AYOTTE & KING FOR TILE, INC.

SAFETY AND HEALTH POLICY

1. The safety and health of every employee of Ayotte & King For Tile, Inc. is our main priority. Management is committed to furnishing a safe and healthy work environment. Management accepts responsibility for developing and directing the safety and health program, and to evaluate this program to ensure effective, safe working conditions and practices.

All employees have a shared responsibility for safety and health by participating in the programs development, and by following all procedures, standards, and guidelines contained in the safety and health program. Employees are expected to use required safety equipment, follow safe work practices, caution any employee observed working unsafely, and cooperate in all safety and health matters. Compliance with this policy will enable us to work together in a productive and accident-free environment.

2. It is the policy of Ayotte & King For Tile, Inc. to provide a safe and healthy workplace for all of our employees, and to observe all applicable safety and health regulations. Management and our employees have and will continue to maintain a safety and health program in which all employees follow safe work practices, are able to recognize unsafe conditions, and timely hazard control is achieve.

Safety and health is a necessary part of each employee's job and active participation and adherence to this program is a condition of employment at our company. No employee is required to work at a job that is not safe. It is our goal to completely eliminate accidents and injuries at our workplace. On account of the many different potentially hazardous conditions associated with our industry, we must all maintain a constant safety and health awareness to achieve this goal. This policy has equal importance with other company policies of providing the best quality and most productive service in our industry.

3. Your safety and health while at work is very important Ayotte & King For Tile, Inc. This company will provide you with the knowledge, assistance, and resources to promote safe working habits. Safety and health are part of each and every employee's job; together we can prevent accidents from occurring. Each employee is expected to follow all of the safe work practices and procedures contained in the Safety & Health Manual in order to protect yourself as well as that of your co-workers.

Each manager and supervisor at this company has personal and individual responsibility for the safety and health of all employees who are assigned to them. It is the duty all management personnel to set a good example for every employee. Each employee has a personal responsibility for accident and incident prevention: not only yourself, but to your co-workers as well. Remember that no job activity is so urgent that it cannot be done safely. Therefore, it is up to each and every employee of this company to maintain safe work habits and always remain alert to potential hazards.

4. Ayotte & King For Tile, Inc. maintains an active and aggressive safety and health program designed to keep all employees healthy and injury-free. In order to ensure full compliance with all safety and health rules and regulations, all employees must share this responsibility. Management has the responsibility to direct support, and evaluate the effectiveness of the safety and health program. Employees share equal responsibility to understand and follow all safety policies and procedures.

The company's safety and health program is based on preparation and prevention. Our program includes safe work activities to reduce the risk of personal injury and/or property damage. Our goal is to recognize, evaluate, and control all hazards to prevent accidents from occurring. The company's short-term objective is "no OSHA recordables" during the second year of the program, and the long-term objective is an "accident free workplace". Together we can achieve these objectives.

5. Ayotte & King For Tile, Inc. has a vital interest in providing each employee with a safe and healthy place of employment and to conduct our business in the safest possible manner. It is the duty of management in the design, construction, operation, and maintenance of all equipment and facilities to ensure high standards of safe and healthy working conditions for all employees, visitors, and outside contractors. We are committed to comply with applicable safety and health laws, and regulations and strongly believe that: (1) work related injuries and illnesses can be prevented, (2) management and employees are jointly responsible for incident prevention, creating a safe and healthful work environment, (3) hazards can be prevented, (4) well trained personnel are essential, and (5) safety and health makes good business sense.

6. It is the policy of Ayotte & King For Tile, Inc. to ensure that all employees have a safe and health workplace. The company regards the promotion and practice of safety and health as integral components of all its operations. Further, it is our policy to be a responsible corporate citizen in the community and to conduct our business in a manner that will improve the quality of life for our employees. We will comply with all applicable safety and health statutes and regulations. There are four basic provisions to this policy: (1) all employees will perform their work assignments in the safest possible manner, (2) hazards will be controlled during all phases of work activities, (3) accidents are preventable, and (4) all employees will be held accountable for safety and health.

7. Ayotte & King For Tile, Inc. will provide a safe place to work, the proper hazard control measures, and a work environment conducive to safe and healthy practices and policies. It is the company's intent to prevent all work-related injuries, illnesses, and incidents. This will be accomplished by: (1) creating an environment in which all employees are safety conscious for themselves and their fellow workers, (2) having all employees trained and aware of the company's safety and health program, (3) providing the necessary authority and resources to maintain an effective program, and (4) making both management and employees responsible for safety and health matters.

8. Ayotte & King For Tile, Inc. recognizes the importance of safety and health and is committed to providing a workplace in which all hazards are controlled. The safety and health of all our employees is our first priority. The only acceptable level of safety and health performance is one that prevents all injuries, illnesses, and incidents. Safety and health are an integral part of our organization that cannot be separated from other business functions and must be shared equally by all employees within our company. Management will be held accountable for the safety and health of their assigned employees and each individual within the organization is expected to conduct their daily work activities in a manner consistent with the philosophy and objectives in this program.

9. Our goal at Ayotte & King For Tile, Inc. is to provide complete safety in all operations. Working in a safe and healthy manner is a fundamental obligation of each and every employees. No operation, process, or activity is successful unless it is also safe. This company insists that every employee does their share to contribute to the overall effectiveness of the program. Management has been given the authority and resources to implement the company safety policies and rules and will be held accountable whenever the program fails to protect employees. Employees will be expected to follow all of the provisions within the safety and health program.

10. Your safety and health is a high priority at Ayotte & King for Tile, Inc. We accept responsibility for providing you with a safe and healthy environment for performing your work in accordance with the practices and procedures outlined in the safety and health program. Effective safety and health management will only be achieved through teamwork at our company. We must all join together in promoting safety and health and take every reasonable measure to assure safe working conditions exist throughout our company.

SAFETY TRAINING PROGRAM

AND SITE SAFETY HANDBOOK

AYOTTE & KING

FOR TILE, INC.

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Attachment:
Job Safety analysis form with description(JSA)

AYOTTE AND KING SITE SAFETY HANDBOOK

INTRODUCTION

Along with Ayotte and King in construction, many contractors are working on the jobsite in close proximity to each other and are engaged in a variety of different operations. As a result, the jobsite is constantly changing and physical hazards are continually emerging that can jeopardize your safety. Ayotte and King will make every effort to plan safety into each job and to provide a safe and healthful jobsite. However, you are the ultimate key to a safe and successful project.

Safety is the responsibility of every employee on a construction jobsite. As a member of the construction team, you have an obligation to yourself, your fellow workers and Ayotte and King to perform your work in a safe and efficient manner. To do this, it is extremely important that you thoroughly understand how to perform every task safely prior to beginning work. If you do not know, or if you are unsure of the safety precautions associated with a task, stop and ask your supervisor before proceeding. If you see an unsafe act or condition on the jobsite and can safely correct it, do so. If not, report the unsafe condition to your supervisor immediately. In your daily work, you may encounter potential hazards in a variety of work situations. When this occurs, use this handbook to refresh your memory and then act accordingly.

Safe jobsites and safe workers do not just happen! Preventing accidents and injuries requires a commitment to safety by every member of the construction team.

PERSONAL PROTECTIVE EQUIPMENT

Personal Safety Equipment

You are responsible for wearing the personal protective equipment provided to you, as follows:

- A hard hat must be worn at all times when required.
- Approved safety glasses with side shields should be worn by all employees when the task or situation warrants.
- Approved safety-toes footwear should be used when the potential for serious foot injuries exists. A six-inch high boot top is recommended to prevent twists and sprains.
- Hearing protection is required in designated high-noise areas.
- Gloves are needed on most jobs.

Clothing

All Clothing should comply with good general work and safety practices. Do not wear clothing that could get caught in machinery or otherwise cause an accident, i.e., loose clothing, baggy shirts, dragging pants. Shirts should be worn at all times and some tasks will require long sleeves to be worn.

Head

When required by the company or when a hazard of head injury exists, employees shall wear hard hats that meet American National Standards Institute (ANSI) Standard Z89.1-1971 and ANSI Z89.2-1971. No hard hat shall be altered by drilling or painting and all damaged hats shall be reported to your supervisor.

Hair should be contained in such a manner that it will not cause a hazard or become caught in moving machinery.

Metal hard hats and bump or laceration caps are generally prohibited on jobsites.

Eye Protection

Where required, safety glasses with side shields meeting ANSI standard Z87.1 should be worn by all employees during work hours. **Note: Normal street glasses are not adequate protection.** Additional eye and face protection such as chemical splash goggles, face shields and welding shields may be required when engaged in work such as: welding, burning, grinding, chipping; handling chemicals, corrosive liquids, or molten material; drilling, driving nails, pouring concrete.

Visitors

All visitors to the jobsites should wear approved hard hats and safety glasses with side shields. Visitors should always be escorted.

Precautions for eye care

1. Always report all eye injuries and suspected foreign material in your eyes to your supervisor immediately. Do not try to remove foreign matter yourself.

2. Keep hands away from eyes.

3. Always clear debris from hardhat brim, top of goggles and face shields to avoid eye contact.

EYE AND FACE PROTECTORS

4. Don't rub your eye when you feel something in it.

5. Know the location of eyewash stations and flood eyes with water if you feel foreign matter in your eyes.

Face and Neck

Face shields should be worn when:

1. Grinding and chipping.

2. Using power saws and other tool/equipment that can throw out solid materials.

3. Working with chemicals, acids and corrosive liquids.

Ears

Hearing Protection

Approved hearing protection should be worn as required in all posted areas and anytime while working with or around high-noise producing machines, tools and equipment. (Note: Hearing protection should be worn anytime that noise is too loud to understand a normal conversation.)

PROTECT YOUR HEARING – USE HEARING PROTECTION WHENEVER YOU HAVE TO TALK ABOVE NORMAL LEVELS!

Ear Protection

When working with or around, grinders, use earplugs to prevent hot grinding slag from entering the ear canal.

Fingers and Hands

Gloves

Suitable gloves should be worn when handling materials and equipment.

1. Leather or canvas gloves should be worn for most normal construction applications.

2. Plastic, vinyl or rubber-coated gloves are to be used for special types of work (i.e., solvents and chemicals). **Note: Keep the inside of gloves free of chemicals.**

Tool Holders

Use tool holders when driving stakes, wedges or when holding star drills, bull points and similar driven tools.

Know how to use a sledgehammer. Keep you hands back from the hammerhead.

Back / Abdomen

Knowledge and a little training can prevent most back injury.

1. Use your legs to lift. Don't use the back muscles. Keep your back straight.

2. Keep the load being lifted close to your body. Never twist your back at waist while carrying load. To change direction, shift your feet.

3. Never lift more than you can safely handle. Consider the size, shape and weight. Then **GET HELP!**

To protect your abdomen, a kickback apron or guard should be used when ripping material on radial arm saws, table saws and similar power machines.

Legs, Thighs, Knees, Shins and Ankles

General Precautions

Overalls or pants should not have loose, torn or dragging fabric. Pant legs without cuffs are recommended. (Note: Tape at rubber boots tops when working in concrete or chemicals.)

Pointed tools such as scissors or shears should not be carried in pockets. Use a canvas or leather tool sheath. **ALL POINTS DOWN**.

Special Jobs

Shin guards should be considered when using certain special equipment, such as chainsaws and brush hooks.

Consider stability when stepping into locations where materials are stored, such as pallets of lumber. Materials may shift and pinch legs and feet.

Feet and Toes

Approved safety-toed footwear should be used on all jobsites. Six-inch high top boots are encouraged to prevent strains and sprains.

Rubber boots with safety toe protection should be used when performing jobs subject to chemically hazardous conditions or standing water.

Footguards may be needed when using jack hammers, tampers and similar equipment.

Sneakers, sandals and similar shoes are generally prohibited on a construction site.

Skin

Skin is susceptible to dermatitis caused by exposure to chemicals which strip oils from the skin. Avoid this condition by using gloves and avoiding exposure to chemicals. Use skin creams if you notice your skin drying out and notify your supervisor immediately.

Protect your skin from burns, sun, welding arc and chemical exposure.

Repeated exposure to wet concrete can cause concrete burns and poisoning. Prevent this by using rubber gloves and boots when working with concrete. Tape boot and glove tops. Remove any clothing saturated with concrete, flush skin with water and neutralize with vinegar.

FALL PROTECTION

Generally, a harness or safety belt (CFR 1926 subpart M has mandated the removal from use of belts for fall protection by 1998) should be worn with a lanyard and tied off when working on the following:

- In any area more than six feet above the ground or solid work surface that is not protected by a guardrail or safety net.
- Any suspended platform, scaffold, or stage.
- Any scaffold with incomplete handrail or decking.
- When assembling and disassembling scaffolding.
- Ladders over 6 feet off of the ground (whenever possible).
- In areas exposed to protruding reinforcing steel.

D-ring or support point on harness belts should be placed to the rear.

LANYARDS MUST BE SECURED TO IMMOVABLE OVERHEAD OBJECT CAPABLE OF SUPPORTING 5,000 POUNDS DEAD WEIGHT AND TIED OFF AS SHORT AS POSSIBLE (maximum fall is six feet).

RESPIRATORY PROTECTION (BREATHING)

Protection against high concentrations of certain dusts, mists, fumes, vapors, gases, and/or oxygen deficiency is provided by appropriate respirators.

Appropriate respiratory protective devices should be used for the hazardous material involved and the extent and nature of the work performed.

If you are required to use respiratory protective devices, you must be evaluated by a physician to ensure that you are physically fit to use a respirator, fitted and thoroughly instructed in their use. **DO NOT USE ANY RESPIRATOR UNLESS AND UNTIL YOU HAVE BEEN FITTED AND THOROUGHLY UNDERSTAND ITS USE.**

Any employee whose job entails having to wear a respirator must keep their face free of facial hair in the seal area.

Respiratory protective equipment should be inspected regularly and maintained in good condition. Respiratory equipment must be properly cleaned on a regular basis and stored in a sanitary, dustproof container.

ERGONOMIC HAZARDS ON THE JOBSITE

Ergonomics, or human factors engineering, refers to the physical relationship between a worker and the equipment he or she must use to perform their job. By using equipment that does not negatively impact an employee physically, injuries may be prevented.

If you are performing tasks that involve constant repetitive motion, or are subjected to vibration for long periods of time, take a break from this type of work for approximately 15 minutes every two hours.

HAZARD COMMUNICATION
(Right to Know)

If you are working with hazardous chemicals, or may come in contact with them, you will be provided information and training concerning the hazardous chemicals. This training will include, but not be limited to:

- An explanation of the Hazard Communication Standard.
- Notification of the training requirements of the Hazard Communication Standard.
- An explanation of the project Hazard Communication Program and its location.
- Instruction on how the project training program accomplishes the federal requirements.
- Notification of the locations of jobsite hazardous chemicals.
- A description on the jobsite chemical and flammable material labeling system.
- A description of the jobsite hazard rating system.
- A description of the Material Safety Data Sheets (MSDS), how to read and use them and their location on the jobsite.

If you have any concerns or desire any information concerning chemicals in your workplace, ask your supervisor for the information.

HAZARDOUS MATERIALS
WARNING LABEL SYSTEMS

NFPA **HMIS**

National Fire Protection Association (NFPA) Hazardous material Identification System (HMIS)

Hazardous materials are those which may cause injury or illness to an employee. Warning labels on containers are color coded to indicate the type of hazardous material they contain (see example of NFPA & HMIS labeling systems above). Numbers of labeling systems indicate the degree of hazard. Hazards are generally classified as:

- ***Fire Hazard (flammability)*** - Those materials which, when combined with an ignition source and supply of oxygen, may burn or explode (Example: gasoline) (color code red)

  Flash Points

  4 – Below 73ºF (boiling point below 100ºF)
  3 - Below 73ºF (boiling point at/above 100ºF) and/or liquids with Flash Points between 73ºF and 100ºF
  2 – At/above 100ºF and below 200ºF
  1 – At/above 200ºF
  0 – Stable, will not burn

- ***Health Hazard*** – Exposure above certain concentrations may lead to adverse health effects (Example: asbestos). (color code blue)

  4 – Deadly
  3 – Extreme Danger
  2 – Hazardous
  1 – Slightly Hazardous
  0 – Normal Material

- ***Reactivity*** – Exposure of certain materials to air or heat, or in combination with other materials, may lead to violent reactions, creating heat,

explosion, or toxic by-products. (Example: mixing strong acids with water.) (color code yellow)

Specific Hazard - -

4 – May detonate
3 – Shock and heat may detonate
2 – Violent chemical change
1 – Unstable, if heated
0 – Stable

- ***Radiation*** – Some materials emit radiation which may cause injury or illness (Example: x-ray weld testing equipment). (color code white)

Radiation such as:

OX – Oxidizer
ACID – Acid
ALK – Aklali
COR – Corrosive
W – No Water
- Radioactive

Identify and understand the hazardous materials you work with on the job. Ask your supervisor to explain the labeling system used on your jobsite.

CORROSIVE LIQUIDS

Do not store, handle, apply or use acids or caustics unless your supervisor has given you detailed instructions, safety precautions and proper personal protective equipment.

HOUSEKEEPING

Orderliness

If you keep your area neat, it encourages safe work habits. Major orderliness considerations are as follows:

- Keep tools and working materials in proper containers.
- Store trash, waste, and scrap in correct containers.
- Store materials safely.

- Put cigarette stubs in butt cans. Although prohibited on most sites.
- Keep small items in boxes or bins.
- Keep the floor clear of tools, rod ends, metal shavings and other debris.
- Keep walkways and scaffolds clear.
- Ensure that work tables are occupied only by work at hand and tools required for work being done.
- Store and contain material so that fire has no place to start.
- Clean up tools and work areas as your job progresses.
- Keep cords and hoses seven feet overhead or lay them flat outside walkways.
- Keep all material, tools and equipment in a stable position (tied, stacked, or chocked) to prevent rolling or falling.
- Maintain clear access to all work areas.
- Keep stairways clear of debris.

Trash, Waste and Scrap Disposal

All trash, waste and scrap (such as trash, scrap metal, oily rags, broken glass and aerosol cans) should be placed in properly identified containers.

Access

Routes leading to and from work locations must be free and clear of obstructions and well lighted.

Walkways and stairways must be clear, ladders must not be blocked, and emergency exits must be identified and clear. **NOTE: Install boot scrapers at landings**.

Check with your foreman about route and access to be used in and out of excavation, to roofs and in and out of buildings.

Do not block any emergency equipment or electric disconnect switch.

Stack, store, or spot material so that it can be reached readily by workers and material-handling equipment.

Slip/Trips

- Practice safe working skills, shorter steps, pay continuous attention.
- Clean spills right away.
- Keep your hands free for balance.
- Walk at a steady pace.
- Wear slip-resistant shoes.
- Take walkways and access provided.
- Keep work areas well lit and clean.
- If you detect slipping or tripping hazards, correct it immediately or notify your foreman or supervisor if you are unable to correct it. If a hazard can not be corrected immediately, mark or barricade it so fellow employees can avoid it.

HAND & POWER TOOL SAFETY

- Visually inspect all tools prior to each use. Look for damage or wear, which could lead to unsafe operation.
- Tools and equipment should be in good condition and well maintained.
- Only qualified, trained persons should use tools and equipment.
- Tools, guards and protective devices should not be altered.
- Tools should only be used for their designed purpose.
- Personal tools should conform to the same safety requirements as company-owned tools.

Hand Tools

Every tool has been designed to do a specific job safely. Use all tools only for their intended purpose. Maintain and take care of your tools!

- Use the correct tool for the job.
- Keep hand tools in top condition, sharp, clean, lubricated, dressed, and not abused.
- Worn tools are dangerous, i.e., hammer heads can fly off loose handles and a pipe wrench may slip if the jaws are worn.
- Impact tools may mushroom. Dress the heads to avoid flying shrapnel. Use tool holders.
- Don't' use cheater bars or other devices to increase tool capacity.
- Don't use tools as pry bars.
- Files should have handles.

Portable Power Tools

Power tools should not be operated without proper training. Some jobs may require special use permits before starting work.

Major Hazards

- The totaling, circular motion crated by drills, grinder, impact wrenches and saws may result in a strong, twisting force. Maintain torque handles and be prepared in case of jamming.
- Constant-on or trigger locking switches should not be used. Be ready to release the power switch or trigger.
- Have good footing. Use two hands, and help out as assigned.
- All power tools may create flying objects. Be aware of people around you and always wear proper eye protection.
- Contact with moving parts may lead to serious injury. Keep moving parts directed away from your body. Always disconnect the power source before replacing moving parts, i.e., drills, chucks, blades and bits. Be aware of employees working near you and warn them of your actions.

- Know the condition of your tools. Examine each tool before using it. Look for damaged parts, loose fittings, nicked cutting bits/blades and grayed or cut electric cords. Tag defective tools and return for repair prior to use.

- When using temporary electrical power, as found on a jobsite, use a ground fault circuit interrupter (GFCI) with all electrical equipment or check with your supervisor to be sure grounding program is in place.

  NOTE: Always test and reset GFCI before you use it.

- All power sources must be shut off and the tool unplugged before making tool adjustments. With air tools, be sure to "bleed down" the air before disconnecting.

- Consumable parts, such as grinding wheels and drill bits, should meet specifications for the power tool, i.e., rpm, and wheel diameter.

Guarding

Approved guards or shields should be installed on all power tools before use. Do not use power tools if their guards are not in place. Never bypass, modify or remove guards.

Stationary Shop Power Tools

These types of machines, including table saws, pipe cut-off machines, joiner/planers, etc., are to be operated by authorized, trained operators, along with basic safety guidelines.
Note: Stationary Shop Tools should be secured to the floor.

Adjustments, Servicing, and Repairs

- Shut down machines and take action to prevent accidental restarting. This may require a lockout/tagout procedure, or unplugging the power or compressor cord.

- Replace all guards prior to start-up. Remove cranks, keys, or wrenches used in servicing.

- Replacement parts should meet required specifications, i.e., grinding wheels must be approved for rpm and wheel diameter, blades must have correct arbor diameter and shape, cutting bits appropriate to the material being worked.

Safe Operating Practice

- Loose clothing, rings and jewelry should not be worn around machinery. Keep sleeves and coats buttoned up and away from rotating equipment.

- Keep fingers away from moving parts. Always disconnect the power to any tool or machine before working on it.

- Inspect your machinery at least daily before start-up.

- Use clamps and vises to secure work whenever possible.

- Many machines have safety interlocking devices. Be sure these work and **NEVER BYPASS A SAFETY INTERLOCK.**

- Some machines use both air and electrical power. Before working on this type of equipment, disconnect both air and electricity, and allow the air supply to "bleed down".

- Fire hazards are constantly around us. Know where the fire extinguishers are. Oil, rags and hot chips are fire hazards. Know what to do in an emergency.

- Be aware of other workers in your area, and make sure they are aware of you and your work.

Powder Actuated Tools

Powder actuated tools are those that use an explosive charge or cartridge to operate, i.e. Hilti or Ramset.

Training and certification is required before using this type of equipment. Only employees who have been trained and certified in their use should operate these tools.

Hilti and Ramset tools should be handled and operated by trained, certified, and carded employees. These tools should be securely stored with controlled access on all jobsites.

**Note:* Pneumatic operators of actuated tools and other power actuated tools should follow the safety guidelines established for powder actuated tools.

MATERIAL HANDLING

Lifting by Hand

- Use gloves whenever cuts, splinters, blisters, or other injuries are possible.
- Know the weight of any object to be handled. Get help for heavy or awkward loads.
    - When lifting, follow good lifting procedures:
    - Keep loads close to the body.
    - Squat down to the load, keep you back straight and use your legs to lift the load.
    - Do not extend the load out from your body.
    - If you must turn with a load, change the position of your feet. Don't twist your back.
    - If you are carrying a load with a partner, let them know when you are going to release the load.
    - Avoid awkward or tight positions while handling loads.
    - Get enough help to safely handle the load.

Mechanical Handling

- Know the weight of the object to be handled.
- Know the capacity of the handling device (crane, forklift, chain-fall, dolly, come-along) that you intend to use.
- Use tag lines to control loads.
- Get rigging instructions from qualified employees before beginning.
- Ensure that handling equipment is in good working order and free of damage.

Material Preparation

- Clean up jagged, sharp metal edges.

- Pull protruding nails and wires or bend them flush.
- Set on pallet or dunnage for ease of handling.

Stability Control of People, Materials and Equipment

You must ensure that you, your material and your equipment are safe from unexpected movement – from falling slipping, tipping, rolling, blowing or other uncontrolled motion.

- Use a safety harness or safety belt with lanyard as required.
- Protect the area below you.
- Salt or sand icy walking and working areas immediately.
- Chock all material and equipment (such as pipe, drums, tanks, reels, trailers and wagons) as necessary to prevent shifting or rolling.
- Tie down or band all light, large surface area material that might be moved by the wind.
- When working at heights, secure all tools and equipment from falling.
- Do not store materials or tools on girts, ducts, lighting fixtures, beam flanges, hung ceilings or similar.

LADDERS AND SCAFFOLDING

Ladders

Straight and extension ladders must be tied off. Stepladders must be fully opened and set level. Work facing the ladder with both feet on the rungs. Always face the ladder and keep both hands on the side rails when climbing or descending. Stay off the top two steps of stepladder and top platform of ladders.

Inspect ladders before use. Ladders are not to be painted except for numbing purposes. Do not use ladders for skids, braces, workbenches or for any purpose other than climbing.

If it is necessary to place a ladder in or over a doorway, barricade the door and post warning signs.

While ascending or descending a ladder, do not carry anything that will prevent holding on with both hands. Use a handline. Keep both feet on the ladder rungs. Do not reach out too far or place one foot on a line or piece of equipment. Change the position of the ladder as often as necessary.

Face a ladder when working from it. A harness or safety belt with a lanyard should be used if it is necessary to work backwards from a ladder and generally, when six feet or more above the working surface. Check with your supervisor.

Metal ladders must not be used for electric welding or near any electric lines or services.

When not in use, the ladder should be taken down and store in an appropriate location.

Report damaged ladders to your supervisor and tag for repair or disposal.

Straight and Extension Ladders

Place straight/extension ladders using a fireman's stanch – toes at feet of ladder, arms extended shoulder width to side rails. Make sure you have a 4:1 slope on set up. Place the ladder so that distance A is one-fourth of distance B as shown in the illustration. Ladders must be equipped with a tie-off rope and nonskid safety feet or secured at the base, and must be adequately tied off. The top of the ladder must extend at least three feet beyond the supporting object when the ladder is used for access to an elevated work area.

After an extension section had been raised to the desired height, check to see that safety dogs or latches are engaged and that the extension rope is secured to a rung on the base section of the ladder. Extension ladders must be overlapped a minimum of three rungs. Do not take extension ladders apart to use either section separately. **NOTE: A ladder must be 3' longer than the height of a wall to allow proper 4:1 slope and a 3' landing.**

Stepladders

Stepladders should always be opened and set level on all four feet, with spreaders locked in place; they should never be used like a straight ladder. Never stand on the top or top two steps of a stepladder of place tools or material on the steps or platforms.

Scaffolds

The erection, adjustment, and dismantling of all scaffolds shall be conducted under the direct line of sight supervision of a COMPETENT PERSON.

Before starting work on a scaffold, inspect it to determine that handrails, toeboards and decking are in place, that all wheels are locked on moveable scaffolds and that locking in are in place.

When working on any scaffold platform not equipped with standard guardrails or complete deck, personnel should wear harnesses or safety belts with the lanyard properly tied off to a substantial object capable of supporting 5,000 pounds.

When working on any scaffold (rolling, stationary, suspended) in the vicinity of energized electrical lines or equipment, employees must ensure that no part of the scaffold or his/her body shall come in contact with the electrical lines or equipment. (A minimum of 15 feet separation is recommended.)

Do not charge or remove scaffold members unless authorized.

Scaffolds deemed incomplete must be tagged and proper personal protective equipment worn.

No one should ride on a rolling scaffold when it is being moved. Remove or secure all tools and material on deck before moving.

Do not climb on or work from any scaffold handrail, midrail or brace member. Use the ladder to get on the scaffold.

Outriggers must be used on mobile scaffolds when the height is more than three times the smaller base dimensions. Fixed or stationary scaffolds must also be tied off horizontally every 30 feet and vertically every 26 feet.

When space permits, all scaffold platforms must be equipped with standard 42-inch-high handrails rigidly secured (not wired) and standard 21-inch high midrails, completely decked with safety plank or manufactured scaffold decking and rigidly secured toeboards on all four sides.

Adjusting or leveling screws must not be used on scaffolds equipped with wheels. Adjusting screws must not be extended more than 12 inches of thread.

Check with your supervisor for safe working loads on all scaffolds.

Rolling scaffolds shall be used only on level, smooth surfaces, or the wheels must be contained in wooden or channel iron runners. Watch for overhead clearance when moving.

Do not alter any scaffold member by welding, burning, cutting, drilling, or bending.

Do not rig from scaffold handrails, midrails, or braces.

Patented Metal Scaffolding

Parts and sections of scaffolding made by one manufacturing are not to be used with another manufacturer's.

Suspended Scaffolding

Swinging stages, toothpicks, boatswain ("bos'n") chairs, floats and needle beams require special approval by your craft superintendent.

Attach and secure a harness or safety belt with lanyard to an independent lifeline before stepping on these scaffolds and no not remove until clear of the scaffold. Lifeline must be tied off to a substantial anchorage on the building or structure that is independent of the scaffold's anchor. Use one lifeline per person.

FLOOR, WALL AND STIRWAY OPENINGS

All holes or openings through floors or walls must be provided with hole covers or standard railing. Do not store material or equipment on a hole cover.

Stairway floor openings with the exception of the entrance shall be guarded by standard railing and toeboards.

All wall openings from which there is a drop of more than six feet and the bottom of the opening is less than 39 inches above the working surface shall be guarded.

All open-sided floors or platforms six feet or more above adjacent floor or ground level shall be guarded by a standard railing or the equivalent.

Placement

Hole covers should have a sign reading, **"WARNING – TEMPORARY COVER. DO NOT REMOVE UNLESS AUTORIZED"** or may be otherwise identified. Covers must be cleated, wired or otherwise secured to prevent slipping sideways or horizontally beyond the hole. Covers must extend adequately beyond the edge of the hole.

Material

Three-quarter-inch plywood may be used, provided that one dimension of the opening is less than 18 inches; otherwise, two-inch lumber is required.

SIGNS AND BARRICADES

Signs

Use signs when necessary and remove them promptly when no longer required. Pay attention to signs – they mean what they say.

Numerous warning and instruction-type signs are available. Signs are to be placed on barricade stands, posts or other suitable locations. Before work starts they must be placed where they will be most effective and removed to proper storage when they are no longer needed. Signs must be legible.

Danger Signs – used where immediate hazards exist.

Caution Signs – used to warn against potential hazards or to caution against unsafe practices.

Exit Signs – used where required or where exits are obscured.

Safety Instruction Signs - used as required.

Directional Signs – (other than automotive) – used as required.

Traffic Signs – all construction areas shall be posted with traffic signs at points of hazard.

Accident Prevention Tags – used as a temporary means of warning employees.

Danger Tags

Danger tags are placed on switches and valves that must not be operated; they are printed with the words **"HANDS OFF – DO NOT OPERATE".**

Danger tags are used only to prevent operation of a switch, valve, or piece of equipment in cases where someone may get hurt or equipment may be damaged.

Barricades

Barricades are required around most excavations, holes or openings in floor or roof areas, edges of roofs and elevated platforms, around certain types of overhead work and wherever necessary to warn people against falling in, through or off.

Use

ANYONE WHO MAKES A HOLE OR OPENING IS RESPONSIBLE FOR HAVING IT BARRICADED.

Erection

Barricades must be 42 inches high and must be square and level. Barricades should be erected before the hole is cut, extended as the excavation progresses and returned to the storage rack when no longer needed.

Numerous excavations in one area may be barricaded effectively by erecting a barricade around the general area.

Blinking lights must be used on road blocks after dark and an entrance, opening, or gate must be left where practical.

Types of Barricades

Warning – Warning barricades such as yellow and black tape on posts call your attention to a hazard but offer no physical protection.

Protective – Protective barricades, such as wood post and rails, cable or chain, warn and provide physical protection from falling. They are to be capable of sustaining 200 lbs. of force without deflecting more than 3 inches.

FIRE PROTECTION AND PREVENTION

As construction progresses, fire hazard conditions constantly change. Accumulation of wooden forms, scaffolding, scrap lumber, packing, materials, paper wrapping and other refuse appear at new locations daily. In addition, many ignition sources are present, such as cutting and welding, temporary heaters and lighting.

Practice fire prevention in your work procedures, including keeping work areas clear of combustibles, controlling sources of ignition and knowing how to use fire suppression equipment.

Extinguishers

Know the location of the nearest fire extinguisher and how to operate it. Know the type of fire on which it should be used. Check the label. Know the capacity of the fire extinguisher, and how big a fire it can handle. Fire extinguishers of the proper size and type should be within 25 feet of each open-flame (cutting or welding) operation you perform.

Fire extinguishers should be inspected regularly. If you see a discharged fire extinguisher, notify your supervisor.

Combustibles

Combustible material should be kept away from all ignition sources. Combustible material under or near welding and burning operations should be moved a safe distance away or covered with fire-retardant material (fire blanket). Where this is not possible, all sparks and slag should be contained by an approved spark containment system.

Refueling

Portable power equipment (generators, welding) should not be refueled while running or hot. When refueling from a fuel truck, attach the ground wire to a bare metal surface on the equipment begin refueled.

Smoking

Smoke in approved areas only. Discard butts in approved containers, never in wastebaskets, trashcans, or on the ground.

Flammables

- Store flammables in properly labeled containers and in designated areas. Keep flammables away from smoking, welding, burning or other ignition sources.

- Flammable liquids must be stored in containers specifically designed for flammable liquid storage. Do not use flammable liquids until instructed in their use.

The following materials are some of the flammable materials you may encounter on the job:

- Petroleum Fuels
- Solvents
- Thinners
- Degreasers
- Protective Coatings
- Caustics
- Acids

Spraying the above liquids may increase the concentration of vapors and fumes, creating potential fire and explosion hazards. Make sure you receive instructions from your supervisors before proceeding. Read the instructions and Material Safety Data Sheet

before using any chemical. Always label all containers holding or transporting flammable or toxic materials.

Emergency Response

In the event of an emergency, be sure you know the following so you can respond quickly and safely to an emergency.

BE AWARE OF:

- Procedures for proper evaluation of your jobsite in the event of fire or emergency.
- Emergency escape plans, including the primary and secondary evacuation routes.
- Assembly area for your work crew.
- Procedure for re-entry to the jobsite following an evacuation.
- Procedures and location(s) of phone numbers for contacting emergency response personnel.

PERMITS

On many projects, written, properly authorized and current permits are required BEFORE you begin certain types of work. Sometimes these permits are for one job, or they may be issued daily or weekly.

Below are a few of the more common permits often required on jobsites.

- Safe Work Permit – This applies to work of any type in any area.
- Scaffolding Permit – Some states, as well as clients, require a permit prior to erecting scaffolding.
- Hot Work Permit – Allows work on flammable process lines or containers. Also, this permit may be required when working with energized electrical equipment.

Always cooperate with jobsite management and/or plant management when permits are required. They are issued to assure your safety.

MOBILE EQUIPMENT

Only authorized, trained personnel should operate vehicles and mobile equipment. Certain equipment requires operators to be trained and certified.

Inspections

All mobile equipment should be inspected by the operator before each shift, prior to use. Any safety defects should be corrected before use.

All mobile equipment should be turned off and the brake set when left unattended. When parking mobile equipment on sloping or unlevel ground, brakes should be set and wheels chocked. The driver is responsible for the safety of all passengers and the stability of materials being hauled.

Seat belts must b worn on any machine equipped with a ROPS canopy.

Safety of Ground Personnel – Working around heavy equipment depends upon them staying out of the operator's blind spot. Wear high visibility clothing and get the operator's eye contact before entering the machine's area of operation.

Obey posted speed limits and other regulatory signs.

Give pedestrians the right of way.

Look behind the vehicle and sound your horn before backing. Use spotters when necessary to assure safe operations. When required, make sure back-up alarms are working properly.

Shut off the motor during refueling.

When required, make sure roll-over devices are in sound condition.

Stability Control

You must ensure that your equipment and material are safe from unexpected movement, such as rolling, tipping, sliding, blowing or any other uncontrolled motion.

- Chock vehicles whenever left unattended and on an incline. Chock all materials to prevent rolling: pipe, drums, tanks, reels, trailers and wagons.

- Tie down all light, large surface area material that might be moved by wind or vehicle motion.

- Secure any material carried on your vehicle to assure it will not shift during transport.

Truck and Cars

Keep arms, feet and bodies inside. All personnel should be seated.

Personnel should not ride in the bed of any vehicle hauling equipment or material.

No one should stand in the bed of a moving pickup truck or sit on the sides or tailgate of the truck.

Truck drivers should dismount from the cab and remain clear during loading and unloading operations unless approved cab protection is provided.

Forklifts

Forklift operators should be trained and qualified.

Operators should take particular care to avoid striking overhead structures, conduit, pipe racks, and warehoused materials. Forklifts shall not be operated close than 10 feet of energized electrical lines.

Forklift stability is variable with the load height, width, weight and terrain. Operators should be aware of equipment limitations and environmental conditions.

Personnel should never ride the forks. Forklifts should not be used to transport personnel unless the platform is specifically designed for that purpose.

HOT WEATER PRECAUTIONS

In hot weather, dress in cotton clothing, preferable loose fitting if this does not create a safety hazard, take cool down breaks and do not exert yourself. Heat stress occurs when abnormally hot air and/or high humidity, or extremely heavy exertion prevents your body from cooling itself fast enough. When this happens you may suffer a heat stroke, heat exhaustion, or heat cramps. **Note: Drink 1 – 1 ½ gallons of water per day, 1 or 2 glasses of water prior to starting the day and ½ to 1 glass every 15-20 minutes in hot weather during heavy work.**

Heat Stroke – Heat stroke is life-threatening. The body's temperature-control system, which produces sweating to cool the body, stops working. The body temperature can rise so high that brain damage and death may result if the body is not cooled quickly.

Symptoms of Heat Stroke

- Hot, dry, red or spotted skin
- Extremely high body temperature
- Very small pupils
- Mental confusion
- Convulsions
- Loss of consciousness

First Aid for Heat Stroke

- Get medical attention immediately
- Have victim lie down to prevent shock
- Remove person from heat – give nothing by mouth
- Cool victim – immerse him or her in a cool bath or apply cool compresses to the body and fan it

Heat Exhaustion- Heat exhaustion typically occurs when people exercise heavily or work in a warm humid place where body fluids are lost through heavy sweating. When it's humid, sweat does not evaporate fast enough to cool the body properly.

Symptoms of Heat Exhaustion

- Cool, pale and moist skin
- Heavy sweating
- Headache, nausea, vomiting
- Dilated pupils
- Dizziness, disorientation
- Slight elevation in body temperature

First Aid for Heat Exhaustion

- Remove victim from heat
- Apply cool wet clothes
- Fan victim, stop if victim develops goose bumps or shivers
- Have victim lie down to prevent shock
- Give victim one-half glassful of water to drink every 15 minutes, if he or she is fully conscious and can tolerate it
- Get medical attention

Heat Cramps – Heat cramps are muscular pains and spasms due to heavy exertion. Any muscles can be affected, but most often it's the muscles you've been using. Loss of water and salt from heavy sweating causes these cramps.

Symptoms of Heat Cramps

- Painful muscle spasms
- Sweaty skin
- Normal body temperature

First Aid for Heat Cramps

- Sit or lie down in a cool area
- Drink one half glassful of water every 15 minutes
- Gently stretch and massage cramped muscle

COOL WEATHER PRECAUTIONS

When your body temperature drops even a few degrees below normal (which is about 98.6°F), you can begin to shiver uncontrollably, become weak, drowsy, disoriented, unconscious, even fatally ill. This loss of body heat is known as "cold stress" or hypothermia.

Construction workers, who work outdoors during the winter, need to learn how to protect against loss ob body heat. The following guidelines can help you keep your body warm and avoid the dangerous consequences of hypothermia, frostbite, and overexposure to the cold.

Dress in Layers

Outdoors, indoors, in mild weather or in cold, it pays to dress in layers. Layering your clothes allows you to adjust what you're wearing to suite the temperature conditions. In cold weather, wear cotton, polypropylene, or lightweight wool next to the skin, and wool layers over your undergarments.

For outdoor activities, choose outergraments made of waterproof, wind resistant fabrics such as nylon. And, since a great deal of body heat is lost through the head, always wear a hat for added protection.

Keep Dry

Water chills your body far more rapidly than air or wind. Always take along a dry set of clothing whenever you are working outdoors. Wear waterproof boots in damp or snowy weather, and always pack raingear (even if the forecast calls for sunny skies).

Use a Buddy System

The effects of hypothermia can be gradual, and often go unnoticed until it's too late. If you know you'll be working outdoors for an extended period of time, work with a buddy. (At the very least, let someone know where you'll be and what time you expect to return.) Ask your buddy to check you for overexposure to the cold – do the same for your buddy. Check for shivering, slurred speech, mental confusion, drowsiness, and weakness. If anyone shows any of the above signs, he or she should get indoors as soon as possible and warm up.

EMERGENCY INFORMATION

TELEPHONE NUMBER

FIRE_____

AMBULANCE _____

HOSPITAL_____

POLICE _____

PHYSICIAN _____

JOBSITE LOCATION INFORMATION

Project Manager_____

Phone _____

Street Address_____

City/State/Zip_____

	JOB TITLE: PAGE _____	OF _____ JSA NO. _____	DATE:	Z NEW Z REVISED
JOB SAFETY ANALYSIS	TITLE OF PERSON WHO DOES JOB:	SUPERVISOR:	ANALYSIS BY:	
INSTRUCTIONS ON REVERSE SIDE	PLANT LOCATION:	DEPARTMENT:	REVIEWED BY:	
REQUIRED AND/OR RECOMMENDED PERSONAL PROTECTIVE EQUIPMENT:			APPROVED BY:	

SEQUENCE OF BASIC JOB STEPS	POTENTIAL HAZARDS	RECOMMENDED ACTION OR PROCEDURE

Job Safety Analysis (JSA) is an important accident prevention tool that works by finding hazards and eliminating or minimizing them *before* the job is performed, and *before* they have a chance to become accidents. Use JSA for job clarification and hazard awareness, as a guide in new employee training, for periodic contacts and for retraining of senior employees, as a refresher on jobs which run infrequently, as an accident investigation tool, and for informing employees of specific job hazards and protective measures.

Set priorities for doing JSA's: jobs that have a history of many accidents, jobs that have produced disabling injuries, jobs with high potential for disabling injury or death, and new jobs with no accident history.

Select a job to be analyzed. Before filling out this form, consider the following: The purpose of the job - What has to be done? Who has to do it? The activities involved - How is it done? When is it done? Where is it done?

In summary, to complete this form you should consider the purpose of the job, the activities it involves, and the hazards it presents. If you are not familiar with a particular job or operation, interview an employee who is. In addition, observing an employee performing the job, or "walking through" the operation step by step may give additional insight into potential hazards. You may also wish to videotape the job and analyze it.

Here's how to do each of the three parts of a Job Safety Analysis:

SEQUENCE OF BASIC JOB STEPS

Examining a specific job by breaking it down into a series of steps or tasks, will enable you to discover potential hazards employees may encounter.

Each job or operation will consist of a set of steps or tasks. For example, the job might be to move a box from a conveyor in the receiving area to a shelf in the storage area. To determine where a step begins or ends, look for a change of activity, change in direction or movement.

Picking up the box from the conveyor and placing it on a handtruck is one step. The next step might be to push the loaded handtruck to the storage area (a change in activity). Moving the boxes from the truck and placing them on the shelf is another step. The final step might be returning the handtruck to the receiving area.

Be sure to list *all* the steps needed to perform the job. Some steps may not be performed each time; an example could be checking the casters on the handtruck. However, if that step is generally part of the job it should be listed.

POTENTIAL HAZARDS

A hazard is a potential danger. The purpose of the Job Safety Analysis is to identify ALL hazards - both those produced by the environment or conditions and those connected with the job procedure.

To identify hazards, ask yourself these questions about each step:

Is there a danger of the employee striking against, being struck by, or otherwise making injurious contact with an object?

Can the employee be caught in, by, or between objects?

Is there potential for slipping, tripping, or falling?

Could the employee suffer strains from pushing, pulling, lifting, bending, or twisting?

Is the environment hazardous to safety and/or health (toxic gas, vapor, mist, fumes, dust, heat, or radiation)?

Close observation and knowledge of the job is important. Examine each step carefully to find and identify hazards - the actions, conditions, and possibilities that could lead to an accident. Compiling an accurate and complete list of potential hazards will allow you to develop the recommended safe job procedures needed to prevent accidents.

RECOMMENDED ACTION OR PROCEDURE

Using the first two columns as a guide, decide what actions or procedures are necessary to eliminate or minimize the hazards that could lead to an accident, injury, or occupational illness.

Begin by trying to: 1) engineer the hazard out; 2) provide guards, safety devices, etc.; 3) provide personal protective equipment; 4) provide job instruction training; 5) maintain good housekeeping; 6) insure good ergonomics (positioning the person in relation to the machine or other elements in such a way as to improve safety).

List the recommended safe operating procedures. Begin with an action word. Say exactly what needs to be done to correct the hazard, such as, "lift using your leg muscles." Avoid general statements such as, "be careful."

List the required or recommended personal protective equipment necessary to perform each step of the job.

Give a recommended action or procedure for each hazard.

Serious hazards should be corrected immediately. The JSA should then be changed to reflect the new conditions.

Finally, review your input on all three columns for accuracy and completeness. Determine if the recommended actions or procedures have been put in place. Reevaluate the job safety analysis as necessary.