



SAFETY PROGRAM

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STATEMENT OF POLICY

Electrical Associates (Company) is committed to providing and maintaining a safe and healthful workplace for all employees. Safety is incorporated into every job we do. We adhere to federal, state, and local safety regulations as well as recognized safe work practices for our industry. Our business is conducted with the highest regard for the safety and well-being of all our employees.

Safety is of the utmost importance; it is considered an integral part of every task every employee performs. Each employee shall be just as responsible for how safely he or she performs his/her work as any other element of that task.

We believe that no job is so important, nor a service so urgent, that it cannot be performed in a safe manner. It is our policy that employees report all accidents, injuries, and unsafe conditions to the appropriate company representative. Any unsafe condition must be corrected before work is begun.

The responsibility for workplace safety is shared among management, supervisors, and employees. The full cooperation and compliance with safety policies and procedures is required of everyone here at our Company. We are counting on you to do your part by recognizing your responsibility to incorporate safety into every task, every day.

Thank you for your cooperation.

General Manager

RESPONSIBILITY OF MANAGEMENT

It is the responsibility of Electrical Associates to

- provide a safe, healthy and secure working environment
- ensure regular inspections are made and take action as required to improve unsafe conditions
- ensure that health, safety and personal security considerations form an integral part of all work processes
- support supervisors and employees in the implementation of an effective health & safety program
- ensure compliance with OSHA and other applicable entities
- ensure adequate time and resources are available to implement appropriate procedures.
- ensure that supervisors are accountable within their jurisdictions for any activities that are non-compliant with the Regulations.
- all accident investigations are reported to management and that steps are taken to ensure that these accidents do not reoccur.

SUPERVISOR RESPONSIBILITIES

It is the responsibility of **ALL** supervisors to:

- formulate specific safety rules and safe work procedures for their area of supervision;
- ensure that all employees under their supervision are aware of safety practices and follow safety procedures;
- provide training in the safe operation of equipment;
- inspect job sites regularly for hazardous conditions;
- correct promptly unsafe work practices or hazardous conditions;
- be responsive to concerns expressed about personal security and investigate any accidents, incidents or personal security concerns which have occurred in their area of responsibility

COMPETENT PERSONS FOR THIS PROJECT

Electrical Associates, LLC – Project Manager

RESPONSIBILITY OF THE EMPLOYEES

It is the responsibility of **ALL** employees to:

- follow all OSHA, state and local rules and regulations that apply to you or your work
- observe safety rules and procedures established by supervisory staff and management
- correct all hazards within your capability
- report as soon as possible any accident, injury, unsafe condition to your supervisor, no matter how minor
- use properly and adequately care for personal protective equipment provided by the company

SAFETY TRAINING

The goal of Safety training is to educate employees to recognize hazardous situations and behaviors that they are most likely to face during the workday. Tool Box Talks will be conducted by your foreman on a weekly basis. Ongoing training also allows the introduction of new equipment and processes and opens the lines of communication within our organization. Mike McDaniel will conduct specialty training as required by OSHA and as required by your job function.

DISCIPLINARY ACTION

Failure to follow safety procedures described in this manual will result in disciplinary action up to and including termination.

ORIENTATION

Upon commencing employment at our Company, every employee shall receive a Safety Orientation as outlined below. The employee's supervisor, in concert with the new employee, shall:

- 1) Review the safety program with the employee.
- 2) Conduct a review of the hazards relating to the employees work.
- 3) Develop and execute a training plan that will ensure the employee can work safely with the identified hazards.
- 4) Ensure the new employee has been trained in the site specific and general emergency response protocols.

The bottom line is that safety is up to everyone. Accident prevention is part of your job.

ACCIDENT INVESTIGATIONS

It is the responsibility of our supervisors to report and investigate any accidents, incidents or close calls to management. Management shall review copies of accident investigations. Based on the investigation, appropriate corrective action must be taken to prevent reoccurrence.

If feasible, one worker and one supervisor should be involved in each investigation. Appropriate experts, if warranted, may also be included in an accident investigation.

EMERGENCY PROCEDURES

OSHA requires that all companies have a written Emergency Response Plan that includes evacuation procedures and emergency phone numbers.

Your foreman will be responsible for informing all employees where all exits are on the job site as well as accounting for the safe evacuation of all employees.

INJURIES

If emergency personnel are needed, dial 911.

Minor injuries, requiring more than first aid will be treated at:

***US HEALTHWORKS
15319 W. 95th Street, Lenexa, KS 66219 (913) 495-9905***

FIRST AID PROCEDURES

The Company will provide first aid kits for all vehicles and job sites. Our employees are trained in First Aid, Blood borne Pathogens and CPR.

JOB HAZARD ANALYSIS

Job Hazard analysis should be done before the start of each job and as your job procedures or environment changes. Every job function will be assessed to determine the hazards involved. Employees will be trained on the recognition of the hazards associated with their job and how to avoid them.

HOUSEKEEPING

- Housekeeping results in a more pleasant working environment.
- Housekeeping is the responsibility of everyone.
- Housekeeping continues throughout the entire workday.
- The orderly arrangement of work areas is vital to the safety of all workers.
- Keep walkways free for passage.
- Dispose of scrap daily.

Poor Housekeeping can cause:

- a) **Slips** from slick or wet floors, platforms, and other walking and working surfaces.
- b) **Trips** from objects or materials that are left in walkways and work areas.
- c) **Falls** from holes in walking and working surfaces, un-even flooring, uncovered pits or drains, and by using boxes or pallets instead of adequate platforms.
- d) **Collisions** caused from overhanging, protruding, or falling objects.

FIRE SAFETY

Prevention is the key to eliminating the hazards for fire in the workplace. The following steps can help prevent fire:

- Keep work areas clean and clutter free.
- Know what chemicals you work with, how to handle and store them.
- Protect electrical temporary wiring from damage.
- Observe “No Smoking” signs.
- Make sure you are familiar with the company emergency action plan for fires.
- Know what you are expected to do in case of a fire emergency.

Preparation is the key to controlling the consequences of fire in the workplace. The following steps can help prepare you in case of a fire:

- Don't panic, call 911.
- If you are trained in the use of the proper fire extinguisher, use it.
- Know the location of the nearest fire exit and proceed to it in an orderly fashion.
- Be aware of smoke and noxious fumes. If necessary, get on your hands and knees to crawl to the nearest exit.
- Make use of things available for a shield, (a heavy blanket or tarp).
- If trapped inside a burning building, shut all doors within your reach.
- Once outside the building, move away from the direction of the flames and smoke.

HAZARD COMMUNICATION PROGRAM

Company Policy

The purpose of this program is to inform our employees about hazardous chemicals that they work with or could be exposed to.

This program applies to all work operations in our company where you may be exposed to hazardous chemicals under normal working conditions or during an emergency situation.

Mike McDaniel, is the program coordinator and has overall responsibility for the program. He will review and update the program, as necessary. Copies of the written program may be obtained from Mike McDaniel.

Under this program, you will be informed of the contents of the Hazard Communication Standard, the hazardous properties of chemicals with which you work, safe handling procedures, and measures to take to protect yourselves from these chemicals. You will also be informed of the hazards associated with non-routine tasks, such as entering confined spaces.

List of Hazardous chemicals

Mike McDaniel, or his designee, will make a list of all hazardous chemicals and related work practices used in the facility, and will update the list as necessary. Our list of chemicals identifies all of the chemicals used on our job sites. A master list of these chemicals will be maintained by, and is available from Mike McDaniel.

Material Safety Data Sheets (MSDS's)

MSDS's provide you with specific information on the chemicals you use. Mike McDaniel will maintain a binder in his office with an MSDS on every substance on the list of hazardous chemicals. Mike McDaniel, or his designee, will ensure that each job site maintains MSDS's for the hazardous chemicals on each job site. MSDS's will be made readily available to you at your job site.

Mike McDaniel, or his designee, is responsible for acquiring and updating MSDS's. He will contact the chemical manufacturer or vendor if additional research is necessary or if an MSDS has not been supplied with an initial shipment. All new procurements for the company must be cleared by Mike McDaniel. A master list of MSDS's is available from Mike McDaniel.

Labels and Other Forms of Warning

Your foreman will ensure that all hazardous chemicals on the job site are properly labeled and updated, as necessary. Labels should list at least the chemical identity, appropriate hazard warnings, and the name and address of the manufacturer, importer or other responsible party. If you transfer chemicals from a labeled container to a portable container that is intended only for your immediate use, no labels are required on the portable container.

Non-Routine Tasks

When you are required to perform hazardous non-routine tasks (e.g., entering confined spaces, etc.), a special training session will be conducted to inform you of the hazardous chemicals to which you might be exposed and the precautions you must take to reduce or avoid exposure.

HAZARD COMMUNICATION PROGRAM *(continued)*

Training

Everyone who works with or is potentially exposed to hazardous chemicals will receive initial training on the Hazard Communication Standard and the safe use of those hazardous chemicals. Your foreman will conduct these training sessions. Whenever a new hazard is introduced, additional training will be provided. Regular safety meetings will also be used to review the information presented in the initial training. Foremen and other supervisors will be extensively trained regarding hazards and appropriate protective measures so they will be available to answer questions from employees and provide daily monitoring of safe work practices.

The training program will emphasize these items:

- A summary of the standard and this company's written program.
- The chemical and physical properties of hazardous materials
- The physical hazards of the chemicals in your work area (e.g., potential for fire, explosion , etc.).
- The health hazards, including signs and symptoms of exposure, of the chemicals in work area and any medical condition known to be aggravated by exposure to these chemicals.
- Procedures to protect against chemical hazards (e.g., required personal protective equipment, and its proper use and maintenance; work practices or methods to ensure appropriate use and handling of chemicals; and procedures for emergency response).
- Work procedures to follow to assure protection when cleaning hazardous chemical spills and leaks.
- The location of the MSDS's, how to read and interpret the information on labels and MSDSs, and how employees may obtain additional hazard information.

Mike McDaniel or his/her designee will review the employee training program. Retraining is required when the hazard changes or when a new hazard is introduced into the workplace. It will be company policy to provide training regularly in safety meetings to ensure the effectiveness of the program. As part of the assessment of the training program, Mike McDaniel will obtain input from employees regarding the training they have received, and their suggestions for improvement.

Other Contractors

Our MSDS's are located in each of our company vehicles and in Key Construction's job trailer. Each contractor bringing chemicals on-site must provide Key Construction with the appropriate hazard information for the substances, including MSDS's, labels, and precautionary measures to be taken when we are working around their chemicals.

FLAMMABLE & COMBUSTIBLE LIQUIDS

Flammable and combustible liquid accidents happen fast. Spills or explosions can cause instant-serious-burn-injuries and their fires spread rapidly, burn hot, and are often difficult to extinguish. Most flammable and combustible liquid accidents occur because they are not handled or used properly. Handling flammable and combustible liquids is a common occurrence with construction projects. You must know the difference between flammable and combustible liquids.

A COMBUSTIBLE LIQUID must be heated to 100 F in order to release enough vapors to ignite. For example: *fuel oil, kerosene and linseed oil.*

A FLAMMABLE LIQUID can ignite at temperatures below 100 F even below freezing. For example: *gasoline, lacquer thinner, alcohol, and some paint thinners.*

Whenever handling liquids in containers marked *flammable* or *combustible* READ THE WARNING LABEL and remember, in addition to the danger of fire and explosion, there may be other serious health threats from these liquids. In order to be safe:

- Always use gasoline and diesel fuels for their intended purpose only, as a fuel.
- Never use liquids as a solvent, thinner, cleaning agent, fire starter, or hand and clothing cleaner.
- Always store, transport, and dispense these fuels from approved, labeled containers.
- Never smoke near fuel storage, while handling fuels, or during refueling operations.
- Never mix gasoline and diesel fuel together. The result could be an unexpected explosion. By blending them together you can produce vapor concentrations that fall into a very explosive category range.

DANGER! FUEL SOAKED CLOTHING CAN CAUSE SKIN IRRITATION AND CAN ALSO CAUSE A FIRE AND/OR EXPLOSION IN YOUR CLOTHES DRYER, EVEN AFTER BEING WASHED!

PERSONAL PROTECTIVE EQUIPMENT

All personal protective equipment (PPE) shall be of safe design and construction for the work to be performed.

Supervisors are required to conduct a hazard assessment of the workplace to determine if any hazards are present that would require the use of PPE and then select the appropriate PPE based on those hazards.

Supervisors shall arrange training for each employee who is required to use personal protective equipment. Training must consist of the following:

- When the equipment is necessary
- What equipment is used
- How to properly don, adjust and remove the equipment
- The limitations of the equipment
- Proper care, maintenance, and disposal practices

Eye and/or face protection must be used when employees are exposed to any of the following:

- flying particles (side protection is required),
- liquid chemicals,
- acids or caustic liquids,
- harmful light radiation, electrical arc/flash
- molten metal, or
- chemical gases or vapors

All eye and face protection used, whether owned by the employee or provided by the Company, must meet or exceed the requirements of ANSI Z87.1 - 1989, and have markings indicating so.

Foot Protection:

Leather work boots are required when working in areas where there is a potential of foot injury due to falling or rolling objects, objects piercing the sole, or exposed electrical hazards. All safety footwear must comply with ANSI Z41-1991, "American National Standard for Personal Protection - Protective Footwear."

Head Protection

Class E Hard hats are required to be worn and are designed to protect you from impact and penetration caused by objects hitting your head, and from limiting electrical shock or burns.

Hearing Protection:

Hearing protection shall be worn on all job sites any time excessive noise, above 85 decibel's, is present. Example: Most hammer drills produces a noise level at approximately 98 decibel's.

Cleaning and Maintenance

It is important that all PPE be kept clean and properly maintained. Cleaning is particularly important for eye and face protection where dirty or fogged lenses could impair vision. PPE should be inspected, cleaned, and maintained at regular intervals so that the PPE provides the requisite protection. Personal protective equipment must not be shared between employees until it has been properly cleaned and sanitized.

It is also important to ensure that contaminated PPE, which cannot be decontaminated, is disposed of in a manner that protects employees from exposure to hazards.

RESPIRATORS

The Company does not require that employees wear respirators. If an employee chooses to wear a respirator (dust mask), which some employees may do for comfort purposes, OSHA requires that these employees adhere to Appendix D of the Respiratory Standard as follows:

Appendix D to Sec. 1910.134 (Mandatory) Information for Employees Using Respirators When Not Required Under the Standard

Respirators are an effective method of protection against designated hazards when properly selected and worn. Respirator use is encouraged, even when exposures are below the exposure limit, to provide an additional level of comfort and protection for workers. However, if a respirator is used improperly or not kept clean, the respirator itself can become a hazard to the worker. Sometimes, workers may wear respirators to avoid exposures to hazards, even if the amount of hazardous substance does not exceed the limits set by OSHA standards. If your employer provides respirators for your voluntary use, or if you provide your own respirator, you need to take certain precautions to be sure that the respirator itself does not present a hazard.

You should do the following:

1. Read and heed all instructions provided by the manufacturer on use, maintenance, cleaning and care, and warnings regarding the respirators limitations.
2. Choose respirators certified for use to protect against the contaminant of concern. NIOSH, the National Institute for Occupational Safety and Health of the U.S. Department of Health and Human Services, certifies respirators. A label or statement of certification should appear on the respirator or respirator packaging. It will tell you what the respirator is designed for and how much it will protect you.
3. Do not wear your respirator into atmospheres containing contaminants for which your respirator is not designed to protect against. For example, a respirator designed to filter dust particles will not protect you against gases, vapors, or very small solid particles of fumes or smoke.
4. Keep track of your respirator so that you do not mistakenly use someone else's respirator.

ELECTRICAL SAFETY

Electrocution is one of the leading causes of death in the workplace. As little as 1/20th of an amp can kill a person if the circumstances are right. Because of this, OSHA has set forth safety standards to prevent electrical accidents. Further more, OSHA distinguishes between qualified and unqualified workers.

Qualified Workers have been trained in how to work safely with electrical equipment and what types of personal protective equipment and insulated tools to use. They have been trained to determine if a circuit or equipment is energized and to know what voltage they are working with.

Unqualified Workers have not had this training and are not allowed to work on or near energized circuits or equipment. Unqualified workers do need to know the dangers of energized circuits and equipment and how to protect themselves from those hazards. Also, unqualified workers need to know what type of work is for qualified workers only.

Electrical Safety Rules:

- 1) All circuits will be de-energized and *lockout-tag out* procedures shall be in place before any employee performs work on an electrical circuit.
- 2) Only qualified persons shall perform work on an energized circuit and only with prior approval from their supervisor.
- 3) Anytime underground work is required, a locating service will be utilized.
- 4) In work areas where the exact location of underground electric power lines is unknown, employees using jack-hammers, bars, or other hand tools which may contact a line, shall be provided with insulated protective gloves.
- 5) Qualified employees that perform work on energized circuits shall be familiar with and use the proper precautionary techniques, personal protective equipment and insulating tools and materials supplied by the Company.
- 6) If work to be performed near overhead power lines, protective measures such as guarding, isolating, or insulation shall be in place to prevent employees from contacting such lines directly with any part of their body or indirectly through conductive materials, tools, or other equipment.
- 7) Employees not qualified to perform work near energized power lines shall maintain a distance of 10 feet for voltages to ground 50kv or below, plus 4 inches for each 10kv over 50kv.
- 8) Employees qualified to perform work near energized power lines shall be protected by insulated tools, equipment, insulated gloves and sleeves, if necessary, rated for the voltage involved and the energized part shall be insulated from all other conductive objects at a different potential.
- 9) All insulating protective equipment shall be inspected at the beginning of each workday and any other time where there could have possibly been any damage done that may affect the insulating properties of the equipment.
- 10) All insulating protective equipment shall be tested at intervals no less than stated in the testing procedures schedule which is on file in the Safety Department.

LOCKOUT / TAGOUT PROGRAM

Purpose

This procedure establishes the minimum requirements for lockout of energy sources that could cause injury to personnel. All employees shall comply with the procedure.

Responsibility

The responsibility for seeing that this procedure is followed is binding upon all employees. All employees shall be instructed in the safety significance of the lockout procedure by your supervisor. Each employee will be furnished with their own lock. Each new or transferred affected employee shall be instructed by their supervisor in the purpose and use of the lockout procedure.

Preparation for Lockout

Employees authorized to perform lockout shall be certain as to which switch, valve, or other energy isolating devices apply to the equipment being locked out. More than one energy source (electrical, mechanical, or others) may be involved. Any questionable identification of sources shall be cleared by the employees with their supervisors. Before lockout commences, job authorization should be obtained.

Sequence of Lockout Procedure

- Notify all affected employees that a lockout is required and the reason therefor.
- If the equipment is operating, shut it down by the normal stopping procedure (such as: depress stop button, open toggle switch).
- Operate the switch, valve, or other energy isolating devices so that the energy source(s) (electrical, mechanical, hydraulic, other) is disconnected or isolated from the equipment. Stored energy, such as that in capacitors, springs, elevated machine members, rotating fly wheels, hydraulic systems, and air, gas, steam or water pressure, must also be dissipated or restrained by methods such as grounding, repositioning, blocking, bleeding down.
- Lockout energy isolating devices with an assigned individual lock.
- After ensuring that no personnel are exposed and as a check on having disconnected the energy sources, operate the push button or other normal operating controls to make certain the equipment will not operate. CAUTION: Return operating controls to neutral position after the test.
- The equipment is now locked out.

Restoring Equipment to Service

- When the job is complete and equipment is ready for testing or normal service, check the equipment area to see that no one is exposed.
- When equipment is clear, remove all locks. The energy isolating devices may be operated to restore energy to equipment.

Procedure Involving More Than One Person

In the preceding steps, if more than one individual is required to lock out equipment, each shall place his/her own personal lock on the energy isolating device(s). One designated individual of a work crew or a supervisor, with the knowledge of the crew, may lock out equipment for the whole crew. In such cases, it may be the responsibility of the individual to carry out all steps of the lockout procedure and inform the crew when it is safe to work on the equipment. Additionally, the designated individual shall not remove a crew lock until it has been verified that all individuals are clear.

Rules for Using Lockout Procedure

All equipment shall be locked out to protect against accidental or inadvertent operation when such operation could cause injury to personnel. Do not attempt to operate any switch, valve, or other energy isolating device bearing

BASIC STEPS FOR LOCKOUT/TAGOUT

To remove energy:

Notify all affected employees.

1. Shut down using normal stopping procedures.
2. Isolate from all energy sources.
3. Lockout (or tag-out) from energy source(s).
4. Release or restrain stored/residual energy.
5. Verify isolation.

To restore energy:

1. Check the machine: remove nonessential items; components operationally intact, and guards installed.
2. Affected employees notified and clear.
3. Verify controls are in neutral position.
4. Remove lockout and reenergize. Except in emergencies, only the person who attached the lockout device may remove it!

ENERGIZED ELECTRICAL PROGRAM

In certain circumstances, it is necessary to perform duties on an energized system.

It is the policy of the Company to take every reasonable measure to protect its workers from job site electrical hazards and injuries due to electrical arcing. Mike McDaniel is the designated competent person assigned to oversee the live electrical work and protection issues for employees at job sites. The Company shall make every attempt to de-energize equipment prior to the start of work. We recognize that there is equipment that cannot be de-energized. If employees must work on energized equipment they will follow all procedures in accordance with the NFPA 70E 2004 standard.

TEMPORARY POWER GUIDELINES

Temporary lighting and powers should be installed in accordance with the NEC and OSHA regulations.

Temporary lighting and power should be protected from damage.

Baskets must be used to protect lamps.

All temporary lighting will be supported by the basket and fastened at intervals every 10 feet.

Junction boxes must be covered at all times.

All extension cords will be inspected before each day's use.

Any cords that show damage must be removed from service.

All 120-volt, single-phase 15- and 20- ampere receptacle outlets on construction sites, which are not a part of the permanent wiring of the building or structure and which are in use by employees, shall have approved ground-fault circuit interrupters (GFCI's) for personnel protection.

GFCI's will be inspected before each day's use and recorded in the foreman's daily log.

All equipment grounding conductors shall be tested for continuity and shall be electrically continuous.

Receptacles on a two-wire, single-phase portable or vehicle-mounted generator rated not more than 5kW, where the circuit conductors of the generator are insulated from the generator frame and all other grounded surfaces, need not be protected with ground-fault circuit interrupters.

FALL PROTECTION PROGRAM

Purpose and Scope

The purpose of this fall protection program is to establish guidelines to protect all employees engaged in outdoor or indoor work activities that expose them to potential falls from elevations.

The scope of this fall protection program includes employees engaged in work activities, which expose them to falls from heights of 6 feet or more.

Goals

The goal of this Fall Protection Program is to prevent the occurrence of falls from elevations of 6 feet or higher. This goal will be accomplished through effective education, engineering and administrative controls, use of fall protection systems, and enforcement of the program. This fall protection program will be continually improved upon to prevent all falls from occurring.

Types of Fall Protection Systems

- 1) An articulating man lift provided with a restraint system and full body harness to an anchor point below the waist (preferably at the floor level).
- 2) Guardrail with a toe-board, mid-rail and top-rail.
- 3) Personal fall arrest systems.
 - Anchor points (rated at 5000 pounds per person).
 - Full body harness.
 - Restraint line or lanyard.
 - Retractable lanyard.
 - Rope grabs.
 - Connectors (self-locking snap hooks).
- 4) Engineered lifelines.
- 5) Warning lines.
- 6) Safety nets.
- 7) Safety monitor systems.

Appropriate fall protection will be determined by the task (job) to be performed.

Fall Protection Guidelines – Options

Guardrails

On all projects, only guardrails made from steel, wood, and wire rope will be acceptable. All guardrail systems will comply with the current OSHA standards (i.e., contain a 42" high top-rail, a mid-rail and toe board, which can withstand 200 pounds of force in any direction,). These guardrails will be placed in the following areas if necessary or feasible based on job location or requirements:

- 1) On all open sided floors.
- 2) Around all open excavations or pits.
- 3) On leading edges of roofs or mezzanines.

FALL PROTECTION *(continued)*

Personal Fall Protection Systems

All employees on any project that will be required to wear a personal fall arrest or restraint system will follow these guidelines:

- 1) A full body harness will be used at all times.
- 2) Only shock absorbing lanyards or retractable lanyards are to be used so as to keep impact forces at a minimum on the body.
- 3) Only nylon rope or nylon straps with locking snap hooks are to be used for restraints.
- 4) All lanyards will have self-locking snap hooks.
- 5) The employee will inspect all personal fall arrest equipment before each use. Any deteriorated, bent, damaged, impacted, and/or harness showing excessive wear will be removed from service.

The maximum free fall distance is not to exceed 6 feet. Consideration must be given to the total fall distance. The following factors can affect total fall distance:

- 1) Length of connecting means (i.e., lanyard length, use of carabiners, snap hooks, etc.)
- 2) Position and height of anchorage relative to work platform/area (always keep above the head whenever possible).
- 3) Position of attachment and D-ring slide on the full body harness.
- 4) Deployment of shock absorber (max. 42”).
- 5) Movement in the lifeline.
- 6) Initial position of worker before free fall occurs (i.e., sitting, standing, etc.).

Calculating Total Fall Distance

It is the total length of shock absorbing lanyard + height of the person + the location distance of the D-ring from the work surface or platform.

Always allow a minimum of 6 feet of clearance above the ground, equipment, etc., at the end of the fall from the fall arrest point.

Engineered Lifeline

- Lifeline systems must be designed and approved by an engineer or qualified person.
- Lifeline systems must be engineered to have appropriate anchorage's, strength of line designed to hold X number of individuals connected to it, line strength to aid in the arrest of a fall, and durability to hold a fallen employee(s) suspended until a rescue can occur.

Warning Line System

All work on a flat roof greater than 50 feet wide, which is performed 6 feet or further back from the edge of the roof can be completed by installing a Warning Line and using a safety monitor. If the roof is flat and less than 50 feet wide, a competent person safety monitor may be used.

Warning Lines will consist of the following:

- 1) Will be erected 6 feet from the edge of the roof.
- 2) Be constructed of stationary posts made of wood or metal.
- 3) Wire or nylon rope and “Caution” tape will be strung from post to post and must be able to withstand 16 pounds of force.
- 4) The warning line will guard the entire perimeter of the roof where work is being performed.

If an employee must access an area within 6 feet of the roof's edge, for reasons other than exiting the roof via a ladder or fixed industrial ladder, another employee must monitor that individual and warn him/her of any dangers. If another employee is not available to act as a safety monitor, then the employee must don a full body harness and attach a fall restraint lanyard to an anchor point to prevent reaching the edge of the roof.

FALL PROTECTION *(continued)*

Inspection of Fall Protection Systems

The following criteria will be utilized to maintain all equipment in good working condition:

Full Body Harnesses

- 1) Inspect before each use.
 - Closely examine all of the nylon webbing to ensure there are no burn marks, which could weaken the material.
 - Verify there are no torn, frayed or broken fibers, pulled stitches, or frayed edges anywhere on the harness.
 - Examine the D-ring for excessive wear, pits, deterioration, or cracks.
 - Verify that buckles are not deformed, cracked, and operate correctly.
 - Check to see that each grommet (if present) is secure and not deformed from abuse or a fall.
 - The harness should never have additional punched holes.
 - All rivets should be tight and not deformed.
 - Check tongue/straps for excessive wear from repeated buckling.
- 2) A competent person will complete an annual inspection of all harnesses and documentation will be maintained
- 3) Storage will consist of hanging in an enclosed cabinet, to protect from damage.
- 4) All harnesses that are involved in a fall will be destroyed.

Training

All employees engaged in fall protection will be trained and have the knowledge to:

- 1) Recognize the fall hazards of/on their job sites.
- 2) Understand the hazards associated with working near fall hazards.
- 3) Work safely in hazardous areas by utilizing appropriate fall protection measures.
- 4) Understand and follow all components of this fall protection program.
- 5) Identify and understand the enforceable OSHA standards and ANSI standards that pertain to fall protection.

Rescue Procedures

Rescue Methods/Options of Fallen Personnel

In the unlikely event that a fall arrest occurs on-site, personnel with the use of an articulating man lift or ladders where feasible, will rescue all employees. Alternate rescue would be through the local emergency services.

LADDER SAFETY

Not all jobs can be done safely with a ladder or by one person with a ladder. If the job **can** be done safely with a ladder, there are several basic considerations in doing it safely whether the ladder is a stepladder or an extension ladder.

- Read and follow the instructions for the ladder and for the tools you are using.
- Be sure the ladder is strong enough to support you and the material and tools you are using. This means that not only should the load capacity be sufficient to support the combined weight of user and materials, the ladder should be in good shape. The ladder should have a label showing its load capacity. The ratings authorized for construction use are:

Type I, heavy duty, 250 lbs.

Type IA, extra heavy duty, 300 lbs.

Type 1AA special duty, 350 lbs.

- Inspect the ladder for defects such as missing, damaged or loose components; snags; oil, mud or other slippery materials.
- Make sure moving parts work properly and all connections are secure.
- Wear slip-resistant shoes or boots, and make sure the soles are clean.
- Climb facing the ladder, one step at a time, with your body centered and using your hands.
- Be sure the ladder has been set up with all ladder feet on firm level ground.
- Keep the area around the ladder clear, and control the traffic.
- Keep your body centered on the ladder. Hold the ladder with one hand while working with the other.
- Never lean or reach sideways so far your belt buckle passes beyond either ladder rail.
- Don't use the top three rungs of an extension ladder or stand or sit on the top or top step of a stepladder.
- Don't use a ladder in strong winds
- Don't use an aluminum ladder around electrical wires that might be live.

Stepladder:

- Open the ladder fully and lock both spreaders firmly.
- Position the ladder so you can face your work.
- Do not climb the back of a stepladder unless it was specifically made for two people.

Extension Ladder:

- Position the rounded end up, with the ladder feet (with non-skid surface for hard ground) down on firm level ground with the upper section on top of the lower section. The upper and lower sections should overlap by at least three steps.
- Place the top of the ladder so that both rails are fully supported. The rails should support the load evenly. The support area should be at least 12 inches wide on each side of the ladder. If the support area is not strong enough to support the ladder, for example, a gutter, find another way to support the ladder. Ladder accessories such as a ladder stand-off may be needed.
- The ladder should form about a 75 degree angle with the ground. This means the horizontal distance from a point directly below the upper support point to the ladder's feet should be $\frac{1}{4}$ the vertical height to the support, 4:1 ratio.
- If you will be climbing onto an upper surface, such as a roof, the ladder should extend at least 3 feet above the surface.
- Extension ladders need both locks holding to prevent overloading a rail. Secure the extension rope to the lower section as a back-up for the lock assemblies.
- Tie down the ladder at both the top and bottom if possible. At each location, tie to both of the ladder rails and tie the other end of the rope so that the rope angles away from the center of the ladder.

SCAFFOLD SAFETY

- Make sure that the safety instructions are included with any leased equipment.
- Scaffolding components should never be interchanged with components from a different manufacturer.
- A competent person should supervise the construction of all scaffolding as well as participate in before and during shift inspections.
- Inspect, maintain, and replace all parts of the scaffold and accessories that are in poor condition.
- Scaffolds should support at least four times the anticipated weight of the workers and materials that will be on them.
- Keep scaffolds, platforms, runways, and floors free of ice, snow, grease, mud, or any other materials that could cause slipping.
- Place scaffolding on firm, smooth foundation that prevents sideways movement.
- Employees must not work on scaffolds during storms or high winds.
- Overhead protection must be provided for persons on a scaffold exposed to overhead hazards.
- Toe boards should be used to protect workers from tools and equipment falling from the platform.
- Do not use scaffolding if the working platform is not planked all the way across.
- All planking or platforms must be overlapped a minimum of 12 inches or secured from movement.
- Tools, materials, and debris must not be allowed to accumulate in quantities to cause a hazard.
- Wire or fiber rope used for suspension must be capable of supporting at least six times the intended load.
- Do not use a scaffold if the planks are not scaffold grade, bearing the proper stamp.
- Provide hard hats to all employees working in an area where objects can fall from above.
- Do not use rolling towers unless the wheels are locked and never allow workers to ride on rolling towers while they are being moved.
- Do not bridge between two scaffolds unless designed by a qualified person.
- Do not use a scaffold taller than four times the minimum base unless it is tied, guyed, or braced to prevent tipping.
- Provide a safe and convenient means for gaining access to the working platform.
- Ladders used to access scaffolds should conform to the requirements of the applicable ladder standard.
- Workers should not carry materials as they climb. Keep both hands on the side rails or ladder.
- Do not use heat producing activities such as welding or insulation removal without taking precautions to protect the scaffold workers.
- Spacing between the platform and the uprights should be not more than 1 inch, unless it is demonstrated that the wider space is necessary.
- Scaffold planks should extend over their end supports not less than six (6) inches not more than 18 inches.
- Only qualified personnel should erect and dismantle scaffolding.
- Use two or more ladders for means of egress if necessary. When platforms are longer than 30 feet, large equipment is between workers and ladders, and anticipated continuous flow of traffic.
- All platforms must be at least 18" (two boards) wide.
- Planks and platforms should be fastened to the scaffold as necessary to prevent uplift or displacement.
- Platforms and planks must not be painted, this will hide defects.
- Loads on the plank should be evenly distributed when possible.
- Post safety rules for scaffolding in obvious places and make sure workers follow them.

SCAFFOLDING *(continued)*

Inspections and Testing of Planks

- Wood planks bear a mark, stamp, seal, or other indication of the referenced standard on usage.
- Examine the plank for large knots, excessive grain slopes, shakes, decay, and other defects that may render it unfit.
- Do not use a scaffold if the planks are bowing more than 1/60 of their span.
- Discard the plank upon visible or audible evidence of failure, or if it has an obvious deflection.
- Determine the safe load for a plank on its size and species.
- Do not use rusty or corroded scaffold equipment, its strength is unknown.
- Check for cracks around welds, joints, and circumference.
- Check castors for damaged brakes, axles, or stems.
- Check manufactured planking for missing hooks, locks, missing rivets, bent side rails, and damaged walking surfaces. If the surface is plywood, check for rotten areas.

Fall Protection

- Each employee on a scaffold more than 10 feet above a lower level must be protected from falling.
- Guardrail systems shall be installed along all sides and ends of platforms over 10 feet high.
- Each guardrail must be able to withstand a force applied in any downward or horizontal direction of at least 200 pounds.

Electrical Power Lines

- The minimum clearances that must be maintained between scaffolds and exposed energized power lines are:
- 10 feet for insulated power lines of 300 volts or more and all unisulated power lines (most power lines are not insulated).
- Electrical conductive tools should not be used where they may contact power lines.
- Evaluate each job site before any work is done to determine if there is a danger of overhead power lines coming in contact with workers.
- Employers should inform workers about the hazards of erecting, moving, or working from scaffolds near overhead power lines.
- Employers should notify the utility company when scaffolds must be erected or moved in areas with overhead power lines where the required clearances cannot be maintained. Utility companies can de-energize the power lines or cover them with insulating hoses or blankets before any work is initiated.
- Clearance between the power lines and scaffolds should be monitored by an observer.

Training

All employees that work on scaffolds must be trained by a qualified person in the hazards associated with the type of scaffold that is being used and how to control the hazards.

The training should include at least the following:

- (1.) Electrical hazards, fall hazards, and falling object hazards.
- (2.) Correct procedures for dealing with electrical hazards, using fall protection, and falling object protection systems.
- (3.) Proper use of scaffolds, and proper handling of materials on the scaffold.
- (4.) Maximum intended load and load-carrying capacities of the scaffolds used.
- (5.) The correct procedures for erecting, disassembling, moving, operating, repairing, maintaining, and inspecting scaffolds.
- (6.) Employees must be trained when new hazards appear at the worksite.
- (7.) The employer must insure that the employees understand the training and must retrain if needed.

SCISSORS LIFTS & AERIAL PLATFORMS

- Only properly trained and authorized personnel shall be permitted to operate a *scissors lift* or an *elevated work platform*.
- Any mechanical or hydraulic malfunction, **MUST** be repaired before operating machine.
- Do not operate machine within *10 feet* of power lines.
- Altering or disabling the interlocks or other safety devices is prohibited.
- Do not exceed rated load capacity when transferring to the platform at any height.
- Do not operate the aerial platform from a position on trucks, trailers, or scaffolds.
- Do not use the aerial platform as a crane.
- Do not position against another object to steady the platform.
- Shut the engine down while fuel tanks are being filled.
- Take care in preventing ropes, cords, and hoses from becoming entangled in platform.
- Do not drive aerial platform in extended position on an inclined surface.
- Inspect batteries.

Pre-start Inspection:

Before use each day or at the beginning of each shift, the aerial platform shall be given a visual inspection and functional test including but not limited to the following:

- 1) operating and emergency controls (upper and lower)
- 2) safety devices
- 3) personal protective devices
- 4) air, hydraulic, and fuel system leaks
- 5) cables and wiring harnesses
- 6) loose or missing parts
- 7) tires and wheels
- 8) placards, warnings, control markings, and operating manual(s)
- 9) outriggers, stabilizers, and other structures
- 10) guardrail system

Workplace Inspection:

Before the aerial platform is used and during use, the operator shall check the area in which the aerial platform is to be used for possible hazards such as, but not limited to:

- 1) drop-offs or holes
- 2) bumps and floor obstructions
- 3) debris
- 4) overhead obstructions and high voltage conductors
- 5) hazardous locations
- 6) wind and weather conditions

During Operation:

Before each elevation of the platform, the operator shall ensure:

- 1) The platform is operated on a surface within the manufacturers specified limits.
- 2) Outriggers, stabilizers, extendible axles, or other stability means are used as required.
- 3) Guardrails are installed and access gates or openings are closed.
- 4) The load and its distribution on the platform extensions are in specified configuration.
- 5) Adequate clearance from overhead obstructions.
- 6) Minimum safe distances to energized power lines and parts are maintained.
- 7) All personnel on the platform are wearing safety gear as required at all times.
- 8) The area surrounding the aerial platform is clear of personnel and equipment before lowering the platform.

Elevated Driving Requirements:

Before and during driving while the platform is elevated, the operator shall:

- 1) Maintain a clear view of the path of travel.
- 2) Maintain a safe distance from obstacles to ensure safe elevated travel.
- 3) Maintain a safe distance from overhead obstacles.
- 4) **DO NOT** drive on inclined surfaces with platform extended!

SAFE LIFTING

Manual material handling accounts for the greater majority of lifting accidents.

Three types of body movements associated with these injuries are: ***bending, twisting, and reaching out.***

Think about how you will pick up an item and make sure you have a clear path to your destination.

Friction/Grip is an important factor in lifting. Wearing special lifting gloves with a gripping surface can make a significant difference in the amount of force required to grip an object.

Follow these procedures for safe lifting:

- Stretching before performing any lifting can reduce your chance of injury
- Use your knees to lift and lower objects.
- Reduce weight of the load by reducing the size or amount of objects carried.
- Two people lifting can cut the weight in half.
- Carry the load close to your body.
- Smaller loads will allow you better vision and maneuverability.
- Keep the load between shoulder and knuckle height (the power zone)
- Turn your feet with the rest of your body, don't twist with a load in hand.
- Avoid reaching out while handling a load.
- Keep yourself in good physical condition.
- When possible, request that vendors and suppliers break down loads prior to delivery.

Mechanical Methods

- Use mechanical means such as forklifts, duct lifts, pallet jacks and hand trucks to lift or transport heavy items such as heavy spools, transformers, switch gear, service sections, conduit, large batteries and machinery.
- Avoid rolling spools. Once they are in motion, it is difficult to stop them.
- If possible, build ramps and/or use lift gates to load machinery into trucks rather than lifting it.

HAND, POWER AND POWDER ACTUATED TOOLS

Hand Tools

Hand tools are non-powered. The greatest hazards posed by hand tools result from misuse and improper maintenance.

Some examples include the following:

- Using a screwdriver as a chisel may cause the tip of the screwdriver to break and fly, hitting the user or other employees;
- If a wooden handle on a tool such as a hammer or an axe is loose, splintered, or cracked, the head of the tool may fly off and strike the user or another worker;
- A wrench shall not be used if its jaws are sprung, because it might slip;
- Impact tools such as chisels and wedges are unsafe if they have mushroomed heads. The heads might shatter on impact, sending sharp fragments flying;
- Employers shall caution employees that saw blades, knives or other tools be directed away from other employees working in close proximity. Knives and scissors shall be sharp. Dull tools can be more hazardous than sharp ones;
- Appropriate personal protective equipment (e.g., safety goggles, gloves) shall be worn due to hazards that may be encountered while using portable power tools and hand tools;
- Safety requires that floors be kept as clean and dry as possible to prevent accidental slips with or around dangerous hand tools; and

Around flammable substances, sparks produced by iron and steel hand tools can be a dangerous ignition source. Where this hazard exists, spark-resistant tools made from brass, plastic, aluminum or wood shall be used.

Power Tools

Power tools can be hazardous when improperly used. There are several types of power tools, based on the power source they use: electric, pneumatic, liquid fuel, hydraulic and powder-actuated.

The following general precautions shall be observed by power tool users:

- Never carry a tool by the cord or hose;
- Never remove prongs from extension cords;
- Never stand in or near water when using tools;
- Never “yank” the cord or the hose to disconnect it from the receptacle;
- Keep cords and hoses away from heat, oil and sharp edges;
- Replace all frayed and/or damaged extension cords. Do not try to tape cords;
- Disconnect tools when not in use, before servicing and when changing accessories such as blades, bits and cutters;
- All observers shall be kept at a safe distance away from the work area;
- Secure work with clamps or a vise, freeing both hands to operate the tool;
- Avoid accidental starting. The worker shall not hold a finger on the switch button while carrying a plugged-in tool;
- Tools shall be maintained with care. They shall be kept sharp and clean for the best performance. Follow instructions in the user's manual for maintenance, lubricating and changing accessories;
- Maintain good footing and balance;
- The proper apparel shall be worn. Loose fitting clothes, ties or jewelry such as bracelets, watches or rings, which can become caught in moving parts; and
- All portable electric tools that are damaged shall be removed from use and tagged "Do Not Use". This shall be done by supervisors and/or employees.

HAND, POWER & POWDER ACTUATED TOOLS *(continued)*

Powder-Actuated Tools

Powder-actuated tools operate like a loaded gun and shall be treated with the same respect and precautions. Safety precautions to remember include the following:

- All employees will be trained on the safe use of Powder Actuated tools.
- These tools shall not be used in an explosive or flammable atmosphere;
- Before using the tool, employees shall inspect it to determine that it is clean, all moving parts operate freely, and the barrel is free from obstructions;
- Employees shall not modify tools;
- The tool shall never be pointed at anybody;
- The tool shall not be loaded unless it is to be used immediately. A loaded tool shall not be left unattended, especially where it could be available to unauthorized persons;
- Hands shall be kept clear of the barrel end;
- To prevent the tool from firing accidentally, two separate motions are required for firing: one to bring the tool into position and another to pull the trigger;
- The tools shall not be able to operate until they are pressed against the work surface with a force of at least five pounds greater than the total weight of the tool;
- If a powder-actuated tool misfires, the employee shall wait at least 30 seconds, then try firing it again;
- If it still will not fire, the user shall wait another 30 seconds so that the faulty cartridge is less likely to explode then carefully remove the load. The bad cartridge shall be put in water;
- Suitable eye and face protection are essential when using a powder-actuated tool;
- The muzzle end of the tool shall have a protective shield or guard centered perpendicularly on the barrel to confine any flying fragments or particles that might otherwise create a hazard when the tool is fired. The tool shall be designed so that it will not fire unless it has this kind of safety device;
- All powder-actuated tools shall be designed for varying powder charges so that the user can select a powder level necessary to do the work without excessive force; and
- If the tool develops a defect during use, it shall be tagged and taken out of service immediately until it is properly repaired

EXCAVATIONS

An excavation is any mechanically-made cavity or depression in the earth's surface. A trench or excavation must adhere strictly to all OSHA safety guidelines. OSHA requires that all trenches and excavations be inspected prior to the start of work and as needed throughout the work shift on a daily basis, as long as the excavation remains open, by a competent person. A competent person is a person who has been trained in the OSHA regulations for excavation, soil classifications, sloping and shoring methods, hazardous atmospheres and other hazardous conditions. Most importantly, a competent person must have the authority to take corrective action or stop any work when conditions become hazardous.

- All employees must be protected by: *sloping, benching*, or an approved *shoring* if an excavation is 5 feet or more in depth. Trenches that are less than 5 feet in depth must also be protected if hazardous ground movement is expected.
- A safe means of entry and exit is required in trenches more than 4 feet deep.
- The presence of all underground installations such as: sewer, telephone, fuel, electric, or water lines shall be determined prior to opening an excavation.
- The backfill pile must be at least 2 feet from the edge of the trench.
- Do not work in excavations where there is accumulated water.
- Warning signals need to be developed to warn employees working in a trench of approaching equipment.
- Where hazardous atmospheric conditions could possibly exist, such as, landfills or areas where hazardous substances are stored nearby, the atmospheres in the excavation shall be tested before employees enter excavations greater than 4 feet in depth.
- Hard hats must be worn at all times.
- Employees exposed to trench work next to public traffic shall wear safety vests.

CONFINED SPACES

Working in confined spaces can be extremely dangerous. Because of this, OSHA developed a strict standard to protect employees in confined spaces. Employee must obtain a permit from their supervisor to enter a confined space. Refer to the company's Confined Space Program.

Definition of a Confined Space:

- Area large enough and so configured that an employee can enter and perform work.
- An area that limits or restricts means of entry or exit.
- An area that is not designed for continuous human occupancy.

Examples of Confined Spaces:

- Storage Tanks
- Process Vessels
- Bins
- Silos
- Tunnels
- Ventilation or Exhaust Ducts
- Sewers
- Trenches
- Vaults

Permit-Required Confined Spaces:

- Contains or has the potential to contain a hazardous atmosphere.
- Contains a material that has the potential for engulfing an entrant.
- Has an internal configuration such that the entrant could become trapped or asphyxiated by inwardly converging walls or by a floor sloping downward and tapering to a smaller cross section.
- Contains any other recognized serious safety or health hazard.

FLEET SAFETY

The National Safety Council reports that about 40,000 people die in traffic accidents every year and millions more suffer disabling injuries. Motor vehicle accidents are one of the leading causes of work related fatalities.

You can help eliminate vehicle accidents by using some of these defensive driving tactics:

- **Expand your look-ahead capacity.** Check what is happening down the road a few seconds before you get there.
- **Size up the whole scene.** Know what is going on all around your vehicle. Don't stare at anything for more than 2 seconds. Make it a habit to check your mirrors every 5 to 10 seconds.
- **Plan an escape route.** Use the correct following distances under normal conditions and for bad weather. There is a 1 second following distance for every 10 feet of vehicle length. Don't tailgate. Yield to other vehicles. Follow the **mandatory** company policy of wearing your seat-belt.
- **Follow posted speed limits.**
- **Inspect your vehicle before driving it.** Make sure your windshield is clean and wipers are in good condition. Maintain proper tire pressure. Check fuel and other gauges. Check horn. Be sure headlights, taillights, and turn signals work and are clean. Always make sure all items inside the vehicle as well as tools and materials stored in racks on top of the vehicle are secure.
- **Maintenance of fleet vehicles.** Must be scheduled with the company's fleet mechanic every 3000 miles. If problems develop with your vehicle between scheduled maintenance, report them to the fleet mechanic for immediate attention.
- **Read and follow the rules of the Company Fleet Vehicle Policy in your Employee Handbook.**

All company fleet vehicles are equipped with a *first aid kit* and a *fire extinguisher*. If an emergency occurs, use the two-way radio, or any means available, to call the office for help or to dial 911.

Concentrate on driving safely whenever you get behind the wheel. Be a responsible and a defensive driver. **Safe driving habits are important ON and OFF the job.**

HEAVY EQUIPMENT

Heavy equipment safety affects everyone. It can be dangerous to those who operate them and to those who work around them. Be aware of the safety guidelines that follow:

If you are the operator:

- Know how to operate your equipment safely and in accordance with the manufacturer's instructions.
- Only trained authorized employees are allowed to operate equipment.
- Check to see all hoses, brakes, steering, backup alarm, horn, lights, and other controls are in safe operating condition before operating.
- Do not operate equipment in an unsafe condition.
- Beware of overhead and underground power lines.
- Do not jump off equipment. Face equipment and use three point contact for mounting and dismounting.
- If equipment comes in contact with power lines, **Stay on the equipment**. If you must leave the equipment, jump clear of the equipment taking care to land on both feet only, keeping feet together, hop to a safe distance clear of the equipment.
- Remove keys and lock up equipment at the end of the day.
- Riders are not allowed.

If you are working around the equipment:

- Hard hats must be worn.
- Stay alert and maintain a safe working clearance from the equipment.
- Never assume the equipment operator sees you.
- Observe back-up alarms and horns, but don't depend on them in noisy work areas.
- Do not walk or work under a load.
- Do not walk alongside equipment.
- Watch out for pinch points.
- Stay clear of equipment if it comes into contact with a power line.

WIRE ROPES, CHAINS & SLINGS

The correct applications, selection, attachment, and inspection of rigging equipment requires knowledge and experience. It should only be performed by a person who is competent in this field. The operator of the equipment is the person responsible for making sure all equipment is in safe condition and that all rigging is done properly.

Some important rules to follow in the selection and use of rigging equipment are:

- 1) Always refer to load charts for proper equipment selection.
- 2) Never use knots, bolts, or other makeshift devices to shorten sling length.
- 3) Protect the sling from sharp edges.
- 4) Do not drag slings over abrasive surfaces or attempt to pull it out from under loads.
- 5) Do not overload or shock-load any rigging equipment.
- 6) Watch for pinch points.
- 7) Keep the load balanced.

Slings shall be removed if any of the following conditions are present:

1. 10 randomly distributed broken wires in one lay, or 5 broken wires in one strand in one lay.
2. Wear or scragging on 1/3 of the original diameter of the outside individual wires.
3. Kinking, crushing, bird caging, or other damage to the wire rope structure.
4. Evidence of heat damage to wire rope.
5. End attachments that are cracked, deformed, or worn.
6. Corrosion of the rope end.
7. Fraying, cuts, discoloration, burns, broken or worn stitches to web or rope slings.
8. Weakened, worn, cracked, nicked, gouged, spread, or elongated links in chain.
9. Hooks that are opened more than 15% or twisted more than 10 degrees.

Prior to each use, refer to the equipment manufacturer's guidelines for safe temperature range, chemical damage warnings, use, and storage precautions.

Alcohol & Drugs

Electrical Associates LLC. has established a policy on the use and/or abuse of drugs and alcohol by its employees.

Effects of Substance Abuse:

- Endangers the safety of employees as well as the general public.
- Increased on-the-job injuries.
- Increased absenteeism.
- Increased health care and benefit costs.
- Increased risk of theft from the company and from other employees.
- A decrease in morale.
- Decreased productivity.
- A decline in the quality of services provided.

Statistics show that approximately 14% of employees use some type of substance on the job. The only way to stop such an addictive behavior is with professional help.

Electrical Associates LLC has a substance abuse policy which does include methods for employees to get professional help as well as training for employees on the importance of a drug and/or alcohol free workplace. If you are suffering from substance abuse on or off the job, please seek help. If you suspect another co-worker is suffering from substance abuse, it is your responsibility to report that person to your supervisor.

The company policy is designed to detect and remove abusers from the workplace. It is also company policy to prevent the use and/or presence of these substances in the workplace. *See the Substance Abuse Policy* in your employee handbook.