- Heights increase the dangers of short cuts
- Excavation and tunnels increase the dangers of short cuts
- Warn those using unsafe short cuts of the hazards associated with short cuts.

Additional Discussion Notes:

Short cuts can really hurt our customers and our profits. Name some examples you have seen on the job.

Remember: Although we all use short cuts in our daily routines, we must be aware of the dangers that short cuts expose us to. There are two ways to perform a work task. Often the safe way is not the fastest or easiest way.

Attendee's:

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Protecting the Public

One social critic pointed out that in the late 1990's the United States has four percent of the world population, and half the world's attorney's. In today's legalistic society with the laws of civil liability and negligence being what they are, all construction companies need to take seriously steps to protect the public. It doesn't really accomplish anything if we protect the public after an accident; their lawyer will have a field day in court at a cost to us and the future of our company.

Guide for Discussion

- Efforts to protect the jobsite should be directed toward the young. (Many liability claims come as a result to injuries to youths that gain access to a jobsite after hours or on weekends.)
- Inform the police of the normal hours of work and ask that they regularly patrol the site after working hours.
- Have workers report changes in the work conditions that may require additional protective measures.
- If possible, fence in the site using plywood or chain link fences, keep the site well lit at night, or provide for a night guard (including using an injured worker in an ERTW status).
- During working hours, don't let unauthorized personnel on the site without an escort.
- Always rope off or barricade excavations; protect against fall exposures.

Additional Discussion Notes:

Consider not installing risers and tread on stairways until after the doors and windows are hung to keep unwanted visitors out of the second or third floors.

Guardrails are an important fall protection on stairways and landing platforms. What do we do to insure guardrails remain functional?

Remember: In all situations of public exposure, it is important that steps are taken to eliminate the exposure of the public to injuries on your jobsite. In defending a suit against the company, good faith efforts can go a long way to protecting the company.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Children And Construction

Most construction sites are like oil and water for children; they don't mix. Conversely, like iron and a magnet, children are attracted to any type of construction. Children like to explore.

Guide for Discussion

Some general observations:

- Children don't recognize hazards as well as those who work on site.
- Locked equipment may still be a hazard.
- All excavations are potential forts or swimming pools.
- Scaffolds become gym sets.

Discouraging children:

- Don't allow children on site during the day.
- Erect a site fence.
- Mark excavations with signs or guard or both. (Remember: Fall protection rules.)
- Group and lock up equipment at night.
- Post "No Trespassing" signs.
- Ask for regular police patrols to check out your jobsite. If necessary, post a guard.

Additional Discussion Notes:

Remember: Most children will respect the builder's wishes and stay out. But some will not and these are the ones that can get hurt or hurt your project from a vandalism standpoint. Experience indicates that those who have had a child injured on their sites find it can be quite a burden on one's conscience. We don't want that to happen on our job sites.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Vehicle Operations

Most construction sites never have all the site space that they need to move vehicles in and around. This is especially true with new subdivisions. Therefore it is important that all the space we have is conserved and used to its maximum. We can reasonably expect congested traffic and an increased likelihood of a vehicle related accident.

Guide for Discussion

- Always keep the vehicles and equipment in good running conditions. This includes brakes, lights, turn signals, and back-up alarms if so equipped.
- Any loads extending past the vehicle body must be tagged.
- No employee should be allowed to ride the load or exterior of any vehicle not designed to transport personnel.
- Always give the right-of-way. Don't worry about who should go first, rather who is the safest.
- Avoid backing in vehicles; when you have to, have front and rear ground guides.
- Report any unsafe road conditions to your fellow employees and supervisor(s).

Additional Discussion Notes:

Note: If workers can expect to be around heavy equipment, see Heavy Equipment or Heavy Equipment Hazards for more information.

- If the worksite is going to be very busy, what is the policy on use of a spotter (ground guide) to direct delivery vehicles?
- What is the *company policy* on parking individually owned cars and trucks around the workplace?

Remember: Unsafe acts when compounded by the force of large vehicles can result in severe injuries and expensive repair or damaged material bills.

Attendee's:

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TRAFFIC CONTROL

Almost every job at one time or another needs traffic control. This often involves the use of a flagman and signs. In short duration situations flagmen are preferable to signs since they can react to any changes in site situations. Signs are however, a suitable solution to an extended traffic control problem.

It should be remembered that the intent of traffic control procedures is to prevent a tie-up in the operation of the construction project and to allow the general public to move as efficiently as possible around the construction site. It is important that all flagmen remember that they represent the company and will come into contact with many people while flagging. Therefore be courteous at all times.

Guide for Discussion

Is the flagman trained and certified?

Set-Up

Pre-plan the entire traffic control operation.
Have the flagman knowledgeable of all construction operations to occur.
Clearly mark all changes or detours.
Enforce all changes and detours.

Flagging Operations

Be sure the traffic can see you.
Wear an Orange safety vest.
Use a flag.
Wear suitable shoes.
Be dressed neatly (to reflect a good public image)
Wear a hard hat
Never turn your back on the traffic
Always be courteous but firm.

Additional Discussion Notes:

IDENTIFY CERTIFIED AND TRAINED COMPANY FLAGGERS

Remember: The flagman has a responsibility to protect the general public as well as those at work on the construction site. Pay attention to what is going on around you.

Attendee's:

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BARRICADES & WARNING DEVICES

Two types of construction work, which usually require a great deal of public protection, are new residential developments and highway work. Both should require modifying the existing traffic patterns and more importantly the existing driving habits of the public. Today we will discuss the use of barricades and signs.

Guide for Discussion

Types of Accidents

- Collision with construction equipment such as forklifts or trucks.
- Collision with other vehicles.
- Pedestrians (both construction workers and visitors) falling into excavations.
- Driving into excavations.
- Driving into work areas.
- Loss of control of vehicle due to changes in road conditions.

Types of Warning Devices

- Signs
- Cones
- Drums
- Barricades
- Channeling devices such as barrier walls
- Flashing lights

General Rules

- Give the public plenty of warning by use of signs
- Make sure warning devices can be seen and are effective
- Use flagmen on narrow passages, one way passages, or when construction vehicles will be interacting with the public traffic flow
- Maintain all barricades and signs
- Give the construction area a buffer area
- Be sure you clearly mark the beginning and end of the construction area.

Additional Discussion Notes:

Remember: There are numerous specific rules for signs, barricades and warning device usage. It is important we use all the types of warning devices we have to protect us and the public around our construction site(s).

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Effects of Weather

There is one element in the construction business that we have no control over—the elements—the weather. However, we can control how the weather affects the safety of a project.

Guide for Discussion

Wind:

- Can blow dust in your eyes.
- Can blow materials and people off scaffolds, roofs or higher floors.
- Can blow down poorly braced formwork or newly framed walls.

Lightning:

- Often electrical storms occur without any rain. Therefore are very dangerous.
- Be sure to stay away from any type of tall object.
- If working around iron or rebar and lightning is seen, clear the area.

Rain, Sleet, Ice and Snow:

- All four are wet, some are cold, and all can cause slips, trips and falls.
- Snow, sleet and ice can cover floor openings and cause more slips, trips and falls.
- Mud can result in pulled muscles from straining.
- All four can ruin construction materials.
- Water, ice and snow can affect trenches and other excavations. Closely inspect all excavations to determine how the weather is affecting them.
- Water, when it accumulates on a jobsite, increases the chances for electrocution.

Additional Discussion Notes:

- What other weather elements can adversely affect the jobsite?
- What our policy is when working in high areas to tie down equipment or people? *DESCRIBE*
- *Who* has the authority to shut down a job because of the danger of high winds?

Remember: When dealing with the weather and the effects of it on a construction project, use common sense and try to minimize the adverse effects.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Heat Exhaustion/Sunstroke

Washington is known for its extremes. During summer months we can be exposed to heat exhaustion. Excessive heat causes accidents in many ways. It becomes more difficult to concentrate on the job, you sweat, you get tired and nervous, and begin making errors in judgment. When the temperature exceeds 90o, everyone needs to be aware of the danger signs.

Guide for Discussion

How to prevent heat exhaustion:

- Avoid consuming alcohol and ice water while working.
- Drink plenty of cool fluids; citrus or fruit juices work best.
- Avoid heavy, fatty-type foods.
- Wear light, loose clothing.
- Avoid fatigue; get plenty of rest.
- Replace lost body salts.
- See a doctor if you are not feeling well.

How to recognize heat exhaustion:

- A person is dazed, staggers or becomes dizzy.
- There is a feeling of nausea or vomiting; the person also can feel chilly.
- Their face looks pale.
- There is a weak pulse and body temperature is below normal.
- A person is lying out unconscious.

What to do:

- Call for emergency medical assistance. (Review "Care For The Injured")
- Keep the victim lying down with their head lower than their feet.
- Loosen the victim's clothing.
- Keep the victim warm. (Remember, one of the results is the person feels chilly.)
- Give fluids if possible. Avoid ice water and alcohol. Salt solutions are best.

Additional Discussion Notes:

Remember: Both heat exhaustion and sunstroke are serious matters. In both cases, the body is reacting to a life threatening situation. Do not take chances. Should you begin to feel ill, take a break and drink some cool (not ice) water or something else other than an alcoholic beverage. Both injuries frequently cause a lack of consciousness; in our business, that can lead to a serious injury.

Attendee's:

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Dressing For Winter Work

During cold weather, it can have a chilling effect on the senses to see, smell, and feel. It is usually difficult to be productive when you are cold. Therefore, it is important to dress for the weather conditions found on the jobsite.

Guide for Discussion

- Always dress in layers with the outer layers being rather loose and the inner layers being somewhat tighter (to trap body heat).
- Do not over bundle.
- Use the outer layer of clothing as a windbreaker. This will make the layers underneath more effective.
- Minimize sweat. If you begin to get hot, take a layer off. Try to avoid getting your clothing wet. Once wet, they will not serve as good protection from the cold.
- Wear head protection. This will increase your overall warmth. Over half of the body's heat loss comes from the head.
- Be sure to properly protect your feet. Unless you are moving around, your feet will feel the effects of the cold first. Wool socks help, but 4-buckle overshoes can provide better protection.
- Gloves are very important. Most often a thin pair of wool gloves under a pair of leather gloves will provide the best protection.

Additional Discussion Notes:

Remember: Don't overdress. This can restrict your movements and increase the chances of an accident. The shock effect resulting from an accident in cold weather can be much more dangerous. Should an accident occur in cold weather, it is critical that the injured person be kept warm.

Attendee's:

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Clothing

The proper work clothing can make a job a lot easier. Most workers never really think much about what they are wearing, but they should. It is very important to dress for the weather since most of the work is done outside or in areas without any climate control.

Guide for Discussion: The following items should help each worker how to dress properly:

Weather

- Know the day's forecast.
- Be prepared to add or subtract clothing.
- Never work without your shirt in summer.
- If you begin to overheat, don't take off more clothes. Instead, slow down your working pace.
- In winter, try to avoid getting wet by wearing the proper clothing.

Proper Clothing – Head to Toe

- A Hard Hat when required; soft cap during winter months.
- Eye protection of either safety glasses or safety goggles (or safety shield).
- Long or short sleeved shirt depending on the weather.
- Long pants always – wearing short pants can be dangerous if you are light skinned.
- Thick socks.
- Safety shoes.
- Work gloves.

Watch for the Following

- Dirty clothes – keep your clothes clean and free of grime and bacteria.
- Keep oil and chemicals off of your clothes—don't be a human torch.
- Don't wear pants with cuffs on them.
- Missing buttons, rips and tears can increase the chances of cuts, bruises and other injuries.
- Loose garments tend to get caught easily.
- Belts, ties and other accessories.

Additional Discussion Notes:

Company Policy on wearing hard hats, eye protection, shirts/long pants.

Remember: Since we generally must work in our clothes all day, every day, it makes good sense to wear the proper type of clothing to keep us as comfortable as possible.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Head Protection – Hard Hats

There are some practical reasons for wearing a hard hat. They help keep your head cooler in summer; dry during rain; and helps shield your ears from noise. But the main reason to wear a hard hat is that it protects the control center part of your body—your head.

Guide for Discussion

What a Hard Hat Does

- Protects you from falling objects.
- Protects your head in case of a fall or bump's into machinery, ductwork and the like.
- Protects you from electrical shocks and burns if it's a non-conductive hat.
- It is a neat place to put stickers and decals, especially first aid trained or safety committee member.

Proper Care. In order for your hard hat to take care of you, you need to care for your hat.

- Always keep your hard hat properly adjusted.
- Do not cut, bend or heat the hard hat.
- When you see deep gouges or cracks in the shell, or the hat color turns dull, its time for a new one.

Proper Wear.

- Do not wear it backwards.
- Don't put anything inside your hard hat except your head.
- Don't try to substitute it for a "bump cap." The bump cap will not provide adequate protection from falling objects; just isn't strong enough.
- It is not a stool or a step; doing so weakens the shell of the hard hat.

Additional Discussion Notes:

What is company policy on wearing hard hats? *INSERT POLICY*

When working on scaffolding and exposed to falling objects, a hard hat must be worn.

Remember: The average hard hat weighs about 14 ounces. The average head weighs about 14 pounds. That's about one ounce of protection for each pound of head. A small price to pay to protect the control center of your body.

Attendee's:

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Eye Protection

The protection of your sight requires three extremes: extremely easy, extremely important, and too often, extremely forgotten. Once you have lost an eye or your ability to see, it's too late. Protecting your eyes is the easiest thing to do, if you care about your eyes.

Guide for Discussion

Types of Eye Injuries

Small flying objects such as dust or other microscopic objects.

Particles resulting from chipping, grinding, sawing, brushing, hammering or using power tools (including nail guns). (These items move with the speed of a bullet and can permanently damage your eyes.)

Liquids such as chemicals, tar, asphalt solvents, paints or masonry cleaning solutions.

Invisible light rays such as those generated by welding operations or by a laser beam.

Methods of Protection

Safety glasses
Safety goggles
Face shields
Welding hoods

Additional Discussion Notes:

Remember: There are all kinds of safety glasses or goggles available on the market; some are really cool. Eye injuries occur in a split second. Don't blind yourself to the necessity of protecting your eyes

Attendee's:

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Foot Protection

Foot protection is probably about the least talked about type of personal protection. Nevertheless, it is still an important safety topic. One nail puncture could cause weeks of lost time off the job.

Guide for Discussion

Characteristics of a Suitable Boot

- Puncture resistant soles.
- Steel toes.
- Boot extends above the ankle.
- Sole provides good traction.

Type of Injuries Commonly Resulting from Poor Footwear

- Punctures from nails and tie wire.
- Bruises of the foot.
- Unsure footing.
- Blisters.
- Body fatigue.
- Mashing of foot resulting from dropped objects.

Other Acceptable Footwear

- Buckle Overshoes – for work in mud, water and concrete. (*)
- Knee and Hip boots – for work in deep water and mud.

(*) Encourage use of rubber boots when placing concrete. Sometimes we forget concrete can cause severe burns if it comes into contact with the skin for any length of time.

Additional Discussion Notes:

What is the company policy on wearing sandals or tennis shoes on the job? *INSERT POLICY*

Remember: Almost all of us work on our feet or at least use our feet to get to work. Doesn't it make sense to take good care of our feet in order to insure that they are able to get us to work?

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Hand Protection

Someone commented that the “hands and fingers are the instruments of the mind.” If that is true, it must become very difficult to be productive when your hands are injured or lost as a result of an accident. Whatever the construction craft, a worker must be able to use both hands in order to get the job accomplished.

Guide for Discussion

Causes of Hand Injuries:

- Inattention.
- Taking chances.
- Exposure to rough materials.
- Stacking of heavy materials (i.e., getting your hand or fingers caught between materials).
- Cut by sharp objects.
- Mashed (or hit by) tools.
- Burns.
- Caught in machinery.

How to Protect Your Hands:

- Wear gloves whenever possible.
- Pay attention to the task being performed.
- Use the proper tools.
- Make sure any equipment used has hand guards in place.

Additional Discussion Notes:

Remember: Should any injuries occur to your hands, be use to get immediate treatment. Without treatment, a minor cut can turn into a major problem with infection. Your hands may look tough, but when you get scratches, cuts, bruises or mashed that seriously injure your hands, you take a chance of losing them. In this business you can't work without them.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Personal Protective Equipment -- Concrete Construction

Concrete construction has unique requirements for the need of personal protective equipment (also called PPE). Today we are going to discuss the various types of PPE and why.

Guide for Discussion

Construction Common

Some sort of head gear. If there is a danger of falling objects, wear a hard hat. If working in cold weather, wear a hat to keep the body warm.

Eye protection. Wear safety glasses or goggles when pouring concrete. That way any splashing concrete stays out of your eyes.

Gloves. It makes common sense to protect our hands as much as possible. Wearing gloves protects against scratches and cuts and possible infection because of the chemicals used in concrete.

Long sleeve shirt/pants. This keeps concrete from splashing on your body. You can avoid burns that way.

Concrete Unusual

One vital piece of PPE is kneepads. Since concrete finishing often exposes knees to additional wear and tear, it makes sense to wear kneepads designed to take the stress rather than scraps of insulation held on by duct tape.

Rubber Boots. If wet concrete comes into contact with the skin for any lengthy period of time, we can get severe burns. Besides, it is easier to wash off rubber boots than to wash off and have wet feet with regular boots after pouring mud.

Additional Discussion Notes:

Remember: Just like roofers have to wear a full body harness, concrete workers need to protect themselves. Unlike roofers protecting against a fall, we have to protect ourselves against additional wear and tear on our bodies.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Knee Pads

Construction workers (and especially roofers) are prone to have knee problems. We bend our knees almost as much as we bend our backs and then at the end of the day, complain about our aching bodies. Just as we must be careful in lifting, we must be careful in bending. To assist in saving our bodies, think about using kneepads as an important part of personal protection equipment.

Guide for Discussion

Do we have exposure to knee injuries?

Is there a way to “engineer out” the constant knee bending situations on this job?

What are appropriate times and places to wear kneepads? Discuss as needed:

- Concrete Finishing
- Decking work
- Roofing work
- Finishing work
- Electrical or plumbing work
- Welding
- Millwrighting or other mechanical type work

Is using a piece of insulation and duct tape an acceptable means of protecting knees?

Improper use examples:

- Binding straps too tight (cutting off circulation)

Additional Discussion Notes:

Are we using kneepads that can work when wearing double kneed work clothing?

Remember: It only takes a moment to strap on kneepads or wear them in double kneed work clothing. Over time, kneepads will save you from permanent injury from working while on your knees, and it is more comfortable for you when getting the work done.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Respirators

Instructor Note: Prior to making a safety presentation, obtain and review your company respirator protection program.

Our company has developed a separate respirator protection program. It is an important program because of the exposures we face in the workplace. We want to protect your body and lungs.

Guide for Discussion

Generally:

- ◆ No respiratory program is required when filtering-facepiece respirators are the only respirator used and they are used voluntarily.
- Respirators will be worn when the employee is exposed to hazards such as fumes, gases, mists, vapors and sprays
- Fit testing shall occur prior to allowing an employee to wear the respirator.
- Employees should be fit tested at minimum of annually to ensure the employee is putting on the respirator properly.
- Respirators shall be kept in a sanitary condition, covered at all times when not in use.
- Respirator training should be conducted prior to wearing the respirator for the first time.

Company Specific: We want all our line employees to:

Inspect the respirator before each use.

Know how to properly don/fit their respirator.

Conduct a positive pressure or negative pressure check with each use.

Report any and all problems to your supervisor.

Take proper care of the respirator.

Never hang respirator on a nail or leave exposed to dust.

Additional Discussion Notes:

Company Respirator Protection Program notes: *Detail Specific Comments*

Remember: The reason we wear respirator is to protect our lungs and bodies against hazardous fumes, gases, mists, vapors or sprays.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Housekeeping

Lack of proper housekeeping on the job is one safety hazard common to all construction projects until after final cleanup. Good housekeeping is one item that can help improve not only the safety on the job, but also the morale and productivity of the job.

Guide for Discussion

The following "General Rules" should be covered in any discussion on housekeeping:

- Keep scrap lumber with protruding nails separate from other debris;
- Bend nails over or remove from lumber.
- Keep all waste debris in neat piles and away from the immediate work area.
- Remove debris from the job on a regular basis.
- Keep aisles, stairways and walkways clear.
- Store materials only in their designated areas.
- Place trash barrels where needed to eliminate food rubbish.
- Keep tools and equipment stored neatly.
- Keep extension cords from being across walkways. If necessary, run them overhead; same applies to air compressor hoses.
- Don't let trash and debris build up. If it does, make an extra effort to get it cleaned up.

Good Housekeeping Can:

- Prevent minor injuries like cuts, punctures, slivers;
- Prevent major accidents like slips, trips, falls and fires;
- Increase job productivity by speeding up the movement of workers and materials on the job;
- Keep compliance inspectors from visiting the job.

Additional Discussion Notes:

When doing tear-off's or out's, no material shall be dropped to any point lying outside the exterior walls of the structure unless the area is effectively protected. (See Trash Chutes for more information.)

Remember: Good housekeeping aids everyone and makes it easier for everyone to do their work safely and with more pride.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Trash Chutes

(Instructor Note: See WAC 296-155-785)

Trash chutes (also called disposal chutes) are commonly used on high rise projects. They are also used by remodeler's and roofers to keep their job sites cleaner and safer.

Guide for Discussion

No material shall be dropped to any point lying outside the exterior walls of the structure unless the area is effectively protected.

Whenever materials are to be dropped in an unprotected area an enclosed chute will be used.

The chute should be fully enclosed on all sides. See WAC 296-155-785.

Never allow someone using a chute to be subjected to material falling from above.

Be sure the chute door can be securely latched in a closed position.

Be sure all debris is collected into a suitable container (i.e., trash barrels, back of a dump truck).

Never allow debris to fall into an unguarded or unsecured area.

Never allow debris to accumulate to overflow.

Keep a fire extinguisher near the trash accumulation area.

Never put solvent, oil, flammable liquids or materials soaked with any flammable liquids into a trash chute.

Be sure the chute is properly guarded with standard guardrails. (See Guardrails "Tool Box Talk" on page 55.)

If attached to a wall opening, standard guardrails, a safety net system or a personal fall arrest system (PFAS) must be used.

Additional Discussion Notes:

Chutes shall be designed and constructed of such strength as to eliminate failure due to impact of debris or other materials loaded on them. In short, don't use a 1x6 when 2x6's are needed.

Where debris is dumped from a wheelbarrow or other mechanical equipment, a toeboard or bumper not less than four (4) inches thick and six (6) inches high will be mounted at each chute opening.

Remember: The use of trash chutes can greatly improve the housekeeping of any construction project. But unless the chutes are properly constructed and used, they will do nothing but create additional hazards for the workers. Be conscious of what you are doing around a chute.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Material Storage

Proper material storage is a vital part to every construction site and to good site housekeeping. This is especially true with finish hardware since it can take so long to receive the materials from the supplier after the order is placed. It also makes good sense, since materials have to be stacked and placed properly, to do it so you can access the materials easily and safely.

Guide for Discussion

Poorly stacked materials are dangerous to anyone around the jobsite.

Keep aisles and passageways clear; never store materials in such a way as to block either.

Never store materials within six (6) feet of a hoistway entrance, floor opening, or at second floors and higher.

Segregate incompatible materials. Don't stack flammables next to combustibles.

Never store more materials than are to be used immediately on scaffolds or runways.

Remove all nails from lumber stacks.

Block all cylindrical storage areas to prevent spreading or tilting.

When possible, cross-tie tiers of a material to increase support.

If heavy materials or large quantities of materials are to be stored on floors above grade, know the load limits of the floor and don't exceed them.

Additional Discussion Notes:

Remember: One way to increase efficiency and safety on the job is to store materials correctly the first time. It just makes good sense.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Material Handling

Proper material handling is part of the successful working of any job. Material handling is also potentially dangerous to those moving the materials from the delivery vehicle to its storage place.

Guide for Discussion

Material Storage

- Ensure that floors can handle the storage loads.
- Keep materials six feet away from open floors or landings; ten feet away from the exterior of the building.
- Keep all aisles and passageways clear.
- Do not store non-compatible materials together. For example, gas containers and bulk lumber do not mix.

Proper Lifting Techniques

- Know your individual lifting capacity.
- Know the capacity of the load to be lifted.
- Avoid over-extending or twisting your back.
- Use your legs to lift – keeping your back straight - with the load close to your body.
- Get help if needed.

Additional Discussion Notes:

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

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

The Spotter

With the high level of material delivery on a construction project and with delivery trucks generally required to back on the site, it becomes very important for the safety of workers and the project to provide spotters. Today we will review what the spotter should be doing and looking out for.

Guide for Discussion

A spotter should always be used any time a vehicle with restricted view is on-site.

A spotter should always:

- Look out for themselves.

- Look out for others.

- Make sure the delivery vehicle is not damaged.

- Make sure the project and project materials are not damaged.

- Give clear and understandable signals.

- Never pass out of view of the driver without stopping the vehicle.

If you must go directly behind a vehicle, keep one hand on it so that you can immediately sense any movement of the vehicle.

Always signal on the driver's side.

Be consistent in giving signals.

Use hand signals.

The spotter must watch where they are walking.

Additional Discussion Notes:

Remember: It is the responsibility of the spotter to get the delivery vehicle on and off the construction site without injury or property damage. This is a big responsibility—no one should take it lightly.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Signaling Techniques

Proper signaling can greatly increase the efficiency and productivity of a construction project whether it is guiding a delivery vehicle, a forklift or a crane. Improper signaling can kill or injure workers as well as cause severe property damage on a project. The following points are recommended discussion points when discussing signaling.

Guide for Discussion

Know the signals. If you have to, get with the operator and coordinate what signals mean.
Allow only one person to give signals.
Be sure the operator knows who the signal person is.

The signal person must:

- Always be in a position to see both the operator and the work area.
- Always watch the load; the operator must watch the signal person.
- Not move a suspended load over workers.
- Always warn workers when loads are being moved in their area.
- Watch for overhead power lines and any other obstructions.

Remember the proper type of signaling operation – for a truck, forklift or crane.

Additional Discussion Notes:

Remember: It only takes one small mistake on the part of the signal person to cause a severe injury or major property damage. Make sure you and the operator understand each other and the signals to be used.

Attendee's:

NOTE: Always promote a discussion of any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

The Right Tool for the Right Job

We are seeing the construction industry become more and more sophisticated with new construction techniques. However, in residential construction, the same tools that were used fifty years ago are used today although with some improvements. One way to get injured on the job is using the wrong tool for the job. Two important points to remember when using hand tools is the selection of the tool for the job and the use of the tool for the job.

Guide for Discussion

Some key points to remember:

Misuse Resulting From:

- Ignorance.
- Poor attitudes.
- Production demands.

General Points:

- Keep your tools clean and in good condition.
- Chose the right tool for a specific job.
- Never use a tool not designed for the job you are doing.
- Never carry tools in your pockets.
- When chipping or cutting, wear eye protection.
- Be wary of the effect of your actions on other nearby workers.
- Use a pulling motion to operate hand tools rather than a pushing method.
- Never leave hand tools in areas where they may be kicked off onto lower levels or where they may be a tripping hazard.
- Never improvise.
- Don't adapt or use "cheaters."
- Never remove an electrical cord by jerking it; pull it away from power by the plug.
- Always be sure that power tools are electrically safe.

Additional Discussion Notes:

Remember: The use of hand tools effects the daily lives of all construction workers. As a result, it is necessary that everyone be aware of safe hand tool practices and follows those practices.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Hand Tools

Without the use of hand tools, the completion of a construction project would be nearly impossible. Yet, as vital as they are, they are often the cause of serious accidents. All too frequently, hand tools are used improperly or when they are defective. Since we use hand tools continually, it is important they be used properly. We are going to briefly cover proper use today.

Guide for Discussion

Pre-Work Inspection

Chisels

- Be sure the heads are safe ended or dressed.
- Be sure the cutting edges are sharp and square.

Files

- The tangs should be protected with handles.
- The teeth should be sharp and clean.

Hammers

- Be sure the handles are tight, unbroken and clean.
- The face of the head should be smooth and not mushroomed.

Screwdrivers

- Be sure handles are smooth and clean.
- Be sure all bits should be sharp and square.

Saws

- Blades should be kept sharp and oiled.
- Handles should be smooth and continuous.

General Hand Tool Rules

- Always use the right tool for the right job.
- Use only tools in good condition.
- Keep tools sharpened.
- Store tools properly.
- When chipping, always wear a face shield or safety glasses.
- Never throw tools to co-workers.
- Never use a tool in such a way that you will be injured if it slips.

Additional Discussion Notes:

Remember: Each tool is designed to perform a specific function. As long as you use the right tool and keep it in good operating condition, the various hand tools will serve you well. When you begin to improvise, expect the unexpected—injuries.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Screwdrivers

The screwdriver is one of the most commonly misused hand tools. While it is designed to tighten or loosen screws, you can also find it being used as a pry bar, punch or chisel. When that happens, the screwdriver can slip. When it slips, it can cause an injury or ruin the tool.

Guide for Discussion

Proper Care

- The handle should be tight, smooth and not slippery.
- The shank should be true and straight.
- The bit should be flat, with the end at a right angle with the shank.
- Keep the bit square edged.
- When sharpening, be use not to remove the bit temper.
- Keep the bit and handle clear and free of grease and oil.

Proper Use

- Always use the proper size bit to fit the screw head.
- Keep the bit square to the screw head.
- Never use pliers on a screwdriver; if possible, use a vise.
- Never use as a pry, chisel, punch or lever.
- Use only a standard screwdriver on a standard screw; Phillips head on a Phillips head screw.
- Select the right length for the job; don't try to improvise.
- Always use a screwdriver with an insulated handle for electrical work.

Additional Discussion Notes:

Remember: The screwdriver is a valuable tool when used properly. When used improperly, it becomes a hazard to your safety with the possibility of a resulting injury.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Wrenches

Wrenches—a very good name for this tool in that all too often it is the condition of a worker's back after misusing a wrench. (Wrenched back, get it?) It is not only a back that can be injured, as we will see after our discussion.

Guide for Discussion

Proper Care

- Inspect on a regular basis
- Replace sprung jaws, cages and faces
- Replace all bent handles
- Keep the jaws sharp
- Keep the wrench clean and free of grease and oil.

Proper Use

- Always use the proper size wrench for the job.
- Never use a shim to make a wrong size wrench fit a nut.
- Never use a piece of pipe on the handle to increase your leverage. (Slip hazard.)
- Don't use a wrench as a substitute for a hammer.
- Don't pound on a wrench to try to loosen a frozen bolt. Use penetrating oil.
- Always pull a wrench toward you—never push away. (Slip hazard.)
- See that the wrench jaws are sharp and can bite the nut.

Additional Discussion Notes:

Avoid possible falls – be sure you have firm footing.
Using a wrench on moving equipment? Never.

Remember: After you have several banged up knuckles or a busted finger because of improper use of a wrench, you have learned the hard way that a wrench is dangerous. Bottom line: If you use a wrench improperly, it can cause painful injuries.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Hammers/Chisels

One of the most common causes of hand injuries is from the improper use of hammers and chisels. Both are responsible for a high number of eye injuries as a result of flying nails, metal or concrete chips.

Guide for Discussion

Chisel Use

- Never use a chisel with a mushroomed head.
- Always wear eye protection.
- Hold the chisel between the thumb and forefingers – don't make a fist around the chisel.
- Do not grip a chisel if your hands are numb.
- If another worker is nearby, place yourself between the other worker and the chipping area.
- Always use sharp chisels.

Hammer Use

- Use the right type of hammer for the job.
- Only use hammers in good condition.
- Use only hammers to drive objects.
- Always grip the hammer close to the end and grip it tightly.
- Whenever possible, wear eye protection.
- Always concentrate on the striking point.
- Strike blows as squarely as possible.
- Be sure there is an unobstructed back swing.
- Don't strike blows with the side of the hammer.
- Never strike a hammer or tempered tool with another hammer.
- Always keep your hammer free of grease and oil.
- Never allow someone else to hold a nail or chisel while striking it.

Additional Discussion Notes:

The company policy on wearing eye protection on the job is *Insert Company Policy*

Remember: In addition to using common sense and following the techniques we discussed earlier, wear safety glasses or goggles when chiseling around metal, concrete or shooting nails. Both will decrease the chances of receiving eye or hand injuries.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Nails Are Dangerous Too

You would think that discussing nails is not a very important subject. However, by one industry estimate, about 20% of all minor injuries on the job are a result of punctures, scrapes, and cuts resulting from nails that were not properly removed from lumber and other debris. We all recognize what can happen if a nail is not properly set before driving it, yet we often forget about how dangerous a nail is once it becomes a part of scrap lumber or job debris.

Guide for Discussion

Driving Nails:

- Be sure your hammer is in good condition.
- Always hit the nail squarely, especially on the first blow.
- Always hit with the blow's 90 degrees to the nail head.
- Make sure the back swing is unobstructed; claws can hurt.
- Be consistent—"groove" your swing.
- Concentrate on the head of the nail.

Pulling Nails:

- Always pull or bend nails when stripping.
- Use the right pulling device for the job.
- If needed, use a block of wood as a fulcrum. It will make the job much easier.
- Keep scrap materials in neat piles and out of walkways.
- Carefully discard used nails.

Additional Discussion Notes:

Remember: Nails can become "snake fangs" if used improperly. Always treat nails with the respect due them. Otherwise you may end up with puncture wounds, scrapes, cuts or potentially the loss of your eyesight. Driving and pulling nails is often common sense; use it.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Table Saws

We all recognize how important our hands are to our employability. However, every year hundreds of fingers and hands are lost to table saws. Table saws are the surest and cleanest way to lose a finger or a hand. Much of this is a result of getting used to operating a table saw and then losing respect for it. That is why it is so important that we review the common safety rules pertaining to the operation of a table saw.

Guide for Discussion

Two common types of saws: Table saw; radial arm saw.

General Operating Rules:

- Never operate without all guards in place, especially the blade guard.
- Be sure you stand in the correct position—always allow for kick back.
- Maintain good footing.
- Never allow other workers to work or rest when they are exposed to kick back.
- Maintain good housekeeping in the saw area.
- Never use your hands to run lumber through the blade or to clean off sawdust. Get a pushstick and a brush.
- Never use a saw with a dull blade. (Note: When you go to change a blade, make sure the power is disconnected and you control the switch.)
- Don't crowd (i.e., pinch) a blade especially when cross-cutting.
- Don't wear loose clothing around a saw.
- Always wear eye protection.
- Be wary of warped lumber.
- Be wary of "fly back" (also called kick back) when ripping.
- Keep the blade set so it just barely makes the desired cut.

Additional Discussion Notes:

Remember: The use of table saws can greatly increase productivity. But if improperly used, they can greatly handicap the user.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Electric Power Tools

Electric power tools come in all shapes and sizes and are designed to do almost anything. However, there are some things that they all have in common, rules for safe and proper use.

Guide for Discussion

The following rules should be remembered when discussing the use of electrical power tools:

Select the right tool.

Know how to use it.

Be sure it is properly grounded or double insulated (i.e., a plastic body and two pronged plug).

Inspect for the following:

- Broken or defective cords
- Defective terminal connections
- Defective plugs
- Defective or loose switches
- Brushes that spark excessively

Never use a tool unless the guards are in place and in working order.

Before using the tool:

- Remove the chuck or adjusting key
- Firmly secure the work
- Be sure you have firm footing

Always use proper personal protective equipment and remove dangerous items:

- Safety glasses or goggles
- Hard Hat
- Safety Shoes
- Loose Clothing
- Jewelry

Never carry the tool by its cord.

Never adjust the tool when it is plugged in.

Disconnect the tool when finished or when not using.

Maintain good housekeeping.

Avoid working in wet areas whenever possible. When you do, wear insulating materials such as rubber gloves or a rubber vest.

Additional Discussion Notes:

Remember: All the basic rules we discussed are common sense in nature. Yet too many times they are forgotten or disobeyed with the result of someone being injured—too often, seriously.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Electric Hand Saws

The electric hand saw is one of the most common power tools found in residential construction. It is also one of the most abused being tossed around, kicked out of the way, but depended on to get the job done. Today we are going to discuss basic safety rules, guard rules, and saw blade rules.

Guide for Discussion

General Safety Rules

- Use only grounded or double-insulated tools.
- Use only extension cords that are in good condition.
- Make sure there is an assured grounding program or ground fault interrupter (GFI) being used. (See Electrical section for more information.)
- Make sure all work areas are as dry as possible.
- Never do maintenance work on the saw while it is plugged in.
- Never ever use your leg as a sawhorse.
- Always remain alert.

Guard Rules

- Make sure all guards are operable before use.
 - Do not use the saw if it has a defective guard.
 - Never block any of the guards open.
- Always check before setting the saw down to be sure that the blade guard does not jam open.

Saw Blade Rules

- Always keep the blade sharp.
- Use the right blade for the materials being cut.
- Never change blades while the saw is plugged in.

Additional Discussion Notes:

The WISHA penalty for a missing or misused guard is anywhere from \$150 up to \$1,700 depending upon the severity of the violation.

Remember: An electric handsaw can, in just a blink of the eye, severely injure you or a co-worker. Be alert when using an electric hand saw and follow the common sense rules we just discussed.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Portable Electric Tools

The use of portable electric power tools is one of the most common occurrences on a construction project today. Workers are exposed to the use of these tools constantly.

It is important to remember that electricity always seeks a path of least resistance and often that is through a defective cord into the worker's body. This is especially true if the worker is exposed to wet weather or has been sweating.

Guide for Discussion

The following safety rules should be reviewed when discussing the safe use of portable electric tools:

Use only equipment that is in good condition.
Be sure the tool is properly grounded.
Always report the following:

- Defective or broken cords;
- Bad connections to power terminals;
- Defective or broken plugs;
- Defective or loose switches;
- Brushes causing sparks.

Never overstrain the tool thus overloading the motor.
Never use an un-insulated tool without a grounding plug.
Avoid working in wet areas unless a ground fault interrupter circuit is used.
Never use a tool in the presence of flammable vapors or gases unless it is designed for such use.

Additional Discussion Notes: *Spell Out Company Policy.*

Address:

What is the company policy on tagging defective tools and removing them from service?
Who is the person responsible to have company owned portable electric tools repaired?
The company's policy on defective employee owned portable electric tool's is?

Remember: Electricity is an unseen killer; it gives no warning. But electrical shock can be avoided by using tools in good condition and common sense.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Powder Actuated Tools

Powder actuated tools are nothing more than a gun that fires a stud into a wall. As such, the safety rules that apply to firearm safety should almost always apply to the use of powder actuated tools. No one will be allowed to operate a powder actuated tool without proper training. The rules discussed today are not intended to be a complete set, but serve as a reminder and a starter.

Guide for Discussion

Hazard Examples

- Flying particles
- Studs being shot through the work area
- Studs ricocheting
- Fire hazards
- Interchanging tool charges with firearm charges

Basic General Safety Rules

Allow only qualified workers trained and have on their person a qualified operator card for operating powder activated tools. See WAC 296-24-66321.

- Inspect the tool before each use.
- Test the tool before each use.
- Always follow the manufacturer's specifications for operation.
- Always study and determine the proper charge.
- Know what is on the other side of the work surface.
- Know what is on the work surface.
- Don't allow other workers on the other side of the work surface.
- Know what can't be shot into, such as cast iron, high carbon steel, armor plate, glazed brick, glass, or tile. See manufacturer's instructions.
- Load just prior to shooting.
- Always wear eye protection.
- Store the tools, charges and studs safely and securely.
- Don't try to fix jams and misfires.

Additional Discussion Notes:

Remember: The example's of hazards and basic general safety rules we discussed is only a partial listing. It is not a substitute for formal training. Powder actuated tools in the wrong or unqualified hands can be as deadly as any firearm. Use extreme caution when you are using or are around a powder actuated tool.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Chain Saws

Except for log home builders and site clearer's, it is rare that a chain saw is used on construction jobs. These are a specialty tool that have their own special hazards. Before you use, review.

Guide for Discussion

Before Operations

Always review operator instructions before you use a chain saw.
Wear snug fitting clothing; don't wear any jewelry.
Be sure to wear earplugs especially if you plan to cut for a long period of time.
Always check for defects in the saw. Replace all defective parts before operating the tool.
Don't use a saw with a dull blade.
Check the item to be cut for nails, wire and any other metal-imbedded items.
Before cutting, plan a path of retreat.

During Cutting

When cutting, keep the saw away from your body.
Never cut anything directly overhead.
Be wary of materials to be cut that may be under tension.
Be careful to avoid pinching the blade or guide bar.
As the material begins to fall, turn off the saw and move away quickly.
Watch for a rebound.

After Cutting

Allow the saw to cool before refueling.
Don't operate the saw near your refueling area.
Check the operator instructions for any special after operations maintenance instructions.

Additional Discussion Notes:

Instructor: Determine company policy on always wearing a hard hat, ear plugs, safety glasses or goggles, leg protection and safety shoes when using a chain saw.

Remember: Chain saws can greatly reduce the labor burden in a construction project. However, these are a dangerous tool and can seriously injure a worker when improperly used. Use common sense and the basic rules we discussed to have a safe operation.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

JOB SITE HAZARDS – THE BIG FOUR

Instructor Notes:

In some Federal Occupational Safety and Health (WISHA) states, compliance officers are evaluating a program whereas they will inspect four basic job site hazards on residential construction projects. If these four areas are found to be satisfactory, the compliance officer has the option to end the inspection at that point and leave the job site.

Residential construction safety professionals often use the four basic job site hazard subject areas as a means to get interest from the on-the-job employees; it works out very well as a training or instructional guide.

The big four are:

Falls From Elevated Heights. Subject areas include falls in general, ladders, floors and other openings on the walking/working surfaces (don't forget skylight wells), and the need to have guardrails or other fall protection devices installed.

We included the need for personal fall protection systems (PFAS) in these Tool Box Talks as discussion points. The various standards of when to wear PFAS will require some research on your part. However, you need to know that when a compliance officer sees someone working on a roof, they are required by statute to check out the situation to see if a worker is exposed to falling.

Being Struck By: This is a term used by industry safety and insurance personnel. Being struck by includes being hit by a hand or power tool. For example, when you accidentally hit your thumb with a hammer holding down a nail. You were struck by the hammer causing an injury. There are a lot of other more serious examples. One is using a nail gun and accidentally discharging a nail into a foot. Another example is an amputation of a hand or finger by a saw blade because the guard was removed.

When we put together this booklet, we looked at specific subject areas to include in "being stuck by." Because the accidents/incidents are so common, we decided to save paper and include the subjects in such areas as Tool Use and Care and Heavy Equipment subject areas.

Being Caught Between or Under: This is also a term used by industry safety and insurance workers. The primary example is excavation crews. Like seeing someone working on a roof, compliance officers are required to stop and inspect when they see a hole in the ground. Be advised. A more common example of a worker being injured is during the raising of a framed wall. If the wall falls backwards, a worker is potentially exposed to being "caught between." In this case, between the wall and the floor. Hips and legs have been broken by falling walls.

Electrical: This applies to all electrical hazards. One reason why electrical hazards are mentioned though out the tool box talks is because of the exposure all workers have to electrical hazards, the silent killer.

TRAINING REQUIREMENTS – FALL HAZARDS

Reference: WAC 296-155-24505(3)(a) Training Requirements.

“The following training provisions supplement and clarify the requirements regarding the hazards.

(a) Training Program.

- (1) The employer shall provide a training program for each employee who might be exposed to fall hazards. The program shall enable each employee to recognize the hazards of falling and shall train each employee in the procedures to be followed in order to minimize these hazards.
- (2) The employer shall assure that each employee has been training, as necessary, by a competent person qualified in the following areas:
 - (i) The nature of fall hazards in the work area;
 - (ii) The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection system used;
 - (iii) The use and operation of guardrail systems, personal fall arrest systems, safety net systems, warning line systems, safety monitoring systems, controlled access zones, and other protection to be used;
 - (iv) The role of each employee in the safety monitoring system when this system is used;
 - (v) The limitations on the use of mechanical equipment during the performance of roofing work on low-sloped roofs;
 - (vi) The correct procedures for the handling and storage of equipment and materials and the erection of overhead protection; and
 - (vii) The role of employees in fall protection plans;
 - (viii) The standards contained in this subpart.

(b) Documentation of training

- (1) The employer shall verify compliance with paragraph (a) of this section by preparing a written training record. The written training record shall contain the name or other identity of the employee trained, the date(s) of the training, and the signature of the person who conducted the training or the signature of the employer.

Training Notes:

See (a) (1) “...a training program for each employee who **might be** exposed to fall hazards.” Some employers include any office or support staff who may come onto a job site in fall hazards training just in case. See “Fall Protection In Construction” for a training record example.

Some employers also include training on ladders as part of their fall hazards training. This accomplishes two training tasks simultaneously.

Wily Coyote always seems to fall into a deep canyon and not be injured at all. People can't. Then why do we seem to have trouble getting workers to pay attention to the fall hazards around them?

Guide for Discussion

The following items represent the bulk of the exposure to falls on a construction site.

Ladders:

- Always use the right ladder.
- Set them on level ground and tie them off at the top (for security).
- Do not over reach.
- Do not over extend yourself on the ladder.
- Always face the ladder and try to use both hands when climbing.

Floor Openings:

- Floor openings should be properly covered.
- Covers must be able to support walls the same as the floor.
- Covers should be firmly attached to the floor/walking/working surface.
- Covers should be marked as such. For example: "Cover," or "Do Not Remove Floor

Opening Cover."

- Consider wall openings and uncompleted stairways as openings with suitable protection provided.

Stairways:

- Use handrails.
- Watch where you step.
- Keep your view clear.
- Concentrate on the stairs.
- Do not run up or down the stairs.
- Keep stair well clean.

Housekeeping:

- Always try to provide good footing.
- Keep tools, trash, scrap materials out of walkways.
- Clean as you go.
- Always be wary of oil, ice or snow.

Additional Discussion Notes:

- Balance. Wear appropriate footwear (including auxiliary footwear like corks) when necessary.

Remember: Paying attention to things around you like ladders, floor openings, stairways and good housekeeping will help prevent a fall.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Ladders

Injuries in the workplace because of ladder are commonplace. Falls from ladders can be as painful as a fall from a roof; about a third of all reported falls are falls from ladders. (*) Many of the fall related injuries result from the improper use or the use of a defective ladder.

Step/extension ladders are made to access/egress upper levels, not to be used as work platforms. There are specifically designed ladders for use as work platforms such as order pickers. These ladders are constructed with a small platform and guardrail. The following safe work rules should be observed when working with ladders.

(*) 1993-94 Study: 238 of 705 falls based on an OSHA study.

Guide for Discussion

Inspection

Look for missing or loose cleats at the bottom.
 Look for loose or missing screws, bolts or nails on job made ladders
 Look for cracked, broken, split, dented or badly worn rungs, cleats or side rails.
 Splinters on wood ladders.
 Corrosion on metal ladders.

Ladder Use

- Always use the right ladder for the right job.
- Don't set your ladder in a walkway or door opening.
- Keep the area at the top and bottom of the ladder clear of tool cords, tools, material and garbage.
- Always set the ladder on solid footing.
- Use a twenty-five percent (25%) angle on the slope of the ladder.
- When using extension ladders, the three (3) top rungs must extend beyond the landing platform. (Or the top of an extension ladder must be 36" (3 feet) above the landing.
- Don't lean to the side when on a ladder or you may tip over.
- Do not carry tools or materials on a ladder. Use both hands when climbing a ladder to grab onto the side rails. If it is necessary to move material or tools up a ladder, first climb up, then pull up the work with a hand line.
- Only one person on a ladder at a time (*unless the ladder is double cleated*).
- Always secure the top of the ladder to prevent it from sliding.
- Never lean a step ladder; always fully open a step ladder.
- Always face the ladder.

Additional Discussion Notes:

Always tie off the ladder. That way it stays where you put it.

Remember: When you are on a ladder, you can fall. If you can fall, you can get hurt. Use ladders safely.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

FALL CAUSES DEATH: LADDER'S ARE KILLERS
A Tool Box Talk Case Study: Why Take Ladders Seriously

Introduction: This is a true story only the first name of the victim has been changed. One of our friends wrote: "I lost a good friend September 15, 1997 from a fall from a roof. It seems that my friend Leroy went to help a neighbor with a leaking roof problem."

Guide for Discussion

It was on a low pitched single story home (a 3/12 or 4/12 pitched roof), about eight foot ground to eaves's height. From family reports, Leroy borrowed a ladder from the neighbor to go up and temporarily fix the problem. However, it was just the top half of an extension ladder without safety feet on the bottom.

Leroy placed the ladder on a painted concrete patio, leaning against the house, with just one rung above the landing surface. Carrying a large rock to hold down the felt, Leroy went up the ladder.

While going up the ladder, the two friends continued their conversation. When Leroy got ready to step off the ladder, the ladder slipped and fell away. Leroy dropped the rock as he fell backward eight to ten feet. The rock bounced on the patio; Leroy hit the back of his head on the rock. He died later that night never having regained consciousness. He left four children (two of whom are contractors) and four grandchildren.

Leroy was an experienced concrete finisher, framer, finished carpenter, and roofer—a skilled "woodworker" according to his obituary. He was careless. I will miss Leroy. His children and grandchildren will miss him more; our sympathies go to the family. However, his accident was preventable.

There are about a dozen "common sense" safety violation lessons learned from Leroy's death. What lessons can you learn from this?

Additional Discussion Notes:

Remember: Tragedies remind us that fall's from ladders or roofs are serious and can be fatal. Every once in a while we need to be reminded why we have safety rules—and why they need to be followed. Don't you take unnecessary chances by using the wrong tool.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Floors and Other Openings

Injuries in the workplace because of holes in walking and working surfaces are commonplace. Slips, trips and even falls from one level to the next can be as painful as a fall from a roof. The following items should be considered when dealing with floors and other types of openings.

Guide for Discussion

Hazard Identification: Floor Openings (2"x2" minimum at any depth)

- Temporary openings
 - Plumbing
 - Ventilation (Vault Ceilings?)
- Skylight wells
- Manholes
- Holes in Ground (Trenches and Excavations)
- Wall/Window Openings
 - Temporary guardrail system

Washington Fall Protection Standards

Methods of Protection

- Use of standard guardrails
- Use of covers
 - Able to support four times the intended load
 - Nail down
 - Mark with "Cover"

Additional Discussion Notes:

Floor Openings -- Types in Need of Guarding

- Ladder way floor openings
- Hatchways and chutes

Remember:

When you create a safety hazard, you need to protect others against the hazard. The easiest method is to fix the problem when you create the problem.

Guardrail systems must be able to withstand a 200 pound load applied horizontally and vertically. All floor covers must be able to support at least twice the intended load and installed to prevent accidental shifting. Floor coverings should be so marked in a bright colored paint to communicate the danger.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Guardrails

One of the more common WISHA citations is for lack of or improperly erected guardrails. There are two basic types of guardrails – the perimeter guardrail (i.e., found on flat roofs, upper stories before framing walls) and floor opening guardrails. Both are constructed the same way and are designed to provide the same type of protection. See WAC 296-155-505.

Guide for Discussion

The following items should be reviewed when discussing guardrails:

When are they required?

All open-sided floors or floor openings exposing workers to a fall of four feet or greater.

Standard Specifications

- The top rail should be 42" high and constructed of 2"x4" stock wood.
- The intermediate (or mid rail) should be 21" (also using 2"x4").
- The bottom rail or toeboard should be at least 4" in vertical height from the floor to the top of the toeboard.
- Uprights will be 2"x4" at 8' centers at a minimum.
- All components must withstand a load test of 200 pounds at any point.

General Rules

Install guardrails properly the first time and reduce the amount of maintenance.
Install as you go—don't wait and then have to catch up.
Regularly inspect all rails.

Additional Discussion Notes:

Window and Door Openings.

Interior stairwells requiring hand rails.

Anyone repairing a guardrail at elevated heights should be wearing their Personal Fall Arrest System (PFAS) and be tied off to an anchor point.

Enforce replacement by subcontractors when they remove them.

Remember: Guardrails are designed to protect you from falling from one level to another. If the guardrail is defective or not there at all, then you are exposed to serious injury or even death.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Ramps and Runways

Ramps and runways are an integral part of almost every jobsite. However, many ramps and runways are not properly constructed resulting in a jobsite hazard to anyone on the site and as a source for damaged materials.

Guide for Discussion

General rules for ramps and runways:

- Keep them free from job junk (debris).
- Provide suitable traction.
- Consider standard guardrails (with or without toeboard) on both sides to prevent falls.
- Ramps with a minimum width of eighteen (18) inches may have only one guardrail.
- Never exceed a twelve foot span (maximum) without bracing.
- All walkways used in lieu of stairs must have cleats.
- Give plenty of clearance when workers are carrying or pushing materials.
- Don't overload with people or materials.
- Keep all loads moving. Don't stop on a ramp or runway with a load.
- Never work under a ramp or runway; the load may wind up on you.

Danger signs for ramps and runways:

- Not wide enough.
- Not properly supported or nailed.
- Too steep an incline.
- No cleats.
- Bad spots or uneven walkways.

Additional Discussion Notes:

When guardrails are mandatory.
Other danger signs.

Remember: It makes good sense to erect safe and accessible ramps and runways. A failure to do so is just like setting up booby traps throughout the job.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

FULL BODY HARNESES/LIFELINES DISCUSSION POINTS

Full Body Harnesses, a connector (for example, a self-retracting lanyard), lifelines and anchors are all part of a Personal Fall Arrest System (or PFAS). The days of having a safety belt and lanyard are over – just too many injuries and deaths to workers.

PFAS is generally required when working at ten (10) feet in the workplace. That is a WISHA requirement. *Insert company policy.* Falls account for over a quarter of all construction injuries. It seems that some workers don't want to take the time to put their PFAS on, or worse, feel they don't need the equipment. We are sure that every person who was injured or died from a fall would have gladly worn their PFAS if they had only known they were about to fall.

Guide for Discussion

- Inspect the equipment (harness, hardware, connector, and lifeline) before use.
- Never use equipment, which is not in good condition.
- Use only rated equipment. Remember, the PFAS must withstand 5,000 pounds of dead load.
- Always secure lanyards to a suitable anchor, above your work area if possible.
- Don't modify to mix any of the safety equipment.
- Never allow acids, caustics or other corrosive materials to come into contact with any of the equipment.
- Store your equipment in a dry place.
- Replace damaged equipment; remove it from service as soon as possible as it is determined to be defective.
- Use the equipment required.

Additional Discussion Notes:

Remember: Don't allow yourself to be lulled into a false sense of security. Always provide yourself with some fall insurance. Regularly wear your PFAS and keep it attached to a lifeline. The life you save may be yours.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Being Struck By

Instructor Note:

The most common cause of “being struck by” is the incorrect use of a hand or power tool.

For instructional information please refer to the following Tool Box talks:

- Tool Use and Care
- Heavy Equipment
- Heavy Equipment Hazards
- The Spotter
- Signaling Techniques

Excavations

Cave-ins and slough-offs are a major cause of deaths in the construction industry each year. Excavations must be properly shored or cut back to an acceptable angle of repose; otherwise, there will be a constant threat of a cave-in and the associated chance of injury or loss of life. A qualified person must be involved in planning and having a safe excavation project.

Guide for Discussion

Before Excavation Review

Underground utilities located? (Checked with local utility companies or property owner.)
 Any overhead hazards (i.e., falling rock, soil, or other materials or equipment)?
 Will there be any heavy equipment operating in the near proximity of the excavation?
 Estimated depth required for the excavation?
 How many people will work inside the excavation?
 Is there an escape plan for those inside the excavation to cover a possible cave-in or slide?
 Has there been a soil analysis? This will help determine the type of shoring to provide or the angle of repose needed.

Steps to Take to Provide a Safe Excavating Operation

Always shore or cut back the opening adequately.
 Any opening with a depth of five feet or more requires shoring or be cut back.
 Never store excavated or other materials closer than two feet from the edge of the excavation.
 Inspect the excavation daily. This must be done by a competent person.
 Access ladders must be provided every twenty-five feet in excavations of four (4) feet or more in depth.
 Review escape procedures with all personnel who may have cause to be in the excavation.

Additional Discussion Notes:

Possible gas accumulation in the excavation?

Barriers, guardrails or other safety warnings in excavation area?

WISHA requires safety compliance officers to stop and examine all open trenches.

Remember: Unlike most accidents, the cave-in of an excavation usually can be predicted if closely watched. It is, therefore, critical that a competent person keeps a close eye on any excavation. Everyone should be removed from the excavation area should it appear to be unstable.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Excavations: Additional Discussion Points

Instructor Note: Review the additional discussion points for specific application to the job at hand. For example, let the crew know who is the “Competent Person.” Explain what the Competent Person is required to do (see below). This reinforces the training and is a further sign of your commitment to have a safe and healthy workplace.

Additional Discussion Points:

A competent person must inspect the site daily. This includes both excavation and the surrounding area. Inspection Points include but are not limited to:

- Possible cave-in's.
- Failure of protective systems and equipment.
- Hazardous atmosphere.
- Other hazardous conditions (i.e., following rain or man-made condition such as blasting).

Adequate protection must be provided against falling objects such as dirt, rock, equipment or other materials for workers.

A warning system should be used to alert equipment operators of the edge of an excavation.

Employees exposed to public vehicle movement must wear warning vests. Alternative is suitable garment made of reflectorized or high-visibility material.

A guardrail system is recommended especially if there are walkways or bridges crossing over an excavation. (See ramps and runways for additional information.)

During excavation operations, special care must be taken to insure no employee is under a load handled by digging or lifting equipment.

Employees should not be permitted to work in excavations where water has accumulated without adequate precautions. Adequate precautions include but are not limited to: Diversion dikes, ditcher or other means to prevent surface water from entering an excavation and to provide drainage to nearby areas.

While an excavation is open, underground installations such as utilities must be protected, supported or removed as necessary to safeguard excavation workers.

Adjacent structures must be supported to prevent possible collapse.

Employees should not enter an excavation greater than four (4) feet in depth without a competent person testing the atmosphere. Testing takes place where oxygen deficiency or a hazardous atmosphere exists or is believed to exist.

Emergency rescue equipment must be readily available. This equipment must be attended when hazardous atmospheric conditions may develop or exist.

Special Company Procedures Notes:

References:

WISHA Excavation, Trenching and Shoring Standards **WAC 296-155-Part N**

Trenching

As far as safety is concerned, trenching and excavation operations are very similar. Both expose workers to the same types of hazards. Therefore, many of the same basic safety rules apply. The main difference is that a trench allows for only restricted working space. This restriction increases the potential for injury. As just one result, the need for safety awareness is increased when compared to excavation operations.

Guide for Discussion

Pre-operations:

- Locate all underground utilities.
- Determine, if possible, soil conditions.
- Determine if there is an overhead exposure.
- Based on the depth of the trench, determine the amount of shoring needed or angle of repose.
- Determine the number of access ladders needed.
- Estimate the number of workers who will be working in the trench and the amount of roof needed to perform the task.
- Appoint a "top man," someone who will monitor the trenching operations.

Trenching Operations

- Always maintain a "top man."
- Constantly monitor the soil conditions.
- Shore or slope any trench with a depth in excess of four (4) feet.
- All shore or stored materials must be kept at least two (2) feet away from the edge of the trench. (Same with "spoil," the dirt removed from the excavation.)
- Keep all unnecessary use of equipment away from the open trench.
- Devise and practice escape routes.
- Place access ladders every twenty-five (25) feet.
- Never allow personnel in trenches where there is a likelihood of a cave-in or slough-off.
- Review rescue techniques with all workers.

Additional Discussion Notes:

WISHA requires safety compliance officers to stop and examine all open trenches.

Remember: A safe and successful trenching operation is the result of carefully following several safety techniques and taking no short cuts. One key is to shore or properly slope all trenches. That knowledge comes from training and supervision.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Dangers Overhead

More and more contractors are using mechanical means to lift loads to the working area; it saves time and avoids injuries. But there is still a hazard. If it takes a piece of equipment to lift materials, then you can bet that if the load falls, it can seriously injure or kill you. Always be aware of overhead operations and remember basic safety rules.

Guide for Discussion

- Always be sure loads are carried close to the ground.
- Use tag lines on loads whenever possible.
- Use only one signal person.
- Be sure the signal person can clearly observe the load and operator at all times.
- Never hoist over other workers; keep the hoist area clear.
- Be sure loads are properly rigged.
- Make sure the hoisting and rigging equipment is in good workable condition.
- Hoisting speed should never proceed too fast as to risk losing control of the load.
- Monitor weather conditions, especially during winds.

Additional Discussion Notes:

During excavation operations, special care must be taken to insure no employee is under a load handled by digging or lifting equipment.

Remember: It is important that the overhead danger of moving materials across a worksite be watched by all assigned to this task. It is important that all workers are aware of the overhead hazard. Once a load begins to free fall, that load is difficult to avoid.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Working in Confined Spaces

Working in a confined space is a unique and serious hazard. There is no halfway problem: Either there is or isn't a problem. By one definition, a confined space is one that is large enough and arranged so that an employee can fully enter and work, has limited or restricted entry or exit and which is not primarily designed for human occupancy. *Insert company policy.* See WAC 296-809 for Confined Space rules.

Guide for Discussion

Primary Hazards:

- Oxygen deficiency.
- Exposure to toxic substances.
- Combustible or Explosive.

Safety Procedures:

- Test for oxygen deficiency.
- Sample for combustible gases. (Most combustible gas meters will not work in oxygen deficient atmospheres.)
- Continually monitor for toxic substances (i.e., gases) as work progresses.

Making a Confined Space Workable:

- If space is unable to be vented, be use to provide proper respiration equipment.
- If space can be vented, continually flush out the space with fresh air.
- Be aware that spark producing equipment should never be used to flush out confined spaces.

Basic Rescue Procedures:

- Never rush to the aid of a fellow employee in a confined space.
- Always be sure that someone watches work in a confined space outside of the space.
- All workers in a confined space must work with a lifeline attached outside of the space.
- All rescuers must be competent in the use of rescue equipment and self-contained breathing units.

Additional Discussion Notes:

Remember: Confined spaces need not be dangerous places to work if the basic precautions are routinely followed. Remember that it is a rare circumstance that a single fatality occurs in a confined space; usually there are multiple fatalities.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Heavy Equipment

Heavy equipment has been designed to handle very large volumes or large loads. As such, heavy equipment is powerful machines and can be dangerous to all around them if not operated correctly. It is important to remember the proper methods used to move them from one site to another, and how to work around them properly.

Guide for Discussion

General Rules When Heavy Equipment is Nearby

- Always remain alert to the equipment moving around you.
- Do not get near moving equipment unless necessary.
- Never ride on equipment unless it has been designed to carry you. This means it must have a seat and a seat belt.
- Do not walk along beside equipment. If it is necessary to travel with a piece of equipment, walk in front or behind it.
- Try to stay in view of the operator. You must remain in view of the operator when working around excavation or trenching if you are the "top man."

Rules For Transporting Heavy Equipment

- Inspect all transporting equipment and make sure it is all in good working condition.
- Always provide for the protection of the general public.
- Wear safety shoes.
- Estimate the center of gravity for the equipment to be loaded.
- Always load equipment slowly onto its carrier.
- If equipment is to be driven off-site, make sure the steering, braking and light systems are in good operating condition.
- Tightly secure the piece of equipment to its carrier.
- Be sure that the boom or any other extensions of the equipment are tightly secured.
- If working with others, be sure to work as a team.
- Keep your hands dry and free of grease and oil as possible.
- Always keep the loading area free of debris and unnecessary tools.

Additional Discussion Notes:

What the company does to further protect the general public?

For example, flag man, barricade the work area.

Remember: A little mistake when dealing with heavy equipment can be magnified thousands of times and become a major mistake. This can easily result in a severe injury or even death.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Heavy Equipment Hazards

The use of heavy equipment on a jobsite is vital and necessary to the overall success of the construction project. However, unauthorized or unwise use of heavy equipment can result in personal injury, loss of life, or severe loss to materials needed to complete the project. Today we will discuss some key points to keep in mind when working around heavy equipment.

Guide for Discussion

Workers

- Always be alert to the position of the equipment around you.
- Only authorized personnel are to operate the equipment.
- Never ride the equipment unless it is designed to be ridden.
- Always keep away from suspended loads.
- When performing as a signal person, be aware of all overhead power lines. Keep crane booms at least ten (10) feet from all power lines.
- Never take naps, breaks or lunch around heavy equipment. You never know what might happen.

Equipment Operators

- Be sure that all bi-directional equipment is either accompanied on site with a signal person, or has an operational back-up alarm.
- Be aware of all overhead power lines and the possible effect on equipment operating within the close vicinity. Keep crane booms at least ten (10) feet from all power lines.
- Always lock out the equipment before it is to be lubricated, adjusted or repaired.
- Always replace gear, belts and any other guard after repair or adjustment.
- Always secure and lock out equipment upon its completion of use.
- Be sure to protect the glass areas of cabs with either metal grates or wood covers.

Additional Discussion Notes:

Who are the only authorized equipment operators?

Remember: The best policy around heavy equipment is to take no chances. Be aware of what is going on around you—both workers and equipment operators.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

WORKING AROUND CRANES

A crane is one of the most versatile and important pieces of equipment usually found on a construction job. It can be used to accomplish a lot of otherwise heavy lifting tasks. However, it can also be one the most dangerous since it can lift heavy loads over large areas of a project. Today we will discuss some of the important safety points about working around cranes.

Guide for Discussion

- Always be aware of the swing radius of the crane
- Never walk within the swing radius of the crane
- Never work under suspended loads. Besides the crane boom could fail.
- Never ride the hook. There are too many things that can go wrong you can't control
- Always wear a hard hat when there is a possibility of a load being overhead
- Stay off of and away from the crane unless you are assigned to be on the crane
- Never walk under a boom, especially if it has a load on it.

Additional Discussion Notes:

Remember: When working around a crane, the crane operator is going to be watching his load or the signal person and not for stray workers. Never enter the swing radius of a crane unless it is absolutely necessary. Never work within the swing radius. Hard hats are required.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Electrical Hazards

Electrical hazards are doubly hazardous in that there is not only the chance of electrocution but also, there is the probability that any electric shock will cause a loss of consciousness that may well result in a fall of some sort. Today we will discuss methods of receiving an electric shock and ways to avoid electrical hazards.

Guide for Discussion

Methods of Receiving an Electric Shock

- From a defective power tool.
- From defective extension cords.
- From overloading a switch or over-riding a by-pass.
- By not grounding electrical equipment.
- By coming in close contact with live electric lines.
- By coming too close to high power lines with the power arching over and making contact.

Ways to Avoid Electric Hazards

- Always inspect tools and equipment for frayed cords and defective plugs before using them.
- Never use a power tool that has had the ground plug removed; inspect the plug.
- Never stand in water and operate a power tool without proper (i.e., insulated) footwear.
- Keep extension cords out of water when in use.
- Consider all power lines "live" and avoid contact with them.
- Follow the company assured grounding/electrical protection program.
- Disconnect all electrical tools and cords when not in use.
- Be use all temporary lighting is equipped with bulb covers.
- Make sure all power supplies, circuit boxes and breaker boxes are properly marked to indicate their purpose.
- Use Ground Fault Interrupters (GFI's) on all jobsites.

Additional Discussion Notes:

Who is responsible for the company assured grounding program or to install a ground fault interrupter system?

Remember: The best way to eliminate the hazard of the "quiet killer" is to act as if each exposure to an electrical hazard may be your last. Never take electricity for granted, "it's a killer."

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Assured Grounding Program

Instructor Note: Washington's Occupational Safety and Health (WISHA) strictly enforces the standards pertaining to electrical grounding. These standards require that a project use either Ground Fault Circuit Interrupters (GFI's) or an Assured Grounding Program. GFI's effectively prevent short circuits by tripping the entire circuit when a short occurs. It eliminates the possibility of electrocution and is the preferred method of protection. See WAC 296-155-447.

Introduction: Our company has an Assured Grounding program as a means to protect ourselves against accidental electrical shock.

Guide for Discussion

Program Components

Have the company written policy on file.
Our policy is located *Where*

Have a competent person conduct all tests.
Our competent person(s) are: *Who*

Test all electrical equipment for proper grounding.
Remove any defective equipment from use and tag it to prevent future use.
Color code all equipment tested to insure complete test result.

We use the following colors— (winter),
(spring),
(summer),
(fall).

A color chart is located *Where*

Tests

Test for the continuity of the grounding conductor.
Test before the equipment is first used; after any repair; after any possible damage and a minimum quarterly (i.e., every three months).

Inspections

Visually daily for defects before use.
Inspect the following types of equipment:
Power Tools, Extension Cords and Temporary Receptacle Boxes

Additional Discussion Notes:

Three prong grounding testers to check extension cord continuity are located *Where*

Remember: The use of an Assured Grounding Program is not only required, but it is good common sense. Electrocution is no laughing matter and all steps we can take to reduce our exposure to this hazard makes sense.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Power Lines and Mobile Cranes

Instructor Note: This has been added to the Tool Box talks because electric line companies get very upset when a crane (or dump truck bed or other piece of heavy equipment) gets close to or touches a power line. They also will notify Occupational Safety and Health (WISHA). Invariably WISHA will pay your job site a visit looking at everything dealing with employee safety and health.

Introduction: It is not uncommon to work around power lines; however, the potential hazards to workers are enormous; workers just have to work safer.

Guide for Discussion

How to Avoid Electrocutation

- Locate all power supplies. Besides this being the state law, it's smart.
- Have the Power Company inform you of the voltage and arc distances.
- Shut off or insulate the power line(s) if possible.
- Never allow a piece of equipment to break the safety zone (the distance required to avoid electric arc.)

General Rules to Remember

- Designate a competent lead signal person.
- Communicate clearly with all members of the work crew.
- Have all crewmembers watch the operation.
- Be alert.
- Watch for non-alert crewmembers.

Additional Discussion Notes:

Remember: Whenever you are near a power line, be sure to minimize the risk by de-energizing or insulating the power source. Only then proceed with caution. At all times, try to avoid entering an arc zone. It is far better to be safe than sorry.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Fire Protection and Control

Most fires are a result of inattention to the job site operations and surrounding conditions. This lack of attention or protection can result in the loss of life and property. All fires can be easily extinguished if caught soon enough and the proper extinguishing tools are handy.

Guide for Discussion

Steps to Remember When a Fire Starts:

- Sound an alarm—yell if necessary.
- Warn those near the fire.
- If possible and the fire is small, try to extinguish it.
- Call the Fire Department if the fire can't be easily and quickly extinguished.
- Evacuate the area if the fire can't be quickly extinguished.
- Direct the Fire Department to the area of the fire.
- Stand by to help, but only if asked by a Fire Department official.

Be Sure to Know the Following:

- The Fire Department phone number.
- Be sure you know the location of the nearest cross street to give the Fire Department directions.
- Where the fire extinguishers are and how to use them.
- How to evacuate the work area.

Steps to Prevent Fires

- Regularly inspect all fire extinguishers.
- Keep the work area free of debris and trash.
- Designate high risk areas as "no smoking" areas. Enforce no smoking rules.
- Store flammable fuels and materials only in approved safety containers.
- Check temporary wiring and electrical tools for defects.

Additional Discussion Notes:

The emergency numbers and job site location (including nearest cross streets) are posted where on the job?

If welding equipment is on the job, when is it regularly inspected?

Remember: Knowing how to recognize, react to, or eliminate fire hazards can greatly decrease the chances of being exposed to a fire.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Fire Extinguishers

One of the quickest ways to lose a job is allow a fire to start. Sometimes fires do start and it then becomes a matter of putting the fire out as soon as possible. The best way is to use a fire extinguisher.

Guide for Discussion

Care and Use

Be sure the fire extinguishers are charged, strategically located and ready for use. Everyone has a responsibility to check to see that fire extinguishers and fire hoses (as well as other dispensing components) are not blocked.

Common Types of Extinguishers

Class A Fires: Rubbish, paper, scrap, scrap lumber. Use soda acid and pressurized extinguishers or water through use of a hose or pump type water can.

Class B Fires: Flammable liquids, oil, grease. Use carbon dioxide, dry chemical or foam extinguishers. Do not use water on these types of fires.

Class C Fires: Electrical in nature. Use carbon dioxide or dry chemical extinguisher. Do not use foam or water composition extinguishers.

Additional Discussion Notes:

The person responsible to insure fire extinguishers are charged, strategically located and ready for use is *Employer*.

Our exposure is generally to Class _____ fires. We have Class _____ fire extinguishers available.

Remember: The quickest way to put out a fire may not always be the best way.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Refueling Equipment

Refueling equipment is a necessary part of each construction project. As such, it is important that this operation be conducted in as safe a manner as possible. Remember that gasoline and fuel oils are manufactured to cause an explosion (hopefully in the engine). Today, we want to talk about simple refueling rules.

Guide for Discussion

Concentrate on the task to be performed.

Never smoke during refueling operations.

Don't refuel near an open flame or near a sparking situation.

Keep a fire extinguisher within 25 feet and closer than 6 feet.

If the equipment may accidentally move, chock the wheels.

Always shut the engine off.

If necessary, allow the engine to cool.

Be sure both fuel dispensing tank and equipment are grounded.

Don't spill the fuel. (Spilled fuel is a safety, health and environmental hazard).

Don't overfill the fuel tank. On hot days, allow for expansion.

Always clean up any spills.

Additional Discussion Notes:

Remember: If there is a refueling area, be sure it is clearly marked and keep the area neat at all times. Whether you are filling a bulldozer or a chain saw, it's better to do it properly than to risk an explosion that could ruin or end your life and the life of those all around you. Remember gasoline was designed to explode when ignited.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Gasoline

Gasoline when harnessed properly serves as a vital source of energy. Treated carelessly, it can become an explosive monster. Many people are killed or seriously injured each year because they did not treat gasoline as a potential killer. Today we will discuss how you protect yourself from being injured or causing a fire or explosion.

Guide for Discussion

Gasoline Facts

- Gasoline doesn't burn. It's the gas vapors that burn.
- Gas vapors are heavier than air. As a result, they collect in low areas.
- Any type of spark can ignite gas vapors.
- Gasoline should never be allowed to come into contact with your skin. Immediately clean the area contacted.
- Don't use it as a solvent for cleaning tools or parts.

Storage

- Always store in approved safety cans. Insure the can has proper labeling (i.e., Flammable plus the type of fuel such as gasoline.)
- Always mark the storage can "GASOLINE - NO SMOKING"
- Remember, an empty can is more dangerous than a full one (because of the gas vapors).
- Always flush out empty cans.
- Keep all containers tightly closed.

Transferring Gasoline

- Never transfer gasoline from one container to another in an area where there is any chance of ignition.
- Clean up any spills immediately. It is a safety, health and environmental hazard.
- Be wary of static electricity. Always use grounding straps when fueling from an above ground tank.

Additional Discussion Notes:

Remember: Working around or with gasoline is like working around dynamite. Only the gasoline, if improperly handled, can be more dangerous. Remember the safety rules for handling gasoline; and use your common sense.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Safety Away From Work

Safety at work is hopefully a matter of routine. Just as important as safety on the job, is safety at home. According to one study, you are actually safer at work than at home. For our discussion today, consider driving, home and play.

Guide for Discussion

Driving

- Don't speed.
- Drinking and driving don't mix.
- Maintain your vehicle in good mechanical condition.
- Watch out for other drivers.
- Allow for proper stopping distances.
- Be courteous, especially if you're in a company vehicle.

Home

- Minimize electrical exposures.
- Eliminate slipping and tripping hazards.
- Don't overextend on ladders.
- Teach your family to identify hazards.
- Know basic first aid and, if possible, CPR.

Play

- Be careful not to overexert yourself.
- Loosen up before you begin playing a sport.
- Don't try to keep up with the children (of all ages).
- Know any safety rules associated with your forms of recreating (i.e., boating, hunting).
- Teach your family how to play safely and then enforce the rules.

Additional Discussion Notes:

Remember: Our family and friends are very important to us. With a safe driving, living, working and playing environment, we can continue with our friends and family.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

Compressed Gas Cylinders

Most of us know what the various compressed gas cylinders are used for on the job, but how many of us realize that the gases stored in those cylinders are under pressure of from 250 psi to 2200 psi? These pressures make the cylinders not only dangerous from a fire standpoint but if not handled and stored properly, you are looking at a bomb or a rocket. Today we want to talk about the safe use of compressed gas cylinders.

Guide for Discussion

1. Always store compressed gas cylinders in a secure upright position.
2. Always store with caps over the valves.
3. Never store two different types of gases closely together.
4. Never tamper with any safety devices on the valve or cylinder.
5. Always open valves slowly.
6. Avoid storing cylinders in areas of high temperatures (shade works).
7. Never use cylinders for rollers or sawhorses.
8. Never attempt to repair valves or regulators.
9. Separate full cylinders from empty ones.
10. Do not try to transfer gases from one cylinder to another.
11. Keep a fire extinguisher nearby when handling or working with compressed gas cylinders.
12. When in use, keep cylinders secured to a cart designed for that use.
13. Remove empty cylinders from the work area.
14. Never expose gases to oil or grease.

Additional Discussion Notes:

Remember: The improper use of compressed gas cylinders is a common safety violation. Most people think the cylinders are safe. However, they are safe only if treated properly. To insure that they don't become a hazard, follow the basic rules we just discussed.

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.

QUICK REFERENCE GUIDE

Many standards in WISHA rules require employers to ensure workers are trained to do their jobs safely. If you want to know exactly what a requirement says, this Quick Reference Guide has been included for you. For greater detail, see "Be Trained! A Guide to WISHA's Safety and Health Training Requirements." *Editing Note: Bold () are small c; other () are small i.*

Accident Prevention Signs & Tags

Workers must be instructed that danger signs indicate immediate danger and caution signs indicate a possible hazard. Safety instruction signs must be used when there is a need for general safety instructions. For more information see:

Caution Signs	WAC 296-24-14005 (2)
Danger Signs	WAC 296-245-14005 (1)
Safety Instruction Signs	WAC 296-24-15005 (3)

Construction Safety Training & Education

Harmful Substances: Workers required to handle or use poisons, caustics, and other harmful substances must have instruction emphasizing hazards, personal hygiene, and personal protective measures.

Harmful Plants and Animals: At job sites where harmful plants or animals are present, workers must be instructed on possible hazards, injury avoidance, and first aid.

Flammable Liquids, Gases, Toxic Materials: Workers required to handle or use flammable liquids, gases, or toxic materials must be instructed on how to use and handle them safely.

Confined Spaces: All workers required to enter confined or enclosed spaces must be instructed about the hazards, precautions, and protective and emergency equipment.

For more information see:

Confined Spaces	WAC 296-809-100 through 800
Flammables etc.	WAC 296-24-69507, 70007
Harmful Plants, Animals	WAC 296-155-100 (3)
Harmful Substances	WAC 296-24-71521
Ventilation	WAC 296-24-71507

Electrical

Workers exposed to electrical shock hazards must be trained in safety requirements relevant to their jobs. Both qualified and unqualified persons must be trained. Qualified persons are trained to work on or near exposed energized parts; they must be able to determine exposed live parts, nominal voltage of exposed live parts, and safe clearance distances. Unqualified persons have not been trained to work on or near exposed energized parts.

For more information see:

WAC 296-45-065

Excavations

There are no specific excavation training requirements for workers. However, employers must ensure that workers recognize and control or eliminate worksite hazards. In addition a competent person must inspect an excavation daily for evidence of cave-in. A registered professional engineer must determine that excavations are a safe distance from existing structures and will not pose a hazard for workers. Support systems must be designed by qualified persons and inspected by a competent person.

For more information see:

Stability of Adjacent Structures **WAC 296-155-655 (9)**
Protection for Workers **WAC 296-155-655 (10)**
Inspections **WAC 296-155-655 (11)**
Safety Training and Education **WAC 296-800-14020**

Fall Protection

Workers exposed to fall hazards must be trained to recognize the hazard and to use procedures that will minimize them. Training must be done by a competent person who understands the following:

- The nature of fall hazards in the work area.
- Procedures for erecting, maintaining, disassembling and inspecting fall protection systems.
- Use of guardrail systems, personal fall arrest systems, safety net systems, warning line systems, safety monitoring systems and controlled access zones.
- The role of each worker in the safety monitoring system.
- Limitations of mechanical equipment during roofing work on low-sloped roofs.
- Procedures for handling and storing equipment and for erecting overhead protection.
- Workers' roles in fall protection plans.
- The requirements of the fall protection standard.

Certification: The employer must certify training for each worker, documenting the worker's name, the training date, and the trainer's signature.

Retraining: The employer must retrain any worker who does not have the skills required by this standard.

For more information see:

WAC 296-155-717

See page 97 for information on Stairways & Ladders in Construction in these Tool Box Talks

Hand & Power Tools

Only workers who have appropriate training are allowed to operate powder-actuated tools.

For more information see:

WAC 296-155-36321

Hazard Communications

This is the “employee’s right to know law.” Employers are required to provide workers with training and information on hazardous chemicals (and/or materials) in their work areas at the time they first come on to the job and whenever a new hazard is introduced. Training and information must cover the following:

- Hazard communication standard requirements
- Operations where hazardous chemicals are present
- The location and availability of the written hazard communications program
- Methods used to detect the presence or release of hazardous chemicals in the work area
- Hazards of chemicals in the work area
- How workers can protect themselves from chemical hazards, including spills or leaks from sealed containers
- The hazard communications program

For more information see:

Information and Training	WAC 296-800-17030
Information and Training	WAC 296-155-180
Leaks and Spills, Containers	WAC-296-800-17040
Leaks and Spills, Containers	WAC 296-155-100 (4)
Transmittal of Information	WAC 296-800-18005
Transmittal of Information	WAC 296-800-18010
Transmittal of Information	WAC 296-800-18015
Transmittal of Information	WAC 296-800-18020

Noise Exposure

Workers exposed to high noise levels must be fitted with hearing protectors. The employer must teach workers how to use and care for the protectors.

Training Program: The employer must have an annual training program for workers exposed to noise at or above an eight-hour time-weighted average of 85 decibels. Training must be consistent with changes in protective equipment and work processes.

For more information see: **WAC 296-817-2002**

Permit-Required Confined Spaces WAC 296-809-20002

Workers exposed to permit space hazards must have the understanding, knowledge, and skills necessary to perform assigned duties. Employers must provide training in the following situations:

- Before the duties are assigned;
- Before any changes in the assigned duties; and
- Whenever workers are deviating from entry procedures.

Certification: The employer must certify that workers accomplish required training. Certification must include each worker's name, signatures or initials of trainers, and training dates. The certification must be available for inspection by workers and their authorized representatives.

Rescue: The employer must ensure that each member of a rescue team is provided with and trained to use all equipment necessary for permit space rescues.

Each member of the team must be trained to perform assigned rescue duties; receive the training required for authorized entrants; and be trained in basic first-aid and in cardiopulmonary resuscitation (CPR).

At least one member of the rescue service holding current certification in first-aid and in CPR must be available. Attendants may enter a permit space to attempt rescue if they have been trained and equipped for rescue operations.

For more information see:

Certification	WAC 296-809-40004
Rescue	WAC 296-809-50014
Training	WAC 296-809-40002
Worker Proficiency	WAC 296-809-40004

Personal Protective Equipment (PPE)

Employers must provide training to workers who use PPE. Training must cover the following:

- When PPE is necessary
- What PPE is necessary
- How to put on, remove, adjust, and wear PPE
- The limitations of PPE
- Care, maintenance, and disposal of PPE

Each worker must understand the training and demonstrate the ability to use PPE properly.

Workers must be retrained when they can't demonstrate required skills and when there are changes in the workplace or in PPE that make previous training obsolete.

Certification: The employer must certify that workers have been trained. The certification must include the trainee's name, training dates, and the type of training received.

For more information see:

Certification	WAC 296-800-16035
Performing a Hazard Assessment	WAC 296-800-16005
Documentation	WAC 296-800-16010
Selection	WAC 296-800-16015
Providing PPE	WAC 296-800-16020
Training	WAC 296-800-16025

A written Job Hazard Analysis shall be made that details the type of work being performed, the part(s) of the body which require protection, and the PPE required.

Respirator Protection

Workers must be trained to use respirator protective equipment in dangerous atmospheres. Competent persons must do the training covering respirator selection, use, and maintenance. Trainers must provide users with the opportunity to handle the respirator, have it fitted properly, test its piece-to-face seal, wear it in normal air, and wear it in a test atmosphere.

Repair Work: Replacement or repairs must be done only by experienced persons. No attempt must be made to replace components or to make adjustments beyond the manufacturer's recommendations. Reducing or admission valves or regulators must be returned to the manufacturer (or to a trained technician) for repair.

For more information see:

Repair Work	WAC 296-842-17015
Training	WAC 296-842-16005

Safety Committees

All safety committee members must receive training in workplace hazard identification and effective accident and incident investigations.

Employers must compensate workers who participate in safety committee training at their regular hourly wage.

Site Clearing

Workers who do preconstruction site clearing must be instructed in first aid and protected from irritants and toxic plants.

For more information see:

WAC 296-155-625 (1) (i)

Stairways & Ladders in Construction

The employer must provide training for workers who use ladders and stairways during construction work. Workers must recognize ladder and stairway hazards and how to minimize the hazards. Workers must be trained by a competent person and must understand the following:

- Fall hazards in the work area.
- Procedures for erecting, maintaining, and disassembling fall-protection systems.
- Proper construction, use, placement, and care of stairways and ladders.
- Maximum intended load-carrying capacities of ladders.

For more information see:

Training Program **WAC 296-155-48060-1 (a)**

Training Requirements **WAC 296-155-48060-1 (b)**

**WISHA Recommended
Periodic Training and/or Certification**

<i>Topic</i>	<i>Frequency</i>	<i>Certification</i>
Acrylonitrile WAC 296-62-07336 (15)	Prior to exposure and retraining yearly	No

Agriculture

Aerial Manlift WAC 307-27010 (3)	Prior to operation and retraining if required	Recommended
Anhydrous Ammonia WAC 296-307-40027 (1)	Prior to handling and retraining if required	Recommended
Bloodborne Pathogens WAC 296-62-08001 (7) (b)	Prior to exposure and retraining yearly	Recommended
Chemical Hazards WAC 296-307-55030	Prior to exposure and whenever new chemicals are introduced	No
Cherry Camp WAC 307-16325 (2) (a)	On hiring	No
Electrical WAC 296-307-37803	Prior to exposure and retraining if required	No
Field Sanitation WAC 296-307-09509	On hiring	No
Fire Protection WAC 296-307-34021	On hiring and retraining yearly	Recommended
First Aid WAC 296-307-03910	Every two years	Yes
General Safety WAC 296-307-018	On hiring	No
Guarding tools and equipment WAC 296-307-18015	On hiring and retraining yearly	No
Hazardous Material Clean-up WAC 296-62-3040	Prior to exposure and annual refresher	Yes
Hearing Conservation WAC 296-62-09035	Prior to exposure and annual refresher	Yes
Ladders WAC 296-307-05503	Prior to use	No
Lockout / Tagout WAC 269-307-32019	Prior to exposure and retraining if required	No

Agriculture (continued)		
LPG Installation, removal, operation, & maintenance WAC 296-307-41043	Prior to activity and annual refresher	No
New Hire Orientation WAC 296-307-030	On hiring	No
Personal Protective Equipment WAC 296-307-10025	On hiring	No
Pesticides WAC 296-307-12040	Prior to exposure	No
Pesticide Handler WAC 296-307-13025 (3) (d) (xiii)	Prior to exposure and retraining yearly	Yes
Powered Industrial Trucks WAC 296-307-52029	Prior to operation and within three years	Yes
Rim Wheel Service WAC 296-307-53005 (1)	On hiring	No
Roll Over Structures WAC 296-307-08018	Prior to operation and retraining yearly	No
Temporary Housing WAC 296-307-16125 (2) (a)	On hiring	No
Vehicles & Farm Equipment WAC 296-307-07005	Prior to operation	Valid Drivers License
Welding WAC 296-307-48001 (4)	Prior to activity	No

Ammonia Handling
WAC 296-24-51009 (10) (a)

Prior to exposure

No

Asbestos (Anthophyllite)
WAC 296-62-07722 (1)

Prior to exposure and retraining yearly

Yes

Asbestos Worker
WAC 296-65-005

Prior to exposure and retraining yearly

Yes

Benzene
WAC 296-62-07523 (10) (c)

Prior to exposure and retraining yearly

Recommended

Bloodborne Pathogens
WAC 296-823-120

Prior to exposure and retraining yearly

No

Boom supported elevating work Platform
WAC 296-24-87510 (18)

Prior to operation and retraining if required

Recommended

Butadiene

Prior to exposure and

Recommended

WAC 296-62-07460 (12) (b)

retraining yearly

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Cadmium

WAC 296-62-07425 (4)

Prior to exposure and retraining yearly

Recommended

Chemical Hazard Communications (Package, Handle, React, Emit, Extract, Generate as a by-product, Transfer.
WAC 296-800-17030

On hiring and whenever a new hazard is introduced in the work area

No

Coke Ovens

WAC 296-62-200019

On hiring and retraining yearly

No

Commercial Diving

WAC 296-37-520

On hiring and retraining if required

Recommended

Confined Spaces

WAC 296-809-400

Prior to exposure and as needed

Yes

Construction

Chemical Hazards

WAC 296-800-170

On hiring/retraining as required

Recommended

Equipment Operation

296-155-035-2

Prior to use and as required

Recommended

Fall Protection

WAC 296-155-24505 (4)

As necessary to maintain proficiency

No

First Aid

WAC 296-155-120

Prior to activity

Valid Certificate

Flagger, Construction

WAC 296-155-307 (7)

On hiring/retraining every three years

Yes

Ladder

WAC 296-155-48060

On hiring/retraining if required

No

Lead Exposure

WAC 296-155-17625 (1) (b)

Prior to exposure and retraining yearly

Yes

Occup. Health & Safety

WAC 296-155-100 (1) (c)

On hiring/retraining if required

Recommended

Rigging, multiple lift

WAC 296-155-717 (3)

As necessary to maintain proficiency

No

Rim Wheels

WAC 296-155-6175 (1)

On hiring/retraining if required

No

Scaffold erection/dismantle

WAC 296-155-493 (2)

Prior to use and retraining if required

Recommended

Scaffold use (working from)

WAC 296-155-493 (1)

Prior to use and retraining if required

Recommended

Crane WAC 296-24-23529 (1)	Prior to operation and retraining if required or within three years	Yes
Crime Prevention, Late Night Retail WAC 296-832-200	On hiring and retraining yearly	No
Electrical, risk of shock WAC 296-24-970 (1)	Prior to exposure and retraining yearly	No
Electrical, work on/near exposed energized parts WAC 296-24-960	Prior to exposure and retraining yearly	No
Emergency Response Responder WAC 296-62-41021	On hiring/retraining if required	No
Equipment Operator, Ski Area WAC 296-59-015 (2)	On hiring/retraining if required	No
First Aid (general industry) WAC 296-800-15005	As necessary to maintain proficiency	Yes
Hazard Communication WAC 296-800-17030	Annual refresher including correct respirator wear	No
Hazardous Waste Operations 296-843-200	Prior to exposure and yearly recertification	Yes
Industrial Powered Lift Truck WAC 296-24-23025 (1)	Prior to operation and retraining if required or within three years	Recommended
LASER WAC 296-62-09005 (4) (f)	Prior to exposure and retraining yearly	No
Lockout/Tagout WAC 296-24-11005 (7) (c)	Prior to exposure and retraining yearly	No
Logging Operations WAC 296-54-507 (1)	On hiring/retraining if required	No
Mobile Equip. Operator, Ski Area WAC 296-59-090 (2) (b)	On hiring/retraining if required	No
New Employee Training and/or Orientation WAC 296-800-14020	On hiring	Recommended Sign-off on company policies
Noise Exposure WAC 296-817-2002	Annual, for each worker in a hearing conservation program	Yes

Permit-Required Confined Spaces WAC 296-809-40002	As necessary to maintain proficiency	No
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Portable Fire Extinguisher Use WAC 296-800-300	On hiring/retraining if required	No
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Powder Actuated Tools WAC 296-807-15005	As necessary to maintain proficiency	Yes
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Respirators WAC 296-842-16005	Prior to exposure and retraining yearly	No
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Robotics WRD 87-3	On hiring/retraining if required	No
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Sawmill Occup. Health & Safety WAC 296-78-515 (1) (c)	On hiring/retraining if required	Recommended
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Scaffold erection/dismantle WAC 296-24-86020 (2)	Prior to use and retraining if required	No
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Scaffold use (working from) WAC 296-24-86020 (1)	Prior to use and retraining if required	Recommended
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Self-propelled elevating work Platform WAC 296-24-87505 (14)	Prior to operation and retraining if required	Recommended
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Window Cleaning WAC 296-878-110	As necessary to maintain proficiency	No
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1,2-Dibromo-3-Chloropropane WAC 62-07342 (15) (a)	Prior to exposure and retraining if required	No
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**WISHA Required
Periodic Training and/or Certification**

Personal Protective Equipment WAC 296-800-160	On hiring/retraining if required	Yes
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No specific WISHA training Required

Textile Industry WAC 296-301
Bakery Equipment WAC 296-302
Laundry Machinery and Operations WAC 296-303

Tool Box Talk Training Record**Safety Subject Area/Topic****Date Presented****Date Presented****Safety Training**

Whose Responsibility Is It?
The Deadly Dozen
Why Accidents Occur
Recognizing Unsafe Conditions
Shop Safety
What Does An Accident Cost
Near Misses
Care For The Injured
Accidents Are Avoidable
Listen For Danger
Accident/Incident Reporting
Sample Report Form

Common Sense Subjects

Safety Is Common Sense
Keeping In Shape
Warming Up
Proper Lifting
Horseplay
Short Cuts

Protecting the Public

Protecting the Public
Children And Construction
Vehicle Operations
Traffic Control
Barricades & Warning Devices

Effects of Weather

Effects of Weather
Heat Exhaustion/Sunstroke
Dressing for Winter Work

Personal Protective Equipment

Construction Clothing
Head Protection -- Hard Hats
Eye Protection
Foot Protection
Hand Protection
Personal Protective Equipment – Concrete Construction
Knee Pads
Respirators

Tool Box Talk Training Record, Continued

Safety Subject Area/Topic	Date Presented	Date Presented
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Housekeeping

Housekeeping
Trash Chutes
Material Storage
Material Handling
The Spotter
Signaling Techniques

Tool Use and Care

The Right Tool For The Right Job
Hand Tools
Screwdrivers
Wrenches
Hammers/Chisels
Nails Are Dangerous Too
Table Saws
Electric Power Tools
Electric Hand Saws
Portable Electric Tools
Powder Actuated Tools
Chain Saws

JOB SITE HAZARDS – THE BIG FOUR

Falls From Elevated Heights

Falls
Ladders
Fall Causes Death: Ladders Are Killers
Floors and Other Openings
Guardrails
Ramps and Runways
Full Body Harnesses/Lifelines
Washington Training Requirements - Fall Hazards

Being Caught Between or Under

Excavations
Excavation: Additional Discussion Points
Trenching
Dangers Overhead
Working in Confined Spaces
Heavy Equipment
Heavy Equipment Hazards
Working Around Cranes

Tool Box Talk Training Record, Continued

Safety Subject Area/Topic	Date Presented	Date Presented
Electrical		
Electrical Hazards Assured Grounding Program Power Lines and Mobile Cranes		
Fire Protection		
Fire Protection and Control Fire Extinguishers Refueling Equipment Gasoline		
Other		
Safety Away From Work		
Future Topics/Topic Expansion		
Compressed Gas Cylinders		

SAFETY TRAINING STEPS

Preparation

Select a topic. Use a priority sequence. Accidents/incidents, demonstrated lack of skills, required or mandatory training (e.g., fall protection, ladders and stairways.)

Chose a good location to train

Research the subject; include company policies and procedures

If a new subject, ask what the audience already knows (so you can avoid covering that information in great detail)

Presentation

Talk about what is going to be taught

Tell why the subject (or training) is important

Describe safety procedures, general to specific

If necessary, demonstrate safety procedures; one step at a time

Repeat steps if necessary; be patient

Involvement

Get workers involved in the discussion; encourage questions

In demonstrations:

- ask worker to perform procedures
- correct any errors immediately; address performance not person
- practice until you and the worker are confident

Follow Up

Observe worker performing safety procedures on the job

Ask for feed-back; encourage questions

Give feedback on performances

Decrease observation over time as appropriate

Subject:

Introduction:

Guide for Discussion

Additional Discussion Notes:

Remember:

Attendee's:

NOTE: Always promote a discussion on any of the topics covered in the Tool Box Talks. Should any question arise that you cannot answer, don't hesitate to contact your Employer.