



WORKPLACE SAFETY

GUIDELINES

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ADMINISTRATOR'S SAFETY POLICY

The Maryland State Highway Administration (SHA) has developed a four year business plan to guide our agency through 2011. This comprehensive plan includes our mission, vision, and values statements, as well as key performance areas and goals.

One important goal in our business plan is aimed at ensuring the health and safety of our people. The skills, talents and experience of our people are immeasurable. SHA understands the benefits in providing a safe and healthful working environment.

We are pleased at the progress that has been made in reducing accidents and injuries in the workplace. However, we will not be satisfied until all of our people realize safe and healthful working conditions in the performance of their job duties.

Developing and maintaining a safety culture requires ongoing line management and front line involvement in safety. Managers must continue to **make safety our number one priority** by promoting programs that are effective in identifying and reducing hazards in the workplace, training our people to work safely, and by making safety the primary consideration in all operations. Everyone who is in a position to supervise the work of others must be held accountable for creating a safe environment and enforcing policies and procedures. Supervisors are responsible for ensuring that accidents are reported promptly, accurately and enforcing work safety rules.

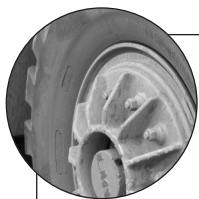
Individuals are expected to perform their duties in a safe and responsible manner. You should be aware at all times of your surroundings and that of your fellow workers. Working safely is a condition of employment. The Maryland State Highway Administration believes that all of our people must work as partners to create a work environment that is free of accidents and injuries. Please keep safety in mind in all of your everyday activities.

Neil J. Pedersen
Administrator

PREFACE

It is beyond the scope of this handbook to list all safety guidelines that will apply to every conceivable work situation at SHA. By following the guidelines contained herein, an employee could minimize the risk of work related injury/illness to themselves and fellow coworkers. It is the responsibility of each employee to read and understand the guidelines that apply to their job. For more specific directions, ask your Safety Management Representative or contact the Safety Management Consultant.





DEFINITIONS & ABBREVIATIONS

Note: Terminology – Certain terms not common in SHA usage are included in this handbook to conform to Labor and Industry terminology.

Accident

An unplanned event that can result in either injury to persons, damage to property, or financial loss to SHA.

CPR

Cardio-Pulmonary Resuscitation.

CE

Chief Engineer

dba

Decibels – A Scale-Weighted – The unit of measure of sound pressure.

Employee

Includes management, supervisory, and non-supervisory personnel.

Establishment

Any SHA workplace, i.e., shops, garages, laboratories, offices, or field offices.

Labor and Industry

Maryland State Division of Labor and Industry. It administers the Maryland Occupational Safety and Health Act of 1973, as amended.

MOSH

Maryland Occupational Safety and Health Act of 1973, as amended.

PPE

Personal Protective Equipment – Items of clothing or devices that could potentially protect the wearers from injuries from accidents. Examples include: hard hat, safety vest, eye-face and hearing protection, and respirator.

SHA

Maryland State Highway Administration





STAFFING

The SHA Occupational Safety and Health Program is administered through the following:

A. Chief Engineer (CE)

The Deputy Administrator with the overall administration of the SHA Safety and Health Program.

B. Safety Management Consultant (SMC)

The SMC is appointed by the CE to manage the SHA Occupational Safety and Health Program.

C. Safety Management Representatives (SMR)

SMR's are located throughout the state at each Engineering District Office and in the Office of Construction, Office of Traffic and Safety, Office of Maintenance and are responsible for the management of safety matters within their Responsibility Center.

D. Safety Management Team (SafMT)

The SafMT has statewide representation and provides guidance and input on safety related matters.

E. Safety Teams (ST)

The ST's are active at many levels throughout the Administration dealing with issues unique to their work areas.

RESPONSIBILITIES

Management

Members of management receive training as needed to enable them to discharge the following responsibilities:

Provide leadership, direction, and support for the SHA Occupational Safety and Health Program by means of the following:

- Setting a good example.
- Making periodic visits to SHA facilities and work sites to observe the occupational safety and health conditions and practices.
- Being familiar with, evaluating, and ensuring compliance with the SHA Occupational Safety and Health Program.
- Being aware of potential causes of accidents.
- Providing opportunities and facilities for safety training, and attending safety meetings as appropriate.
- Ensuring quick corrective action is taken on all known occupational safety, health hazards, and concerns.
- Ensuring that all employees are supported and encouraged to report occupational safety and health hazards and concerns without fear of reprisal.



RESPONSIBILITIES

Supervisors

Supervisors receive training as needed to enable them to discharge the following responsibilities:

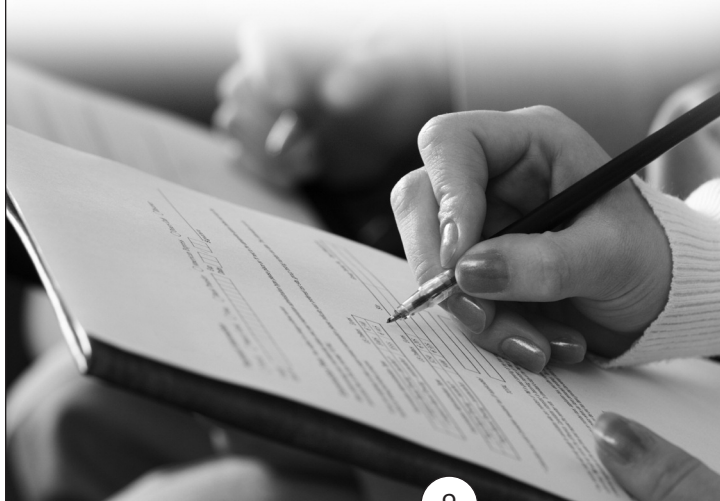
- Setting a good example for safety in the workplace.
- Being familiar with the provisions of the SHA Occupational Safety and Health Programs, and interpreting them to other employees.
- Train employees to work safely and recognize unsafe conditions and work practices.
- Being alert for safety and health hazards while carrying out routine duties, and taking prompt action to correct them.
- Obtain first aid and prompt medical attention when needed.
- Investigating all accidents promptly, and submitting accident reports as required.

RESPONSIBILITIES

Non-Supervisors

- Be familiar with applicable SHA Workplace Safety Guidelines complying with them at all times.
- Report every accident and occupational safety and health hazard or concern to your supervisor as soon as possible. Report whether or not anyone was hurt, regardless of how unimportant it may seem to you.
- Be aware of safety, and exercise good judgement in the performance of all assigned duties.
- Observe the work of their team members for safety and health risks.
- Obtain first aid and prompt medical attention when needed.

SAFETY Guidelines





REPORTING A SAFETY OR A HEALTH HAZARD

When you feel that your work places you in danger of bodily harm, you should follow this procedure.

- Inform your supervisor of the danger and ask that it be corrected.
- The supervisor will investigate the complaint immediately, if there is a danger of bodily harm, will correct it at once, or remove you from the danger until it can be corrected. If it is decided that there is no danger, you will be advised to return to work.
- If you still consider that there is danger of bodily harm, you may refuse to perform the job, although you should realize that this action might render you subject to disciplinary action if further investigation fails to confirm the danger.
- If you refuse to do the job, you must address a memo to your supervisor stating your refusal, clearly identifying the danger, and asking that it be investigated by higher management.
- The supervisor will send your memo to the head of your responsibility center, who will forward a copy to the Safety Management Consultant or Safety Management Representative.
- The head of your responsibility center, or someone appointed by them, along with the Safety Management Consultant or safety Management Representative will cooperate in investigating the job, and if they find that there is a danger of bodily harm, they will see that it is corrected as soon as possible. They must inform you of their findings within ten (10) working days after they receive your memo.

PERSONAL PROTECTIVE EQUIPMENT

Employees and supervisors have the responsibility to make reasoned judgements, regarding the use of protective equipment, in relation to the tasks being performed.

Eye and Face Protection: Must be worn when there is potential for eye or face injury from flying particles, objects, radiation agents, or chemical agents.

Foot Protection: Must be worn when there is danger of foot injuries due to falling and/or rolling objects, or objects piercing the sole. Due to the nature of maintenance/construction work, and the element that tasks may change without notice throughout the day, foot protection is therefore required at all times. *See special note.*

Head Protection: Must be worn where there is potential for head injury from impact, or from falling or flying objects, or from electrical shock or burns. *See special note.*

Hearing Protection: Must be worn in areas of excessive noise; hearing protection may also be required for coworkers in the immediate area. Hearing protection must be worn when operating heavy equipment, using impact or power actuated tools, grass cutting/trimming operations, or in areas where the noise level is greater than 85db.

Safety Seat Belts: Must be worn by all individuals while driving, riding, or operating state vehicles and equipment.

Fall Protection: Devices and systems designed to catch and hold a person after an accidental fall from height.

Respiratory Protection: Employees should be familiar with and follow the State Highway Administrations respirator program guidelines.



PERSONAL PROTECTIVE EQUIPMENT

continued

High Visibility Safety Apparel Policy: This policy applies to all SHA employees and all other persons who work on Maryland state highways and rights-of-way. All workers will wear, at a minimum, Class 2 ANSI/ISEA 107/2004 apparel.

- a) For SHA employees, this apparel will have a fluorescent yellow-green background material color and be the outermost garment worn.
- b) Retro-reflective material color for SHA employee apparel will be silver or white and be visible at a minimum distance of 1,000 feet. The retro-reflective safety apparel will be designed to clearly recognize and differentiate the wearer from the surrounding work environment. The retro-reflective material may be contrasted by fluorescent orange background material not to exceed one and one half inches on either side of the retroreflective material.
- c) Non-SHA employees will wear approved Class 2 ANSI/ISE 107/2004 apparel that is either fluorescent orange-red or fluorescent yellow-green background material color and be the outermost garment worn.
- d) Retro-reflective material color for non-SHA employee apparel will either be orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and be visible at a minimum distance of 1,000 feet. The retro-reflective safety apparel will be designed to clearly recognize and differentiate the wearer from the surrounding work environment.

• • •

Special Note: *Construction Inspection Division (CID) Personnel [and all visitors to a worksite] will be governed by Construction Directive 07220.100.28, Construction Work Site Safety Regulations. All CID personnel and visitors must wear hardhats, safety vest, and hard-soled shoes on the work site.*

Material Safety Data Sheets (MSDS) may also offer relevant information regarding the use of personal protective equipment.

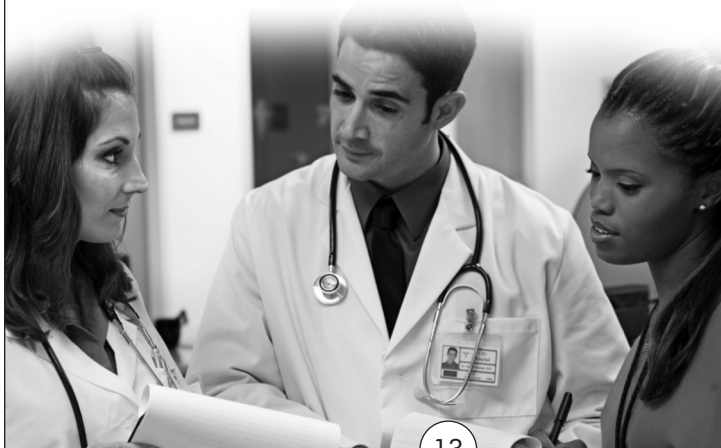
BLOODBORNE PATHOGENS

It is beyond the scope of these guidelines to list all situations that may put an employee at risk of possible exposure to Bloodborne pathogens.

Bloodborne Pathogens are infectious organisms present in human blood or bodily fluids.

Exposure is a result of direct contact with infected blood or bodily fluids that can enter the body through skin wounds (scrapes, cuts, punctures, etc.) or splashed into the eyes, mouth, or nose. The possibility of direct contact can come from post accident clean up where it may be necessary to remove broken glass and other debris, during litter pickup where it is possible to encounter infectious material such as medical waste, needles, clothing etc. Even providing CPR and first aid can expose individuals to bloodborne pathogens. In any given situation an employee should consider to possibility of exposure and use the appropriate PPE such as gloves, safety glasses, and respirator masks.

Any suspected exposure should be reported to your supervisor immediately so that prompt medical attention and monitoring can be initiated.





A.

PROCEDURES IN CASE OF AN INJURY

- Know who in your unit is qualified to give first aid;
CALL 911 for Emergency Medical services as needed.
- Know the locations of First Aid Kits, eyewash and shower stations.
- Do not move the victim more than is absolutely necessary.
- Keep onlookers away from the victim.
- Report **all** injuries, no matter how slight, to your supervisor.
- Ensure employee receives necessary medical attention.

B.

BUILDINGS/FACILITIES

- Adequate lighting shall be provided on stairs and in the work areas.
- Floor openings shall be covered with 1 inch thick plywood 6 inches larger on all sides than the opening or guarded by railings 39 inches high and toe boards at least 4 inches high.
- Exits shall be prominently marked with lighted “EXIT” signs colored in accordance with local codes.
- Stairs shall be at least 22 inches wide, and, if more than four risers high, shall have one handrail. If more than four risers high and 44 inches or more wide, two handrails 36 to 39 inches high are required.

SAFETY Guidelines





ELECTRICAL EQUIPMENT

- All pieces of electrical equipment shall be marked with the following information:
 1. Manufacturer's name.
 2. Current specifications.
 3. Load capacity.
- Shut off sparking motors and overheating equipment immediately.
- All electrical equipment or wiring shall be guarded or insulated to prevent contact with exposed, live electrical parts.
- All electrical motor frames shall be grounded.
- Use **Marked Double Insulated** power tools or three-wire grounded cords.
- Breaker switches shall be identified as to the circuits they serve.
- Proper safety guards shall protect all exposed bulbs in temporary lights.
- Replace fuses with the same type and size.
No substitutes.
- Do not stand on a damp surface while operating electrical equipment. If you must stand on a damp surface, you should wear rubber-soled shoes or boots or have the appropriate mat.
- Keep all electrical switches, junction boxes, panels, and fuse boxes free and clear of obstructions (3 FEET). Keep them covered when not in use.

- All flexible cords shall be heavy duty, 18 guage, three-way type cords.
- Do not use flexible cords as a substitute for fixed wiring.
- Do not lead flexible cords through holes in walls, floors, and ceilings or through doorways. Do not wrap around pipes, steel beams, or gas cylinders.
- When using flexible cord, tie or clip the ends to prevent a direct pull on joints or terminals.
- Inspect electrical cords prior to use for defects. Discard all cords that are frayed, have bare wires, or missing the ground pin. Do not patch or tape any cords.
- Do not leave electrical cords lying on the floor or ground when not in use.
- Do not make repairs to electrical wiring or equipment unless you are qualified and have authorization to do so.
- Prior to working on electrical equipment shut off energy and use lock out tag out.
- Do not use metal ladders near electrical wiring or electrical equipment.



D.

EXCAVATION & TRENCHING

- Contact Miss Utility before you dig.
- Warning signs and barricades shall protect all open excavations.
- When excavation areas are more than five feet in depth, the sides shall be supported by shoring and bracing, or sloped to the proper angle of repose.
- Store and retain excavated or other material at least two feet or more from the edge of the excavation area.
- A competent person will make daily inspections of excavation areas. If any “evidence of a possible cave-in or slide is present, work in the excavation will cease until the necessary precautions have been taken to safeguard the employees.
- A minimum of one ladder(s), ramp, or steps shall be placed in all trenches/excavation areas 4 feet deep or more at minimum intervals of 25 feet.
- Do not drop or throw equipment, tools, or material into an excavation area where employees are working. Carry or pass them hand to hand or lower them by rope.
- Check for moving traffic before leaving an excavation area.

E.

FIRE PROTECTION

- Do not leave fires or open flame devices unattended.
- Make sure “NO SMOKING” signs are posted as required.
- Observe “NO SMOKING” signs without exception.
- Do not smoke in areas where flammable or combustible materials are stored. “NO SMOKING” signs shall be prominently displayed in such areas.
- When smoking, make sure all cigarettes, cigars, etc. are completely extinguished before discarding.

NOTE: smoking is prohibited in the workplace in accordance to Department of Licensing and Regulation Subtitle 12 – 09.12.23.

- Keep work areas free from accumulations of trash, debris, and other flammable materials. Remove flammable or hazardous materials from your work area daily before leaving.
- Grounds shall be kept clear of weeds and underbrush.



E.

FIRE PROTECTION *continued*

- Dispose of oily or greasy rags or materials only in closed, flameproof metal containers.
- Do not store oily or greasy clothes in lockers or other closed non-flameproof containers.
- Lockers shall be made of fire-resistant material.
- No spark producing or smoking machinery, open flames, or heating elements shall be used within 20 feet of paint spraying operations.
- Work with flammable liquids only outdoors or in an area that is provided with forced ventilation.
- Fire extinguishers of the appropriate size and type shall be placed where they are highly visible and easily accessible. They shall be prominently marked with their type, directions for use (**P**-pull the pin, **A**-aim at the base of fire, **S**-squeeze handle, **S**-sweep back and forth) and date of last recharge.
- Fire extinguishers shall be visually inspected on a monthly basis with the date and the inspectors initials placed on the extinguisher inspection tag.
- Fire protection equipment or devices shall not be used for any purpose other than fire protection.
- Keep fire doors and exits free from all obstructions.

- Have fire extinguishers replaced and recharged as soon as possible after each use and kept recharged on a regular schedule as indicated on the extinguisher.
- Every employee in each establishment shall know the following information:
 - How to sound the fire alarm.
 - Where fire extinguishers are located and how to use them.
 - Where the fire hose is located (where applicable) and how to use it.
 - Location of the nearest exit.





E.

FIRE PROTECTION *continued*

- All employees shall participate in fire drills scheduled in accordance with local codes and at intervals often enough to insure procedure familiarity. At least once annually.
- Procedures in case of fire:
 - Activate alarm at once.
 - Keep calm. Do not shout.
 - Assist those in need.
 - Close your door as you head to the nearest exit.
 - Walk – don't run – to the nearest exit.
 - DO NOT use elevators.
 - If there is a delay in getting through the exit, do not shove or crowd. Wait your turn.
 - Do not delay leaving the building. Do not return to the building. Forget your tools or valuables; and save your life.
 - Assemble at a designated area to account for all employees.

F.

GENERAL

- All employees **MUST** comply with the MDOT substance abuse policy.
- Know your job; be fully acquainted with your tools, machinery, and equipment you use. Be familiar with the safety requirements.
- Do not engage in horseplay while on the job.
- Maintain a clean work area throughout the day, and dispose of waste and hazardous materials appropriately.
- Use passageways and aisles as directed. Do not take shortcuts through equipment and materials.
- Walk – don't run – up and down stairs. Take one step at a time and use the handrail.
- Keep alert for occupational safety and health hazards. Report all occupational safety and health hazards to your supervisor at once.

SAFETY Guidelines





F.

GENERAL *continued*

- Keep out of restricted areas.
- Do not operate switches or valves unless you are authorized to do so.
- Never use chairs, tables, boxes or file cabinets in place of ladders.
- Do not jump or climb down from elevated structures, such as vehicles, ladders, or platforms without holding on. (use handholds if provided)
- Do not toss or drop material or tools to other employees; carry or pass them hand to hand or lower them by rope.
- Report all accidents and or hazards to your supervisor immediately whether or not there is an injury.
- Be watchful of your own safety and the safety of your fellow employees.

G. **HAND TOOLS**

- Use hand tools only for their designed purpose. Do not improvise.
- Do not try to work with cutting tools that are dull.
- Make sure that the heads of hammers, axes, and picks are tight.
- Do not hammer chisels and bits that have deformed ends. Have the end reshaped.
- Carry axes at the side of your body, edge down. Do not carry on your shoulder.
- Keep tools in their box except when using.
- When doing overhead work, secure tools that are not in use.
- Do not throw or drop tools to other employees, carry or pass them hand to hand or lower them by rope.
- Use scabbards for sharp tools, when available.





H.

HAZARDOUS MATERIALS

Review Material Safety Data Sheet (MSDS) prior to using materials.

Flammable Liquids

- Smoking on trucks transporting flammable liquids is forbidden.
- There shall be no smoking, open flames, or heating elements in areas being painted.
- There shall be no smoking, open flames, or heating elements in areas where flammable liquids are being transferred or used to fuel equipment.
- Use approved containers to store or transport flammable liquids.
- Keep containers for flammable liquids labeled and tightly closed.
- Storage tanks for flammable liquids shall have relief vents.
- Containers of flammable liquids must not be allowed to remain in direct sunlight.
- Do not refuel hot or running equipment.
- Storage areas for flammable liquids shall be adequately ventilated and equipped with explosion proof lights.
- Clean up spills immediately.
- Gasoline, if stored indoors, shall be in quantities no greater than 25 gallons per room, unless kept in storage cabinets constructed to MOSH specifications. If such cabinets are used, quantities up to 60 gallons may be stored in each cabinet. No more than three cabinets may be located in a single storage area.

Compressed Gases

- Store and transport compressed gas cylinders in an upright position and chain in place.
- Keep all gas cylinders capped when not in use.
- If a gas cylinder is leaking, evacuate the building or immediate area at once, call **911** and the vendor.
- When not in use and not being transported, oxygen cylinders shall be stored at least 20 feet from acetylene cylinders, and from grease, oil paint and other flammable materials.
- Keep gas cylinders no in use away from welding areas to avoid sparks.
- Do not direct a stream of oxygen toward oily surfaces or materials, **IT WILL IGNITE.**
- Keep gas hoses clear of walkways and driveways.
- Compressed gas hoses showing defects or signs of deterioration should be reported immediately to the supervisor for removal from service.
- The appropriate key to turn off the gas cylinder valve must be on the cylinder or in the tool tray at all times.



H.

HAZARDOUS MATERIALS

continued

Poisons

- When using pesticides (herbicides, fungicides, insecticides, etc.) wear the required protective equipment; follow the manufacturer's instructions. When applying herbicides, also follow the SHA Herbicide Applications Standards.
- Do not use carbon tetrachloride for **ANY** purpose.
- Do not use sodium hydroxide (lye) to unclog pipes.
- Never apply grease or oil to the threads of compressed gas cylinders, gauges, or hose fittings.
- Compressed air outlets used for equipment and parts cleaning shall be equipped with a reducer to lower outlet pressure to no more than 30 PSI at the tip.
- Scrub hands and other exposed parts of your body immediately after working with any hazardous substance.
- Post warning signs at the entrances of storage areas stating the nature and location of toxic materials stored within.
- You are strongly urged to set aside extra clothing for use when working with poisonous substances. The clothing should have long sleeves and trousers, and be worn with the collar and cuffs buttoned. It should be changed immediately upon completion of the job. Do not eat or smoke while wearing this clothing.

- When working in poison ivy or poison oak, you should wear long sleeves, long trousers and gloves. Wash exposed parts of your body immediately after contact.
- Do not burn poison oak or poison ivy; the smoke is toxic.

SAFETY Guidelines





HEALTH PROTECTION

- A supply of drinking water (fountains, bubblers or spigots) shall be provided for at least every fifty employees, with disposable paper or plastic cups at each source. Do not use a common drinking cup.
- Managers shall arrange for commercial pest exterminators to inspect their establishments at regular intervals for infestation, and to treat the premises when necessary.
- All enclosed working areas shall be adequately ventilated. Forced ventilation shall be provided in enclosed areas subject to toxic fumes or gases.
- Exhaust fans shall be directed away from the openings of input fans.

J.

HEATING KETTLES *(Tar pots and rubber pots)*

- Have the appropriate dry chemical fire extinguisher available during operations.
- Do not park kettles near leaves or dry grass.
- Keep the outside of kettles free of excess tar and rubber.
- Do not try to fill kettles while they are in operation.
- Vehicles towing kettles must carry the appropriate dry chemical fire extinguishers.
- Do not overheat kettles.
- When not in use, cover kettles thoroughly to keep out water.
- If the presence of water is suspected, do not fill the kettle more than halfway with tar or rubber to prevent blowups.

SAFETY Guidelines





K.

HEAVY EQUIPMENT

- Perform pre trip inspections prior to starting any equipment to insure that all devices are functioning properly and the equipment can be operated in a safe and efficient manner.
- Operators shall be familiar with the capacities and limitations of their equipment.
- Before starting to work, the operator shall familiarize himself with his assignment and review the hand signals.
- Passengers shall not be carried on any equipment, except motor vehicles, and then only on SHA business and with proper authorization.
- No equipment, unless so designed, shall be operated from outside the cab.
- Make sure all personnel are clear of equipment before starting the motors.
- Do not mount or dismount from equipment that is in motion.
- Do not refuel hot or running equipment.
- Keep deck plates of equipment free of oil, grease, tools and trash.
- Do not try to repair equipment unless you are qualified and authorized.
- Turn off the ignition when not in use. Do not leave equipment unattended with the motor running. Lock the equipment.

- Inspect crane hooks daily for cracks or deformation. Turn over defective hooks to the supervisor for removal from service.
- Inspect load attachment chains daily, and turn over defective chains to the supervisor for removal from service.
- Inspect rope slings prior to use, and turn over defective slings to the supervisor for removal from service.
- Keep hoist ropes free of kinks. Inspect ropes daily, if found to be defective, the supervisor shall remove the crane from service until they are replaced.

SAFETY Guidelines





K.

HEAVY EQUIPMENT

continued

- Do not leave equipment unattended with the bucket, boom, or attachment in the air.
- Do not operate any aerial equipment, buckets, booms, or attachments of heavy equipment within **10 FEET** of any conductor (Utility Wire). That conductor must be considered energized.
- Do not wrap chains or ropes around loads. Use slings.
- Do not stand beneath suspended loads, buckets, booms, or attachments of heavy equipment.
- In swinging loads, be careful not to come into contact with electric wires, use guide ropes if necessary.

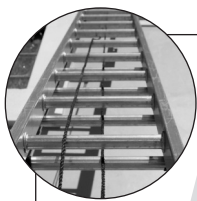
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Special Note: *employees must be trained as appropriate, prior to operating a powered industrial truck (forklift), to meet OSHA compliance requirement 1910.178.*

L.

HOUSEKEEPING

- Keep aisles clear of equipment, materials, and trash.
- Do not allow liquid to lie on floors. Clean up spills (liquid, flammable, oily, etc.) from floors immediately and dispose of properly.
- Do not allow waste to accumulate, deposit in proper containers not on benches, tables, floors, etc.
- Keep unused tools off the floor.
- Do not allow trash to accumulate in lockers. Remove and dispose of on a regular basis.
- Clean up broken glass with a brush and dustpan, wrap pieces and identify the contents.
- Do not allow dust to accumulate on overhead fixtures.
- Do not reach into any wastebasket; turn upside down to empty.
- When cleaning floors, follow these steps:
 - Place warning signs for slippery areas; remove when dry.
 - Clean when traffic is light.
 - Do not leave mops, brooms or other cleaning gear in hallways, stairs or doorways.



M.

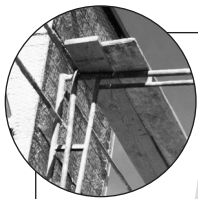
LADDERS

- Use ladders only for climbing.
- Ladders shall be inspected regularly for defects (broken steps, rungs or rails).
- Do not paint wooden ladders, paint may hide defects.
- If a ladder is dropped, inspect immediately. If found defective take out of service and either repair or destroy, as the supervisor decides. **DO NOT USE.**
- Set up ladders on level ground and insure that the distance from the feet of the ladder to the base of the wall is approximately $\frac{1}{4}$ the height of the ladder.
- Ladders leading to a roof or other platform shall extend at least three feet above the roof or platform.
- Do not work above the third rung from the top of a straight ladder or the second step from the top of a stepladder.
- Do not try to work more than an arm's length from each side of the ladder; keep your body between the side rails.
- Climbing up or down ladders, always face the ladder, grasp the rails or the rungs firmly; maintain a three-point contact with the ladder.

- Do not place ladders in blind corners nor in front of unlocked and unguarded closed doors.
- Do not use metal ladders near electric wires or electrical equipment.
- If a ladder is erected over foot traffic, make sure the area beneath is barricaded, and warning signs are placed.
- Stepladders are not to be used as a straight ladder.
- The area around the top and bottom of the ladder must be kept clear.

SAFETY Guidelines





N.

SCAFFOLDS

- Construct and maintain scaffolds in conformance with section 1910.28 and 1910.29 of the Occupational Safety and Health Standards (OSHA).
- Never use a ladder as a scaffold.
- Do not construct makeshift scaffolds, e.g., supported by bricks or blocks, or using old or used lumber.
- Scaffolds and components must be able to support four times the maximum anticipated load.
- Toe boards and rails shall be used on all open sides of scaffolds. The toe boards shall be at least four inches high.
- Clear scaffolds of all tools, rubbish and building materials.
- If a scaffold is erected over foot traffic, make sure the area beneath is barricaded, and warning signs are placed.

0.

LIFTING & CARRYING

When lifting and carrying, perform the following steps in sequence:

- Determine whether the load is too large or too heavy to carry by yourself. Keep in mind how far you have to carry it, and if there is any doubt, get help. Never carry a load you can not see over.
- Inspect material for splinters, jagged edges and rough surfaces. In all cases, you should wear gloves.
- Wipe off wet, greasy or slippery objects before lifting, and make sure your hands are free of oil and grease.

Solo Lifting and Carrying

- Position your feet close alongside the object, making sure your hands are free of oil and grease.





0.

LIFTING & CARRYING

continued

- Take a sitting position over the edge, keeping your back straight. If you have to bend, bend from the hips; keep your back straight, but not necessarily vertical. Tuck in your chin.
- Grip the object with your whole hand. Use your palm as well as your fingers.
- Draw the object in close to your body.
- Lift by straightening your legs.
- Keep the object as close to your body as possible, and keep your body weight over your feet.
- Never twist your body in lifting or carrying; change the direction of your feet.
- To set the object down, remember to keep your body weight over your feet, the object close to your body, your back straight, and your chin tucked in. Do not shift your grip until you actually release the object.
- To place an object on a bench or table, first set it on the edge and push it far enough onto the table to keep it from falling off. Then remove your hands and push it into place.
- To lift a load above shoulder height, first lift it to your waist. Rest it on a support, if one is available, and shift your hands so you can push the load up to your shoulder. Then bend your knees and lift the load the rest of the way as you straighten your knees.
- To lower a load from above the shoulder, first lower it to your waist and rest it on a support, if one is available. Shift your hand position, and lower the load the rest of the way to the floor, keeping your back straight and bending your knees.

- To place an object in a tight space, it is safer to slide it into place with your hands in the clear, than to try to lift it and set it down.
- When you have to carry long objects such as pipe or lumber by yourself, carry the load over your shoulder and keep the front end elevated to avoid striking other employees, especially at corners. Call out a warning as you approach a corner.
- Never hurry. If the material is so heavy you have to hurry to keep from getting tired, you need help. Get it before you start.

Team Lifting and Carrying

- Let one person take command and call the signals. Make sure before starting that the signals are understood by everybody.
- Adjust the load so that each person carries an equal weight. Make test lifts before the actual lifting.
- Follow the same procedures as in solo lifting.
- In lifting boxes, cartons, or bags, the best grip is usually by diagonal top and bottom corners.
- When carrying sheet metal, wear leather gloves or gloves with metal inserts.



P.

MACHINERY

- Before operating machinery you must be familiar with its operating instructions, safety precautions, and required Personal Protective Equipment.
- Do not wear loose clothing, such as rolled up long sleeves, or jewelry when operating machinery.
- Control long hair with a hat, cap, net, etc.
- Make sure all the guards are in place and properly adjusted before you start the machine. The following parts must be guarded:
 - Chains, sprockets, gears and belts
 - Nip-points (CRUSH)
 - Rotating shafts
- Never reach through, over, around or under a machine in motion. Turn it off first.
- Never leave a running machine unattended. Turn it off.
- When stopping a machine, never attempt to brake it with your hands or any makeshift-braking device.
- Turn off all defective machines at once, tag them and report them to your supervisor. Do not try to operate them.
- Do not try to repair any machine unless you are qualified and authorized to do so.
- Never try to repair any machine unless it is turned off, disconnected from the power source, and the power source is locked out tagged out.

Q.

MATERIALS HANDLING

(non-hazardous)

- Do not store material if it blocks aisles or accessways. If necessary, mark the area with conspicuous warning signs.
- When stacking material, use pallets and stack in cross tiers to tie the stacks together to stabilize when possible.
- Remove all defective pallets from service.
- When unstacking, keep the tops of the stacks level and maintain the setback.
- Stack all bagged material in tiers that are blocked, interlocked and limited to a height you can comfortably reach. Stack the bags with the mouths pointed inward.
- Do not stack bagged material more than ten bags high without a setback.
- When removing materials from a pile, do not create an overhang.



SAFETY
Guidelines



Q.

MATERIALS HANDLING

(non-hazardous) continued

- Stack pipes and block it to prevent spreading or rolling. Place each pipe in position. Do not drop in place.
- When stacking barrels and drums on end, make a pyramid and block the bottom tier.
- When stacking barrels and drums on their sides, put planks between the rows, and block the end of each row.
- When handling lumber, you should wear leather gloves.
- When stacking lumber, always use tie straps. Keep the tops of the stacks level.
- Remove nails from used lumber before stacking.
- Whenever possible, avoid carrying material by hand. Use mechanical devices such as hand trucks, dollies, or pallet jacks.
- Do not roll barrels or drums down ramps.
- When operating hand trucks, be prepared to stop suddenly. Approach all corners and blind intersections with caution. Do not hurry, run, or take short cuts.
- Inspect all hand trucks and dollies, and turn defective ones over to the supervisor for removal from service.
- Push hand trucks when traveling on the level or downhill. Pull trucks uphill. Never walk backward when using a truck.
- Never load hand trucks so high that your view is obstructed.
- When loading two-wheel hand trucks, keep the load close to the truck and to the wheels to prevent toppling. You should never have to bear the weight of the load, only balance, steer and push or pull the truck.

R.

MOTOR VEHICLES

- Each operator is responsible for the safe operation of their vehicle and must adhere to and obey:
 - All applicable Traffic Laws and Regulations
 - General Rules for Drivers of State Owned Vehicles and Equipment.
- The operator must have a valid Drivers License required for the class of vehicle being driven.
- All individuals driving, riding, or operating State vehicles or equipment **MUST** wear seat belts.
- Only SHA employees and non-SHA persons engaged in SHA business shall be carried as passengers, and only when authorized.





S.

OFFICE SAFETY

- Wherever possible, aisles shall be uniform in width, and shall be kept clear of furniture, supplies, trash receptacles, etc.
- File cabinets shall be located so those drawers do not open into aisles where ever possible. A 36-inch walkway must be maintained.
- Keep file drawers closed when not in use.
- Slick floors shall be covered with a slip-resistant preparation.
- Carpeting or other floor covering that is torn, curled, or threadbare, must be repaired or replaced.
- Operable windows must open and close freely.
- Electric fans must be equipped with guards having openings no greater than 3/8 inch.
- Place material in file cabinets so the weight is concentrated in the bottom drawers. Open only one drawer at a time, and keep it open only when you are filing or removing material. Never leave open drawers unattended.
- Do not overload shelves.
- Do not place office machines too close to the edges of desks or tables.
- Decorations must be made of fire resistant materials.
- Do not overload electrical outlets.
- Keep aisles clear of electric cords.
- Adequate lighting shall be provided for all desks and work areas.

T.

POWER TOOLS

- Use paper shredders with caution; be aware of loose clothing, long hair, and jewelry.
- Do not operate any power tool unless you are qualified, authorized to do so, and are wearing the required safety equipment
- Inspect all power tools before using them.
Do not operate any power tool if the guard is missing or modified, or if the safety switches do not function properly.
- Do not wear loose clothing when operating power tools.
- Control long hair with a hat, cap, net, etc.
- Do not lift or carry power tools by the power cords.
- Unplug power tools when not in use, and before adjusting or repairing them.

SAFETY Guidelines





T.

POWER TOOLS

- Keep the cutting edges of power tools sharp.
- Rotating and reciprocating power hand tools shall be equipped with a constant pressure “Dead Man’s” switch.
- Circular handsaws shall be equipped with a self-closing blade guard.
- Do not use power tools requiring a three-prong plug if the ground pin is missing from the plug.
- Pneumatic (air) tools shall be equipped with safety clips to keep the dies and bits from being expelled from the barrels.
- Do not operate grinding wheels in excess of their rated speed.
- Do not use a grinding wheel that is cracked or chipped, turn it over to your supervisor to dispose of.
- Tool rests shall be spaced no more than $\frac{1}{8}$ inch from the grinding wheels and tongue guard $\frac{1}{4}$ inch from the grinding wheel.
- Do not use damaged saw blades turn over to your supervisor for possible disposal.
- While making rip cuts with a power saw, use a push stick to pass the wood across the blade.
- Employees operating chain saws or performing brush and tree cutting operations **MUST** adhere to the Occupational Safety and Health Administration (OSHA) Logging Standard 1910.266
- Do not operate a chain saw unless you are wearing all **REQUIRED** Personal Protective Equipment.

- Before starting a chain saw, make sure that all **REQUIRED** guards and chain brake devices are in place; operating properly, you have firm footing and a clear space in which to work.
- While using a chain saw, keep one hand on the handle bar and the other hand on the control bar.
- While using the chain saw, turn it off to inspect the chain for proper tension and sharpness. Always wear gloves.
- Do not force any power saw to cut. Operate the saw at full throttle and allow the saw to cut at its own speed.





U.

TRAFFIC CONTROL

- Procedures for control of traffic at maintenance and construction sites are set forth in the Manual on Uniform Traffic Control Devices (MUTCD) and the Work Zone Traffic Control Manual (WZTC).



V.

WELDING & CUTTING

- All compressed gas bottles shall be stored and transported in a vertical valve end up position, secured by chains or straps and safety protective caps properly placed.
- Do not operate any welding or cutting apparatus unless you are certified and authorized to do so.
- Prior to operating welding or cutting apparatus make sure all required safety devices are operable and in place, i.e. flash back arrestor, gauges, caps, regulators.
- When the operation is completed or apparatus is not in use, shut off gas and purge all lines.

SAFETY Guidelines





WELDING & CUTTING

continued

- Keep gas cylinders away from the operation.
- Effectively ground the frames of all electric welding and cutting machines.
- When arc welding is to be suspended for any substantial period of time, such as during lunch or overnight, all electrodes (Rods) shall be removed from the holders.
- Wear the recommended personal protective equipment.
- Make sure a proper fire extinguisher is in close proximity of the work area.
- Use adequate ventilation or approved respirator while welding or cutting.
- Put your hood in place before igniting the torch or striking the arc.
- Avoid exposing bare skin to sparks and welding arc strikes.
- Whenever practicable, all arc welding and cutting operations shall be shielded by noncombustible or flameproof screens which will protect employees and other persons working in the vicinity from the direct rays of the arc.
- Be aware of your surroundings.

W.

TICKS & LYME DISEASE

- The adult female deer tick measures about 2 millimeters in size – about the size of a sesame seed. Immature deer ticks are smaller – about the size of a poppy seed. The size of deer ticks will increase when they are swollen with blood. Deer ticks should not be confused with common wood ticks and dog ticks (but deer ticks can be found on dogs).
- If you work in tick-infested areas, always perform a nightly skin and hair check looking for: 1) wandering ticks, 2) attached ticks, or 3) any skin changes suggestive of Lyme disease (see below). Your nightly check should include all body areas which are good hiding places for ticks – scalp, arm pits, groin, back of knee, etc.
- Remove all attached ticks promptly. According to several authorities, typically an infected deer tick must be attached to the host human through a bite for at least 24 hours to transmit the bacteria which cause Lyme disease.
- Tick Removal Procedure.
 - 1) Do not apply alcohol, petroleum jelly, hot match, or any other irritants to the tick.
 - 2) Use fine-tipped tweezers (NOT your fingers) to grasp the tick by the head/mouth parts right where it enter the skin – do NOT grasp the tick by the body.
 - 3) With firm steady pressure, pull the tick straight back and out – do not jerk or twist.



W.

TICKS & LYME DISEASE

continued

- 4) Place any tick suspected of being a deer tick in a container of rubbing alcohol (to save in case your doctor wishes to see it).
 - 5) Clean the bite wound and tweezers with disinfectant.
 - 6) Monitor the bite area for any signs of infection or an expanding skin rash
- If you find an attached tick which you think is a deer tick, you must immediately report this to your safety manager or supervisor. You will need to be evaluated at one of the medical network sites or by your private doctor.
 - Most individuals who contract Lyme disease never find an attached tick and do not remember any tick bite. The first symptoms of Lyme disease appear from 3 days to 30 days after the deer tick bite. Most early symptoms of Lyme disease fall into in one of 3 categories: 1) skin changes, 2) flu-like symptoms, and/or 3) joint pains/swelling. The Lyme skin rash at the site of the tick bite occurs in about 80-90% of Lyme cases. Only about 30% of Lyme skin rashes look like a bull's-eye. Most appear as an irregular or solid reddish blotch. This Lyme skin rash typically enlarges over several days with an average maximal size of 5-6 inches in diameter, but it can be smaller or larger. The appearance of any skin changes or symptoms suggestive of Lyme Disease requires a visit to your private doctor ASAP. Also report this to your safety manager or supervisor.



WORKPLACE SAFETY GUIDELINES

I acknowledge by my signature that I have received and understand this information.

Print Name

Signature

Date

This publication is a revision of the Employees
Occupational Safety and Health Handbook dated
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Administration's Workplace Safety Council.

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