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CONSTRUCTION SAFETY MANUAL

Lauth Construction

Safety Manual

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Table of Contents

Section 1 - Management Safety Policy Statement

It is the policy of Lauth to strive for the highest safety standards on our projects. Safety does not occur by chance. It is the result of careful attention to all company operations by those who are directly and indirectly involved. Employees at all levels must work diligently to execute the company's policy of maintaining safety and occupational health.

Our safety program has been developed to assure compliance with Federal, State and Local regulations with particular emphasis on the Occupational Safety and Health Act of 1970 (OSHA), and the OSHA requirements that apply to our construction operations (29 CFR Part 1926). It is the obligation of all employees to be knowledgeable of the standards established by these agencies and to implement the rules and regulations contained therein on projects under their direction.

Regard for the safety of the general public, our own employees and the employees of our subcontractors are a supreme responsibility of all levels of our organization. We intend to prevent any accidental injury, property damage, fire damage and occupational illness. All of which could result in human suffering. Accidents, even minor ones, cause pain, both physical and mental. Prevention of injury and illness is a goal well worthy of our achieving.

A safe operation is organized, clean and efficient. If every employee views accidents in the same way we consider all other aspects of our operations, we will be in a better position not only to control accidents but also to improve the total performance of our company. It is therefore of utmost importance that all aspects of our safety program be strictly adhered to and that the intent of this program be followed to the letter. Any recommendations to improve our safety program are encouraged.

Signature _____
President

Section 2 - Roles and Responsibilities

Purpose
Establish and assign specific safety and health responsibilities and authority of all Lauth employees in developing, maintaining, administering, and implementing Lauth Health and Safety Program.

References
29 CFR 1926

Definitions
Responsible – The named individual is assigned the task outlined, and is accountable for the completion of the task, even if the actual performance is delegated to other capable and knowledgeable Individuals.

Responsibilities
President
- Establish safety and health program according to standards of OSHA.
- Create safety and health goals for the company.
- Responsible for overall direction and effectiveness of the safety and health program.
- Reviews incident, accident, and property damage.
- Establishes safety goals for the company, annually or as needed.

Safety Representative
- Participates in injury and incident investigations.
- Develops, administers, implements, and enforces the company's safety and health program.
- Keeps OSHA Log and Summary Reports up to date.
- Communicates with regulatory agencies and the company's insurance representative.
- Coordinates safety-training programs for management and employees.
- Maintains and updates all company's safety records and medical records.
- Reports directly to upper management.
- Shall attend the OSHA 30-hour construction course.
- Conducts and documents random safety inspections.
- Communicates written safety and health goals and ongoing progress to employees.

Project Managers and Superintendents
- Provide materials, equipment, manpower, and additional resources as needed to support the program.
- Shall attend OSHA 10-hour construction course.
- Regularly inspects the job-site.
- Responds to all employees' safety and health suggestions as appropriate.
- Maintains knowledge of Federal and State OSHA Regulations for each jobsite and work area.
- Provides toolbox talks, proper personal protective equipment, first aid kits, regulation posters, and emergency action plans.
- Actively support the company's safety and health program in verbal and written communication, training, meetings, and inspections and by personal compliance.

- Establish and monitor the emergency action plans for project sites.
- Establishes and maintains a safe and healthful working environment for all employees and subcontractors.
- Inspects tools and equipment to ensure safe operating and arranges for their repair or replacement when needed.
- Keeps work areas and emergency exits clean and orderly at all times.
- Corrects all safety hazards and conditions under his/her authority.
- Reports all accidents/incidents involving bodily injury requiring medical attention, lost time or serious near misses and property damage to the Project Manager and Safety Representative.

<u>All Employees</u>

- Actively support the company's safety and health program in verbal and written communication, training, meetings, and inspections and by personal compliance.
- Learns and adheres to all safety regulations and policies.
- Keeps work area and emergency exits clean and orderly at all times.
- Follows safe and proper usage of tools and machines used at all jobsites.
- Attends and participates in all safety training sessions.
- Submits safety suggestions and ideas to the Safety Representative.
- Employees shall not conduct any task in which the employee has not been trained for.
- Report all safety hazards to your supervisor and/or the Safety Representative.

Section 3 - General Safety Policies

Purpose
Establish general company safety rules that are applicable to all Lauth employees and operations.

Definitions
General Safety Rules - Rules that are applicable to employees, visitors, suppliers, and subcontractors who may be present on Lauth, premises or jobsites, at company functions, or traveling between these locations on Company business. These rules are "common sense" rules and are not meant to replace more specific procedures applicable to specific operation covered by OSHA, EPA, and/or DOT regulations.

Responsibilities
The Project Managers and Superintendents will ensure that subcontractors, suppliers, and visitors are aware of and comply with the General Safety Rules.

All employees are required to follow these rules. Superintendents shall instruct and train their employees in the General Safety Rules.

The Safety Representative shall instruct new employees in the General Safety Rules during New Hire Orientation.

Procedures
Employees shall use care in the performance of their assigned tasks and act in a manner that will assure maximum safety to themselves, fellow employees, and the general public.

All injuries and incidents must be reported immediately to your Supervisor. Proper forms will be completed, signed, and turned into the Safety Representative.

Horseplay, trickery, scuffling, or other unsafe behavior is prohibited, and those responsible are subject to dismissal.

Power equipment, tools, and other equipment will not be operated without the manufacturer's safety guards or other protective devices in place.

All defective or unsafe equipment, tools, or machinery shall be taken out of service and properly tagged.

All employees shall regularly attend safety meetings.

The more stringent of Company regulations or Government regulations will be adhered to.

Leather type work boots are mandatory. Athletic shoes, soft-soled shoes, sandals, open-toed or open-heeled shoes are not permitted.

The use of drugs, alcohol, or any mind-altering substance will not be tolerated under any circumstances. (See Substance Abuse)

A one-day supply of prescription medicine may be carried. The employee's immediate Supervisor is to be made aware of this situation when it occurs.

No employee will operate machinery or tools that have been locked/tagged out.

All employees shall make themselves familiar with the Emergency Response Plan.

Prior to using, ensure that ladders are in good condition, firmly placed and anchored. Only one employee at a time is to be on the same ladder. All ladders are to conform to OSHA and state regulations.

Do not throw or drop anything from an elevated area without warning persons below.

Learn to lift properly, with the legs and not the back. Get help with heavy loads.

Unlawful weapons are prohibited on company property and in company vehicles of Lauth, violation of this rule is grounds for immediate dismissal.

Fighting and personal harassment will not be tolerated on company premises, and may result in immediate termination.

Observe and obey all "No Smoking" areas, offices, and buildings.

Observe and obey all caution and danger signs/tape, barricades, and safety permit tags.

Rings and/or other jewelry should be removed while working with or around machinery, moving parts, or belts.

Loose or ragged clothing shall not be worn while working with or around machinery, moving parts, belts, or mechanical tools.

Shirts are to be worn at all times and must have sleeves.

Good housekeeping is to be practiced at all times. Waste materials shall be disposed of properly, and shall not be allowed to accumulate in the work area. Disposal of hazardous materials will be done in accordance with the manufacturer's recommendations and local/state regulations. (See Hazard Communication)

Approved safety containers are to be used for storage and transporting of flammable liquids in quantities of one gallon or more. These containers will be properly labeled at all times.

All hazardous material containers must be labeled. (See Hazard Communication)

All personal hand and power tools are required to be in proper working order. This includes strain relief on plugs, ground prongs, proper polarity, cords without cuts or splices, and handles without cracks or splinters.

Specific Rules: Additional safe work practices will be developed and implemented for special case operations and tasks. These special cases may require development of special rules

and/or procedures. Besides "in-house" solutions, trade associations, government agencies, professional societies, or academic resource centers may be sources of help in development of these specific rules.

ABRASIVE GRINDING 1926.303
Abrasive wheel bench, stand, or hand held grinders must have safety guards strong enough to withstand bursting wheels. Adjust work rests on bench grinders to a clearance not to exceed 1/8 inch between rest and wheel surface. Inspect and ring-test abrasive wheels before mounting. Always leave wheel in working condition for next user. Properly dress wheel before and after use.

ACCESS 1926.34
In every building or structure, exits shall be so arranged and maintained as to provide free and unobstructed egress from all parts of the building or structure at all times when it is occupied. Access to exits shall be marked by readily visible signs in all cases where the exit or way to reach it is not immediately visible to the occupants. Means of egress shall be continually maintained free of all obstructions or impediments to full instant use in the case of fire or another emergency.

ASBESTOS 1926.1101
Asbestos is a widely used, mineral-based material that is resistant to heat and corrosive chemicals. Depending on the chemical composition, fibers may range in texture from silky to coarse. The properties that make asbestos fibers so valuable are its high-tensile strength, flexibility, heat and chemical resistance, and good frictional properties.

Asbestos fibers enter the body by inhalation of airborne particles or by ingestion and can become embedded in the tissues of the respiratory or digestive systems. Years of exposure to asbestos can cause numerous disabling or fatal diseases. Among these diseases are asbestosis, an emphysema-like condition; lung cancer; mesothelioma, a cancerous tumor that spreads rapidly in the membranes covering the lungs and body organs; and gastrointestinal cancer.

Asbestos can be expected in building siding, floor tile, roofs and pipe insulation. Lauth, employees that potentially may have contact with asbestos should not disturb the asbestos and should notify the appropriate personnel at a jobsite. If asbestos is suspected or found in the office environment, do not disturb the suspected material and immediately notify the Safety Representative. The Safety Representative will contact the appropriate personnel for testing and, if necessary, removal of the material. Awareness level training is conducted during New Hire Orientation.

ATTITUDE
All company employees are required to treat safety as the number one priority. As such, they are expected to report work in good mental and physical condition to safely perform their assigned duties. Before starting any task, employees must consider the possible effects of their actions on themselves and others and take appropriate protective measures.

ERGONOMICS
Understanding ergonomics is to understand the anatomy, physiology and the psychology of people and design the workplace accordingly.

By fitting the job to the person, we can improve both employee well-being and workplace efficiency. Lauth employee complaints or suggestions are welcome without reprisal. Employees should promptly and accurately report signs of workplace discomfort, aches, pains and carpal tunnel syndrome so they can be evaluated, and if needed, treated. All workstations shall be designed to accommodate the employee who actually works on given tasks at that station. Proper and correct lifting techniques and proper body mechanics should be used when lifting or moving all material.

To assist in preventing ergonomic concerns, Lauth, personnel are requested to consider the following when performing work activities:

- Do limbering exercises before starting a task.
- Take frequent breaks while performing a continuous task.
- Don't repeat the same motion hour after hour.
- Keep yourself physically fit.
- Adjust workstations to assist with proper body mechanics.

FLAMMABLE LIQUIDS 1926.152

Only approved containers (i.e. metal safety cans with self-closing lids) and portable tanks will be used for storage and handling of flammable liquids.

No more than 25 gallons of flammable liquids may be stored in a room outside of an approved storage cabinet.

No more than three storage cabinets may be located in a single storage area. Inside storage for flammable liquids must be of fire-resistive construction, with self-closing fire doors, 4-inch sills or depressed floors, a ventilation system of at least six air changes per hour, and electrical wiring and equipment approved for Class 1, Division 1 locations.

Storage in containers outside of buildings may not exceed 1,000 gallons in any one pile or area. Grade storage areas to divert possible spills away from buildings or other exposures, or surround storage areas with a curb or dike. Locate storage areas at least 20 feet from any building and keep free from weeds, debris, and other combustible materials. Keep flammable liquids in closed containers when not in use.

FLOOR OPENINGS, OPEN SIDES, HATCHWAYS 1926.500

Guard openings with a standard guardrail and toe boards or cover. Provide railing on all exposed sides, except at entrances to stairways. Guardrails will be constructed to withstand 200 lbs. of force.

Every open-sided floor or platform, 6 feet or more above adjacent floor or ground level, must be guarded by a standard railing or equivalent, on all open sides except where there is entrance to a ramp, stairway, or fixed ladder.

Runways 6 feet high or more need standard railings on all open sides.

Guard ladder way floor openings or platforms with standard guardrails and standard toe boards on all exposed sides, except at entrance to opening, with passage through the railing provided by a swinging gate or offset so a person cannot walk directly into opening.

Temporary floor opening will have standard railings or effective covers. Floor holes into which persons can accidentally walk will be guarded by either a standard railing with standard toe board on all exposed sides, or a standard floor hole cover. While the cover is not in place, a standard railing will protect the floor hole.

GASES, VAPORS, FUMES, DUST AND MISTS 1926.55
Exposure to toxic gases, vapors, fumes, dusts, and mists at a concentration above those specified in the "Threshold Limit Values of Airborne Contaminants" of the ACGIH should be avoided.

When engineering and administrative controls are not feasible to achieve full compliance, protective equipment or other protective measures will be used to keep the exposure of employees to air contaminants within the limits prescribed.

A technically qualified person must review any equipment and technical measures used for the purpose for each particular use. Employees will wear all furnished equipment at all times.

Electric-power operated tools will either be approved double insulated, be properly grounded, or used with ground fault circuit interrupters.

HEATING DEVICES - TEMPORARY 1926.154
Fresh air must be present in sufficient quantities to maintain the safety of workers. Solid fuel salamanders are prohibited in buildings and on scaffolds.

HORSEPLAY
All disruptive activities usually referred to as "horseplay" is forbidden.

HYDRAULIC EQUIPMENT
Never go under any type of load supported by hydraulics unless you are certain it is blocked by other means of support such as props or load jacks. Never ride in the bucket of a hydraulic machine

Keep clear of any moving parts of a hydraulic system. A hydraulic system produces several thousand pounds of pressure and could cause amputation if caught in the path of movement.

Never operate a hydraulic system or machine unless you have had proper training. Avoid overloading a hydraulic system; this can lead to mechanical failure and cause hydraulic fluid lines to burst.

Never leave equipment unattended while running. Operator must remain at the controls during operation.

Stand clear of dump trucks during dumping operations. If attempting to free a stuck load, shut the truck off.

ILLUMINATION 1926.26
Construction areas should be lit to not less than minimum illumination intensities listed while work is in progress.

Illumination of general construction areas: General intensity – 5 foot-candles for construction areas, concrete placement, active storage areas, loading platforms, refueling and field maintenance areas and stairways.

INJURIES
All injuries, even those that appear to be slight, will be reported immediately to your Superintendent.

When approved by attending physician, Lauth will attempt to assign the employee to light duty work.

LASERS 1926.102(b)(2)
Only trained employees will be allowed to operate lasers. Employees will wear proper eye protection where there is a potential exposure to laser light greater than 0.005 watts (5 milliwatts).

Beam shutters or caps will be utilized, or laser turned off, when laser transmission is not actually required. When lasers are left unattended for a substantial period of time, turn them off.

LEAD 1926.62
Lead is a heavy metal and is a basic chemical element. It can combine with various other substances to form numerous construction materials including lead based paint, wire insulation, solder, ground soil, and welding materials.

When absorbed into the body in certain doses lead is toxic. Lead is most likely to be absorbed into the body by inhalation and ingestion when scattered through the air as a dust, fume, or mist. A significant portion of the lead inhaled or ingested gets into the blood stream. Once in the blood stream, lead is circulated through the body and stored in various organs and body tissues. Some of this lead is quickly filtered out of the body excreted, but some remains in the blood and tissues. As exposure continues, the amount stored will increase if the body is absorbing more lead than it is excreting. The lead stored in the tissues can slowly cause irreversible damage, first to individual cells, then to organs and whole body systems.

Tasks most likely to create exposures to lead over acceptable levels include manual demolition of structures, abrasive blasting, power tool cleaning, spray-painting, and welding, cutting or burning on any structure where lead-containing coatings or paint are present.

Lauth employees that potentially may have contact operations similar to those described above should notify the appropriate personnel at a jobsite. If lead or the above tasks are suspected or found in the office environment, do not disturb the suspected material and immediately notify the Safety Representative. The Safety Representative will contact the appropriate personnel for testing and, if necessary, removal of the material. Awareness level training will be conducted during new hire orientation.

NON-ENGLISH SPEAKING COMMUNICATION
All signage will be written in a language that is understood by all employees. All policies will be translated into the language of the workforce.

PEDESTRIANS AND DRIVING SAFETY

Working trucks must frequently stop in high traffic areas to perform off-loading of material. This activity frequently requires our trucks to stop in lanes that carry traffic. If work is in these areas or ones with similar traffic patterns, you should set out florescent cones behind the truck to let people know the truck is stopped.

When driving a truck, you must exercise greater caution than when driving a car. Not only must all traffic laws be obeyed, but frequently you may need to drive slower than the actual speed limit. This is especially true if the truck is heavily loaded.

POTABLE WATER 1926.51

An adequate supply of potable water shall be provided at all jobsites. Portable containers used to dispense drinking water shall be capable of being tightly closed, labeled, and equipped with a tap. Water shall not be dipped from containers.

Any container used to distribute drinking water shall be clearly marked as to the nature of its contents and not used for any other purpose. Where single service cups (to be used but once) are supplied, both a sanitary container for the unused cups and a receptacle for disposing of the used cups shall be provided.

POWER INDUSTRIAL TRUCKS

The operator must inspect lift trucks before each shift. If the truck is not safe to use, it must be taken out of service immediately.

Trucks that are used continually, shall be inspected every shift. Inspections will be documented. Any defects or items to be repaired shall be reported to maintenance immediately upon discovery. Repairs that affect safety must be made before the truck is put back into service.

All inspections shall be conducted in accordance to manufactures recommendations. Only trained and authorized personnel shall be used in the maintenance and repairs of the trucks. The employee must complete and receive satisfactory performance in all categories of forklift testing prior to being issued a license.

The employee shall have a valid driver's license.

Only trained and licensed operators will be permitted to operate a powered lift truck.

Lift truck training shall consist of classroom participation, instruction and operator’s demonstration of safe operating techniques, and written exam.

A certification letter will be issued upon successful completion of the above-mentioned items. The participant must receive 80% or better on the written exam and must demonstrate competence in all areas of the operator's demonstration of safe driving.

PROTECTION OF THE PUBLIC

All company personnel are charged with aiding in the protection of the public including, as your job description dictates, installation and maintenance of signs, signals, lights, fences, guardrails, ramps, temporary sidewalks, barricades, overhead protection, etc. as may be necessary.

RECORDKEEPING 29 CFR 1904
The OSHA 300 Log is used for recording and classifying recordable occupational injuries and illnesses, and for noting the extent and outcome of each case.

The log shows when the occupational injury or illness occurred, to whom, what the injured or ill person's regular job was at the time of the injury or illness exposure, the department in which the person was employed, the kind of injury or illness, how much time was lost, and what the case resulted in.

The Safety Representative is responsible for the preparation and maintenance of the OSHA 300 Log.

Raise height and tread width will be uniform throughout any flight of stairs.

STORAGE 1926.250
All materials stored in tiers will be secured to prevent sliding, failing or collapse. Aisles and passageways will be kept clear and in good repair. Stored materials will not obstruct exits. Material stored in buildings under construction shall not be placed within 6 feet of any hoist way or inside floor openings, nor within 10 feet of an exterior wall that does not extend above the top of the material stored. Materials shall not be stored on scaffolds or runways in excess of supplies needed for immediate operations.

TOILETS 1926.51
Toilets will be provided according to the following: 20 or fewer persons - one facility; 20 or more persons - one toilet seat and one urinal per 40 persons; 200 or more persons - one toilet seat and one urinal per 50 persons. Remember to provide facilities with locks for female employees.

WATER HAZARDS
All employees will receive awareness training on water hazards, when required by an owner. Lauth does not perform any work activities around water. All work activities of this type will be performed by a subcontractor.

WORK ZONE SAFETY 1926.200-.202; 1926.600-.602; 1926.604
Work zones (street and road construction) are filled with various construction activities, and that are constantly changing. There are numerous hazards for those employees working in these work zones, including the exposure to the traveling public. To avoid accidents/incidents while working in the work zone:

- Employees exposed to work zone equipment and vehicular traffic must wear high visibility vest/clothing. Safety vests shall conform to ANSI 107-2004 guidelines.
- Traffic Control personnel (flaggers) must wear safety vest/clothing with reflective properties. Flagger apparel must conform to ANSI 107-2004 (Class 3 Level 2).
- All employees and sub-contractors are required to wear hard hats and safety glasses at all times while in the work zone, unless inside an enclosed cab of a vehicle or equipment.
- Adequate barricades and traffic control signs shall be set up for all street and highway work zones. Barricading and signage shall be in compliance with local, state, and federal regulations and in accordance with the Manual on Uniform Traffic Control Devices (MUTCD-2009).
- All employees who will be preforming flagging duties must receive certified training.

- All equipment must operate with its lights on.
- Stay within the work zone, do not enter public traffic lanes, unless directed by the flagger.
- Be alert to ongoing changes especially traffic patterns.
- Use extreme caution with installing or removing traffic control devices.
- Be aware of your position in relation to construction equipment.

Section 4 - Accident Investigation

Purpose
To ensure proper documentation of accidents, injuries, and near misses and to determine contributing factors with corrective actions; which will lead to the prevention of future incidents.

This policy is applicable to all Lauth employees. An investigation shall be performed on any accident or incident involving the following:

- Recordable Occupational Injury or Illness
- Medical Expense
- Property Damage
- Near Miss
- Chemical Spill

References
29 CFR 1904 – Recording and Reporting Occupational Injuries and Illnesses

Definitions
Reportable Accident - Any accident that incurs a medical or property expense.

Near Miss Incident - Occurrence that could have resulted in an OSHA Recordable Injury, or property damage.

Recordable Accident - Any occupational death, or nonfatal occupational illness or injury which involves one or more of the following: loss of consciousness, restriction of work or motion, transfer to another job, or medical treatment (other than first aid).

Lost Time - Amount of time the employee is unable to perform his/her normal job duties over a normal work shift, even though the employee may be able to continue working; but not including the initial day of injury or onset of illness, and not including days the employee would not have worked even though able to work (holidays, vacations, etc.).

Reporting Procedures

- Employees must notify their Project Manager as soon as possible
- Injuries and Illnesses where one employee is hospitalized, an amputation or loss of an eye must be reported to OSHA within 24 hours of the incident. When a fatality occurs, OSHA requires notification within 8 hours. The notification shall be the Safety Representatives responsibility.
- Project Managers will be responsible for conducting accident investigation interviews with employees and witnesses that were involved in the incident.
- The Accident Investigation forms will be used for all written reports of investigation.
- These completed forms will be submitted to the Safety Representative within 24 hours following the accident.
- All accident reports will be reviewed by the President and Safety Representative.

Accident Investigation Procedures
The investigation will be made as soon as possible after an incident. The report shall be completed and submitted to the persons listed below within 24 hours after the incident occurs. The report will include the basic cause of the incident, as well as the corrective action taken to

prevent a future similar incident. The Accident Investigation and Employer First Report of Injury/Illness forms will indicate exactly what caused the accident and describe the type of corrective action taken.

A copy of the investigation report is to be sent to:

- President
- Safety Representative

An Employee/Witness Accident Statement is to be completed by the injured employee and any witnesses. These forms will be submitted to their Project Manager and then forwarded to the President within 24 hours of the accident.

After the persons listed above have reviewed the investigation report, a brief description of the incident and the corrective actions taken to avoid a similar incident will be communicated to all employees during Lauth Toolbox Talks.

All documentation is forwarded to management to conduct an accident analysis.

Section 5 - Aerial Lifts

Purpose
To define minimum requirements and responsibilities for the safe use of aerial work platforms.

Scope
This section applies to all Lauth employees and job classifications that may involve the use and operation of any vehicle mounted device that telescopes, articulates, or is used to position personnel in an elevated work position. This includes bucket trucks and platforms fitted to fork trucks.

Definitions
Aerial Work Platforms - Aerial lifts include vehicles mounted aerial devices used to lift personnel to job sites above ground. For example, extensible boom platforms, aerial ladders, articulating boom lifts, vertical towers, or a combination of these.

Responsibilities
The Foreman will act as the competent person for safe work practices during the use of aerial work platforms. And will ensure all employees who may be required to use an aerial lift as part of their normal job requirements are adequately trained.

Procedures
General Requirements

- Only trained and authorized personnel will operate an aerial work platform.

Aerial lift will be designed and constructed in conformance with applicable requirements of the American National Standards for Vehicle Mounted Elevating and Rotating Work Platforms. Modifications to the equipment must be certified in writing by the manufacturer or by any equivalent entity.

A pre-operational check meeting the manufacturer's requirement will be performed. A checklist shall be used to document the inspection. At a minimum, the check shall include the following:

- Operating controls and associated mechanisms for:
    - Conditions interfering with proper operation.
    - Excessive component wear and contamination of materials.
    - Visual and audible safety devices for malfunction.
    - Hydraulic or pneumatic systems for observable deterioration or excessive leakage.
    - Fiberglass and other insulating components for visible damage or contamination.
    - Electrical apparatus for malfunction, signs of excessive deterioration, dirt, and moisture accumulation.
    - Lift controls operations

Do not operate a machine that is not functioning properly.

Before operating the equipment, review the written operating procedures including all pertinent safety sections.

Comply with rated load capacity of the equipment.

At least 10 feet of clearance will be maintained when operating aerial work platforms near exposed electrical conductors including overhead power lines.

Equipment Operation

- Only trained and authorized personnel shall operate an aerial work platform.

Safe operation of aerial work platforms may require the presence of two or more persons. If backup alarm is not available or not loud enough for the surrounding noise, a spotter may be used while backing.

A ground person will be required during the usage of any lift or platform when the following conditions exist:

- Welding or burning is performed from the work platform.
- Work is performed around vehicular traffic.
- Work is being performed adjacent to or over railroad tracks.

Maintain a clear visual site line with the ground observer at all times.

Materials and/or tools can be carried within the confines of the bucket or basket to the extent that they do not impede the mobility of the operator, and do not result in exceeding the weight limitations of the device.

Use flagging and barricades to isolate the area below an overhead work area.

Personal fall protection equipment will be worn by all occupants of an aerial work platform.
A full body harness and adjustable lanyard is required and attached to manufacturer's anchorage point.

Personal fall protection equipment will not be secured to an adjacent structure while the person remains in the aerial work platform.

Anchorage points for elevated work outside the lift will be elevated and tested prior to leaving the lift. (Anchorage points must be capable of supporting 5000 pounds per person attached.)

Be aware of operating clearances required before initiating any machine functions. Always look in the direction that the bucket is moving and at any object in the path of the boom.

Do not mechanically block the foot switch.

Do not lean out of the equipment. Stand firmly on the floor and do not climb on the rails or the edge of the basket.

Before operating the equipment, review the written operating procedures including all pertinent safety sections.

Training Requirements
Only qualified and/or competent operators shall be permitted to operate aerial work platforms.

Section 6 - Bloodborne Pathogens

Purpose
To reduce the risk of exposure to bloodborne pathogens for all Lauth employees, including those who perform first aid and/or CPR.

Definitions
Occupational Exposure - Reasonably anticipated skin, eye, mucous membrane, or parenteral (needle stick, puncture) contact with blood or other potentially infectious materials that may result from the performance of an employee's duties. This regulation was initially written to protect workers in the emergency response and health care profession. OSHA has found an application in the construction industry. According to OSHA those individuals assigned with the responsibility of administering first aid on the job site are occupationally exposed or have the potential of being exposed to human blood and body fluid.

Bloodborne Pathogens - Pathogenic micro-organisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to, hepatitis B virus (HBV) and human immunodeficiency virus (HIV).

Contaminated Sharps - Any contaminated object that can penetrate the skin including, but not limited to, needles, scalpels, broken glass, broken capillary tubes, and exposed ends of dental wires.

Decontamination - The use of physical or chemical means to remove, inactivate, or destroy bloodborne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal.

Engineering Controls - Controls (e.g., sharps disposal containers, self-sheathing needles) that isolate or remove the bloodborne pathogens hazard from the workplace.

Exposure Incident - A specific eye, mouth, other mucous membrane, non-intact skin, or parenteral contact with blood or other potentially infectious materials that results from the performance of an employee's duties.

Hand washing Facilities - A facility providing an adequate supply of running potable water, soap and single use towels or hot air drying machines.

HBV - Hepatitis B virus.

HIV - Human immunodeficiency virus.

Occupational Exposure - Reasonably anticipated skin, eye, mucous membrane, or parenteral contact with blood or other potentially infectious materials that may result from the performance of an employee's duties.

Parenteral - Piercing mucous membranes or the skin barrier through such events as needle sticks, human bites, cuts, and abrasions.

Personal Protective Equipment - Specialized clothing or equipment worn by an employee for protection against a hazard. General work clothes (e.g., uniforms, pants, shirts or blouses) not intended to function as protection against a hazard are not considered to be personal protective equipment.

Regulated Waste - Liquid or semi-liquid blood or other potentially infectious materials; contaminated items that would release blood or other potentially infectious materials in a liquid or semi-liquid state.

Compressed - Items that are caked with dried blood or other potentially infectious materials and are capable of releasing these materials during handling; contaminated sharps; and pathological and microbiological wastes containing blood or other potentially infectious materials.

Source Individual - Any individual, living or dead, whose blood or other potentially infectious materials may be a source of occupational exposure to the employee.

Universal Precautions - An approach to infection control. All human blood and certain human body fluids are treated as if known to be infectious for HIV, HBV, and other bloodborne pathogens.

Procedures

It is inevitable that some employees may encounter blood or some other body fluid in the workplace. The following control measures will be utilized when body fluid is encountered on the jobsite:

- Barricade, mark, or section off any area that contains spilled blood or body fluid until it can be cleaned and decontaminated. Employees registered in First Aid/CPR should clean up the spill as soon as possible before returning to regular duties.

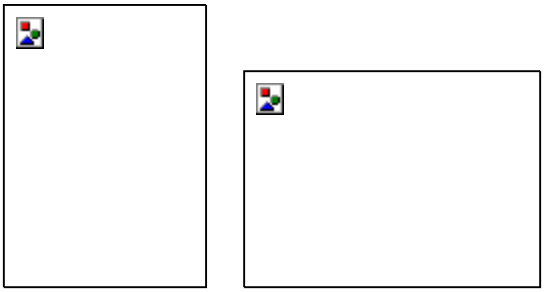
Only first aid/CPR-trained personnel are considered qualified to wear the appropriate personal protective equipment prior to assisting the injured party. Personal protective equipment includes:

- Disposable gloves
- Eye protection
- Body gown
- Disposable shoe covers
- One way resuscitation device (used to restore breathing)

All of the above equipment will be considered part of the first aid kit.

All body fluids shall be considered contaminated and shall be cleaned up and disposed of properly. The following procedures will be used for cleaning and removal of body fluids:

- Personal protective equipment as described above will be worn during the operation.
- Puncture resistant containers will be used to store the contaminated material.
- Containers will be labeled as contaminated, using the Orange Biohazard symbol.



- Containers will be taken to a servicing facility such as a hospital or clinic, for proper disposal.

Lauth makes available, at no cost to the first aid/CPR trained employee, a Hepatitis B Vaccination. This employee is not required to have the vaccination, but if he/she refuses the vaccination, he/she must sign the declination form. This form will be kept in the employee's personal file in the Corporate Office. The vaccination will be available at no cost to the employee at a future date if he/she decides to have it.

For the safety and well-being of our employees, Lauth has made it mandatory that those employees who have been exposed to body fluids must see the Lauth Doctor for a follow-up evaluation and possibly laboratory tests. Upon evaluation, the Doctor may recommend that the employee have the Hepatitis B vaccination. This recommendation will be followed, and the employee will be required to have the vaccination.

When dealing with body fluids of any kind, it should be considered contaminated. A contaminated material is hazardous and will be labeled as such, placing the Orange Biohazard symbol on the container containing fluid.

Lauth will keep records on those employees who have been exposed to body fluids for up to 30 years after employment is discontinued.

Lauth shall provide instruction to first aid/CPR certified employees in the proper methods of reducing the risk of exposure.

Training Requirements
This policy will be reviewed during New Hire Orientation and during annual refresher training.

Section 7 - Compressed Air & Gas

Purpose
To define minimum requirements and responsibilities in the safe use of Compressed Air and Gases.

Scope
This section applies to all Lauth employees and operations.

Definitions
Compressed gases - used for industrial purposes are contained in high-pressure cylinders. Gases can be combustible, flammable, explosive, poisonous, corrosive, or all of these.

Acetylene - The widest flammable range known and is classified as an asphyxiant. It may contain dangerous amounts of phosphine and arsine when generated directly from calcium carbide. Under certain conditions it can form compounds with silver, mercury, or copper that explode spontaneously. An unstable compound, acetylene may explode even under low pressures. The safe maximum pressure is 15 pounds per square inch for small diameter piping systems. Acetylene can be stored in cylinders at a pressure of 250 pounds per square inch at 70°F. The cylinders contain a porous material and acetone to absorb acetylene in a stabilized condition.

Ammonia - A colorless, lighter than air, has a piercing odor, and is highly irritating to the eyes, skin, and respiratory tract. The National Institute for Occupational Safety and Health (NIOSH), lists 81 occupations with potentially hazardous exposures to ammonia. They range from acetylene workers and farmers to tanners and wool scourers. The substance is widely used as a fertilizer and refrigerant.

Anhydrous Ammonia - A pure dry gas. Liquid anhydrous ammonia is this gas compressed into a liquid. Ammonium hydroxide is gaseous ammonia dissolved in water. Anhydrous ammonia is flammable; and though it's flammable; and though its flammable range is very high, ammonia fires and explosions are not uncommon. The chief hazards of ammonia are freeze burns, severe eye injury, and death from inhalation of high concentrations.

Carbon Dioxide - An odorless, colorless, and heavier than air, is toxic when high percentages are present and can cause death when encountered in asphyxiating concentrations. This gas is not flammable and is in common use as a fire extinguishing agent. Because of its ability to displace oxygen, it will smother the fires of petroleum, coal, and wood; but the fires of magnesium, sodium, potassium, and metal hydrides will burn rapidly in an atmosphere of carbon dioxide.

Chlorine - Is not flammable, but it can react with organic compounds such as petroleum products, ethers, and alcohols with explosive violence. It is a corrosive, very irritating gas. If mixed with acetylene, it will explode when exposed to sunlight. Only slightly soluble in water, chlorine reacts with water to form hypochlorous and hydrochloric acids that eat into iron and steel. Never use water on a chlorine leak. Iron and steel are not affected by dry chlorine at lower temperatures; however, those metals used in chlorine systems must be kept dry at all times.

Fluorine - A pale yellow, corrosive, and poisonous gas that attacks all but a few materials. Fluorine and acetylene mixtures also may explode if exposed to light.

Hydrogen - The lightest of all elements, is both colorless, and odorless. Its flammable range is almost as wide as that of acetylene. A mixture of 10 to 65 percent in air will explode if ignited. Hydrogen is classified as an asphyxiant.

Oxygen - Although oxygen supports combustion, it does not burn. Oxygen is considered a hazardous element because flammable materials burn must faster in oxygen, and oxygen can quickly combine with other elements and compounds to produce spontaneous ignition. When oxygen comes into contact with oil, grease, or fuel oils, the result can be a sudden and violent fire. Employees involved in the handling of this gas must take every precaution to prevent the combination. Liquid oxygen can be equally dangerous if not handled properly. A burning cigarette dropped into liquid oxygen will produce a flame two feet high, and even shredded metal will burn if exposed to it. Open flames and smoking must never be allowed near oxygen storage areas.

Responsibilities
Supervisors must ensure that unloading operations of compressed gas and cylinders are performed by reliable personnel properly instructed. Employees using compressed air equipment should be familiar with the appropriate operating and maintenance instructions.

Procedures
Compressed air used for cleaning shall not exceed 30-PSI pressure and only then with effective chip guarding. Appropriate respirator and ear protection shall also be worn.

Air under pressure must never be permitted to contact any part of the body.

Compressed gas cylinders shall always be treated as full. Avoid dropping, jarring, or bumping.

When turning on air, hold nozzle securely to avoid "kicking."

When cylinder is not in use, place protective cap over the valve.

Where possible, move cylinder by dolly.

Transport cylinders in upright position only.

Chain or strap cylinders upright to prevent falling.

Keep cylinders out of contact with grease, acids, salt, heat, and flames.

Never let grease, oil, or dirt (check your hands) come in contact with oxygen cylinder controls.

Never blow dust from clothes with compressed gases.

In storage, oxygen and gaseous fuel cylinders must be separated by at least 25 feet, or by an approved firewall constructed of the following materials:

- One-quarter inch or thicker steel plate that extends 24 inches above the top of the cylinders (meeting requirements of a 1/2 hour fire retardant rating.)

Smoking or an open flame in oxygen storage areas is not permitted.

Read and understand the name of contents before opening valves on any cylinder.

In industrial plants and other workplaces, unauthorized employees must never enter ammonia-hazard areas. Gas masks and other protective equipment must be located within easy reach. In the event of ammonia exposure, the skin and eyes of the victim should be immediately flushed with plenty of portable water, and medical attention should be sought at once. Employees authorized to handle anhydrous or strong aqua ammonia must wear gloves, shoe covers, and aprons that are impervious to ammonia. They must also wear eye and face protective equipment.

Compressed gas cylinders must be examined as soon as they are received. If there are any signs of damage or leakage, they must be moved to a safe, isolated area and returned to the supplier as soon as possible. The greatest care must be exercised in the handling of cylinders. They must never be dropped or banged against each other. Nothing should be allowed to fall on them. They must be stored upright in a safe, well ventilated area, away from any source of heat and away from electrical wiring. They must be secured in the upright position by chain, cable, or other suitable means to keep them from tumbling.

The requirement that cylinders be secured in an upright position applies only to cylinders on construction sites, and not to establishments where welding gases are manufactured and distributed (OSHA Instruction STD 3-8.2, March 1981).

Most cylinders are provided with a steel protective cap that screws on over the valve. Except when cylinders are in use, these caps should remain screwed down to the last thread.

When cylinders are moved, special hand trucks should be used. When in transit, the cylinders should be lashed to the cradles of the trucks in as near an upright position as possible.

Storage areas must be fire-resistant, clean, free of combustible materials, and well lighted. Cylinders of oxygen must never be stored near cylinders containing flammable gases. Empty cylinders must be marked MT and kept away from full ones. Full cylinders must be positively identified as to the gases they contain.

Improper handling of compressed gas cylinders can produce a hazard called "rocketing." If an accidental rupture occurs, or if a valve assembly is snapped off, a cylinder can blast its way through a concrete wall.

Training Requirements
Employees should know the chemical and physical hazards of working with compressed air and gas (See Section 3 above) and the correct usage of Personal Protective Equipment.

A preventative maintenance checklist should be tailored to each operation. Some of the items may include:

- Are pulleys and belts on compressors and motors completely guarded?

- Are flexible cords or plugs on electric motors periodically checked and replaced if in a deteriorated condition?
- Do the relief valves operate properly?
- Are air tanks drained regularly?
- Is the pressure relief device and gauge in good operating condition?
- Are employees properly trained in handling gas cylinders?
- Are unloading operations performed by reliable persons properly instructed?
- Are employees trained in the proper use of personal protective equipment?

Section 8 - Confined Space Entry

Purpose
To ensure a safe work environment when work is performed in a confined space.

Scope
This procedure applies to all Lauth employees who may be required to enter a confined space. Confined space entry training will be conducted first and the following policy will be followed.

Definitions
Competent Person - Means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has the authorization to take prompt corrective measures to eliminate them.

Confined Space –
- Is large enough and so configured that an employee can bodily enter and perform assigned work; and
- Has limited or restricted means for entry or exit
- The space is not designed for continuous employee occupancy

Controlling Contractor – Means the employer that has overall responsibility for construction at the worksite.

Entry Employer - Means any employer who decides that an employee it directs will enter a permit space.

Hazardous Atmosphere –
- An atmosphere that may expose employees to the risk of death, incapacitation, and impairment of ability to self-rescue (that is, escape unaided from permit space), injury, or acute illness from one or more of the following causes:
    - Flammable gas, vapor, or mist in excess of 10 percent of its lower flammable limit (LFL);
    - Airborne combustible dust at a concentration that meets or exceeds its LFL;
    - Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent;
    - Atmospheric concentration of any substance for which a dose or a permissible exposure limit is published in Subpart G, Occupational Health and Environmental Control, or in Subpart Z, Toxic and Hazardous Substances, of this part and which could result in employee exposure in excess of its dose or permissible exposure limit;
    - Any other atmospheric condition that is immediately dangerous to life or health.

Host employer - Means the employer that owns or manages the property where the construction work is taking place.

Permit-Required Confined Space –
- Permit-Required Confined Space means a confined space that has one or more of the following characteristics:

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

Non-Permit Confined Space –

- (Low Hazard) A confined space that poses no actual or potential atmospheric hazards and if all hazards within the confined space are eliminated without entry into the space, the space may be classified or reclassified as a Non-Permit confined space, for as long as the non-atmospheric hazards remain limited. (Forced air ventilation does not consider elimination of a hazard).

Qualified Person - Means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his ability to solve or resolve problems relating to the subject matter, the work, or the project.

Responsibilities

The Safety Representative shall manage the overall confined space entry program and will ensure that supervisory and worker personnel are trained and comply with policy requirements. The entry employer must retain each canceled entry permit for at least 1 year to facilitate the review of the permit-required confined space program.

Attendants

- Have knowledge of all potential hazards of entry.
- Aware of possibly behavioral effects of hazard exposure.
- Stay in continuous communication with entrants
- Remain outside the permit space during entry operations, unless relieved by another attendant.
- Monitor activities inside and outside the space to determine if it is safe for entrants to remain in the space and order entrants to evacuate immediately under any of the following conditions:
  - Attendant detects a prohibited condition.
  - Attendant detects the behavioral effects of hazard exposure in an entrant.
  - Attendant detects a situation outside the space that could endanger the entrants.
- Summon rescue and other emergency services as needed.
- Take appropriate actions if unauthorized persons approach or enter a permit space.
  - Warn unauthorized persons to stay away from permit space.
  - Advise unauthorized persons to exit immediately if they have entered the permit space.
  - Inform authorized entrants and entry supervisor if unauthorized persons have entered the space.
- Perform non-entry rescue as specified by the employer's rescue procedure.

Entrants

- Have knowledge of all potential hazards of entry.
- Stay in contact communication with attendants.

- Alert the attendant whenever:
    - Entrant recognizes any warning sign or symptom of exposure to a dangerous situation.
    - Entrant detects a prohibited condition.
- Exit the space as quickly as possible whenever:
    - An order to evacuate is given by the attendant or entry supervisor.
    - Entrant recognizes any warning sign or symptom of hazardous exposure.
    - Entrant detects a prohibited condition.
    - An evacuation alarm is activated.

Entry Supervisor

- Has knowledge of all potential hazards of entry.
- Verifies full completion of permit, including atmospheric testing requirements and all other applicable procedures and equipment as specified by the permit before signing and allowing entry to begin.
- Terminates the entry and cancels the permit whenever:
    - Entry operations covered by the permit are completed.
    - A condition not allowed under the permit arises in or near the permit space.
- Verifies that rescue services are available and the means for summoning them are operable.
- Removes unauthorized individuals who enter or attempt to enter the permit space.
- Coordinates permit transfer so that entry operations remain consistent with the terms of the entry permit and that acceptable entry conditions are maintained.

Procedures

General Requirements

- Before work begins at a worksite, each employer/contractor must ensure that a competent person identifies all confined spaces in which one or more of the employees it directs may work, and identifies each space that is a permit space, through consideration and evaluation of the elements of that space, including testing as necessary.
- If the workplace contains one or more permit spaces, the employer who identifies, or who receives notice of, a permit space must:
    - Inform exposed employees by posting danger signs or by any other equally effective means, of the existence and location of, and the danger posed by, each permit space; and
    - Inform, in a timely manner and in a manner other than posting, its employees' authorized representatives and the controlling contractor of the existence and location of, and the danger posed by, each permit space.
- The company Safety Representative is responsible for program development, implementation, and policy revisions.
- Types of Hazards Associated with Confined Spaces:
    - Oxygen deficiency, less than 19.5%
    - Combustible/Flammable/Explosive Atmospheres
    - Toxic Gases or Vapors
    - Physical Hazards
    - Grinding
    - Agitators
    - Steam

- Falling/Tripping
- Other Moving Parts
- Mulching
- Corrosive chemicals
- Biological
- Unknowns
- Electrical
- Wind
- Lighting
- Weather
- Insecure Footing
- Rodents/Snakes/Spiders

Confined Space Entry

- Review activity to be performed. The company Safety Representative shall determine entry classification of permit or non-permit required.
- Complete Lauth Confined Space Entry Permit
  - Prepare Space Entry
    - Notify the department likely to be affected by service interruption.
    - Post signs, put up barriers and tape where necessary to prevent unauthorized entry.
    - Qualified personnel follow appropriate shutdown procedures.
    - Implement lockout/tagout where necessary to isolate space.
    - Empty the space if possible of hazardous materials, clean, wash and purge.
    - Ventilate if needed long enough in advance. Verify by testing.
    - Review with personnel entering the space that previous testing has been completed.
    - Attach "HOT WORK" permit, if required, to confined space entry permit.
    - Conduct atmospheric testing to determine concentration levels of all hazards identified.
    - Post confined space entry permit
    - Suspend or cancel the entry permit and fully reassess the space before allowing reentry when a condition that is not allowed under the entry permit arises in or near the permit space and that condition is temporary in nature and does not change the configuration of the space or create any new hazards within it.
- Atmosphere Testing and Monitoring Requirements
  - The atmosphere within the space must be continuously monitored unless the entry employer can demonstrate that equipment for continuous monitoring is not commercially available or periodic monitoring is sufficient. At a minimum all confined spaces must be evaluated for:
    - Oxygen (O2) levels must be >19.5% and <21.5%
    - Presence of Carbon Monoxide (CO) gas must be below the PEL
    - Presence of explosive gas or vapor must be less than 10% of the LEL
- Additional tests in confined spaces may be needed because of the function of the confined space. For example:
  - Chemical Hazards

        - Toxicity (Review SDS's, PEL's, TLV's and other data to evaluate exposure.)
        - Sulfur Dioxide (SO2)
        - Hydrogen Sulfide (H2S)
        - Hydrogen Cyanide (HCN)
    - Physical Hazards
        - Heat stress (using wet Bulb Globe thermometer)
        - Noise (using dosimeter to evaluate)
    - Continuous Testing in Attended Confined Spaces
        - Where the space contains or has the potential to contain a hazardous atmosphere, continuous monitoring will be done.
        - Personnel using continuous monitors will be trained on the use and limitations of the monitor. This training is part of the annual confined space training program.
    - Flammables Gases and Combustible Dusts Testing
        - All confined spaces shall be tested for explosive gases and vapors prior to entry, no "HOT WORK" shall be permitted if atmospheric readings are above 10% of the lower explosion limit (LEL). Continuous reading monitors for explosive ranges shall be used on the jobsite in which "HOT WORK" is being conducted in attended confined spaces.
        - Before "HOT WORK" is conducted in confined spaces which contain combustible dusts, they shall be adequately cleaned by means of washing or "wetting down", or vacuuming with properly grounded equipment. At NO time is compressed air to be used for cleaning of combustible dusts.

Training Requirements
Initial training will provide employees with the understanding, skill and knowledge necessary to perform the job safely, in addition to the proper PPE, use of tripod and other necessary equipment. Refresher training will be given when duties change, hazards in space change or whenever evaluation exposes inadequacies in employee knowledge. Employer certification of training must include employee's name, signature or initials of trainer and date of training.

<u>Rescue Services</u>

- Employee retrieval systems will be used whenever possible. The other end of the retrieval line must be attached to a mechanical device or fixed point outside the permit space in such a manner that rescue can begin as soon as the rescuer becomes aware that rescue is necessary.
- A mechanical device must be available to retrieve personnel from vertical type permit spaces more than 5 feet deep.
- Rescuer's ability to respond to a rescue summons must occur in a timely manner, considering the hazard(s) identified. Onsite teams must be properly equipped. They must receive the same training as authorized entrants plus training to use personal protective and rescue equipment and first aid training, including CPR. They must practice simulated rescues at least once every 12 months. Outside rescue services must be made aware of hazards, receive access to comparable permit spaces to develop rescue plans and practice rescues. Employer must provide hospitals or treatment facilities any SDSs or other information on a permit space hazard exposure situation that may aid in treatment of rescued employees.
    - Qualification requirements for using alternative protection procedures

- The only hazard is an actual or potential hazardous atmosphere.
- Ventilation alone is sufficient to maintain the permit space safe for entry and work to be performed within the permit-required space must introduce no additional hazards.
- Gather monitoring and inspection data to support above items.
- If entry is necessary to conduct initial data gathering, perform such entry under the full permit program
- Document the determinations and supporting data and make them available to employees.
- Entry can take place after a) it has been determined safe to remove the entrance cover; b) any openings are guarded to protect against falling and falling objects; c) internal atmospheric testing; d) air remains without hazard whenever any employee is inside the space; e) continuous forced air ventilation has eliminated any hazardous atmosphere; f) space is tested periodically. Employees must exit immediately if a hazardous atmosphere is detected during entry, and the space must be evaluated to determine how the hazardous atmosphere developed.

Section 9 - Cranes and Hoist

Purpose
To prevent accidents and injury from the use of unsafe crane equipment or from the unsafe operations of cranes or crane equipment.

Scope
This section applies to all Lauth operations with cranes or engaged in crane use or related activities.

Responsibilities
The Project Manager will be responsible for the safe use of crane equipment at the jobsite, and will ensure that the crane operator is trained and qualified for the equipment being used.

The crane operator will ensure that all crane equipment including hoist is inspected annually by a competent person recognized by the Department of Labor. The Safety Representative will maintain the inspection records.

Lauth will comply with the manufacturer's specifications and limitations applicable to the operation of any and all cranes and derricks. Where manufacturer's specifications are not available, the limitations assigned to the equipment will be based on the determinations of a qualified engineer competent in this field and such determinations will be appropriately documented and recorded. Attachments used with cranes shall not exceed the capacity, rating, or scope recommended by the manufacturer.

Rated load capacities, and recommended operating speeds, special hazard warnings, or instruction, will be followed and conspicuously posted on all equipment. Instructions or warnings will be visible to the operator while he/she is at his control station.

Procedures
Daily Inspection by a designated Competent Person

- Visually inspect the entire crane and rigging equipment for signs of damage during and prior to start of work, which may cause unsafe operation. Inspect the bridge and cab for loose objects which might fall to the floor.
- Visually inspect running hoist cable from cable drum to block. If broken wires in a strand are found, have the Project Manager ask maintenance to check the hoist cables. Ensure that user cables are threaded through their sheaves.
- Visually inspect all ropes, chains, and slings during and prior to operating. Visually inspect for hook spread. Be sure safety latch is in place and in working condition.
- Test the alarm.
- Operate each control to determine that it functions properly:
    - Bridge control and brake
    - Trolley control and brake
    - Hoist control and brake
    - Handling equipment controls: (Example: Rotator rope grab). Check for misalignment, worn points, hose, and cables out of holders or racks, electric cables pinched or worn, and leaking hydraulics.

- Check the emergency hoist limit switch; IT IS NOT AN OPERATING CONTROL (The hoist limit switch is for automatic emergency use only). After checking, do not hoist the crane block to the point of engaging the limit switch.
- Move the crane to an open area, away from personnel and equipment and test the limit switch without a load. The operator shall stand clear of the fall pattern of the crane block.
- Raise the block and hook-up to, but not more than three feet below the limit switch trip mechanism and stop the hoist motion completely.
- Raising the block(s) slowly, proceed cautiously until the emergency hoist limit switch engages.
- During a hoist limit switch check, the operator shall never run the limit switch at full speed.
- When the emergency switch is inoperable, an operator runs the risk of the blocks going beyond the height of the emergency hoist limit switch and getting caught in the frame, causing the cables to break, the block and hook to drop.
- If the hoist limit switch is working, the hoist will stop.
- If the limit switch does not operate at the point of which it should, lower the block out of contact with the limit switch trip mechanism and NOTIFY YOUR FOREMAN IMMEDIATELY.
- Always bring the block down out of the power limit slowly. JOG DOWN THE HOIST, because at that point, you do not have dynamic braking. The block and hook are coasting downward due to the weight of the block and will carry the hoist drum downward.

Inspection shall be documented.

General Crane Rules
Test the hoist brake on the first load lifted on the shift and on successive larger loads during the shift. Test by lifting the load a few inches off the floor and stopping to make sure the brake does not slip.

Report immediately to your Project Manager any unsafe condition found during the proportional check and/or during later operations of the crane.

Know the rated capacity of the crane before operating or attempting any lifting operation.

Watch for co-workers near or on crane rails. Look down the rails in the direction of travel prior to bridge movement.

When approaching a pennant streamer across the building, or other stop signal, stop crane immediately. Find out why the warning was given and then proceed only when you are sure of safe operating conditions. Before moving a load, make sure that no one is in a position to be injured and that no equipment or material could be damaged by the lift.

Crane towers, loads and any part of the crane will be kept a minimum of ten feet from power lines

Center the hook over load before any lift is started, this will prevent swinging. Check with rigging personnel to ensure that the load center of gravity has been clearly established.

Sound crane bell, horn, or siren as you begin to move a load through high traffic areas and intersections. NEVER carry a load over co-workers.

If in doubt about clearing any object -STOP- and seek assistance.

Any time an object is accidentally damaged by your crane, load, or grab, STOP and report it immediately to your Project Manager. When you are relieved by another operator, report the crane operating condition to the operator relieving you.

Avoid parking cranes so that control pendants, hooks, grabs, or other lifting devices are left suspended over aisle ways. When work on an overhead crane or gantry crane requires the crane to be tagged out. The cranes main electrical disconnect switch shall be tagged and locked in the open position.

The following situations require cranes adjacent to the work area to be locked/tagged out or blocked when the work area is in the path of the bridges of these cranes:

- When working in a JLG, bucket truck, or other personnel lifting device
- When working with a mobile crane
- When working on the bridge of a gantry crane or small crane
- When working on a ladder or scaffold
- When working on any elevated platform or on any equipment

<u>Acceptable Blocking Methods</u>
Crane stops on each rail with a streamer of pennants draped between the stops. The streamer shall be draped with sufficient slack to hang the pennants at or below the level of the cab of an adjacent crane. When the crane stops are used, the operators of the adjacent crane(s) shall be notified, and a sign, "CAUTION, Crane Stops up at Column ##", shall be hung on a rung of the access ladder(s) to the adjacent crane(s). To caution operators of pendant and radio controlled crane, a caution tag, instead of a sign, shall be attached to the control box of the crane.

A fire extinguisher of 5BC shall be kept on the crane at all times.

An adjacent crane can be positioned between the work area and other active cranes. The adjacent crane shall have parking brakes set and shall be properly locked out. Locking or blocking adjacent cranes on the same rails shall be required when performing maintenance activities on the overhead crane.

Blocking is required when a section of the crane rail is electrically de-energized. The blocks shall be placed so the crane electrical pick up shoes do not enter the de-energized zone and lose power.

When an operator is at the controls of a crane, he/she shall be aware of any person boarding or leaving a crane. The crane shall not be moved while a person is boarding or leaving the crane.
Keep aisle ways unobstructed in the area serviced by pendant or radio controlled cranes. Keep a firm grip on the pendant control box. Turn off electrical power when you finish using the crane.

In all cases when the need for a flag person is required, stop and call for assistance.

Crane Hand Signals

- Both the signal person and crane operator shall know and use the standard crane signals. Communication between the crane operator and the signal person is essential for the safe operation and movement of the crane while in operation. Hand signals will be those prescribed by the applicable ANSI standard for the type of crane in use.

Signal Person

- A signal person shall be provided when any point of the operation or movement is not in full and direct view of the operator. The signal person shall be in a sufficiently lighted area and clearly visible to the operator.
- The signal person shall give signals so that they are easily recognized and identified.
- There shall be only one person to relay all signals to the crane operator although the need for more than one ground guide may be required. Effective communications between the ground guides shall be clear and precise.

Crane Operator

- The crane operator shall respond to the standard operating signals only from one authorized signal person. If more than one signal person is on the floor at the same time, the crane operator shall not lift the load until it has been determined which individual will give the signals. However, the operator shall recognize and obey a STOP signal at all times, no matter who gives it.
- If the signal or order from the person is unsafe, the crane operator shall refuse to make the lift until corrections have been made and the move or load can be lifted safely.
- The crane operator shall not move a load unless signals are clearly given, seen and understood. The operator shall halt the lift or movement in progress if the signal person is not in clear view at all times.

Whenever internal combustion engine powered equipment exhausts in enclosed spaces, tests will be made and recorded to see that employees are not exposed to unsafe concentrations of toxic gases or oxygen deficient atmospheres.

Modifications or additions which affect the safe operation of the equipment may only be made with the manufacturer's written approval. All crawler, truck, or locomotive cranes in use will meet the applicable requirements for design, inspection, construction, testing, maintenance and operation as prescribed in the ANSI B30.5-1968

Training Requirements

Only trained qualified and licensed personnel shall operate the crane and perform rigging maintenance. Operators must meet the physical qualifications, pass a physical, a written examination, understand and be able to use a load chart, as well as calculate loads for the crane type.

Section 10 - Demolition

Purpose
To protect employees, subcontractors, and the general public from undue exposure to hazards associated with demolition operations.

Scope
This section applies to all Lauth jobsites involved with demolition.

Definitions
Not applicable to this section.

Responsibilities
Project Manager will be responsible for providing direction to all Lauth employees and guidance to all subcontractors during the demolition operation.

Procedures
Lauth employees will be required to wear durable gloves, eye protection, and long-sleeved shirts in addition to their standard Personal Protective Equipment when performing selective demolition operations.

Prior to beginning demolition operations, an engineering survey will be made by a qualified person. This survey must determine the condition of the framing, floors, and walls, and will also determine the possibility of an unplanned collapse of any part of the structure. Adjacent structures will be checked for structural integrity. Written evidence of the results of this survey is to be given to the owner, or his authorized representative; and a copy of this report is to be placed in the job file at the Corporate Office.

Prior to beginning demolition operations, we will obtain from the owner/client a site survey identifying the locations of asbestos- and lead-containing materials. If the owner/client is unable to provide this information, Lauth must persuade them to employ a testing agency that can identify and/or verify areas suspected of containing these materials prior to their disturbance during the demolition operation. A copy of the results of this testing is to be retained in the Job File at the Corporate Office.

When employees are required to work in a building that has been damaged by fire, flood, explosion, or similar types of events, the walls and/or floors are to be braced and/or shored.

All electric, gas, water, steam, sewer, and other service lines must be shut off, capped, or otherwise controlled outside the building line before demolition work is started. Any utility company whose services are affected will be notified in advance.

If electric, gas, water, steam, sewer, or other utilities are necessary during demolition, their lines must be temporarily relocated and protected.

Before demolition begins, the building will be checked to determine whether any hazardous chemicals, gases, explosives, flammable materials, or similarly dangerous substances have been used in pipes, tanks, or other equipment on the property. If such substances are found or their presence is suspected, the hazard must be eliminated before demolition is started.

Any hazardous glass fragments must be removed.

All floor and wall openings, which pose a threat of being fallen through, must be protected. If debris is dropped through holes in the floor without the use of chutes, the area onto which the material is dropped will be completely enclosed with barricades not less than 42 inches high and not less than 6 feet back from the project openings. Signs must be posted at each level, warning of the hazard of falling materials. Removal of the debris from the lower area must not be permitted until debris handling from above has ended.

Floor openings not used as material drops will be covered with material that can withstand the weight of any potential load. The floor opening cover will be secured to prevent it from being accidentally moved.

Demolition of exterior wall construction and floor construction will begin at the top of the structure and proceed downward, except for the cutting of holes in floors or walls for chutes and material drops, preparation of storage space, and similar preparatory work. Each story of exterior wall and floor construction will be removed and dropped into the storage space prior to removing exterior walls and floor construction in the story below.

Entrances to multi-story structures being demolished must be completely protected by sidewalk sheds, canopies, or both. Protection will be provided from the face of the building for a minimum of 8 feet. Canopies must be at least 2 feet wider (1 foot each side) than the opening or entrance being protected, and will be capable of sustaining a load of 150 pounds per square foot.

Chutes

- No material will be dropped outside the exterior walls of a structure unless the landing area is effectively protected.
- Materials, chutes, or sections at an angle of more than 45 degrees from the horizontal will be entirely enclosed, except for openings equipped with closures at or about floor level where materials are inserted. The openings will not exceed 48 inches in height as measured along the wall of the chute. At all stories below the top floor, openings not being used will be kept closed or covered.
- Each chute must have a substantial gate at or near the discharge end. A competent employee must control the operation of the gate, and the backing and loading of trucks.
- When operations are not in progress, the area surrounding the discharge end of a chute must be securely closed off.
- Any chute opening into which debris is dumped will be protected by a substantial guard rail approximately 42 inches above the surface on which workers stand when dumping debris. Any space between the chute and the openings in the floor through which the chute passes will be covered.
- Where material is dumped from mechanical equipment or wheelbarrows, a securely attached toeboard or bumper not less than 4 inches thick and 6 inches will be provided at each chute opening.
- Chutes will be designed and constructed strong enough to sustain the impact of materials or debris loaded in them.

Removal of Materials through Floor Openings

- Openings cut in a floor for debris disposal should be no larger than 25 percent of the total floor area, unless the lateral supports of the removed flooring remains in place. Floors weakened or otherwise made unsafe by demolition operations can be safely sustained.

Removal of Walls, Masonry Sections, and Chimneys

- Masonry walls or other sections of masonry are not to be allowed to fall in masses that exceed the floor's safe load capacities.
- No wall section more than one story in height may stand alone without lateral bracing, unless the wall was originally designed and constructed to stand without lateral support and is in a condition safe enough to be self-supporting. All walls will be left in a stable condition at the end of each work shift.
- Demolition personnel will not work on the top of a wall during hazardous weather conditions.
- Structural or load-supporting members on any floor will not be cut or removed until all stories above such a floor have been demolished and removed. This provision does not prohibit the cutting of floor beams for the disposal of debris or for the installation of equipment.
- Floor openings within 10 feet of any wall being demolished will be planked solid, except when employees are kept out of the area below.
- In buildings of "skeleton-steel" construction, the steel framing may be left in place during the demolition of masonry. Where this is done, all beams, girders, and similar structural supports must be cleared of all loose material as the masonry demolition progresses downward.
- Walkways or ladders will be provided so that demolition workers can safely reach or leave any scaffold or wall.
- Walls, which serve as retaining walls to support earth or adjoining structures, will not be demolished until the earth has been properly braced or the adjoining structures has been properly underpinned.

Manual Removal of Floors

- Openings cut in floors will extend the full span of the arch between supports. Before demolishing a floor arch, debris and other material will be removed from the arch and other adjacent floor area. Planks not less than 2 inches by 10 inches in cross section, full size undressed, will be used to stand on while breaking down floor arches between beams. The planks will be placed so that a safe support is provided for the workers if the arch between the beams collapses.
- The open space between planks must not exceed 16 inches.
- Safe walkways, not less than 18 inches wide, formed of planks, not less than 2 inches thick, if wood, and of equivalent strength, if metal, will be provided so that workers can reach any point without walking on exposed beams.
- Stringers of ample strength will be installed to support the flooring planks, and the ends of such stringers will be supported by floor beams or girders, and not by floor arches alone.
- Planks will be laid together over solid bearings with the ends overlapping at least 1 foot.
- When floor arches are being removed, workers will not be allowed in the area directly below. Such an area will be barricaded so that access is prevented.

- Demolition of floor arches will not be started until the arches and surrounding floor area for a distance of 20 feet have been cleared of debris and any other unnecessary materials.

Removal of Walls, Floors and Material with Equipment

- Mechanical equipment will not be used on floors or working surfaces unless the floor or surface is strong enough to support the imposed load.
- Floor openings must have curbs or stop-logs to prevent equipment from running over the edge.

Storage

- The storage of waste material and debris on any floor will not exceed the allowable floor loads.
- In buildings that have wooden floors, the flooring boards will be removed from not more than one floor above grade to provide storage space for debris, provided that falling material does not endanger the stability of the structure.
- When wood floor beams brace interior walls of free-standing exterior walls, the beams will be left in place until other equivalent support can be installed to replace them.
- Floor arches, to an elevation of not more than 25 feet above grade, may be removed to provide storage area for debris provided that such removal does not endanger the stability of the structure.
- Storage space into which debris is dumped will be blocked off, except for opening necessary for debris removal. The openings will be kept closed at all times when debris or material is not being removed.

Removal of Steel Construction

- When floor arches have been removed, planning will be provided by those responsible for razing the steel framing.
- Steel construction must be dismantled column length by column length, and tier by tier.
- Structural members being dismembered are not to be overstressed.

Demolition using Mechanical Equipment

- When demolition balls and clam shovels are used for demolition, no workers will be allowed to enter an area that can be adversely affected by this operation.
- Only those workers necessary for the performance of the operations will be permitted in this area at any other time.
- The weight of the demolition ball must not exceed 50 percent of the crane's rated load, based on the length of the boom and the maximum angle of operation at which the ball will be used; or it will not exceed 25 percent of the nominal breaking strength of the line by which it is suspended, whichever is less.
- The ball will be attached to the loadline with a swivel-type connection to prevent twisting of the loadline, and attached so that the weight cannot become accidentally disconnected.
- During demolition, continuing inspections by a competent person will be made as the work progresses so that hazards that could result from weakened or deteriorated floors, or walls, or loosened material are detected. No employee will be allowed to work where such hazards exist, until these hazards are corrected by shoring, bracing, or other effective means.

Training Requirements
Lauth Project Managers and Subcontractor Safety Representatives are responsible for training their employees in demolition operations.

Section 11 - Designated Healthcare Facility

Purpose
To provide prompt quality medical services and to establish procedures for returning employees with job-related injuries or illnesses to work by providing Restricted Duty job assignments.

Scope
This policy applies to all Lauth jobsites.

Definition
Designated Clinic – The nearest Occupational Facility that has been selected by Performance Services or, when available, an On-the-job-site Contractors clinic to treat all non-life threatening work related injuries. In the absence of a selected Occupational Facility the employee shall use a Health clinic most convenient to the job site.

Restricted Duty - An assignment provided to an employee who, because of a job-related injury or illness, is physically or mentally unable to perform all or any part of his/her normal assignment during all or any part of the normal workday or shift.

Procedures
Accidents resulting in injuries that require emergency personnel to transport the injured employee should be transported to the nearest emergency room facility.

For injuries not requiring emergency transport, the Safety Representative, after being notified of an injury, will select and contact the nearest preferred Occupational facility for treatment of the injured employee. The selection of this facility and future designated clinics will be based on the following:

- The doctor's experience in treating occupational injuries;
- The doctor's attitude in recommending light duty work assignments and;
- The doctor's familiarity of State workmen's compensation laws.

Lauth policy is to return employees to work as soon as possible after a job-related injury or illness has occurred. All possible opportunities will be considered to provide Restricted Duty assignments for these employees. Restricted Duty Assignments will also be considered for employees injured off the job whenever possible.

By returning to work, employees are able to maintain their normal income while recovering from an injury or illness. Returning employees to work as soon as possible also benefits Lauth by keeping claims to a minimum and maintaining productivity by keeping the qualified individual on the job rather than retraining a replacement worker.

When an injured employee returns to work, all physical and mental limitations must be evaluated so that additional injury or aggravation does not occur. The safety of other employees working with the injured individual must also be considered.

Evaluation

All injuries and illnesses will be evaluated on case-by-case basis by the physician, with consultation by company representatives regarding light duty work that is available for the injured employee. The evaluation should consider the following items:

- Can the employee perform a useful task for Lauth?
- Does the assignment risk further injury or aggravation?
- Will the assignment compromise the safety of other employees?

Injured employees may return to work on Restricted Duty under the following circumstances:

- The employee's attending physician has determined the physical restrictions.
- Lauth has a task that can be assigned that meets the restrictions.
- Lauth Project Managers are informed of the restrictions.
- No employee on Restricted Duty will be allowed to work more than (40) hours per week.

The employee must receive full medical release from a physician before resuming normal work activities.

Medical facility information shall be posted at each jobsite.

Training Requirements

This policy will be reviewed during New Hire Orientation and during annual refresher training.

Section 12 - Disciplinary Procedures

Purpose
To provide a fair and consistent method for ensuring compliance with rules concerning operation, personnel, safety, security, and other regulations adopted by Lauth This Disciplinary Policy will apply to all employees of Lauth

Project Managers are authorized to enforce or administer the disciplinary policy. The Safety Representative will make the final determination of the degree of disciplinary action taken for violations of a rule or regulation.

Scope
This section applies to all Lauth employees exposed to chemical hazards in the workplace.

Definitions
Safety Violation - Any unsafe act or condition that could reasonably lead to an accident, injury or property loss; and that could have reasonably been anticipated.

Procedures
Determine the degree of seriousness of the violation as follows:

- First Degree - Non-Serious Violation: A safety violation that has a direct relationship to jobsite safety and health, but in all probability, would not cause death or serious physical harm.
- Second Degree - Serious Violation: A non-serious violation that has been addressed verbally and not corrected in a reasonable period of time or could reasonably result in death or serious physical harm.
- Third Degree - Intentional Violation: A non-serious violation that is intentionally and knowingly committed or repeated without any effort to eliminate the unsafe condition.

Determine the Degree of Discipline as follows:

- First Degree - Non-Serious Violation. Penalty: Verbal Warning. The Project Manager should log this warning and advise the Safety Representative of its occurrence. The record of this occurrence will be placed in the violator's personnel file.
- Second Degree - Serious Violation. Penalty: Written Warning. The Project Manager and the violator will sign the written warning, and it will be placed in the violator's personnel file. (See Individual Disciplinary Notice D-5)
- Third Degree - Intentional Violation. Penalty: Up to three (3) days of suspension with written notice for an employee, and suspension from work. The Project Manager and the violator will sign the notice, and it will be placed in the violator's personnel file.

In addition to the above procedure, Lauth reserves the right to immediately terminate a person for violating safety and health policies.

Training Requirements
This policy will be reviewed during New Hire Orientation and during annual refresher training.

Section 13 - Electrical

Purpose
Protect all employees from electrical hazards and/or working on or near exposed energized parts.

Scope
This section is applicable to all Lauth operations including shops, offices, and jobsites.

Definitions
Grounded - Connected to earth or to some conducting body that serves in place of the earth.

Ground-Fault Circuit Interrupter - A device for the protection of personnel that functions to deenergize a circuit or portion thereof within an established period of time when a current to ground exceeds some predetermined value that is less than that required to operate the overcurrent protective device of the supply circuit.

Guarded - Covered, shielded, fenced, enclosed, or otherwise protected by means of suitable covers, casings, barriers, rails, screens, mats, or platforms to remove the likelihood of approach to a point of danger or contact by persons or objects.

Qualified Person - A recognized degree, certificate, or professional standing, or extensive knowledge, training, and experience enabling successful demonstration of ability to solve or resolve problems relating to the subject matter, the work, or the project.

Responsibilities
The Safety Representative evaluates field operations for compliance with safe work practices associated with electrical hazards.

Project Managers evaluate the potential for electrical hazards at each jobsite and ensure that field personnel follow existing safe work procedures.

Procedures
Lauth will utilize Ground Fault Circuit Interrupters (GFCI's) to protect our employees on all construction sites.

Ground Fault Circuit Interrupters

- Temporary wiring on a construction job shall be guarded by the use of Ground Fault Circuit Interrupters (GFCI) to protect Lauth employees. This requirement is in addition to any other requirements for equipment grounding conductors.
- All 120 volt, single-phase, 15 and 20 ampere receptacle outlets on construction sites, which are not a part of the permanent wiring of the building or structure and which are in use by employees, should, under ideal conditions, have approved Ground Fault Circuit Interrupters to provide protection for those employees.
- Receptacles on a two-wire, single-phase portable or vehicle mounted generator rated not more than 5kW, where the circuit conductors of the generator are insulated from the generator frame and all other grounded surfaces, need not be protected with GFCI.

- The testing of company owned or controlled GFCI's should be documented. The test results should be kept as part of job file. Any GFCI which fails to properly function shall be immediately taken out of service.

Reporting

- Any electrical equipment found to be unsafe shall be reported, tagged "DO NOT USE", and turned in for repair or replacement.
- Reporting and alerting co-workers will prevent possible electrical contact. Notify jobsite supervision of all identified electrical hazards.

Test Equipment

- Only qualified persons shall use test equipment and shall verify that the hazard has been de-energized. If the circuit to be tested is over 600 volts, nominal, the test equipment shall be checked for proper operation.

Warning Signs

- Warning signs are posted where employees may be exposed to high voltage electrical hazards. Never remove or damage this signage. When guarding, isolating, insulating, or grounding protective measures have been taken, they shall not be removed by "unqualified employees".

Power Tools

- Insure that all electric power tools are grounded. Electric power tools shall be equipped with a proper ground plug (three-prong) or be of double insulation construction.
- Never use the electrical supply cord to carry electric power tools. Carry the tool by its proper handle.
- Power hand tools shall be carefully inspected before use. Check blades, chucks, tool assembly, guards, and electrical cords.

Housekeeping

- Housekeeping duties that require an employee to perform duties near electrical hazards shall not use electrically conductive cleaning materials (steel wool, metalized cloth, and silicon carbide as well as any conductive liquid solutions). Pay close attention to materials used to ensure they won't contribute to a potential explosion.

Conductive Apparel

- All employees shall take special care in the use of conductive apparel (such as watch bands, bracelets, rings, key chains, or metal headgear and glasses).

Connecting/Starting/Energizing Electrical Equipment

- At no time shall any employee connect, start, or energize electrical equipment while standing in water.

Personal Protection Equipment

- Lauth shall provide personal protection equipment to safeguard "qualified personnel" where potential electrical hazards are present.
- Employees shall wear eye and face protective equipment where necessary to protect them from electric arcs or flashes or from flying objects.

Training Requirements

Electrical hazards (except lockout/tagout) shall be addressed in Lauth safety talks, safety newsletters and daily work instructions (at a minimum).

Section 14 - Emergency Action Plan

Purpose
To ensure the safety and well-being of all employees in the event of a natural or man-made emergency or disaster. Emergency Action Plan procedures and equipment are developed prior to the start of a project.

An Emergency Action Plan contains requirements to protect all employees' from the hazards associated with emergencies on projects that are continuously staffed for more than 3 months. As such, the customary and normal Lauth project does not fall under these guidelines. All employees will then rally at the company vehicle until an all clear is given by the Project Manager. Emergency agencies will be contacted via 911.

References
1910.38 – Employee Emergency Plans and Fire Prevention Plans

Definitions
Emergency - Any serious, unexpected situation or occurrence that demands immediate action in order to protect the life of an employee, falls under scrutiny by the government or media, jeopardizes our public image, or threats our financial or legal condition. Emergencies covered under this plan include:

- Major accidents
- Employee deaths from accidents
- Serious injuries
- Natural disasters, such as tornadoes, floods, earthquakes, etc.
- Man-made disasters, such as fires, explosions, workplace violence, chemical spills, toxic gas releases, etc.

Emergency Action Plan (EAP) - Written and posted documents as described on the Emergency Response Plan Checklist

Procedures
Complete the Emergency Action Plan Checklist as needed.

Who to Call
All employees of Lauth must know exactly who to call in the event of an emergency. The ERP will include a list of the following:

- Designated, On-site Leader of the Emergency
- VP Operations
- All Local Emergency Response Teams

Site Access
The plan will include a means of access and exit for the emergency agencies. The following items must be made known to all emergency teams:

- Map of the site showing path to be taken through the jobsite.
- A means to ensure the emergency team stays on this path. A suggestion would be to assign a number of people to stand at intervals, holding up a flag, to identify the path to be taken.
- Who the lead person(s) is (are) on-site.

- What the means of communication will be.

Site Evacuation
The plan will include an evacuation procedure (if the existing building does not already have one posted) including the following:

- Illustrated evacuation route, floor plans or workplace maps clearly showing the emergency escape route, along with safe refuge areas.
- A means of communicating the order.
- A means of accounting for personnel.

Evacuating Employees:

- Proceed to the emergency assembly area using the safest and fastest evacuation routes.
- Employees are to meet in designated area according to the type of emergency.
- DO NOT go back to the building or the area of the emergency.

Responsibilities
The Safety Representative, with input from the Safety Committee, is responsible for the development, implementation, and review of the Emergency Action Plan Policy.

- Project Managers and Superintendents share the responsibilities of development of the jobsite Emergency Action Plan, using this policy as a general guideline.
- These responsibilities include the following:
    - Completing the EAP prior to the start of the project.
    - Reviewing the job-specific plan with all jobsite employees, subcontractors, and client/ customer representatives.
    - Taking appropriate action to minimize hazardous situations and exposures to Lauth employees and subcontracted personnel.
    - Ensuring that outside emergency services (medical aid and local fire departments are called when necessary).
    - Posting the EAP where all employees, suppliers, and subcontractors can see and read its provisions.
    - Updating the EAP as required during the course of the project.
- All subcontractors will comply with Lauth provisions of the jobsite Emergency Action Plan.

Training Requirements
This policy will be reviewed during New Hire Orientation and during annual refresher training.

Section 15 - Fall Protection

Purpose
To protect Lauth employees and subcontractors from the hazards of falls from elevated areas.

Scope
These fall protection guidelines will also apply to floor, roof, or wall openings and has been written to protect all personnel from the possibility or danger of personnel or materials falling through these openings.

Definitions
Anchorage - Means a secure point of attachment for lifelines, lanyards or deceleration devices.

Body Harness - Means straps which may be secured about the employee in a manner that will distribute the fall arrest forces over at least the thighs, pelvis, waist, chest and shoulders with means for attaching it to other components of a personal fall arrest system.

Controlled Access Zone (CAZ) - Means an area in which certain work (i.e., overhand bricklaying) may take place without the use of guardrail systems, personal fall arrest systems, or safety net systems and access to the zone is controlled.

Deceleration Device - Means any mechanism, such as a rope grab, rip-stitch lanyard, specially-woven lanyard, tearing or deforming lanyards, automatic self-retracting lifelines/lanyards, etc., which serves to dissipate a substantial amount of energy during a fall arrest, or otherwise limit the energy imposed on an employee during fall arrest.

Guardrail System - Means a barrier erected to prevent employees from falling lower levels.

Handrail - Single bar on brackets attached on a wall, ramp or stairway, used to prevent tripping.

Hole - Means a gap or void 2 inches (5.1cm) or more in its least dimension, in a floor, roof, or other walking/working surface.

Lanyard - Means a flexible line of rope, wire, or strap which generally has a connector at each end for connecting the body belt or body harness to a deceleration device, lifeline, or anchorage.

Leading Edge - Means the edge of a floor, roof, or formwork for a floor or other walking/working surface (such as the deck) which changes location as additional floor, roof, decking, or formwork sections are placed, formed, or constructed. A leading edge is considered to be an "unprotected side and edge" during periods when it is not actively and continuously under construction.

Lifeline - Means a component consisting of a flexible line for connection to an anchorage at one end to hang vertically (vertical lifeline), or for connection to anchorages at both ends to stretch horizontally (horizontal lifeline), and which serves as a means for connecting other components of a personal fall arrest system to the anchorage.

Low Slope Roof - Means a roof having a slope less than or equal to 4 in 12 (vertical to horizontal).

Lower Levels - Means those areas or surfaces to which an employee can fall. Such areas or surfaces include, but are not limited to, ground levels, floors, platforms, ramps, runways, excavations, pits, tanks, material, water, equipment, structures, or portions thereof.

Opening - Means a gap or void 30 inches (76 cm) or more high and 18 inches (48 cm) or more wide, in a wall or partition, through which employees can fall to a lower level.

Personal Fall Arrest System - Means a system used to arrest an employee in a fall from a working level. It consists of an anchorage, connectors, a body belt or body harness and may include a lanyard, deceleration device, lifeline, or suitable combinations of these. As of January 1, 1998, the use of a body belt for fall arrest is prohibited.

Rope Grab - Means a deceleration device which travels on a lifeline and automatically, by friction, engages the lifeline and locks so as to arrest the fall of an employee. A rope grab usually employs the principle of inertial locking, cam/level locking, or both.

Roof - Means the exterior surface on the top of a building. This does not include floors or formwork which, because a building has not been completed, temporarily become the top surface of a building.

Roofing Work - Means the hoisting, storage, application, and removal of roofing materials and equipment, including related insulation, sheet metal, and vapor barrier work, but not including the construction of the roof deck.

Safety Monitoring System - Means a safety system in which a competent person is responsible for recognizing and warning employees of fall hazards.

Standard Railing - Vertical barrier to protect and prevent persons from falling into, through or from wall openings, ramps, platform or other areas where a fall hazard exists.

Steep Roof - Means a roof having a slope greater than 4 in 12 (vertical to horizontal).

Toe board - Means a low protective barrier that will prevent the fall of materials and equipment to lower levels and provide protection from falls for personnel.

Unprotected Sides and Edges - Means any side or edge (except at entrances to points of access) of a walking/working surface, (i.e., floor, roof, ramp, or runway where there is no wall or guardrail system at least 39 inches [1.0 m] high.)

Walking/Working Surfaces - Means any surface, whether horizontal or vertical on which an employee walks or works, including, but not limited to, floors, roofs, ramps, bridges, runways, formwork and concrete reinforcing steel but not including ladders, vehicles, or trailers, on which employees must be located in order to perform their job duties.

Warning Line System - Means a barrier erected on a roof to warn employees that they are approaching an unprotected roof side or edge, and which designates an area in which roofing

work may take place without the use of a guardrail, body belt, or safety net systems to protect employees in the area.

Work Area - Means that portion of a walking/working surface where job duties are being performed.

Responsibilities
The Safety Representative will ensure that all Project Managers are trained and educated on the company fall protection policy and procedures.

Project Managers must instruct personnel in the use of fall protection equipment and procedures. Project Managers will consult with the Safety Representative to determine if the project has an adequate fall protection plan.

All employees are required to follow safe work practices related to fall protection.

Project Managers must evaluate and control the worksite hazards associated with floor, roof, and floor openings and must instruct workers to avoid exposure to the hazards and/or provide the physical means to prevent such exposures.

The employer shall provide for prompt rescue of employees in the event of a fall or shall assure that employees are able to rescue themselves.

Procedures
Pre Project Planning - A systematic evaluation of the building structure, openings and skylights, and fall exposures must be made prior to construction or demolition operations. Pre project planning for safety is best performed in conjunction with the safety department, the project management team, and other appropriate experts. A written site-specific fall prevention plan may be appropriate for particularly hazardous projects.

- Compliance with Fall Protection Requirements
  - Generally, fall protection for workers is required whenever there is a potential for fall exposure of six feet or more. Existing regulations allow alternative systems to protect workers from fall-related accidents.
    - Guardrail Systems
    - Controlled Access Zones
    - Safety Net Systems
    - Safety Monitoring Systems
    - Personal Fall Arrest Systems
    - Covers (for holes in roofs, etc.)
  - Project Managers should implement the most suitable form of fall protection systems for each project, task, and employee. Decisions and action required to implement fall protection must occur prior to operations.

The following are examples of each of the seven types of fall protection systems that must be used when workers are working at or above six foot elevations

- Guardrail Systems
  - The top edge of the guardrail shall be 42 inches (+/-3 inches) above the walking/working level. Midrails shall be installed between the top edge of the guardrail system and the walking/working surface.

- Midrails shall be installed at a height halfway between the top edge of the guardrail system and the walking/working surface.
- Guardrail systems shall be capable of withstanding without failure, a force of at least 200 pounds in any outward or downward direction, at any point along the top edge.
- When the 200 pound test load is applied in a downward direction, the top edge of the guardrail shall not deflect to a height less than 39 inches above the walking/working level. Guardrail system components selected and constructed will be deemed to meet this requirement.
- Midrails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members shall be capable of withstanding, without failure, a force of at least 150 pounds applied in any downward or outward direction at any point along the midrail or other member.
- Guardrail systems shall be so surfaced as to prevent injury to an employee from punctures or lacerations, and to prevent snagging of clothing.
- If wire rope is used for top rails, it shall be flagged at not more than 6-foot intervals with high-visibility material.
- When guardrail systems are used at hoisting areas, a chain, gate or removable guardrail section shall be placed across the access opening between guardrail sections when hoisting operations are not taking place.
- When guardrail systems are used at holes, they shall be erected on all unprotected sides or edges of the hole.
- When guardrail systems are used around holes used for the passage of materials, the hole shall have not more than two sides provided with removable guardrail sections to allow the passage of materials. When the hole is not in use, it shall be closed over with a cover, or a guardrail system shall be provided along all unprotected sides or edges.
- When guardrail systems are used around holes which are used as points of access (such as ladderways), they shall be provided with a gate, or be so offset that a person cannot walk directly into the hole.
- Guardrail systems used on ramps and runways shall be erected along each unprotected side or edge.
- Manila, plastic or synthetic rope being used for top rails or midrail shall be inspected as frequently as necessary to ensure that it continues to meet the strength requirements of 200 pounds and 150 pounds.

- Personal Fall Arrest Systems
  - Personal fall arrest systems and their use shall comply with the provisions set forth below. Effective January 1, 1998, body belts are not acceptable as part of a personal fall arrest system. NOTE: The use of a body belt in a positioning device system is acceptable.
  - Connectors shall be drop forged, pressed or formed steel, or made of equivalent materials.
  - Connectors shall have a corrosion-resistant finish, and all surfaces and edges shall be smooth to prevent damage to interfacing parts of the system.
  - Dee-rings and snaphooks shall be proof-tested to a minimum tensile load of 3,600 pounds without cracking, breaking, or taking permanent deformation.
  - Snaphooks shall be sized to be compatible with the member to which they are connected to prevent unintentional disengagement of the snaphook by depression of the snaphook keeper by the connected member, or shall be a

locking type snaphook designed and used to prevent disengagement of the snaphook by the contact of the snaphook keeper by the connected member. Effective January 1, 1998, only locking type snaphooks shall be used.

- Unless the snaphook is a locking type and designed for the following connections, snaphooks shall not be engaged:
  - directly to webbing, rope or wire rope;
  - to each other;
  - to a dee-ring to which another snaphook or other connector is attached;
  - to a horizontal lifeline; or
  - to any object which is incompatibly shaped or dimensioned in relation to the snaphook such that unintentional disengagement could occur by the connected object being able to depress the snaphook keeper and release itself.
- On suspended scaffolds or similar work platforms with horizontal lifelines which may become vertical lifelines, the devices used to connect to a horizontal lifeline shall be capable of locking in both directions on the lifeline.
- Horizontal lifelines shall be designed, installed, and used, under the supervision of a qualified person, as part of a complete personal fall arrest system, which maintains a safety factor of at least two.
- Lanyards and vertical lifelines shall have a minimum breaking strength of 5,000 pounds.
- When vertical lifelines are used, each employee shall be attached to a separate lifeline.
- Lifelines shall be protected against being cut or abraded.
- Self-retracting lifelines and lanyards which automatically limit free fall distance to 2 feet or less shall be capable of sustaining a minimum tensile load of 3,000 pounds applied to the device with the lifeline or lanyard in the fully extended position.
- Self-retracting lifelines and lanyards which do not limit free fall distance to feet or less, ripstitch lanyards, and tearing and deforming lanyards shall be capable of sustaining a minimum tensile load of 5,000 pounds applied to the device with the lifeline or lanyard in the fully extended position.
- Ropes and straps (webbing) used in lanyards, lifelines, and strength components of body belts and body harnesses shall be made from synthetic fibers.
- Anchorages used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pounds per employee attached, or shall be designed, installed, and used as follows:
  - as part of a complete personal fall arrest system which maintains a safety factor of at least two; and
  - under the supervision of a qualified person.
- Personal fall arrest systems, when stopping a fall shall:
  - limit maximum arresting force on an employee to 900 pounds when used with a body belt;
  - limit maximum arresting force on an employee to 1,800 pounds when used with a body harness;
  - be rigged such that an employee can neither free fall more than 6 feet, nor contact any lower level;

        - bring an employee to a complete stop and limit maximum deceleration distance an employee travels to 3.5 feet; and,
        - have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6 feet or the free fall distance permitted by the system, whichever is less.
    - The attachment point of the body belt shall be located in the center of the wearer's back. The attachment point of the body harness shall be located in the center of the wearer's back near shoulder level, or above the wearer's head.
    - Body belts, harnesses, and components shall be used only for employee protection (as part of a personal fall arrest system or positioning device system) and not to hoist materials.
    - Personal fall arrest systems and components subjected to impact loading shall be immediately removed from service and shall not be used again for employee protection until inspected and determined by a competent person to be undamaged and suitable for reuse.
    - Personal fall arrest systems shall be inspected prior to each use for wear, damage and other deterioration, and defective components shall be removed from service.
    - Personal fall arrest systems shall not be attached to guardrail systems, nor shall they be attached to hoists.
    - When a personal fall arrest system is used at hoist areas, it shall be rigged to allow the movement of the employee only as far as the edge of the walking/working surface.
- Warning Line Systems
    - The warning line shall be erected around all sides of the roof work area.
    - When mechanical equipment is not being used, the warning line shall be erected not less than 6 feet from the roof edge.
    - When mechanical equipment is being used, the warning line shall be erected not less than 6 feet from the roof edge which is parallel to the direction of mechanical equipment operation, and not less than 10 feet from the roof edge which is perpendicular to the direction of mechanical equipment operation.
    - Points of access, materials handling areas, storage areas, and hoisting areas shall be connected to the work area by an access path formed by two warning lines.
    - When the path to a point of access is not in use, a rope, wire, chain, or other barricade, equivalent in strength and height to the warning line, shall be placed across the path at the point where the path intersects the warning line erected around the work area, or the path shall be offset such that a person cannot walk directly into the work area.
    - Warning lines shall consist of ropes, wires, or chains, and supporting stanchions erected as follows:
        - The rope, wire, or chain shall be flagged at not more than 6-foot intervals with high-visibility material;
        - The rope, wire, or chain shall be rigged and supported in such a way that its lowest point (including sag) is no less than 34 inches from the walking/working surface and its highest point is no more than 39 inches from the walking/working surface;
        - After being erected, with the rope, wire, or chain attached, stanchions shall be capable of resisting, without tipping over, a force of at least 16 pounds

applied horizontally against the stanchion, 30 inches above the walking/working surface, perpendicular to the warning line, and in the direction of the floor, roof, or platform edge;
        - The rope, wire, or chain shall have a minimum tensile strength of 500 pounds and after being attached to the stanchions, shall be capable of supporting, without breaking, the loads applied to the stanchions.
        - The line shall be attached at each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in adjacent sections before the stanchion tips over.
    - Mechanical equipment on roofs shall be used or stored only in areas where employees are protected by a warning line system, guardrail system, or personal fall arrest system.
- Controlled Access Zones
    - When used to control access to areas where leading edge and other operations are taking place the controlled access zone shall be defined by a control line or by any other means that restricts access.
    - When control lines are used, they shall be erected not less than 6 feet nor more than 25 feet from the unprotected or leading edge, except when erecting precast concrete members.
    - When erecting precast concrete members, the control line shall be erected not less than 6 feet nor more than 60 feet or half the length of the member being erected, whichever is less, from the leading edge.
    - The control line shall extend along the entire length of the unprotected or leading edge and shall be approximately parallel to the unprotected or leading edge.
    - When used to control access to areas where overhand bricklaying and related work are taking place:
        - The controlled access zone shall be defined by a control line erected not less than 10 feet (3.1 m) nor more than 15 feet from the working edge.
        - The control line shall extend for a distance sufficient for the controlled access zone to enclose all employees performing overhand bricklaying the related work at the working edge and shall be approximately parallel to the working edge.
        - Additional control lines shall be erected at each end to enclose the controlled access zone.
        - Only employees engaged in overhand bricklaying or related work shall be permitted in the controlled access zone.
        - Control lines shall consist of ropes, wires, tapes, or equivalent materials, and supporting stanchions as follows:
        - Each line shall be flagged or otherwise clearly marked at not more than 6 feet (1.8 m) intervals with high-visibility material.
        - Each line shall be rigged and supported in such a way that its lowest point (including sag) is not less than 39 inches from the walking/working surface and its highest point is not more than 45 inches (50 inches when overhand bricklaying operations are being performed) from the walking/working surface.
        - Each line shall have a minimum breaking strength of 200 pounds.
    - On floors and roofs where guardrail systems are in place, but need to be removed to allow leading edge work to take place, only that portion of the guardrail necessary to accomplish that day's work shall be removed.

- Safety Monitoring Systems
    - The employer shall designate a competent person to monitor the safety of other employees and the employer shall ensure that the safety monitor complies with the following requirements:
        - The safety monitor shall be competent to recognize fall hazards;
        - The safety monitor shall warn the employee when it appears that the employee is unaware of a fall hazard or is acting in an unsafe manner;
        - The safety monitor shall be on the same walking/working surface and within visual sighting distance of the employee being monitored;
        - The safety monitor shall be close enough to communicate orally with the employee; and
        - The safety monitor shall not have other responsibilities which could take the monitor's attention from the monitoring function.
    - No employee, other than an employee engaged in roofing work (on low-sloped roofs) or an employee covered by a fall protection plan, shall be allowed in an area where an employee is being protected by a safety monitoring system.
        - Each employee working in a controlled access zone shall be directed to comply promptly with fall hazard warnings from safety monitors.
- Covers
    - Covers located in roadways and vehicular aisles shall be capable of supporting, without failure, at least twice the maximum axle load of the largest vehicle expected to cross over the cover.
    - All other covers shall be capable of supporting, without failure, at least twice the weight of employees, equipment, and materials that may be imposed on the cover at any one time.
    - All covers shall be secured when installed so as to prevent accidental displacement by the wind, equipment, or employees.
    - All covers shall be color coded or they shall be marked with the word "HOLE" or "COVER" to provide warning of the hazard. NOTE: This provision does not apply to cast iron manhole covers or steel grates used on streets or roadways.
- Floor Openings and Floor Holes
    - Floor openings shall be guarded by using a standard railing and toeboard.
    - All floor holes shall be covered with material that is capable of supporting the maximum weight load intended.
    - All Ladderways Floor Openings or Platforms
        - Ladderways shall be guarded with standard railings and toeboards.
        - Platforms shall be guarded with standard railings and toeboards.
    - Hatchways and Chute Floor Opening
        - Hatchways shall be guarded with hinged cover and standard railings with only one exposed side. The hinged cover shall be closed or side shall be guarded with removable standard railings.
        - Chutes shall be guarded with removable standard railings and toeboard on not more than two sides of the opening and a fixed standard railing and toeboard. All standard railings shall be kept in place when the chute is not in use.
    - Skylights, Pits and Trap-Door Floor Opening
        - Skylights shall be guarded with fixed standard railings on all sides.
        - Pits and trap-doors shall be guarded with floor opening covers or standard railings on all exposed sides by removable standard railings.

Training Requirements

The Safety Representative's designated representative and/or competent person shall provide training for each employee to recognize the hazards of falling and shall train each employee in the following procedures:

- The nature of fall hazards in the work area;
- The correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems to be used;
- The use and operation of guardrail systems, personal fall arrest systems, safety net systems, warning line systems, safety monitoring systems, controlled access zones, and other protection to be used;
- The role of each employee in the safety monitoring system when this system is used;
- The limitations on the use of mechanical equipment during the performance of roofing work on low-sloped roofs;
- The correct procedures for the handling and storage of equipment and materials and the erection of overhead protection; and
- The role of employees in fall protection plans;
- The standards contained in the subpart.

The employer shall verify fall protection by preparing a written certification record. The written certification record shall contain the name of the employee trained, the date(s) of the training, and the signature of the person who conducted the training or the signature of the employer.

When the Safety Representative has reason to believe that any affected employee who has already been trained does not have the understanding and skill required, the Safety Representative shall retrain each such employee. Circumstances where retraining is required include, but are not limited to, situations where:

- Changes in the workplace render previous training obsolete; or
- Changes in the types of fall protection systems or equipment to be used render previous training obsolete; or
- Inadequacies in an affected employee's knowledge or use of fall protection systems or equipment indicate that the employee has not retrained the requisite understanding or skill.

Project Managers will train workers in the avoidance of floor, roof, and wall opening hazards through the use of toolbox talks and daily work instructions.

Employees are required to self-inspect all fall protection equipment prior to use.

Section 16 – Fire Protection

Purpose
To provide for effective fire response, prevention, and protection program.

Scope
This section applies to all Lauth employees and subcontractors.

Responsibilities
The primary responsibility for fire protection and prevention rests with the Superintendent. The Superintendent must ensure that fire extinguishers are available, hot work permits are implemented where applicable, employees are trained, a fire protective program has been developed, and an alarm system for evacuation purposes is in place. Extinguishers must be inspected monthly on jobsites and on an annual basis by professionals. Extinguishers are available in the main office for exchange with extinguishers needing their annual inspection.

Procedures
Fire Protection

- All firefighting equipment will be conspicuously located, accessible, inspected periodically, maintained at all times, replaced immediately when defective, and approved for the location and hazards.

- A fire extinguisher rated 2A (or 55 gallon drum with 2 fire pails) will be provided for each 3000 square feet of the protected building. Travel distance to the nearest fire extinguisher shall not exceed 100 feet.

- On multi-story buildings, at least one fire extinguisher will be located adjacent to each stairway on each floor.

- A fire alarm system (telephone, siren or similar device) will be established by Lauth, whereby contractors and the local fire department can be alerted in case of fire. The telephone number of the local fire department will be posted at the jobsite.

- A fire extinguisher, rated not less than 10B, shall be provided within 50 feet of wherever more than 5 gallons of flammable liquids or 5 pounds of flammable gas are being used on the jobsite. This requirement does not apply to the integral fuel tanks of motor vehicles.

Fire Prevention

- Internal combustion engines will be located so that the exhausts are well away from flammable material.

- Smoking will be prohibited in vicinity of potential fire hazards. Fire hazard areas will be conspicuously posted "No Smoking or Open Flame."

Training Requirements
Lauth will also discuss fire extinguisher use and the hazards involved with beginning-stage firefighting during new hire orientation and annually via toolbox talks.

Section 17 - First Aid / CPR

Purpose
To treat minor injuries and to give basic first aid treatment to employees with more serious injuries until medical assistance arrives or while the employee is transported to a medical facility.

Scope
Select employees will be certified by the Red Cross or equivalent, in first aid and CPR so that at least one first aid trained person is at the jobsite at all times. Lauth shall have provisions prior to commencement of a project, for prompt medical attention in case of serious injuries.

Definitions
First Aid - Emergency treatment administered to an injured or sick person before professional medical care is available.

Responsibilities
A first aid kit will be provided for each jobsite in the gang box or company vehicles. First aid kits shall consist of appropriate items and stored in a weather proof container with individual sealed packages of each type of item per ANSI. The site supervisor is responsible to ensure that the kit is checked before being sent out on each job and at least weekly on each job to ensure that the expended items are replaced.

Only trained first aid personnel shall administer first aid at the jobsite.

Lauth will maintain an ANSI (Z 308.1 - 1978) approved first aid kit.

The Safety Representative is responsible for ensuring that his/her organization's on-site first aid kit is stocked for the environment to be used, easily accessible, and maintained in accordance with ANSI (Z 308.1 - 1978). This first aid kit will also contain equipment and materials to be compliant with 29 CFR 1910.1030 - Bloodborne Pathogens, including mouth-to-mouth resuscitation devices, powdered bleach, and latex disposable gloves.

In the absence of a clinic or doctor that is reasonably accessible in terms of time and distance (response time should not exceed 4 minutes), at least 1 person from the organization will be trained and certified (by either the American Red Cross or the National Safety Council) to provide first aid and cardio pulmonary resuscitation (CPR).

Procedures
Basic Rules of First Aid:

The first rule is that if you do not know how to give it, do not try to. You may do more harm than good. It's important to know not only what to do, but also what NOT to do.

If required, administer the following lifesaving procedures:

- Open the airway.
- Look, listen, and feel for breathing.
- Check the pulse.
- Stop the bleeding and protect the wound.

- Treat for shock.

Do not move the injured person unless you know that moving him will not worsen the injury.

- Keep the injured person lying down.
- Do not give liquids to the unconscious.

All first aid treatments will be recorded on a first aid log at the jobsite. In addition, the Supervisor will turn in a copy of his first aid log each week to the Corporate Office.

In the event of an emergency where there is an injured employee seeking medical attention beyond first aid call 911, if it is determined that the response time of the ambulance is insufficient then the site supervisor will escort the injured employee to the nearest emergency room.

During the summer months drink plenty of water (small amounts and frequently). Once heavy sweating has started, it is very difficult to drink an amount of water that is equal to the amount lost by sweating, about one quart per hour.

Eye wash will be available in the first aid kit for those employees exposed to injurious corrosive materials. An eye wash facility may be set up in the onsite job trailer.

Do NOT take in an excessive amount of salt.

At times of high humidity and high temperature or when returning to a hot area, pace your work until you become acclimated to existing conditions.

The site supervisor will ensure phone numbers of physicians, hospitals, and ambulances will be posted in a conspicuous place at the jobsite.

Lauth first aid kits shall consist of the following minimum components:

1ea. Triangular Bandage	10ea. First Aid Cream Foil Packs
2ea. Cold Packs Unit Size	10ea. 3”x3” Gauze Pads
10ea. 2”x3” Non-Adherent Pads	5ea. 2”x2” Gauze Pads
4ea. Ammonia Inhalants	1 bag of Cotton Balls
10ea. Iodine Wipes	10ea. Antiseptic Wipes
100ea. 1”x3” Plastic Strips	1ea. First Aid Book
2ea. 1”x5yd. Stretch Gauze	2ea. 2”x5yd Stretch Gauze
1ea. 3”x5yd. Stretch Gauze	3 sets Disposable Latex Gloves
1pr. Scissors	1ea. Disposable Tweezer
1oz. Eyewash w/Eye Pads	2pks. Powdered Bleach or !gal Liquid Bleach
1ea. Self-Contained Mouth-to-Mouth Resuscitation Device/Breathing Bloodborne Apparatus	1ea. Eye Protection (Pathogen Exposure)
1ea. Disposable Body Gown (Pathogen Exposure)	1ea. Shoe Cover (Pathogen Exposure
1ea. Disposable Biohazard Container/Bag	

Training Requirements
Lauth will schedule first aid and CPR training classes for employees at regular intervals during the year.

Section 18 - Hand and Power Tools

Purpose
Describe general rules and requirements for the safe usage of hand and power tools.

Scope
This section applies to all Lauth employees and operations, which may require the use of select hand and power tools.

Responsibilities
Superintendent

- Ensures the safe condition and maintenance of all tools and equipment used by Lauth employees including those tools supplied by the employee.
- Ensure that employees are trained and knowledgeable on the safe use of tools required on the job.

Employees/Craftsperson

- Wear the proper clothing and PPE as indicated in the following procedures.
- Inspect tools prior to use and report any defects to the supervisor immediately.
- Do not use defective tools.
- Defective tools shall be tagged "Do Not Use" until the device can be repaired or destroyed.

Procedures
General Requirements

- Maintain work areas free of clutter.
- Keep alert to potential hazards in the working environment such as damp locations or the presence of highly combustible materials.
- Do not surprise or distract anyone using a power tool.

Tool Selection

- Know the application, limitation, and potential hazards of the tool to be used.
- Select the proper tool for the job.
- Inspect the tool for any defects prior to the beginning of use.

Use

- Remove adjusting keys and wrenches before turning on tools.
- Do not use tools with frayed cords or loose or broken switches.
- Do not use dull/chipped/warped saw blades, drill bits, utility knife blades, etc.
- Keep hands away from saw blades, drill bits, etc.
- Never use excessive force, let the tool do the work.
- Never “hand hold” material while cutting/drilling, use a firm surface to work on and use clamps to hold the material.
- Keep guards in place and in working order. The guard may not be manipulated in such way that will compromise its integrity or compromise the protection in which intended. Guarding shall meet the requirements set forth in ANSI B15.1.

- Most hand-held electrical tools must be equipped with a "dead-man" or "quick-release" control, so that power is shut off automatically whenever the operator releases the control.
- Portable circular saws must be equipped with guards above and below the base plate or shoe. The lower guard must retract when the blade is in use, and automatically return to the guarding position when the tool is withdrawn from the work.
- All hand-held portable electrical equipment must have its frame grounded or be double-insulated and identified as such.
- Powder actuated tools may only be used by trained and authorized personnel.

Dress

- Dress properly to prevent loose clothing from getting caught in moving parts.
- Use protective clothing and equipment when necessary. E.g. safety glasses, fall protection, hearing protection, hand protection, respiratory, etc.
- Jewelry shall not be worn while using power tools.

Training Requirements

This policy will be reviewed during New Hire Orientation and during annual refresher training.

Section 19 - Hazard Communication (HAZCOM)

Purpose
To properly educate and protect employees from exposures to hazardous chemicals in the workplace.

Scope
This section applies to all Lauth employees exposed to chemical hazards in the workplace.

Definitions
Chemical - Any element, chemical compound, or mixture of elements and/or compounds.

Exposure or Exposed - An employee is subjected in the course of employment to a chemical that is a physical or health hazard, and includes potential (e.g. accidental or possible) exposure. "Subjected" in terms of health hazards includes any route of entry (e.g. inhalation, ingestion, skin contact or absorption.)

Flammable liquid - Any liquid having a flashpoint at or below 199.4°F. Flammable liquids are divided into four categories as follows:

- Category 1 shall include liquids having flashpoints below 73.4°F and having a boiling point at or below 95°F.
- Category 2 shall include liquids having flashpoints below 73.4°F and having a boiling point above 95°F.
- Category 3 shall include liquids having flashpoints at or above 73.4°F and at or below 140 °F. When a Category 3 liquid with a flashpoint at or above 100°F is heated for use to within 30°F of its flashpoint, it shall be handled in accordance with the requirements for a Category 3 liquid with a flashpoint below 100°F.
- Category 4 shall include liquids having flashpoints above 140°F and at or below 199.4°F. When a Category 4 flammable liquid is heated for use to within 30°F of its flashpoint, it shall be handled in accordance with the requirements for a Category 3 liquid with a flashpoint at or above 100°F.

Flash Point - The minimum temperature at which a liquid gives off vapor within a test vessel in sufficient concentration to form an ignitable mixture with air near the surface of the liquid.

Globally Harmonized System - The Globally Harmonized System (GHS) is an international approach to hazard communication, providing agreed criteria for classification of chemical hazards, and a standardized approach to label elements and safety data sheets. It is based on major existing systems around the world, including OSHA's Hazard Communication Standard and the chemical classification and labeling systems of other US agencies.

Hazard Category - The division of criteria within each hazard class, (e.g., oral acute toxicity and flammable liquids include four hazard categories). These categories compare hazard severity within a hazard class and should not be taken as a comparison of hazard categories more generally.

Hazard Class - The nature of the physical or health hazards, (e.g., flammable solid, carcinogen, oral acute toxicity).

Hazard Not Otherwise Classified (HNOC) - An adverse physical or health effect identified through evaluation of scientific evidence during the classification process that does not meet the specified criteria for the physical and health hazard classes addressed in this section. This does not extend coverage to adverse physical and health effects for which there is a hazard class addressed in this section, but the effect either falls below the cut-off value/concentration limit of the hazard class or is under a GHS hazard category that has not been adopted by OSHA (e.g., acute toxicity Category 5).

Hazard Statement - A statement assigned to a hazard class and category that describes the nature of the hazard(s) of a chemical, including, where appropriate, the degree of hazard.

Hazardous Chemical - Any chemical which is classified as a physical hazard or a health hazard, a simple asphyxiant, combustible dust, pyrophoric gas, or hazard not otherwise classified.

Health Hazard - A chemical which is classified as posing one of the following hazardous effects: acute toxicity (any route of exposure); skin corrosion or irritation; serious eye damage or eye irritation; respiratory or skin sensitization; germ cell mutagenicity; carcinogenicity; reproductive toxicity; specific target organ toxicity (single or repeated exposure); or aspiration hazard. The criteria for determining whether a chemical is classified as a health hazard are detailed in 29CFR Appendix A to §1910.1200—Health Hazard Criteria.

Immediate Use - The hazardous chemical will be under the control of and used only by the person who transfers it from a labeled container and only within the work shift in which it is transferred.

Label - An appropriate group of written, printed or graphic information elements concerning a hazardous chemical that is affixed to, printed on, or attached to the immediate container of a hazardous chemical, or to the outside packaging.

Label Elements - The specified pictogram, hazard statement, signal word and precautionary statement for each hazard class and category.

Mixture - A combination or a solution composed of two or more substances in which they do not react.

Physical Hazard - A chemical that is classified as posing one of the following hazardous effects: explosive; flammable (gases, aerosols, liquids, or solids); oxidizer (liquid, solid or gas); self-reactive; pyrophoric (liquid or solid); self-heating; organic peroxide; corrosive to metal; gas under pressure; or in contact with water emits flammable gas.

Pictogram - A composition that may include a symbol plus other graphic elements, such as a border, background pattern, or color, that is intended to convey specific information about the hazards of a chemical. Eight pictograms are designated under this standard for application to a hazard category.

Precautionary Statement - A phrase that describes recommended measures that should be taken to minimize or prevent adverse effects resulting from exposure to a hazardous chemical, or improper storage or handling.

Product Identifier - The name or number used for a hazardous chemical on a label or in the SDS. It provides a unique means by which the user can identify the chemical. The product identifier used shall permit cross-references to be made among the list of hazardous chemicals required in the written hazard communication program, the label and the SDS.

Safety Data Sheet (SDS) - A written or printed material concerning a hazardous chemical that is prepared in accordance with paragraph (g) of this section.

Signal Word - A word used to indicate the relative level of severity of hazard and alert the reader to a potential hazard on the label. The signal words used in this section are "DANGER" and "WARNING." "Danger" is used for the more severe hazards, while "warning" is used for the less severe.

Substance - Chemical elements and their compounds in the natural state or obtained by any production process, including any additive necessary to preserve the stability of the product and any impurities deriving from the process used, but excluding any solvent which may be separated without affecting the stability of the substance or changing its composition.

Work Area - A room or defined space in a workplace where hazardous chemicals are produced or used and where employees are present.

Workplace - An establishment, jobsite, or project, at one geographical location containing one or more work areas.

Responsibilities
All containers of hazardous materials located at the workplace, and not previously labeled by the manufacturer, must be labeled.

The Safety Representative will maintain SDS binders at the main office, as well as administering the HAZCOM written program and training.

The Project Managers will be responsible for ensuring that labeling practices are observed and complied with per the HAZCOM program requirements in the workplace as materials arrive (new and used).

Procedures
All Lauth employees shall be aware of the potentially hazardous materials use on its premises. These materials will be identified with warning labels and SDS's shall be kept for each.

To understand the potential dangers of chemicals, employees will follow these HAZCOM written program guidelines:

This program includes guidelines on identification of chemical hazards and the preparation and proper use of container labels, placards and other types of warning devices.

- Chemical Inventory
    - Lauth maintains an inventory of all known chemicals in use on the worksite. A chemical inventory list is available from the Safety Representative.
    - Hazardous chemicals brought onto the worksite will be included on the hazardous chemical inventory list.

- Container Labeling
    - All chemicals on site will be stored in their original or approved containers with a proper label attached, except small quantities for immediate use. A proper label is one that contains the material's Health rating, Flammability rating, Reactivity rating, special precaution indicator, and Chemical Identity (i.e. NFPA label or HMIS label). Any containers not properly labeled should be given to the Safety Representative for proper handling.
    - Workers may dispense chemicals from original containers only in small quantities intended for immediate use. Any chemical left after work is completed must be returned to the original container or the Safety Representative for proper handling.
    - All secondary containers must have the appropriate warning label.
    - Lauth will rely on manufacturer applied labels whenever possible, and will ensure that these labels are maintained. Containers that are not labeled, or from which the manufacturer's label has been removed, will be relabeled by the Safety Representative or Project Manager.
    - Lauth will ensure that each container is labeled to identify any hazardous chemicals inside and any appropriate hazard warnings.
    - As of June 1, 2015, OSHA's hazard communication standard will require pictograms on labels to alert users of the chemical hazards to which they may be exposed. Each pictogram consists of a symbol on a white background framed within a red border and represents a distinct hazard(s). The pictogram on the label is determined by the chemical hazard classification.

Health Hazard 	**Flame** 	**Exclamation Mark** 
• Carcinogen • Mutagenicity • Reproductive Toxicity • Respiratory Sensitizer • Target Organ Toxicity • Aspiration Toxicity	• Flammables • Pyrophorics • Self-Heating • Emits Flammable Gas • Self-Reactives • Organic Peroxides	• Irritant (skin and eye) • Skin Sensitizer • Acute Toxicity (harmful) • Narcotic Effects • Respiratory Tract Irritant • Hazardous to Ozone Layer (Non Mandatory)
Gas Cylinder 	**Corrosion** 	**Exploding Bomb** 
• Gases under Pressure	• Skin Corrosion/ burns • Eye Damage • Corrosive to Metals	• Explosives • Self-Reactives • Organic Peroxides
Flame over Circle 	**Environment *(Non Mandatory)** 	**Skull and Crossbones** 
• Oxidizers	• Aquatic Toxicity	• Acute Toxicity (fatal or toxic)

- Safety Data Sheets (SDS)
    - Employees working with a hazardous chemical may request a copy of the safety data sheet (SDS). Requests for an SDS should be made to the Safety

Representative. SDS's will be made available, upon request, to employees, their designated representatives, the Assistant Secretary & the Director in accordance with the requirements of 29 CFR 1910.1020(e).

- SDS's should be available, and standard chemical reference may also be available, on the site to provide immediate reference to chemical safety information. SDS's are required for each hazardous chemical used.
- By Dec. 1, 2015 chemical manufacturers and distributors will provide safety data sheets which meet the 16-section standardized format. These sections will include:

Section 1	Identification
Section 2	Hazard(s) Identification
Section 3	Composition/information on ingredients
Section 4	Fire aid measures
Section 5	Fire-fighting measures
Section 6	Accidental release measures
Section 7	Handling and storage
Section 8	Exposure controls/personal protection
Section 9	Physical and chemical properties
Section 10	Stability and reactivity
Section 11	Toxicological information
Section 12	Ecological information
Section 13	Disposal considerations
Section 14	Transport information
Section 15	Regulatory information
Section 16	Other information, including date of preparation or last revision

Training Requirements

Employees will be trained to work safely with hazardous chemicals. Employee training will include:

- Methods that may be used to detect a release of hazardous chemicals in the work place,
- Physical and health hazards associated with chemicals,
- Protective measures to be taken,
- Safe work practices, emergency responses and use of personal protective equipment,

Information on the Hazard Communication standard including:

- Labeling and warning systems, and
- An explanation of Safety Data Sheets.

Personal Protective Equipment (PPE)

Required PPE is available from the Project Manager. Any employee found in violation of PPE requirements may be subject to disciplinary actions up to and including discharge.

Emergency Response

Any incident of over exposure or spill of a hazardous chemical/substance must be reported to the Project Manager at once.

The Project Manager will ensure that proper emergency response actions are taken in leak/spill situations.

Hazards of Non-Routine Tasks

The Project Manager will inform employees of any special tasks that may arise which would involve possible exposure to hazardous chemicals.

Review of safe work procedures and use of required PPE will be conducted prior to the start of such tasks. Where necessary, areas will be posted to indicate the nature of the hazard involved.

Informing Other Employers

Other on-site employers are required to adhere to the provisions of the Hazard Communication Standard.

Information on hazardous chemicals known to be present will be exchanged with other employers. Employers will be responsible for providing necessary information to their employees.

A copy of the HAZCOM program, including SDS's shall be present on each jobsite.

Lauth written hazard communication program will be readily accessible to other on-site employers.

Section 20 - Hearing Conservation Program

Purpose
To provide a hearing conservation/protection program for all Lauth employees.

Scope
This policy applies to all employees who are subjected to sounds exceeding those listed in Table G-16 below.

TABLE G-16 - PERMISSIBLE NOISE EXPOSURES (1)

Duration per day, hours	Sound level dBA slow response
8	90
6	92
4	95
3	97
2	100
1 1/2	102
1	105
1/2	110
1/4 or less	115

Definitions
Decibels (dB) - This symbol is used for expressing the relative intensity of sounds. Zero (0) represents the average least perceptible sound to approximately 130 for the average pain threshold.

Time Weighted Average (TWA) - Averaged dB over 1 hour time period through the usage of a noise dosimeter.

Responsibilities
The Safety Representative will administer the Hearing Conservation Policy.

Procedures
Audiometer testing by a licensed or certified audiologist, will be offered at least annually to all employees exposed to greater than 85 decibels on a (8) hour time weighted average (TWA). All test results will be made available to each effected employee.

Areas where daily noise exposures are likely to exceed the 85 decibels (TWA) will be posted with hearing protection required signs. When information indicates that employee exposure may equal/exceed the 8 hr. time-weighted avg. of 85 decibels, Lauth will implement a monitoring program to identify employees to be included in the hearing conservation program.

Hearing Protection Required

- Hearing protection required signs are to be posted at the entrance and throughout all areas that have been determined as capable of exposing employees to noise levels in excess of 85 decibels over an 8 hour time weighted average (TWA).
- Once a hearing protection required area has been established, all employees working or entering the area will be required to wear the appropriate hearing protection. Hearing protection will be provided at no cost to the employee.

Types of Hearing Protection

- Suitable ear plugs, muffs, etc. will be readily available for employee usage. The Foreman will review the types of hearing protection that will be made available for all affected employees.
- Lauth will evaluate hearing protection for the specific noise environments in which the protector will be used.
- In all cases where the sound levels exceed the TWA values shown below, a continuing effective Hearing Conservation Program (HCP) shall be administered.

Sound Pressure Level

Sound Pressure Level	Time Weighted Average (TWA)	Source or Effect of Noise
114-139	< = 1 Hour	Power actuated tools (such as those for setting fasteners into concrete).
114-118	< = 1 Hour	Hard rock drilling or usage of a jack hammer.
105-125	< = 1 Hour	Riveting tools used on metal plates.
98-100	2 Hours	Heavy truck cab.
95-105	1 Hour - 4 Hours	Crawler tractor.
95-102	1 Hour - 4 Hours	Front-end loaders.
90-120	< = 1 Hour - 8 Hours	Earth moving equipment.
90-115	< = 1 Hour - 8 Hours	Power shovel cab.
87-89	8 Hours	Diesel air compressor.
85-98	2 hours - 8 Hours	Graders.

65-105	1 Hour - 8 Hours	Welding equipment.

The HCP includes a baseline audiogram within six months of first exposure, which tests the current level of hearing for a particular employee. This baseline audiogram (which is quantifiable data) becomes a part of the employee's medical records. Testing to establish audiogram shall be proceeded by at least fourteen hours without exposure to workplace noise. If employees are not exposed to action levels the annual audiometric testing will include employees whose exposures equal or exceed levels.

The HCP also includes annual audiograms to determine if a loss of hearing has occurred for those exposed, an audiometric testing program, employee notification, hearing protection requirements, training on the effects of noise to an employee's hearing and the use of Personal Protective Equipment (PPE).

Each employee's annual audiogram shall be compared to that employee's baseline audiogram to determine if the audiogram is valid and if a standard threshold shift has occurred. If a comparison of the annual audiogram to the baseline audiogram indicates a standard threshold shift, the employee shall be informed of this fact in writing, within 21 days of the determination.

If a standard threshold shift occurs the use of hearing protection shall be re-evaluated and refitted and if necessary a medical evaluation may be required.

Training Requirements
A training program shall be established for all employees who are exposed to noise at or above the action level of an 8-hour time-weighted average of 85 decibels.

The training program shall be repeated annually for each employee included in the hearing conservation program. Information provided in the training program shall be updated to be consistent with changes in protective equipment and work processes. Employees will have access to all noise dosimetry test results and all hearing conservation training information.

Each employee shall be informed of the following:

- The effects of noise on hearing;
- The purpose of hearing protectors, the advantages, disadvantages, and attenuation of various types, and instructions on selection, fitting, use, and care; and
- The purpose and results of audiometric testing, and an explanation of the test procedures.

Lauth will evaluate hearing protection for the specific noise environments in which the protector will be used.

Section 21 - Housekeeping

Purpose
Provide general guidelines for housekeeping for Lauth

Scope
This policy applies to all jobsites of Lauth

Procedures
Lauth has put together this plan, so that at every job site generated waste is disposed in the proper receptacles. By estimating the waste that will be generated prior to work being performed will assist in deciding and planning for the needed containers and waste removal, if necessary. The same waste is usually generated at each location and a one trash receptacle is usually efficient.

Form and scrap lumber with protruding nails and other debris will be kept clear from work areas. All combustible scrap and debris must be removed at regular intervals. Containers will be provided for collection and separations of all refuse. Covers are required on containers used for flammable or harmful substances.

At the end of each phase of work, all tools and excess materials must be returned to proper storage. All debris must be cleaned up before moving on to the next phase. Employees are responsible for keeping their work areas clean.

Lauth encourages proper segregation of waste materials to ensure opportunities for reuse or recycling.

Training Requirements
Employees will be instructed on the proper disposal method for wastes. This may include general instruction on disposal of non-hazardous wastes, trash, or scrap materials. If wastes generated are classified as hazardous, employees must be trained to ensure proper disposal. This training may include a more formal HAZWOPER course as needed.

Section 22 - Lockout/Tagout

Purpose
To prevent the activation of equipment when it is installed, repaired or being adjusted and to control hazardous energy sources by means of lockout/tagout procedures.

Scope
Valves, switches and other mechanical or electrical equipment must be properly locked and tagged out of service to prevent the system from operating while installation, maintenance or repair work is in progress.

Definitions
Affected Employee - An employee whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lockout or tagout, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed. The affected employee is not trained or authorized to lockout equipment.

Authorized Employee - A person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment. An affected employee becomes an authorized employee when that employee's duties include performing, servicing, or maintenance covered under this section.

Energy Isolating Device - A mechanical device that physically prevents the transmission or release or energy, including but not limited to the following: a manually operated electrical circuit breaker, a disconnect switch, a manually operated switch by which the conductors of a circuit can be disconnected from all ungrounded supply conductors and, in addition, no pole can be operated independently; a line valve; a block; and any similar device used to block or isolate energy.

Energy Source - Any source of electrical, mechanical, hydraulic, pneumatic, chemical, thermal, or other energy.

Lockout - The placement of a lockout device on an energy isolating device, in accordance with an established procedure, ensuring that the energy isolating device and the equipment being controlled cannot be operated until the lockout device is removed.

Lockout Device - A device that utilizes a positive means such as a lock, either key or combination type, to hold an energy isolating device in the safe position and prevent the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds. Only locks supplied by Lauth are to be used for program compliance.

Servicing and/or Maintenance - Workplace activities such as constructing, installing, setting up, adjusting, inspecting, modifying, and maintaining and/or servicing machines or equipment. The activities include lubrication, cleaning or unjamming of machines or equipment and making adjustments or tool changes, where the employee may be exposed to the unexpected energization or startup of the equipment or release of hazardous energy.

Tagout - The placement of a tagout device on an energy isolating device, in accordance with an established procedure, to indicate that the energy isolating device and the equipment being controlled may not be operated until the tagout device is removed.

Tagout Device - A prominent warning device, such as a tag and a means of attachment, which can be securely fastened to an energy isolating device in accordance with an established procedure to indicate that the energy isolating device and the equipment being controlled, may not be operated until the tagout device is removed. Only tags supplied by Lauth are to be used for program compliance.

Responsibilities

The Safety Representative, Project Manager, and Field Manager shall survey field operations to determine if workers are required to perform tasks that may expose them to hazards associated with energized equipment.

The Safety Representative will establish an energy control and training program that includes written procedures for the control of potentially hazardous energy when employees are engaged in maintenance and/or servicing activities.

The employer must ensure that before any employee performs any servicing or maintenance on a machine or equipment, the machine or equipment is isolated and rendered inoperative.

The Safety Representative will ensure that employee training has been accomplished; written certification will show employer names and dates of training.

Procedures

General Requirements

The program procedures must clearly outline the scope, purpose, authorization, rules, and techniques to be used for the control of hazardous energy, and the methods of compliance including:

- A specific statement of the intended use of the procedures.
- Steps for shutting down, isolating, blocking, and securing machines or equipment to control hazardous energy.
- Steps for the placement, removal, and transfer of lockout or tagout devices and the responsibility for them.
- Requirements for testing a machine or equipment to determine and verify the effectiveness of lockout/tagout devices, and other energy control measures.
- The energy control program also must include procedures for conducting periodic inspections of the program (at least annually), to ensure that it meets the standard's requirements.
- Locks and tags supplied by Lauth are not to be used for any other purpose than program compliance.
- All equipment shall be locked out or tagged out to protect against accidental or inadvertent operation when such operation could cause injury to personnel. Do not attempt to operate any switch, valve, or other energy isolating device when it is locked or tagged out.
- Failure to follow all appropriate lockout procedures will result in disciplinary action
- Lockout/Tagout Equipment Specifications

- Equipment shall be provided by Lauth or the owner on which site company employee's work.
- Lockout and tagout devices shall be singularly identified.
- Lockout and tagout devices shall not be used for any other purpose.
- (Durable) Lockout and tagout devices shall be capable of withstanding the environment to which they are exposed for the maximum amount of time that exposure is expected.
- (Standardized) Lockout and tagout devices shall be standardized within the facility in at least one of the following criteria: color, shape, or size. And in the case of tagout devices, print and format shall be standardized.
- (Substantial) Lockout devices shall be substantial enough to prevent removal without the use of excessive force or unusual techniques. Tagout devices including their means of attachment, shall be substantial enough to prevent inadvertent or accident removal. Tagout device attachment means shall be of a non-usable type, attachable by hand, self-locking, and non-releasable with a minimum unlocking strength of no less than 50 pounds and having the general design and basic characteristics of being at least equivalent to a one-piece, all environment-tolerant nylon cable tie.
- (Identifiable) Lockout devices and tagout devices shall indicate the identity of the employee applying the device(s).

<u>Lockout/Tagout Procedures</u>

Application

- STEP 1: Preparation
  - Lockout and tagout procedures should only be carried out by "authorized employees". Before implementing the lockout/tagout procedure you must fully understand:
    - the type and magnitude of the energy to be controlled
    - the methods of controlling the hazardous energy
    - the means of controlling the hazardous energy
- STEP 2: Notification
  - Before the application of lockout or tagout devices, notify all affected personnel.
  - Tell workers that the energy control procedure is going to be used and the reasons why.
- STEP 3: Shutdown
  - Shut down equipment in an orderly manner. This may simply mean to turn off the equipment. When the equipment is part of a production or manufacturing process all parts of the operation must be considered. An orderly shutdown will avoid increased hazards when the equipment is de-energized.
- STEP 4: Isolation
  - Locate all of the energy isolating devices. Operate the energy isolating devices so that the equipment is completely isolated from the energy source. When complete, all devices will be in the "safe" or "off" position.
- STEP 5: Application of Locks and Tags
  - Single-point Lockout/Tagout
    - Attach locks and/or tags to the energy isolating device so the device is held in the "safe" or "off" position. Separate locks or tags must be used for each authorized employee. Jobs requiring several employees to lockout energy sources will use multi-lock adapters or follow the multi-point lockout

procedure. Tags must be securely attached to the energy isolating device so that they cannot be accidentally detached during use. If you are not able to attach the tag directly to the energy isolating device, put it as close as safely possible. Place the tag in a position that will be immediately obvious to anyone attempting to operate the device.

    - Multi-point Lockout/Tagout
        - Jobs requiring multi-point lockout/tagout, where several locations or energy sources must be locked/tagged out, will require the use of a lockbox. A lock set will be used to lock out each multi-point location. The key from the lock set is then placed in a lockbox. Each authorized employee must then place their individual lock on the box.
- STEP 6: Control Stored and Residual Energy
    - Relieve, disconnect and restrain all stored or residual energy. Remember, hazardous energy can be found in springs, elevated machine members, capacitors, rotating flywheels, hydraulic systems, air, gas, and steam and water pressure. This energy must be dissipated or restrained. Some common methods to restrain or dissipate stored energy are repositioning, blocking, and bleeding down systems.
- STEP 7: Verification
    - Check to be sure that all personnel are in a safe location. Verify that the equipment is properly isolated and all hazardous energy is safely controlled. Operate push buttons and other controls to verify isolation. Check circuits with electrical meters. Inspect springs, pressure gauges, the location of moving parts, and other sources of stored energy. Return operating controls to the "neutral" or "off" position after the test. Once you are absolutely sure the energy is isolated and safely controlled, proceed with the maintenance and service activities. WARNING: Some machinery and equipment can re-accumulate stored energy even after the system has been de-energized. If there is a possibility of stored energy building to a hazardous level, continue verification until maintenance or service is completed or until the possibility of accumulation no longer exists.

Extended Work Requirements

- If the job requiring lockout will last beyond one shift, special provisions must be made to ensure the integrity of the lockout. The foreman for the employees being relieved must physically show the locations of the lockout to the relieving foreman. Each new employee must then apply their lock following single or multi-point procedures.

<u>Release of Energy Controls</u>

- STEP 1: Inspection
    - Inspect the work area. Be sure all non-essential items such as tools, parts, and cleaning supplies have been removed. Check to be sure that all machine and equipment components are ready for operation. Be certain all affected employees have been safely positioned or removed.
- STEP 2: Notification
    - Notify all affected employees that the lockout/tagout devices are being removed.
- STEP 3: Remove Locks And Tags
    - Remove locks and tags. The lockout or tagout devices should only be removed by the authorized employee who applied them.

- If the authorized employee who applied the lockout or tagout device is not available to remove it, that device may be removed under the direction of the employer, provided that specific procedures and training for such removal have been developed, documented, and incorporated into the employer's energy control program. The employer must demonstrate that the specific procedure provides equivalent safety to the removal of the device by the authorized employee who applied it.

Training Requirements

General Training

- Required for all Lauth employees and subcontractors who are authorized to apply locks when needed or are affected by an equipment lockout.
- Authorized employees must be trained to recognize:
  - Applicable hazardous energy sources;
  - The type and magnitude of the energy present in the workplace; and
  - The methods and means of necessary for energy isolation and control.
- All other employees, whose work operations may be in an area where energy control procedures may be used, must be instructed about the energy control procedure. Training should emphasize that any attempts to restart or re-energize machines or equipment that are locked or tagged out is prohibited.

Tags

- When tagout systems are used, employees also must be trained in the limitations of tags. Training must convey the following information:
  - Tags are essentially warnings affixed to energy isolating devices, and do not physically restrain energy controls as do locks.
  - Only an authorized person may remove a tag that is attached to an energy isolation means. Tags must never be bypassed, ignored, or otherwise defeated.
  - Tags must be legible and understandable by all authorized employees, affected employees, and all other employees whose work operations may be in the area in order to be effective.
  - Tags must be made of materials that will withstand the environmental conditions encountered in the workplace.
  - Tags may evoke a false sense of security, and their meaning needs to be understood as part of the overall energy control program.
  - Tags must be securely attached to an energy isolating devices so that they cannot be inadvertently or accidentally detached during use.
  - The Safety Representative shall document that employee training is accomplished, along with written certification to indicate employee names or dates of training.

Retraining

- Retraining must be provided for all authorized and affected employees whenever there is a change in their job assignments; a change in machines, equipment, or processes that present a new hazard; or when there is a change in the energy control procedures.
- If during an inspection an employer finds that there are deviations from or inadequacies in the employees' knowledge or use of the energy control procedures, employees must be retrained.
- Retraining must reestablish employee proficiency and introduce new or revised control methods or procedures.

Program Inspection

- Company lockout/tagout procedures are reviewed annually to ensure that the procedures meet the standard's requirements.
- Project Managers shall ensure that all appropriate lockout/tagout procedures are followed. Failure to follow appropriate lockout procedures may result in employee dismissal.

Section 23- Machine Guarding

Purpose
To protect employees from potential hazards from moving parts associated with machinery. This section applies to Lauth employees while in the field or shop areas.

Definitions
Abrasive Wheel - A cutting tool consisting of abrasive grains held together by organic or inorganic bonds. Diamond and reinforced wheels are included.

Organic Wheels - Wheels that are bonded by means of an organic material such as resin, rubber, shellac, or other similar bonding agent.

Inorganic Wheels - Wheels which are bonded by means of inorganic material such as clay, glass, porcelain, sodium silicate or metal.

Feeding - The process of placing or removing material within or from the point of operation.

Automatic Feeding - The material or part being processed is placed within or removed from the point of operation by a method or means not requiring action by an operator.

Manual Feeding - The material or part being processed is handled by the operator.

Guard - A barrier that prevents entry of the operator's hands or fingers into the point of operation.

Operator's Station - The complete complement of controls used by or available to an operator on a given operation.

Authorized Person – Employee who has the authority and responsibility to perform a specific assignment has been given by the employer.

Responsibilities
All Lauth personnel must keep fixed guards in place and make appropriate changes to “adjustable guards” during the operation of all such equipment. All personnel shall immediately report missing guards to the Project Manager.

Only authorized Lauth personnel shall operate motorized grinding equipment.

Procedures
Control of dust exposure may be accomplished by equipping portable tools with low-volume, high-velocity exhaust systems or utilizing wind conditions to remove dust from the work area.

When feeding material into equipment, all personnel shall take precautions to avoid contact with the point of operation. This includes using tools to assist with manual feeding and securing clothing or other loose personal items.

Portable Abrasive Wheels

- Abrasive wheels must be used only on machines provided with safety guards except for

wheels used for internal work, mounted wheels used in portable operations two inches and smaller in diameter.

- A safety guard must cover the spindle end, nut and flange projections. The safety guard must be mounted so as to maintain proper alignment with the wheel, and the strength of the fastenings must exceed the strength of the guard except where the work provides a suitable measure of protection to the operator.
- Safety guards used on machines known as right angle head or vertical portable grinders must have a maximum exposure angle of 180 degrees, and the guard must be so located so as to be between the operator and the wheel during use.

Portable Powered Tools (Pneumatic)

- Hose and hose connections used for conducting compressed air to utilization equipment must be designed for the pressure and service to which they are subjected.

Section 24 - Material Handling and Rigging

Purpose
Identify and control hazards associated with material handling operations.

Scope
The section applies to all Lauth employees and shop operations.

Definitions
Not applicable to this section

Responsibilities
The basic responsibility for safe material handling practices rests with the supervisor in charge of the lifting operation.

Procedures
Only qualified employees should be assigned to handle materials. In selecting appropriate individuals, the most useful procedure according to NIOSH is a medical history coupled with objective strength testing.

A qualified rigger is needed during assembly/disassembly of cranes, when employees are engaged in hooking, unhooking, or guiding the load, or in the initial connection of a load to a component or structure and are within the fall zone.

No employee is allowed under suspended loads.

Tag lines will be used to help control loads.

Rigging equipment not in use will be removed from the work area and be properly stored.

Rigging equipment will not be loaded in excess of its safe working load. All rigging equipment will be supplied with a tag indicating the safe working load.

Defective rigging equipment will not be used. Defective rigging equipment will be tagged out of service and removed from the jobsite.

Wire Rope/Slings for Material, Handling Hoists, and Conveyers

- All running rope in continuous service shall be visually inspected once every working shift. This inspection shall be performed by an operator who has been trained and qualified. The inspection should be noted and record all changes such as broken wires, severe abrasion, or damage resulting from abuse or wear. It shall include inspection of the rope at the equalizer sheaves and near both fastenings. In all cases, the operator conducting the inspection shall provide adequate lighting in order to perform the required hands on inspection.
- A quarterly detailed inspection shall be made by an experienced and qualified inspector. This inspection shall include all items listed below. An excellent time to perform a detailed inspection is after the rope has been cleaned and prepared for lubrication.
- A thorough inspection of all running ropes shall be made at least once a calendar quarter. A full written, dated and signed report of the rope condition shall be kept on file

where readily available to appropriate personnel. This inspection shall be performed by the assigned inspector and shall be designated in writing by the department foreman.

- The inspection and removal of wire rope shall transpire when any of the following conditions exists:
    - Six randomly distributed broken wires in one rope lay or three wires in one strand of one rope lay.
    - Wear of one-third the original diameter of outside individual wires.
    - Kinking, crushing, bird caging, or any other damage resulting in distortion of the rope structure.
    - Evidence of any heat damage.
    - Evidence of corrosion, either external or internal.
- Latches on hooks will be in place, eliminating the hook throat opening

Slings

All slings shall have identification tags. Slings shall not be shortened with knots, bolts, or other makeshift devices. Sling legs shall not be kinked. Slings shall not be loaded in excess of their rated capacity.

If there is any question as to the possibility that multiple-leg slings are being used in a lift that approaches the working load limit, refer to tables showing the effect of angle of loading on the working load limits.

Slings used in a basket hitch shall have the loads balanced to prevent slippage. Slings shall be securely attached to their loads. Slings shall be padded or protected from the sharp edges of their loads. Suspended loads shall be kept clear of all obstructions. All employees shall be kept clear of loads about to be lifted or suspended. Hands or fingers shall not be placed between the sling and its load at any time. Shock loading is prohibited. A sling shall not be pulled from under a load when load is resting on the sling. Each day before being used, the user shall inspect the sling and all fastenings and attachments for damage or defects. Additional inspections shall be performed during sling use, where service conditions warrant. Damaged or defective slings shall be removed immediately from service. They shall be tagged and cut in half and returned to your foreman. Sling hooks shall be removed from service and tagged that have been opened more than 15% of normal throat opening measured at the narrowest point or twisted more than 10 degrees.

Rope Slings

Sling Identification: Each sling shall have an identification tag attached stating the diameter, length, and rated vertical capacity for a single leg sling and 30 degree, 45 degree, and 60 degree of lifting angle capacities for a multiple leg sling lift.

Minimum sling lengths:

- Cable laid and 6" x 19" and 6" x 37" slings shall have a minimum clear length of wire rope 10 times the component rope diameter between splices, sleeves, or end fittings.
- Braided slings shall have a minimum clear length of wire rope 40 times the component rope diameter between the loops or end fittings.
- Cable laid grommets, strand laid grommets, and endless slings shall have a minimum circumferential length of 96 times their body diameter.

Safe Operations Temperature: Fiber core wire rope slings of all grade shall be permanently removed from service if they are exposed to temperatures in excess of 200 degrees Fahrenheit.

When non-fiber core wire rope slings of any grade are used at temperatures above 400 degrees Fahrenheit or below minus 60 degrees Fahrenheit, recommendations of the sling manufacturer regarding use at that temperature shall be followed.

Chain Slings

Sling Identification: Alloy steel chain slings shall have permanently affixed durable identification stating, size, grade, rated capacity and reach.

Do not anneal, normalize, heat treat, or weld alloy steel chains. Return to manufacturer for reconditioning.

Hooks, rings, oblong links, pear shaped links, welded, or mechanical coupling links or other attachments shall have rated capacity at least equal to that of the alloy steel chain with which they are used, or the sling shall not be used in excess of the rated capacity of the weakest component.

Makeshift links or fasteners formed from bolts or rods, or other such attachments shall not be used.

Where slings are in constant and critical use, they shall be given a link-by-link inspection monthly.

A record card shall be made on each new chain sling received and the card shall contain a record of the most recent month in which each sling was thoroughly inspected.

Fiber Rope Slings

Safe Operating Temperatures: Natural and synthetic fiber rope slings, except for wet frozen slings, may be used in temperature ranges from minus 20 degrees Fahrenheit to plus 180 degrees Fahrenheit without decreasing the working load limit. For frozen slings, the sling manufacturer's recommendations shall be followed.

Splicing: Spliced fiber rope slings shall not be used unless they have been spliced in accordance with the following minimum requirements and in accordance with any additional recommendations of the manufacturer:

- In manila rope, eye splice shall consist of at least three full tucks, and short splices shall consist of at least six full tucks, three on each side of the center line.
- In synthetic fiber rope, eye splices shall consist of at least four full tucks, and short splices consist of at least eight full tucks, four on each side of the center line.
- Strand end tails shall not be trimmed flush with the surface of the rope immediately adjacent to the full surface of the full tucks. This applies to all types of fiber rope under one inch in diameter; the tail shall project at least six rope diameters beyond the full tuck. For fiber rope inch in diameter and larger, the tail shall project at least six inches beyond the last full tuck. Where a projection tail interferes with the use of the sling, the tail shall be tapered and spliced into the body of the rope using at least 2 additional tucks (which will require a tail length of approximately six rope diameters beyond the last full tuck.)

End Attachments: Fiber rope slings shall not be used if end attachments come in contact with the rope that may have sharp edges or projections.

Removal from Service: Natural fiber rope slings shall be removed immediately from service if any of the following conditions are present:

- Abnormal wear
- Powdered fiber between strands
- Broken or cut fibers
- Variations in the size or roundness of strands
- Discoloration or rotting
- Distortion of hardware in the sling

Repairs: Only fiber rope sling made from new rope shall be used. Use of repaired or reconditioned fiber rope sling is prohibited.

Synthetic Web Slings

Sling Identification: Each sling shall be marked or coded to show the rated capacities for each type of hitch and of synthetic web material.

Environmental Conditions: When synthetic web slings are used, the following precautions shall be taken:

- Nylon web slings shall not be used where fumes, vapors, sprays, mists or liquids of acids or phenolics are present.
- Polyester and polypropylene web slings shall not be used where fumes, vapors, sprays, mist, or liquids of caustics are present.
- Web slings with aluminum fittings shall not be used where fumes, vapors, sprays, mists or liquids of caustics are present.

Safe Operating Temperatures: Synthetic web slings of polyester and nylon shall not be used at temperatures in excess of 180 degrees Fahrenheit. Polypropylene web slings shall not be used at temperatures in excess of 200 degrees Fahrenheit.

Repairs:

Synthetic web slings that require repair shall not be used unless repaired by a sling manufacturer or an equivalent entity.

Each repaired sling shall be proof-tested by the manufacturer or equivalent to twice the rated capacity prior to its return to service. The employer shall retain a certificate of proof test and make it available for reexamination.

Slings, including webbing and fittings, which have been repaired in a temporary manner shall be used.

Removal from Service: Synthetic web slings shall be removed immediately from service if any of the following conditions are present:

- Acid or caustic burns.
- Melting or charring of any part of the sling surface.
- Snags, punctures, tears or cuts.
- Broken or worn switches.
- Distortion of fittings or elongation exceeding seven percent for uncoated nylon and ten percent for coated nylon, and three percent for uncoated polyester.

Metal Mesh Slings

Sling Identification: Each sling shall have permanently affixed to it a durable marking that states the rated capacity for vertical basket hitch and choker hitch loading.

Safe Operating Procedures: Metal mesh slings that are not impregnated with elastomers may be used in a temperature range from minus 20 degrees Fahrenheit to plus 550 degrees Fahrenheit without decreasing the working load limit. Metal mesh slings impregnated with polyvinyl chloride or neoprene may be used once in a temperature range from zero degrees to plus 200 degrees Fahrenheit. For operations outside these temperature ranges or for metal mesh sling impregnated with other materials, the sling manufacturer's recommendations shall be followed.

Repairs:

Metal mesh slings that are required to be repaired shall not be used unless repaired by a metal mesh sling manufacturer or an equivalent entity.

Once repaired, each sling shall be permanently marked or tagged, and a written record maintained, to indicate the date and nature of the repairs and the person or organization that performed the repairs. Records of repair shall be made available for examination.

Metal mesh slings shall be removed immediately from service if any of the following conditions are present:

- A broken weld or broken brazed joins along the sling edge.
- Reduction in wire diameter of 25 percent due to abrasion of 15 percent due to the fabric.
- Lack of flexibility due to distortion of the fabric.
- Distortion of the female handle so that the depth of the slot is increased more than 10 percent.
- A 15% reduction of the original cross sectional area of the metal at any point around the handle eye.
- Distortion of either handle that is out of its plane.

Training Requirements

Superintendents shall be trained, competent and qualified persons competent in safe procedures. Qualified rigger training will include load weights, center of gravity, and knowledge of various types of slings. Field personnel will receive daily work instructions and information from tool box talks concerning safe rigging practices.

Section 25- Pandemic Preparedness

Purpose
This plan will play a key role in protecting employees' health and safety as well as limiting the negative impact to the economy and society.

Scope
The section applies to all Lauth employees and shop operations if a pandemic warning is issued.

Definitions
Pandemic - a disease prevalent over a whole country or the world

Quarantine - a state, period, or place of isolation in which people or animals that have arrived from elsewhere or been exposed to infectious or contagious disease are placed.

Social Distancing – keeping a 6' length from other people. Groups of people should be no more than 50 max.

Responsibilities
Responsibilities of the Pandemic Coordinator/Team

- Identify essential employees and other critical inputs required to maintain business operations by location and function during a pandemic. (e.g. raw materials, suppliers, sub-contractor services/products, and logistics).
- Identify key contacts, a chain of communications, contact numbers for employees, and processes for tracking business and employee's status.
- Find up-to-date, reliable pandemic information from community public health, emergency management, and other sources and make sustainable links.
- Forecast and allow for employee absences during a pandemic due to factors such as personal illness, family member illness, community containment measures and quarantines, school and/or business closures, and public transportation closures.
- Discuss how to reduce the spread of diseases through testing and training of this plan.

Management Responsibilities

- Management should implement guidelines to modify the frequency and type of face-to-face contact among employees and between employees and customers. (refer to CDC recommendations) (e.g. hand shaking, office layout, sharing workstations, seating in meetings).
- Management personnel are to encourage and track annual immunizations and to allow these to be administered on company time.
- Management should identify employees and customers with special needs, and to incorporate the requirements of such persons in the preparedness plan.
- Management policies should be established for flexible/alternative work sites, flexible work hours will be established if necessary, to help control a pandemic event.
- Management should communicate with employees, sub-contractors, customers and suppliers which will be initiated by e-mail, phone and/or website inside and outside the worksite in a consistent and timely manner, including redundancies in the emergency contact system. Notification will be sent to all employees, sub-contractors, customers and suppliers when operations resume.

- Management should address strategy for continuation of work in the event of a large percentage of employees becoming ill. Workers that have not been able to work due to an illness may have flexible work hours. This may be arranged by the direct supervision should the work need to be made up or completed at a remote area. Workers are encouraged to stay at home when ill, when having to care for ill family members, or when caring for children when schools close, without fear of reprisal. Tele-commuting or other work-at-home strategies may be developed or offered according to job assignment and job needs. The manager in charge or assigned to the ill employee(s) will check up on the employee(s) each day of the status of their illness. They will make sure all work is being covered and completed as needed to not interrupt the daily operations.
- Those individuals who can provide their essential roles from home will ensure they have the following services available to them.
    - Home computer or laptop
    - Internet access
    - Cell phone or land line
    - Contact names and numbers for the management team
- Management will identify and/or appoint a pandemic coordinator and/or team with defined roles and responsibilities for preparedness and response planning.
- All personnel should receive annual training on influenza prevention and risks for complications of influenza. The training should include information on risk assessment; isolation precautions; vaccination protocols; use of engineering and administrative controls and personal protective equipment protection during high-risk aerosol-generating procedures; signs, symptoms, and complications of influenza; and to promptly seek medical attention for any concerns about symptoms of influenza.
- Management will encourage employees to wash their hands often.
- May implement social distancing including increasing the space between employee work areas and decreasing the possibility of contact by limiting large or close contact gatherings.

Procedures

<u>Hygiene and Health Recommendations</u>

1. Frequent hand washing and the use of hand sanitizers is recommended.
2. Sick employees should stay home.
3. Sick employees should be sent home.
4. Employees with symptoms of flu-like illness should stay home until at least 24 hours after they are free of fever.
5. Clean surfaces and items that are more likely to have frequent hand contact.
6. Employees are encouraged to get proper vaccinations.
7. Clean surfaces that are touched with cleaning agents that are usually used in these areas. Additional disinfection beyond routine cleaning is not recommended.
8. Employees should cover their coughs and sneezes and use tissues and no-touch wastebaskets.

<u>Objectives of Pandemic Preparedness</u>

- Ensure optimal coordination, decision making, and communication between internal departments as well as with local health authorities.
- Keep employees and their families educated and informed of new information.

- Implement measures to decrease the spread of disease among the company and the community, thus protecting the health and safety of employees and their families.
- Maintain financial viability despite possible evacuation of employees from the office
- Preserve human life.

Any employees returning from a place where the disease is prevalent must work from home for the incubation time of the disease

The plan and emergency communication strategies will be periodically tested to ensure it is effective and workable.
Hand sanitizers, disinfectant sprays and tissues should be available to all employees and visitors.

The person in charge of implementing this program will perform a “lessons learned” program to create learning opportunities for the other employees. Corrective actions will also be used to help prevent any future occurrences.

The Pandemic Preparedness program will be reviewed and upgraded as conditions change or are identified.

Training Requirements
This policy will be reviewed during New Hire Orientation and during annual refresher training.

Section 26 - Personal Protective Equipment

Purpose
To specify safety requirements and policy guidance on the usage of personal protective equipment (PPE) to protect employees in the work place.

Scope
This section is applicable to all Lauth employees who perform tasks requiring PPE to include: equipment for eyes, face, head, arms, legs, clothing, and protective shields. All safety equipment must meet American National Standards Institute (ANSI) Standards and shall carry markings of approval.

References
1910.132, Subpart I

Definitions
PPE - Personal Protective Equipment.

Foot & Leg Protection - Safety-toe footwear for employees shall meet the requirements and specifications in American National Standard for Men's Safety-Toe Footwear, Z41.1-1967. Examples of types of foot a leg protection include: steel-toed boots or work boots, metacarpal guards, metatarsal guards, etc.

Hand Protection - Protective gloves or glove system that will provide protection against cuts, punctures, and direct contact with chemicals including concrete.

Eye, and Face Protection - Eye and face protection for employees shall meet the requirements and specifications in American National Standards Institute, Z87.1-1968, Practice for Occupational and Educational Eye and Face Protection. Examples include: glasses, goggles, face shields, welding hood, etc.

Head Protection - Head protection for employees shall meet the requirements and specifications in American National Standards Institute, Z89.1-1969, and Safety Requirements for Industrial Head Protection.

Procedures
PPE Analysis
- Administrative and Engineering controls will be the first priority (where applicable) to avoid using PPE.

Eye and Face
- Safety glasses with side shields are to be worn in all manufacturing areas as well as whenever else there is a hazard present to the eyes. Employees who wear prescription glasses, must have eye protection that meets ANSI Z87.1 Standards.
- Employees must use eye and face protection when they are exposed to hazards such as flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation. The protective equipment must be marked to identify the manufacturer.

- Protective eye and face devices bought after July 5, 1994 must comply with ANSI Z87.1 - 1989, "American National Standard Practice for Occupational and Educational Eye and Face Protection."
- Equipment bought before July 5, 1994 must comply with ANSI Z87.1-1968, "USA Standard for Occupational and Educational Eye and Face Protection."
- In general, eye protection and face shields must be appropriate for the particular hazards to which the employees are exposed. Visors are appropriate for those operations where splashing is a hazard. In high heat environments, a special wire screen visor may be worn that allows the heat to dissipate and permits maximum vision for the wearer. Goggles are recommended in situations involving dust, flying particles, sparks, noxious gases, corrosive liquid splashes, and radiation from welding.
- Cup goggles provide added protection where there is the combined hazard of flying particles and severe impact. Some cup goggles also provide ventilation, protection against dust hazards in cement plants, foundries, and compressed air operations. When worn in conjunction with a face shield, cup goggles provide good protection against acids, caustics, and chemicals, and are recommended for babbitting, hot metal casting, and hot metal bath dipping. Face shields are not recommended for use by themselves as basic eye protection since they do not provide impact protection; instead they should be worn over basic eye protection.
- Eye and face equipment should be comfortable, easy to clean, and capable of being disinfected. The fit must be snug enough to protect properly and not restrict the movement of the wearer.
- Eye protection should be cleaned regularly and checked daily for cracks, scratches, pits, or fading. Badly chipped, scratched, or pitted lenses indicate that the surface is broken and should not be used. Safety glasses should be evaluated periodically to ensure that the optical density provided is still at the desired wavelength.
- In addition to providing employees with appropriate eye protection, easily accessible emergency eyewash stations should be provided.

<u>Head</u>

- Hard hats are to be worn whenever there is a danger of falling objects from above. Hard hats are to be worn with the bill protecting the face and in accordance with pertinent safety standards.
- Hard hats bought after July 5, 1994 must comply with ANSI Z98-1986, "American National Standard for Personal Protection - Protective Headwear for Industrial Workers-Requirements."
- Hard hats purchased before July 5, 1994 must comply with the ANSI Z98.1-1969, "American National Standard Safety Requirements for Industrial Head Protection."

<u>Foot</u>

- Steel toed boots are not mandatory, but are recommended. Work boots are a minimum.
- Protective footwear purchased after July 5, 1994 must comply with ANSI Z41-1991, "American National Standard for Personal Protection - Protective Footwear." Protective footwear purchased before July 5, 1994 must comply with ANSI Z41.1-1967, "USA Standard for Men's Safety-Toe Footwear."

<u>Hand</u>

- Various types of gloves may be required. Hazards from which hands need to be protected include skin absorption of harmful substances, severe cuts or lacerations, severe abrasions, punctures, chemical burns, thermal burns, and harmful temperatures.

<u>Hearing Protection</u>

- Employees shall not be exposed to more than an average of 90 dB over an 8 hour period and hearing protection is required when noise is above 85 dB.
- Employees will be informed of the areas where hearing protection is required.
- Employees wearing hear protection must stay aware of the environment around them.

Protective Clothing

- Employees are to wear appropriate clothing for the tasks being performed.
- Employees who wear jewelry are to use caution around moving machinery.
- Employees are to wear shirts with sleeves and pants that cover the legs.
- In the warm weather employees should wear light colored clothing that allow the skin to stay cool.
- In the colder weather employees are to wear warm layers of clothing.

Training Requirements

Employees will receive training on the proper maintenance, donning, and doffing of PPE.

Section 27 - Process Safety Management

Purpose
This section contains requirements for preventing or minimizing the consequences of catastrophic releases of toxic, reactive, flammable, or explosive chemicals. These releases may result in toxic, fire or explosion hazards.

Scope
This policy applies to all Lauth employees performing maintenance or repair, turnaround, major renovation, or specialty work on or adjacent to a covered process.

Definitions
Atmospheric tank - means a storage tank which has been designed to operate at pressures from atmospheric through 0.5 p.s.i.g. (pounds per square inch gauge, 3.45 Kpa).

Boiling point - means the boiling point of a liquid at a pressure of 14.7 pounds per square inch absolute (p.s.i.a.) (760 mm.). For the purposes of this section, where an accurate boiling point is unavailable for the material in question, or for mixtures which do not have a constant boiling point, the 10 percent point of a distillation performed in accordance with the Standard Method of Test for Distillation of Petroleum Products, ASTM D-86-62, which is incorporated by reference as specified in Sec. 1910.6, may be used as the boiling point of the liquid.

Catastrophic release - means a major uncontrolled emission, fire, or explosion, involving one or more highly hazardous chemicals, that presents serious danger to employees in the workplace.

Facility - means the buildings, containers or equipment which contains a process.

Highly hazardous chemical - means a substance possessing toxic, reactive, flammable, or explosive properties and specified by paragraph (a)(1) of this section.

Hot work - means work involving electric or gas welding, cutting, brazing, or similar flame or spark producing operations.

Normally unoccupied remote facility - means a facility which is operated, maintained or serviced by employees who visit the facility only periodically to check its operation and to perform necessary operating or maintenance tasks. No employees are permanently stationed at the facility. Facilities meeting this definition are not contiguous with, and must be geographically remote from all other buildings, processes or persons.

Process - means any activity involving a highly hazardous chemical including any use, storage, manufacturing, handling, or the on-site movement of such chemicals, or combination of these activities. For purposes of this definition, any group of vessels which are interconnected and separate vessels which are located such that a highly hazardous chemical could be involved in a potential release shall be considered a single process.

Replacement in kind - means a replacement which satisfies the design specification.

Trade secret - means any confidential formula, pattern, process, device, information or compilation of information that is used in an employer's business, and that gives the employer an opportunity to obtain an advantage over competitors who do not know or use it. Appendix D contained in 1910.1200 sets out the criteria to be used in evaluating trade secrets.

Responsibilities
Owners shall inform Lauth employees of the known potential fire, explosion, or toxic release hazards related to the work and the process.

Owners shall explain to Lauth employees the applicable provisions of the emergency action plan.

The Owner shall develop and implement safe work practices to control the entrance, presence and exit of contract employers and contract employees in covered process areas.

Lauth shall assure that each contract employee is trained in the work practices necessary to safely perform his/her job.

Lauth shall assure that on all jobsites there will be an updated list and binder for all hazardous materials onsite.

Lauth shall assure that each contract employee is instructed in the known potential fire, explosion, or toxic release hazards related to his/her job and the process, and the applicable provisions of the emergency action plan.

Lauth shall document that each contract employee has received and understood the training required by this paragraph. The contract employer shall prepare a record which contains the identity of the contract employee, the date of training, and the means used to verify that the employee understood the training.

Lauth shall assure that each contract employee follows the safety rules of the facility including the safe work practices.

Lauth shall advise the employer of any unique hazards presented by their work, or of any hazards found by their work.

Procedures
Pre-startup safety review
Owner shall perform a pre-startup safety review for new facilities and for modified facilities when the modification is significant enough to require a change in the process safety information.

- The pre-startup safety review shall confirm that prior to the introduction of highly hazardous chemicals to a process;
- Construction and equipment is in accordance with design specifications;
- Safety, operating, maintenance, and emergency procedures are in place and are adequate;
- For new facilities, a process hazard analysis has been performed and recommendations have been resolved or implemented before startup; and modified facilities meet the requirements contained in management of change.

- Training of each employee involved in operating a process has been completed.

The owner shall establish and implement written procedures to maintain the on-going integrity of process equipment.

Inspections and tests shall be performed on process equipment.

The owner shall correct deficiencies in equipment that are outside acceptable limits before further use or in a safe and timely manner when necessary means are taken to assure safe operation.

In the construction of new plants and equipment, the owner shall assure that equipment as it is fabricated is suitable for the process application for which they will be used.

The owner shall issue a hot work permit for hot work operations conducted. Hot work will not be conducted until a hot work permit is obtained from the owner.

The owner shall establish and implement written procedures to manage changes (except for "replacements in kind") to process chemicals, technology, equipment, and procedures; and, changes to facilities that affect a covered process.

Employees involved in operating a process and maintenance and contract employees whose job tasks will be affected by a change in the process shall be informed of, and trained in, the change prior to start-up of the process or affected part of the process.

Employees will immediately report accidents injuries and near misses. The owner shall investigate each incident which resulted in, or could reasonably have resulted in a catastrophic release of highly hazardous chemical in the workplace. An incident investigation must be initiated within 48 hours. Resolutions and corrective actions must be documented and maintained for 5 years.

The owner shall establish and implement an emergency action plan for the entire plant in accordance with the provisions of 29 CFR 1910.38(a). In addition, the emergency action plan shall include procedures for handling small releases. Owners covered under this standard may also be subject to the hazardous waste and emergency response provisions contained in 29 CFR 1910.120(a), (p) and (q).

Owners shall certify that they have evaluated compliance with the provisions of this section at least every three years to verify that the procedures and practices developed under the standard are adequate and are being followed.

Owners shall make all information necessary to comply with the section available to those persons responsible for compiling the process safety information, those assisting in the development of the process hazard analysis, those responsible for developing the operating procedures, and those involved in incident investigations, emergency planning and response and compliance audits without regard to possible trade secret status of such information.

Training Requirements

The employer shall train each employee involved in maintaining the on-going integrity of process equipment in an overview of that process and its hazards and in the procedures applicable to the employee's job tasks to assure that the employee can perform the job tasks in a safe manner.

Lauth employees performing such work will need additional training before working in such areas.

Section 28 - Respiratory Protection

Purpose
To protect employees from harmful exposure to dusts, fumes, mists, gases, smokes, sprays, or vapors, when all other engineering or administrative controls are either not feasible or have failed.

Scope
Lauth employees will not normally be required to wear respirators. Jobs requiring respiratory protection will be performed by designated individuals who have been properly trained, medically evaluated, and fit tested. The Safety Representative will administer this program for Lauth

Definitions
Respiratory Hazards - The normal atmosphere consists of 78% nitrogen, 21% oxygen, 0.9% inert gases and 0.04% carbon dioxide. An atmosphere containing toxic contaminants, even at very low concentrations, could be a hazard to the lungs and body. A concentration large enough to decrease the percentage of oxygen in the air can lead to asphyxiation, even if the contaminant is an inert gas.

Oxygen Deficiency - The body requires oxygen to live, if the oxygen concentration decreases, the body reacts in various ways. Death occurs rapidly when the concentration is decreased to 6%.

- Physiological effects of oxygen deficiency are not apparent until the concentration decreases to 16%. The various regulations and standards dealing with the respirator use recommends that concentrations ranging from 16 - 19.5% be considered indicative of an oxygen deficiency. Such numbers take into account individual physiological response, errors in measurement, and other safety consideration. In hazardous material response operations 19.5% oxygen in air is considered the lowest "safe" working concentrations.
- An oxygen-enriched atmosphere is also recognized not only as a physical hazard but an explosion hazard. Enriched oxygen atmospheres increase the likelihood of combustion and possible explosion, therefore, Lauth, will not place employees in these areas.

Aerosols - Aerosol is a term used to describe fine particulates (solid or liquid) suspended in air. Particulates ranging in diameter from 50 to 30 microns are deposited in the nasal and pharyngeal passages. The trachea and smaller conducting tubes collect particulates 1-5 microns in diameter. For particulates to diffuse from the bronchioles into alveoli they must be less than 0.5 microns in diameter. Larger particulates reach the alveoli due to gravity. The smallest particulates may never be deposited in the alveoli and so may diffuse back into the conducting tubes to be exhaled.

- Aerosols can be classified in two ways: by their physical form and origin and by the physiological effect on the body.

Physical Classification:

- Mechanical Dispersoid: liquid or solid particle mechanically produced.
- Condensation Dispersoid: liquid or solid particle often produced by combustion.
- Spray: visible liquid mechanically dispersed.

- Fume: extremely small solid condensation Dispersoid.
- Mist: liquid condensation Dispersoid.
- Fog: mist dense enough to obscure vision.
- Smoke: liquid or solid organic particles resulting from incomplete combustion.
- Smog: mixture of smoke and fog.

Physiological Classification:
- Nuisance: no lung injury but proper lung functioning inhibited.
- Inert Pulmonary Reaction Causing: non-specific reaction.
- Pulmonary Fibrosis Causing: effects ranging from nodule production in lungs to serious diseases such as asbestosis
- Chemical Irritation: irritation, inflammation, or ulceration of lung issue.
- Systemic Poison: diseases in other parts of the body.
- Allergy-Producing: allergic hypersensitivity reactions such as itching or sneezing.

Gaseous Contaminants - Gases and vapors are filtered to some degree through the respiratory tract. Soluble gases and vapors are absorbed by the conducting tubes in route to the alveoli. Not all will be absorbed and so along with insoluble gases, finally diffuse into the alveoli, where they can be directly absorbed into the bloodstream. Gaseous contaminants can be classified chemically and physiologically.

Chemical Classification:
- Acidic: acids react with water to form acids.
- Alkaline: bases react with water to form bases.
- Organic: compounds which may range from methane to chlorinated organic solvents.
- Organometallic: organic compounds containing metals.
- Hydrides: compound in which hydrogen is bonded to another metal.
- Inert: no chemical reactivity.

Physiological Classification:
- Irritants: corrosive substances which injure and inflame issue.
- Asphyxiant: substances that displace oxygen or prevent the use of oxygen in the body.
- Anesthetics: substances that depress the central nervous system, causing a loss of sensation or intoxication.
- Systemic Poisons: substances that can cause disease in various organ systems.

Procedures

General
- When working in areas where the potential exists for overexposure to air contaminated with harmful dusts, fogs, mists, gases, smokes, sprays, or vapors, employees will be required to wear the appropriate respirator.
- Employees must be clean-shaven if they are required to wear respiratory protection as part of their job requirements.
- Employees may be required to wear respiratory protection as part of their job, must be medically qualified by a physician to do so. Because of this, pulmonary function tests will be required for each employee on an annual basis.

Hazard Identification

- All job classifications, operations and/or areas where respiratory protection devices must be used to prevent employee overexposure against specific health risks will be identified. This may be accomplished by one more of the following:
    - Review of company operations, processes and procedures.
    - Industrial hygiene monitoring results.
    - Information contained on Safety Data Sheets (SDS).

Types of Respiratory Protection Available

Air Supplying

- Airline supplied: (SAR) means an atmosphere supplying respirator for which the source of breathing air is not designed to be carried by the user.
- Self-Contained Breathing Apparatus (SCBA) means an atmosphere-supplying respirator for which the breathing air source is designed to be carried by the user.

Air Purifying

- Air purifying respirators only "purify" contaminants from the ambient air. They add NO oxygen. Because of this, air purifying respirators can only be used when the identify and concentration of the contaminant is known, the oxygen content in the air is at least 19.5%, there is no periodic monitoring of the work area, the respirator assembly is approved for protection against the specific contaminant and concentration level, and the type of respirator has been fit-tested on the employee.

Filtering Face piece Respirators - A negative pressure particulate respirator with a filter as an integral part of the face piece or with the entire face piece composed of the filtering medium. Approved disposable filtering face piece respirators provide protection against nuisance dusts and sometimes asbestos. It is difficult to fit-test, obtain, and maintain a good face piece to face seal.

- Half-Mask Respirators: Two cartridges are used to filter the air and discarded once the use of limits are reached. The half-mask respirators have approved cartridges for pesticides, organic vapors, dusts, mists, fumes, acid gases, ammonia, and several combinations.
- Full-Face Respirator: The entire face is protected by this form of respirator. It gives 10 times the protection of a half-mask. The full-faced mask also uses cartridges or canisters which filter out hazardous contaminants from the air. Filters are available for the same materials as for the half-mask, with several additional ones available.
- Powered Respirators: Powered respirators give no breathing resistance. They are used with half or full face masks, and special helmets.

Selection

Potential areas of exposure previously identified shall be reviewed by the Safety Representative to determine appropriate respiratory protection.

Proper selection of respiratory protection will be made only by a competent person, who has been trained on the specific hazards and the requirements of the standard. Respirators shall be selected only after each of the following has been considered:

- Identity of the substance(s) present in the work environment.

- The physical state of the contaminant.
- The PEL and toxicity of the substance.
- Exposure measurements showing the concentrations likely to be encountered.
- The protection factor listed for the respirator.
- The possibility of an oxygen deficient atmosphere.
- Any limitations or restrictions applicable to the types of respirators being considered.
- Selection of respirators shall be made in accordance with the following table:

HAZARD	RESPIRATOR
Oxygen Deficiency	Self-contained breathing apparatus. Hose mask with blower. Combination air-line respirator with auxiliary self-contained air supply or an air-storage receiver with alarm
Gas and vapor contaminants immediately dangerous to life and health	Self-contained breathing apparatus. Hose mask with blower. Air-purifying, full face piece respirator with chemical canister (gas mask). Self-rescue, mouthpiece respirator (for escape only). Combination, air-line respirator with auxiliary self-contained air supply or an air-storage receiver with alarm.
Not immediately dangerous to life and health	Self-contained breathing apparatus. Hose mask with blower. Air-purifying, half-mask or mouthpiece respirator with chemical cartridge.
Particulate contaminants immediately dangerous to life and health	Self-contained breathing apparatus. Hose mask with blower. Air-purifying, full face-face piece respirator with appropriate filter. Self-rescue mouthpiece respirator (for escape only). Combination air-line respirator with auxiliary self-contained air supply or an air-storage receiver with alarm.
Not immediately dangerous to life and health	Air-purifying, half-mask or mouthpiece respirator with filter pad or cartridge. Air-line respirator. Air-line abrasive-blasting respirator. Hose-mask without blower.
Combination gas, vapor, and particulate contaminants immediately dangerous to life and health	Self-contained breathing apparatus. Hose-mask with blower. Air-purifying, full face piece respirator with chemical canister and appropriate filter (gas mask with filter). Self-rescue mouthpiece respirator (for escape only). Combination air-line respirator with auxiliary self-contained air supply or an air-storage receiver with alarm.

Not immediately dangerous to life and health	Air-line respirator. Hose mask without blower. Air-purifying, half-mask or mouthpiece respirator with chemical cartridge and appropriate filter.

Identification of gas mask canisters for half or quarter mask respirators being used can be determined on the label or the color coding scheme as described in the OSHA standards.

Use

- When SCBAs or hose masks with blowers are used in IDLH atmospheres, attendants must be present with suitable rescue equipment.
- Persons using airline respirators in IDLH atmospheres shall be equipped with safety harnesses and lifelines for lifting or removing persons from hazardous atmospheres. Attendants must also be used.
- Employees required to wear respiratory protection must be clean-shaven, as facial hair will not allow a proper seal.
- Every respirator wearer shall perform the following test before using the respirator:
    - Close off the inlet ports of the respirator with the palms. Inhale so that the face piece collapses slightly and hold breath for 10 seconds. If the face piece remains collapsed and no inward leakage is noticed, the fit is considered fight adequate.

Medical Evaluations

- Lauth shall provide a medical evaluation to determine the employee's ability to use a respirator before the employee is fit tested or required to use the respirator.
- Medical Evaluation Procedures:
    - Identify a physician or other licensed health care professional (PLHCP) to perform medical evaluations using a medical questionnaire.
    - The medical evaluation shall obtain the information requested by the questionnaire.
    - The medical questionnaire and examinations shall be administered confidentially during the employee's normal working hours or at a time and place convenient to the employee.
    - The medical questionnaire shall be administered in a manner that ensures that the employee understands its content.
- Supplemental information for the PLHCP
    - This information must be supplied to the PLHCP before the PLHCP makes a recommendation concerning the employee's ability to use a respirator.
    - The type and weight of the respirator to be used by the employee.
    - The duration and frequency of respirator use (including use for rescue and escape).
    - The expected physical work effort.
    - Additional protective clothing and equipment to be worn.
    - Temperature and humidity extremes that may be encountered.
    - Any supplemental information provided previously to the PLHCP regarding an employee need not be provided for a subsequent medical evaluation if the information and the PLHCP remain the same.
    - Lauth shall provide the PLHCP with a copy of the written respiratory protection program and a copy of this section.
    - Additional Medical Evaluations. At a minimum, Lauth shall provide additional medical evaluations that comply with the requirements of this section if:

- An employee reports medical signs or symptoms that are related to ability to use a respirator.
- A PLHCP, Project Manager, Project Manager, or the Safety Representative informs Lauth that an employee need to be reevaluated.
- Information from the respiratory protection program, including observations made during fit testing and program evaluation, indicates a need to employee reevaluation.
- A change occurs in workplace conditions (e.g., physical work effort, protective clothing, and temperature) that may result in a substantial increase in the physiological burden placed on an employee.

Training Requirements

- Training will be performed for those employees who may be required to wear respirators as part of their normal job. This training shall include at a minimum:
  - Nature of the respiratory hazard and what may happen if the respirator is not used properly.
  - Engineering and administrative controls being used and the need for the respirator as added protection.
  - Reason for the selection for a particular respirator.
  - Proper use and limitations of the respirator.
  - Proper maintenance and storage.
  - Proper method for handling emergency situations.

Fit-Testing

- Qualitative: A pass/fail test to assess the adequacy of respirator fit that relies on the individual's response to the test agent. This type of fit testing is not as dependable because of its qualitative nature. Accurate results rely on the individual being tested. Each individual being tested has different sensory levels for detection of a smell or a taste. Irritant smoke may be considered the best option for qualitative testing but it can cause respiratory problems in some individuals who are more sensitized.
  - Saccharin
  - Employee must choose proper mask
  - Perform a negative or positive fit check
  - Attach HEPA filters to chosen face mask
  - Allow the user to smell a weak concentration of the saccharin
  - In a fit testing hood:
    - Activate saccharin nebulizer
    - Begin with only a small amount of smoke
    - Allow user to adjust the mask if they smell smoke
    - Slowly add more smoke and ask the test subject to perform the following for one minute each:
      - Normal breathing
      - Deep breathing
      - Grimace
      - Turn head side-to-side while breathing normally
      - Nodding head up-and-down while breathing normally
      - Talking (Rainbow Passage, see below)
      - Jogging in place
      - Normal breathing

RAINBOW PASSAGE

When the sunlight strikes raindrops in the air, they act like a prism and form a rainbow. The rainbow is a division of white light into many beautiful colors. These take the shape of a long round arch, with its path high above, and b who ends apparently beyond the horizon. There is, according to legend, a boiling pot of gold at one end. People look, but no one ever finds ft. When a man looks for something beyond his reach, his friends say he is looking for the pot of gold at the end of the rainbow.

  - If the test subject does not smell saccharin, they have passed the test and can be allowed to wear that in approved atmospheres.
  - Fill out test form and card.

- Quantitative: An assessment of the adequacy of respirator fit by numerically measuring the amount of leakage into the respirator. Relies on a sensitive device inside the face piece, which records actual numerical levels of contaminant inside and outside of the respirator.

Maintenance and Care

- Inspection
- Respirators must be inspected regularly (during cleaning and on a monthly basis) and all worn or defective parts shall be replaced. Respirator inspection shall include, but will not be limited to:
- Inspect the inside sealing surface for cracks or distortions (if they are found, the face piece must be disregarded);
- The valves must be inspected for severe distortion which would cause them not to seal properly (faulty valves must be replaced);
- If headbands are severely overstretched, frayed or mutilated, they must be replaced;
- Inspect to insure that the filter element is secured tightly to the face piece.
- Respirators shall be inspected routinely before and after each use.
- SCBA's are inspected on a monthly schedule.
- Inspection records shall be kept and documented on the forms provided. (See Inspection & Maintenance Check List)

Cleaning

- Routinely used respirators shall be collected, cleaned and disinfected as frequently as necessary to insure the respirator is clean and in good operating condition. Specific information and procedures for cleaning and disinfecting of respirators is included at the back of this section.

Repair

- Replacement or repair shall be done only by experienced persons with parts designed for the respirator.

Storage

- Shall be stored to protect against dust, sunlight, heat, extreme cold, excessive moisture, or damaging chemicals.
- Store the respirator so that the face piece and exhalation valves rest in a normal position. Do not hang the respirator by its straps.

- Respirators placed at workstations for emergency use should be quickly accessible at all times and stored in compartments built for that purpose. The compartments should be clearly marked.

Program Monitoring

- Respiratory protection program will be monitored by the Safety Representative on each project as part of the quarterly inspection.
- The Safety Representative will review this program at least annually to determine any needed changes or updates.

Section 29 - Safe Return to Work

Purpose
It is the goal of Lauth to return employees to meaningful, productive temporary employment following injury or illness until their health care provider releases them to full duty.

The return to work program provides opportunities for any employee who sustains a compensable injury during the course and scope of employment to safely return to work. If the employee is not capable of returning to full duty, the return to work program provides opportunities for the employee to perform a temporary assignment, either modified or alternative duty as defined below.

Scope
This policy applies to all Lauth operations.

Definitions
Lost Time - Time spent away from work beyond the day of injury at the direction of the treating health care provider as a result of a compensable injury sustained in the course and scope of employment. The term does not include time worked in a temporary assignment.

Full Duty - Performance of all duties and tasks of the position for which the employee is employed. Full duty entails performing all essential and non-essential functions of the employee's regular job.

Temporary Assignment - Performance of a temporary job assignment intended to return an injured employee to work at less than his or her full duties when a serious injury or serious medical condition prevents the employee from working full duty. Temporary assignments are limited to six months at the same pay, beyond six months; the program will be reviewed in assistance of Lauth management to determine the next best course of action. Temporary assignments are modified duty and alternative duty.

Modified Duty - Modified duty allows the employee to return to employment in his/her regular job and perform all of the essential functions of the position and those nonessential duties and tasks that are within the capabilities of the employee, given the restrictions imposed by the treating health care provider. Modified duty is a temporary arrangement until the injured employee can resume full duty. If during the course of the modified duty assignment or after six months, whichever is sooner, it is determined that the employee has permanent restrictions, the program will be reviewed in assistance of Lauth management to determine the next best course of action.

Alternative Duty - Alternative duty allows the employee to temporarily perform the essential functions of a job and other nonessential duties and tasks, within the restrictions prescribed by the treating health care provider, other than the position for which the individual is employed (regular full-time position).

Responsibilities
Supervisors will ensure that all injuries are promptly reported and carefully supervise employees who are in a return to work classification.

Employees will report all injuries immediately and will follow all aspects of this program.

Procedures
Lauth provides modified work opportunities to injured employees, whenever practicable. Modified work should be offered, wherever possible, to employees who are unable to return to their regular duties following a workplace injury or illness. The benefits of offering modified duty include, but are not limited to, reduced workers compensation costs, improved employee retention, enhanced employee morale, reduction in lost time days, and a strengthening of the companies' relationship with its employees. Modified work should be meaningful to the employee and company, and consistent with work restrictions outlined by the treatment provider.

If the health care provider states that the employee cannot perform any temporary assignments/ modified duties, Lauth may challenge the decision depending on the injury and request independent medical information.

Employee Reporting Responsibilities
An employee who is a candidate or participant in a modified or alternative duty temporary job assignment under the Safe Return to Work program is responsible for reporting to the workers compensation carrier any employment or income earned while performing modified or alternative duty if required by the workers compensation carrier.

An employee participating in the safe Return to Work program must provide his/her supervisor with medical documentation accounting for all absences due to the injury/illness within one day of any absence from work, or face disciplinary action.

Non Retaliation
Retaliation against an individual for in good faith filing a request or making a claim under this or related policies, for instituting or causing to be instituted any proceeding under local regulatory guidelines or federal anti- discrimination or anti-retaliation laws, for testifying in an investigation or proceeding, or for otherwise opposing discriminatory or retaliatory actions or practices will not be tolerated. Retaliation by any Lauth employee is a violation of this policy. Nothing in this procedure should be interpreted as not requiring an individual to report suspected acts of discrimination or retaliation to the individual he or she believes is engaging in discriminatory or retaliatory conduct.

Prohibited Actions
This return to work program shall not be applied to any situation or circumstance in a manner that retaliates or discriminates on the basis of race, color, sex, age, national origin, religion, or disability.

Return to Work Coordination
The Lauth Safety Representative designated person will assist Site Mangers/Supervisors with return to work activities/ plans for individuals who have sustained a compensable injury or illness during the course and scope of employment.

Medical Records for Injured Employees Must be Kept Confidential

Medical records should be kept by the employer strictly on a need-to-know basis. The records should be kept in a locked file and confidential.

All Documentation Related to an Incident is Maintained by Lauth

Lauth should maintain written records of incident details. This will help recall information about the circumstances of the incident at a later time, and will demonstrate due diligence. Incident investigation records should be maintained. Records should be kept of communications with the injured employee regarding modified work. Workers compensation and medical records, where applicable, should also be maintained.

How local health care providers are made aware that Lauth provides modified work to employees who are unable to perform their regular duties:

- Local health care providers should be advised that Lauth provides modified work to injured employees, whenever practicable. This may be accomplished proactively making arrangements with clinics that specialize in occupational health, and recommending injured employees seek treatment there. If/when this is not practicable, a standard letter should be drafted that outlines the company's modified work opportunities. Injured employees should take this letter with them when they visit their health care provider.
- Lauth will provide a copy of the employee's regular job description to accompany a work status form to be completed by the health care provider following any initial report of injury. When the medical status form is returned, it will be determined whether the employee can perform the essential functions of his/her job.
- Modified work provided to injured employees must be consistent with restrictions provided by the health care provider. Lauth must ensure that modified work being offered is consistent with the medical restrictions listed by the health care provider. Workers must ensure that changes in the scope of the modified work must adhere to the medical restrictions. Modified work is temporary and should be managed with a goal to return the individual to full time work as soon as deemed medically fit.
- The employee's health care provider must review and certify that the employee can perform the essential functions defined in a modified (temporary assignment) job description. If the health care provider changes the temporary assignment position description, the employing/hosting department must determine if the change is acceptable. The health care provider must approve any changes proposed by the hosting department.
- The physician's restrictions are provided to those required to ensure that the restrictions are followed.
- Supervisors must be made aware of the restrictions to ensure the modified work meets the physician's orders. If the medical provider states the employee can return to work with work restrictions Lauth will notify the employee via a temporary assignment offer of employment. If the employee fails to report to work on the indicted start date the workers compensation company is to be immediately notified and the employee may be subject to discipline for failure to return to work.
- The employee must obtain the appropriate forms from the Safety Representative or Human Resources to be completed by his/her health care provider at each visit or every 30 days, whichever is sooner, for assessment of the employee's ability to perform the functions of the temporary assignment position. The employee is required to submit the

work status form (or suitable replacement) to his/her supervisor within one working day following each visit to his/her health care provider.

- If the health care provider states that the employee cannot perform any temporary assignments/ modified duties, Lauth may challenge the decision depending on the injury and request independent medical information.

Temporary Assignment / Modified Work Procedures

Physical demands are assessed for modified duty jobs to ensure they can be performed safely by injured employees.

A list of jobs available to be performed for employees on modified duty should be maintained. All jobs should be assessed to determine which jobs can be performed by persons working under specific restrictions. It is recommended that a Physical Demands Analysis (PDA) be prepared for each of these jobs to ensure workers are placed accordingly.

Training Requirements

Employees are informed of the Lauth Safe Return to Work program.

Employees may be informed by communicating the Safe Return to Work policy via a safety meeting or toolbox talk, reviewing the policy as part of the new employee orientation, and/or posting the policy in a conspicuous location, etc.

Section 30 - Safety Inspections

Purpose
To provide a means to conduct and document our efforts to evaluate Lauth jobsites and shop areas by identifying safety deficiencies and correcting them.

Definitions
Safety Inspection - A systematic approach to evaluate and document the current status of an organization's safety program.
Responsibilities

All levels of management will be responsible for continually assessing working conditions for compliance with safety and health standards.

All employees are to report any unsafe conditions immediately to their Project Manager. Any employee who works with equipment that is unsafe or allows a known unsafe condition to exist and exposes other employees to danger may be subject to disciplinary action.

Periodically, the Project Manager will utilize the Safety Inspection Report form to document the findings of their ongoing safety evaluations.

Procedures
Inspections are performed by the Project Manager or Safety Representative and may be documented by using the Safety Inspection Report form or similar means.

A copy of the Safety Inspection Report form or other form of report will be forwarded to parties responsible for corrective action.

The measures taken to correct deficiencies will be noted on the inspection report and returned to the job file for recordkeeping.

Training Requirements
All employees shall be trained in the procedures outlined above during New Hire Orientation and annual refresher training.

Safety Inspections will be conducted by trained employees.

Section 31 - Safety Orientation

Purpose
All new employees shall be given an orientation prior to beginning work for Lauth

Definitions

Annual Refresher training - In conjunction with the calendar year, a follow-up orientation with the Safety Representative and all current employees.

New Hire Orientation - Sets the Lauth safety foundation. It will present general information that will be addressed and reinforced in more detail throughout the orientation process.

Responsibilities
Within the first day of work, the Safety Representative will provide an orientation to all new employees. The Employee Orientation Form shall be completed and signed by both the employee and the Safety Representative. The completed form will detail specific policies discussed and become part of the employee's personnel file.

Procedures
During the new-hire orientation a review of specific safety procedures and requirements as well as task specific hazards and controls that the new employee needs to understand. Topics include:

- Hazardous elements specific to the workplace, including hazardous materials, machinery, or noise.
- Hazard control measures such as administrative or engineering controls, safe operating procedures and personal protective equipment.
- Emergency response procedures, evacuation routes, and access to medical assistance.

Items to be covered during the orientation include all policies from safety program as listed in the table of contents.

Training Requirements
After the initial orientation all employees will attend the refresher orientation meeting annually to confirm original training and to confirm any changes occurring during the year.

Section 32 - Safety Training and Education

Purpose
To ensure that employees understand established safety and health policies and procedures as mandated by the company or OSHA. Project Managers and lead persons should be well trained on these safety responsibilities and the reasons for them, including:

- Analyzing the work under their supervision to identify unrecognized potential hazards;
- Maintaining physical protection in their work areas;
- Reinforcing employee training on the nature of potential hazards and on needed protective measures, through performance feedback and enforcement of safe work practices.

Definitions
Competent Person - Capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and authorized to take prompt corrective action.

Qualified Person - A recognized degree, certificate, or professional standing, or extensive knowledge, training, and experience enabling successful demonstration of ability to solve or resolve problems relating to the subject matter, the work, or the project.

Procedures
Safety training and education will be based on OSHA Regulations 29 CFR 1926, Occupational Safety and Health Standards for Construction Industry, and other internal company safety training requirements.

The following topics should be discussed and reinforced as needed:

- Explain any special conditions, hazards or work practices.
- Provide specialized equipment and personal protective equipment usage instructions as necessary.
- Review the SDS's that pertains to the work being done.
- Review accidents and/or incidents that have occurred at any Lauth jobsite.

Lauth will initially send a minimum of one Project Manager to an OSHA Construction 10 Hour Class. Based upon business needs, Project Manager may be sent annually thereafter.

Documentation of Lauth safety training activities will be kept on file in the Lauth office.

Employees required to operate aerial platforms shall be trained prior to use and shall be certified. Daily inspections of aerial platforms are required using the pre-start inspection form.

All Project Managers, Job Superintendents, and Foreman will be trained on the company's specific safety policy.

Training Requirements
All employees shall be trained in the procedures outlined above during New Hire Orientation and annual refresher training.

Section 33 - Scaffolding

Purpose
The purpose of this policy is to provide guidelines for working safety around and on scaffolding.

Scope
This policy applies to all Lauth employees working near or on scaffolding.

Definitions
Competent Person - One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Qualified Person - One who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated his/her ability to solve or resolve problems related to the subject matter, the work of the project.

Supported Scaffolds - One or more platforms supported by outrigger beams, brackets, poles, legs, uprights, posts, frames, or similar rigid support. Examples include mobile scaffold, stationary scaffold, mason scaffold, and pump jack scaffold.

Suspension Scaffolds - One or more platforms suspended by ropes or other non-rigid means from an overhead structure(s). Examples include catenary scaffold, float (ship) scaffold, and masons' multi-point adjustable suspension scaffold.

Procedures
General Requirements

- All scaffolds are to conform to the appropriate General Requirements listed. Additional requirements listed under the section 1926.452 “Additional requirements applicable to specific types of scaffolds” also shall be followed when using scaffold types indicated in section 1926.452.
- Scaffolds shall be erected, moved, dismantled, or altered only under the supervision and direction of a competent person qualified in scaffold erection, moving, dismantling or alteration. Such activities shall be performed only by experienced and trained employees selected for such work by the competent person.
- Capacity
    - Scaffolds and scaffold components shall be capable of supporting, without failure, its own weight and at least 4 times the maximum intended load.
    - Scaffolds shall be designed by a qualified person and shall be constructed and loaded in accordance with that design.
- Scaffold Platform Construction
    - Each platform on all working levels of scaffolds shall be fully planked or decked between the front uprights and the guardrail supports.
    - Each platform unit shall be installed so that the space between adjacent units and the space between the platform and the uprights is no more than 1 inch wide, except where the contractor can demonstrate that a wider space is necessary.
    - Each scaffold walkway shall be at least 18 inches wide.

- The front edge of all platforms shall not be more than 14 inches from the face of the work, unless the type of work indicates guardrail systems are erected along the front edge and/or personal fall arrest systems are used.
- Each end of a platform, unless cleated or otherwise restrained by hooks or equivalent means, shall extend over the centerline of its support at least 6 inches.
- Each end of a platform 10 feet or less in length shall not extend over its supports more than 12 inches unless designed and installed so that the extended portion of the platform is able to employees and/or materials without tipping, or has guardrails which block employee access to the extended portion.
- Each platform greater than 10 feet shall not extend over its support more than 18 inches, unless it is designed and installed so that the extended portion of the platform is able to support employees without tipping, or has guardrails which block employee access to the extended end.
- Scaffold platforms joined to create a long platform shall rest on a separate support surface.
- Scaffold platforms that overlap to create a long platform, shall overlap only over supports and not be less than 12 inches unless the platforms are nailed together or otherwise restrained.
- At all points of a scaffold where the platform changes direction, any platform that rests on a bearer at an angle other than a right angle shall be laid first, and platforms which rest at right angles over the same bearer shall be laid second.
- Wood platforms shall not be covered with opaque finishes.
- Scaffold components manufactured by different manufacturers shall not be intermixed unless the components fit together without force and the scaffold's structural integrity is maintained by the user.

<u>Criteria for Supported Scaffolds</u>

- Supported scaffolds with a height to base width ratio of more than four to one (4:1) shall be restrained from tipping by guying, tying, bracing, or equivalent means.
- Guys, ties, and braces shall be installed according to the scaffold manufacturer's recommendations or at the closest horizontal member to the 4:1 height and be repeated vertically at locations of horizontal members every 20 feet or less thereafter for scaffolds 3 feet wide or less, and every 26 feet or less thereafter for scaffolds greater than 3 feet wide.
- The top guy, tie or brace of completed scaffolds shall be placed no further than 4:1 height from the top. Such guys, ties and braces shall be installed at each end of the scaffold and at horizontal intervals not to exceed 30 feet.
- Supported scaffold poles, legs, posts, frames, and uprights shall be on base plates, mud sills or other adequate firm foundations.
- Supported scaffold poles, legs, posts, frames, and uprights shall be plumb and braced to prevent swaying and displacement.

<u>Access</u>

- When scaffold platforms are more than 2 feet above or below a point of access, ladders, stairtowers, ramps, walkways, integral prefabricated scaffold access, or direct access from another scaffold, structure, personnel hoist, or similar surface shall be used.
- Portable, hook-on, and attachable ladders shall be positioned so as not to tip the scaffold.

- Hook-on and attachable ladders shall be positioned so that their bottom rung is not more than 24 inches above the scaffold supporting level.
- When hook-on and attachable ladders are used on a supported scaffold more than 35 feet high, they shall have rest platforms at 35 foot maximum vertical intervals.
- Hook-on and attachable ladders shall be specifically designed for use with the type of scaffold used.
- Hook-on and attachable ladders shall have a minimum rung length of 11½ inches.
- Hook-on and attachable ladders shall have uniformly spaced rungs with a maximum spacing between rungs of 16 ¾ inches.
- Steps and rungs of ladder and stairway type access shall line up vertically with each other between rest platforms.
- Direct access to or from another surface shall be used only when the scaffold is not more than 14 inches horizontally and not more than 24 inches vertically from the other surface.
- Requirements for Stairway-type Ladders:
    - Be positioned such that their bottom step is not more than 24 inches above the scaffold supporting level.
    - Be provided with rest platforms at 12 foot maximum vertical intervals.
    - Have a minimum step width of 16 inches except that mobile scaffolds stairway-type ladders shall have a minimum step width of 11½ inches.
    - Have slip-resistant treads on all steps and landings.
- Requirements for Stairtowers:
    - Be positioned such that their bottom step is not more than 24 inches above the scaffold supporting level.
    - A stairrail consisting of a toprail and a midrail shall be provided on each side of each scaffold stairway.
    - Stairrail systems and handrails shall be surfaced to prevent injury to contractor employees from punctures or laceration, and to prevent snagging of clothing.
    - The ends of stairrail systems and handrails shall be constructed so that they do not constitute a projection hazard.
    - Handrails and toprails that are used as handrails shall be at least 3 inches from other objects.
    - Stairrails shall not be less than 28 inches nor more than 37 inches from the upper surface of the stairrail to the surface of the tread, in line with the face of the riser at the forward edge of the tread.
    - A landing platform at least 18 inches wide by at least 18 inches long shall be provided at each level.
    - Each scaffold stairway shall be at least 18 inches between stair rails.
    - Treads and landings shall have slip-resistant surfaces.
    - Stairways shall be installed between 40 degrees and 60 degrees from horizontal.
    - Guardrails meeting the standards requirements shall be provided on the open sides and ends of each landing.
    - Riser heights shall be uniform, within ¼ inch, for each flight of stairs.
    - Tread depth shall be uniform, within ¼ inch, for each flight of stairs.
- Requirements for Integrated Prefabricated Scaffold Access Frames:
    - Be specifically designed and constructed for use as ladder rungs.
    - Have a rung length of at least 8 inches.

- Not be used as work platforms when rungs are less than 11½ inches in length, unless affected employee uses fall protection, or a positioning device, which complies with 1926.502.
- Be uniformly spaced within each frame section.
- Be provided with rest platforms at 35-foot maximum vertical intervals all supported scaffolds more than 35 feet high.
- Have a maximum spacing between rungs of 16¾ inches. Non-uniform rung spacing caused by joining end frames together is allowed, provided the resulting spacing does not exceed 16¾ inches.
- The contractor shall provide safe means of access for each employee erecting or dismantling a scaffold where the provision of safe access is feasible and does not create a greater hazard. The contractor shall have a competent person determine whether it is feasible or would pose a greater hazard to provide, and have employees use a safe means of access. This determination shall be based on site conditions and the type of scaffold being erected or dismantled.
- Hook-on or attachable ladders shall be installed as soon as scaffold erection has progressed to a point that permits safe installation and use.
- When erecting or dismantling tubular welded frame scaffolds, (end) frames with horizontal members that are parallel, level and are not more than 22 inches apart vertically may be used as climbing devices for access, provided they are erected in a manner that creates a usable ladder and provides good hand hold and foot space.
- Cross braces on tubular welded frame scaffolds shall not be used as a means of access or egress.

<u>Use</u>

- Scaffolds and scaffold components shall not be loaded in excess of their maximum intended loads or rated capacities, whichever is less.
- Scaffolds and scaffold components shall be inspected for visible defects by a competent person before each work shift, and after any occurrence that could affect a scaffold's structural integrity.
- Any part of a scaffold damaged or weakened so that its strength is less than that required by this standard shall be immediately repaired or replaced, braced to meet those provisions, or removed from service until repaired.
- Scaffolds shall not be moved horizontally while employees are on them, unless they have been designed by a registered professional engineer specifically for such movement or, for mobile scaffolds, where the provisions of 1926.452(w) are followed.
- Adequate clearance between scaffolds and power lines shall be maintained.
- Employees shall be prohibited from working on scaffolds with snow, ice, or other slippery material except as necessary for removal of such materials.
- Work on or from scaffolds is prohibited during storms or high winds unless a competent person has determined that it is safe for employees to be on the scaffold and those employees are protected by a personal fall arrest system or wind screens. Wind screens shall not be used unless the scaffold is secured against the anticipated wind forces imposed.
- Where swinging loads are being hoisted onto or near scaffolds such that the loads might contact the scaffold, tag lines or equivalent measures to control the loads shall be used.
- Debris shall not be allowed to accumulate on platforms.

- Makeshift devices, such as but not limited to boxes and barrels, shall not be used on top of scaffold platforms to increase the working level height of personnel.
- Ladders shall not be used on scaffolds to increase the working level height of employees, except on large area scaffolds where employees have satisfied the following criteria:
- When the ladder is placed against a structure that is not part of the scaffold.
- The platform units shall be secured to the scaffold to prevent their movement.
- The ladder legs shall be on the same platform or other means shall be provided to stabilize the ladder against unequal platform deflection.
- The ladder legs shall be secured to prevent them from slipping or being pushed off the platform.
- Platform shall not deflect more than 1/60 of the span when loaded.

Fall Protection

- Each employee on a scaffold more than 10 feet above a lower level shall be protected from falling to that lower level.
- The contractor shall have a competent person determine the feasibility and safety of providing fall protection for personnel erecting or dismantling supported scaffolds. Contractors are required to provide fall protection for personnel erecting or dismantling supported scaffolds where the installation and use of such protection is feasible and does not create a greater hazard.
- Personal fall arrest systems used on scaffolds shall be attached by a lanyard to a vertical lifeline, horizontal lifeline, or scaffold structural member.
- Guardrail systems installed to meet the requirements of the section shall comply with the following provisions:
- Guardrail systems shall be installed along all open sides and ends of platforms.
- Guardrail systems shall be installed before the scaffold is released for use by personnel other than erection/dismantling crews.
- The top edge height on supported scaffolds manufactured and placed in service before January 1, 2000, and on all suspended scaffolds where both a guardrail and a personal fall arrest system are required shall be between 36 and 45 inches.
- When midrails, screens, mesh, intermediate vertical members, solid panels, or equivalent structural members are used, they shall be installed between the top edge of the guardrail system and the scaffold platform.
- Each toprail or equivalent member of a guardrail system shall be capable of withstanding, without failure, a force applied in any downward or horizontal direction at any point along its top edge of at least 100 pounds for guardrail systems installed on single-point adjustable suspension scaffolds or two-point adjustable suspension scaffolds, and at least 200 pounds for guardrail systems installed on all other scaffolds.
- Midrails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members of a guardrail system shall be capable of withstanding, a force applied in any downward or horizontal direction at any point along the midrail or other member of at least 75 pounds for guardrail systems with a minimum 100 pound toprail capacity, and at least 150 pounds for a guardrail system with a minimum 200 pound toprail capacity.
- Guardrails shall be surfaced to prevent injury to a contractor employee from punctures or lacerations, and to prevent snagging of clothing.

- The ends of all rails shall not overhang the terminal posts except when such overhang does not constitute a projection hazard to employees.
- Cross bracing is acceptable in the place of a midrail when the crossing point of the two braces is between 20 inches and 30 inches above the work platform or as a toprail when the crossing point of the two braces is between 38 inches and 48 inches above the work platform. The end points at each upright shall be no more than 48 inches apart.

Falling Object Protection

- In addition to wearing hard hats each employee on a scaffold shall be provided with additional protection from falling hand tools, debris, and other small objects through the installation of toeboards, screens, or guardrails systems, or through the erection of debris nets, catch platforms, or canopy structures that contain or deflect the falling objects.
- Where there is danger of tools, material, or equipment falling from a scaffold and striking personnel below, the following provisions apply:
- The area below the scaffold to which objects can fall shall be barricaded, and personnel shall not be permitted to enter the hazard area.
- A toeboard shall be erected along the edge of the platforms more than 10 feet above lower levels for a distance sufficient to protect personnel below.
- Where tools, materials, or equipment are piled to a height higher than the top edge of the toeboard, paneling or screening extended from the toeboard or platform to the top of the guardrail shall be erected for a distance sufficient to protect personnel below.
- A guardrail system shall be installed with openings small enough to prevent passage of potential falling objects.
- A canopy structure, debris net, or catch platform strong enough to withstand impact forces of the potential falling objects shall be erected over the personnel below.
- Where used, toeboards shall be:
    - Capable of withstanding, without failure, a force of at least 50 pounds applied in any downward or horizontal direction at any point along the toeboard.
    - At least three and one-half inches high from the top edge of the toeboard to the level of the walking/working surface. Toeboards shall be securely fastened in place at the outermost edge of the platform and have not more than inch clearance above the walking/working surface. Toeboards shall be solid or with openings not over one inch in the greatest dimension.

Inspection

- Scaffolds and scaffold components shall be inspected for visible defects by a competent person before each work shift, and after any occurrence which could affect a scaffold's structural integrity.
- Scaffold tags will be utilized to document the daily competent person inspection. Complete Masonry will utilize a color coded tagging system as described below:
    - Green – Scaffold is completed.
    - Yellow – CAUTION – Special caution is to be taken. Items listed for caution include: No handrails; no midrails; openings in deck; no toeboards; safety harness required; overhead construction; short ladder; other. The yellow tag will include an authorized signature by a competent person.
    - Red – DANGER: DO NOT USE – Scaffold Under Construction / Incomplete Scaffolding

Training Requirements

- Each employee who performs work while on a scaffold must be trained by a person qualified in the subject matter to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards. The training shall include the following areas, as applicable:
    - The nature of any electrical hazards, fall hazards, and falling object hazards in the work area;
    - The correct procedures for dealing with electrical hazards and for erecting, maintaining and disassembling the fall protection systems and falling object protection systems being used;
    - The proper use of the scaffold, and the proper handling of materials on the scaffold;
    - The maximum intended load and the load carrying capacities of the scaffolds used; and;
    - The proper procedures in the use of PPE.
- Each employee involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting a scaffold must be trained by a competent person to recognize any hazards associated with the work in question. The training shall include the following areas, as applicable:
    - The nature of scaffold hazards;
    - The correct procedures for erecting, disassembling, moving, operating, repairing, inspecting and maintaining the type of scaffold in question;
    - The design criteria, maximum intended load-carrying capacity and intended use of the scaffold in question;
    - The proper procedures in the use of PPE.
- When there is reason to believe that a contractor employee lacks the skill or understanding needed for safe work involving the erection, use or dismantling of scaffolds, the employee shall be retrained so that the requisite proficiency is regained.
- Retraining is required in at least the following situations:
    - Where changes at the worksite present a hazard about which an employee has not been previously trained;
    - Where changes in the types of scaffolds, fall protection, falling object protection, or other equipment present a hazard about which an employee has not been previously trained;
    - Where inadequacies in an affected employee's work involving scaffolds indicate that the employee has not retained the requisite proficiency.

Section 34 - Signs and Barricades

Purpose
To provide protection to the public and employees, Lauth shall rely on the Construction manager that contracts for Lauth services to have installed signs, signals and barricades identifying and isolating hazards associated with a project.

Definitions
Barricades - means an obstruction to deter the passage of persons or vehicles.

Signs - means the warnings of hazard, temporarily or permanently affixed, and placed at locations where hazards exist.

Signals - are moving signs, provided by workers, such as flagmen, or by devices, such as flashing lights, to warn of possible or existing hazards.

Responsibilities
Lauth will rely on Project Managers to be responsible to ensure signs and symbols shall be visible at all times when work is being performed, and shall be removed or covered promptly when the hazards no longer exist.

Procedures
Typical Hardware to include:
Danger Signs

- Danger signs shall be used only where an immediate hazard exists.
- Danger signs shall have red as the predominating color for the upper panel; black outline on the borders; and a white lower panel for additional sign wording.

Caution Signs

- Caution signs shall be used only to warn against potential hazards or to caution against unsafe practices.
- Caution signs shall have yellow as the predominating color; black upper panel and borders: yellow lettering of "caution" on the black panel; and the lower yellow panel for additional sign wording. Black lettering shall be used for additional wording.
- Standard color of the background shall be yellow; and the panel, black with yellow letters. Any letters used against the yellow background shall be black.

Exit Signs

- Exit signs, when required, shall be lettered in legible red letters, not less than 6 inches high, on a white field and the principal stroke of the letters shall be at least three-fourths inch in width.

Safety Instruction Signs

- Safety instruction signs, when used, shall be white with green upper panel with white letters to convey the principal message. Any additional wording on the sign shall be black letters on the white background.

Directional Signs

- Directional signs shall be white with a black panel and a white directional symbol. Any additional wording on the sign shall be black letters on the white background.

Traffic Signs

- Construction areas shall be posted with legible traffic signs at points of hazard.
- All traffic control signs or devices used for protection of construction workmen shall conform to American National Standards Institute D6.1-1971, Manual on Uniform Traffic Control Devices for Streets and Highways.

Signaling

- When operations are such that signs, signals, and barricades do not provide the necessary protection on or adjacent to a highway or street, flagmen or other appropriate traffic controls shall be provided.
- Hand signaling by flagmen shall be by use of red flags at least 18 inches square or sign paddles, and in periods of darkness, red lights.
- Flagmen shall be provided with and shall wear a red or orange warning garment while flagging. Warning garments worn at night shall be of reflective material.

Barricades

- Barricades for protection of employees shall conform to the portions of the American National Standards Institute D6.1-1971, Manual on Uniform Traffic Control Devices for Streets and Highways, relating to barricades.

Training Requirements

All employees shall be trained in the procedures outlined above during New Hire Orientation and annual refresher training.

Section 35 - Silica

Purpose
To inform employees and contractors of the hazards associated with working near crystalline silica and protect the employees form the hazards of crystalline silica.

Scope
This section applies to all Lauth employees, subcontractors, job classifications, etc. that may be exposed to crystalline silica during routine or non-routine tasks.

Reference
29 CFR 1926.1153

Definitions
Action level - means a concentration of airborne respirable crystalline silica of 25 µg/m3, calculated as an 8 hour TWA.

Employee exposure - means the exposure to airborne respirable crystalline silica that would occur if the employee were not using a respirator.

High-efficiency particulate air [HEPA] filter - means a filter that is at least 99.97 percent efficient in removing monodispersed particles of 0.3 micrometers in diameter.

Respirable crystalline silica - means quartz, cristobalite, and/or tridymite contained in airborne particles that are determined to be respirable by a sampling device designed to meet the characteristics for respirable-particle size- selective samplers specified in the International Organization for Standardization (ISO) 7708:1995: Air Quality-Particle Size Fraction Definitions for Health-Related Sampling.

Competent person - means an individual who is capable of identifying existing and foreseeable respirable crystalline silica hazards in the workplace and who has authorization to take prompt corrective measures to eliminate or minimize them.

Properties and Hazards of Silica
Crystalline silica is a basic component of soil, sand, granite, and many other minerals. Quartz is the most common form of crystalline silica. Cristobalite and tridymite are two other forms of crystalline silica. All three forms may become respirable size particles when workers chip, cut, drill, or grind objects that contain crystalline silica.

The dust created by cutting, grinding, drilling or otherwise disturbing these materials can contain crystalline silica particles. Crystalline silica has been classified as a human lung carcinogen. Additionally, breathing crystalline silica dust can cause silicosis, which in severe cases can be disabling, or even fatal. The respirable silica dust enters the lungs and causes the formation of scar tissues, thus reducing the lungs' ability to take in oxygen. Since silicosis affects lung function, it makes one more susceptible to lung infections like tuberculosis. Additionally, smoking cause’s lung damage and adds to the damage caused by breathing silica dust.

For tasks not listed in 1926.1153 Table 1 or where engineering and work practice controls are not properly implemented the following procedures will be performed to determine employees' exposure:

- An initial assessment will be performed to determine the 8 hour TWA for all employees that represents the exposures of that job classification on that shift in that area. Where multiple employees performing the same task are working in the same area only a fraction of the employees need to be sampled to provide employee exposure.
    - Monitoring will be continued if the following conditions are present after the initial assessment and subsequent monitoring:
    - Exposure above the action level but at or below the permissible exposure limit (PEL) – repeat monitoring within six months of most recent monitoring.
    - Exposures above the PEL – repeat monitoring within three months of most recent monitoring.
    - When the most recent (non-initial) monitoring is below the action level repeat monitoring will be done within six months of most recent monitoring.
    - Monitoring will be discontinued if the following occurs:
        - Initial assessment is below the action level.
        - When two consecutive assessments, done seven or more days apart, are below the action level.
- A reassessment will be performed if there is a change in production, process, control equipment, personnel, work practices, or if there is reason to believe exposures have risen above the action level.
- Employees will be notified within five working days after the assessment session has been completed. Each affected employee with be notified individually of their exposure in writing or the results will be posted in an area that is accessible to all affected employees.
- If the exposure assessment shows that the PEL has been exceeded the employees will be notified of what control measures will be put in place to get the exposure below the PEL.

<u>Competent Person</u>

The onsite Lauth Foreman will serve as the competent person. The Foreman is responsible for performing frequent and regular inspections of job sites, materials, and equipment to implement the written exposure control plan.

Engineering and work practice controls will be the used to reduce employee exposure to or below the PEL wherever feasible.

Engineering controls include:

- Using equipment with an integrated water delivery system that feeds water to the cutting surface.
- Using equipment with a dust collection system that has an air flow recommended by the manufacturer or greater and have a filter that has a 99% or greater efficiency and filter cleaning mechanism.
- Having proper ventilation when working indoors or in an enclosed space.

Work Practice Controls include:

- Operate and maintain tools in accordance with the manufacturer's instructions.
- Follow proper housekeeping rules.

When engineering and work practice controls are not sufficient enough to reduce the exposure to or below the PEL, then respiratory protection will be used as well as the engineering and work practice controls. When respirator use is required the employees will be provided the proper respirator and a respiratory protection will be implemented that is in compliance with 1910.134.

Work Area Access

When necessary, access to work areas will be restricted to minimize the number of employees exposed to respirable crystalline silica and their level of exposure, including exposures generated by other employers or sole proprietors.

The following procedures will be reviewed and implemented for each work site. Due to the variability of when employees are exposed to silica and the changing construction environment, review and revisions of these procedures may be required during a project. If this situation occurs, then additional communications to employees may be necessary.

Identify work areas where employees are likely to be exposed to silica. If appropriate and helpful, use a general plat or map of the work site to identify work areas where employees are exposed to silica.

- The Competent Person shall regularly evaluate the work site and ensure that areas that cause employees to be exposed are properly restricted and employees informed.
- If appropriate, coordinate with other contractors on the worksite regarding work activities. To the extent possible, schedule high exposure tasks when others are not likely to be in the work area.
- Employees shall maintain a safe distance from dust clouds generated by work activities.
- Employees shall reposition themselves so that they will not exposed to silica.

Medical Surveillance

Lauth will make medical surveillance available at no cost to the employee, and at a reasonable time and place, for each employee who will be required to use a respirator for 30 or more days per year for the protection from silica.

All medical examinations and procedures will be performed by a PLHCP. Lauth will make available an initial (baseline) medical examination within 30 days after initial assignment, unless the employee has received a medical examination that meets the requirements of this section within the last three years. The examination shall consist of:

- A medical and work history, with emphasis on: Past, present, and anticipated exposure to respirable crystalline silica, dust, and other agents affecting the respiratory system; any history of respiratory system dysfunction, including signs and symptoms of respiratory disease (e.g., shortness of breath, cough, wheezing); history of tuberculosis; and smoking status and history;
- A physical examination with special emphasis on the respiratory system;
- A chest X-ray (a single posteroanterior radiographic projection or radiograph of the chest at full inspiration recorded on either film (no less than 14 x 17 inches and no more than 16 x 17 inches) or digital radiography systems), interpreted and classified according to the International Labor Office (ILO) International Classification of Radiographs of Pneumoconioses by a NIOSH-certified B Reader;

- A pulmonary function test to include forced vital capacity (FVC) and forced expiratory volume in one second (FEV1) and FEV1/FVC ratio, administered by a spirometry technician with a current certificate from a NIOSH approved spirometry course;
- Testing for latent tuberculosis infection; and
- Any other tests deemed appropriate by the PLHCP.

Lauth will make available medical examinations at least every three years, or more frequently if recommended by the PLHCP.

Lauth will make and maintain an accurate record for each employee covered by medical surveillance. The record will include the following information about the employee:

- Name and social security number;
- A copy of the PLHCPs' and specialists' written medical opinions; and
- A copy of the information provided to the PLHCPs and specialists.

Medical records and monitoring records will be maintained for 30 years plus the length of employment.

Housekeeping

Employees will not perform any dry sweeping or brushing when the activity could lead to exposure to crystalline silica.

The proper housekeeping methods are:

- Wet sweeping;
- HEPA filter vacuuming and;
- Any other methods used to reduce the exposure.

Employees will only use compressed air to clean clothing or surfaces if there is proper ventilation set up to capture all the dust.

Training Requirements

Employees which may be exposed to silica will receive awareness training. Employees must be able to demonstrate knowledge and understanding of at least the following:

- The health hazards associated with exposure to respirable crystalline silica;
- Specific tasks in the workplace that could result in exposure to respirable crystalline silica;
- Specific measures Lauth has implemented to protect employees from exposure to respirable crystalline silica, including engineering controls, work practices, and respirators to be used;
- Identify the designated competent person; and
- The purpose and a description of the medical surveillance program.

Lauth will include respirable crystalline silica in the Hazard Communication program to comply with the hazard communication standard (29 CFR 1910.1200). This includes ensuring that each employee has access to labels on containers of crystalline silica and safety data sheets, and is trained accordingly. This training will include the following hazards: cancer, lung effects, immune system effects, and kidney effects.

Lauth shall review and evaluate the effectiveness of the written exposure control plan at least annually and update it as necessary.

Section 36 - Stairways and Ladders

Purpose
Procedures for the construction use and inspection of stairways and ladders at the jobsite.

Scope
This section applies to all Lauth employees and subcontractors that use ladders at our jobsites.

Definitions
Cleat - A ladder crosspiece of rectangular cross section placed on edge upon which a person may step while ascending or descending a ladder.

Double-Cleat Ladder - A ladder similar in construction to a single-cleat ladder, but with a center rail to allow simultaneous two-way traffic for employees ascending or descending.

Equivalent - Alternative designs, materials, or methods that the employer can demonstrate will provide an equal or greater degree of safety for employees than the method or item specified in the standard.

Failure - Load refusal, breakage or separation of component parts. Load refusal is the point where the structural members lose their ability to carry the loads.

Fixed-Ladder - A ladder that cannot be readily moved or carried because it is an integral part of a building or structure. A side-step fixed ladder is a fixed ladder that requires a person getting off at the top to step to the side of the ladder side rails to reach the landing. A through fixed ladder is a fixed ladder that requires a person getting off at the top to step between the side rails of the ladder to reach the landing.

Individual-Rung/Step Ladders - Ladders without a side rail or center rail support. Such ladders are made by mounting individual steps or rungs directly to the side or wall of the structure.

Job-Made Ladder - A ladder that is fabricated by employees, typically at the construction site, and is not commercially manufactured. This definition does not apply to any individual-rung/step ladders.

Ladder Stand - A mobile fixed size self-supporting ladder consisting of a wide flat tread ladder in the form of stairs. The assembly may include handrails.

Maximum Intended Load - The total load of all employees, equipment, tools, materials, transmitted loads, and other loads anticipated to be applied to a ladder component at any one time.
Nosing - That portion of a tread projecting beyond the face of the riser immediately below.

Riser Height - The vertical distance from the top of a tread to the top of the next higher tread or platform/landing or the distance from the top of a platform/landing to the top of the next higher tread or platform/landing.

Side-Step Fixed Ladder - See definition above on "Fixed Ladder."

Single-Cleat Ladder - A ladder consisting of a pair of side rails, connected together by cleats, rungs, or steps.

Single-Rail Ladder - A portable ladder with rungs, cleats, or steps mounted on a single rail instead of the normal two rails used on most other ladders.

Stairrail System - A vertical barrier erected along the unprotected sides and edges of a stairway to prevent employees from falling to lower levels. The top surface of a stairrail system may also be a "handrail".

Step Stool (Ladder Type) - A self-supporting, foldable, portable ladder, nonadjustable in length, 32 inches or less in overall size, with flat steps and without a pail shelf, designed to be climbed on the ladder top cap as well as all steps. The side rails may continue above the top cap.

Unprotected Sides and Edges - Any side or edge (except at entrances to points of access) of a stairway where there is no stairrail system or wall 36 inches (.9 m) or more in height, and any side or edge (except at entrances to points of access) of a stairway landing, or ladder platform where there is not wall or guardrail system 39 inches (1 m) or more in height.

Responsibilities
Lauth Project Managers are responsible for ensuring their workers use ladders according to the rules and procedures described in this section.

All stairways and ladders shall be inspected weekly by a competent person.

Procedures
Ladders shall be inspected by a competent person for visible defects on a weekly basis, and after any occurrence that could affect their safe use. The inspection includes but is not limited to the following:

- Cracked or missing cleats.
- Cracked side rails.
- Decaying and rotted wood.
- Installation of rubber feet.
- Nonconductive.
- Slope requirements.
- Handrail requirements.
- Landing requirements.
- Construction requirements.
- Tie-off requirements.
- 3 foot extension requirements.

When transporting, ladders should be carried in the horizontal position to avoid contact with overhead electrical conductors.

If a stairway or ladder does not pass the weekly inspection, it should be removed until the necessary repairs can be made. If for some reason the stairway or ladder cannot be removed, it must be "TAGGED-OUT" of service until the necessary repairs can be made. DO NOT USE AN UNSAFE STAIRWAY OR LADDER!!

A stairway or ladder shall be provided at all personnel points of access when there is a break in elevation of 19" or more to gain access to different levels of the building structure, and no ramp, runway, sloped embankment, or personnel hoist is provided.

- Each ladder shall be capable of supporting 4 times its maximum intended load.
- Ladder rungs, cleats, and steps shall be parallel, level, and uniformly spaced.
- Ladder components shall be surfaced so as to prevent injury to an employee from punctures or lacerations, and to prevent snagging of clothing.

Ladder side rails shall extend 3 feet above the landing surface to which the ladder is used to gain access, or when such an extension is not possible the ladder shall be secured from movement at its top to a rigid support that will not deflect, a grasping device, such as a grabrail, shall be provided to assist employees in mounting and dismounting the ladder.

- Ladders shall be maintained free of oil, grease, and other slipping hazards.
- Ladders shall only be used on level stable surfaces, unless secured to prevent accidental displacement.
- Ladders placed in passageways, doorways, or driveways shall be completely secured, or the area shall be completely barricaded to keep activities away from the ladder.

The areas around the top and base of the ladder shall be kept clear.

- Ladders shall not be moved, shifted, or extended while occupied.
- The top or top step shall not be used for a step on a step ladder.
- Ladders with defects SHALL BE PLAINLY MARKED - "DO NOT USE" AND REMOVE FROM SERVICE.
- Employees shall use at least one hand to grasp the ladder when ascending or descending
- Employees shall not carry any objects or loads that could cause the employee to lose balance and fall.

<u>Portable Ladder Safety Rules</u>

Always inspect ladders before using, or tag out defective ladders. Inspect for the following:

- Broken or damaged cleats or grippers.
- Rungs not tightly joined to the side rails.
- Broken or split side rails.
- Loose or damaged hinge spreaders.
- Angle brackets must not be broken.

Straight ladders will be equipped with cleats or grippers. When in use, the ladder will be lashed at the top and secured at the bottom whenever possible.

Ladders placed in doors or aisle ways of hazardous areas shall be guarded by barricades or a watch person. Warning signs will be posted.

Straight ladders will be placed at the proper angle. The distance from the wall to the base of the ladder will be one fourth of the working length of the ladder.

Straight ladders used for accessing an upper landing surface will have the side rails of the ladder extended at least three feet above the landing.

Stepladders higher than ten feet will be secured or held by another person. Do not stand on the top step or cap of the ladder.

Always face the ladder when ascending and descending. Use both hands. All tools or equipment will be hauled up or down by the use of a hand line.

Do not overreach and always keep your belt buckle inside the side rails. Ladders will not be moved, shifted, or extended while occupied by anyone.

Ladders must not be used as scaffolding.

Do not splice ladders together to make them longer.

Do not leave ladders unattended unless they are secured in place.

Remove grease, oil, and other debris from your hands and feet before climbing.

Only one person shall be on a ladder at any given time.

Always clean and return ladders after use to the same storage area where they came from.

Double-Cleated Ladders
Shall be used when a ladder is the only means of access or egress from a working area for 25 or more employees, or when the ladder is to serve simultaneous two-way traffic.

Stairways
Shall be used whenever the horizontal distance is more than a quarter of the vertical distance (working distance).

Spiral Stairways
Shall never be used unless it is or will become a permanent part of the structure.

If metal pan stairs are to be used during construction, the pans shall be fitted with wood.

All parts of stairways and ladders shall be free of hazardous projections. NEVER USE DOUBLE-HEADED NAILS FOR THE CONSTRUCTION OF STAIRWAYS, LADDERS, HANDRAILS, BARRICADES, ETC.

Slippery conditions such as ice, snow, grease or oil shall be corrected prior to using ladders or stairways. NO EXCEPTIONS.

Training Requirements
All new employees must be trained on ladder safety during their employee orientation. Existing employees shall be re-trained annually or as needed in the following areas:

- The nature of fall hazards in the work area.
- The correct procedures for erecting, maintaining, and disassembling the Fall Protection System to be used.
- The proper construction, placement, and care in handling of all ladders and stairways.

- The maximum intended load carrying capacities of ladders used.

The Subcontractor Safety Representative shall ensure that each employee has been trained by a Competent Person in the above mentioned training requirements.

Section 37 - Steel Erection

Purpose
To provide guidance to Lauth employees on minimum requirements and responsibilities for safe steel erection operations.

Scope
This section applies to all Lauth employees and operations.

Definitions
Anchored bridging - means that the steel joist bridging is connected to a bridging terminus point.

Bolted diagonal bridging - means diagonal bridging that is bolted to a steel joist or joists.

Bridging clip - means a device that is attached to the steel joist to allow the bolting of the bridging to the steel joist.

Bridging terminus point - means a wall, a beam, tandem joists (with all bridging installed and a horizontal truss in the plane of the top chord) or other element at an end or intermediate point(s) of a line of bridging that provides an anchor point for the steel joist bridging.

Choker - means a wire rope or synthetic fiber rigging assembly that is used to attach a load to a hoisting device.

Cold forming - means the process of using press brakes, rolls, or other methods to shape steel into desired cross sections at room temperature.

Competent person - means one who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Connector - means an employee who, working with hoisting equipment, is placing and connecting structural members and/or components.

Construction load (for joist erection) - means any load other than the weight of the employee(s), the joists and the bridging bundle.

Controlled Decking Zone (CDZ) - means an area in which certain work (for example, initial installation and placement of metal decking) may take place without the use of guardrail systems, personal fall arrest systems, fall restraint systems, or safety net systems and where access to the zone is controlled.

Controlled load lowering - means lowering a load by means of a mechanical hoist drum device that allows a hoisted load to be lowered with maximum control using the gear train or hydraulic components of the hoist mechanism. Controlled load lowering requires the use of the hoist drive motor, rather than the load hoist brake, to lower the load.

Controlling contractor - means a prime contractor, general contractor, construction manager or any other legal entity which has the overall responsibility for the construction of the project -- its planning, quality and completion.
Critical lift - means a lift that (1) exceeds 75 percent of the rated capacity of the crane or derrick, or (2) requires the use of more than one crane or derrick.

Decking hole - means a gap or void more than 2 inches (5.1 cm) in its least dimension and less than 12 inches (30.5 cm) in its greatest dimension in a floor, roof or other walking/working surface. Pre-engineered holes in cellular decking (for wires, cables, etc.) are not included in this definition.

Derrick floor - means an elevated floor of a building or structure that has been designated to receive hoisted pieces of steel prior to final placement.

Double connection - means an attachment method where the connection point is intended for two pieces of steel which share common bolts on either side of a central piece.

Erection bridging - means the bolted diagonal bridging that is required to be installed prior to releasing the hoisting cables from the steel joists.

Fall restraint system - means a fall protection system that prevents the user from falling any distance. The system is comprised of either a body belt or body harness, along with an anchorage, connectors and other necessary equipment. The other components typically include a lanyard, and may also include a lifeline and other devices.

Girt (in systems-engineered metal buildings) - means a "Z" or "C" shaped member formed from sheet steel spanning between primary framing and supporting wall material.

Headache ball - means a weighted hook that is used to attach loads to the hoist load line of the crane.

Hoisting equipment - means commercially manufactured lifting equipment designed to lift and position a load of known weight to a location at some known elevation and horizontal distance from the equipment's center of rotation. "Hoisting equipment" includes but is not limited to cranes, derricks, tower cranes, barge-mounted derricks or cranes, gin poles and gantry hoist systems. A "come-a-long" (a mechanical device, usually consisting of a chain or cable attached at each end, that is used to facilitate movement of materials through leverage) is not considered "hoisting equipment."

Leading edge - means the unprotected side and edge of a floor, roof, or formwork for a floor or other walking/working surface (such as deck) which changes location as additional floor, roof, decking or formwork sections are placed, formed or constructed.

Metal decking - means a commercially manufactured, structural grade, cold rolled metal panel formed into a series of parallel ribs; for this subpart, this includes metal floor and roof decks, standing seam metal roofs, other metal roof systems and other products such as bar gratings, checker plate, expanded metal panels, and similar products. After installation and proper fastening, these decking materials serve a combination of functions including, but not limited to: a structural element designed in combination with the structure to resist, distribute and

transfer loads, stiffen the structure and provide a diaphragm action; a walking/working surface; a form for concrete slabs; a support for roofing systems; and a finished floor or roof.

Multiple lift rigging - means a rigging assembly manufactured by wire rope rigging suppliers that facilitates the attachment of up to five independent loads to the hoist rigging of a crane.

Opening - means a gap or void 12 inches (30.5 cm) or more in its least dimension in a floor, roof or other walking/working surface. For the purposes of this subpart, skylights and smoke domes that do not meet the strength requirements of § 1926.754(e)(3) shall be regarded as openings.

Permanent floor - means a structurally completed floor at any level or elevation (including slab on grade).

Personal fall arrest system - means a system used to arrest an employee in a fall from a working level. A personal fall arrest system consists of an anchorage, connectors, and a body harness and may include a lanyard, deceleration device, lifeline, or suitable combination of these. The use of a body belt for fall arrest is prohibited.

Project structural engineer of record - means the registered, licensed professional responsible for the design of structural steel framing and whose seal appears on the structural contract documents.

Purlin (in systems-engineered metal buildings) - means a "Z" or "C" shaped member formed from sheet steel spanning between primary framing and supporting roof material.

Qualified person - means one who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, has successfully demonstrated the ability to solve or resolve problems relating to the subject matter, the work, or the project.

Safety deck attachment - means an initial attachment that is used to secure an initially placed sheet of decking to keep proper alignment and bearing with structural support members.

Shear connector - means headed steel studs, steel bars, steel lugs, and similar devices which are attached to a structural member for the purpose of achieving composite action with concrete.

Steel erection - means the construction, alteration or repair of steel buildings, bridges and other structures, including the installation of metal decking and all planking used during the process of erection.

Steel joist - means an open web, secondary load-carrying member of 144 feet (43.9 m) or less, designed by the manufacturer, used for the support of floors and roofs. This does not include structural steel trusses or cold-formed joists.

Steel joist girder - means an open web, primary load-carrying member, designed by the manufacturer, used for the support of floors and roofs. This does not include structural steel trusses.

Steel truss - means an open web member designed of structural steel components by the project structural engineer of record. For the purposes of this subpart, a steel truss is considered equivalent to a solid web structural member.

Unprotected sides and edges - means any side or edge (except at entrances to points of access) of a walking/working surface, for example a, floor, roof, ramp or runway, where there is no wall or guardrail system at least 39 inches (1.0 m) high.

Responsibilities
The duties of the Lauth include but are not limited to:

- The superintendents will not allow Lauth personnel to work on the open steel during high winds or when the steel is slippery from ice or snow.

Procedures
Bolt buckets will be tied off to steel members to prevent accidental dislodging.

Contractor personnel will not be permitted to work above vertically protruding reinforcing steel until it has been protected against potential impalement.

A safety railing of 1/4 inch wire rope or equal shall be installed, approximately 42 inches high, around the periphery of all temporary planked or temporary metal-decked floors of tier buildings and other multi-floored structures during structural steel assembly.

During connecting, the following should be adhered to:

When connectors are working together, only one person shall give signals. That person will make sure the others working on the job are in the clear. Each contractor employee shall select a position to avoid being struck by a swinging load.

When connectors are working at the same connecting point, they shall connect one end of the structural member before going out to connect the other end, and then only one connector shall go out to connect the other end.

Whenever possible, the connectors shall straddle the beam instead of walking along the top flange.

During the final placing of solid web structural members, the load shall not be cut loose from the load line until the members are secured with not less than two bolts, or the equivalent, at each connection, to keep members from rolling and to sustain anticipated loads. Bolts shall be drawn up wrench-tight.

When columns are being set on base plate or shims, and before the column is cut loose from the load line, either the nuts on the anchor bolts shall be drawn down tight or temporary guys shall be affixed.

A piece shall never be cut loose from the load line until the required minimum number of bolts have been installed; a wrench or driftpin in the hole shall not be used as a substitute for the bolts.

The lifting of multiple loads with a crane (Christmas treeing) is in violation of OSHA regulations and is strictly prohibited due to exposing connectors to overhead suspended loads.

At no time shall any contractor employee be allowed to ride the headache ball, hook, or load.

Permanent floors must be installed so there is not more than eight stories between the erection floor and the uppermost permanent floor, except when structural integrity is maintained by the design.

During skeleton steel erection, a tightly planked temporary floor must be maintained within two stories or 30 feet, whichever is less, below and directly under that portion of each tier of beams on which any work is being performed.

Temporary floor is used in steel erection, when not in use as a floor, must be properly bundled and braced to prevent movement until ready for use at the next tier.

During skeleton steel erection, where tightly planked temporary floor cannot be maintained, and where scaffolds are not used, safety nets must be maintained whenever the potential fall distance exceeds two stories or 25 feet.

A safety railing of ¼ inch wire rope or equivalent must be installed around the perimeter of all temporarily floored buildings, approximately 42 inches high, during structural steel assembly.

When placing structural members, the load must not be released from the hoisting line until the member is secured by at least two bolts, or the equivalent, at each connection, drawn up wrench tight.

Training Requirements
Lauth employee training in the selection and use of personal fall arrest systems is imperative. Before equipment is used, employees must be trained in the use of the system. This should include the following: application limit, proper anchoring and tie off techniques, estimation of free fall distance, including determination of deceleration distance, and total fall-distance to prevent striking a lower level, methods of use, and inspection and storage of the system.

Section 38 - Trenching and Excavations

Purpose
The purpose of this policy is to establish standard guidelines to comply with OSHA 1926.650 and perform work safely in and around excavations.

Scope
This policy applies to all excavations on Lauth projects.

Definitions
Competent Person - One who is capable of identifying existing and predictable hazards in the surroundings, or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt corrective measures to eliminate them.

Excavation - Any man-made cut, cavity, trench, or depression in an earth surface, formed by earth removal.

Hazardous Atmosphere - An atmosphere which by reason of being explosive, flammable, poisonous, corrosive, oxidizing, irritating, oxygen deficient, toxic, or otherwise harmful, may cause death, illness, or injury.

Protective System - A method of protecting employees from cave-ins, from material that could fall or roll from an excavation face or into an excavation, or from the collapse of adjacent structures. Protective systems include support systems, sloping and benching systems, shield or shoring systems, and other systems that provide the necessary protection.

Trench (Trench Excavation) - A narrow excavation (in relation to its length) made below the surface of the ground. In general, the depth is greater than the width, but the width of a trench (measured at the bottom) is not greater than 15 feet (4.6 m). If forms or other structures are installed or constructed in an excavation so as to reduce the dimension measured from the forms or structure to the side of the excavation to 15 feet (4.6m) or less (measured at the bottom of the excavation), the excavation is also considered to be a trench.

Responsibilities
The assigned competent person is responsible for all aspects of safe trenching and excavation. These responsibilities include (but are not limited to) the following:

- Determination of soil type.
- Observe soil for cracks or fissures.
- Assure that implementation of shielding, shoring, benching, sloping, or other means to protect workers and public from cave in accidents is in place.
- Ensuring proper barricades are erected to prevent pedestrians or motorists from accidentally entering a trench or excavation and to aid in the protection of the trench or excavation being an attractive nuisance.
- Ensuring that employees do not enter trenches that are not shored or braced.
- Removing workers from trenches or excavations whenever conditions are such that workers' safety is jeopardized.

Procedures
Before excavating (Jobsite Preplanning):

- Before opening any excavation, efforts shall be made to identify and eliminate any potential hazards such as:
    - Underground Utilities
    - Unstable Soil
    - Groundwater
    - Hazardous Atmospheres
    - Adjacent Exposures
    - Vibration (vehicle traffic)
    - Falls
- Excavations greater than five feet in depth must be safeguarded from cave-in by the use of a protective system such as:
    - Sloping
    - Shielding
    - Benching
    - Shoring
- When choosing a system the tables and charts found in the OSHA standard 1926.650 should be referenced. If manufactured systems are used the contractor may rely on the data supplied by the manufacturer. Shoring and shielding systems must be used, installed, repaired and removed in accordance with the manufacturer's written instruction or the direction of a professional engineer.
- Call or verify that a call has been made to all Local Utility Companies 48 hours before digging to locate any and all underground installations. This contact must be documented. Call 811 “Call Before You Dig”.

<u>During Excavation:</u>

- Adequate protection must be provided to protect employees from falling rock, soil, or other materials and equipment. Keep all loose material at least 2 feet from the edges of the excavation.
- Employees should not be permitted to work in excavations where water has accumulated or is accumulating unless adequate precautions have been taken. Diversion ditches, dikes, or other means must be used to prevent surface water from entering an excavation and to provide drainage to the adjacent area. Pump water from the trench before allowing workers to enter the area. The water removal equipment and operations shall be monitored by a competent person to ensure proper operation.
- Before an employee enters an excavation greater than 4 feet in depth, a competent person must test the atmosphere when oxygen deficiency or a hazardous atmosphere exists or could reasonably exist. Emergency rescue equipment must be readily available and must be attended when hazardous atmospheric conditions exist or may develop.
- Employees should not be permitted under loads that are handled by lifting or digging equipment. Employees should not be allowed to work in the excavation above other employees unless the lower level employees are adequately protected. OSHA requires hard hats when in a trench.
- Sufficient means for exiting excavations 4 feet deep or more must be provided and must be within 25 feet of lateral travel for employees. This can usually be accomplished by providing ladders or an earthen ramp.
- Employees exposed to public vehicular traffic must wear warning vests or other suitable garments made of reflective or high-visibility material.

<u>Daily Inspections:</u>

- Daily inspections are performed of excavations, the adjacent areas, and protective systems prior to the start of work and as conditions change by a competent person. All excavations greater than five feet in depth must be constructed under the supervision of a competent person.
- This is done to identify possible cave-in sites, failure of protective shoring or bracing systems, or other hazardous conditions before the start of work and as needed throughout the work shift.
- Inspections shall also be done after every rainstorm or other hazard increasing event.

Training Requirements

The designated "competent person" shall train workers in the avoidance of excavation and trenching hazards through the use of tool box talks and/or daily work instructions.

Section 39 - Welding Safety

Purpose
Welding and Hot Work, such as brazing or grinding present a significant opportunity for fire and injury. All precautions of this program must be applied prior to commencing any welding or hot work by all Lauth employees.

Scope
This section applies to all Lauth employees and operations.

Definitions
Welding/Hot Works Procedures - any activity which results in sparks, fire, molten slag, or hot material which has the potential to cause fires or explosions. Examples of Hot Works: Cutting, Brazing, Soldering, Thawing Pipes, Torch Applied Roofing, Grinding and Welding.

Special Hazard Occupancies - any area containing Flammable Liquids, Dust Accumulation, Gases, Plastics, Rubber and Paper Products.

Responsibilities
Foremen should ensure that appropriate safety equipment is available to employees for welding procedures.

Foremen are responsible for inspecting the area before welding and/or cutting operations are performed. He/she shall designate precautions to be followed in granting authorization to proceed preferably in the form of a written permit

Procedures
No burning or welding shall be performed for propane storage, natural gas substations, or high volatile material storage.

Permits are required in all "No Smoking" areas and other hazardous areas. The Foremen for these areas will be responsible for issuing the permit.

First aid kits shall be available at all times.

Any welding, cutting or burning of lead base metals and/or paints shall have proper ventilation or respiratory protection.

Oxygen cylinders shall be stored in an upright, secured position, 20 feet from any flammable gases or petroleum products.

Employees in charge of the oxygen or fuel-gas supply equipment, including generators, oxygen or fuel-gas distribution piping systems, shall be instructed and judged competent by their employer for this important work before being left in charge.

Before welding, sweep floors clean and dry, wet down necessary areas, and cover wooden floors with sheet metal or equivalent.

Never use cylinders without suitable reducing valves and regulators to insure suitable pressure requirements.

Never interchange oxygen regulators, hoses or other appliances with similar equipment for other gases.

Report any equipment defect or safety hazards and discontinue use of equipment until its safety has been assured and repairs shall be made only by qualified personnel.

When cleaning welding equipment or hoses do not use compressed air. Use only gas that is intended for use with equipment.

Wear earplugs when welding in closed areas. This will help prevent hot slag from entering the ear.

Do not weld or burn on empty containers such as tanks, drums, barrels, pails, cans, or other containers.

A welding station shall be guarded with non-combustible screens.

During welding, there must be adequate ventilation to exhaust the fumes away from the person welding.

If the object to be welded or cut cannot readily be moved, all moveable fire hazards should be removed.

Where practical all combustibles shall be relocated at least 35 feet from the work site.

Where relocation is impractical, combustibles shall be protected with flame proof covers, shielded with metal, guards, curtains, or wet down material to help prevent ignition of material.

If relocation and/or guarding is impractical, welding and cutting shall not be performed.

Ducts, conveyor systems, and augers that might carry sparks to distant combustibles shall be protected or shut down.

Fire watchers will be required in the following situations:

- In areas where other than a minor fire might develop.
- In areas where combustible material is closer than 35 feet away from the point of operation.
- In areas where combustible material is more than 35 feet away but are easily ignited by sparks.
- Wall or floor openings within a 35 foot radius which exposes combustible material in adjacent areas including concealed spaces in walls or floors.
- When combustible materials are adjacent to the opposite side of metal partitions, walls, ceilings, or roofs and are likely to be ignited by conduction or radiation.

Fire watchers shall have fire extinguishers readily available.

A fire watch shall be maintained for at least a half hour after the welding or cutting operations to detect and extinguish possible smoldering fires.

Cutting or welding shall not be permitted in the following situations:

- In areas not authorized by management.
- In sprinkled buildings while such protection is impaired.
- In the presence of potentially explosive atmospheres, e.g. a flammable
- In areas near the storage of large quantities of exposed, readily ignitable materials.
- In areas where there is dust accumulation of greater than 1/16 inch within 35 feet of the area where welding/hot works will be conducted.

Welding and Cutting in Confined Spaces:

- Ventilation is required in confined spaces during welding and cutting operations.
- When welding or cutting is being performed in any confined spaces the gas cylinders and welding machines shall be secured and left on the outside.
- Where a welder must enter a confined space through a manhole or other small openings, means shall be provided for quickly removing him/her in case of emergency.
- When arc welding is to be suspended for any substantial period of time, all electrodes shall be removed from the holders and the holders carefully located so that accidental contact cannot occur, and the machine is disconnected from the power source.
- Whenever the torch is not to be used for a substantial period of time, the torch valves shall be closed, the fuel-gas and oxygen supply to the torch positively shut off at some point outside the confined area.
- After welding operations are completed, the welder shall mark the hot metal or provide some other means of warning to other workers.

<u>Welding and Hot Work Fire Prevention Measures.</u>
All designated welding areas are established that meet them following requirements:

- Floors swept and cleaned.
- Flammable and combustible liquids and material will be kept 35 feet from work area.
- At least one 10 lb. dry chemical fire extinguisher should be within access of the 35 feet of work area.
- Protective dividers such as welding curtains or non-combustible walls will be provided to contain sparks and slag to the combustible free area.

Training Requirements
Cutters, welders and their supervisors will be suitable trained in the safe operations of their equipment and the safe use of the process. Including sections (1910.254) and with 1910.252(a)(b) & (c).

Employees assigned as fire watchers will be trained in the use of fire extinguishing equipment and familiar with the facilities for sounding an alarm in the event of a fire.

Employees designated to operate welding equipment will be instructed to properly operate the equipment and to know the safety procedures, particularly in areas such as machine hookup, grounding, leaks, switches, manufacturers' instructions, electrode holders, and electric shock.

Operators will be trained to report any equipment defects to their supervisor. Any repairs shall be made only by qualified personnel.

Employee designated to operate arc welding equipment shall be properly trained and qualified to operate such equipment. Employees assigned must be familiar with §1910.254 and §1910.252(a), (b) and (c). If gas shielded arc welding is done, employees shall be familiar with the American Welding Society Standard A6-1-1966.

Section 40 - Forms

ACCIDENT INVESTIGATION PROCEDURES

1. Provide emergency response

FIRST PRIORITY IS SAFETY AND HEALTH OF PEOPLE.

- ☐ Notify appropriate people – medical, fire, rescue.
- ☐ Depending on seriousness of incident, Superintendent, Foreman, or Leadman will accompany injured employee to doctor.
- ☐ Provide care for the injured.
- ☐ "Safe" the area. Prevent other accidents.
- ☐ Notify Safety Representative, Project Manager, and members of investigation team.

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2. Secure the area

- ☐ Observe the big picture.
- ☐ Secure, barricade, and isolate the scene.
  - ☐ Shut off electrical power and other utilities.
  - ☐ Bleed or isolate pressurized systems.
  - ☐ Block mechanical equipment—prevent movement.
  - ☐ Check air quality.
  - ☐ Issue personal protective equipment.
  - ☐ Provide emergency power, lighting, air, etc.
  - ☐ Secure the scene and protect the evidence. (Rope off or post a guard).
  - ☐ Determine extent of damage to equipment, material, or building facilities.
  - ☐ Issue lockout/tagout permits.
  - ☐ Control crowd and onlookers.

- ☐ **COLLECT TRANSIENT AND PERISHABLE EVIDENCE IMMEDIATELY.**
  - ☐ Take pictures from several angles or make sketches. Note positions of tools, equipment, material, layout, etc. Note things that melt or evaporate, tire tracks, footprints, loose material on the floor.
  - ☐ Collect operating logs and records.
  - ☐ Record serial numbers of equipment and identify maintenance records.
  - ☐ Put dimensions on all sketches.
  - ☐ Sign and date all photos.

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3. Identify Potential Witnesses

- ☐ Identify People
  - ☐ Involved in accident
  - ☐ Eyewitnesses to accident
  - ☐ People who heard the accident
  - ☐ People who arrived at the scene after the accident
  - ☐ People who were at the scene prior to the accident
  - ☐ Anyone who may have useful information about the accident

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4. Use an Investigation Kit

☐Safety Representative has a master kit. Each jobsite should have all items except the tape recorder.

- ☐Camera (Smartphone, Video, Polaroid, 35 mm) Film
- ☐Tape Recorder
- ☐Measuring Devices
- ☐Sample Collection Containers
- ☐Interview/investigation Forms
- ☐Flashlight
- ☐Barricade Markers
- ☐Tape
- ☐Lockout/Tagout
- ☐Padlocks

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5. Procure Hard Evidence and Record Data

- ☐ Get samples of all possible material at the site.
- ☐ Find all equipment pieces.
- ☐ Get photos from all possible sights and angles.
- ☐ Use appropriate forms.
  - ☐ First Aid Reports
  - ☐ Injury Reports
  - ☐ Accident Investigation Reports
  - ☐ Supplementary record of occupational injuries and illnesses
  - ☐ Supervisor's Report
  - ☐ Injury and illness record of employee
  - ☐ OSHA Log 200 and First Report of Injury 101
  - ☐ Note general conditions that may have contributed to the accident.
    - ☐ Housekeeping
    - ☐ Periodic Rule or Procedure Violation
    - ☐ Work Environment or Layout
    - ☐ Training, Experience, or Supervision
    - ☐ Floor or Surface Conditions
    - ☐ Alcohol or Drug Abuse
    - ☐ Lighting or visibility
    - ☐ Employee Morale or Attitude
    - ☐ Noise or distractions
    - ☐ Health or Safety Record
    - ☐ Air Quality, Temperature or Weather
    - ☐ Equipment Condition or Malfunction history

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6. Conduct Interviews with Witnesses

Assure witnesses that you are not looking for someone to blame; you are looking for the root cause of the accident.

DO:

- ☐ Interview as soon as possible.
- ☐ Interview at the accident scene
- ☐ Take notes or use a tape recorder
- ☐ Ask open-ended questions
- ☐ Avoid bias
- ☐ Put the witness at ease
- ☐ Repeat the story back to the witness
- ☐ End interview on a positive note

DON'T:

- ☐ Pressure the witness
- ☐ Blame the witness for the accident
- ☐ Interrupt an answer
- ☐ Ask questions that can be answered with a yes or no
- ☐ Ask "why" questions and opinion questions first

ALWAYS:

- ☐ Stress that you only want the facts
- ☐ Stress that you want to prevent the next accident
- ☐ Take the extra time to get understanding

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7. Review Data

- ☐ Look at all other possible data or records including:
  - ☐ Inspection Reports
  - ☐ Maintenance Reports
  - ☐ Accident Reports and Analysis Results
- ☐ Identify any patterns or trends
- ☐ Analyze all data to determine root causes

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8. Prepare an Investigation Report

Involve Project Manager and Safety Representative. State facts, not opinion.

- ☐ Record any key facts in a written report. Use Accident Investigation Report Form
  - ☐ Write down the accident story
  - ☐ Note the undisputed facts and the disputed facts
  - ☐ Compare the undisputed facts, the disputed facts, and the physical evidence to establish the best answer.
  - ☐ Finalize the story and identify the root cause.

- ☐ Complete the Accident Investigation Report
  - ☐ Who had the accident?
  - ☐ When did it happen? (time/date)
  - ☐ When was it reported?

- ☐ What object/agent caused the injury?
- ☐ Who had most control of the object?
- ☐ What happened?
- ☐ What things caused/contributed to the accident?
  - ☐ Direct cause(s)
  - ☐ Indirect cause(s)
  - ☐ Root cause(s)
- ☐ What can be done to prevent recurrence?
  - ☐ Who will do it?
  - ☐ When will it be done?
- ☐ Names, addresses, phone numbers, and driver's license numbers of witnesses
- ☐ Photos (signed and dated)
- ☐ Evidence tagged, recorded and kept

☐ Develop interim reports during extended investigations to keep everyone informed

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9. Implement Corrective Actions

Implement corrective actions to eliminate root causes in all parts of the system.

☐ *Failure to complete this step can lead to criminal charges if accident re-curs because hazards and solutions have been identified and documented in an accident report.*

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10. Follow-up Classify and Analyze Data and Communicate Results

Compile and analyze all accident and incident data on a regular basis, at least monthly and yearly. Tabulate and cross tabulate to study patterns.
Answer the following questions:

Are all parts of the company committed to hazard control?
Are there patterns to injuries?
What is the quality of supervision and management?
Are employees empowered to take individual action?

Lauth
ACCIDENT/NEAR MISS INVESTIGATION REPORT

Name (Injured)_____ Project: _____

Address/Location _____

When	☐ Accident ☐ Near Miss Date and Time_____ Report to Supervisor or First Aid Delayed? Yes _____ No _____ If Yes, Why_____ _____ _____
Witnesses	Witnesses (statements if possible) _____ _____ _____
Injury/Loss	Nature/Extent of Injuries or Property Damage_____ _____ _____
Where	Exact Location where Accident Occurred_____ _____ _____
What/How	Type of Accident _____ Was Employee Doing Something Other Than Required Duties at time of Accident? _____ If so, what and why_____ _____ Description of Accident (Detail what Employee was doing, how he/she was doing it, and what physical objects, tools, machines, structures or equipment were involved) _____ _____ _____
Why	Describe What Are Believed to be the Accident Causes and Comment Fully Here_____ _____ _____
Prevention	What Should Be Done to Prevent Recurrence of this Type of Accident? ____ _____ _____

Comments: _____
_____
_____

Name: _____ Signature: _____

EMPLOYEE/WITNESS ACCIDENT STATEMENT

Company Name	Project #	Date of Accident	Time am pm	Date Accident Reported

PERSON INJURED

Name	Job Title	Nature of Injury
Part of Body Injured	Type of Accident	Equipment, Object, or Substance Causing Injury

DESCRIPTION

Describe How The Accident Occurred (use a diagram if necessary)

Signature _____ Date_____

NEW HIRE / ANNUAL ORIENTATION CHECKLIST

Items to be reviewed with new and existing employees on an annual basis by the safety representative. Check off each item when it is explained to the new employee.

Employee Name (**Print**): _____

Date: _____ Job Title: _____

SAFETY POLICY / SAFETY RULES

❑ PROGRAM ADMINISTRATION

- Safety Program Policy
- Organizational Responsibilities
- Accident Investigation/Reporting
- Emergency Response Plan
- New Hire and Annual Orientation
- Self-Inspection Program
- Substance Abuse
- Safety Program Goals
- General Safety Rules
- Disciplinary Policy
- Safety Training and Education
- Housekeeping

❑ HAZARD IDENTIFICATION, EVALUATION AND CONTROL

- Compressed Air & Gas
- Material Handling and Storage
- Electrical Hazards
- Fall Protection
- Flammable Liquids
- Hazard Communication
- Lockout/Tagout Procedures
- Powered Industrial Trucks
- Respiratory Protection
- Stairways and Ladders
- Cadmium
- Process Safety Management Awareness
- Benzene
- Confined Space Entry
- Fire Protection/ Prevention
- Hand & Power Tools
- Machinery & Machine Guarding
- Personal Protection
- Recordkeeping
- Signs, Signals & Barricades
- Welding, Torch Cutting & Lancing
- Lead
- Hazwoper Awareness
- Steel Erection Awareness

❑ MEDICAL PROGRAMS

- Bloodborne Pathogens
- Designated Health Care/ Return to Work
- Hearing Conservation/Protection

Trainer _____ Date _____

Employee _____ Date _____

This form must be completed and signed before an employee is allowed to start work. Employee may retain one copy and the original will be inserted in the employee's file at the office.

HAZCOM EMPLOYEE TRAINING CHECKLIST

Date _____ Project _____

Employee Name_____

General Training Requirements	Initial
Hazard Awareness	
Physical and Health Hazards of Chemicals	
Warning Labels	
Availability and Interpretation of SDS	
Using Safe Work Practices and Personal Protective Equipment	
Authorized Use List - Hazardous Materials Location	

I have been instructed on all the above listed topics.

_____
Employee Signature

_____
Instructor Signature

FITNESS FOR DUTY

REASONABLE CAUSE/OBSERVATION DOCUMENTATION

All employees, including yourself, occasionally exhibit some performance problems and behavior changes. Sometimes these problems and changes cause concern that an employee may be unfit to perform the employer's regular duties as a result of substance abuse. Below is a checklist of observations for you to use in determining when there is reasonable cause for such concern and possible substance testing.

NAME_____ LOCATION_____

DATE_____ TIME_____

The onset of one or more of the following observations may be cause for substance abuse testing.

SPEECH	**AWARENESS**	**BALANCE**	**PHYSICAL INDICATORS**
___ Incoherent	___ Confused	___ Swaying	___ Pupil dilated/red eyes
___ Muddled	___ Sleepy	___ Staggering	___ Cold sweats/tremors
___ Slurred	___ Erratic Behavior	___ Falling	___ Alcohol/marijuana odor

When you observe behaviors that may interfere with the employee's performance, you should note and document your observations. The employee should be counseled about any performance problems, and any explanations volunteered or offered by the employee should be noted. Although work related performance or behavior problems may be cause for substance abuse testing, continued work related performance and behavior problems may result in reassignment, or discipline up to and including termination of employment.

WORK OBSERVATIONS

___Unexplained or excessive absenteeism or tardiness
___ Unexplained or excessive absence from work area.
___ Frequent trips to water cooler, or restroom
___ Difficulty in understanding/recalling instructions
___ High frequency of accident occurrence

MOODS

___ Withdrawn/sad/morbid
___ Mood swings high and low
___ Extremely sensitive/irritable
___ Nervousness/agitation

PHYSICAL INDICATORS

___ Rapid Breathing
___ Inappropriate wearing of sunglasses

COMMENTS:

_____
_____
_____
_____

To the best of my knowledge and belief this report represents the actions, appearances and/or conduct observed by me and upon which I base my decision to suggest said employee to be tested or be further evaluated by a supervisor.

EMPLOYEE_____

SUPERVISOR_____WITNESS_____

NOTE: This report is to be used only as an observation aid, and will remain absolutely confidential

TOOLBOXTALK GUIDELINES

- Hold meetings regularly, such as once a week, so that employees become accustomed to them as part of the work routine.

- Choose a place that is comfortable and free of distractions.

- Choose a time that does not disrupt work activities and at which everyone is alert and most likely to pay attention. The beginning of the day, before work starts, is a good time. The end of a shift is not an appropriate time.

- Keep the meeting short and simple; from 15 to 20 minutes is sufficient.

- Your choice of topic should be relevant to the work your crew performs. Stay with one topic for each class.

- Use your resources to develop the talk, but do not read to your audience. Nothing will turn off an audience more quickly than a speaker reading from a paper. Try as much as possible to deliver the talk in your own words, with the printed copy as a backstop or ready reference.

- Use props if possible. Most people will remember what they see at least as vividly as what they only hear. Visual aids like charts and pictures can also be helpful, provided they are large enough to be seen clearly.

- Encourage participation by your group. Ask them questions, describe an accident and ask them for suggestions on how it might have been avoided.

- Keep attendance records. Have each attendee sign an attendance form. Then the speaker should complete the form and forward it to wherever your company's procedure calls for.

- To summarize:

- **Prepare.** Think, write, read, listen, organize, and practice your talks.

- **Identify.** Don't try to cover too much ground in one session. Focus on one main idea.

- **Personalize.** Bring the subject close to home, to make it more meaningful to your listeners.

- **Visualize.** Create a clear mental picture for your listeners. Use physical objects or visual aids whenever possible.

- **Define.** Make sure you tell your listeners precisely what they should or should not do in order to keep themselves and their co-workers safe and be specific!!

TOOLBOXTALK FORM

Date	Company Name	
Project Number/Name	Meeting Location	Person Conducting Meeting

Items Discussed:*

_____

_____

_____

_____

Problem Areas or Concerns:

_____

_____

_____

_____

_____

Attendees:

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

_____ _____

Comments:

_____

_____

_____

_____

_____

* 1. Determine if all corrective measures have been implemented.
2. Report results of latest site safety inspection.
3. Review recent injury or accident reports.
4. Discuss current issues.
5. Plan future operations with safety in mind.

cc: Project File
Foreman
Safety Rep

EMERGENCY RESPONSE PLAN CHECKLIST

		YES	NO
1.	Have you obtained MSDSs from subcontractors for all hazardous chemicals in your workplace	_____	_____
2.	Does your plan include emergency escape procedures and route assignments for all employees?	_____	_____
3.	Have accessible areas, with escape routes, that can serve as a temporary refuge for all employees been identified.	_____	_____
4.	Are floor plans or workplace maps that clearly show escape routes and refuge areas available to your employees?	_____	_____
5.	Has a sufficient number of people been trained to assist in an orderly evacuation.	_____	_____
6.	Does the plan detail procedures for accounting for all employees after the evacuation is completed, with a responsible person to report any missing personnel?	_____	_____
7.	Are emergency telephone numbers posted on or near telephones and at other conspicuous locations?	_____	_____
8.	Does your plan include the names or regular job titles of people who must be notified in case of an emergency and who may be contacted for further information or explanation of duties?	_____	_____
9.	Does each employee know how to report an emergency?	_____	_____
10.	Does your plan have an adequate and distinctive alarm system (3 blasts from air horn or truck) that all people can hear or see?	_____	_____
11.	Has someone been assigned to meet with the media?	_____	_____
12.	Have all employees been trained in evacuation plans, alarm systems, reporting procedures, and types of potential emergencies.	_____	_____
13.	Are employees retrained at least annually, and whenever equipment, materials, processes, or procedures change?	_____	_____
14.	If your jobsite does not have a hospital or other treatment facility close by, do you have an adequate number of employees on each shift who are trained in first aid procedures?	_____	_____
15.	Do you have adequate first aid supplies on hand?	_____	_____
16.	Do employees who may be exposed to corrosive materials have ready access in their work areas to flushing equipment or eye washes?	_____	_____
	Are they trained to use it?	_____	_____
17.	Have arrangements been made with local health care facilities to handle medical emergencies?	_____	_____
18.	Have arrangements been made with local ambulance services?	_____	_____

PERSONAL PROTECTIVE EQUIPMENT CHECKLIST

A checklist of questions to survey for personal protection problems should be tailored to each employer's operations. Some of the items may include:

		YES	NO
1.	Is personal protective equipment provided, used, and maintained wherever it is necessary?	_____	_____
2.	Is employee-owned personal protective equipment, such as gloves and protective shoes, adequate and properly maintained?	_____	_____
3.	Is eye protection available where debris or flying objects could be a hazard?	_____	_____
4.	Are ear plugs or muffs provided and worn during noisy conditions?	_____	_____
5.	Is slip-resistant footwear worn?	_____	_____
6.	Are respirators provided when necessary?	_____	_____
7.	Are there written standard operating procedures for the selection and use of respirators?	_____	_____
8.	Is the user instructed and trained in the proper use of respirators?	_____	_____
9.	Where practicable, are respirators assigned for use by employees individually?	_____	_____
10.	Are respirators cleaned and disinfected after use?	_____	_____
11.	Are respirators stored in a convenient, clean, and sanitary location?	_____	_____
12.	Are routinely used respirators inspected during cleaning?	_____	_____
13.	Is the proper respirator in use for the hazard present?	_____	_____

SAFETY INSPECTION REPORT

Person(s) making Inspection: _____Title: _____

Date: _____Time: _____

Job Name/Number/Location: _____

1. JOB-SITE INFORMATION:	**YES**	**NO**	**DATE CORRECTED/ COMMENTS**
a. OSHA & other job-site warning posted.			
b. Adequate first aid equipment available.			
c. Accident investigation forms available.			
d. Emergency phone numbers conspicuously posted.			
2. HOUSEKEEPING & SANITATION:			
a. General neatness of the working areas.			
b. Passageways and walkways clear.			
c. Waste containers provided.			
d. Adequate supply of drinking water available.			
e. Disposable drinking cups available..			
f. Adequate lighting.			
g. Trash receptacle for drinking cups.			
h. Adequate number of toilet facilities provided and clean.			
3. FIRE PREVENTION:			
a. Fire instruction/training provided to personnel.			
b. Fire extinguishers identified and checked.			
c. Hydrants clear, access to public roads.			
d. Housekeeping.			
e. "No Smoking" signs posted and enforced where needed.			
f. Storage, use and handling of flammable liquids in accordance with standards.			

4. ELECTRICAL INSTALLATION:	**YES**	**NO**	**DATE CORRECTED / COMMENTS**
a. Wiring is insulated and fused properly.			
b. All electrical equipment is grounded, all extension cords three prong type.			
c. Double insulating tools are used.			
d. All terminal boxes equipped with required covers.			
e. Lock Out/Tag Out Program.			
5. HAND TOOLS:			
a. Proper tools for each job.			
b. Neat and secure storage area.			
c. Inspection and maintenance procedures.			
d. System for reporting/replacing damaged tools.			
6. POWER TOOLS:			
a. All power tools are properly grounded and/or dc insulated.			
b. All power tools are guarded.			
c. Pneumatic power tools, fuel power tools, hydraulic power tools properly guarded.			
7. POWDER ACTUATED TOOLS:			
a. All operators are qualified.			
b. PPE available and in good working order.			
c. Tools and charged protected from unauthorized use are in good working order.			
8. LADDERS:			
a. Ladders are inspected and in good condition.			
b. Step ladders fully open when in use.			
c. Metal ladders not used around electrical hazards.			
d. Ladders are equipped with safety footings.			
9. SCAFFOLDING:			
a. Scaffold is plumb and square with cross bracing.			

9. SCAFFOLDING: (CONTINUED)	YES	NO	DATE CORRECTED/ COMMENTS
a. Guardrails and toe boards on all scaffolds and platforms > 10' high. Scaffolds that are less than 45" in their least dimension are required guardrails 4' or higher.			
b. Damaged components identified and repaired or replaced.			
c. Access ladder provided for scaffolds.			
d. Scaffold footing and anchorage.			
e. Scaffold height is < 4 time's minimum base.			
10. HOISTS, CRANES & DERRICKS:			
a. Approved slings, chains, hooks and eyes.			
b. Outriggers are downward.			
c. Power line signs in plain view of operator.			
d. Signal men where needed.			
11. MOTOR VEHICLES / HEAVY EQUIPMENT:			
a. Regular inspection and maintenance.			
b. Lights, brakes, warning signals operative.			
c. Haul roads well maintained and laid out properly.			
d. Noise arresters in use.			
e. Guards over moving parts.			
f. Proper fire protection.			
g. Operators licensed and qualified.			
h. Personnel carried in a safe manner.			
12. BARRICADES:			
a. Floor openings planked over or barricaded.			
b. Roadways and sidewalks effectively protected.			
c. Adequate lighting provided.			
d. Traffic controlled.			
13. HANDLING & STORAGE OF MATERIALS:			
a. Materials are properly stored or stacked.			
b. Passageways are clear.			
c. Stacks on firm footings, not too high.			

13. HANDLING & STORAGE OF MATERIALS: (CONTINUED)	**YES**	**NO**	**DATE CORRECTED/ COMMENTS**
d. Protection against falling into hoppers or bins.			
e. Dust protection is observed.			
f. Extinguishers and other fire protection available.			
g. Traffic is controlled in the storage area.			
14. PERSONAL PROTECTIVE EQUIPMENT:			
a. Eye protection.			
b. Face shields.			
c. Respirator and masks.			
d. Head and or face protection.			
e. Gloves, aprons and sleeves.			
f. Ear/hearing protection.			
g. Safety harnesses and lifelines used.			
h. Proper shoes, trousers & shirts.			
15. SITE SETUP - TRAILERS & STORAGE YARD			
a. Proper steps, landings and handrails.			
b. Existing utilities flagged, protected and insulated.			
c. Bulletin Board posted:			
- OSHA Standards/Poster			
- Emergency Phone Numbers			
- OSHA 300 form posted (each February).			
- Contractor Safety Rules.			
- Assured Grounding Program.			
- Emergency Procedures for Fire/Accident.			
- Workers' Compensation, EEO, Minimum Wage, Prevailing Wage information.			
- Hazard Material Container Labeling Poster.			
d. Required signs - Hard Hats, No Smoking, Fire Extinguisher.			
e. Required Special Permits - Burning, Welding, Traffic, Confined Space Entry.			
f. Office Files:			
- Maintenance records for cranes.			
- P.E. designs for trenches, daily soil logs, trench box certifications.			

f. Office Files: **(CONTINUED)**	**YES**	**NO**	**COMMENTS / DATE COMPLETED**
- Lifting chain certifications.			
- Training Records.			
- Accident Report Forms.			
- Written Hazard Communication Program.			
- SDS's for all on site materials.			
- Hazard Chemical inventory list.			
- Medical - First Aid Program.			
- Weekly Jobsite Safety Checklist.			
- Adequate Ventilation.			
- Lead Exposure.			
- Asbestos Exposure.			
- Weekly Safety Meeting Reports.			

Lauth
TRENCHING AND EXCAVATION CHECKLIST
29 CFR 1926.651

Date: _____/_____/_____ Time: _____ a.m. _____ p.m.

Weather (Circle One): Dry Rainy Previous Rain

Competent Person (Employee Name): _____Phone: _____

Occupation (SIC Code):_____

Employer Name: _____

Length of Experience in this Occupation: _____

Length of Experience with this Employer: _____

1. **Inspections - (if there is potential for employee exposure)**

- Has the contractor's competent person conducted daily inspections?

  □ Of the excavation(s)? _____ Yes _____ No
  □ Of the adjacent area(s)? _____ Yes _____ No
  □ Of protective system(s)? _____ Yes _____ No

- When were these inspections conducted?

  □ Prior to the start of work? _____ Yes _____ No

  □ As needed throughout the work shift? _____ Yes _____ No
  □ After rainstorm or other hazard increasing occurrence? _____ Yes _____ No

2. **Protective Systems - General**

- Has the excavation ground been examined for indication of cave-in potential?
  _____ Yes _____ No

- Inspection of material or equipment used for protective systems and evaluated its suitability for continued use? _____ Yes _____ No
  Please explain if No:
  _____
  _____
  _____

- Use the OSHA appendixes A-F outlined by the standard

  □ Is the contractor relying upon the use of the OSHA Standard to construct a protective system for the safety of their employees? _____ Yes _____ No

  □ Did the contractor's competent person properly classify the soil in the excavation, using Appendix A? You must categorize the soil and rock deposits in a hierarchy of stable rock, Type A, Type B, or Type C. These must be determined based on:

- Analysis of the properties
- Performance characteristics of the deposits
- The environmental conditions of the exposure

□ What properties has the competent person determined as controlling factors in the soil?
(Circle One) Sand Silt Clay

□ Can the contractor's competent person describe the performance characteristics that may control the soil they have encountered (must be able to describe the effects of: Drying, Saturation, Vibration, Surcharge Loads, Other? _____ Yes _____ No

□ What environmental conditions of exposure currently affect the condition of the soil: Drying, Wetting, Vibrations, Surcharge Loads, Other
_____

- Did the contractor's competent person choose the proper sloping or benching configuration from Appendix B or the proper shoring from Appendix C or D?_____ Yes _____ No
If no, please explain:
_____

3. **Water Condition**

- Is dewatering equipment being used on the site? _____ Yes _____ No
- If yes, is the contractor's competent person monitoring the equipment and its proper operation? _____ Yes _____ No
- Has the excavation been subjected to water accumulation? _____ Yes _____ No
- Has the soil in the trench been adversely affected? _____ Yes _____ No
- If yes, has the contractor's competent person inspected the excavation and complied with precautions of (h)(1) and (h)(2)? _____ Yes _____ No

4. **Ramps**

- Is the contractor using a ramp for access or egress to the excavation? If no, skip to the next section. _____ Yes _____ No
- Is ramp used solely for employee access? _____ Yes _____ No
- If yes, was it designed by competent person for safe access and egress? _____ Yes _____ No
- Is ramp used for access and egress of equipment? _____ Yes _____ No
- Is the competent person who designed the ramp qualified in structural design? _____ Yes _____ No
- Does the ramp meet design specifications? _____ Yes _____ No
- If no, have photos and documentation been acquired? _____ Yes _____ No

5. **Confined Space**

- Does the trench or excavation meet definition of confined space? _____ Yes _____ No

  - □ Limited Access and Egress
  - □ Ventilation which could produce or contain hazardous air contaminants
  - □ Not designed for continuous human occupancy
  - □ Excavation deeper than four (4) feet

- Has a qualified person been assigned to assess the hazards of the confined space? _____ Yes _____ No

  - □ Qualified Person: A person designated by the employer in writing, as capable (by education and/or specialized training) of anticipating, recognizing and evaluating employee exposure to hazardous substances or other unsafe conditions in a confined space. This person shall be capable of specifying necessary control and/or protective action to ensure worker safety?

  - □ Detail Training:
    _____

    _____

- Is the competent person (qualified person) capable of specifying necessary control measures to assure worker safety? _____ Yes _____ No

  - □ Detail Measures Taken:
    _____

    _____

Lauth Competent Person

Name: _____

Signature: _____

CONFINED SPACE ENTRY PERMIT

A. Confined Space #_____ Purpose of Entry _____

Department: _____ Date:_____ Time: Entry_____

Location/Description of Space:_____ Project No.:_____
Exit:_____

B. Identified Hazards (check all that apply)

- ☐ Oxygen deficiency (<19.5%)
- ☐ Oxygen enrichment (>23.5%)
- ☐ Flammable vapors (>10% of LEL)
- ☐ Toxics _____ (specify)
- ☐ Corrosives _____ (specify)
- ☐ Electrical shock
- ☐ Hot work
- ☐ Engulfment
- ☐ Moving mechanical equipment
- ☐ Heat stress
- ☐ Other _____

C. Monitoring Record

Time % O_2 % LEL $CO_{(ppm)}$ $H25_{(ppm)}$ Initials

____ ____ _____ _____ _____ _____ ____ ____
_____ _____ _____ _____

____ ____ _____ _____ _____ _____

____ ____ _____ _____ _____ _____

____ ____ _____ _____ _____ _____

____ ____ _____ _____ _____ _____

Monitoring equipment _____

(specify type & model) _____

Calibration By _____ Cal. Date_____

D. Safety Equipment Checklist

☐ Hard Hat	☐ Safety Boots
☐ Safety Eyewear	☐ Protective Cloth.
☐ Air-Supplied Respirator	☐ First Aid Kit
☐ Air-Purifying Respirator	☐ Fire Extinguisher
☐ Resp. Cartridge _____	☐ Traffic Barricades

E. Hazard Control Checklist

Yes	N/A	
☐	☐	Warning signs posted & barricades in place?
☐	☐	Ventilation system operable?
☐	☐	Mechanical systems locked, blocked and tagged?
☐	☐	Elect. systems locked out & tagged?
☐	☐	Piping blanked or disconnected?

☐ Harness/Lifeline/Hoist ☐ Low Volt. Lights ☐ Spark-Proof Tools ☐ Other_____	☐ ☐ Ignition sources isolated? ☐ ☐ Communication system (specify) _____
F. Confined Space Team (specify names)	**G. Authorization for Entry**
Authorized Entrants: 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ Authorized Attendant:_____ Entry Supervisor: _____ Designated Rescue Team:_____ Rescue Team Notified? _____ Yes _____ No Plant Security #_____ Fire #_____ Medical #_____	I certify that all precautions have been taken as required by the Confined Space Entry Program for safe entry and work in this confined space. _____ _____ Entry Supervisor: *(signature)* Date
PERMIT VALID ONLY DURING DATE AND TIMES INDICATED! ***POST PERMIT OUTSIDE ENTRY.***	**H. Cancellation of Entry** This permit is effectively canceled for entry into this confined space. _____ _____ Entry Supervisor *(signature)* Date

Employee Warning Record

Employee's Name: _____ Date: _____

WARNING

Date of Violation: _____
Time of Violation: _____
Place of Violation: _____

☐ Substandard Work ☐ Tardiness ☐ Carelessness

☐ Conduct ☐ Noncompliance ☐ Safety Violation

COMPANY REMARKS

Has Employee been warned previously?		☐ Yes	☐	No

Warning #	Verbal	Written	By Whom	Date

EMPLOYEE'S REMARKS

The absence of any statement on the part of the EMPLOYEE indicates his/her agreement with the report as stated.

I have entered my version of the matter above.
Employee's Signature: _____ Date: _____

ACTION TO BE TAKEN

This information will be placed in Employee's file as record of this warning.

I have read this warning and understand it.
Employee's Signature: _____ Date: _____

Signature of person who prepared warning: _____
Title: _____ Date: _____

Project Manager's Signature: _____ Date: _____

Job Hazard Analysis

JOB HAZARD ANALYSIS START COMPLETE	PROJECT NAME DATE	☐ NEW ☐ REVISED
	LOCATION:	ANALYSIS BY:
P.M. / SUPERVISOR:	SUBCONTRACTOR(S):	REVIEWED BY:
JOBSITE SAFETY REQUIREMENTS (PPE, HOUSEKEEPING SCHEDULE, DUST WALLS, SPARK-PROOF TOOLS, Etc.):		

TASKS TO BE PERFORMED	POTENTIAL HAZARDS	RECOMMENDED ACTION OR PROCEDURE

EMPLOYEES PRESENT

DAILY CHECKLIST - FORKLIFT

Date _____ **Inspector** _____ **Vehicle ID** _____

Job Name _____

ITEM	SAFE	DEFECT
Horn		
Service Brakes (Report immediately.)		
Emergency Brake		
All Auxiliary Lights Operational		
Fuel Leaks		
Hydraulic Leaks		
Tires		
Seatbelt		
Loose or missing parts		
Battery		
Oil Level		
Water Level		
Operating Controls		
Fire Extinguisher		
Load Backrest		
Overhead Guard		
Comments		

Inspector's Signature _____

PRESTART INSPECTION - AERIAL PLATFORM

Date _____ **Inspector** _____ **Vehicle ID** _____

Before each day/ shift, the aerial platform shall be given a visual inspection and functional test including, but not limited to, the following

ITEM	SAFE	DEFECT
Operating and Emergency Controls (1)		
Safety Devices (2)		
Personal Protective Devices (3)		
Air, Hydraulic, and Fuel System Leaks (4)		
Cables and Wiring Harness (5)		
Loose or Missing Parts (6)		
Tires and Wheels (7)		
Placards, Warnings, Control Markings, Operating Manuals (8)		
Outriggers, Stabilizers and Other Structures (9)		
Guardrail System (10)		
Items Specified By Manufacturer (11)		
Comments		

Inspector's Signature _____

HEPATITIS B VACCINE DECLINATION

(MANDATORY)

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring Hepatitis B Virus (HBV) infection. I have been given the opportunity to be vaccinated with Hepatitis B vaccine, at no charge to myself. However, I decline Hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring Hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with Hepatitis B vaccine, I can receive the vaccination series at no charge to myself.

_____ _____

Signature Date Signed

_____ _____

Print Name Social Security Number

_____ _____

Witness Date Signed

OSHA INSPECTION CHECKLIST

Procedures to follow before, during and after an OSHA inspection.

The first requirement in dealing with any OSHA inspection is to be prepared before an inspector arrives at the facility. Generally, the Project Superintendent should be the designated representative to meet the inspector. Whoever is designated as the representative, that individual should thoroughly understand the safety program and its policies and procedures covering OSHA inspections.

Preparations before an Inspection

- Identify who will accompany the inspector
- Identify who will be notified of the inspection
- Emphasize with supervisors the need to continue to enforce corporate safety policies during the inspection.
- Know exact location of training records, safety program, and related documentation that may be requested by the inspector.
- Know the location of confidential and proprietary information.

Start of the Inspection and the Opening Conference

- Notify the employee representative (if applicable)
- Copy the inspector's name, agency he/she is from, the agency address and telephone number.
- Establish whether the inspector has a warrant.
- Find out what the purpose of the inspection is, and what the inspector wants to see.
- Identify which documents or records the inspector desires to review and what regulatory authority is being used as a reference.
- Ask the inspector what initiated the inspection.
- Write opening conference information down.
- Inform your legal representatives and the Thomas Grantham office that you are being inspected by OSHA.

During the Inspection

- Accompany the inspector for the entire inspection
- Take specific notes on the following areas:
- What is seen by the inspector
- Who the inspector talks to
- What is said during these conversations
- Any pictures taken by the inspector (project superintendent should also take the same pictures).
- Ask the inspector to write down and provide you with a copy of his/her questions being asked to the employees.

Post Inspection and Closing Conference

- Do not admit doing anything wrong or argue with the inspector.
- Request copies of photographs or videotapes made by the inspector.
- Request copies of sample reports and receipt of any documents copied.

If Cited

- Promptly post the citation.
- Schedule the informal conference.
- Have a notice of contest filed to the issuing OSHA office no later than 15 working days from the date of citation (if applicable)
- Fix the uncontested violations within the stated abatement period.