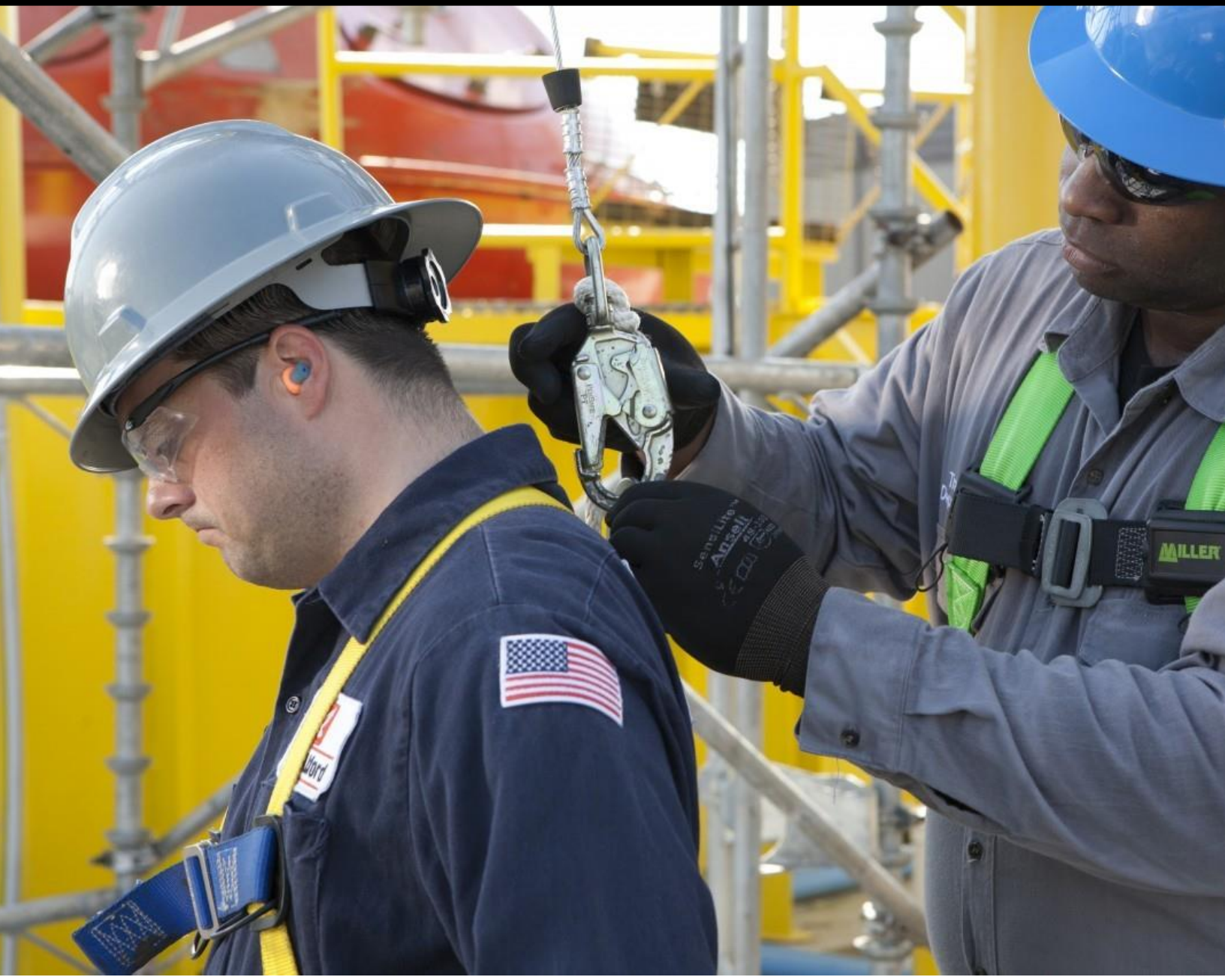
LASHER
CONSTRUCTION CO.



Lasher Construction Company
2017 Safety Manual

Issue Date: 10/15/2017

LASHER CONSTRUCTION COMPANY

STATEMENT OF POLICY

It is our commitment to provide a safe, accident-free, and healthy work environment for everyone. However, excellent safety and health conditions do not occur by chance. They are the result of diligent work and careful attention to all policies by everyone in Lasher Construction Company.

Our safety and health program has been developed to assure Lasher Construction Company complies with federal, state, and local regulations to meet any occupational safety and health rules and regulations that apply to any states where we operate.

Safety demands cooperation on everyone's part. Thus, it is important that communication be kept open at all times between management and employees. Workers who notice hazards or other safety problems, or feel that they need additional training, must Notify their supervisor/superintendent. Supervisors and management must address these concerns and take corrective action when warranted.

Everyone is obligated to be knowledgeable of the standards applicable to their area or job, and just as important, to abide by them. Supervisors/superintendents must instill a positive attitude and safety awareness in their subordinates through personal adherence, contact, training, and regular safety meetings. It is the duty of all Lasher Construction Company employees to perform their work with maximum regard for safety of themselves and others.

Our safety policies are based on past experience and current standards, and are also an integral part of Lasher Construction Company personnel policies. This means that compliance with the policies is a condition of employment and must be taken seriously. Failure to comply is sufficient grounds for disciplinary action and/or termination of employment.

Safety and health are every bit as important in this organization as productivity and quality. In fact, they go hand in hand. Of course the best reason for you to observe these policies is because it's in your own self-interest to do so. Conscientiously following them can help you stay safe, healthy, and able to work, play, and enjoy life to its fullest.

TABLE OF CONTENTS

COMPANY OVERVIEW AND ACCOUNTABILITY

PURPOSE

Safety is good business. It is also reflected in work quality, effective management, cost reduction, job efficiency, supervision, and work force, thereby contributing to the success of Lasher Construction Company.

The program contained in Lasher's safety manual has been established to accomplish the following:

1. Protect and promote the health and safety of employees, customers and others who may be affected by Lasher's business activities.
2. Comply with all pertinent regulatory obligations.
3. Assure the safety, health, and loss control programs are given the proper priority and attention, and are achieving the required results.
4. Coordinate safety, health, and loss control activities while maintaining consistency in procedures at the required level of performance.
5. Assist new and existing projects in developing and/or revising safety, health, and loss control programs by interacting with each superintendent and providing external resources to ensure consistency with this purpose.

PRINCIPLES AND GOALS

An effective occupational, health and safety program will be maintained. This program is basic to the principles of safe operations and requirements of our business. Qualified personnel and adequate tools and equipment will be provided by LASHER in keeping with these principles and goals. The following principles are fundamental to a successful operation:

FUNDAMENTAL PRINCIPLES

1. Appropriate programs need to be implemented to protect employee health and safety and to minimize human suffering.
2. Occupational injuries and illnesses are preventable.
3. Management seeks to define, initiate and maintain programs and procedures to prevent injuries and illnesses.
4. Continuing scrutiny of programs and ongoing employee training and education in occupational health and safety are essential program elements.

GOALS

1. Minimize health and safety risks by providing safe and healthful work environments, preventing unsafe acts and controlling exposures to health and safety hazards in the workplace.
2. Safety Director must be knowledgeable and trained on OSHA standards.
3. Provide and assure that appropriate health and safety programs exist and are in place.
4. Control health hazards in the workplace and assure that employees are informed of hazards and how to protect themselves from overexposure.
5. Communicate to employees all mandated medical findings and advise appropriate actions to be taken.
6. Maintain medical records in a confidential manner.
7. Assure all managers and employees have received orientation, instruction and training in health, safety and environmental protection matters.
8. Require that all health, safety, environmental protection and loss control practices, standards, laws and regulations be observed relating to people, facilities, materials, processes, wastes and the environment.

ROLES AND RESPONSIBILITIES

R&O PRESIDENT

1. Promote a safe and healthy culture throughout the organization.
2. Set a high standard for safety and health practices and lead by example.
3. Ensure that the needed financial, material and personnel resources are provided to achieve the goals and objective of the safety and health program.
4. Ensure that the program is fully implemented and effective.

LASHER VP OF OPERATIONS

1. Ensure that each element of the program is implemented in each project.
2. Ensure that all division managers, project managers and superintendents comply with the program.
3. Ensure that all required documents (including the OSHA injury and illness logs) are maintained.
4. Set a high standard for safety and health practices and lead by example.

SAFETY DIRECTOR RESPONSIBILITIES

1. Inspect all projects to ensure compliance with safety policies and all other regulations and requirements. Assist the superintendents, conduct surveys as needed, and look for ways to help improve the quality of safety by working with project managers, superintendents, owners, insurance companies, and others as required.
2. Act as a resource or assistant to project superintendents for advice and consultation whenever needed.
3. Review all accident/injury reports for accuracy, detail, and ensure that corrective actions have been taken. Provide copies of accident/injury reports.
4. Amend or add to Lasher's safety policies when need arises.
5. Assist in regulating Lasher's incentive program.
6. Ensure that all LASHER employees receive a safety handbook. Confirm that they have read and signed the acknowledgement and have given it to Human Resources for filing.
7. Develop and maintain a safety education program for all LASHER employees.
8. Inform LASHER management of regulatory changes in safety.
9. Track hazard communication standards to ensure that LASHER stays in compliance.
10. Review all supervisor incident/injury reports to ensure superintendents keep a separate accumulated record of the history of the incident/injury reports. Indicate the date of injury, injured person's name, job title, part of body injured, and number of days lost.
11. Monthly, quarterly, and annually, give a copy of each project's accumulated history of incident/injury reports to the company executive committee and operations manager. The operations manager will review the reports with the

superintendent in order to evaluate the effectiveness of the program, to identify specific problems, and to identify problem areas that require attention.

12. Attend job-site pre-construction meetings to review the safety requirements of each subcontractor associated with the project.

13. Make certain that each project has all required posters, signs, and other safety related materials to assist with keeping the project safe.

14. Work closely with worker's compensation and general liability insurance representatives to make certain that the company is in compliance with the requirements of each policy.

15. Review all inspection reports submitted by each project manager and superintendent to insure that proper corrective measures have been taken.

16. Meet regularly with division managers to review activities in progress and to discuss ways that the company can improve its safety program, as well as how it is working.

17. Furnish each project with current publications of Lasher's safety manual, hazard communication program, the OSHA Standards for the Construction Industry, and all state and local requirements.

SAFETY COMMITTEE

1. Promote safety and health by conducting safety and health meetings on a regular basis, no less than once per quarter.

2. Encourage communication between employees and management.

3. Serve as an oversight committee on all issues relative to safety and health.

4. Make recommendations to the Safety Director whenever appropriate but not less than once per quarter.

DIVISION MANAGERS

1. Ensure that safety/health observations and inspections are conducted on projects on a regular basis, the frequency of which shall not be less than once per month.

2. Ensure that each project manager and superintendent in his division complies with the program.

3. When visiting jobs, perform a (SMBWA) Safety Management by Walking Around of the job site. Discuss finding with the superintendent. If any repeat violations occur, determine what disciplinary action is necessary. Issue an observation report to both the safety director and project safety file.

4. Set a high standard for safety and health practices and lead by example.

PROJECT MANAGER'S RESPONSIBILITIES

A project manager should recognize that the principles of management control commonly applied to cost, schedules, quality and productivity are equally applicable to safety and that, if used, will improve safety performance.

Understand the Safety and Health Program and be the role model for all LASHER personnel subcontractors, clients and owners on the following rules and procedures:

1. Participate in safety duties by performing a (SMBWA) Safety Management by Walking Around of all job sites under his jurisdiction. Discuss findings with the superintendent. If any repeat violations occur, determine what disciplinary action is necessary. Issue an observation report to both the safety director and project safety file.

2. Review accident reports for detailed investigations and for corrective actions taken to prevent reoccurrence. Deliver incident/injury reports to the safety director.

3. Review on a monthly basis, with the superintendent, a copy of the project's accumulated history of incident/injury reports. Evaluate the nature, type and cause of each accident/injury in order to judge the effectiveness of the safety procedures taken and to identify specific problem areas.

4. Reassure local property owners about efforts to keep inconvenience, dust, noise, vibrations, etc., at a minimum (use of letters may be most effective). Provide local authorities with information about detours, speed limits, etc., around the project. Check that each subcontractor has the required amount of both, worker's compensation and liability insurance, before the subcontractor mobilizes on the job-site.

5. Make provisions in the preconstruction planning meeting as to how vehicular and pedestrian traffic will be managed (i.e., signs, barricades, flashers, walkways, flagmen, detours, etc.), where the contractual limit fence will be routed, and if there will be need for security watchmen.

6. Make plans along with the superintendent for any natural disaster that might be caused (i.e., high winds, floods, earthquakes, fires, dust, landslides, etc.).

7. Ensure that safety policies of the company are reviewed with each subcontractor before performing any task on site.

8. Coordinate and plan with superintendent pre-mobilization of all projects.

SUPERINTENDENT RESPONSIBILITIES

Regardless of your technical training or practical experience, LASHER does not consider you a competent or responsible supervisor unless you enforce safe practices in your daily work.

1. Be responsible for maintaining a complete compilation of safety laws and regulations and for carrying out the provisions of the LASHER Safety and Health, Drug and Hazard Communication Policies, the OSHA standards and all other state and local safety requirements. The superintendent is authorized to require compliance with all policies and regulations and to require removal from the job site of any personnel who refuse to fail or comply. The superintendent is responsible for the safety of all men on the project and therefore, personally liable by law for any accident or injury that occurs because of neglect to safety. (Contributory Negligence).

2. Instruct LASHER project subcontractors and foremen as to all safety requirements and make sure they pass that instruction to their crews.

3. Conduct a weekly project safety meeting involving all subcontractor foremen and all LASHER employees on the project. At these project meetings, safety shall be reviewed, including unsafe conditions and corrections necessary to make the job a safer place. Near misses, and injuries, and how to avoid injuries and perform a job function, safety minutes documenting attendance and topics of discussion will be recorded on the Safety Meeting Report and given to the safety director.

4. Review, on a monthly basis with the project manager, a copy of the project's accumulated history of incident/injury reports. Evaluate the nature, type and cause of each accident/injury in order to judge the effectiveness of the safety procedures taken and to identify specific problem areas.

5. The superintendent is responsible for weekly safety inspections of the jobsite, including the subcontractor's activities, to discover and eliminate all safety and health hazards. It is the superintendent's responsibility to order immediate action to correct any hazardous situation that arises. Records of such corrections shall be recorded on the Weekly Safety Review Report and in the superintendent's daily log.

6. If a subcontractor repeatedly violates safety standards or required compliance is not accomplished within a reasonable period of time, a stop work action may be invoked by the safety director or superintendent until such violations are corrected. Chronic violators shall be recommended to operations and estimating management as undesirable subcontractors.

7. Be responsible to maintain a supply of all personal protective equipment, first aid supplies, fire extinguishers, etc., on the job site, for use by Lasher Construction Company employees.

8. Report any injury to the project manager and safety director. The Employee First Report of Injury and Supervisor Injury Report should be sent to the office within 24 hours of the accident/incident.

9. Any serious injury must be followed by a verbal report to OSHA within eight hours of occurrence. Also, at the discretion of the superintendent, the injured or person causing the injury may be required to submit to testing to determine the presence of controlled substances.

10. See that a Ground-fault Circuit Interrupter test is completed for all outlets and extension cords at least quarterly. Repair or discard circuits or extension cords proven to be faulty.

11. Post safety signs at entrance gates stating: HARD HAT ONLY – VISITORS CHECK IN WITH SUPERINTENDENT.

12. Insist on good housekeeping by Lasher's employees and all subcontractors' employees.

13. Do not loan any equipment owned or rented by LASHER to a subcontractor, i.e., scaffolding, welder, air compressor, crane, etc. If it is absolutely necessary to do this, and only as a last resort, have the subcontractor sign a memo releasing LASHER from responsibility due to any accidents, injuries, or claims while using company loaned items and require a copy of current certification from operator. Make sure current GL certificate is on file.

14. When a state OSHA compliance officer visits the project, be cooperative and courteous. Notify safety director as soon as you can, and if at all possible have Safety Director tour the site with you. Make the officer aware of company safety procedures and programs. Keep a record of the compliance officer's name, comments made, photos taken, sub's contacts, corrections to make, and any other pertinent items dealing with the visit. Send a copy of this report to the safety director.

15. Ensure adequate ventilation and lighting in all work areas.

16. Ensure fresh drinking water is available for the project.

17. Maintain adequate toilet facilities for the number of employees on the project and schedule weekly cleaning and stocking.

18. Protect the general public, both vehicular and pedestrian, from injury or accident by providing warning and protective devices (i.e., signs, flags, light, barricades, etc.). In the event of any accident involving the public that results in bodily injury or property damage, the superintendent must make a detailed written report on the day of the accident and submit it to the project manager.

19. Be in compliance with the Hazard Communication Program by having upon request the following items: a copy of Lasher's written HazCom program, a list of chemicals on the job-site, copies of Material Safety Data Sheets (MSDS) for any hazardous materials to which your job site is exposed, and documented training for each employee.

20. Ensure that no minor under the age of (18) eighteen is employed by Lasher Construction Company.

FOREMEN RESPONSIBILITIES

Because of his experience and knowledge of operating procedures, and a close relationship with the employee, the foreman is the key person in the safety program.

1. Know and enforce all safety rules and regulations (i.e. Safety and Health, Drug Policies, the Occupational Safety and Health Construction Standards and local safety requirements).

2. Instruct new and existing employees in safe working practices through a pre-task planning work sheet.

3. See that all employees have received, read, and acknowledged their understanding of Lasher's safety, drug policies, and other rules.

4. Ensure that all work is performed in a safe manner and that no unsafe conditions or equipment exist. The foreman is responsible for the crew's safety and could be personally liable by law for any accident or injury that occurs because of neglect to safety. (Contributory Negligence).

5. See that all personal protective equipment is available and used.

6. Correct, log, and report all unsafe conditions, practices, or near misses to your superintendent. The information will be discussed in the job-site safety meeting and the weekly foreman's Toolbox Meeting.

7. Be responsible for holding a weekly Tool Box Meeting and teaching or demonstrating safe practices. Discuss unsafe conditions found, corrections made, near misses, safety training, any injuries and show how to avoid recurrence. Fill out Safety Meeting Report, log attendance and turn it into the safety director.

8. Secure prompt medical attention for any injured employee.

9. "TREAT THE PATIENT AND THEN TREAT THE PAPER WORK".

10. Report any injury resulting in loss of consciousness, loss of time, or the inability to perform duties of the injured's regular job to your superintendent by completing the Supervisor's Incident/Injury report and delivering it to your superintendent. Each accident that is defined as recordable must be reported on the Supervisor's Incident/Injury Report within one working day.

THE PHILOSOPHY OF PRODUCTION AND SAFETY MUST BE INSEPARABLE

EMPLOYEE RESPONSIBILITIES

Never sacrifice safety for anything. Safety must be considered an integral part of quality control, cost reduction, and job efficiency. THE WORLD'S BEST KNOWN SAFETY EQUIPMENT WILL NEVER REPLACE A CAREFUL WORKMAN.

1. The direct responsibility of all employees is that no job can be considered competently finished unless the worker has followed every precaution and safety rule to protect him and fellow workers.
2. Read and acknowledge the understanding of Lasher's Safety and Health, Drug Policies.
3. Observe all safety rules and regulations (i.e. Lasher's Safety and Health, Drug Policies and the OSHA Construction Standards, and all other state and local requirements).
4. Attend the weekly Tool Box Safety Meetings conducted by the foreman and a safety meeting conducted by the superintendent.
5. Use and maintain all personal safety devices provided.
6. Maintain and properly use all tools under your control.
7. Correct all unsafe conditions and practices and report them along with all near misses to your foreman or superintendent for discussion in the weekly Safety Tool Box Meeting. There will be no retaliation or discipline against any employee reporting unsafe practices and/or unsafe conditions.
8. Report any injury resulting in loss of consciousness, loss of time, or the inability to perform the duties of your regular job to your foreman or superintendent and, together, fill out the Supervisor's Incident/Injury Report form. Each accident that is defined as recordable must be reported on the Supervisor's Incident/Accident Report immediately.

DISCIPLINARY PROCEDURES

PURPOSE

To provide guidelines for enforcement of safety rules, policies, procedures and directives from appropriate management personnel.

SCOPE

All employees.

RESPONSIBILITIES

1. Employees will be subject to disciplinary action for violations of safety rules. Such action may include any one or more of the following depending on the severity of the violation.

2. Employees shall be afforded instructive counseling and/or training to assure a clear understanding of the infraction and the proper conduct under company guidelines. However, nothing in Lasher's policy or this safety manual will preclude management from terminating an employee for a safety violation. This is not a progressive discipline system and any safety violation may lead to an employee's termination without prior instruction or warning. Management reserves the right to impose whatever disciplinary action it deems appropriate.

3. Verbal warning with documentation in personnel file.

    a. Written warning outlining nature of offense and necessary corrective action with documentation in personnel file.

    b. Disciplinary suspension with documentation in personnel file.

    c. Termination.

4. Management, including supervisory personnel, shall be subject to disciplinary action for the following reasons:

    a. Repeated safety rule violations by their job-site employees.

    b. Failure to provide adequate training prior to job assignment.

    c. Failure to report accidents and provide medical attention to employees injured at work.

    d. Failure to control unsafe conditions or work practices reported by job-site employees or by job observations. e.

    SAFETY INCENTIVE PROGRAM

SAFETY RECOGNITION PROGRAM

Safety is its own reward, but at LASHER we recognize employees for their safety performance. The purpose of the incentive program is to develop a means by which employees can be recognized for their efforts on following and participating in our safety program. LASHER believes that through effective safety programs, the construction workforce can be motivated to work more safely. To support that belief LASHER will recognize outstanding safety performance on a quarterly and annual basis with safety awards for all field employees.

CRITERIA FOR CONSCIENTIOUS, CAREFUL AND SAFE FIELD EMPLOYEES

1. Must have worked at least 400 man- hours during the quarter.
2. Must be listed as “Available for Work” as of the last day of the quarter.
3. Must have received no formal (written) SAFETY violations during the quarter.
4. Must have worked without an incident (an incident is any work-related injury or illness that is OSHA recordable under “Record Keeping Guidelines”). An employee can have an incident but may not be a recordable. So, he is still eligible for the award.
5. Participate on minimum (3**) three safety meetings** per month done by the superintendent on the jobsite.

HOW IT WORKS

Every quarter we’ll recognize and reward those field employees who’ve met the above criteria. You’ll have your choice of earning “*Safety Bucks”* that can be redeemable for LASHER Logo Merchandise or “Gift portfolio” which contains over 40 different items to select one item from.-Gift portfolio includes tools, personal items, home improvements, and more. The portfolio is transferable and items carry a 1 year 100% satisfaction guarantee. Once you’ve made your selection, item will be shipped free of charge to your home.

SEE SAFETY DIRECTOR FOR A SAMPLE OF GIFT PORTFOLIO.

RULES AND GUIDELINES

EMPLOYEE RULES

STANDARDS OF CONDUCT

Commonly accepted standards of conduct help maintain good relationships between people. They promote responsibility and selfdevelopment. You can avoid misunderstandings, frictions and disciplinary action by avoiding thoughtless or wrong acts, such as the following:

NOTE: EMPLOYEES SHOULD UNDERSTAND THAT THIS IS NOT AN ALL INCLUSIVE LIST OF STANDARDS OF CONDUCTS.

1. Failure to perform work, inefficient performance, incompetence or neglected work.
2. Willful refusal to perform work as directed (insubordination).
3. Negligence in observing regulations, poor housekeeping, or failure to report on-the-job injuries or unsafe conditions.
4. Unexcused or excessive absence or tardiness.
5. Failure to call superintendent or manager within one hour after the scheduled start time each day of absence.
6. Unwillingness or inability to work in harmony with others. Discourtesy, irritation, friction or conduct creating disharmony.
7. Horseplay, fighting, threatening, intimidating or coercing others on company premises.
8. Bringing unauthorized weapons, firearms or explosives on Company premises.
9. Harassing or discriminating against another individual.
10. Failure to be prepared for work by wearing the appropriate construction clothing or bringing the necessary tools.
11. Violation of any other commonly accepted reasonable rule of responsible personal conduct.

INTOLERABLE OFFENSES

Certain employee conduct may be so intolerable as to justify immediate discharge. Intolerable offenses and actions will include, but will not be limited to:

1. Dishonesty or falsification in any form or degree.
2. Damage, loss or destruction of company, employee, or customer property due to willful or negligent acts.
3. Unauthorized possession, removal or use of property belonging to the company, customers or other employees.
4. Being under the influence of or possession of alcoholic beverages, intoxicants or illegal drugs on company premises.
5. Refusal to submit to a drug screening or failure to pass a drug screening.
6. Safety violations that endanger other employees

ENT/DISCIPLINE

For minor offenses with minor consequences, an employee will be expected to agree to improve behavior. Offenses may later be recorded as a warning.

1.

2. Suspension or discharge will result from major offenses, those with serious or costly consequences, or for repeated minor offenses of minor consequences for which an employee shows a lack of responsible effort to correct deficiencies.

3. Discipline is intended to preserve good conditions for other employees and encourage each employee to be a responsible and conscientious person. Violations will be kept on file for a period of six months. Lasher's employees shall be issued a hazardous act warning notification for all unsafe acts for the following: a. Violating R & O's safety policy.

   b. Committing unsafe acts.

   c. Accidents caused by negligence.

NOTE: ALL NEW HIRES WILL RECEIVE A VERBAL WARNING DURING THEIR SAFETY ORIENTATION.

ENFORCEMENT/DISCIPLINE (SAFETY VIOLATIONS ONLY)

First Offense – Employee will receive a written warning.

Second Offense – Employee with receive a two (2) day suspension without pay.

Third Offense – Employee will be discharged.

AT WILL EMPLOYMENT POLICY

1. Lasher Construction Company Company reserves the right to discontinue employment at any time for any reason or no reason, with or without notice. Employees also reserve the same right.

2. Nothing contained in the safety manual, or any other personnel materials which may be issued, create a binding contract or other obligation or liability by the company.

3. Lasher Construction Company Company reserves the right to report the illegal removal of company or employee property, possession or use of firearms and explosives, use or trafficking of illegal drugs to law enforcement officials, and to turn over to the custody of law enforcement officials any such stolen property, firearms, explosives, illegal drugs, and/or person(s) involved with said property.

EMPLOYEE ORIENTATION

Lasher Construction Company Company is committed to excellence in safety and to providing the finest quality construction service to our customers. It is our goal to provide the employees with a safe working environment on every LASHER job site, no matter the size. In turn, to help prevent accidents, employees are required to follow the guidelines outlined in our safety manual and the instructions received upon employment. At the time of hire, employees attend a 1 to 1 ½ hour orientation wherein the following information is presented and discussed:

1. The employee is presented with the Pocket Safety Handbook.

2. The employee receives training in hazardous communication and hazard recognition in the following areas: a.

   Company rules and disciplinary action

   b. Lasher's drug and alcohol policy

   c. Employer/Employee responsibilities

   d. Eye Protection

   e. Head Protection

   f. Hearing Protection

g. Respiratory Protection

h. Minimum construction clothing requirements

i. Fall Protection

j. Scaffolds and ladders

k. Perimeter guarding and other guarding such as wall, floor openings and stairs

l. Trenching and excavations

m. Housekeeping

n. Concrete

o. Electrical Safety

p. Material handling, rigging and crane safety

q. Signs, barricades and flagging

r. Fire Protection

s. First Aid Procedure

t. Emergency Procedures

u. Tool Box Safety Meetings

v. Accident, injury reporting

w. Hazard Communication

3. All employees are required to read the Pocket Safety Handbook, sign and date the first page.

4. View the Hazardous Communications Video, sign the Hazardous Communications form.

EMPLOYEE TRAINING

PURPOSE

To provide required training to all employees.

SCOPE

All affected employees

REFERENCES

Federal, State and Local Standards, e.g., OSHA, ADA, EEOC, State Labor Codes, etc.

RESPONSIBILITY

1. Safety coordinator shall assure that appropriate training material is provided to the superintendents and project managers.
2. Division managers shall assure appropriate training is conducted. Signed documentation shall be maintained in the employee's personnel file.
3. Documentation shall consist of, specifically what was taught, who attended and who did the teaching. All attendees and the instructor shall sign and date the form.

TRAINING TOPICS (A PARTIAL LISTING)

1. Orientation
2. HAZCOM
3. Fall Protection
4. Aerial Lift
5. Forklift
6. Ladder
7. Heavy Equipment
8. Scaffolding

9. PPE
10. Hand tools
11. Emergency Procedures
12. Respiratory Protection Program
13. Hearing Conservation
14. Lockout/Tagout

DOCUMENTATION

1. Date.
2. Location (building, room, floor, etc.) where the meeting was held.
3. Time it started and ended.
4. A listing of topics reviewed or discussed.
5. The instructor (for each topic if more than one instructor was involved).
6. The name of each person attending, as well as those required to receive the training involved who were not present, shall be documented.
7. A list of all matters that were found to require some type of follow-up or further action (This includes the training of those who were unable to attend.).
8. The source document or audio-visual presentation, if one should be identified.

SOURCES OF TRAINING MATERIAL INFORMATION

1. National Safety Council
2. Insurance Agent
3. Insurance Carrier

4. Safety Rules
5. National Fire Protection Association
6. American Society of Safety Engineers
7. American National Standards Institute
8. Federal and State Occupational Safety and Health Administrators

EMPLOYEE TRAINING RECORD

Employee Name _____

Job Title _____

DATE	TRAINING TOPICS	INSTRUCTOR
_____	Orientation	_____
_____	HAZCOM	_____
_____	Aerial Lift and/or Forklift	_____
_____	Respirator Fitting	_____
_____	Ladder and/or Scaffold	_____
_____	Emergency Procedures	_____
_____	Heavy Equipment	_____
_____	Personal Safety Equipment	_____
_____	Lockout/Tagout	_____
_____	Hand Tools	_____
_____	_____ Other	_____

I do hereby certify I understand the training I have received and have dated the above topics that were covered in this session.

Employee's Signature _____

Employee's response in understanding the training provided:

_____

_____

_____

SUBCONTRACTORS

All subcontractors and their employees are required to comply with Lasher Construction Company Company's Environmental Health and Safety
Policies, and all the OSHA construction standards along with other state and local safety requirements while working on LASHER Construction's projects.

If a subcontractor repeatedly violates safety standards or his compliance response is not accomplished within a reasonable period of time, a stop work action may be invoked by the Superintendent until such violations are corrected. Chronic violators shall be recommended to operations management as undesirable subcontractors.

STANDARDS OF CONDUCT FOR SUBCONTRACTORS

Commonly accepted standards of conduct help maintain good relationships between people. They promote responsibility and selfdevelopment. You can avoid misunderstandings, frictions and disciplinary action by avoiding thoughtless or wrong acts, such as the following:

1. Failure to perform work, inefficient performance, incompetence or neglected work.
2. Willful refusal to perform work as directed (insubordination).
3. Negligence in observing regulations, poor housekeeping, or failure to report on-the-job injuries or unsafe conditions.
4. Unexcused or excessive absence or tardiness.
5. Failure to call superintendent or manager within one hour after the scheduled start time each day of absence.
6. Unwillingness or inability to work in harmony with others. Discourtesy, irritation, friction or conduct creating disharmony.
7. Horseplay, fighting, threatening, intimidating or coercing others on Company or project premises.
8. Bringing unauthorized weapons, firearms or explosives on Company or project premises.
9. Harassing or discriminating against another individual.
10. Failure to be prepared for work by wearing the appropriate construction clothing or bringing the necessary tools.
11. Violation of any other commonly accepted reasonable rule of responsible personal conduct.

NOTE: SUBCONTRACTORS AND EMPLOYEES SHOULD UNDERSTAND THAT THIS IS NOT AN ALL INCLUSIVE LIST OF STANDARDS OF CONDUCT.

INTOLERABLE OFFENSES

Certain employee conduct may be so intolerable as to justify immediate discipline and/or discharge. Intolerable offenses and actions will include, but will not be limited to:

1. Dishonesty or falsification in any form or degree.
2. Damage, loss or destruction of company, employee, or customer property due to willful or negligent acts.
3. Unauthorized possession, removal or use of property belonging to the company, customers or other employees.
4. Being under the influence of or possession of alcoholic beverages, intoxicants, or illegal drugs on Company or project premises.
5. Refusal to submit to a drug screening or failure to pass a drug screening.
6. Safety violations that endanger other employees.

ENFORCEMENT/DISCIPLINE

1. For minor offenses with minor consequences, a subcontractor will be expected to agree to improve behavior. Offenses may later be recorded as a warning.
2. Suspension or discharge will result from major offenses, those with serious or costly consequences, or for repeated minor offenses or minor consequences for which a subcontractor shows a lack of responsible effort to correct deficiencies.
3. Discipline is intended to preserve good conditions for other subcontractors and encourage each subcontractor to be a responsible and conscientious person.
4. Subcontractors shall be issued a hazardous act warning notification for unsafe acts.

AT WILL EMPLOYMENT POLICY

1. Lasher Construction Company Company reserves the right to discontinue employment at any time for any reason or no reason, with or without notice. Employees also reserve the same right.
2. Nothing contained in this book, or any other personnel materials which may be issued, create a binding contract or other obligation or liability by the company.
3. Lasher Construction Company Company reserves the right to report the illegal removal of company or employee property, possession or use of firearms and explosives, use or trafficking of illegal drugs, to law enforcement officials

and to turn over to the custody of law enforcement officials any such stolen property, firearms, explosives, illegal drugs, and/or person(s) involved with said property.

ALL VISITORS

(Owners, Architects, Engineers, etc.)

All visitors must:

1. Check in with the Superintendent before proceeding on the project.
2. Observe all safety rules and regulations (i.e. Lasher's Standards and all other state and local safety requirements.)

DRUG AND ALCOHOL POLICY

1. The buying, selling, transportation, distribution, consumption, or use of illegal drugs or alcohol on Lasher Construction Company Company's job sites, premises or equipment, is strictly prohibited and is cause for disciplinary action, including termination. Reporting to work or working under the influence of illegal drugs or alcohol is similarly enforced.
2. Lasher Construction Company Company reserves the right to test employees or prospective employees for the presence of illegal drugs or alcohol as a condition of employment, individual impairment, safety or accident. The collection and testing of samples shall not be limited to the above. If any employee refuses to submit to the drug screening test(s), such action may be cause for disciplinary action, including termination.
3. Individual impairment, safety violation or accident – Employee must submit to drug screening on same day as incident. Picture I.D. is required at the time of the drug screening. The clinic will not perform the screening without it.
4. Employees and/or potential employees of subcontractors will be drug tested. If the employee fails the drug test, he/she will be removed from the project.

EMPLOYER/EMPLOYEE RESPONSIBILITIES

EMPLOYER

At no time will an employee be required or expected to work where conditions are unsanitary, hazardous, or dangerous to his/her health. To insure that such conditions do not exist, the company will initiate and maintain the necessary programs to prevent unsafe conditions from arising.

1. The company shall conduct regular inspections of its job-sites. Only employees that are qualified by training or experience shall be allowed to operate equipment. Tools, equipment, etc., whether company or personal and not meeting safety or health regulations will be removed from service.

2. Operators of all heavy equipment (for example: crane, forklift, backhoe, aerial lifts, etc.) must be trained and authorized.

EMPLOYEE

Never sacrifice safety for anything. Safety must be considered an integral part of quality control, cost reduction, and job efficiency.

THE WORLD'S BEST KNOWN SAFETY EQUIPMENT WILL NEVER REPLACE A CAREFUL WORKMAN.

1. The direct responsibility of all employees is that no job can be considered competently finished unless the worker has followed every precaution and safety rule to protect him and fellow workers.

   THE PHILOSOPHY OF PRODUCTION AND SAFETY MUST BE INSEPARABLE

2. Read and acknowledge understanding of Lasher's Environmental Health and Safety Program.
3. Observe all safety rules and regulations (i.e. Lasher's Policies and the OSHA Construction Standards, and all other state and local safety requirements).
4. Attend the weekly Tool Box Safety Meetings conducted by the foreman and a Safety Meeting conducted by the Superintendent.
5. Use and maintain all personal safety devices provided.
6. Maintain and properly use all tools under your control.
7. Correct all unsafe conditions and practices and report them along with all near misses to your foreman or superintendent for discussion in the weekly Safety Tool Box Meeting. There will be no retaliation or discipline against any employee for reporting unsafe practices and/or unsafe conditions.
8. Report any injury resulting in loss of consciousness, loss of time, or the inability to perform the duties of your regular job to your foreman or superintendent and, together, fill out the Supervisor's Incident/Injury Report form. Each accident that is defined as recordable must be reported on the Supervisor's Incident/Accident Report immediately.

EYE PROTECTION

Eye injuries are one of the most frequent causes of injury in the construction industry. The following are the requirements for wearing eye protection.

Eye protection is required on all projects in the construction area when the following conditions exist:

1. All types of hammers, saws, chipping tools, brooms, grinders, impact tools, and drills, chemicals, hazardous substances such as insulation, concrete mix, and other substances which create hazardous dust, mists, and fumes, including concrete pouring, dry packing, and grouting.

2. Employees, visitors, and vendors who are in the immediate area of the above operations will also be required to wear eye protection gear.

3. Approved eye protection, such as safety glasses, face shields, burning goggles, welding helmets, chemical goggles, will be provided and is required on all activities where the potential of any eye injury exists.

HEAD PROTECTION

Hard hats are to be worn correctly, at all times, until the ceilings throughout the building are completely finished and all overhead hazards where the possibility of damage to the head from impact of falling objects no longer exist. The only exception to wearing the hard hats correctly is surveyors, structural steel erectors, equipment operators and welders.

HEARING PROTECTION

All employees required to work in an area where the noise is above the acceptable sound levels will be issued and required to wear hearing protection.

Since conditions are changing constantly in the area where you work, an easy rule of thumb to follow for the use of hearing protection is:

"IF YOU HAVE TROUBLE UNDERSTANDING CONVERSATION WITH SOMEONE THREE TO FIVE FEET AWAY FROM YOU, BECAUSE OF THE SURROUNDING NOISE, YOU ARE REQUIRED TO OBTAIN HEARING PROTECTION."

RESPIRATORY PROTECTION

If work requiring respiratory protection is performed the following guidelines will be followed:

1. Only NIOSH/MSHA Respirators approved for work conditions will be used.
2. In an oxygen deficient environment (less than 19.5% oxygen) a self contained breathing apparatus (SCBA) will be used.
3. Persons working in areas such as enclosed or confined spaces where they could be overcome by the toxic fumes will work only if an outside man is present. He/She shall be able to see or communicate with the persons inside at all times. Rescue equipment shall be available at all time when such work is being performed.
4. Respirators will also be used when using substances containing toxic vapors, fumes or dust.
5. If disposable respirators are used they will be assigned on an individual basis. If reusable respirators are used, they will be cleaned and disinfected after each use.
6. If the use of a respirator is required for a certain task, employees performing these tasks shall be trained in the proper use and care of a respirator.

NOTE: SEE RESPIRATORY PROTECTION PROGRAM – SECTION 10.

CLOTHING REQUIREMENTS

1. Full-length trousers shall be worn.

2. Shirts with a minimum of tee-shirt length sleeves shall be worn.
3. Leather over the ankle work boot with a heavy sole (no tennis shoes), shall be worn.
4. All subcontractors will be required to wear leather over the ankle boots with a heavy sole.
5. Gloves shall be worn where protection is needed against concrete, rough or sharp objects, hot materials, caustic or abrasive material, or chemicals which could harm the skin.
6. Tank tops, shirts cut off at the midriff, cutoffs, sweatpants, moon boots, sandals, sneakers, jogging shoes, etc., are prohibited. Subcontractors and visitors are required to maintain the same dress code.

FALL PROTECTION

1. A full body harness with a shock absorbing lanyard will be worn when working on unprotected, elevated platforms 6 feet above solid ground or above a temporary work platform or floor.
2. 100% tie off is required when working at or above six (6) feet. Compliance with this rule will require the use of two lanyards, life lines, or static lines.
3. Any deviation from the six (6) foot tie off rule must be requested in writing to the Project Manager and Safety Director from the Superintendent and be accompanied by a Site Specific Fall Protection Plan.

SCAFFOLDING & LADDERS

SCAFFOLDING

1. All scaffolding will be erected per the manufacturer's instructions and will meet the guidelines outlined in OSHA construction standards.
2. Footing and/or anchorage shall be sound, rigid and capable of carrying four (4) times the maximum intended load without settling or displacement.
3. Scaffolding or planking shall not be supported by barrels, boxes, bricks, blocks, or any other unstable materials.
4. All scaffolding shall have the work deck fully planked.
5. Standard guardrails shall be installed on all open sides and ends of platforms more than ten feet above ground or floor.

6. All scaffold planking shall not extend over the end. Supports shall not be less than 6 inches, nor more than 12 inches, and shall be secured against movement.
7. Scaffolds shall not be moved until all materials and personnel are off the work platform.
8. Scaffolding and accessories with defective parts shall be immediately replaced or repaired.
9. Erection, repairs and adjustments to scaffolds shall be made only by or under the supervision of Competent Persons.
10. Full body harness will be used when the scaffolding does not meet the requirements of the OSHA construction standards.

SWINGING SCAFFOLDS

1. Each employee shall wear an approved Fall Arrest System (harness) attached to an independent lifeline. Independent from the tie-back.
2. The lifeline shall be securely attached to substantial members of the structure (not scaffold) or to securely rigged lines, which will safely suspend the employee in case of a fall.
3. Platform shall not be more than 36 inches wide unless designed by a qualified person to prevent unstable conditions.

TUBULAR WELDED FRAME SCAFFOLDS

1. Scaffolds shall be properly braced. Cross braces shall be of such length as will automatically square vertical members to ensure that the scaffold is erected plumb, square and rigid.
2. Scaffolds shall be capable of supporting four (4) times the maximum intended load and erected on sound, rigid footings, capable of carrying the maximum load without setting or displacement.
3. Standard guardrail shall be installed on all open sides and ends of platforms six feet or more above the ground or floor depending on the state, federal, and local regulations and when the scaffold is 45 inches or more in its least dimension.

4. Cross braces may be used as part of the guardrail system when the top rail or mid rail meet the following requirements:
    a. Used as top rail when the cross brace is between 38” and 45”. Then install a horizontal brace as mid rail.
    b. Used as mid rail when cross brace is between 20” and 30”. Then install a horizontal brace as top rail.
    c. Maximum spacing between planking is not to exceed 1 inch.
    d. All walking surfaces must be at least 18 inches wide.
    e. A ladder must be attached when the distance between the rungs on scaffold are less than 12 inches and greater than 13 ¾ inches or when the width of the rung is less than 16 inches.
    f. Scaffolding and accessories with defective parts shall be immediately replaced or repaired.
    g. Scaffold must be tied-off to the building or structure at intervals that do not exceed 30 feet horizontally and 26 feet vertically.

LADDERS

1. An employee shall not use a ladder that has broken, loose, or cracked rungs, side rails or braces. If such conditions are noted, remove from service and notify the Superintendent so that the ladder may be repaired or replaced.
2. Ladders must be well secured at the top and of sufficient length to extend not less than 36 inches above any platform or landing for which they serve.
3. Ladders shall be placed so the base will have a ratio of 4 to 1 of the working length of the ladder from the support structure.
4. Employees shall not work on or above the third rung of an extension ladder or on the top two steps of a ladder. In that way the “belt buckle rule” will be in place, allowing the body to always stay inside the rails of the ladder.
5. Step ladders shall only be used in a fully open position.
6. When ascending or descending ladders, employees shall have hands free to grip the sides or rungs with both hands, and shall always be facing the ladder.
7. Job-made ladders shall be constructed so that cleats will be inset into side rails one half inch or filler blocks used. Cleats shall be uniformly spaced, 12 inches top to top.
8. Ladders shall never be used as a platform, runway, or scaffold.

PERIMETER GUARDING

EDGE PROTECTION & FLOOR OPENINGS

1. All wall openings from which there is a drop of more than four feet and the bottom of the opening is less than three feet above the working surface and more than 12 inches or 16 inches wide will be guarded with a standard railing. A standard railing is measured from the floor and consists of a top rail at 42 inches, intermediate rail at 21 inches and a toe-board. All wall openings from which there is a drop of 6 feet or more shall be guarded to prevent employees and/or materials from falling to the lower level. If the opening extends to a distance of less than 4 feet above the working surface, toe boards shall be installed. Open sided floors 6 feet above the ground or adjacent floors shall have fall protection installed. Runways 4 feet or more above the floor or ground level shall normally have guardrails and toe boards. Stairways having four (4) or more steps shall be equipped with handrails.

2. Floor and roof openings measuring 12 inches or more in their smallest dimensions should be guarded by a standard railing or cover. The cover should be capable of supporting the maximum load to which it will be subjected, and be properly installed to prevent accidental displacement.

3. The cover shall be marked by a readable sign that says “OPEN HOLE”.

4. Roof Level – Warning or perimeter guarding should be rope or cable, flagged with highly visible bits of material hanging from the warning lines at frequent intervals and be installed 42 inches above the roof surface to warn employees that they are approaching the edge of the roof. Stanchions supporting warning lines shall be installed securely.

5. The warning lines shall have a minimum breaking strength of 500 pounds and be placed no closer than 6 feet from the roof edge. The warning lines shall be erected either around the complete perimeter of the roof or only in the area of the roof where work is being accomplished, provided the work progresses in such a manner as to provide continuous warning to employees in the work area when they are approaching the roof edge. A safety monitor may also be used. (If the roof is greater than 50 feet wide a warning line, and safety monitor must be used).

6. Floor openings through which men or material may fall shall be covered or guarded, except where the entryway leads to a ladder or stairs. Covers shall be secured against movement. Removable covers shall be labeled, “Floor Opening Do Not Remove”. Any cover, guardrail, or handrail that must be removed shall be replaced immediately upon completion of task requiring removal or before leaving the opening unattended.

TRENCHING AND EXCAVATION

1. Before excavating, utility companies shall be contacted to determine if there are underground installations in the area. Underground facilities must be located and supported during excavation operations.

2. Walls or trenches 5 feet or more in depth and all excavations in which employees are exposed to danger from moving ground or cave-in must be guarded by shoring or sloping.

3. In excavations which employees are required to enter, excavated or other material shall be stored 2 feet or more from the edge of the excavation unless barriers or retaining devices are used to contain such materials.

4. Trenches 4 feet deep or more require adequate means of exit such as a ladder located so as to require no more than 25 feet of lateral travel.

5. When employees or equipment are required to cross over an excavation, walkways or bridges with standard guardrails will be provided and used.

6. All excavations shall have warning barricades around them.

7. Excavations and trenches which are 5 feet or more in depth and less than 20 feet in depth and that do not meet the requirements for type A, B, C, soils must be designed by a registered professional engineer.

8. When excavations and trenches require a registered professional engineer (R.P.E) to design them, the R.P.E. must be registered in the state for which the excavation and trenching is taking place.

9. The design criteria by the R.P.E. for protective systems for the excavation and trenches must be kept at the job-site and contain the following information:

10. Be in written form to include size, type, and configurations of materials to be used in the protective system and identify the R.P.E. appointing the design.

HOUSEKEEPING

Good housekeeping is one outstanding indication of an efficiently run job. It is imperative that all projects be kept clean and free of debris and rubbish.

1. Trash piles shall be removed at regular intervals. Containers shall be provided for refuse.

2. Scrap lumber, hoses, cables, wiring, and all other debris shall be kept clear from work areas, hallways and stairs.

3. Bend or remove protruding nails.

4. Each employee is responsible for keeping his immediate work area clean. Dispose of lunch and break garbage in trash containers only.

5. Store and segregate materials and supplies as to size and type. This material is not to intrude on walk or traffic ways. Aisles, passageways and exits shall be kept clear.

6. Throwing materials over the side of a structure is not allowed unless a signalman is directing.

7. Accumulation of trash and scrap materials will not be tolerated. Trash and other materials shall not be thrown from one level to another. Trash and combustible material shall be placed in containers provided for that purpose. Combustible and non-combustible materials shall be disposed of only in the appropriately marked containers.

8. All materials shall be secured to prevent sliding, falling, or collapsing.

9. The project superintendent shall approve the stocking of an area with materials.

CONCRETE

1. Form work and shoring will be designed and constructed to safely support all loads imposed during concrete placement. Drawings or plans or jack layout, form work, shoring, working decks, and scaffolding systems will be available at the job-site.

2. Employees working with concrete, concrete forms and shoring will be required to follow the OSHA Construction Standards, both Federal and State. The employee is also required to wear full body harness and a shock absorbing lanyard when working more than six feet above any adjacent working surface when placing and typing reinforcing steel and 100% tie off is required when working 25 or more feet above the solid ground. 3. Do not ride the concrete bucket or work in it when suspended.

ELECTRICAL SAFETY

1. Only qualified persons shall repair, test, or connect (other than plug in) electrical equipment. All hand tools should be visually inspected for damage, daily. Do not operate any type of electrical equipment while standing in water or wearing wet clothing. Electrical equipment shall be de-energized and locked and tagged out before any electrical work is performed.

2. No electrical cord or tool with a damaged ground plug, end pulled away from the outer insulation, or where the inner wires are exposed may be used. On a monthly basis, inspect each plug and receptacle and any equipment connected by cord and plug for external defects and possible internal damage. Remove from service or repair immediately any defective items.

3. All 15 and 20 ampere or greater receptacle outlets on single phase, 120 volt circuits on construction sites shall be protected by a Ground Fault Circuit Interrupter (GFCI) or an Assured Grounding Conductor Test shall be performed daily.

MATERIAL HANDLING, RIGGING PROCEDURES, AND CRANE SAFETY

1. When handling material manually, do not try to handle more than you are capable of. Do not show off or try to impress your coworkers. When using mechanical methods to handle materials make sure that you do not overload equipment. Avoid strains, sprains and back injuries by using proper lifting techniques. If you have any doubts as to a machine's capability, contact your supervisor.

2. When rigging materials, make certain your hands, feet, and other body parts are not in contact with the pinch point. Check rigging devices prior to the beginning of each shift. Removed damaged rigging equipment from service.

3. Do not allow hoisted materials to pass over fellow coworkers. Use tag lines on all loads. Do not wrap tag lines around any part of your body. Only qualified persons shall be allowed to rig materials. Only standard hand signals shall be given and must be done by a qualified individual. Only one person shall give signals to the operator. All equipment shall be inspected daily before being put to use. Defective equipment shall be tagged and not used until repairs are made. Make certain all guards and safety devices are in place and working properly. Only the operator is permitted to ride on mobile equipment. NO ONE WILL BE ALLOWED TO RIDE THE BLOCK, HOOK, BALL, LOAD OR CONCRETE BUCKET. Keep all booms away from power lines. Verify weight and lift charts before making large lifts.

4. Do not leave equipment unattended with a load on the load line.

5. Barricade the swing radius of all cranes.

6. No part of a crane or its load, concrete pump or its hose, or any other piece of equipment shall be operated within 10 feet of a line rated below 50kv or twice the length of the line insulator when over 50kv, except where electrical distribution and transmission lines have been de-energized.

SIGNS, BARRICADES, AND FLAGGING

1. Signs, barricades and flagging shall be used to protect employees from hazards such as excavations/trenches, swing radius of cranes, wall and floor openings, roof edges, propane tanks, and any other situation where employees could be exposed to serious harm or danger.

2. Barricades and flagging shall not be crossed without first identifying the hazard and asking questions before crossing if the hazard does not seem obvious. Signs such as Danger and Caution shall be identified as a problem. Signs, barricades and flagging removed to complete a specific task, such as bringing in material, shall be replaced when task is completed.

3. The following are types of flagging which are to be used:

   a. 3 inch **"DO NOT ENTER"** banner tape. This is a red tape with black letters. This is used to control access to areas where a hazardous condition exists and it is determined necessary to keep all unauthorized personnel out of the affected area. No one, other than the personnel that have established the area, may enter or remove the tape. **"DANGER"** signs are to be used with this tape to identify the hazard. Authorized personnel putting up the signs will include their name and phone number on the signs so that other personnel who may need access can contact the person responsible for coordination with this type of flagging. Unauthorized persons crossing or removing this barrier will be subject to termination or other disciplinary action.

   b. 3 inch "**SECURITY LINE, DO NOT CROSS"** tape is yellow banner with black letters. This is used to protect and secure an accident scene until an investigation has been completed. This type of barrier will be put up only by safety, security, or fire department personnel. Removal of this barrier will only be completed by the same department personnel. Unauthorized persons crossing or removing this barrier will be subject to termination or other disciplinary action.

   c. 3 inch **"CAUTION"** tape is a yellow banner with black letters. This is used to identify a potentially hazardous condition. **"CAUTION"** signs are used with this tape to identify the potential hazard. Personnel posting this sign should include their name and phone number on the sign. Personnel may cross this barrier so long as they take the precautions necessary to ensure their safety. Unauthorized persons removing this barrier will be subject to disciplinary action.

NOTE: BARRICADES MAY BE NEEDED IN CONJUNCTION WITH ANY OF THE FLAGGING AND SIGNING NOTED ABOVE.

   d. Barricade tapes and warning signs are a temporary method of protecting and warning personnel of hazardous conditions, but are not a substitute for physical barrier guarding (i.e. 2"x4" lumber, tube-loc, wire rope, etc.) where a hazardous condition presents a potential for serious injury or death.

   e. Do not leave openings, floors, walkways, or catwalks without proper guarding installed. It is the responsibility of the supervisor performing the work to ensure the protection and safety of all personnel affected by the operation.

   f. Barricades will be treated according to the flagging attached to the barricade.

FIRE PROTECTION AND PREVENTION

1. Firefighting equipment must be conspicuously located, readily accessible (especially when welding or torch cutting), and periodically inspected and maintained in operating condition. Report any inoperative or missing equipment to the supervisor.

2. When welding, cutting, or burning remove the following:
    a. All combustible materials within a 35 foot radius.
    b. All flammable materials within a 50 foot radius.
    c. All explosive materials within a 100 foot radius.
3. Where welding or burning is taking place, a minimum 10 lb ABC fire extinguisher shall be made readily available. After completion of welding or burning, a check shall be made for possible fires or smoldering.
4. Fire extinguishers are to be used only for fires. Any extinguishers discharged shall be replaced with one that is fully charged.
5. Areas where combustibles or flammables are stored are areas where smoking, burning, welding, and open flames are prohibited. These areas shall be posted.
6. Each office and tool trailer will have at least one 20 lb ABC fire extinguisher on hand.

FIRST AID

1. Every trailer has a First Aid box. It is there for you and your fellow employees to use. It is not there as a supply for your personal first aid box
2. Emergency telephone numbers are conspicuously posted near a phone – when you get to your work area, learn where they are. It could save a life, including your own.
3. Secure prompt medical attention for any injured employee.

TREAT THE PATIENT FIRST, PAPERWORK SECOND.

EMERGENCY PROCEDURES

In case of emergency such as a fire, accident or incident, send someone to call it in using the emergency phone number located in the office/trailer while you and/or others take care of the emergency. Remember, take care of the problem first and the paperwork second. When an emergency does arise, let the superintendent and/or foreman know about the emergency so they can contact the safety department and fill out the necessary paperwork.

TOOL BOX SAFETY MEETING

1. Tool Box Safety Meetings are designed to teach you, demonstrate safe working procedures and discuss unsafe conditions, near misses, and injuries along with the corrective measures to take to prevent recurrences.

2. Your attendance and participation is required and be sure to sign the signup sheet.

PROCEDURES FOR ACCIDENT/ INCIDENT INVESTIGATION

All accidents (with or without injuries), or incidents, must immediately be investigated. This applies to any accident/incident involving employees, subcontractors, customers, trespassers, equipment.

PROCEDURE

1. Incident Reports – Employees, subs, customers, trespassers, damaged equipment.
   a. First Report of Injury (or loss**) – Superintendent fill out** (see Appendix E)
   b. Co-Worker Incident Report – **Involved person or witness fills out.** (see Appendix E)
   c. Physician's Statement & Medical Release (see Appendix E) – **Use if injury requires treatment by Doctor.**
2. Pictures – Digital or other pictures.
3. Send a copy of all reports, including pictures, to your PM and Ann Judd for filing.
4. Importance of an Investigation – Lawsuits may be filed many months down the road and witnesses may have disappeared or victims or witnesses recall of the incident has dimmed or been changed through coercion or pressure.
5. When an accident occurs, remember, TREAT THE PATIENT, TAKE CARE OF THE ACCIDENT OR INCIDENT FIRST, And THEN, DO THE PAPERWORK.
6. Report all accidents, injuries and incidents, no matter how small, to your immediate supervisor in order to properly take care of the problem.
7. All emergency phone numbers shall be conspicuously posted near the phone (i.e., "911", ambulance, doctor, fire department, paramedics, etc.).

8. The following procedures for first aid recordable and lost time cases are designed to help lower the frequency and experience modification rates of Lasher's workers compensation. When an employee has a job related injury/illness the following is to take place:

   a. Every possible effort will be made by the superintendent to treat the injury/illness from the first aid box on the job-site.

   b. If the superintendent and/or the employee feels further treatment is necessary, the employee will be taken to one of Lasher's medical providers. The person who accompanies the injured employee is to instruct the medical provider to send the statement and a copy of the diagnosis directly to the Safety Director.

   c. When the injured employee is sent to a medical provider, the superintendent will notify Lasher's Safety Director to explain the type of treatment the injured received.

   d. Once this information has been received, the Safety Director will evaluate the diagnosis to determine, using the OSHA guidelines and ANSI 216.4 1977, if the injury is FIRST AID or RECORDABLE.

   e. A copy of the injury/illness report will be kept on file in case there are any complications and the employee needs further treatment.

   f. If complications occur, the injury will be considered a new accident and the claim will be turned over to the worker's compensation carrier.

   g. If an injury is found to be compensable, the claim will automatically be reported to the worker's compensation carrier by the safety director.

   h. Even though the medical providers will be informed to send all billings directly to LASHER, it is the responsibility of the project superintendent to tell the medical providers to send it. If a problem arises, the project superintendent is to call the Safety Director for assistance.

EARLY RETURN TO WORK PROGRAM

PURPOSE OF LIGHT DUTY WORK POLICY

1. To allow an injured/ill employee to remain productive in the workplace and to retain his/her income-earning potential.

2. To reduce the number of employee's days away from work because of occupational injuries and illnesses.

THE COMPANY'S LIGHT DUTY WORK POLICY IS AS FOLLOWS

1. Light Duty may be offered to an employee who suffers an injury/illness which prevents him/her from performing their normal work.
2. Light Duty may also be offered to an employee as part of a return to work program after a significant injury/illness.
3. Light Duty work is not guaranteed, but is encouraged when the work is available and medically suitable.
4. Temporary light duty work must be approved by the Safety Director and the Project Supervisor.
5. The duration of light duty work will be determined by the Safety Director's and the Project Supervisor's recommendations, which will be based on the availability of legitimate work.

LASHER PROGRAMS/PROCEDURES

FALL PROTECTION

PURPOSE

To control the hazards causing falls and prevent employees from suffering injury in the event of a fall from elevations.

PROCEDURE

1. Equipment and systems shall be designed and implemented based on the project safety plan to ensure that fall protection is provided to all employees. Elements of the project safety plan should include methods to ensure appropriate anchorage is provided throughout the construction project. Work with fall exposures that exceed six (6') feet requires a fall protection safety plan designed specifically for that project. The plan must be submitted to project management prior to any work.
2. All employees on LASHER premises must use fall protection such as life lines and railings when working within six (6') feet of open-sided roofs, ledges, catwalks or when parapets are less than forty two (42") inches high. Employees must be tied off at the time when exposed to a fall, which may require the use of a lanyard system.
3. Only approved full-body harness (no belts) shall be worn when exposed to a fall of six (6') feet or greater.
4. Daisy-chaining of fall protection devices is strictly prohibited.

5. It is important to know the difference between fall restraint and fall arrest. If there is a potential for a fall, then a fall arrest system must be utilized. Fall arrest systems require use of a full body harness.

6. If and when a static line system is utilized, documentation will be required to demonstrate the effectiveness of that system.

LADDERS, SCAFFOLDS & AERIAL LIFTS

PURPOSE

To outline the minimum safety standards for ladders, scaffolds, and aerial lifts.

EMPLOYEES WORKING ON LADDERS:

Anytime an employee is working and is exposed to a fall hazard in excess of six (6') vertical feet as measured from the sole of their shoe, personal fall protection shall be used.

Exceptions:

1. Maintains at least three points of contact with the ladder at all times.

2. Maintains center of body between the ladder's vertical supports while performing work on a ladder.

GENERAL PORTABLE LADDER REQUIREMENTS:

1. A metal spreader/locking device of sufficient strength to securely hold the front and back sections in open positions shall be working, a component of each stepladder.

2. Do not use the two top rungs of a ladder.

3. Ladders shall be inspected prior to each use.

4. Damaged ladders shall be tagged as **"Dangerous, Do Not Use"** and be withdrawn from service.

5. Ladders shall not be placed in front of doors opening toward the ladder unless door is blocked open, locked, or posted or guarded.

6. Ladders shall be equipped with non-slip bases.

7. Ascend/descend on side approved for such.

8. When ascending/descending, climber must face the ladder.
9. Only one person on ladder at a time.
10. Only fiberglass ladders are allowed. Wood or metal types are not acceptable.
11. When storing, ladders must be laid on their side or secured with a chain, cable or approved storage device when stored upright.
12. Extension ladders must be adequately secured at the top.
13. A minimum of a thirty six (36”) inch overlap above landing is required for extension ladders.
14. Manufacturer’s information must be on the side of the ladder.
15. Follow the 4:1 rule: The distance from the ladder’s base to the vertical side of support shall be one-fourth of its supported length.
16. Post and/or secure area with cones or barrier tape to keep area separate from other employees.
17. Carry tools or equipment in tool belts or bags, handed up or down to different levels, or lifted by a mechanical hoist.

GENERAL FIXED LADDER REQUIREMENTS

1. All rungs shall have a minimum diameter of 3/4 (3/4 “) inch.
2. Distance between rungs shall not exceed twelve (12”) inches and shall be uniform throughout.
3. Minimum length or run shall be sixteen (16”) inches.
4. The required clearance between ladder rungs and nearest permanent object on the back side of the ladder.

SCAFFOLDS

When working on scaffolds, follow these guidelines:

1. Before starting work on a scaffold, inspect visually to determine that:
    a. Handrails, midrails, toeboards, and decking are in place.
    b. Wheels are locked on movable scaffolds.

c. Locking pins are in place at each joint.

2. Personnel must wear safety harnesses and be properly tied off on any scaffold platform over 10' and, that is not equipped with standard handrails, midrails or complete deck.

3. Do not change or remove scaffold members unless authorized.

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

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

6. All scaffolds must be erected level and plumb, on a firm base.

7. Scaffolds must be tied off or stabilized with outriggers when the height is more than three times the smaller dimension. Scaffolds must also be tied off horizontally every 30 (30') feet.

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

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

10. Be sure you know the safe working loads on all scaffolds.

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

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

13. Do not stack brick, tile, block or similar material higher than twenty four (24") inches on the scaffold deck.

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

15. Patented Metal Scaffolding.

    a. Generally, parts and sections of scaffolding made by one manufacturer are not to be used with another manufacturer's.

16. Suspended Scaffolding.

a. Swinging stages, toothpicks, boatswain ("bos'n") chairs, floats, and needle beams require special approval prior to use.

b. Attach and secure safety belt before stepping on these scaffolds and do not remove until clear of the scaffold. Tie off to independent lifeline or building structure.

17. Decking.

a. Planks of two-inch scaffold grade lumber or laminated wood. Store scaffolding planks on dunnage separately from ordinary lumber.

b. Manufactured aluminum decking. Use for scaffolds only.

AERIAL LIFTS

Follow the guidelines below:

1. Workers shall be trained on the equipment they will be operating.
2. Lifts shall be inspected and determined to be in a safe condition prior to use.
3. Only the minimal materials, tools, and equipment are allowed to be hoisted in personnel lifts. Lifts shall not be used to raise/position materials.
4. Tie-off is required on all boom lifts and man baskets. The tie-off points around scissor lifts are an acceptable tie off point, as long as the lift manufacture has stated and pointed them out.
5. All gates/guardrails shall be closed and/or installed prior to raising the platform.
6. Personnel shall not dismount from lifts in an elevated position (unless double-lanyard tie off is possible).
7. Appropriate clearances around energized electrical conductors must be maintained. Recognized electrical safe work practices shall be observed.
8. All parts of the worker's body shall remain inside the lift platform when it is being raised.

a. Lifts shall be lowered prior to traveling long distances (over 10 feet).If lifts are moved in a raised position; the operator shall look in direction of travel and avoid all overhead obstructions.

b. Floor load ratings shall be adhered to.

POWERED EQUIPMENT & TOOLS

PURPOSE

To define Lasher's specific expectations for powered equipment and tool use on LASHER projects.

PROCEDURE

1. All tools and equipment shall be maintained in good condition and have current certificates as required by law.
2. Contractor equipment shall be inspected daily before use by an operator. Formal, documented inspections of all tools are required on a monthly basis. Copies of inspections must be made available to LASHER when requested.
3. Contractor agrees to document and manage an equipment "*red tag*" program that clearly identifies equipment taken out of service due to maintenance problems or issues. No equipment shall be used if red tagged.
4. If equipment is owned by LASHER, but borrowed and used by contractors (only as a last resort), contractors are responsible to keep and maintain equipment in safe working order. (See "Superintendent Responsibilities", section #13, page 7).
5. Personal Protective Equipment (PPE) shall be defined for use with each class or type of powered equipment and/or tool and provided for use.
6. Stationary tools or grinding machines shall be securely mounted to prevent movement and/or injury.
7. All portable electrically powered tools need to be grounded or double insulated to prevent electrical shock.
8. Compressed air shall not be used for cleaning purposes.
9. All pinch points and other machine hazards shall be guarded. All guards as provided by the manufacturer of the tool shall be in place at all times. No equipment shall be used or customized for work other than its originally intended purpose.
10. Grand Fault Circuit Interrupter (GFCI) and/or an assured grounding program shall be in place for temporary construction power use.
11. Ground plug must be present an all electrically powered tools unless double-insulated.

POWDER ACTUATED TOOLS

PURPOSE

To control the use of powder actuated tools and prevent employees from suffering injury from them by establishing minimum standards for powder actuated tools use.

PROCEDURE

1. The use of powder activated tools is prohibited in LASHER occupied buildings. The use of such tools by the contractor may be given consideration in special cases only after careful review by your project management and LASHER project management.
2. Only employees who have been trained in the operation of the particular tool in use will be allowed to use them.
3. The tool will be inspected each day before loading to insure that all safety devices are in good working condition.
4. Tools will not be loaded until just prior to the intended firing time. Loaded tools will not be left unattended.
5. Tools will not be used in an explosive or flammable atmosphere.
6. Misfired cartridges shall be segregated from fired cartridges and disposed of per manufacturer's recommendations.
7. Fired cartridges shall be disposed of properly and not allowed to accumulate on the floor or in the work area. 8. Tools shall not be greater than .22 caliber.

HAND TOOLS

PURPOSE

To eliminate injuries caused by the unsafe use of hand tools.

PROCEDURE

1. Determine and use the right tool for the job.

2. Inspect tools prior to use.
3. Make sure the tool handle is maintained.
4. Make sure impact work surfaces of tools are maintained.
5. Follow safe work practices.
6. If the tool is used in electrical work or where the potential for contact with electrical components exists, insulated tools shall be required.
7. Use only the tools that you have been trained to use.
8. Wear the appropriate PPE.

CRANES, RIGGING & HOISTS

PURPOSE

1. To establish minimum safety standards to ensure all crane operations are performed in a safe manner.
2. To ensure that all cranes used on LASHER projects are in safe working condition.
3. To prevent injuries and losses resulting from incidents caused by improper use of cranes.

PROCEDURE

All crane work must be pre-planned to ensure the safety of the process. It is the responsibility of the contractor and/or crane equipment supplier to ensure any crane used on an LASHER project is in safe working condition. Documentation must be supplied with the crane and reviewed by project management prior to any work by the crane on the job.

DOCUMENTATION REQUIRED

1. The crane has been inspected and maintained in accordance with the manufacturer's specifications.
2. The crane complies with all applicable regulatory or special requirements of the project. Cranes should be equipped with two-blocking devices, or a system shall be used which deactivates the hoisting action before damage occurs in the event of a two-blocking situation (two-block damage prevention feature).
3. Operator's manual must be available in the cab of the crane.

4. The crane has a current, thorough annual inspection by a person qualified to inspect and certify cranes.
5. Inspection logs for daily, weekly, monthly work are available in the crane cab for inspection.
6. The operator of the crane has a crane safety training card or documentation verifying the operator's qualifications to operate this specific type of crane.
7. Written safe crane operating procedures are available in the cab of the crane. These are to be written by the contractor. The operator's manual may not be used in lieu of separate safety procedures.
8. Special permission (in the form of a lift plan) is required for any lift that exceeds 90% of the rated capacity of the crane in the pick condition.(This is not applicable for mobile cranes equipped with operating computer systems or tower cranes with operating limit switches).
9. At no time will a crane be operated with computer systems or limit switches in a non-functioning or override condition.
10. The weight of the load must be known (not estimated) or means taken to accurately weigh the load before any pick.
11. All outriggers must be fully extended and set on stable ground and/or adequate solid cribbing before any lift.
12. All rigging gear is inspected before each use. Damaged equipment must be immediately taken out of service. All rigging gear must be rated for a safe capacity for that lift.
13. Any multiple crane pick requires a written plan submitted to the project superintendent.
14. A written safety plan must be submitted to project management for the use of multiple tower cranes, including a tower crane and mobile cranes, prior to work on a project.
15. Cranes, rigging, and loads are not permitted within ten (10') feet of power lines rated 50kv or below. Any questions regarding cranes and rigging should be referred through project management.
16. Use of a dedicated bellman should be considered in project planning.
17. Due to the seriousness of crane safety procedures, any operator or supervisor who violates these procedures will be subject to immediate disciplinary action, up to and including removal from the project.

MULTIPLE CRANES ON A PROJECT

Whenever two or more cranes are in use on a project, the following procedures must be followed:

1. Crane use meetings should be held daily before work starts. Attending: a.

   Operators

   b. Bellboys and/or dedicated signal men.

   c. Foreman of crews using cranes.

2. A written pre-plan must be submitted as part of the project safety plan.

TOWER CRANES

1. Tower crane selection and sizing must be pre-planned as a function of the project safety plan. Consideration must be given to local conditions and potential permits required. A specific tower crane erection, jumping, or dismantling safety meeting must be held at the job site prior to these work processes.

2. The following checklist should be used as a guide for issues that must be addressed at this meeting. Tower crane erection, jumping, dismantling checklist:

   a. All tower cranes must be erected, jumped, dismantled, and operated in accordance with the manufacturer's specifications and procedures.(Operating manual must be provided on site).

   b. The tower crane lessor must provide the erector and project management with a list of verified weights of all major component parts.

   c. The tower crane lessor must provide the erector and project management with written procedures for erecting, jumping (when appropriate), and dismantling each major component. This will include proper torquing specifications and procedures.

   d. The tower crane lessor must ensure that all components of the crane arrive at the job site in safe working condition.

   e. The tower crane lessor, erection contractor, mobile crane operator, and/or representative, and project supervision must make a physical inspection of the erection site to ensure adequate setup area and proper radius and load chart capacities.

   f. The erector must provide a load chart for the crane to be used in the erection process.

   g. The erector must provide a fall protection work place for the erection, jumping, or dismantling process.

h. The tower crane erector's representative must be on the job site to monitor the erection process.

i. Soils and footings for both the tower and mobile crane must be verified as adequate for the erection process.

j. The tower crane erector's representative must inspect, test, and certify, in writing, that the tower crane is in safe working condition prior to any work being performed.

3. Radio communications between operators are required.

4. Quadrants of operation must be clearly defined.

TRENCHING/EXCAVATIONS

PURPOSE

This requirement establishes guidelines to be used by LASHER employees when excavation (including a trench) work is to be performed.

COMPETENT PERSON

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

2. In order to be a *"Competent Person"* for the purpose of this requirement one must have documented specific training in and be knowledgeable about soils analysis, the use of protective systems, and the requirements of 29 CFR Part 1926.650 -.652, Subpart P. Technical questions during the interview approval process will be asked to validate competency in excavation safety.

REQUIREMENTS

1. Prior to excavation all appropriate site permits must be obtained and task specific instructions followed.

2. During excavation work a competent person shall be on the job site at all times when personnel are working within or around the excavation of three (3') feet or greater, in order to monitor soil conditions and protection systems employed.

3. The estimated location of utility installations, such as sewer, telephone, electric, water lines, or any other underground installation that reasonably may be expected to be encountered during excavation work, shall be determined prior to opening an excavation.

4. Adequate precautions shall be taken to prevent employees working in excavations against the hazards posed by water accumulation.

5. Employees shall be protected from excavated or other materials or equipment that could pose a hazard by falling or rolling into excavations. Protection shall be provided by placing and keeping such materials or equipment at least two (2') feet from the edge of excavations.

6. A stairway, ladder, or ramp shall be used as a means of access or egress in trench excavations that are four (4') feet or more in depth. The ladder(s), stairway(s), or ramp shall be spaced so that no employee in the trench excavation is more than twenty five (25') feet from a means of egress. When ladder(s) are employed, the top of the ladder shall extend a minimum of three (3') feet above the ground and be properly secured.

7. When excavations are exposed to vehicular traffic, each employee shall wear a warning vest made with reflective material or high visibility material.

8. Employees shall not be permitted underneath loads handled by lifting or digging equipment. Employees shall be required to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling material.

9. In excavations where oxygen deficiency or gaseous conditions exist, or could reasonably be expected to exist, a confined space permit must be obtained.

10. Where oxygen deficiency (atmosphere containing less than 19.5% oxygen) exists, the area must be continuously ventilated until the oxygen levels are above 19.5 %.

11. Where a gaseous condition exists, the area shall be ventilated until the flammable gas concentration is below 10% of the lower flammable limits.

12. Whenever oxygen deficiency or gaseous conditions exist or could reasonably exist, the area shall be monitored continuously to assure that employees are protected.

13. Where the stability of adjoining buildings, walls, or other structures is endangered by excavation operations, support systems such as shoring, bracing, or underpinning shall be provided to ensure the stability of such structures for the protection of employees.

14. Sidewalks, pavement, and appurtenant structure shall not be undermined unless a support system such as shoring is provided to protect employees from the possible collapse of such structures.

PERSONNEL PROTECTION SYSTEMS

1. Employees in excavations shall be protected from cave-ins by an adequate protective system, which shall be inspected by a competent person.

2. The use of protective systems is required for all excavations, in excess of five (5') feet, except when excavation is within stable rock.

3. Trench excavations less than five (5') feet in depth may not require the use of protective systems, unless there is evidence of a potential cave-in. The competent person shall determine the need for use of protective systems when such conditions exist.

4. When sloping, benching, or protective systems are required, refer to requirements in CFR 1926.652 (OSHA Construction Standards).

5. Whenever support systems, shield systems, or other protective systems are being used, a copy of the manufacturer's specifications, recommendations, and limitations sheet shall be in written form and maintained at the job site.

RESPONSIBILITIES OF COMPETENT PERSON

1. Perform daily inspection of protection equipment, trench conditions, and adjacent areas.

2. Inspections shall be made prior to the start of work and as needed throughout the shift.

3. Inspections shall be made after every rainstorm or other hazard increasing occurrence.

4. Remove employees from hazardous conditions and make all changes necessary to ensure their safety.

5. Categorize soil conditions and conduct visual and manual tests.

6. Determine the appropriate protection system to be used.

7. Obtain appropriate permits when needed.

8. Maintain on-site records of inspections and protective systems used.

ASSURED EQUIPMENT GROUNDING PROGRAM

PURPOSE

Prevent injuries due to faulty grounding practices or hazards associated with inadequate electrical grounding methods.

PROCEDURE

1. Applies to all electrical cord sets, portable electric hand tools used for maintenance and construction activities. This procedure does not include permanently attached equipment, double insulated tools, equipment used in connection with ground fault circuit interrupters, or cord and plug connected equipment used for non-construction or maintenance activities.

2. General

   a. The following tests/inspection shall be made at the required interval (see below) to ensure the safe condition of equipment grounding conductors:

      i. Visual inspection of cords and attachment points to plug and

      equipment. ii. All equipment grounding conductors shall be tested for

      continuity.

      iii. Each receptacle and attachment cap or plug shall be tested for correct attachment of equipment grounding conductor.

   b. Required Test Frequency:

      i. Prior to the first use of new equipment. ii. When equipment is

      returned to service following any repairs. iii. Prior to equipment being used

      after any incident which can be reasonably suspected to have caused damage.

      iv. At intervals not exceeding three months.

   c. Tests performed under the Assured Grounding Program must be documented. Test documentation shall identify each item of equipment tested and indicate the last date it was tested. All documentation shall be placed in a site central file.

   d. Equipment found to be defective may not be used until repaired.

   e. Equipment tested per this program shall be identified with colored tape indicating the time of the last test. The color codes shall be consistently defined for use on projects.

f. The above-mentioned work shall be performed by personnel who have been specifically trained to perform the tests involved.

REFERENCES

1. Occupational Safety and Health Administration, Department of Labor. 29 CFR 1910.304.
2. National Electrical Code. Article 305-6(b).

ELECTRICAL SAFETY/ENERGIZED ELECTRICAL WORK (EEW)

PURPOSE

To minimize hazardous electrical exposures to personnel and ensure compliance with regulatory requirements applicable to electrical systems.

SCOPE

This policy applies to all personnel who perform work with, on, or around electrical equipment, circuitry, and/or systems on LASHER controlled property.

APPLICABLE FORMS/DOCUMENTS

1. Energized Electrical Work (EEW) Permit
2. Applicable Documents:
   a. OSHA 1910, Subpart S
   b. OSHA 1926
   c. National Electrical Code (NEC)
   d. ANSI Standards Z89.1 (head protection) and Z87.1 (eye protection)
   e. Site Control of Hazardous Energies program
   f. National Fire Protection Association Article 70 & 79

GENERAL

1. Key Result: A corporate-wide safety procedure to prevent accidents when working on or around electrical systems.

2. Definitions:

   a. Blast Suit – Properly rated hood, face shield, gloves, hard hat, and Nomex or equivalent outer clothing combination.

   b. Buddy System – A safety system used where one person is performing Energized Electrical Work (EEW) and one person is functioning as a dedicated Qualified – (EEW) Buddy. Both individuals must be qualified as per this document. A person may function as an EEW Buddy for two people if they are working on the same system and are both in a single line of sight from a single observation point.

   c. Compelling Reason – A situation where a greater operational health, safety or environmental hazard exists if equipment is de-energized or if an essential continuity of service is halted. Examples of "compelling reasons" include:

      i. Impact to Emergency

      Alarms ii. Impact to Illumination

      iii. Impact to Life Support

   d. Infeasible Shutdown – Will be determined by a senior level management for that organization.

   e. Electrical Hazard – An electrical condition where the possibility of injury or incident is present due to an exposed energized circuit.

   f. Energized Electrical Work (EEW) – Energized Electrical Work, formerly electrical "hot work". Any work requiring performance of duties on or near an exposed energized circuit with magnitude greater than 50 volts to ground or 240 volt-amps.

   g. EEW Badge (or other visible indicator, hereafter referred to as "EEW" badge") – A badge authorizing a qualified person to perform trouble shooting, I/R Scanning, and voltage and current measurements for Type 4 classifications without an EEW permit. The badge must be visible when performing the operations. The individual must be qualified per this document.

   h. EEW Permit – Document authorizing qualified personnel to perform installations or repairs on energized electrical equipment and/or systems.

   i. Hazardous Locations – Class 1, Division 1 and 2 Locations as specified in the NEC and NFPA.

j. Permit Issuer – Individual responsible for issuing EEW permits and adhering to the permit system criteria as defined in this document.

k. Properly Rated and Tested – PPE device has a specific purpose and a specific rating. The rating will determine if the PPE will protect the worker. Most PPE requires an inspection, as specified by the manufacturer and appropriate standards of the device, before donning. This includes looking for obvious indications of mechanical or functional failure.PPE devices that do not pass this inspection should be returned for repair or discarded. Rubber insulated gloves, sleeves and mats require certification from an approved certifier.

l. Qualified EEW Buddy – A person assigned to monitor the individual performing Type 4 EEW.

m. Qualified Person – A person who is familiar with the construction, operation, and hazards of the specific equipment involved and has had training in avoiding the electrical hazards of working on or near exposed energized parts. This person must also meet the requirements of this document. The qualification applies to specific tools or equipment and cannot be universally applied to all tools and equipment.

n. Qualified Persona as an EEW Buddy – A person assigned to monitor the individual performing Type 5 EEW. o. Safe

Working Distance

i. Voltage Range (phase to phase), Minimum Approach

Distance ii. < 300 V, Avoid Contact iii. > 300 V and< 750 V - 1 ft. 0

in. (30.5 cm) iv. > 750 V and < 2 kV - 1 ft. 6 in. (46 cm)

v. > 2 kV and < 15 kV - 2 ft. 0 in. (61 cm) vi. >

15 kV and < 37 kV - 3 ft. 0 in. (91 cm) vii. > 37

kV and < 87.5 kV - 3 ft. 6 in. (107 cm) viii. >

85.5 kV and < 121 kV - 4 ft. 0 in. (122 cm)

ix. 121 kV and < 140 kV - 4 ft. 6 in. (137 cm)

p. Avoid Contact – Minimal possibility of bare skin contact to exposed live energized parts.

q. Trouble Shooting – Investigation techniques employed to locate the source of an equipment malfunction.

r. Testing & Metering – Diagnosis and analysis of electrical systems to trace or determine voltage and/or current on circuits.

s. Volt-amps – Circuit voltage (volts) multiplied by current (amperes).

PROCEDURE

1. Energized Electrical Work

   a. If feasible, electrical systems shall be worked "cold". In situations where systems must remain energized, proper precautions must be taken. A compelling reason (i.e., de-energization would result in greater overall risks to health, safety, the environment, and plant operation) must exist before energized work can be considered.

   b. An EEW permit is necessary for work on energized systems operating at a potential greater than 50 volts to ground.

   c. The location of safety critical equipment (fire extinguishers, emergency eyewash, telephone, up line electrical disconnects) shall be identified and communicated prior to conducting EEW.

2. All personnel who perform work on electrical systems must be qualified as defined by this document. Whenever possible, electrical equipment must be worked on in an electrically de-energized state according to documented lockout/tagout procedures. Work on energized electrical equipment will be permitted only when it can be demonstrated that the use of de-energized work practices introduces additional or increased hazards or is not feasible; documented compelling reasons must be provided and approved.

   a. The scope of work must be communicated and understood by all parties involved.

   b. Personnel must not wear conductive items when working on or within the defined safe working distance of energized electrical equipment. These items include, but are not limited to watches, bracelets, rings, conductive framed glasses, earrings, badge clips, and clothing with metal snaps and buttons. If conductive items cannot be removed they must be covered with a non-conductive material.

   c. EEW in hazardous locations (Class 1, Division 1 or 2) should be avoided. This work should only be performed after a thorough analysis has been made to verify the work can be performed safely, and approval has been obtained from the responsible manager. Compelling reason must be documented and approved via an EEW permit.

PROCEDURES CHART

1. The appropriate safe work practices to be used for a project or task are based upon the rated type of electrical work until proven to be a lesser type. See Matrix below.

Electrical Work Type	Energy Magnitude	Work Specifics	Testing/ Metering Operations	Typical Minimum Safety Equipment Required**	Buddy Required	EEW Permit Required
Type # 1* **	Zero Volt Amps	De-energized, locked and tagged out. Meter and check all sources of power before beginning work.	Meter only to ensure no power.	Safety Glasses. As defined by a job hazard analysis.	No	**No**
Type # 2* **	Energized with covers in place less than 600 Volts	Permanent covers in place designed for metering and testing that will prevent any accidental bodily contact with electrical or RF energies.	Meter and test only by means of designed testing points with all covers in place.	Safety Glasses. As defined by a job hazard specialist.	No	**No***
Type # 3* **	Less than 240 Volt Amps and less than 50 Volts. Visual Inspection for less than 600 Volts	Work involving potential direct physical contact with energized exposed circuits not exceeding 240 Volt Amps and less than 50 volts.	Meter, test, or troubleshoot within voltage and Volt Amp ranges.	Safety Glasses (nonconductive frames) As defined by a job hazard specialist.	No	**No***

Type # 4	50 to 600 Volts	Work involving potential direct physical contact with energized exposed circuits greater than 50 Volts and less than 600 Volts. Ensure the area is properly barricaded. Includes all energized, exposed RF work.	Metering and testing with any covers removed allowing for direct contact within this voltage range. This is considered EEW.	Safety Glasses (nonconductive frames). Properly rated and tested rubber insulated gloves and mats. Insulated boots, body hook as defined by a job hazard analysis.	Qualified EEW Buddy	**Yes, EEW Badge may be used for testing and metering only***

Type # 5	**Greater than 600 Volts**	**Work involving potential direct physical contact with energized exposed circuits greater than 600 Volts. Ensure the area is properly barricaded with nonconductive material.**	**Metering and testing with any covers removed exposing over 600 Volts. This is considered EEW.**	**Safety Glasses (nonconductive frames).Properly rated and tested rubber insulated gloves and mats. Insulated boots, body hook as defined by a job hazard analysis.**	**Qualified Person as an EEW Buddy**	**Yes**

***ANY energized work (i.e. Types 2-5) done in hazardous location require an EEW permit.

**Individual tasks must be reviewed for PPE requirements

2. The use of temporary coverings (blankets), insulated tools, mats, and PPE reduces the risk to the employee conducting the work. It should not reduce the energized electrical work to a lower type.

3. General Electrical Work Practices:

    a. No EEW may be performed without approved insulated tools. The hand tools must be specified by the risk assessment and be manufactured to meet the requirements of the work.

    b. Areas around exposed/energized equipment must be properly barricaded and/or secured to prevent accidental contact and maintain a safe work environment.

    c. Personnel should not employ practices which provide a current path through any part of their body. Every effort should be made to practice the “one-hand rule” when the task allows.

    d. No electrical work will be permitted in areas which are dimly lit.

    e. Employee clothing, jewelry, equipment, and work materials shall be rendered nonconductive or used in a manner to prevent contact with energized electrical conductors.

    f. Tripped circuit breakers may not be reset (or fuses replaced) until the system which they service has been verified safe.

    g. Special tools shall be used to install/remove fuses under load. Panel doors shall be closed prior to re-energizing circuits in which fuses have been replaced.

    h. Equipment must be suitable for the environment (e.g., hazardous locations, damp areas) in which it is used.

    i. All electrical and protective equipment shall be inspected for damage prior to use. Damaged items shall be tagged and taken out of service.

    j. Temporary power cords must be protected from damage. Those running overhead shall be adequately secured (with a non-conductive means) at above 7 feet from floor level. No temporary cords shall be draped over equipment or left where potentially walked or driven upon.

    k. Cords used on construction projects shall be of an extra hard use type.

    l. Precautions shall be taken to verify the location of underground/inner wall electrical interferences prior to beginning excavation/penetration activities. If unsure of the exact location of these interferences, protective equipment must be worn.

    m. No use of metal key-hole saws to penetrate sheet rock walls for electrical installations.

    n. Work in wet or damp locations must not be performed until all efforts to abate the hazard has been exhausted. Ground Fault Circuit Interrupters (GFCI’s) must be used when work must be performed in wet or damp locations.

o. Metal fish tape shall never be used for pulling wire into energized panels or where the potential exists for contact with energized components.

p. Non-metallic pulling socks shall be used when pulling wire into energized panels or where the potential exists for contacting energized components.

4. Electrical Work in Hazardous Locations:

a. Work on equipment that is rated for use in hazardous locations that will violate the classified location rating is not permitted. For example, work which requires the opening of explosion proof enclosures in a classified location must be performed in a de-energized, locked and tagged out state.

b. If there is a potential for combustible vapors in a work area, a test of the area must be performed with a combustible gas meter prior to and during the duration of any EEW. Work must be halted immediately if any combustible gas or vapor is detected.

5. Procedures for Energized Electrical Work Types:

NOTE: THE FOLLOWING PROCEDURES SHOULD BE COMMON TO ALL ELECTRICAL WORK FOR THE RESPECTIVE TYPES. ADDITIONAL TASK SPECIFIC PROCEDURES AND EQUIPMENT SHOULD BE INCLUDED WHEN DEVELOPING THE WORK PLAN. IN ALL CASES THE WORK SHOULD BE CLASSIFIED AT THE HIGHER LEVEL UNTIL IT HAS BEEN DETERMINED TO BE A LOWER ONE.

a. Type 1 – De-energized, locked and tagged out

i. Arrange for required down time of equipment/systems.

ii. De-energize all power sources including backup power, lock and tag out and verify all electrical sources are at zero voltage. Ensure that Hazardous Control program criterion has been met.

iii. Verify functionality of test equipment and ensure it is properly rated for maximum potential voltage to be tested, including valid calibration date.

6. After de-energizing, test all circuits for voltage as follows:

7. Check meter with known voltage.

8. Check voltage with meter-confirm to be zero.

9. Check meter with known voltage again, to confirm proper operation of the meter.

b. Type 2 – Covered, energized circuits less than 600 volts or any work less than 50 volts i. Verify that all covers are in place. ii. Ensure proper safety equipment (per Job Hazard Analysis) is at work site and in good condition.

iii. Verify functionality of test equipment and ensure it is properly rated for work to be performed, including valid calibration date.

c. Type 3 – Energized work on exposed electrical systems less than 50 volts and less than 240 volt-amps. Visual inspections rated between 50 V to 600 V.

i. Obtain approval from area owner to do work.

ii. Verify functionality of test equipment and ensure it is properly rated for work to be performed, including valid calibration date. iii. Determine the voltage, location of shutdown points, and any other associated hazards.

iv. Ensure proper tools and test equipment are available for the work to be done and in proper working conditions.

d. Type 4 – Energized work on exposed electrical systems greater than 50 volts and less than 600 volts

i. Ensure EEW badge is visible. If work cannot be performed within the EEW badge system, obtain and properly fill out an EEW permit. Review the permit to obtain required signatures before beginning the work.

ii. A compelling reason, per the definition in this document, for performing EEW must be provided on the EEW permit. Compelling reasons must be approved by the site's designated approver.

iii. Verify functionality of test equipment and ensure it is properly rated for work to be performed, including valid calibration date. iv. Determine voltage, location of shutdown points, and other potential hazards.

v. Apply warning tags that inform others that work is being completed on interrupting breakers/switches. The tag should be placed at the nearest level upstream power source to prevent re-closure and re-energizing of equipment/systems. (Power distribution systems only).

vi. Obtain the proper safety equipment that will be needed to complete the job in a safe manner. The specific safety equipment will vary based on the potential hazard. The correct PPE, insulated tools, and procedures for safe practices should be documented in the job hazard analysis. The safety equipment may include but is not limited to the following:

10. ANSI approved hard hat
11. ANSI approved safety glasses with non-conductive frames
12. Rubber insulated mats and boots

13. Properly rated and tested rubber gloves
14. Properly rated and tested rubber sleeves
15. Body hook
16. Approved insulated tools
17. Face shield
18. Fire extinguisher
19. Flame retardant clothing (i.e. Nomex or equivalent outer clothing)
20. Properly rated and tested blast suit
21. Cotton clothing
    i. PPE should be based on the hazards of the task.
    ii. Ensure that proper tools and test equipment are available for the work to be done and are in proper working condition. iii. Insulated mats and/or boots must be used when working on conductive surfaces for Type 4 and 5 work. iv. Barricade and/or secure the area.
    v. Upon completion of job or shift:
22. (Power distribution systems only) Retrieve all upstream warning tags.
23. Return the EEW Permit and (power distribution systems only) upstream waning tags to permit issuer. e. Type 5 – Greater than 600 volts
    i. In addition to Type 4 requirements above
    ii. All Type 5 energized electrical work must be planned with documentation of sequenced steps, safety precautions, and equipment needed to perform the job safely. The documentation will be approved by an electrical engineer. If this work is routine, procedures should be outlined in PM procedures and on line checklists.
    iii. Permit Systems
24. Qualified Person must obtain an EEW permit and (for power distribution systems only) upstream warning tag.

25. Qualified Person must fill out permit, including compelling reason, and sign.
26. Qualified Person must obtain all appropriate signatures on EEW permit.
27. Qualified Person must post EEW permit at work site.
28. Closed permits shall be archived for one year by the issuing department. If changes are made it will be under the direction of the site EHS department.

RESPONSIBILITIES

1. Environmental Health and Safety (Contractor and/or LASHER)
    a. Ensure quality of the content of training.
    b. Audit to assure that safe electrical work practices are being adhered to.
    c. Coordinate or assist the completion of the Job Hazard Analysis.
    d. Ensure quality of the content of program documentation.
    e. Communicate requirements to site senior management.
2. Equipment Owner/Process Engineer, the person that has the responsibility for the operation and maintenance of the equipment.
    a. Evaluate tasks performed at Types 4 and 5 for engineering controls that would reduce the work to Type three or below and modify the equipment accordingly.
    b. Update specs to comply with the requirements of this document.
    c. Assist in scheduling to minimize production downtime.
    d. Complete the Job Hazard Analysis.
    e. Complete the following training requirements:
    f. Basic Electrical Safety training
3. Management
    a. Enforce the requirements of this document.

b. Ensure that this program is appropriately audited for compliance on a routine basis.

c. Understand the scope & hazards associated with the work they are approving.

d. Read and understand this document.

e. Complete the following training requirements:

i. Basic Electrical Safety training.

4. Qualified EEW Buddy:

a. Review scope of work with qualified person.

b. Know location of disconnects and how to de-energize.

c. Observe work without interfering with worker and without participating in the work.

d. Determine best emergency procedures prior to work beginning.

e. Review and sign EEW permit.

f. Complete the following training requirements:

i. CPR/First Aid – Every two years

ii. Basic Electrical Safety

5. Qualified Person as an EEW Buddy:

In addition to the responsibilities already listed for an EEW Buddy, the Qualified Person as an EEW Buddy must also have:

a. Equivalent knowledge of the qualified person and of the equipment.

b. Understand the scope of work.

c. Complete the following training requirements:

i. CPR/First Aid – Every two years

ii. Basic Electrical Safety iii.

Intermediate Electrical Safety

iv. Advanced Electrical Safety – Advanced is required annually

6. Qualified Person

a. Understand the scope of work.

b. Comply with all electrical safe work procedures and requirements as described in this document. c. Ensure that the buddy system is used.

d. Ensure the EEW permit system is followed.

e. Have read and understood this document.

f. Have experience required to perform work on the respective equipment and understand the hazards associated with the work:

g. Complete the following training requirements:

i. CPR/First Aid – Every two years

ii. Hazardous Energies – annual

iii. Basic Electrical Safety iv.

Intermediate Electrical Safety

v. Advanced Electrical Safety – Advanced is required annually

7. Senior Project/Site Management or designee

a. Ensure that resources are allocated to support this program.

b. Work to eliminate or reduce the need for electrically energized work.

c. Establish a means to enforce compliance with the requirements of this guideline.

d. Complete the following training requirements:

i. Basic Electrical Safety training

ii. Ensure the requirements of this document are implemented and kept current.

8. Supervisors and Permit Issuers

a. Ensure that permits are used, filled out correctly, and signed for all EEW.

b. Verify that all employees performing electrical work have current training certifications and skills necessary to perform the work.

c. Supervisors must ensure that there are a sufficient number of personnel trained and available to do the work.

d. Enforce the availability, maintenance, calibration and/or testing, and use of personal protective equipment.

e. Permit Issuers must understand the scope and hazards associated with the work they are approving.

f. Read and understand this document. Complete the following training requirements: i. Basic Electrical Safety training

HAZARDOUS ENERGIES

PURPOSE

To establish minimum standards and procedures for the operation or energization of the equipment/process in order to protect personnel and equipment.

SCOPE

This policy applies to energy sources such as, but not limited to, electrical, mechanical, hydraulic, pneumatic, chemical, radiation, thermal, compressed air, energy stored in springs, and potential energy from gravity.

PROCEDURE

1. Contractor shall define scope of work and all possible sources of stored energy.
2. A lock and tag are required for each employee at all points of stored energy. Group lockout is not allowed.
3. In coordination with LASHER representative, shut down the equipment or system using normal shutdown procedures.
4. Isolate the equipment or system by operating the switch, valve, or other energy-isolating device. Block, bleed down, or otherwise control all stored energy.
5. In coordination with LASHER representative, verify that isolation and de-energization has been accomplished by attempting to operate the equipment or system and verify with appropriate diagnostic equipment. Electrical Energized Work (EEW) procedures shall be employed until work area has been tested and proven to be de-energized.

6. Each person working on the equipment or system must secure each energy-isolating device with a lock and tag.
7. Prior to startup, check the equipment or system to ensure it is in safe operating condition with all guards, etc. in position.
8. Notify all affected employees and LASHER representatives (if appropriate) that lockout/tagout is being removed.
9. In coordination with LASHER representatives, restore power source and verify safe operating conditions.

CONFINED SPACE MANAGEMENT

PURPOSE

Define clear expectations of contractors regarding confined space entry management.

DEFINITIONS

Confined Space is defined as any space that:

1. Is large enough and so configured that an employee can bodily enter (any portion of the body) and perform assigned work.
2. Has limited or restricted means for entry and/or exit, and
3. Is not designed for continuous occupancy.

Non-permit Confined Space is a confined space that does not contain any hazard capable of causing death or serious physical harm nor has the potential to contain an atmospheric hazard.

Permit Required Confined Space is a confined space which has one or more of the following characteristics:

4. Contains or has the potential to contain a hazardous atmosphere.
5. Contains a material that has the potential for engulfing an entrant.
6. Has an internal configuration such that an entrant could be trapped or asphyxiated by inwardly converging walls or by a floor which slopes downward and tapers to a smaller cross section or,
7. Contains other recognized serious safety or health hazards.

PROCEDURES

1. Each project may have different criteria and/or processes defined to manage confined space entry on LASHER sites. Prior to commencing work, each contractor/general contractor shall obtain the current site confined space entry written program and integrate its expectations into the project plan.

2. Contractors shall ensure all confined spaces as defined above are identified and managed using documented project confined space management methods.

DEMOLITION

PURPOSE

To establish minimum standards and procedures for disposal and storage of demolition items.

PROCEDURE

NOTE: CLEANING OF EQUIPMENT AND MATERIALS MUST BE DONE IN CONJUNCTION WITH THEIR REMOVAL. STORAGE OR STAGING OF THESE MATERIALS IS NOT PERMITTED UNLESS SPECIFICALLY OUTLINED IN THESE GUIDELINES OR APPROVED BY LASHER PROJECT MANAGEMENT.

1. Solvent equipment, piping, ducting, valves, etc.

   a. Solvent gloves and safety glasses must be worn when handling these materials. High concentrations of solvent vapors may also require a respirator. Contact EHS for an evaluation of the hazard if solvent vapors are present.

   b. Any free liquid in solvents equipment or materials must be drained into a solvent drain line or transferred to an approved container and pumped back into the bulk solvent systems.

   c. For remaining wetness or films, evaporate solvents until dry in a solvent exhaust hood, or out doors on the solvent piping rack at the waste management facility. **Do not** rinse any solvent material in the corrosive decontamination pit. Equipment should be sufficiently dismantled and piping cut into sections less than four (4') feet to aid in the evaporation process. Evaporation should be complete in one to seven days, depending on thickness.

   d. For sludge that cannot be evaporated, contact EHS for case-by-case cleaning and disposal requirements.

2. Corrosive equipment, piping, ducting, valves, etc.

   a. Acid gloves, safety glasses, apron, full-face shield, and boots must be worn when handling these materials. If corrosive vapors are present, contact EHS for an evaluation.

   b. Any free liquid in corrosive equipment or materials must be drained into an acid waste line or transferred to an approved container and placed into the acid waste system. Fluoride-containing waste (hydrochloric acid (HF) and

ammonium fluoride) are disposed of in HF system. All other corrosives go to the acid waste system. The corrosive decontamination pit in the waste management facility can be used for all corrosives, except HF.

c. After draining free liquids, corrosive equipment and materials must be rinsed with water at the corrosive decontamination pit until the pH on all surfaces is between five and nine. If a pH in this range cannot be achieved, contact EHS for further instructions.

d. Acid gloves, bags and acid aprons can be rinsed off and disposed of as normal trash.

3. Vacuum equipment, piping, valves, etc.

a. Acid gloves, safety glasses, apron, full-face shield, boots must be worn when handling these materials. If corrosive vapors are present, contact EHS.

b. High vacuum piping and valves frequently have films or deposits that are water reactive and/or corrosive. To decontaminate these materials, the deposits must be reacted by submerging the materials completely in water.

c. If the material cannot be completely submerged, contact EHS for cleaning requirements. Do not spray these items with water, as corrosive vapors may be generated.

4. Arsenic equipment, piping, ducting material, etc.

a. Latex gloves, Tyrek suit, and safety glasses must be worn when handling these materials.

b. For house vacuum piping contaminated with arsenic, wrap and tape pipe ends to contain dust and debris. The pipe must be wiped inside and out with wet wipes to remove all remaining residues. These wipes should be treated as hazardous and placed into waste bags, as well as gloves and suits. The hose vacuum piping can be disposed of in the general trash.

c. For other materials contaminated with arsenic, contact EHS for case-by-case handling, cleaning, and disposal. DO NOT discard materials other than house vacuum piping without EHS approval.

5. Disposal of cleaned materials and equipment:

a. Materials and equipment cleaned by the above methods that will be disposed of must be immediately dismantled or cut into manageable pieces if not done already. Labels that identify the chemical residues present before cleaning must be removed or painted over such that they are unreadable.

b. For routine cleaning methods as outlined above, materials composed completely of metal must be placed in the metal recycle roll-off. All other items must be disposed of in general trash roll-off.

i. For special case-by-case cleaning instructions, such as those for arsenic equipment, material must not be disposed of until reviewed by EHS member.

6. Warehousing or transferring cleaned equipment

    a. If equipment will be warehoused or transferred inside or outside of LASHER, a decontamination label must be attached and equipment cleaning form must be completed before a transfer will be authorized. Forms are available from EHS.

GENERAL SAFETY GUIDELINES

PERSONAL PROTECTIVE EQUIPMENT

HARD HATS

Hard hats shall be worn correctly at all times where there is a possible danger of head injury from impact or from falling objects.

EYE AND FACE PROTECTION

Eye injuries are one of the most frequent causes of injury in the construction industry.

Following are the requirements for wearing eye protection:

1. Mandatory eye protection is required on all projects except when the following conditions no longer exist:

    a. All types of hammers, saws, chipping tools, brooms, grinders, impact tools, drills, chemicals, hazardous substance such as insulation, concrete mix, and other substances which create hazardous dust, mists, and fumes.

    b. Concrete pouring, dry packing, grouting, welding, burning, and cutting.

2. Safety glasses, face shields, burning goggles, welding helmets, and chemical goggles will be provided and required on all activities presenting an eye injury hazard.

EAR PROTECTION

Ear protection devices shall be provided whenever it is not feasible to reduce noise levels or duration of exposure.

PERMISSIBLE NOISE EXPOSURES

DURATION PER DAY HOURS	SOUND LEVEL DBA SLOW RESPONSE
8	90
6	92
4	95
3	97
2	100

1 ½	102
1	105
½	110
¼ or less	115

RESPIRATORY PROTECTION

1. Air purifying respirators will be required and should be supplied on all activities (i.e., concrete grinding, indoor sweeping, jack-hammering, etc.) when dust exposure is above PEL limits.

2. Atmosphere-supplying Respirators will be supplied when conditions warrant and after consultation with the superintendent.

FULL BODY HARNESS AND LANYARDS

1. A full body harness shall be worn when working in an elevated work area where there is no handrail protection such as, but not limited to following:

    a. Within six feet of roof or platform edges.

    b. On scaffolds without handrails.

    c. On swing stages.

    d. On boatswain chairs.

    e. On equipment and structures.

2. Tie-off of 100 percent is required when working six feet or more above solid ground or above temporary and permanent floors or platforms when guardrails are not provided. This will require the employee to use one of the following:

    a. A double lanyard.

    b. Lifeline.

    c. Static line.

CLOTHING, BOOTS, AND GLOVES (NOT SUPPLIED BY THE COMPANY)

1. Full-length trousers shall be worn.

2. Shirts with a minimum of tee-shirt length sleeves.
3. Leather over the ankle work boot with a heavy sole (no tennis shoes).
4. All subcontractors will be required to wear leather over the ankle boots with a heavy sole.
5. Gloves shall be worn where protection is needed against concrete, rough or sharp objects, hot materials, caustic or abrasive material, or chemicals which could harm the skin.
6. Tank tops, shirts cut off at the midriff, cutoffs, sweatpants, moon boots, sandals, sneakers, jogging shoes, etc., are prohibited. Subcontractors and visitors are required to maintain the same dress code.

ABRASIVE GRINDING

Abrasive wheel bench or sand grinders must have safety guards strong enough to withstand bursting wheels. Inspect and ring test abrasive wheels before mounting. Always leave wheel in good working order.

COMPRESSED GAS CYLINDERS (HANDLING AND STORAGE)

1. Put valve protection caps in place before compressed gas cylinders are transported, moved, or stored.
2. Cylinder valves are to be closed when work is finished and when cylinders are empty or being moved.
3. Oxygen and acetylene regulators shall be in proper working order while in use.
4. Cylinders of compressed gas shall be chained or otherwise secured in an upright position while in use or being stored, or transported.
5. Compressed gas hoses must be free from leaks or poor connections and be neatly wound on hose hangers.
6. Storage areas are to comply with the following:
    a. Oxygen and fuel gases must be separated by a one hour fire wall five feet high or 20 feet apart.
    b. The empty and full cylinders are to be stored separately with the storage area labeled empty/full.
    c. No smoking signs must be conspicuously posted.
    d. 20-B rated fire extinguishers are to be located no closer than 25 feet or further than 75 feet from the storage area.

CONCRETE SHORING

Form work and shoring will be designed and constructed to safely support all loads imposed during concrete placement. Drawings of plans or jack layout, form work, shoring, working decks, and scaffolding systems will be available at the job-site.

CRANES, MACHINERY, AND CONCRETE PUMPS

1. Operators of all heavy equipment must be trained and certified.
2. All machinery must be shut down with the motor off prior to cleaning, fueling, lubricating, or repairing.
3. Cranes, rigging, and equipment will be checked each day by the operator before being used.
4. Rated load capacities, hand signals, and special hazard warnings must be conspicuously posted on all equipment.
5. Barricades will be required around all accessible areas within the swing radius of the rear of the rotating superstructure on all types of cranes used by LASHER in order to prevent employees from being crushed or injured in any manner.
6. Except where electrical distribution and transmission lines have been de-energized, no part of a crane or its load, concrete pump or its hose, or any other piece of equipment shall be operated within ten feet of a line rated below 50kv or twice the length of the line insulator when over 50kv.
7. Only trained flagmen shall direct equipment.
8. Crane operators shall not swing loads above areas where others are working, and shall stop use of crane during high winds or lightening storms.
9. RIDING THE HOOD, BALL, LOAD, AND CONCRETE BUCKET IS ABSOLUTELY FORBIDDEN.
10. Only the crane operator will be allowed on the crane within the barricaded areas, except when there is need to talk to the crane operator
11. The only time an individual will be allowed to talk to the operator is when it is safe to do so.
12. No one will be allowed at any time to eat, sit, stand, or ride on the equipment except the operator.
13. If any part of this policy is violated, as with any safety violation policy, disciplinary action must and will be taken.

DISASTER PLANNING (EARTH, WIND AND FIRE)

In areas and seasons that have historically produced violent weather (i.e., earthquake, high wind, fire, flood, etc.) the supervisor should be acquainted with the potential of a natural disaster and take every precaution to avoid a human or financial loss. Preventive measures, as well as planned reactions to a disaster, are important. A simple but effective plan should be formulated for each. A few, but not all situations are the following:

1. Earthquake.
2. High winds.
3. Fire fighting.
4. Flood control.
5. First aid.
6. Emergency plans for 24 hours a day, seven days a week.
7. Notification sequence and communication to each employee.
8. Regular contacts with communications media.
9. Utility main shutdown.
10. Site security.
11. Site shutdown procedures.
12. Outside help (i.e., police, fire department, utility, etc.).

DRUGS AND ALCOHOL

The buying, selling, transportation, distributing, consumption, or use of illegal drugs or alcohol on Lasher's job-sites, premises, or equipment is strictly prohibited. Reporting to work or working under the influence of illegal drugs or alcohol is similarly prohibited.

EDGE PROTECTION AND FLOOR OPENING

1. All wall openings from which there is a drop of more than four feet and the bottom of the opening is less than three feet above the working surface and more than 12 inches or 16 inches wide will be guarded with a standard railing. A standard railing is measured from the floor and consists of a top rail at 42 inches, intermediate rail at 21 inches and a toe-board.

2. All wall openings from which there is a drop of 6 feet or more shall be guarded to prevent employees and/or materials from falling to the lower level. If the opening extends to a distance of less than 4 feet above the working surface, toe boards shall be installed. Open sided floors 6 feet above the ground or adjacent floors shall have fall protection installed. Runways 4 feet or more above the floor or ground level shall normally have guardrails and toe boards. Stairways having four (4) or more steps shall be equipped with handrails.

3. Floor and roof openings measuring 12 feet or more in their smallest dimensions should be guarded by a standard railing or cover. The cover should be capable of supporting the maximum load to which it will be subjected, and be properly installed to prevent accidental displacement.

4. Roof Level – Warning or perimeter guarding should be rope or cable, flagged with highly visible bits of material hanging from the warning lines at frequent intervals and be installed 42 inches above the roof surface to warn employees that they are approaching the edge of the roof. Stanchions supporting warning lines shall be installed securely. The warning lines shall have a minimum breaking strength of 500 pounds and be placed no closer than 6 feet from the roof edge. The warning lines shall be erected either around the complete perimeter of the roof or only in the area of the roof where work is being accomplished, provided the work progresses in such a manner as to provide continuous warning to employees in the work area when they are approaching the roof edge. A safety monitor may also be used. (If the roof is greater than 50 feet wide a warning line safety monitor must be used).

5. Floor openings through which men or material may fall shall be covered or guarded, except where the entryway leads to a ladder or stairs. Covers shall be secured against movement. Removable covers shall be labeled, *"Floor Opening Do Not Remove".* Any cover, guardrail, or handrail that must be removed shall be replaced immediately upon completion of task requiring removal or before leaving the opening unattended.

ELECTRICAL

1. Only qualified persons shall repair, test, or connect (other than plug in) electrical equipment. All hand tools should be visually inspected for damage daily. Do not operate any type of electrical equipment while standing in water or wearing wet clothing. Electrical equipment shall be de-energized and locked and tagged out before any electrical work is performed.

2. No electrical cord or tool with a damaged ground plug, end pulled away from the outer insulation, or where the inner wires are exposed may be used. On a monthly basis, inspect each plug and receptacle and any equipment connected by cord and plug for external defects and possible internal damage. Remove from service or repair immediately any defective items.

3. All 15 and 20 ampere or greater receptacle outlets on single phase, 120 volt circuits on construction sites shall be protected by a Ground Fault Circuit Interrupter (GFCI) or an Assured Grounding Conductor Test shall be performed monthly.

4. A monthly GFCI test on all cords with 120 volt circuits shall be performed by the superintendent or the safety technician and recorded in the superintendent's daily log and on the weekly safety inspection report.

5. Identification of power tools, temporary power cables, and extension cords must be done as follows:

    a. Place some type of contractor identification (i.e. tags) on all power tools, temporary electrical cables, and extension cords.

    b. A representative of Lasher Construction Company Company shall remove from service all power tools, temporary power cables, and extension cords which are not in compliance with the National Electrical Code and OSHA construction standards and cannot be properly identified as to which contractor they belong to.

    c. If any power tool, temporary power cable, or extension cord is found not in compliance and can be identified as to which contractor it belongs to, the contractor shall be notified of the violation.

    d. If the contractor fails to correct the violation, a representative of Lasher Construction Company Company will issue the contractor a written warning.

    e. If, after issuing the written warning, the contractor does not comply, the power tool, temporary electrical cable, and/or extension cords must be removed from service by an Lasher Construction Company Company representative.

    f. This policy is to be presented to all subcontractors of a project, and is to be part of each pre-mobilization agenda.

EXCAVATING

1. Before excavating, utility companies shall be contacted to determine if there are underground installations in the area. Underground facilities must be located and supported during excavation operations.

2. Walls or trenches 5 feet or more in depth and all excavations in which employees are exposed to danger from moving ground or cave-in must be guarded by, shoring or sloping.

3. In excavations which employees are required to enter, excavated or other material shall be stored 2 feet or more from the edge of the excavation unless barriers or retaining devices are used to contain such materials.

4. Trenches 4 feet deep or more require adequate means of exit such as a ladder located so as to require no more than 25 feet of lateral travel.

5. When employees or equipment are required to cross over an excavation, walkways or bridges with standard guardrails will be provided and used.

6. All excavations shall have warning barricades around them.

7. Excavations and trenches which are 5 feet or more in depth and less than 20 feet in depth and that do not meet the requirements for type A, B, C, soils must be designed by a registered professional engineer.

8. When excavation and trenches require a registered professional engineer to design them, the R.P.E. must be registered in the state for which the excavation and trenching is taking place

9. The design criteria by R.P.E. for protective systems for the excavation and trenches must be kept at the job-site and contain the following information:

10. Be in written form to include size, type, and configurations of materials to be used in the protective system and identify the R.P.E. appointing the design.

FIRE PROTECTION

1. Firefighting equipment must be conspicuously located, readily accessible (especially when welding or cutting with a torch), periodically inspected and maintained in operating condition. Report any inoperative or missing equipment to the supervisor.

2. Each office and/or tool trailer will have at least one 20 pound ABC Fire Extinguisher on hand.

3. When welding, cutting, or burning, remove the following:

    a. All combustible materials within a 35 foot radius.

    b. All flammable materials within a 50 foot radius.

    c. All explosive materials within a 100 foot radius.

FOR ADDITIONAL INFORMATION SEE "HOT WORK PROCEDURES".

FLAMMABLE AND COMBUSTIBLE LIQUIDS

1. Only U.L. or equivalent approved metal containers and portable tanks shall be used for storage and handling of flammable and combustible liquids.

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

3. Tank storage shall not be located under power lines.

4. Signs with "NO SMOKING WITHIN 50 FEET" will be posted on or near the flammable/combustible storage area.

5. A fire extinguisher with a 20 ABC rating will be available within 50 feet but not closer than 20 feet during the transfer of flammable liquids.

FOR ADDITIONAL INFORMATION SEE SECTION 14 (HANDLING, STORAGE AND DISPENSING OF FLAMMABLE AND COMBUSTIBLE LIQUIDS).

HAZARD COMMUNICATION (TOXIC MATERIALS)

1. The hazard communication standard requires employers to provide information on all hazardous substances that may be present in the workplace. Subcontractors or vendors bringing hazardous materials onto Lasher's premises or job-sites are required to have available Material Safety Data Sheets (MSDS) for that material. The manufacturer of the material is required to provide MSDS' with hazardous substances. The superintendent will provide subcontractors and employees with MSDS forms on their project as requested.

2. Compile a list of all toxic material on the project and from that list procure a MSDS sheet for each of the hazardous materials from the central purchasing agent.

3. Label all chemicals properly and keep all containers accurately labeled, identifying current contents.

4. Avoid incompatible storage or storage of chemicals above eye level.

5. In the project safety meeting, review hazardous materials that are being used on the project and train the employees and subcontractors in the following:

    a. Provisions of the Hazard Communication Standard.

    b. How to detect a chemical exposure.

    c. Physical and health hazards of chemicals in use.

    d. Use and availability of MSDS sheets.

    e. Safe work practices and/or personal protective equipment.

    f. Detailed records of employee training shall be maintained to prove that the training requirements have been met.

    g. Have upon request all of the following:

        i. Copy of Lasher's written Hazardous Communication

        Program. ii. Copy of OSHA Hazard Communication Standard.

        iii. A list of all of the hazardous chemicals on the job-site.

iv. Copies of MSDS sheets for any hazardous materials to which the job-site is exposed. **FOR ADDITIONAL INFORMATION SEE HAZARD COMMUNICATIONS PROGRAM SECTION 5**

HOUSEKEEPING

Good housekeeping is one outstanding indication of an efficiently run job. It is imperative that all projects be kept clean and free of debris and rubbish.

1. Trash piles shall be removed at regular intervals. Containers shall be provided for refuse.
2. Scrap lumber, hoses, cables, wiring, and all other debris shall be kept clear from work areas, hallways and stairs.
3. Bend or remove protruding nails.
4. Each employee is responsible for keeping his immediate work area clean. Dispose of lunch and break garbage in trash containers only.
5. Store material and supplies segregated as to size and type. This material is not to intrude on walk or traffic ways. Aisles, passageways and exits shall be kept clear.
6. Throwing materials over the side of a structure is not allowed unless a signalman is directing.
7. Accumulation of trash and scrap materials will not be tolerated. Trash and other materials shall not be thrown from one level to another. Trash and combustible material shall be placed in containers provided for that purpose. Combustible and non-combustible materials shall be disposed of only in the appropriately marked containers.
8. All materials shall be secured to prevent sliding, falling, or collapsing.
9. The project superintendent shall approve the stocking of an area with materials.

LADDERS

1. An employee shall not use a ladder that has broken, loose, or cracked rungs, side rails or braces. If such conditions are noted, remove from service and notify the superintendent so that the ladder may be repaired or replaced.
2. Ladders must be well secured at the top and of sufficient length to extend not less than 36 inches above any platform or landing for which they serve.

3. Ladders shall be placed so the base will have a ratio of 4 to 1 of the working length of the ladder from the support structure.

4. Employees shall not work on or above the third rung of an extension ladder or on the top two steps of a ladder. In that way the “belt buckle rule” will be in place, allowing the body to always stay inside the rails of the ladder.

5. Step ladders shall be only used in a fully open position.

6. When ascending or descending ladders, employees shall have hands free to grip the sides or rungs with both hands, and shall always be facing the ladder.

7. Job-made ladders shall be constructed so that cleats will be inset into side rails one half inch off filler blocks used. Cleats shall be uniformly spaced, 12 inches top to top.

8. Ladders shall never be used as a platform, runway, or scaffold.

LIGHTING

1. The intensity of light shall be three foot candles in general areas and five foot candles or more on any walkway, ladder, stairway, or working level.

2. Temporary lighting shall be equipped with guards to prevent accidental contact with the bulb, except when the light is deeply recessed and protected by the lamp holder.

MEDICAL SERVICES AND FIRST AID

1. When a medical facility is not reasonably accessible, a person trained to render first aid shall be available on the project.

2. First aid supplies shall be readily available and stored in either or both, the tool and office trailer(s).

3. All emergency telephone numbers shall be conspicuously posted near the phone (i.e., “911”, ambulance, doctor, fire department, paramedics, etc.).

4. Payment Procedures for First Aid Recordable and Loss Time Cases

    a. This procedure is designed to help lower the frequency and experience modification rates of LASHER. This policy is effective immediately.

    b. When an employee has a job related injury/illness the following is to take place:

i. Every possible effort will be made by the superintendent to treat the injury/illness from the first aid box on the job-site.

ii. If the superintendent and/or the employee feels further treatment is necessary, the employee will be taken to one of Lasher's medical providers. The person who accompanies the injured employee is to instruct the medical provider to send the statement and a copy of the diagnosis directly to LASHER for payment.

iii. When the injured employee is sent to a medical provider, the superintendent will notify R & O's Safety Director to explain the type of treatment the injured received.

iv. Once this information has been received, the Safety Director will evaluate the diagnosis to determine, using OSHA guidelines and ANSI 216.4 1977, to see if it is FIRST AID or RECORDABLE.

v. A copy of the injury/illness report will be kept on file in case there are any complications and the employee needs further treatment.

vi. If complications occur, the injury will be considered a new accident and the claim will be turned over to the worker's compensation carrier.

vii. If an injury is found to be reportable, the claim will automatically be reported to the worker's compensation carrier by the Safety Director.

viii. LASHER will not have a loss time accident unless the doctor completely refuses to allow the injured person to return to work. ix. The light duty will be responsibility of the project on which employee was injured.

x. Even though the medical providers will be informed to send all billings directly to LASHER, it is the responsibility of the project to tell the medical providers to send it. If a problem arises, the project is to call the Safety Director for assistance.

COMPANY MOTOR VEHICLES

Safety belts shall be properly fastened by employees while driving or riding in Company vehicles. In cases of repeated or flagrant violations of this policy, appropriate discipline will be required, including revoking the use of Company vehicles.

TOOLS

Secure pneumatic tools to hose with safety clips or retainers to prevent them from being accidentally disconnected or expelled.

1. Powder Actuated Tools

   a. Only trained and certified employees shall be allowed to operate powder actuated tools.

b. Any defect discovered during use shall be immediately corrected or the tool shall be removed from service until properly repaired.

2. Power Operated Tools and Hand Tools

3. No power tools shall be operated without a properly adjusted guard.

4. Hand tools shall be used only for the purpose for which they were designed and shall be kept in good repair.

5. Pneumatic power tools shall be secured to the hose by some positive means to prevent the tool from becoming accidentally disconnected.

6. Any tool found not in proper working order, or that develops a defect during use, shall be removed from service until properly repaired.

PROTECTION FOR THE GENERAL PUBLIC

1. Protect the general public from injury or accident by providing warning and protective devices (i.e., signs, flags, lights, barricades) on pedestrian walkways to keep them free from obstacles or obstruction.

2. Where vehicular traffic needs to be re-routed, post a flagman.

3. Keep spectators (especially children) away from the job-site. Always be courteous but firm in dealing with the public.

4. In the event of any accident involving the public that results in injury or property damage, the superintendent shall make a detailed written report on the day of accident, submitting it to the project manager.

RADIOS AND TAPE DECKS

Playing of audio equipment is prohibited.

SCAFFOLDS

1. Scaffolding

a. All scaffolding will be erected per the manufacturer's instructions and will meet the guidelines outlined in OSHA construction standards.

b. Footing and/or anchorage shall be sound, rigid and capable of carrying four (4) times the maximum intended load without setting or displacement.

c. Scaffolding or planking shall not be supported by barrels, boxes, bricks, blocks, or any other unstable materials. d.

All scaffolding shall have the work deck fully planked.

e. Standard guardrails shall be installed on all open sides and ends of platforms more than ten feet above ground or floor, or six feet above ground or floor when working under Federal OSHA construction standards.

f. Any scaffold planking shall not extend over the end. Supports shall not be less than 6 inches, nor more than 12 inches, and shall be secured against movement.

g. Scaffolds shall not be moved until all materials and personnel are off the work platform.

h. Scaffolding and accessories with defective parts shall be immediately replaced or repaired.

i. Erection, repairs and adjustments to scaffolds shall be made only by or under the supervision of Competent Persons.

j. Full body harness will be used when the scaffolding does not meet the requirements of the OSHA construction standards.

2. Swinging Scaffolds

a. Each employee shall wear an approved safety belt attached to a lifeline and separated from the tie-back.

b. The lifeline shall be securely attached to substantial members of the structure (not scaffold) or to securely rigged lines, which will safely suspend the employee in case of a fall.

c. Platform shall not be more than 36 inches wide unless designed by a qualified person to prevent unstable conditions.

3. Tubular Welded Frame Scaffolds

a. Scaffolds shall be properly braced. Cross braces shall be of such length as will automatically square vertical members to ensure that the scaffold is erected plumb, square and rigid.

b. Scaffolds shall be capable of supporting four (4) times the maximum intended load and erected on sound, rigid footings, capable of carrying the maximum load without settling or displacement.

c. Standard guardrail shall be installed on all open sides and ends of platforms six feet or more above the ground or floor depending on the state, federal, and local regulations and when the scaffold is 45 inches or more in its least dimension.

d. Cross braces may be used as part of the guardrail system when the top rail or mid rail meets the following requirements:

    i. Used as top rail when cross brace is between 38” and 45”. Then install a horizontal brace as mid rail.

    ii. Used as mid rail when cross brace is between 20” and 30”. Then install a horizontal brace as top rail.

e. Maximum spacing between planking is not to exceed 1 inch.

f. All walking surfaces must be at least 18 inches wide.

g. A ladder must be attached when the distance between the rungs on scaffold are less than 12 inches and greater than 13 ¾ inches or when the width of the rung is less than 16 inches.

h. Scaffolding and accessories with defective parts shall be immediately replaced or repaired.

i. Scaffold must be tied-off to the building or structure at intervals that do not exceed 30 feet horizontally and 26 feet vertically.

STORAGE

1. All materials shall be secured to prevent sliding, falling, or collapsing.
2. Aisles, passageways and exits shall be kept clear.
3. The project superintendent shall approve the stocking of an area with materials.

THEFT AND VANDALISM

Safeguard the job-site from theft and vandalism. LASHER and its subcontractors on open job-sites are easy prey to vandals. A plan should be implemented to protect the job-site from the following.

1. Theft by employees and the public.
2. Vandalism by employees, ex-employees, local gangs, or children.
3. Fire by arson or accident.
4. Attractive nuisance resulting in injury or death.
5. A job-site security system should consider the implementation of at least the following:
    a. Careful scheduling of material, (keep excess materials off the job-site).

b. Organized receiving site that confines material in a specific area.

c. Entire area should be enclosed by a security fence.

d. Area should be lighted at night and visible from adjacent streets where possible.

e. Small high value items should be stored in locked enclosures.

f. A separate parking area for employee vehicles will help control the disappearance of tools and materials.

TOILETS

1. One toilet facility will be provided for every 20 or fewer employees. It shall be cleaned and serviced on a weekly basis.
2. Creating or contributing to unsanitary conditions or failing to use the toilet facilities provided will be cause for discharge or expulsion from the project.

VENTILATION

1. When working in enclosed areas, the air quality shall be monitored for dangerous levels of gases, dusts, or fumes (i.e., carbon monoxide, carbon dioxide, or harmful dusts.)
2. No quantities of toxic or noxious dusts, fumes, vapors, or gasses should exceed the threshold limit values adopted by the American Conference of Governmental Industrial Hygienists.
3. Tests should be conducted periodically and all test dates recorded in the Superintendent's Daily Log.

AERIAL LIFTS

An aerial lift is any vehicle or device which has:

1. An extendible boom.
2. Aerial ladders.
3. Articulating boom platforms.
4. Vertical towers.
5. Any combination of the above.

ALL THE ABOVE REQUIRE PERSONNEL TO BE TIED OFF WHILE WORKING ON OR INSIDE THESE PLATFORMS.

LASER

Employees who are required to use lasers must be certified. The following are some common sense rules for using a laser:

1. Set up in low traffic areas and near a barrier if possible.
2. Avoid the paths of extension cords, welding cables and air hoses.
3. On large jobs, use a permanent location if possible. (Cement a pipe at a fixed height).
4. Set up over dirt or grass if possible.
5. Set lasers 12-18" lower than an optical lever (You are not looking through it).
6. Keep legs on tripods in a wide stance and hobble the legs if set on concrete.
7. Tie fluorescent flagging to tripod's legs.
8. Keep level and laser cases closed while using the instruments to keep dirt and moisture out. Protect levels, transits, and theodolites from moisture.
9. Never carry a level or laser over your shoulder while still attached to tripod.
10. Set up instruments away from compaction equipment.
11. Put instruments away when not in use and store in secure location.
12. Where applicable, have warning signs clearly displayed.
13. Have workers properly trained and OSHA training cards in possession.
14. Insist on proper training for use of the laser.
15. Always carry Training verification card.
16. Be sure to post "Caution-Laser Light" placard on job-site.
17. Shut off laser when not in use.
18. Do not direct laser at personnel or vehicles.
19. Do not look directly into the beam.

20. Always use target supplied with system.

GUIDELINES FOR USING NAIL GUNS

All operators must be trained and certified.

1. Always wear eye protection.
2. Never use bottled gases.
3. Do not exceed 120 psi.
4. Never point nailer toward yourself or anyone else.
5. Never carry finger on trigger.
6. Always wear ear and head protector.
7. Store nailer properly.
8. Keep work area clean.
9. Never use in presence of flammable liquids or gases.
10. Keep visitors away.
11. Dress properly.
12. Never use non relieving coupler on nailer.
13. Check push lever before use.
14. Keep all screws and covers tightly in place.
15. Do not load fasteners with trigger or push lever depressed.
16. Keep hands and feet away from firing head during use.
17. Place nailer properly on work piece.
18. Take care of double fire due to recoil.
19. Do not drive fasteners into thin boards or near corners and edges of work piece.

20. Never drive fasteners from both sides of a wall at the same time.
21. Check for live wires.
22. Never carry nailer by hose.
23. Do not overreach.
24. Never use nailer which is defective or operating abnormally.
25. Do not disconnect air hose from nailer with finger on trigger.
26. Disconnect air hose from nailer when:
    a. doing maintenance and inspection
    b. cleaning a jam
    c. it is not in use
    d. leaving work areas
    e. moving it to another location
    f. handing it to another person
27. Stay alert.
28. Handle nailer correctly and carefully.
29. Never use nailer for applications other than those specified in this manual.
30. Do not wire safety guard in the depressed (open) position or allow a tool to be operated with a non functioning safety guard.

WELDING, CUTTING, AND HEATING

1. Proper precautions for fire prevention shall be taken in areas where welding or other “hot work” is being performed (i.e., isolating welding and cutting, removing fire hazards from the vicinity, and providing a fire watch with an extinguisher on hand during remodel work).
2. Always wear proper approved eye protection when welding, cutting, or working in areas where welding is being performed.

FLAGGING, BARRICADES, AND SIGNS PROCEDURE

PURPOSE

The purpose of flagging, barricades, and signs is to ensure that any operation which could present a hazard to personnel working in an affected area or passing through an area is protected. The following are types of flagging which are to be used:

1. Three inch **"DO NOT ENTER"** banner tape. This is a red tape with black letters. This is used to control access to areas where a hazardous condition exists and it is determined necessary to keep all unauthorized personnel out of the affected area. No one, other than the personnel that have established the area, may enter or remove the tape. **"DANGER"** signs are to be used with this tape to identify the hazard. Authorized personnel putting up the signs will include their name and phone number on the signs so that other personnel who may need access can contact the person responsible for this type of flagging. Unauthorized persons crossing or removing this barrier will be subject to termination or other disciplinary action.

2. Radiation barrier tape and signs are one half to three inches in size and the color is yellow and magenta (purplish-red). The sign has a radiation symbol which is magenta and the background is yellow. This is used on the project to secure areas where x-rays are being performed. Technicians performing this work are the only ones authorized to put up and remove any type of tape and signs. Unauthorized persons crossing or removing this barrier will be subject to termination or other disciplinary action.

NOTE: RADIATION BARRIER TAPE AND SIGNS ARE ALSO USED TO IDENTIFY NUCLEAR DEVICES. EVEN THOUGH THE EXPOSURE MAY BE MINIMAL, NONE SHOULD ENTER OR LOITER IN THESE AREAS UNNECESSARILY.

3. Three inch **SECURITY LINE, DO NOT CROSS"** tape is yellow banner with black letters. This is used to protect and secure an accident scene until an investigation has been completed. This type of barrier will be put up only by safety, security, or fire department personnel. Removal of this barrier will only be completed by the same department personnel. Unauthorized persons crossing or removing this barrier will be subject to termination or other disciplinary action.

4. Three inch **"CAUTION"** tape is a yellow banner with black letters. This is used to identify a potentially hazardous condition. **"CAUTION"** signs are used with this tape to identify the potential hazard. Personnel posting this sign should include their name and phone number on the sign. Personnel may cross this barrier so long as they take the precautions necessary to ensure their safety. Unauthorized persons removing this barrier will be subject to disciplinary action.

5. Multi-colored pennant flagging is used to get your **"ATTENTION"** or as a **"NOTICE"**. It is important that the appropriate signs be posted, if needed. Indiscriminate use is discouraged. However, some work operations and government requirements may justify its use.

BARRICADES

1. Barricades may be needed in conjunction with any of the flagging and signing noted above.

2. Barricade tapes and warning signs are a temporary method of protecting and warning personnel of hazardous conditions, but are not a substitute for physical barrier guarding (i.e. 2" x 4" lumber, tube-loc, wire rope, etc.) where a hazardous condition presents a potential for serious injury or death.

3. Do not leave openings, floors, walkways, or catwalks without proper guarding installed. It is the responsibility of the supervisor performing the work to ensure the protection and safety of all personnel affected by the operation. 4. Barricades will be treated according to the flagging attached.

HOT WORK PROCEDURES

PURPOSE

The purpose of this procedure and permit is to control ignition sources during construction operation to minimize the possibility of fire hazards.

1. The foreman assigning the job is responsible for ensuring that the welder doing the job has adequate equipment.

2. The safety department or a qualified representative and the foreman are responsible for reviewing the job to outline the necessary precautions to be taken during the welding operation.

3. The fire watch will watch for fire, the spread of hot metal, and sparks. This person will have one 20 pound ABC Fire Extinguisher.

4. Before welding operation begins, the fire watch will clear the area of the following:

   a. All combustibles within a 35 foot radius.

   b. All flammables within a 50 foot radius.

   c. All explosives within a 100 foot radius.

5. All tanks, vessels, and piping suspected or known to have flammable vapors shall be isolated from existing systems, drained and re-filled with water or purged with nitrogen. Check with a monitor before cutting or welding to ensure that all flammable vapors are removed. Under no circumstance will tanks, vessels, or piping be cut into or welded until the flammable vapors are removed.

6. If the combustibles cannot be removed, they shall either be covered with a fire blanket or wet down.

7. Following the welding operation, the fire watch will remain 30 minutes to ensure there are no fires and that all hot particles are extinguished.

8. The project safety representative will identify the hot work areas and a permit will be filled out and signed.

9. A new permit will be filled out prior to the beginning of each shift.

10. Copies of these permits will be kept on file in the project safety office. The permit will contain three pages, distributed as follows:

    a. Original- Posted in Work Area.

    b. Fist Copy - Retained by Craft Foreman.

    c. Second Copy - File in Safety file in Main Office.

11. Once the hot work is complete, the permit posted at the work area will be returned to the safety engineer or superintendent.

SAFETY COMMITTEE

OBJECTIVE

To assist management in establishing a safe and efficient workplace and environment.

MEMBERSHIP

Members should be chosen in view of the duties and responsibilities of the committee. A chairman and secretary should be appointed and committee members selected according to their position, knowledge, abilities and interest in promoting safety. A person from each department should be represented. However, care must be taken to avoid creating too large of a committee. A smaller committee usually functions more effectively than a larger one. Large committees tend to produce more debate and less action. Committees should have an odd number of members to prevent tie votes.

Management and the labor force should both be represented on the committee.

SCOPE

A well-run safety committee is an important part of the loss control program. It can help reduce the cost of operation and produce many other effects, such as:

1. Reducing the occurrence, frequency and/or severity of accidents.
2. Increase productive output (quality and quantity).
3. Improve the use of equipment.
4. Reduce material waste.
5. Enhance employee satisfaction.
6. Facilitate employee loyalty, cooperation and contributions.
7. Provide analysis and evaluation of injury and incident data and program performance to management.
8. Develop countermeasures for identified problems per company business plans.

GOALS

1. A safety committee shall be responsible for establishing annual goals concerning hazard control and accident prevention. Once the goals are set and specific objective formulated, they are to be provided to management and the

Safety Director.

2. Some examples of goals could be:

   a. Help the company comply with government standards concerning loss control matters.

   b. Integrate hazard control and safety into the day-to-day activity of all personnel.

   c. Improve the new employee orientation and training programs.

   d. Reduce injury incidence rates (i.e., frequency and/or severity).

   e. Evaluate injury and incident occurrences for the purpose of providing management with recommended countermeasures concerning prevention.

ACTIVITY AND DUTIES

1. The safety committee shall meet on a regular basis to accomplish its goals and objectives.

2. The safety committee shall also discuss; accidents, near misses, new training requirements, employee suggestions, future educational needs as they relate to safety and submit recommended countermeasures for improvement.

3. Other actions should include:

   a. Review quality of supervisor's accident investigation reports.

   b. Review actions taken to prevent accident recurrences.

   c. Establish a system for handling employee safety suggestions.

   d. Review new employee safety orientation procedures.

   e. Review results of the safety inspection program.

   f. Participate in revising safety rules and procedures.

   g. Consult management in arranging special safety training programs.

   h. Review and help implement specific accident prevention activities.

   i. Review, update, and prepare reports on the status of the loss control program.

   j. Act as a consultant for the company on safety and loss control issues.

EFFECTIVE COMMITTEE MEETINGS

1. Good safety meetings require thorough planning and effort. Notices of meetings should be sent to each member of the committee.

2. The meeting place should be comfortable, well lighted, with no distractions.

3. The meeting shall be conducted as follows:

   a. CALL TO ORDER – The meeting should be called to order promptly at the appointed time.

   b. ROLL CALL BY THE SECRETARY - Names of members and others present should be recorded. Members who cannot attend should send an alternate. Absences should also be noted.

   c. INTRODUCTION OF VISITORS – If any.

   d. MINUTES – Previous meeting minutes should be reviewed briefly.

   e. UNFINISHED BUSINESS – A status review of issues or assignments made during the last meeting should take place.

   f. REVIEW OF ACCIDENTS – Serious accidents or incidents since the last meeting should be reviewed with an aim towards preventing recurrences.

   g. OTHER ACTIVITIES – Inspections, environmental health studies, ergonomic studies, surveys, training programs, safety suggestions, insurance reports form company service representative and other activities from the past month should be reviewed.

   h. NEW BUSINESS – Any new issues, programs, problems, etc., should be brought up. Appropriate assignments should be given.

   i. GENERAL DISCUSSION – Any relevant comments or suggestions for the good of the company should be discussed. Guest speakers may also be allotted this time.

   j. ADJOURNMENT – Set time, date and locations for the next meeting. Adjourn on time.

4. Minutes should be taken, prepared and circulated by the secretary after approval by the chairman. The minutes should accurately record all decisions made and actions taken since they serve a s a means of keeping management informed of the group's work and as a follow-up. Committee members and the company managers should receive copies and a copy should be posted on the employee bulletin board or intranet. Copies should be maintained for one year.

MINUTES OF THE SAFETY COMMITTEE MEETING

Date of Meeting _____ Date of Next Meeting _____

Time Closed _____ Date of Last Meeting _____

Signed _____

Names of Committee Members and Guests Present Position

_____ _____

_____ _____

Pending Business: The following action was taken on business pending before the Committee. (Refer to recommendations by number.)

Recommendations completed since last meeting _____

Recommendations under consideration _____

Recommendations rejected _____

New Business: The following attached reports were read, discussed, and approved:

Inspection Report of Safety Inspector dated _____

Workmen's Committee Report dated _____ (where applicable) Foremen's

Committee Report dated _____ (where applicable)

Accidents and Preventive Recommendations Made: The records of all injuries reported by employees since the last General Safety Committee meeting were reviewed to determine what caused the injuries, and what steps should be taken to prevent recurrence. The discussion developed the following:

_____

_____

_____

_____

INJURY MANAGEMENT

An injury management program is a post injury procedure designed to ensure quality medical care, contain medical costs, reduce opportunities for litigation and return injured workers to full gainful employment in the earliest possible time.

MANAGEMENT'S ROLE

The soaring cost of Worker's Compensation Insurance to our company will be contained. Rather than accepting injury related expenses as a fixed cost of doing business, we will be proactive in this program to focus our resources on: 1. Educating our employees.

2. Loss reporting.

3. Utilization of medical providers.

4. Return to work (RTW).

5. Documentation.

The success of this program is dependent on a strong partnership between our management staff, employees, medical care providers and our insurance company.

IMPLEMENTATION

1. Educating our employees.

   Fear and uncertainty are primary reasons for injured employees to delay reporting injuries and to seek assistance from attorneys. This may be due to concern over medical bills, lost income or even the loss of employment. We will take whatever action is necessary to alleviate these fears, specifically:

   a. All employees will be provided with an explanation of the Worker's Compensation system and benefits it will provide.

   b. The work force will be instructed in accident reporting procedures.

   c. We will direct injured employees to our selected medical care providers if state law permits.

   d. Company directed and/or recommended providers will have their names, telephone numbers and addresses posted on bulletin boards.

   e. Of particular importance, all workers will be schooled in our substance abuse policy, fraudulent claim prevention and alternative job duties and other aspects of returning to work.

2. Loss Reporting

   a. We will establish procedures which will give all employees the responsibility and incentive to report all accidents and near-miss incidents to their supervisor immediately.

   b. The state required First Report of Injury will be prepared and reported to the insurance company within 24 hours by fax or telephone. Follow state requirements for distribution of hard copies.

3. Utilization of Medical Providers

a. The selection of physicians, clinic or hospitals is an important injury management decision. We will either directly or indirectly manage the medical care provided to our injured employees to the maximum extent permitted by our state's Worker's Compensation regulations.

b. We will use Preferred Provider Organizations (PPO) if available to us.

c. Chosen medical facilities must provide quality care, effective service and pricing to fit our needs.

d. Whenever possible, we will encourage physicians treating our employees to visit the company to observe our operations to better understand the way we conduct our business.

RETURN TO WORK (RTW)

To effectively manage the costs incurred as a result of work related injuries, the following eight point plan will be closely followed and monitored:

1. **Ensure that initial treatment is provided.** Immediately following an injury, provide the necessary first aid, and then send the employee to a medical provider as required. Document all details of the date and time of the injury, the type of first aid provided and the name of the physician, clinic or hospital where the employee received treatment.

2. **Notify claims.** Contact our claim office immediately following an injury, preferably by phone or fax.

3. Provide the job function evaluation form to treating physician. This information should include:

   a. A description of the employee's current job, with details on postures (standing, sitting, walking) and physical demands (lifting-weight and frequency, hours worked, tool usage, etc.).

   b. A copy of the injury report describing how the injury occurred if available.

   c. A statement of our company's position on returning injured employees to work.

4. **Attending physician's report.** It is critical to obtain the treating physician's response to any work restrictions our injured worker may have. If the doctor has the job function evaluation as a guide, an informed response should be obtainable.

5. **Contact the employee.** Employee contact should be made in person or by phone within 24 hours. Upon contact, relay the following to the employee:

   a. Reassure the employee of our company's commitment to their well-being.

   b. Assess the employee's understanding of the treatment he or she received.

c. Ask if the employee has any specific questions about future plans, treatment, etc.

6. **Follow up with the physician.** Within 24 hours of initial treatment obtain details regarding recommended additional treatment, return-to-work expectations and specific job restrictions. Discuss a specific timetable for the employee's return to work.

7. **Maintain contact with the employee, physician and the claims handler.** During the employee's absence from work, we will continue to monitor progress as follows:

   a. Contact the employee at least once every week to inquire about their recovery and express our concern for their return to good health.

   b. Contact the physician periodically to discuss recovery progress and any changes in the timetable for the employee's return to work.

   c. Keep our claim handler informed about the employee's return to work status.

8. **Establish an injury management record.** (Refer to the Injury Management Checklist file exhibit). For each case involving lost time and/or follow up medical treatment, establish an injury management record. At a minimum, this record should include:

   a. A copy of the injury report.

   b. Documentation of initial treatment.

   c. Copies of medical bills.

   d. A log of all phone conversations with the employee, physician and claim representative.

   e. Progress reports from the physician.

   f. All activities regarding treatment and recovery should be logged and documented whenever possible. Explain any progress toward return to work and discuss this with our claim representative and the physician or other parties involved. Indicate the date the employee returned to work and in what capacity (full duty, part-time, limited physical activity, etc.).

INJURY MANAGEMNT CHECKLIST FILE

INTRODUCTION

A medical case file (a.k.a. Injury Management Checklist) should be maintained on every employee injury requiring medical treatment if lost work time is anticipated due to a workplace accident. These medical files should be separated from the standard employee files and secured apart from all other file information being maintained on the injured employee.

MEDICAL FILE CONTENTS

All documentation concerning the treatment of an employee injury should be maintained in this file. This includes a copy of the Employer's First Report of Injury, copy of the employee's First Report of Injury (if required by the state), medical bills received, medical bills paid, and correspondence to and from all parties involved until the injured worker returns to full gainful employment without medical restrictions.

PURPOSE

There are several good business reasons to maintain a medical case management file. These include:

1. Maintaining strict confidentiality between injured employee and employer.
2. The securing of data necessary to manage the claim.
3. Providing a checklist for the company representative managing the case which documents actions taken to protect the right of the company and the injured employee.
4. Provides for a monitoring system to keep company management current on the status of the injured employee and progress being made on getting that individual back into the normal workflow.

FILE CONSTRUCTION (EXHIBIT C)

1. The file itself is constructed in three parts:
    a. Activity checklist (see Exhibit C1)
    b. Monitor (see Exhibit C2)
    c. Employee identifier (see Exhibit C3)
2. On a standard size straight cut file folder, paste a copy of Exhibit C1 onto the front face of the folder.
3. On the left inside face of the folder paste a copy of Exhibit C2.
4. On the right inside face of the folder paste a copy of Exhibit C3.

MAINTENANCE INSTRUCTIONS

1. As soon as management becomes aware of an employee accident, report it to our insurance carrier's claims office immediately by telephone or FAX. Follow the activity instructions including the date and time the activities are complete as shown on Exhibit C1.

2. The monitor (Exhibit C2) should be used as a day-to-day diary of all activity taking place in managing the claims process.

3. Write the injured employee's name and social security number in the spaces provided, as well as the claim file number and the name of the assigned claim representatives (Exhibit C3).

HAZARD COMMUNICATION PROGRAM

PURPOSE

It is the policy of LASHER, that the first consideration in the performance of work shall be the protection of the safety and health of all employees. LASHER has developed this Hazard Communication Program to ensure that all employees receive adequate information relevant to the possible hazards which may be involved with the various hazardous substances used in the Company's operations and processes. The following program outlines how we will accomplish this objective.

SCOPE

This policy covers all potential workplace exposures involving hazardous substances as defined by Federal, State and local regulations.

HAZARD DETERMINATION

LASHER does not intend to evaluate any of the hazardous substances purchased from suppliers and/or manufacturers but has chosen to rely upon the evaluation by the suppliers or by the manufacturers of the substance to satisfy the requirements for hazard determination.

CONTAINER LABELING

1. No container or hazardous substances will be released for use unless the container is correctly labeled and the label is legible.

2. All chemicals in bags, drums, barrels, bottles, boxes, cans, cylinders, reaction vessels, storage tanks, or the like will be checked by the receiving department to ensure the manufacturer's label is intact, legible, and has not been damaged in any manner during shipment. Any containers found to have damaged labels will be quarantined until a new label has been installed.

3. The label must contain:

    a. The chemical name of the contents.

    b. The appropriate hazard warnings.

    c. The name and address of the manufacturer.

    d. Any other information required.

4. All secondary containers shall be labeled. The information must include details of all chemicals which are in the referenced container.

MATERIAL SAFETY DATA SHEETS (MSDS)

1. Each job-site must maintain a master MSDS file as well as a job-site specific file.
2. These Material Safety Data Sheets are available to all employees, at all times, upon request.
3. The Safety Director or Superintendent will be responsible for reviewing all incoming MSDSs for new and significant health/safety information (LASHER will ensure that any new information is passed on to the employees involved).
4. The Safety Director or Superintendent will review all incoming MSDSs for completeness. If any MSDS is missing or obviously incomplete, a new MSDS will be requested from the manufacturer or distributor. OSHA is to be notified if the manufacturer or distributor will not supply the MSDS or if it is not received after 30 days from request. Any new information will be passed on to employees involved.
5. New materials will not be introduced into the work area until a MSDS has been received.
6. The superintendents will make it an ongoing part of their function to obtain MSDSs for all new materials when they are first ordered.
7. The Safety Director or Superintendent shall coordinate with appropriate contractors to make sure all MSDSs are obtained, distributed and communicated.

LIST OF HAZARDOUS SUBSTANCES

Each job-site shall compile, and update as necessary, a completed inventory of all substances present on that job. The name of those materials determined to be hazardous are defined in applicable Federal and State standards.

EMPLOYEE INFORMATION AND TRAINING

1. All employees will attend an orientation meeting for information and training on the following items prior to starting work with hazardous substances and receive the following information and training: (Training CHECKLIST is to be completed and kept on file).
    a. An overview of the requirements of the Hazard Communication Standard, including their rights under this regulation.
    b. Information on where hazardous substances are present in their work areas.

c. Information regarding the use of hazardous substances in their specific work areas.

d. The location and availability of the written Hazard Communication Program. The program will be available to all employees during the orientation meeting. Subsequent to this, the program will be available from managers and also from the office.

e. The physical and health aspects of the substances in use.

f. Methods of observation techniques used to determine the presence or release of hazardous substances in the work area.

g. The controls, work practices and personal protective equipment which are available for protection against possible exposure.

h. Emergency and first aid procedures to follow if employees are exposed to hazardous substances.

i. How to read labels and material safety data sheets to obtain the appropriate hazard information. j.

Refresher training on an annual basis.

2. It is most important that all of our employees understand the information given in the orientation meetings. Questions regarding this information should be directed to the Safety Director or Superintendent.

3. When new substances are introduced into the workplace, the superintendent will review the above items with you as they are related to the new materials.

4. The superintendents will relay all the above information to new employees who will be working with hazardous substances, prior to their starting work.

5. An Acknowledgement Statement is to be completed by each employee receiving this information and training. These are to be kept on file in the Human Resources Department.

NON-ROUTINE TASKS

1. Infrequently, employees may be required to perform non-routine tasks which involve the use of hazardous substances. Prior to starting work on such projects, each involved employee will be given information by his/her supervisor about hazards to which they may be exposed during such an activity.

2. This information will include:

a. The specific hazards.

b. Protective/safety measures which must be utilized.

c. The measures the company has taken to lessen the hazards, including special ventilation, respirators, the presence of another employee, air sample readings, and emergency procedures.

INFORMING CONTRACTORS

To ensure that outside subcontractors work safely on our jobs, and to ensure the safety of the subcontractors' employees, it will be the responsibility of management to provide subcontractors the following information:

1. The hazardous substance to which they may be exposed while working on the jobsite.
2. The precautions the subcontractors' employees must take to lessen the possibility of exposure by usage of the appropriate measures.
3. Rules and regulations regarding the protection of employee safety, relevant to fire and ignition sources around flammable materials will be followed. The rules regarding smoking, welding, and grinding, will also be followed.'

PLAN ADMINISTRATION

This Hazard Communication Program will be monitored by the Safety Director.

Questions regarding this program should be directed to the Safety Director.

Signature_____

*Title_____

Date_____

*This document must be approved and signed by the Senior Executive on site.

SUBSTANCE AUBSE POLICY

DRUG AND ALCOHOL TESTING POLICY

GENERAL STATEMENT

Lasher Construction Company, (hereinafter referred to as the company) is committed to a safe, productive, and drug-free environment and promoting the general health and well-being of all employees. However, this commitment is jeopardized when employees illegally use drugs or alcohol on the job, come to work under the influence, or manufacture, possess, distribute or sell drugs in the workplace. Therefore, in order to achieve the Company's objectives of safety, productivity, health, and well-being in the work place, the Company establishes the following policy:

1. It is a violation of Company policy for employees to manufacture, posses, distribute or sell, or offer for sale, illegal drugs or otherwise engage in the illegal use of drugs or alcohol on the job.

2. It is a violation of Company policy for anyone to report to work under the influence of illegal drugs or alcohol.

3. It is a violation of Company policy for anyone to use prescription drugs illegally.

4. Violations of this policy are subject to Disciplinary action up to and including Termination of employment.

DEFINITIONS

1. "Alcohol" refers to ethyl alcohol or ethanol.

2. "Drugs" refers to any substance recognized as a drug in the United States Pharmacopoeia, the National Formulary, the Homeopath Pharmacopoeia, or other drug compendia, or supplement to any compendia. This includes, but is not limited to, narcotics, hallucinogenic, depressants, stimulants or other controlled substances.

3. An "employee" is any person in the service of the company for compensation of any kind.

4. A "prospective employee" is one who has made an application for employment with the company.

5. A "sample" refers to urine, blood, breath, saliva or hair.

DRUG AND ALCOHOL TESTING PROGRAM

The company shall test employees and prospective employees for the presence of drugs or alcohol in accordance with the provisions of this policy and as a condition of employment. The testing policy also applies to the employer and all management personnel.

1. Pre Hire/Probation Testing. All prospective employees will be drug tested prior to actually starting work. Such testing is a condition of employment and employees who refuse to be tested or who test positive will not be hired or will be terminated. All newly hired employees will be subject to additional testing according to the following provisions of this policy.

2. Random Testing. No less than 2% to 5% of the employee group will be tested each month. Those to be tested will be selected by scientific random sample.

3. Post-Accident Testing. Employees involved in any incident which results in damage to or loss of company property, or a claim of work-related injury or illness requiring medical care (other than first aid), must submit to testing before leaving either the job site or the clinic where treatment for the injury occurred. Refusal or avoidance of testing can result in severe disciplinary measures including termination. All supervisors must advise the office of any incidents as soon as possible.

4. "For Cause" Testing. An employee will be required to submit to a drug test if the Company has reasonable suspicion to believe that the employee is impaired due to the influence of drugs or alcohol.

5. Post-Rehabilitation Testing. An employee who successfully completes a Company approved substance abuse program and is allowed to return to work, shall be subject to additional testing, the schedule and frequency of which shall be based upon the recommendation of the rehabilitation service.

NOTICE

1. Employees will receive a copy of the company's drug testing policy and procedures.

2. Each employee must sign an acknowledgment that they have received a copy of the Company's drug and alcohol policy and that they consent to be tested according to the provisions of the Company's testing program.

3. A copy of the Company's drug and alcohol policy and testing program will be made available to all prospective employees for their review at the time of application.

COLLECTION AND TESTING

1. By law, the Company may designate the type of sample to be used in the testing program.

2. All costs of collection, transportation and analysis are to be borne by the Company.

3. Prior to testing, employees and prospective employees may be required to provide identification.

4. Collection of the sample will be done during or immediately after regular work hours for all current employees and shall be counted as work time for purposes of compensation and benefits. The sample shall be taken in a reasonable and sanitary location with due regard for the privacy of the individual, and in such a manner as to preclude the probability of erroneous identification of the sample.

5. Transportation of samples to the testing facility will be accomplished in a manner such as to prevent the contamination or adulteration of the sample.

6. Testing of the sample will be done by scientifically accepted analytical methods. A positive test will be confirmed or verified by gas chromatography-mass spectroscopy or other comparable and reliable methods.

DISCIPLINE & CORRECTIVE ACTION

Upon receipt of a verified or confirmed positive drug or alcohol test result which indicates a violation of this policy, or upon the refusal of a current employee or prospective employee to provide a test sample, the Company shall use the test result or refusal as the basis for disciplinary and/or corrective action which includes the following:

1. The Company will refuse to hire a prospective employee who tests positive or refuses to take a test. Current employees who refuse to participate in the testing program shall be terminated.

2. A current employee, who tests positive, may be required by the Company to enroll in a Company approved rehabilitation, treatment program, the cost to be borne by the employee. Upon successful completion of a company approved treatment program the company may allow the employee to return to work, however, additional testing will be required as a condition of continued employment.

3. A current employee, who tests positive, may be suspended without pay and referred to a Company approved rehabilitation or treatment program, the costs to be borne by the employee. Upon successful completion of a company approved treatment program the company may allow the employee to return to work, however, additional testing will be required as a condition of continued employment. A current employee, who tests positive, may be terminated from employment.

4. The Company may impose other disciplinary measures in conformance with the Company's usual procedures, including any collective bargaining agreement.

CONFIDENTIALITY

It is the Company's policy and legal obligation to assure the confidentiality of all information, interviews, reports, statements, memoranda, and test results which are developed, received, or generated as a consequence of the implementation of this policy and testing program. Use of any information generated as a result of this policy will be restricted to the lawful pursuit and achievement of those purposes and objectives defined in the Company's policy statement.

VEHICLE POLICY

COMPANY VEHICLE POLICY

OVERVIEW

As a driver of an LASHER company vehicle or personal vehicle on company business, the authorized driver has been given certain privileges. He/she assumes the duty of obeying all motor vehicle laws, maintaining the vehicle properly at all times and, otherwise, following the policies and procedures outlined as follows.

President Dale Campbell _____

Safety Director Cesar Calvillo _____

VEHICLE POLICY PURPOSE

1. LASHER company vehicles and the truck allowances and/or mileage reimbursements for personal vehicles are provided to support business activities and are to be used only by qualified and authorized employees. They are not to

be considered a part of employee's compensation and must not be used as an inducement of employment. In all cases, these vehicles are to be operated in strict compliance with motor vehicle laws of the jurisdiction in which they are driven and with the utmost regard for their care and cost efficient use.

2. LASHER company vehicles may not be used for business activities of other companies or personal use.

3. LASHER company vehicles may not be driven to Mexico.

DRIVER LICENSING

LASHER company drivers, employees receiving truck allowances, anyone authorized to drive the company vehicles, and employees driving on company business must have a valid driver's license issued in the state of residence for the class of the vehicle being operated and they must be able to drive a vehicle. Obtaining a driver's license is a personal expense.

DRIVER QUALIFICATIONS

Driver qualifications are as follows:

1. Authorized employee of Lasher Construction Company.

2. Must be at least 21 years of age.

3. Must meet licensing requirements.

4. Will not qualify for a company vehicle, truck allowance or mileage reimbursement if, during the last 36 months, the driver had any of the following experiences:

   a. Been convicted of a felony.

   b. Been convicted of sale, handling or use of drugs.

   c. Been convicted of an alcohol or drug related offense while driving.

   d. Had driver's license suspended or revoked.

   e. Been convicted of three or more speeding violations or one or more other serious violations.

   f. Been involved in two or more chargeable accidents.

REVIEW OF MOTOR VEHICLE RECORD

State Motor Vehicle Records (MVRs) will be used as the source for verifying driver history. MVRs will be obtained and reviewed at least annually. Driving privileges maybe withdrawn or suspended and/or the company vehicles/truck

allowances removed for any authorized driver for not meeting the above requirements. In addition, appropriate disciplinary action may be taken.

MOTOR VEHICLE RECORD POLICY

1. All current employees who drive on company business must provide LASHER with a current motor vehicle record (MVR). It is an LASHER policy and requirement for employment that every employee position with driving duties requires an MVR meeting the grading requirements stated below. This MVR policy applies both to drivers of company owned vehicles as well as employees using personal vehicles in the course of LASHER Company business.

2. MVRs will be examined prior to the start of employment and at least annually thereafter. Any job offer made to an employee-candidate for a position with driving duties shall be contingent upon a current MVR meeting the required standards; continued employment in a position with driving duties also requires an MVR meeting the standards outlined below.

3. The standards for MVRs are as follows:

    a. All operators must have a valid driver's license for at least three years.

    b. No employee will be authorized driving duties with a "borderline" or "poor" MVR. MVRs will be graded based on the criteria table, as minimum requirements.

    c. Driving records must remain "acceptable" or "clear", as graded on the criteria table, for continued employment in positions with driving duties.

ANY EXCEPTIONS TO THESE GUIDELINES MUST BE REFERRED TO SENIOR MANAGEMENT FOR WRITTEN APPROVAL. THE AUTO INSURANCE CARRIER WILL BE CONSULTED ON ANY/ALL MVRS NOT MEETING THE MINIMUM CRITERIA.

Motor Vehicle Grading Criteria (last three years)

NUMBER OF MINOR VIOLATIONS	NUMBER OF AT-FAULT ACCIDENTS			
	0	**1**	**2**	**3**
0	Clear	Acceptable	Borderline	Poor
1	Acceptable	Acceptable	Borderline	Poor
2	Acceptable	Borderline	Poor	Poor

3	Borderline	Poor	Poor	Poor
4	Poor	Poor	Poor	Poor
Any major violation	Poor	Poor	Poor	Poor

MINOR VIOLATIONS: ANY MINOR VIOLATION OTHER THAN A MAJOR:	MAJOR VILOATIONS
Exceptions: • **Motor vehicle equipment, load or size requirement** • **Improper/failure to display license plates** • **Failure to sign or display registration** • **Failure to have driver's license in possession (if valid license exists)**	• Driving under influence of alcohol/drugs • Failure to stop/report an accident • Reckless driving/speeding contest Driving while impaired Making a false accident report Homicide, manslaughter or assault arising out of the use of a vehicle Driving while license is suspended/revoked Careless driving Attempting to elude a police officer

PREVENTATIVE MAINTENANCE

1. To retain the safety and integrity of the LASHER vehicles, Lasher Construction Company will provide the necessary resources to ensure all company vehicles are operating at their best. All routine motor vehicle maintenance will be done according to the manufacturer's specifications. Critical components that must always be maintained and promptly repaired are; brakes, tires, suspension, steering, lights, mirrors, windows, and windshield wipers.

2. Authorized drivers are required to properly maintain their vehicles at all times. Vehicles should not be operated with any defect that would inhibit safe operation due to current and foreseeable weather and lighting conditions. Preventive maintenance such as regular oil changes, lubrication and tire pressure and fluid checks determine to a large extent whether you will have a reliable, safe vehicle to drive and support work activities. You should have preventive maintenance completed on your vehicle as required in the owner's manual.

THEFTS

In the event of the theft of an LASHER vehicle, notify local police and LASHER management immediately.

DRIVER RESPONSIBILITIES

Each driver is responsible for the actual possession, care and use of an LASHER company vehicle and personal vehicle when used for LASHER business. Therefore, a driver's responsibilities include, but are not limited to the following:

1. Operation of the vehicle in a manner consistent with reasonable practices that avoid abuse, theft, neglect or disrespect of the equipment.
2. Obey all traffic laws.
3. The use of seat belts and shoulder harness is mandatory for drivers and passengers.
4. Adhering to manufacturer's recommendations regarding service, maintenance and inspection.
5. Vehicles should not be operated with any defect that would prevent safe operation.
6. Attention to and practice of safe driving techniques and adherence to current safety requirements.
7. Restricting the use of vehicles to authorized driver only (for company vehicles).
8. Reporting the occurrence of moving violations.
9. Accurate, comprehensive and timely reporting of all accidents by an authorized driver and thefts of a company vehicle to the company Safety Director.

FAILURE TO COMPLY WITH ANY OF THESE RESPONSIBILITIES WILL RESULT IN DISCIPLINARY ACTION.

PERSONAL USE AND GUIDELINES FOR OPERATING R & O VEHICLES

GUIDELINES FOR USING COMPANY VEHICLES

1. Only those employees whose names appear on Lasher Construction Company's list of authorized drivers and have a supervisor's permission shall operate a company owned or leased vehicle.
2. LASHER company owned vehicles are to be used for company business only. Personal use of a company vehicle is prohibited unless approved by management. Company vehicles that are driven to and parked at employee residences must be secured when not occupied and have contents reasonably safeguarded.

PERSONAL USE OF R & O COMPANY VEHICLES

1. LASHER Company vehicles are provided primarily for business purposes; however, occasional personal use is permitted.

   Personal use is a privilege extended only to the authorized employee. The privilege of personal use may be

withdrawn at any time without notice by the company. The following rules apply to personal use of company vehicles:

a. Only authorized employee may drive.

b. The company vehicle may only be used for incidental trips within 25 miles of home.

c. Personal trailers, including boat and recreational vehicles, are not to be pulled.

d. A company vehicle is not to be driven while under the influence or alcohol or any controlled substance.

e. Possession, transportation or consumption of alcohol or illegal drugs by anyone in the vehicle is not allowed.

f. Driver and all passengers must wear available personal restraints.

g. Report any accident immediately to police and your manager.

ANY EXCEPTIONS TO THESE RULES REQUIRES ADVANCE, WRITTEN APPROVAL BY APPROVED COMPANY MANAGER OR OFFICER. VIOLATION OF THESE RULES WILL RESULT IN DISCIPLINARY ACTION AND/OR REMOVAL OF DRIVING PRIVILEGES.

2. LASHER provides employees with vehicles to complete business in a safe, efficient and economical way while promoting a positive image of LASHER and their employees. Authorized drivers are required to drive company vehicles in a safe, responsible manner. However, once LASHER company business is done, many times the rules change or just go away altogether. Many drivers feel their private time is their time; and many times their company vehicle takes on the look of their own private vehicle. However, once LASHER business is done, the company positive image shall be retained.

PERSONAL CARS USED ON COMPANY BUSINESS

1. The company does not assume any liability for bodily injuries or property damage. The employee may become personally obligated to pay damages arising out of an accident occurring in connection with operation of his/her own car.

2. The reimbursement to the employee for the operation of his/her car on company business includes the allowance for mileage. You are required to have minimum liability limits of 100/300, unless alternate arrangements are made with the department head. The company does not specify and assumes no responsibility for any other coverage employees carry on their own cars since this is a matter of individual status and preference.

3. You must provide insurance certificates to LASHER with LASHER listed as an additional insured, listing the proper limits.

TRAFFIC VIOLATIONS AND ACCIDENTS

TRAFFIC VIOLATIONS

1. Fines for parking or moving violations are the personal responsibility of the assigned operator. The company will not condone nor excuse ignorance of traffic citations that result in court summons being directed to LASHER.

2. Each driver is required to report all moving violations to the Safety Director within 24 hours. This requirement applies to violations involving the use of any vehicle (company, personal or other) while on company business. Failure to report violations may result in appropriate disciplinary action, depending on seriousness of violation.

3. Please be aware that traffic violations incurred during non-business (personal use) hours will affect your driving status as well and are subject to review.

ACCIDENTS INVOLVING COMPANY VEHICLES

In the event of an accident:

1. Do not admit negligence or liability.

2. Do not attempt settlement, regardless of how minor.

3. Get name, address and phone number of injured person and witness if possible.

4. Exchange vehicles' identification, insurance company name and policy numbers with the other driver.

5. Take a photograph of the scene of accident if possible.

6. Call the police if injury to others is involved. You may want to call police even if there are no injuries.

7. Complete the accident report in your vehicle.

8. Turn all information over to your Safety Director within 24 hours.

PREVENTABLE ACCIDENTS

1. A preventable accident is defined as any accident involving a company vehicle – whether being used for company or personal use – or any vehicle while being used on company business that results in property damage and/or personal injury, and in which the driver in question failed to exercise every **reasonable precaution** to prevent the accident.

2. Classification of preventable accidents:

    a. Following too close.

    b. Driving too fast for conditions

    c. Failure to observe clearances.

d. Failure to obey signs.

e. Improper turns.

f. Failure to observe signals from other drivers.

g. Failure to reduce speed.

h. Improper parking

i. Improper passing.

j. Failure to yield.

k. Improper backing.

l. Failure to obey traffic signals or directions.

m. Exceeding the posted speed limit.

n. Driving While Intoxicated (DWI) or Driving Under the Influence (DUI) or similar charges.

IF YOU ARE INVOLVED IN AN ACCIDENT:

1. **Stop at Once!** Check for personal injuries and send for an ambulance, if needed. Do not leave the scene, but ask for the assistance of bystanders.

2. **If Fire or Smoke is Present,** evacuate vehicle occupants to a safe location. If stalled on a railroad track, evacuate occupants to a safe location away and at a right angle from the tracks.

3. **If Fire, Smoke or Spilled Fuel is Present,** send for the fire department. Do not leave the scene; ask a bystander to call the fire department. If possible, use a spill kit to absorb the spill.

4. **Protect the Scene.** Set emergency warning devices to prevent further injury or damage. Secure your vehicle and its contents from theft.

5. **Secure Assistance** of the police whenever possible. Record names and badge numbers.

6. **Record Names, Addresses and Phone Numbers** of all witnesses, whether injured and driver(s) and their passengers. Record vehicle license numbers.

7. **Do Not Argue!** Make no statement except to the proper authorities. Sign only official police reports. Do not make statements regarding the operating condition of your vehicle and do not admit to fault.

8. **Report the Incident to Your Dispatcher/Supervisor IMMEDIATELY** after first aid has been given, authorities have been notified, the scene has been protected and you are able to do so.

9. **Complete the Incident Report** at the scene as thoroughly as possible. Exchange insurance information only with other involved driver(s).

10. **If You Strike an Unattended Vehicle** and cannot locate the owner, leave a note with your name and phone number, get the vehicle description VIN number and license plate number.

CELL PHONE USE POLICY

PURPOSE

To communicate the hazards of cell phone use while driving an automotive vehicle.

RESEARCH RESULTS

1. Researchers at the University of Toronto found that the risk of having a traffic accident while using a cell phone is the same as that while driving drunk. Their findings were published in the New England Journal of Medicine. The study shows that cell phone users were 400 to 500 times more likely to get into traffic accidents than those who do not use them. “Telephones that allowed the hands to be free did not appear to be safer than hand-held telephones,” the study said.

2. Using a cell phone while driving leads to an increased risk of having an accident, through a lack of attention to driving. Inattention is the #1 cause of vehicle accidents in America. Cell phone use is a matter of record and juries are awarding huge settlements to plaintiffs when it is proven that the defendant was using their cell phone at the time of the crash.

R & O CONSTRUCTION CELL PHONE USE POLICY

1. Extreme care and caution must be used if it is necessary to use cellular/mobile phones while operating a vehicle.

2. If at all possible, or if the driving conditions are dangerous or risky, allow voice mail to handle your calls and return them at your safe convenience or ask a passenger to make the call.

3. If you need to place or receive a call and driving conditions are unsafe or risky, pull off the road to a safe location.

4. Inform regular callers your driving schedule, and when you will be available to talk.

5. Keep your hands on the wheel and your eyes and mind on the road while driving. Do not attempt to look numbers up, take down messages, or manual dial the phone when driving conditions are unsafe.

I HAVE READ THE ABOVE POLICY AND WILL ABIDE BY IT.

ACKNOWLEDGMENT AND CONSENT AGREEMENT

I have read, or have had read to me, the entire contents of LASHER Company Vehicle Usage Policy and agree to comply with all requirements. I have been given an opportunity to ask questions and fully understand the meaning of the policy. Additionally, I understand that I should contact a company supervisor should I have any future questions or concerns. By signing below, I acknowledge receipt of this policy and agree to abide by the contents.

Name (printed) _____

Signature_____Today's Date_____

I have read and will abide by the conditions as stated in this document regarding the operation of any vehicle for company business.

Name (printed)_____

Signature_____Today's date_____

Witness_____ Today's date_____

VEHICLE INSPECTION CHECKLIST

Date: Location:

Make: Model: Year:

Vehicle Number: Mileage:

Item to be checked	Pass	Fail	Item to be checked	Pass	Fail
Headlights	❒	❒	Instruments – Gauges	❒	❒
Taillights	❒	❒	Horn	❒	❒
Turn Signals	❒	❒	Windows – Windshield	❒	❒
Brake Lights	❒	❒	Windshield Wipers – Washers	❒	❒
Reflectors	❒	❒	Speedometer	❒	❒
Tires and Rims	❒	❒	Steering	❒	❒
Battery	❒	❒	Brake System	❒	❒
Radiator and Hoses	❒	❒	Seat Belts	❒	❒
Exhaust System	❒	❒	Seats	❒	❒
Suspension	❒	❒	Heater/Defroster	❒	❒
Fuel System	❒	❒	Mirrors	❒	❒
Oil – Water leaks	❒	❒	Safety Equipment	❒	❒
Water Level	❒	❒	Accident Kit	❒	❒
Transmission	❒	❒	Other	❒	❒

Body Damage: (Describe):

Remarks:

Signed By: _____ Date: _____

Mechanics Report:

Mechanic: _____ Date: _____

VEHICLE SAFETY POLICY

Traffic related motor vehicle accidents are the leading cause of work-related fatalities. The environment in which these accidents occur involves numerous complex factors of which the majority are uncontrollable. The purpose of Lasher Construction Company's Vehicle Safety program is to provide the means to reduce such factors to eliminate unnecessary injuries and fatal circumstances. We value our employees not only as employees but also as human beings crucial to the success of their family, and the local community.

REQUIREMENTS

1. All employees are expected and required to actively participate in this program for their own health and well-being. Lasher Construction Company encourages its employees to take a proactive approach in identifying potential hazards by promptly reporting them to their supervisor. ***Use of seatbelts and other safety devices is mandatory.***

2. MVRs will be requested periodically, at a minimum of at least once per year. Management reserves the right to use its discretion in determining an unsatisfactory MVR. As a guideline, 3 violations in the past three years will be grounds for a warning and 4 violations will be grounds for possible termination and/or disciplinary actions such as losing a truck allowance or company vehicle.

3. Lasher Construction Company conducts mandatory random drug and alcohol testing. Driving under the influence of alcohol or other illegal substances is grounds for termination.

4. The reimbursement to the employee for the operation of his/her car on company business includes the allowance for mileage. You are required to have minimum liability limits of $100,000/300,000. The company does not specify and

assumes no responsibility for any other coverage employees carry on their own cars since this is a matter of individual status and preference.

5. You must provide insurance certificates with LASHER listed as an additional insured.

6. Each driver is required to report all moving violations to the Safety Director within 24 hours. This requirement applies to violations involving the use of any vehicle (company, personal or other) while on company business. Failure to report violations will result in appropriate disciplinary action.

7. Please be aware that traffic violations incurred during non-business (personal use) hours will affect your driving status and are subject for review.

8. New hire and periodic employee training will be offered. All employees are expected and required to actively participate in identifying training needs as well as program development. Programs will consist of classroom and on the road modules. Training will focus on, but not limited to, defensive driving techniques and behavior modification.

9. We encourage all employees to report any and all maintenance and malfunction issues immediately to their supervisor. Lasher Construction Company realizes a proper working vehicle is the first step to ensuring everyone's safety.

10. All vehicles will be supplied with an accident claims kit, a pen, and a disposable camera. Drivers are required to document all details of the accident; traffic flow, speed limits, stop lights/signs, weather conditions, citations issued,

    etc. Pictures should be taken to document the extent of damage to all vehicles involved. REPORT ALL ACCIDENTS IMMEDIATEDLY TO YOUR DISPATCHER OR SUPERVISOR!

11. Personal use of company vehicles is prohibited without prior permission from management.

I read and understand Lasher Construction Company's Vehicle Safety Policy, its requirements and expectations of me as an employee.

Employee Signature: _____

Date: _____

FALL PROTECTION PROGRAM

FALL PROTECTION POLICY

1. LASHER is committed to continuous Fall Hazard Control wherever the potential exists for personnel falls from heights of at least 6 feet. Accordingly, LASHER will take all practical measures to eliminate, prevent, and to control the hazards causing falls and prevent employees from suffering injury in the event of a fall from elevations. Work sites and activities will be surveyed to identify all hazards of employees falling from elevations. First consideration will be given to the elimination of those hazards and if a fall hazard cannot be practically eliminated, second consideration will be given to implementing effective permanent means of fall prevention.

2. If a fall hazard cannot be eliminated or fall prevention assured, effective fall protection means will be planned, implemented, and carefully monitored to control the risks of employee injury due to falling. Fall protection systems will be continuous by design and supervision shall control against their intermittent or improper use.

3. All employees (and their supervisors) working where fall hazards cannot be eliminated or the onset of falls prevented, will be uniformly equipped, trained, and given refresher training at specified intervals to minimize adverse effects of accidental falls. Fall protection equipment and training standards will be established and compliance with the same, will be mandatory for all contractors. Furthermore, compliance by outside contractors will be required when working on Lasher's projects. No Exceptions!

4. Equipment and systems shall be designed and implemented based on the project safety plan to ensure that fall protection is provided to all employees. Elements of the project safety plan should include methods to ensure appropriate anchorages are provided throughout the construction project. Work with fall exposures that exceed six (6) feet requires a fall protection safety plan designed specifically for that project. The plan must be submitted to project management prior to any work.

5. All employees on LASHER premises must use fall protection such as life lines and railings when working within six (6") feet of open-sided roofs, ledges, catwalks or when parapets are less than 42 (42 ") inches high. Employees must be tied off when exposed to a fall which requires use of a lanyard system.

6. Only approved full-body harnesses (no belts) shall be worn when exposed to a fall of six (6') feet or greater.

7. Daisy-chaining of fall protection devices is strictly prohibited.

8. It is important to know the difference between fall restraint and fall arrest. If there is a potential for a fall, then a fall arrest system must be utilized. Fall arrest systems require the use of a full body harness.

9. If and when a static line system is utilized, documentation will be required to demonstrate the effectiveness of that system.

HIERARCHY OF PREFERENCE CONTROLS

By the term "Safety at Heights", we embrace three topics; the elimination, prevention, and control of falls. Here is what this means to LASHER:

1. Elimination of Fall Hazards. Elimination of fall hazards is the first and best line of defense against falls from heights. This task requires careful assessment of the workplace and the work itself. The "who, what, when, where, why, how, and how much" of each exposure is considered. Often, pre-consideration of the work and site not only leads to elimination of the hazard, but also identifies alternative approaches to the work that can measurably enhance productivity. The idea is to design safety directly into the work process and not simply try to add safety as an afterthought to an inherently unsafe work procedure. Examples include but are not limited to: servicing a pile when laid down; back filling abutments, walls, etc., before employees access structures; using radios for signaling instead of employees hanging over the edge giving signals; and other mechanical devices that can be controlled from the ground.

2. Examples of eliminating fall hazards include:

    a. Performing as much work on the ground as possible to eliminate the hazard of climbing/working at elevation.

    b. Assembling guardrail systems and fall arrest systems on Form work and/or structural steel at ground level rather than at elevation.

3. Prevention of Falls. Preventing falls is the second line of defense when fall hazards cannot be entirely eliminated. This also requires assessment of the workplace and work process. It involves making changes to the workplace so as to preclude the need to rely on the worker's behavior and personal protective equipment to prevent falls. Examples include but are not limited to: use of stairs, guardrails, barriers, and travel restriction systems to prevent the worker from direct and unprotected exposure to the fall hazard. These techniques deal with preventing the fall before onset.

4. Examples of fall prevention methods include:

    a. Guardrail systems.

    b. Aerial lifts.

    c. Stairs, ramps, and runways.

5. Control of Falls. Controlling falls is the last line of defense. It should be considered only after determining that the fall hazard cannot be eliminated or the possibility of falling prevented. This is the domain of fall protection and calls for equipment such as: safety nets or harnesses, lanyards, shock absorbers, fall arresters, lifelines, and anchorage connectors. It deals with reducing the risk of injury in falling after onset of the fall. This fall protection also necessitates workplace and work process assessment and planning in order to select the proper equipment, installation, and proper use of gear.

6. Examples of such gear include:

   a. Lifelines (horizontal and vertical).

   b. Lanyards.

   c. Retractable devices.

   d. Rope grabs.

   e. Hardware (snap hooks, d-rings, shackles).

ANCHORAGE

1. An anchorage is a secure point of attachment for lanyards, lifelines. or deceleration devices capable of withstanding the anticipated forces applied during a fall.

2. Anchorage planning is the key to designing fall arrest systems.

3. The anchorage point should be positioned on an independent structure and used for securing a lifeline or lanyard. An anchorage point should be located above the worker to avoid unnecessary swing in the event of a fall. The anchorage point should be capable of supporting 5,400 pounds minimum strength for fall protection systems allowing free falls up to 6 feet. Alternatively, retracting lifelines permitting free falls of 2 feet or less require anchorage points capable of supporting only 3000 pounds.

4. Anchorage points must be engineered by a qualified person. This individual must be capable of determining the required strength, location and design of the selected anchorage to meet the requirements of the construction activity. Each anchorage point must be carefully planned into the job to provide continuous and complete protection during the work task.

5. Selecting anchorage points requires evaluating the following characteristics:

   a. **Strength**. The strength of an anchorage point is its most important characteristic because failure of any anchorage is likely to result in an unprotected fall. The required strength for a fall arrest system ultimately depends on the potential forces applied and the integrity of the anchorage component selected.

   b. **Independence**. Anchorage points for fall arrest systems should be independent of the working platform and its anchorage.

   c. **Height.** The primary consideration in determining anchorage point height is to minimize free fall to the shortest distance possible. The shorter the free fall, the less impact force experienced during fall arrest.

d. **Clearance.** The total fall distance must be determined to ensure the height and location of the anchorage is sufficient to prevent collision injury with the ground or other objects.

e. **Identification.** Anchorage points must be identified by a qualified person. Employees should be educated about what is (and what is not) considered acceptable anchorage. When practical, anchorages should be labeled by painting the approved locations so workers know exactly where to secure for proper anchorage.

ANCHORING DEVICES/POINTS	NON-ANCHORAGES
Structural Members	Railings
Anchors/Fasteners	Guardrails
Eyebolts	Rungs
Imbeds	Pipe Vents
Turnbuckles	C-Clamps
Shackles	Bolt Holes
Slings	
Retractables	
Cross Arm Straps	

FALL HAZARD CONTROL PARTICIPATION

Execution of Lasher's Fall Protection Program requires participation by all LASHER employees, subcontractors, and other on-site personnel. This necessary participation may be achieved through one of several different means. The most common is a Weekly Safety Meeting discussion and job specific training for applications requiring fall protection as work progresses.

IDENTIFICATION OF FALL HAZARDS

It is the primary responsibility of the LASHER job site superintendent to assure that all fall hazards are identified, evaluated, and controlled. There are at least four basic ways to identify fall hazards.

1. Accident/Incident Record Review. Accident/Incident records that give a description of how an accident or incident occurred can be helpful. You may find the work and condition that led to a previous fall is still being performed in the same way at that same location. You may also realize that this work is being performed at other locations in the same hazardous way.

2. Canvas Surveys. Canvas surveys have the advantage of being able to obtain information from a large number of workers relatively easily. Although surveys sometimes give incomplete information, they may also reveal a lack of awareness in the work force which is useful to know in planning future training, instruction, and warning steps.

3. Interviews. The best way to identify fall hazards is to talk to the workers themselves. Sometimes the worker will not actually recognize the hazard and may not appreciate the risk of injury or the likelihood of the fall taking place; but they will know the work that they do at heights and how they do it. Consequently, we can access their knowledge by asking the right questions.

4. Fall Hazard Inspection Surveys. Another effective way to identify hazards is to invite experienced workers to assist with a walk-through tour of operations. Workers and their supervisors can point out the various places they have to work and can explain what they do to get the job done.

EVALUATION OF FALL HAZARDS

Once a list of fall hazards has been collected, each hazard must be evaluated and prioritized in order of the most dangerous, to determine which should be controlled first. As hazards are identified, it will be found that some can be controlled immediately. Therefore, address these as rapidly as possible since there is no objective scientific method to make the distinction between those hazards most likely to produce harm with those least likely to produce harm.

However, there are two factors related to fall hazards which would likely affect the severity of the injury and the possibility of the fall occurring. These factors are:

1. Likely Consequence Rating. The first consideration in the process of evaluating the list of fall hazards is to analyze and determine the likely consequence of a fall for each hazard. Segregate the hazards most likely to result in death or serious physical harm from those less likely to result in death or serious injury.

2. Probability of Occurrence. The next consideration is the probability or likelihood of an accident occurring. After selecting the hazards which will likely result in death or serious physical harm, segregate those most likely to occur from those least likely to occur. Some of the factors affecting probability are:

    a. Proximity to Edge. Workers who must traverse or perform their work at the edge or within 3 feet of the edge of the fall hazard.

    b. Type of Walking/Working Surface. Workers traversing or working on ice, snow, oily surfaces, surfaces with trip hazards near the edge, and surfaces not recently inspected for capacity verification.

    c. Type of Work Performed. Workers who must push or pull tools or material are more likely to lose their balance and fall. Also, workers who cannot maintain 3 point contact (two feet and one hand, or two hands and one foot).

    d. Particularly Dangerous Work. Workers who must maintain good balance while walking I-beams; workers who must jump across floor openings or across edges; workers exposed to high winds; workers in poorly lit areas or who work over water.

    e. Exposure Time. The longer a worker is exposed to a hazard, the greater the likelihood of an accident occurring. Thus, exposure time is a function of the frequency of exposure, the duration of the exposure, and the number of workers exposed.

    Exposure Time = (Frequency of Exposure) x (Duration of Exposure) x (Number of Workers Exposed)

FEASIBILITY OF IMPLEMENTATION OF EFFECTIVE CONTROLS

1. Some hazards can be simply and inexpensively eliminated or controlled. Other hazards require relatively large expenditures and greater difficulty from an engineering and design point of view.

2. In any event, the goal is to provide the greatest amount of protection in the shortest amount of time. We can do this by first isolating the hazards most likely to result in death or serious injury, as well as those easiest to eliminate or prevent in order to provide the greatest protection in the shortest amount of time. However, always keep in mind that hazards of less than 6 feet can, and have, resulted in death, paralysis, brain damage, etc. Also, hazards which may appear to be less likely to result in accidents can produce more than their share of injury. Unfortunately, there is no simple way to predict with certainty where and how an accident will occur. Therefore, we must establish plans to eliminate, prevent or control to the extent feasible all fall hazards which have been identified.

REQUIREMENTS

1. Equipment circuits and controls that are de-energized shall be rendered inoperative (either by physical removal of control capabilities or placement of a lockout mechanism) and have tags attached at all points where such equipment or circuits can be energized.

2. Controls that are to be de-activated during the course of work on energized or de-energized equipment or circuits shall be tagged and locked if deemed necessary.

3. Tags or locks shall be placed.

DEFINITIONS

1. The energized or de-energized pieces of equipment to include fixed equipment or circuits are that which either supplies energy to or receives energy from the system (equipment and/or circuits) which is being worked on. Energy is to be interpreted as electricity, fluid, liquid and gaseous pressure, mechanical drives, etc.

2. Fixed equipment means equipment that is fastened in place or connected by permanent wiring.

PROCEDURE

1. Before work is performed on, in, or near equipment, circuits and /or controls which cause bodily injury by contact with electrically energized parts, by accidental start-up of machinery , by release of acids, corrosives, flammable or other hazardous materials or electrical circuits shall be de-energized, valves shall be closed, pressures shall be bled off, hazardous materials shall be drained from lines and/or vessels when necessary.

NOTE: HANDLING AND STORAGE OF HAZARDOUS MATERIALS SHALL BE IN ACCORDANCE WITH APPLICABLE POLICIES AND PROCEDURES, INCLUDING PERSONAL PROTECTIVE EQUIPMENT CONSIDERATION.

2. Once is has been determined that all equipment, circuits and systems have been rendered safe for work, the appropriate tags and locks shall be placed on equipment, circuits, and/or controls associated with electrical disconnects, valves and wherever else required to prevent the accidental start-up of the equipment, circuits or systems being worked on.

3. Method for tagging and/or locking out equipment or control systems. The following is a basis for implementation of job-site lockout/tagout procedure. In many instances, particular requirements will dictate variances from this procedure, however, any change or variance must be viewed with caution and possible contingencies accounted for at all times.

a. Identify Equipment. Determine which equipment is involved with work to be performed.

b. Determine Availability. Project supervision, if necessary in conjunction with customer/client representatives, will make available systems and equipment, and must ensure that normal operation of associated equipment will not interfere or cause activation of systems or equipment to be worked on.

c. De-Energized Equipment. Place all electrical disconnects in the off position and/or close all valves which have the capability of energizing the equipment, controls, and systems.

d. Lockout Equipment. After de-energizing and/or closing of valves, the individual(s) who will accomplish the work will place a lockout mechanism in such a way as to prevent the operation of or energizing the equipment controls and/or systems.

e. Check for Safety. The supervisor in charge of the work to be performed will physically inspect the equipment, systems, and/or controls prior to the actual work operation taking place. The supervisor will also make certain, through the use of testing equipment, all switches and/or systems are physically inoperative, that all fluid pressures are bled off, that all stored electrical charges (i.e., static, capacitance, etc.) are discharged, and if necessary all hazardous materials are drained and removed from the immediate work area.

f. Removal of Lockout Mechanisms. After each portion of the work is completed, the individual who places the lockout mechanism will be responsible for its immediate removal. If, in the case where more than one work operation is being performed on a piece of equipment, system, or controls, it will be necessary for each individual to remove their lockout mechanism immediately after their work task has ended. The last individual to remove their lockout mechanism must notify the supervisor in charge that all work has been completed. It will then be the responsibility of that supervisor to ensure that indeed all activities have been completed prior to the release of the equipment and/or system for normal operation.

g. Removal of the Tagout Mechanisms / Re-Energizing. The individual who places a lockout mechanism on an electrical, disconnect, valve, or control system is the only one who is permitted to remove it. However, if an individual forgets to remove the lockout mechanism, all attempts must be made by the appropriate supervisor to contact the individual to arrange for lockout mechanism removal. If the individual is unavailable, only then after the physical inspection has determined that all work has been completed and the safety of equipment, systems, or controls is ensured, can the lockout mechanism be removed.

    i. When re-energizing equipment a qualified person must make test and visual inspection to verify locks, electrical, jumpers, cords, grounds, and other related devices have been removed.

    ii. When removing the lockout/tagout mechanism/re-energizing employees must be made aware the locks and tags have been removed in that particular work area.

    iii. There must also be a visual inspection to determine no one is in the area and everyone is clear of all energized circuits, controls, and equipment.

RESPIRATORY PROTECTION PROGRAM

PURPOSE

To establish a program for the protection of Lasher Construction Company, their employees and subcontractors, in order to prevent respiratory disorders and disease.

SCOPE

This program applies to all Lasher Construction Company employees and subcontractors who are exposed to harmful fumes, vapors, mists, gases, smokes, dusts and sprays.

POLICY

1. It will be the responsibility of the Safety Department or a designated, responsible person, trained by the Safety Department to administrate, train and fit test all LASHER employees required to wear respiratory protection.

2. Provide guidance and ensure that all subcontractors comply with or have a program equal to or greater than Lasher Construction Company's Respiratory Protection Program.

REQUIREMENTS/PROCEDURES

EMPLOYER RESPONSIBILITY

1. Provide employees with NIOSH/MSHA approved respiratory equipment which is applicable and suitable for the purpose they are intended.

2. Select the respiratory protection on the basis of the hazards to which the employee is exposed.

3. Train, fit test, and provide guidelines for proper use, inspection and maintenance of all respirators issued.

4. Have the employees sign the form provided, stating that he/she is properly trained and fit tested in the proper use, inspection, maintenance of the type of respiratory protection issued (see Appendix 1). Copies of this form shall be filed and a copy goes to the employee.

5. Ensure that the Employees are physically fit to wear respiratory protection provided. This is accomplished by ensuring the employee is given a Spirometer Screening Test. This test is provided by the Company through a local medical center.

6. Selection shall be made on the guidelines provided (See Appendix 2).

7. Ensure that the employees are clean shaven, have trimmed side burns and mustache.

8. Ensure that employees required to wear respiratory protection have a Qualitative Fit Test at least every six months and a Spirometer Screening annually.

NOTE: DOCUMENTATION OF THESE TESTS MUST BE KEPT FOR 3 YEARS.

EMPLOYEE RESPONSIBILITY

1. Properly use, inspect, and ensure regular cleaning and maintenance of the respiratory protection provided.

2. Guard against damage to the respirator.

3. Report any malfunction of the respirator to the Foreman, Superintendent, or the designated person in charge of training and fit testing.

ESSENTIAL STEPS TO REMEMBER WHEN WEARING A RESPIRATOR

1. Make sure all straps are attached and adjusted properly, and positioned in the proper location on the head (refer to manufacturer's guidelines provided with respirators).

2. Straps must not be too tight, or this may deform the mask.

3. The respirator must not be worn in at atmosphere for which it was not intended. The user must be informed of the hazards and limitations of the respirator.

4. NEVER ENTER AN OXYGEN DEFICIENT ATMOSPHERE (LESS THAN 19.5%) UNLESS YOU HAVE AIR OR OXYGEN SUPPLIED BY THE RESPIRATOR!

5. User must know how to recognize when the device is not working properly. Some signs to recognize are: Feeling of dizziness or nausea, difficulty in breathing, smelling the contaminant.

INSPECTION CHECKLIST

1. Are all straps present and not worn, torn or frayed?

2. Are all rubber parts clean?

3. Are exhalation valves in good working condition and not installed improperly, distorted, cut, deteriorated or dirty?

4. Are cartridge gaskets present, in good condition and sealed properly?

5. Are inhalation valves in good condition and properly sealed?

6. Is the exhalation valve cover in place?

7. Are there any missing parts?

NOTE: PROBLEMS WITH ANY OF THE ABOVE CONDITIONS SHALL BE REPORTED TO THE PERSON IN CHARGE OF ISSUING AND FIT TESTING, AND SHOULD BE REMOVED FROM SERVICE UNTIL NECESSARY REPAIRS ARE MADE.

CLEANING

1. Respirators are to be cleaned daily. If used by more than one person, the respirator will be cleaned after each use. Follow the guidelines below, plus the manufacturer's recommendations.

2. Guidelines for effective cleaning:

   a. Remove filters, cartridges or canisters. Do not re-use if their effectiveness no longer meets requirements.

   b. Wash face piece, inhalation valves, exhalation valve, exhalation valve seat, exhalation valve guard, and inhalation connectors in a 120° - 140°F water.

   c. Air-dry in a clean area.

FIT TESTING

1. Factors which prevent a good fit test are:

   a. Manufacturer supplying one size fits all.

   b. Beards, side burns, spectacles, scars.

   c. Hollow temples, prominent cheekbones, broken facial bones, lack of teeth or dentures.

2. Instructions: Pressure tests (to be performed before using each time). Put on respirator; adjust according to the manufacturer's directions.

   a. Negative Pressure Test

i. Cover air inlets with palms of hands (cartridges).

ii. Gently breathe in until the face piece collapses slightly.

iii. Hold breath for 5 to 10 seconds.

iv. If the respirator remains slightly collapsed and no inward leaks are felt, the face piece probably fits tight enough.

b. Positive Pressure Test

i. Cover the exhalation valve with the palm of your hand. ii. Exhale gently. iii. A small build up of positive pressure will occur. If no outward leaks are detected, it usually indicates a good fit.

c. Organic Vapors, using Banana Oils (ISOAMYL ACETATE).Test

This test is for respirators fit with organic vapor cartridges.

i. Before using this test, make certain the individual is sensitive to the odor of banana oil. This is done by placing a broken ampoule inside a bag, about waste bucket size and quickly passing it under the individual's nose. Seal the bag. ii. If the individual cannot smell bananas, do not use this test.

iii. If the individual can smell the banana oil, have him/her put the respirator on and properly adjust, using the steps discussed earlier. iv. Perform a negative and positive test.

v. Place the bag with the banana oil over the person's head.

vi. Once the head is inside the bag, have the individual take deep, regular breaths while moving his head from one side to the other. vii. Have the person nod his head up and down, exhaling when the head is in full upright position. viii. Have the individual read the Rainbow Passage (See Appendix 3). ix. Have the person jog in place and breathe normally (should take several minutes).

x. If the wearer smells any banana oil, the respirator is not fitted properly or the mask itself is leaking.

xi. If the test fails, inspect the respirator for damage. If no damage is found, readjust and perform test again.

xii. If the test fails the second time, DO NOT WEAR IT!!

xiii. If other size respirators are available, put one on and test again, following the same procedures as before. d.

Test for Dust, Mist, Fume, Filter Respirators.

This test is for respirators fitted with high efficiency filters (approved for use with contaminants having a TLV of less than 0.05 mg/m.

i. Place the respirator on the user. Adjust properly and wait 5 minutes. ii.

Perform the negative and positive pressure tests. iii. Release an irritant smoke

(Stannous Chloride) following the 2 kit instructions.

iv. WITH EYES CLOSED, generate light puffs of smoke around the contact between the face and the respirator. If no irritation is felt, generate heavier amount of smoke. Move head as described in the previous test. v. If the respirator leaks, the user will cough.

vi. Workers performing tasks in areas where they could be overcome by toxic fumes or an oxygen deficient atmosphere (tanks, bins, etc.) shall have at least one additional person stationed outside the structure. Communication shall be maintained between the individual performing the task and the stand by person. Rescue equipment shall be available in case of emergency. The stand by outside person will be trained in the use of rescue equipment.

vii. If an emergency does arise, the rescuer will not enter the problem area until another individual is obtained to be stationed outside the structure. This individual and the rescuer will be in communication with each other during the rescue operation.

viii. Once the respirator selection has been made and the respirator has been properly fit tested, the Safety Department or another qualified individual will enter the area, using approved monitoring equipment, and sample the breathing zones, to ensure the proper respiratory protection equipment is being used. If the air samples show the respiratory equipment is not sufficient, the area will be evacuated immediately and a reassessment and evaluation will be made as to the type of protection needed.

NOTE: EVEN THOUGH THE RESPIRATOR PASSES THE FIT TEST, THERE ARE LIMITS TO THE PROTECTION PROVIDED. QUARTER MASKS (THOSE COVERING ONLY THE NOSE AND THE MOUTH) AND HALF MASKS (THOSE COVERING THE NOSE, MOUTH AND CHIN) SHOULD NOT BE WORN WHERE THE EXPOSURE IS MORE THAN TEN TIMES THE TLV OF THE SUBSTANCE.

CONFINED SPACE ENTRY PROGAM

This program pertains to all LASHER employees and their subcontractors.

DEFINITIONS

CONFINED SPACE

1. Is a space large enough and so configured that an employee can barely enter and perform assigned work.
2. Has limited or restricted means for entry or exit (i.e., tanks, vessels, silos, storage bins, hoppers, vaults, or piles)
3. Is not designed for continuous employee occupancy.
4. Is four or more feet in depth.

ACCEPTABLE ENTRY CONDITIONS

Conditions that must exist in a permit space to allow entry and to ensure that employees involved with a permit can enter into and work in the confined space safely.

ATTENDANT

An individual stationed outside one or more permit spaces who monitors the authorized entrants and who performs all attendants duties.

AUTHORIZED ENTRANT

An employee authorized by the employer to enter a permit space.

BLANKING OR BLENDING

The absolute closure of a pipe, line, or duct by the fastening of a solid plat (such as spectacle blend or a skillet blend) that completely covers the box and is capable of withstanding the maximum pressure of the pipe line or duct with no leakage beyond the plate.

COMMUNICATIONS (WHICH MAY BE USED)

1. Visual
2. Voice
3. Telephone
4. Two-way radio

DOUBLE BLOCK AND BLEED

The closure of a line, duct, or pipe by closing and locking or tagging two in-line valves and by opening, locking or tagging a drain or vent valve in the line between the closed valves.

EMERGENCY

Any occurrence (including any failure of hazard control or monitoring equipment or event, internal or external to the permit space that could endanger entrants).

ENGULFMENT

The surrounding by a liquid, a fine solid substance (flowable) that can cause death by filing or plugging the respiratory systems or can exert enough force on the body to cause death by strangulation, constriction, or crushing.

ENTRY

The action taken by a person who passes through an opening into the permit required confined space. Entry includes work activities in that space or when any part of entrants' body breaks the plane of the opening into space.

ENTRY PERMIT

A written or printed document provided by the employer to all entrants and controls entry.

ENTRY SUPERVISOR

1. A person employed by the employer (such as a foreman, crew chief, superintendent) who is responsible for the following tasks.

    a. Determining if acceptable entry conditions are present at the permit space. b. Authorizing entry.

    c. Overseeing entry operations.

    d. Terminating entry.

2. The entry supervisor may also do the following:

    a. If properly trained, serve as an attendant.

    b. May pass duties to another individual during the course of the entry operation, as long as that person is properly trained.

HAZARDOUS ATMOSPHERE

An atmosphere that has the potential of being hazardous and exposing employees to the risk of engulfment, death, incapacitation, impairment , or ability to self-rescue (escape unaided) injury or acute illness from one or more of the following causes.

1. Flammable gas, vapor, or mist in excess of ten percent of lower flammable limit (LFL/LEL) Lower Flammable Levels/Lower Explosive Levels.

2. Airborne Combustible test at a concentration that exceeds its LFL/LEL.

NOTE: THIS CONCENTRATION MAY BE APPROXIMATED AS A CONDITION IN WHICH THE HAZARD OBSCURES VISION AT A DISTANCE OF FIVE FEET (1.52M OR LESS).

3. Atmospheric oxygen concentration below 19.5 percent or above 23.5 percent.

4. Atmospheric concentration of any substance for which a dose or a permissible exposure limit is set.

5. Toxic and hazardous substances which could result in an employee's exposure in excess of its dose or permissible exposure limit.

NOTE: ATMOSPHERIC CONDITIONS OF ANY SUBSTANCES NOT CAPABLE OF CAUSING DEATH, INCAPACITATION, AND IMPAIRMENT OF THE ABILITY TO SELF-RESCUE (ESCAPE UNAIDED), INJURY OR ACUTE ILLNESS DUE TO ITS HEALTH EFFECTS ARE NOT COVERED BY THIS PROVISION.

6. Any other atmospheric condition that is immediately dangerous to life or health (see MSDS).

7. Hot work is riveting, welding, thermal or oxygen cutting, heating and other fire or spark producing operations capable of providing a source of ignition. A hot work permit is required before performing of hot work begins.

8. Immediate Danger Life and Health (IDLH) is any condition that poses an immediate or delayed threat to life or that would cause irreversible adverse health effects or that would interfere with an individual's ability to escape unaided from a permit space.

NOTE: MATERIALS SUCH AS HYDROGEN FLUORIDE GAS AND CADMIUM VAPOR MAY PRODUCE IMMEDIATE MOMENTARY EFFECTS. THE VISUAL FEELS NORMAL WHILE RECOVERING FROM THE POISONING EFFECTS UP TO THE TIME OF COLLAPSE. THE FATAL COLLAPSE COULD HAPPEN 12 TO 72 HOURS AFTER EXPOSURE.

9. Inert is the displacement of the atmosphere by a noncombustible gas such as nitrogen, to such an extent the atmosphere is noncombustible.

NOTE: THE PROCEDURE CREATES AN OXYGEN DEFICIENT ATMOSPHERE.

10. Isolation is the process by which a permit space is removed from service and is completely protected against the release of energy into space by locking and tagging out all source of energy or blocking or disconnecting all mechanical linkage.

11. Line breaking is the intentional opening of a pipe, line, or duct that is or has been carrying flammable or corrosive material, an inert gas or any fluid at a volume, pressure or temperature capable of causing injury.

NON -PERMIT REQUIRED CONFINED SPACE

A confined space that does not contain or have the potential to contain any hazard capable of causing death or serious physical harm.

PERMIT REQUIRED CONFINED SPACE

A confined space that has one or more of the following characteristics.

1. Contains or has a potential to contain hazardous atmosphere.
2. Contains a material that has the potential for engulfing any entrant.
3. Has a configuration that an entrant could be trapped or asphyxiated.
4. Contains other recognized serious safety or health hazards.

ENTRY WITHOUT A PERMIT, ATTENDANT, OR A NON-PERMIT CONFINED SPACE

Confined spaces may be entered without the need for a written permit or attendant when the following conditions are not present.

The space is determined not to be a permit requested confined space. This is determined when the following factors exist.

1. Oxygen in not less than 19.5 percent or more than 23.5 percent.
2. Toxic gasses are not present and if they are, the space ventilation can be mechanically maintained.
3. The space is not such, that the entrant could be trapped or asphyxiated.
4. Contains no other recognizable safety and health hazards.
5. Once the above has been determined, using the Confined Space Pre-Entry Check List, a permit is not required. Post a sign at the entrance stating either of the following:

   CAUTION – CONFINED SPACE – ENTRY PERMIT NOT REQUIRED

   DANGER – CONFINED SPACE ENTRY PERMIT REQUIRED

To check for toxic gases and oxygen deficiency, use an enrichment monitor that samples O2 LFL, LEL, and PPM. The oxygen levels must be no less than 19.5 percent or more than 23.5 percent of permissible levels of LFL, LEL and PPM. Check OSHA Part 1926.

RESCUER

The person designated to rescue employees from the confined space.

RETRIEVAL SYSTEM

Equipment used for rescue which includes retrieval line, chest or full body harness, wristlet and if necessary, an appropriate lifting device.

SAFETY DEPARTMENT

Lasher's safety department or a qualified person authorized and trained by the safety department.

PROCEDURE

1. Before entering the confined space, the requester must contact the safety department and /or qualified person.
2. The requester, safety department and/or qualified person will survey the confined space and fill out and complete all of the following:
    a. Confined space entry checklist. See Appendix A.
    b. Confined space entry permit, if necessary. See Appendix B.
    c. The confined space entry permit only needs to be filled out if the conditions in the confined space per-entry permit change.
3. For additional information in deciding whether or not the confined space is a "permit space" or a "no permit space", see Appendix C.
4. Once the pre-entry checklist is complete and the atmospheric conditions are surveyed and assessed not hazardous or unsafe, an entry permit is not required.
    a. At the entrance of the non-permit confined space, post a sign which states, "Caution, Entry Permit Not Required".
    b. At the entrance of a required "permit space", post a sign which states, "Danger – Confined Space, Entry Permit Required".
5. Upon completion of the pre-entry checklist and conditions are found to have the potential of having unsafe conditions and/or found to have potential of having hazardous substances or material, get out and complete the entry permit.

6. The entry permit must be completed and signed along with Appendix D and MSDS at the entrance to the confined space, with copies given to the requester and safety department.

7. Once the work is complete in the confined space, return the permit that was posted at the confined space to the safety department and/or qualified person who issued the permit.

NOTE: PERMIT MUST BE LOGGED AND KEPT ON FILE FOR A PERIOD OF NOT LESS THAN A YEAR. SEE APPENDIX E.

8. Only authorized entrants will be allowed to enter the confined space.

9. Procedures for Atmospheric Testing.

   a. Testing and evaluation shall be done with equipment capable of sampling the conditions within the confined space prior to entry with the findings recorded on the confined space permit.

   b. If contaminates are found in the confined space, an evaluation and verification must be made as to the type and concentration of the contaminate and findings recorded on the confined space permit c. Duration of Testing.

      i. Duration or number of tests taken will be determined by the concentration, source, type of the contaminate, and results of the ventilation system.

      ii. Recommendations of the specification of the equipment as required by the manufacturer of the testing equipment and/or MSDS.

      iii. In a large area greater than four feet in depth, a test grid will be adopted to ensure uniform atmospheric conditions, and to ensure the atmospheric condition will not change in the work area because of air circulation and air changes.

TRAINING

1. Personnel entering the confined space must be trained and have the necessary skills (i.e., understanding of and how to conform to safety procedures) before they are assigned their duties.

2. Training shall be provided to every authorized entrant before the following occur:

   a. They are assigned their duties.

   b. Changes in assignments are made.

   c. Changes occur in the confined space operations.

d. If there are deviations in the confined space procedures.

3. The training will establish the necessary skills required in performing their duties.

4. Training in any new or revised procedures relating to the work to be performed in the confined space will be conducted.

5. Verification of the training of the authorized entrants will take place.

6. The training certification will contain the following name and signatures of employees and instructor and witness, and make them available to all interested parties upon their request. See Appendix F.

7. Duties of authorized entrants are as follows:

a. Know the potential hazards prior to allowing entry, with understanding of the signs, symptoms and consequences of exposure. (Refer to MSDS)

b. Understand the proper use of equipment for monitoring and the use of other related equipment.

c. Communicate with outside attendants on a regular basis.

d. Alert the outside observer when the following conditions exist:

i. Warning signs or symptoms of over-exposure to the attendant.

ii. Detection of any prohibited conditions.

e. Exit confined spaces as quickly as possible when the following occurs:

i. Ordered to exit by the supervisor and/or outside attendant. ii. Recognize warning signs or symptoms of exposure to damage. iii. Detect a prohibited condition. iv. The evacuation alarm is activated.

f. Duties of outside attendants are as follows:

i. Be familiar with hazards and potential hazards entrants may be exposed to during entry, also signs and symptoms of being exposed to the hazards. ii. Be aware of the behavioral effects of the exposure to the hazardous conditions.

iii. Use Appendix D to check personnel in and out of the confined area.

g. If necessary, remain outside the permit space until relieved by another attendant.

h. Be trained in CPR and first aid and emergency rescue.

i. If the project chooses to use local emergency personnel, bring the emergency team to the site and allow them to become acquainted with the area in which they will be working in.

j. If other outside attendants are to be used for rescue, another trained attendant must be present before the rescuer is allowed to enter the confined space.

k. Communicate with authorized entrants to monitor the status of the confined space and to alert those working in the confined space of any emergencies.

l. Monitor inside and outside the confined space to determine the concentrations of the contamination for safe operations, unless the following conditions exist:

i. Detection of prohibited conditions. ii. Behavioral effects of hazard exposure. iii.

Detection of a situation outside of the confined space which could endanger the entrant.

iv. The authorized entrant cannot perform the duties safely.

m. Summon rescue and emergency service when deemed necessary.

n. Take action to prevent an unauthorized person from entering the confined space. If an unauthorized entrant enters the confined space, they must be immediately removed.

o. Keep the supervisor in charge of the confined space informed of all those entering the space.

p. Perform no duties which will interfere with the monitoring and protection of those inside the confined space.

q. The attendant may monitor more than one confined space providing they are in the immediate area.

r. Perform non-entry rescue as specified in the rescue procedure.

8. Duties of the superintendent and foreman are the following:

a. Be aware of the hazards which may exist within the confined space.

b. Verify that all the necessary procedures on the permit have been made (i.e., proper tests are being done; proper procedures are in place before signing or allowing entry.)

c. Terminate entry into the confined space and cancel permit when conditions require it.

d. Verify emergency rescue services are available and know how to summon when needed.

e. Remove unauthorized persons who enter or attempt to enter the confined space.

f. Determine the responsibility and transfer of the permit space entry operations based on the hazard change and operations performed.

RESCUE AND EMERGENCY SERVICE

1. Employees who are required to perform services must be trained in the following:
   a. Personal protective equipment.
   b. First aid /CPR.
   c. Rescue techniques training.
   d. Practice in a simulated rescue at least every 12 months using a representative confined space.
2. If project chooses to arrange for rescue of other than LASHER employees, the following must take place:
   a. Inform rescue service of hazards they may encounter when performing the rescue.
   b. Provide the rescue service with access to all permit spaces so the rescue service can develop appropriate plan.
3. Non-entry rescue retrieval systems or methods will be used whenever an entrant enters a confined space unless the risk is too great or would not contribute to the rescue operations.
   a. Employees who are rescued will have a chest or full body harness.
   b. Retrieval system will be attached to a mechanical device or fixed point outside the confined space when vertical depth is five feet or more in depth

STORAGE & HANDLING OF L.P. GAS, TEMPORARY HEATING DEVICES & FIRE PROTECTION

The following are minimum requirements for the use, storage and handling of LP Gas, temporary heating devices and fire protection as outlined by 1926.153-154 and NFPA 30 & 58.

L.P.G. HOSES

1. Shall be clearly identified as to use, i.e., when used with liquefied petroleum gases; a minimum of 250 lbs. working pressure is required.
2. Shall contain approved pressed hose clamps. DO NOT USE RADIATOR HOSE CLAMPS.
3. Shall be protected from damage or from becoming a tripping hazard. Hoses shall not be hung by wire or sharp chafing material.

4. Each hose connection shall be leak tested when reconnected.
5. Aluminum piping or tubing shall not be used.
6. 5/16" air equipped wire braid hose is required on all liquid propane tanks and others when the hose cannot be properly protected.

TANKS, CYLINDERS & VALVES

1. Shall be located on a solid, secure base.
2. Shall be secured to protect them from falling, being knocked or stored in major access ways.
3. Shall have protective safety collar.
4. Shall contain all required safety valves such as regulators and excess flow valves.
5. Shall be protected from the elements in approved manner, i.e., snow, ice, rain, mud or concrete.
6. Shall not be subjected to any source of ignition, i.e., open flame, electrical source, etc.
7. Shall not be subjected to vehicle collision, impact from falling objects, welders, slag, etc.
8. All tanks/cylinders shall be labeled with signs: "FLAMMABLE GAS PROPANE, NO SMOKING OR OPEN FLAME."
9. Shall not be located where a leak can enter vaults, pit, and conduits or accumulate in recesses.
10. Fill tanks and cylinders to 75% or less during cold weather.
11. Tanks are to be stored and/or used outside building or structure and secured. If a variance is required contact the safety department.
12. Storage outside of buildings shall meet the following requirements:

QUANTITY	DISTANCE FROM BUILDING (FT.)
500 LBS. or less	0
501 to 6,000 lbs.	10
6,001 to 10,000 lbs.	20
Over 10,000 lbs.	25

13. Containers having a water capacity greater than 2-1/2 lbs. (normal 1-lb. LP-gas capacity) shall be equipped with excess flow valves.

14. Regulators shall be either directly connected to the container valves or to manifolds connected to the container valves.

LIQUID PROPANE

Liquid Propane is a flammable liquid and shall be treated as such. (See 1926.152, NFPA 30 & 58).

1. Containers shall be located at least 20 feet from buildings.

2. Tanks shall be surrounded by a 12" high curb or earth dike.

3. Drains shall be provided for draining off accumulations of ground or rain water and spills.

4. If two or more tanks are grouped together, there shall be at least 5 feet separation between them.

5. Within 200 feet of each portable tank a 12 foot wide access shall be provided for fire equipment access.

6. There shall be no ignition source within 50 feet of each tank and appropriate signs shall be posted stating "FLAMMABLE
LIQUID, NO SMOKING OR OPEN FLAME WITHIN 50 FT."

7. Vehicle protection shall be provided.

TEMPORARY HEATING DEVICES

1. Portable heaters, including salamanders, shall be equipped with an approved automatic shut-off device to stop the flow of gas to the main burner.

2. Heaters with air input of 50,000 BTU or more shall be equipped with a pilot light or an electrical ignition system.

3. Heaters shall be located at least 6 feet from any LP-Gas container.

4. Blower and radiant type heaters shall not be directed toward any LP-Gas container within 20 feet of heater.

5. If two or more heaters are located on the same floor and in an unpartitioned area, they shall be separated by at least 20 feet.

6. There shall be sufficient quantities of air to maintain the health and safety of the employees. Attendants should be aware of the possibility of carbon monoxide poisoning and adequate provisions for monitoring air quality should be

available. When the build-up of harmful gases exists, first evacuate the area, then increase the ventilation and report the condition to the Superintendent.

7. When heaters are used in confined spaces, special care must be taken to provide sufficient ventilation, ensure proper combustion, maintain the health and safety of workers and limit the temperature rise.

8. Heaters shall be placed from combustibles as follows:

HEATING APPLIANCES	MINIMUM CLEARANCE (INCHES) SIDES REAR CHIMENY
Room Heater, circulating type	12 12 18
Room Heater, radiant type	36 36 18

9. Heaters shall be located at least 10 feet from combustible tarps, canvas or similar covering.

10. Oil filtered heaters shall be shut down and allowed to cool before moving or refueling because of the hazard of flashing vapors in the stack.

SOLID FUEL

1. Salamanders are prohibited in buildings or on scaffolds.

2. Oil-fired heaters shall be equipped with a primary safety control valve to stop the flow of fuel in the event of flame failure.

FIRE PROTECTION

Storage locations shall be provided with at least one approved portable fire extinguisher having a rating of not less than 20 lb. ABC. Extinguishers shall be located not closer than 25 feet or no further than 75 feet from the storage area.

FIRE PREVENTION

The LASHER safety superintendent is responsible for implementation and enforcement of the fire control program. This program is aimed at protecting life and property while controlling losses. Fire protection activities are emphasized during all phases of construction.

1. In the event of fire in its incipient stage, extinguish only if trained to dos so.
2. For a larger fire, call 911 immediately and evacuate area.

GENERAL REQUIREMENTS

1. Regardless of size, all fires must be reported to the LASHER Superintendent and LASHER Safety.
2. Subcontractors will:
    a. Provide adequate fire protection/suppression procedures and equipment to adequately protect their work in progress and property on-site.
    b. Supply and maintain fire extinguishers adequate to suppress any fires within their immediate area. Fire extinguishers must be rated for ABC fires and be charged with a minimum of 20 lbs. of dry chemical extinguishing agent.
3. Extinguishers shall be conspicuously located where they will be readily accessible and immediately available in the event of a fire. Extinguishers shall not be obstructed or obscured from view.
4. All extinguishers shall be on the hangers or in the brackets provided. Extinguisher use shall be reported to LASHER.

HOUSEKEEPING

1. Avoid accumulation of flammable rubbish and waste materials.
2. Remove trash from inside buildings and away from buildings daily or whenever an accumulation of material may constitute a fire hazard.
3. Do not, under any circumstances, use wood sawdust or shavings as an absorbent for spilled flammable liquids or petroleum lubricants.
4. Burning of rubbish is prohibited.

REFUELING OF EQUIPMENT

1. Refuel all gasoline-powered equipment outside and clear of structures, with engines shut off.
2. Locate gasoline-powered equipment, such as air compressors, hoists, and pumps so exhausts are well away from combustible material.

HEATING DEVICES

1. Use of open flame devices, sources of heat, and spark-producing equipment is prohibited in areas containing flammable materials.
2. All open flame devices and furnaces used in construction work must have an attendant, unless the device is equipped with combustion safety controls.
3. Remove all empty propane, acetylene, oxygen, and butane gas cylinders from buildings, marked as empty (MT), and store and secure in an upright position in an approved area.

WELDING

1. The superintendent coordinates and approves all welding operations.
2. All welding operations have an approved non-electrical hot work permit and a fire extinguisher at the site.
3. Cover all combustible materials that cannot be moved a safe distance from welding operations with approved noncombustible blankets or non-combustible rigid barriers for protection from sparks.

FLAMMABLE LIQUIDS

1. Segregate all flammable liquids, chemical fuels, resins, lubricants, and solvents by labels and store in an approved location. Do NOT store non-compatible materials in the same storage area.
2. Keep flammable liquid containers covered at all times when not in use.
3. Do not store flammable liquids in the work area, except in a quantity needed to accomplish the job in a single shift.
4. Dispose of flammable paint or solvent rags and any materials subject to spontaneous combustion in covered metal containers.

5. Store all flammable liquids in safety cans or approved containers.

ELECTRICAL EQUIPMENT

1. The use of frayed and worn extension cords is not permitted.
2. The overloading of extension cords and electrical receptacles is not permitted.
3. Protect temporary wiring from mechanical damage by cranes, shovels, trucks, and other equipment.

SPRAY PAINTING, FLAMMABLE RESINS, AND CHEMICALS

1. No spray painting or application chemicals that give off flammable vapors is permitted within 50 feet of a possible ignition source.
2. Use approved exhaust fans and blowers in areas where conditions hinder the dissipation of hazardous vapors.

ACCESS AND EGRESS

1. Maintain access to the site at all times, day or night, for fire apparatus or ambulance. Bridge over ditches, openings in earth piles or storage areas.
2. Maintain exit routes for personnel at all times.

TEMPORARY BUILDINGS

Use non-combustible materials for temporary walls and partitions for area protection during construction. Use fire retardant plastic or visqueen film.

COMBUSTIBLE BUILDING MATERIALS

1. Store combustible materials separate from construction shacks or buildings.
2. Segregate storage of various materials by type with approved separation provided for non-compatible materials.

SMOKING

1. Smoking is not permitted inside buildings.

2. Smoking is permitted only in designated areas outside of buildings.

3. Extinguish matches/cigarettes and place them in approved containers.

EMERGENCY PHONE NUMBERS

Prominently display or post the emergency phone numbers near the telephone at the construction site.

HOT WORK PERMIT

1. A Hot Work Permit is required any time work involves the use of open flame or spark producing equipment. This includes welding, cutting, burning, grinding and or soldering operations.

2. Prior to commencing work, all work specific/area hazards shall be understood and communicated and all appropriated permits shall be obtained.

3. All appropriate permits shall be posted in the area of work.

4. All personnel in the surrounding work area shall be properly warned of the hazardous work area by the use of barricades or other communication means.

5. Prior to work within 35 feet of work area:

   a. Flammable liquids, dust lint and oily deposits are to be removed.

   b. Explosive atmosphere is eliminated or if not possible, monitored.

   c. Floors are swept clean.

   d. Combustible floors are wet down, combustibles in the area removed or covered with fire resistive protection. e.

      Floor and wall openings covered.

   f. Fire resistive tarpaulins are suspended beneath work.

6. A fire watch will be posted while Hot Work is ongoing and for 60 minutes after, with fire extinguishing equipment immediately available at the work area.

7. Fire watch personnel will be trained in the use of the fire protection equipment provided.

"ALL FLAMABLE AND COMBUSTIBLE LIQUIDS SHOULD BE KEPT IN CLOSED CONTAINERS WHEN THEY ARE NOT IN USE".

DEFINITIONS

1. Flammable liquid is any liquid with a flash point below 100°F.
2. A combustible is any liquid with a flash point above 100°F.
3. Flammable liquids are classified 1A, 1B and 1C.
4. Combustible liquids are classified Class II and Class III.
5. Flammable Liquids
    a. Class 1A. A liquid whose flash point is less than 73°F and has a boiling point less than 100°F.
    b. Class 1B. A liquid whose flash point is greater than 73°F and has a boiling point greater than or equal to 100°F.
    c. Class 1C. A liquid whose flash point is greater than 73°F but less than 100°F with a boiling point that is greater than or equal to 100°F.
6. Combustibles
    a. Class II. A liquid whose flash point is greater than 100°F with a boiling point of less than 140°F.
    b. Class III. A liquid whose flash point is greater than or equal to 140°F with a boiling point greater than 200°F.
    c. Container – A vessel designated to contain a liquid, including but not limited to a can, barrel, drum, bucket or pail.
    d. Flash Point – The lowest temperature at which a liquid gives off enough vapor within a test vessel to form an ignitable 3 mixture.
    e. Portable Tank – Any closed vessel with a liquid capacity over 60 gallons not intended for fixed installation.
    f. Safety Can – An approved container that holds no more than 5 gallons and has a spring closing lid and spout cover designed to release internal pressure safely when exposed to fire.

INDOOR STORAGE

1. Not more than 25 gallons will be stored in a room, trailer or temporary building outside an approved cabinet. (See 1925.152 part 2Ci for types of cabinets).
2. Not more than 60 gallons of flammable liquids will be stored in any one cabinet.
3. Not more than 120 gallons of combustible liquids will be stored in any one cabinet.
4. Not more than 3 cabinets will be stored in a single storage area.
5. Electrical wiring and equipment inside storage rooms will be Class 2, Division 1 (Explosions Proof).
6. Each storage room must be provided with either a gravity or mechanical exhausting system capable of 6 air changes per hour.
7. If room is used for dispensing, an electric pilot shall be installed adjacent to the light switch.

STORAGE OUTSIDE BUILDING

1. Storage containers (not more than 60 gallons each) must not exceed 1,100 gallons in any one storage area.
2. Piles or groups of containers must be separated by a 5 foot clearance, not to be closer than 20 feet from any building.
3. Within 200 feet of each pile, there must be a 12 foot wide access to permit access of fire control equipment.
4. Storage must be graded to divert possible spills away from any building or other exposures.
5. Each storage area must be surrounded by a curb or dike at least 12 inches high or higher. (The dike must be able to hold the contents of the material stored). A drain is to be installed using a 2” pipe with a threaded cap.
6. It must be long enough to go through the berm and extend out far enough for easy access and drainage.

OUTDOOR STORAGE TANKS

1. No closer than 20 feet from any building.
2. Two or more portable tanks grouped together, having a combined capacity in excess of 2,200 gallons, must be separated by a 5 foot clearance.
3. Outside storage must have a least a 20–B limit fire extinguisher located not less than 25 feet or more than 75 feet from storage area.

4. No smoking or open flame within 25 feet. Signs shall be conspicuously posted.
5. For environmental purposes, all dikes will be lined with a petroleum resistant lining.
6. All storage areas are to be protected from vehicular traffic.
7. All storage areas and containers are to be properly labeled as to contents.
8. There is to be a material safety data sheet (MSDS) for each type of liquid.

REQUIRMENTS FOR ALL STORAGE AREAS

1. Be kept free of weeds, debris and other combustible material.
2. Inside storage must have at least a 20-B unit fire extinguisher not more than 10 feet from the door opening in any rooms used for more than 60 gallons.
3. Outside storage must have at least a 20-B limit fire extinguisher located not less than 25 feet nor more than 75 feet from storage area.
4. No smoking or open flame within 25 feet. Signs shall be conspicuously posted.
5. For environmental purposes, all dikes will be lined with a petroleum resistant lining.
6. All storage areas are to be protected from vehicular traffic.
7. All storage areas and containers are to be properly labeled as to contents.
8. There is to be a material safety data sheet for each type of liquid.

DISPENSING

1. All portable fueling tanks will be grounded.
2. The dispensing hose will house a wire mesh inside outer cover. (Regular dispensing type hose).
3. Metal to metal contact will be at all times during dispensing.
4. When dispensing, a 20-B rated fire extinguisher will not be closer than 25 feet and not further away than 75 feet from dispensing area.
5. No smoking and/or open flame.

1. Oxygen / acetylene are to be stored, transported and handled in an upright position.
2. Storage areas are to comply as follows:
   a. Oxygen and fuel gases must be separated by a one (2) hour fire wall or be 25 feet apart.
   b. The empty and full cylinders are to be stored separately with the storage area labeled empty / full. c.

      No smoking signs conspicuously posted.

   d. Protected from vehicular traffic.
   e. 20-B rated fire extinguisher no closer than 25 feet or further away than 75 feet from storage areas.

This emergency action plan is designed to help protect the health, safety, and environment of every LASHER project and to provide the best possible emergency care for everyone, including the general public.

The emergency action plan includes the following: emergency telephone numbers such as medical, fire, police, hazardous materials response unit, Environmental Protection Agency (EPA), OSHA, project superintendent, project manager, division manager and the safety director.

This plan also includes general information to help interpret the policies and procedures for medical, fire, property, equipment damage, general public employees other than Lasher's employees (i.e., subcontractors, visitors, owners, etc.), environmental, hazardous substances, structural failure and water related incidences.

The following are guidelines that are to be followed before contacting any of the above agencies.

GUIDELINES

1. Medical. To be used for items other than first aid when the victim is seriously hurt, there is a fatality, is disabled, or the project cannot treat or transport safely. For medical emergencies that are not life threatening, Lasher's preferred medical providers are to be used.

2. Fire. If the emergency is serious enough and the on-site equipment cannot handle the emergency.

3. Police. If employee protection and security is required or if it is an accident involving a motor vehicle. Hazardous material response unit (Hazmat), if the incident involves a hazardous substance.

4. HAZMAT. If the incident involves a hazardous substance requiring the notification of hazardous materials response unit.

5. EPA. If there is a spill of a hazardous substance in quantities equal to or greater than what is required in Sections 13 and 15 of Lasher's Safety Program and Lasher's Environmental Program.

6. OSHA. Notify within eight hours, for all fatalities, disabling, or serious injuries. If there is a question as to the seriousness, contact Lasher's safety director.

7. Project superintendent, manager and division manager of all of the above, except for first aid cases.

8. Project Manager. All of the above, except first aid cases.

9. Division Manager. All of the above, except first aid cases.

10. Company Safety Director. All of the above, including first aid cases and all type of incidents.

GENERAL INFORMATION

LASHER will incorporate the following personnel, equipment, and procedures:

1. Safety Orientation. Lasher's safety director or the safety coordinator will conduct a thorough safety/environmental orientation session with each new employee or subcontractor. Lasher's safety program will be outlined using the pocket safety handbook. All project specific safety and environmental concerns, safety plans, equipment, and procedures will be reviewed. All new employees and/or subcontractors must attend the orientation session before beginning work on the project.

2. Trained personnel in first aid, fire protection, accident investigation, environmental protection and notification of the appropriate agency and hazardous communication.

3. Hand held radios for quick and efficient business and emergency communication among the project staff. Radios will be carried by the superintendent, safety coordinator, and all foremen.

4. Weekly Safety Meetings. Meetings will be conducted by the safety coordinator or superintendent weekly. Representatives from all subcontractors will be present. All safety plans and equipment specific to the project will be introduced and the use of each reviewed. Toolbox Safety Meetings will also be conducted by both the foremen and general foremen with all crew members. These meetings will be held at least weekly or more often depending on the nature of the work. Safety meetings are further detailed in Lasher's Safety Manual.

5. In the event that it is necessary to evacuate the area and/or there is a life threatening emergency, the following should be followed:

   a. A loud horn will be kept on-site to be used to alert all persons in the area.

   b. The project safety coordinator will be responsible for the following:

      i. Making certain everyone is properly evacuated and accounted for. ii. The knowledge of how to perform first aid. iii. The cleaning up of spills and disposal of the hazardous substances. iv. Notification of the appropriate agencies.

      v. Conducting an investigation of the incident.

6. If an evacuation is necessary, the project safety coordinator, with the assistance of the superintendent, general foreman, and safety director, will select an appropriate site for evacuation.

MEDICAL EMERGENCY

1. Treat the victim.
2. If the emergency is life threatening, contact the nearest facility.

3. If the emergency is not life threatening, the victim will be taken to Lasher's preferred medical provider.
4. In addition to notifying the medical provider, Lasher's safety director, project and senior construction managers will be contacted.
5. OSHA will be notified within eight hours if the incident meets the criteria in the guidelines section under OSHA.
6. All medical incidents will be investigated with a report filled out describing what happened, why it happened, and what should be done to prevent a reoccurrence. The report will be sent to Lasher's safety director and to those who by contract are required to receive a copy within 24 hours.
7. For all medical incidents that are fatal, disabling, and/or serious, the area will be protected and secured to prevent the disruption of the scene until the investigation is complete.
8. If there is a question concerning whether the scene should be preserved, Lasher's safety director must be contacted.
9. In the event of a fatality, the superintendent will immediately secure the scene and start the investigation (i.e., gather witnesses, statements, notify the safety director who will call OSHA, notify the VP of operations, division manager and project manager, insurance carriers, and others required by contract).

The safety director will conduct an investigation with the assistance of the project superintendent and project manager.

LASHER Public Relations, division manager, safety director, and a representative of the contractor will prepare a press release.

INCIDENTS INVOLVING FIRE

1. Secure the area.
2. If possible, use extinguishing equipment such as fire extinguisher, water and other available materials.
3. If the fire is too big to contain or extinguish, the local fire, police, and medical departments will be contacted.
4. Remember, do not risk your life but take every precaution necessary to protect the safety of those involved in or near the accident.
5. Once the incident is under control, the incident will be investigated and a written report will be completed. The written incident report will be forwarded to Lasher's safety director who will in turn notify, project manager, division manager, VP of operations, and others as required by contract.

INCIDENTS INVOLVING PROPERTY AND EQUIPMENT (NO MEDICAL ATTENTION REQUIRED)

For incidents where vehicles and other equipment are damaged, the following shall occur:

1. Accidents resulting in property or equipment damage over $200 shall be reported to Lasher's safety director through the use of the Supervisor's Incident Report form. Any accident resulting in property or equipment damage in excess of $1,000 shall be immediately reported verbally to Lasher's risk management director, with the Supervisor's Incident Report form following.

2. Accidents involving Lasher's vehicles shall be reported at once to the Lasher's safety director, and, as applicable, to police. The Supervisor's Report of Motor Vehicle Accident form shall be completed and sent to the safety department. The
General Liability Loss Report, supplied by Lasher's insurance company, will be filled out by the safety director.

3. Incidents involving personnel other than Lasher's employees (i.e., subcontractors, visitors, owners, etc.) shall be reported on an incident report including witness statements, photographs, police reports, and other related information. The report must be sent to Lasher's safety director for review and if necessary, sent to the general liability carrier.

4. Incidents Involving the Environment, follow the procedures outlined in the Environmental Program, as well as Sections 13 and 14 of Lasher's Safety Program. Contact the safety director immediately.

5. A team consisting of the superintendent, on-site safety/environmental coordinator, and others required by contract will investigate the incident and file a report which will include copies of witness statements, photographs, EPA's report and other related information. This information will be sent to Lasher's safety director, project manager, and operations manager.

INCIDENTS INVOLVING HAZARDOUS SUBSTANCE WASTES

1. If in large quantities, the local Hazmat, EPA, medical, fire and police will be contacted.

2. All personnel will be evacuated to a predetermined area, up-wind, and up-slope.

3. All medical emergencies will be treated.

4. All personnel will be accounted for.

5. Assist, if required, in the rescue operation by the hazardous team, by investigating or assisting in the investigation file.

6. An incident report with witness statements, photographs, and other information will be sent to Lasher's safety director, project manager, senior construction manager, and all others as required by contract within 24 hours.

INCIDENTS INVOLVING STRUCTURE FAILURE (I.E., COLLAPSE OF BUILDINGS, SHELTERS, FORMWORK, ETC.)

1. Measures will be implemented to stabilize the incident using the appropriate resource equipment, such as fire extinguishers, or available on-site equipment, such as cranes, forklifts, and excavating equipment to assist in emergency.

2. If necessary, the appropriate agency (i.e., fire, police, medical, Hazmat, etc.) will be contacted to assist in the emergency. In any case, the project manager and company safety director will be notified.

3. Once the incident has been taken care of, a team consisting of the superintendent, safety coordinator, and other designated people will investigate the incident. Complete a written report with witness statements, send copies to the project manager, senior construction manager, company safety director, and others who require a copy by contract.

INCIDENTS THAT ARE WATER RELATED

1. The following minimum life saving equipment will be strategically stored at the project site if near water. c. Three life saving rings with 100 feet of rope.

   d. Three life jackets.

   e. Ladders, as required.

   f. One 35-man first aid box.

   g. One trauma bag.

   h. Ropes and other related materials required by contract.

2. Upon notification that a water incident has occurred, the emergency horn will sound immediately.

3. Victims will be treated immediately.

4. The incident will be investigated and a written report completed, including witness statements, photographs, and other related material.

5. The investigation will be conducted by the project superintendent, safety coordinator, and others as required by contract.

6. Upon receiving the report, a follow-up investigation will be coordinated if necessary, by Lasher's safety and risk management departments.

INCIDENT OF COFFERDAM FAILURE

1. A small PVC lined earth-fill cofferdam will be constructed and maintained throughout the duration of the project. Failure of this cofferdam will allow water to enter the deep excavation, endangering persons working there.

2. While the cofferdam is in place and persons are working behind it, the following action will be taken:

   a. The deep excavation plan will be outlined and described to all affected personnel by the safety coordinator.

b. All personnel will be trained on the location and use of exit ladders, ropes with life saving rings, warning horns, and other rescue equipment.

c. Evacuation will be designed so personnel will not have to travel more than 25 feet to the escape areas.

d. The evacuation plan will be reviewed and practiced by all personnel under the director of the safety coordinator as soon as the cofferdam is in place.

e. Weekly safety meetings will be conducted to address the deep excavation safety and evacuation procedures as the cofferdam is placed and excavation begins.

f. A daily inspection of the cofferdam will be done by Lasher's project superintendent.

g. A weekly inspection of the cofferdam will be done by the Lasher's safety coordinator.

h. A bi-monthly inspection of the cofferdam will be done by Lasher's safety director.

i. At least one foreman with a radio will be present in the excavation at all times while construction activities are in progress.

j. The de-watering system will remain in place at all times throughout the duration of construction behind the cofferdam.

k. Should a failure occur, the following equipment will be available and procedures implemented:

   i. Life saving equipment as outlined below will be strategically stored at the project site:

      - Three life saving rings with 100 foot rope.
      - Three life jackets.
      - Ladders, as required (a minimum of six).
      - One 35-man first aid box.
      - One trauma bag.
      - Ropes and other related materials required by contract.

   ii. Upon notification that a failure of the cofferdam has occurred, the emergency horn will sound immediately.

   iii. All personnel will be evacuated from the excavation. The primary evacuation route will be to the closest exit of the excavation. (See Item B, above).

   iv. A head count on all personnel will be conducted. The on-site foreman will have the primary responsibility for this activity. The general foreman and safety coordinator will have the secondary responsibility to ensure that all personnel are accounted for.

   v. Victims will be treated immediately.

vi. The incident will be investigated and a written report completed, including witness statements, photographs, and other related information.

vii. The investigation will be conducted by the project superintendent, safety coordinator and others as required by the contract.

viii. Once the investigation and incident report is complete, it will be sent to Lasher's safety director, project manager, operation managers, and others required by contract within 24 hours. ix. Upon receiving the report, a follow-up investigation will be coordinated by Lasher's safety department.

DEMOLITION

PREPARATION

1. Prior to permitting employees to begin the demolition process, a survey must be made by an engineer or a competent person. The purpose of the survey is to check for the possibility of an unplanned collapse of the structure.
2. Make certain all utilities and other service lines are capped and/or shut off.
3. If necessary to maintain power, water, or other services, make certain they are properly located and protected.
4. Determine if any type of hazardous substance and/or waste is present, to include flammable or similar type substances that are still in the pipes, tanks, or other equipment. If it has been determined that hazardous substances do exist, make certain everything has been tested and purged before the process begins.
5. Remove hazard created by glass fragmentation.
6. Protect all fall hazards such as floor and wall openings.
7. Barricade areas where debris is dropped through holes in the floor. Place all the appropriate signs and install fall protection where needed.
8. Demolition must begin from the top down.
9. Employee entrances to multi-story structures must be protected by sidewalk sheds, canopies, or both, providing protection from the fall by at least eight feet.

STAIRS, PASSAGEWAYS, AND LADDERS

1. Use only those that are designated as a means of access. All other access ways must be closed off entirely at all times.
2. Inspect and maintain in a safe condition.

3. Make certain all areas are properly illuminated.

CHUTES

1. All material dropped to any point outside the building must be properly protected.
2. In multi-story buildings the chutes with an angle of more than 45 degrees must be enclosed. The openings must not exceed 48 inches.
3. Doors must be installed at all levels and kept closed when not in use. Openings must be protected with standard guardrail.
4. Must be designed for the intended load.

REMOVAL THROUGH FLOOR OPENING

The opening must not exceed 25 percent of the total floor space.

REMOVAL OF WALL, MASONRY SECTIONS AND CHIMNEYS

1. Do not allow material to fall in masses as to exceed the safe working loads of the existing areas for which they are designed to safely hold.
2. No single section more than one story in height will be allowed to stand alone without bracing.
3. Employees will not be allowed to work on top of walls when conditions present a hazard.
4. No structural or load supporting members will be removed until all the stories from above have been removed.
5. Floor openings within ten feet of the wall will be planked solid except where employees are kept out of the area.
6. In buildings consisting of skeleton steel, the steel framing can stay in place as long as all loose material is removed from beams, girders and other structural components.
7. Walkways and ladders must be provided to reach any scaffold and/or walls.
8. Retaining walls used to support earth or adjoining structures will not be demolished until the earth has been properly braced and adjoining structures properly underpinned.
9. Walls which will be used to pile debris against, will not be used unless the walls are properly braced to hold the intended load.

MANUAL REMOVAL OF FLOORS

1. Openings cut in floors will extend the full span of the arch between loads.
2. Undressed planking 2” x 10” will be provided as a work surface for employees when demolishing the floor arches, removing debris and other material. The spaces between the planking must not exceed 16 inches.
3. Safe walk ways to all work areas must be provided and must not be less than two inches thick and 18” wide.
4. Planks will be laid together over solid bearing, with one foot overlap.
5. Stringers of ample strength shall be installed to support planks.
6. An area of 20 feet must be cleared of debris and other materials before the demolition of the arches begins.

STORAGE

1. Material must not exceed the load capacity of the area where it is stored.
2. Wood beams must be left in place until equivalent support is installed.
3. Storage where material is dumped must be blocked except when the material must be removed. The door to the material storage must be kept closed when not in use.

REMOVAL OF STEEL

1. Structural members must not be over stressed.
2. Must be removed column by column and tier by tier. The columns may be removed in two story lengths.
3. Hoisting equipment must meet subpart N of CFR 19 1926 of the construction standard. 4. After the arches have been removed, planking must be installed.

MECHANICAL REMOVAL

1. Only workers who are required to perform work will be allowed in the demolition area.
2. Boom and load lines must be as short as possible.
3. The weight of the demolition must not exceed 50% of the crane's rated load.
4. Must have a swivel type connection.
5. Walls or portions of walls must be cut before pulling them over.
6. All corners and other stone work must be removed.
7. Inspections by a competent person must be made on a regular basis while work is in progress to detect hazards that could cause harm to those involved in the demolition process.

SELECTIVE DEMOLITION PROCEDURES

When using explosives, the procedure must comply with Lasher's procedure on the use of explosives and subpart U of OSHA construction standards.

PERSONAL PROTECTIVE EQUIPMENT

The following personal protective equipment must be used when doing demolition work:

1. hard hats
2. safety glasses
3. steel toed boots
4. long sleeve shirts along with a good pair of pants
5. respiration mask when working in a dusty atmosphere
6. other equipment as may be required

This procedure is for the protection of Lasher's employees who are trained in the basic first aid and treatment of minor injuries in addition to their other duties. These individuals are considered first responders and/or good Samaritans.

DEFINITIONS

Blood borne pathogens mean pathogenic microorganisms that are present in the 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).

1. **Exposure Incident** – A specific eye, mouth, or 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.

2. **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 any employee's duties.

3. **Infectious Materials –** Any bodily fluid that is visibly contaminated with blood, and all bodily fluids in situations where it is difficult or impossible to differentiate between bodily fluids.

4. **Protective Equipment –** Isolation Pack consisting of infection control gown, gloves, mask with visor, infectious waste bag with tie, disposable towelettes, micro shield, and booties.

5. **Other Protective Equipment –** Gloves, masks, eye protection, infectious waste bag.

TRAINING

Employees who respond to first aid incidents will do the following before treating the patient:

1. Incident Not Involving Spurting Blood

    a. Before treating first aid cases when spurting blood does not exist but there is an open wound, put on gloves, mask and eye protection.

    b. Treat the patient using supplies from the first aid box.

    c. Once the patient is treated, place all materials in the infectious waste bag.

2. Incident Involving Spurting Blood

    a. Place a bandage over the wound.

    b. Put on control gown, gloves, booties, and mask with splash guard.

c. Once this has been accomplished, finish treating the patient then remove the protective equipment and put in the infectious waste bag along with other material that was used to treat the patient.

3. Disposal

a. Once the contaminated material is placed in infectious waste bag, dispose of in the dumpster, except when working in Davis County.

b. Davis County will not allow infectious waste bags to be disposed of in their landfills.

c. When working out of state, check regulations before disposing of the hazardous waste bag and its contents.

4. First Aid Treatment Form. Fill out the form in detail and send it to the office. At this time, a medical file will be set up for the first responder.

5. Hepatitis B Vaccination Consent Form

a. After you have treated the patient, you have 24 hours to decide whether or not to take the Hepatitis B Vaccination. It is a series of three shots which will be paid for by the Company.

b. You will be given a form to sign stating that you will accept or reject this vaccination series. The only time it is necessary to take the vaccination series is if you are contaminated with blood from the patient or if you feel you want it for any other reason.

c. Once the training is complete, a form will be signed by all those who received the training along with your social security number and job title. These records will be kept on file for 30 years.

BLASTING AND DRILLING OPERATIONS

GENERAL REQUIREMENTS

Comply with Lasher's Safety Manual, 29 CFR 1926, Subpart U, and Section 900-914.

EXPLOSIVES

1. Permit only authorized and qualified persons to handle and use explosives.
2. Do not permit smoking, matches, open flames, open flame lamps, firearms, or other fires near or around engines or explosives while being used, stored or handled.
3. Explosives will be accounted for at all times.
4. Explosives not in use will be kept in a locked magazine and made unavailable to unauthorized persons.
5. Records will be kept of all inventory and use. Records must contain the date, time, and location of blast, the number of holes, types of explosives, number of delays, and type of caps used.
6. Notify authorities of any loss, theft, or unauthorized entry to magazine.
7. Do not abandon explosives or blasting agents.
8. In the event of a fire do not try and fight it. Remove all employees to a safe area and protect against intruders and notify the local fire department.
9. Explosives and detonators must be kept in the original container. Utilize Class II magazine when transporting to and from magazine.
10. Special precautions must be taken when blasting in congested areas or in and around other structures, installations, highways and railroads.
11. The person in charge and/or who is authorized to blast should take the following precautions before blasting. a. Do a visual inspection of the area.
    b. Sound audible and or visual alarms such as flags, barricades, horns.
12. It can only be done between sun-up and sun-down.
13. Precautions must be taken to prevent accidental discharge from radar, radio transmitters, lighting adjacent power lines, dust storms or other sources of extraneous electricity.

14. All electrical detonators will be short-circuited until wired into the blasting circuit.

15. All blasting operations will be suspended while electrical storms are in progress.

16. Warning signs will be posted within 1,000 feet of the blasting area. The signs will be as shown below. a. Blasting Zone

    1,000 Feet

    b. Turn off Two-Way Radio

NOTE: DIMENSIONS OF THE SIGNS WILL BE; (1) APPROXIMATELY 48" X 48", (2) APPROXIMATELY 42"X 36"

17. If the 1,000 feet requirements are not followed, a competent person must be consulted to evaluate the situation. A description of the alternate plan must be submitted in writing to a representative of the secretary of labor. The plan must contain information as to how premature blasting will be prevented.

18. Mobile radio transmitters less than 100 feet away from blasting must be de-energized, placed in the original container and locked.

19. All empty boxes, paper and fiber packing materials containing the explosives must not be used for another purpose. This material must be destroyed by burning at an approved location.

20. All explosives, blasting agents and blasting supplies showing deterioration must not be used.

21. Deliveries must be made only by authorized persons.

22. The deliveries must be made to an authorized magazine or approved temporary storage and handling areas.

23. Operators and owners must be notified that safe measures have been taken when blasting around power lines, communication lines, utility services and other services and structures.

BLASTER QUALIFICATIONS

1. Must be able to understand and give written and oral instructions.

2. Must be in good physical condition and not addicted to drugs of any type (i.e., alcohol, intoxicants).

3. Must be qualified by training and have a working knowledge of all federal, state and local regulations in the use, handling and transportation. In addition, the blaster must be knowledgeable and competent in the use of each blasting method.

4. Blasters must upon request furnish satisfactory evidence that they are competent in the safe handling of the explosives.

TRANSPORTATION

1. Must meet the requirements of the Department of Transportation Regulations 14CFR Part 103, Air and Transportation 46, CFR Part 146-149, Water Carriers 49 CFR 171-179, Highways and Railway 49 CFR Part 180, Pipelines and 49 CFR Part 39 Motor Carriers.

2. The transportation of explosives and blasting agents must be done by a driver who is physically fit and familiar with the local, state and federal regulations.

3. Smoking, carrying of matches and other flame producing devices, or firearms or loaded cartridges will not be carried while in, near or around the transporting of explosives.

4. Vehicles must be capable of carrying explosives without difficulty and in good mechanical condition.

5. Explosives and blasting agents must not be transported with other materials.

6. Blasting caps including electrical must not be transported in the same vehicle with other explosives.

7. When explosives or blasting agents are transported in an open vehicle, it must be transported in Class II Magazine that is properly secured.

8. Vehicles used for transporting must have tight doors and all exposed material must be covered with non-sparking material.

9. Vehicles must be properly placarded on front sides and back with the word “Explosives” in red letters not less than four inches high.

10. Vehicles must have a fully charged ten pound ABC Fire Extinguisher. The driver must be trained in the use of the fire extinguisher.

11. Vehicles must not be taken into garages or shops for repair until the explosives and blasting agents are removed and properly stored.

12. Vehicles transporting explosives must not be unattended.

13. Except in emergencies, vehicles carrying explosives shall not be refilled.

LOADING OF EXPLOSIVES AND BLASTING AGENTS

1. The holes must be drilled larger than the explosives to allow easy access of the explosives.

2. Drilling should be at least five feet away from holes being loaded with explosives.
3. Holes should be checked for proper depth before loading.
4. Before drilling, spot check for possible unfired explosives.
5. Drill and shoot a safe distance from misfired charges.
6. Follow the manufacturer's recommendations when selecting the explosives and detonators.
7. Do not load explosives or detectors during storms or when one is approaching.
8. Only holes that are drilled and are ready for detonation will be loaded.
9. Under no circumstance shall holes loaded for detonation be left overnight or to the next shift.
10. Primers and dummies shall be made up in any area away from the magazine.
11. After loading, all remaining explosives and detonators will be returned to the magazine before detonation.
12. Machines and tools used for loading must be removed from the immediate location before blasting.
13. Equipment must not be operated less than five feet from drill holes.
14. No activities other than the blasting operation will be allowed in the blast area such as loading holes with explosives.
15. When loading a long line with more than one crew, the crews shall be separated by practical distance and shall be supervised.
16. Portable electrical cables used in the blasting operation must be kept a safe distance from explosives and blasting agents.
17. Cables in the proximity of the blast area must be de-energized and locked out by the blaster.
18. Explosives will not be loaded in the presence of combustible gases or dust.
19. Warning signs indicating the blast area shall be maintained at all times with lettering which is no less than four inches in size.
20. No unloaded holes shall be left unattended or unprotected.
21. Drill holes which are not water filled will be cooled before re-loading.

DRILLING AND LOADING

1. Holes shall be of greater diameter than the cartridges being used.

2. Drilling shall not be carried on closer than 25 feet from holes being loaded in the area.

3. Check bare hole with wooden rod or tape measure to determine condition before loading; also make certain the hole contains no hot material of any kind, particularly broken drill bits.

4. Carefully examine the face of rock for possible unfired explosives before drilling. Do not drill, pick or bore in butts of old holes, even if examination fails to reveal explosives remaining therein. Drill and shoot at a safe distance from misfired charges.

5. Do not handle, use or be near explosives or detonators during the approach or progress of any severe, electrical storm.

6. All employees shall consider the manufacturer's recommendations in selecting the grade or kind of explosive and type of detonator, and use the least amount of proper strength explosive that will effectively do the job.

7. Drill holes shall be made ready before explosives are brought to the site. The operations of priming, charging, stemming and firing shall be carried on with as few employees as possible and as rapidly as is consistent with careful work practices.

8. Drill holes shall not be loaded except those that are to be fired in the next round of blasting. Holes loaded during one shift shall be fired during that shift whenever possible, and no loaded holes shall be left unattended overnight or until the next shift.

9. Primers shall be made up in a safe area, away from the magazine, and only as required for immediate use. Cap crimpers of proper design shall be used for crimping blasting caps onto fuse.

10. To reduce the chances of a misfire, the detonator shall be completely inserted lengthwise in the cartridge, fastened in such a manner that it cannot be accidentally pulled out, and so that the fuse or cap wires are not subjected to any strain.

11. When using electrical firing in large diameter holes, each electrical detonator shall be tested with a blasting galvanometer before it is placed in a primer cartridge and again after the primer has been placed in the hold and the hole is tamped. After the latter test, the leg wires shall be short circuited by twisting the ends together and shall remain so until ready to be connected into the firing circuit. When using small diameter holes that can be re-primed in case of a broken circuit, the shunt shall not be removed until the cap is connected into the firing circuit which shall be tested with a galvanometer.

12. Before loading a bore hole after springing (enlarging the hole with explosives) or upon completion of drilling, make certain that it is cool and does not contain any hot metal or burning or smoldering material. Temperatures in excess of 150 degrees Fahrenheit are dangerous.

TAMPING

1. Unless it is positively necessary, dynamite shall not be removed from the cartridge, but if it is done, loose dynamite should not be tamped, (unless it is specifically designed for tamping (i.e., "TAMPTITE")).

2. Use only wood or fiberglass tamping tools with no metallic parts excepting non-sparking metal connectors for sectional poles. Do not tamp harder than necessary to insure firm loading. Never tamp the primer.

3. Explosives shall be confined to the bore hole with sand, earth, clay or other suitable, noncombustible material. "Pea Gravel" will be used for stemming in practically all cases.

4. Care shall be exercised to avoid kinking or injuring fuse, detonation fuse, or cap wires during tamping.

WARNING SIGNALS AND TRAFFIC CONTROL

1. Standard signals, which indicate that a blast is about to be fired and subsequent all clear signals have been adopted. It is important that everyone working in the area be familiar with these signals, if used, and that they are properly obeyed.

2. Signs for the benefit of the general public are mandatory, notifying them of the nature and type of warning signals used. Use of this type sign will help to minimize public liability claims often resulting from blasting operations.

3. Employees of R & O and all subcontractors are to follow this waning procedure. (1) a signal five minutes before the blast; (2) a second signal one minute before the blast; and (3) a third signal after inspection of the shot.

4. The first warning is a signal to certain designated personnel to warn all persons in the area that a blast is about to happen and to order those persons out of the danger zone. At the same time, workers equipped with red flags, are posted at all possible approaches to the blasting area to stop traffic.

5. No vehicular traffic is allowed to move in the area nor is any person allowed to enter the blasting zone until the allclear sound.

NOTE: ONE WARNING SIGNAL BEFORE THE BLAST WILL SUFFICE WHEN BLASTING IN TOTALLY ISOLATED AREAS.

PREPARING TO FIRE THE BLAST

1. A code of blasting signals shall be posted at one or more conspicuous places at the operation.

2. Danger signs shall be placed at suitable locations. Flagmen shall be safely stationed on highways which pass through the danger zones.

3. Warning Signals.

   a. A one minute series of long blasts five minutes prior to blast signal.

   b. Blast Signal. A series of short blasts one minute prior to the shot.

   c. All Clear Signal. A prolonged blast following the inspection of the blast area.

4. Responsibility. The blaster shall be in charge of the blasting machine or firing switch, and shall connect the firing line to the firing device. All connections shall be made from the cap circuit back to the firing device, and the firing line shall remain shorted until connected to the firing device immediately prior to firing.

FIRING THE BLAST

1. After loading is complete, there shall be as little delay as possible before firing.

2. Each blast shall be fired under the direct supervision of the blaster, who shall inspect all connections before firing and personally see that all persons are in the clear before giving the order to fire.

3. Blasting mats shall be used where there is danger or rocks being thrown into the air or when close to buildings or transportation systems nearby.

   a. Disconnecting. Immediately following the blast, the firing line shall be disconnected from the firing power source or blasting machine, and shunted. Firing switches shall be locked open.

   b. Inspection Following a Blast.

      i. All blasts. Prior to the all-clear signal, a thorough inspection shall be made by the blaster to determine if all charges have been fired. Wires shall be carefully checked and a search made for unexploded charges.

      ii. All-clear signal. The all-clear signal shall be sounded only after the inspection of the area has been satisfactory.

ELECTRICAL FIRING

1. In electrical firing, it is important that the rack bar of a generator type blasting machine be pushed down with force and speed. The faster the rack bar is pushed down the more current flows through the circuit at the end of the stroke. Careful observation of this fact will prevent many misfires. Other types of portable blasting machines shall be stored, used, and maintained in conformance with the manufacturer's instructions.

2. When firing by electricity from power or lighting wires, a switch shall be provided with the lever down when in the "off" position. There shall be a positive break in the line on the power side of the switch that will reduce the chances of premature firing from leakage, stray current, or lightening. This gap shall be closed with a jumper cable for firing blasts. The switch shall be fixed in a locked box, the key to which should be kept by the blaster in charge of operations.

3. The following ten rules for avoiding trouble in electrical firing are mandatory.

   a. Make good, tight electrical connections.

   b. Make sure there are no short circuits or breaks in the leading wires.

   c. Make sure there is sufficient current to fire all the electrical blasting caps in the circuit.

   d. Make series connections when firing with a blasting machine, or use parallel series following the recommendations of the manufacturer.

   e. Make sure the blasting machine is in good order and of sufficient capacity to fire all the electric blasting caps connected in the circuit. Test it with a meostat.

   f. Always operate a generator type blasting machine a few times before making connections. This will test the action and prepare it for the generation of maximum capacity.

   g. Always operate a generator type blasting machine with maximum force.

   h. Never use electric detonators or delay electric detonators from different manufacturers in the same blast.

   i. Make sure not to damage the insulation of cap wires when tamping charges.

   j. Always take ample time to check the wiring and connections before firing. Test any circuit of electric detonators with a blasting galvanometer and see that the resistance is correct before attempting to fire.

4. The blaster shall conduct a thorough survey for extraneous currents and eliminate dangerous currents. The blaster shall be in charge of the blasting machine and when making the leading wire connections, shall be the only one to fire the shot.

5. Blasters, when testing circuits to charged holes, shall use only blasting galvanometers, that have been approved by management or approved blasting consultant.

   a. In any single blast, all caps shall be of the same style.

   b. When connecting wires, both wires and lead wires shall be insulated single solid wires.

   c. The power circuit shall not be grounded.

6. Blasting machines shall be tested periodically to make certain they can deliver power to their rated capacity. Manufacturer's recommendations shall be followed with regard to:

   a. Connections.

b. Number of blasting caps connected to machine.

c. Series circuits.

7. The lead wires from a blasting machine shall be immediately disconnected after firing.

8. In underground operations, a safety unit shall be placed in the permanent firing line at intervals and made so it can be locked only in the "Off" position and shall be provided with a short circuiting arrangement of the firing lines to the cap circuit.

9. There shall be a "lightening" gap at least five feet in the firing system ahead of the main firing switch. The gap shall be bridged by a flexible jumper cord just before firing the blast.

10. Except when firing, the firing switch shall be locked in the open or "Off" position at all times. The firing lines to the cap circuit shall be designated to automatically short circuit when the switch is in the "Off" position.

RADIO FREQUENCY ENERGY

Radio, television, and radar transmitters create fields of electrical energy that can, under exceptional circumstances, detonate electric blasting caps. The institute of makers of explosives recommends that the following minimum distances be maintained between the nearest transmitter and electric blasting caps.

FOR FM MOBILE TRANSMITTERS

TRANSMITTER POWER (WATTS)	MINIMUM DISTANCE (FEET)
5	10
30-60	15
60-250	30

FOR ALL EXCEPT FM MOBILE TYPE TRANSMITTERS

TRANSMITTER POWER (WATTS)	MINIMUM DISTANCE (FEET)
5-25	100
25-50	150
50-100	220
100-250	350
250-500	450
500-1,000	650
1,000-2,500	1,000
2,500-5,000	1,500

5,000-10,000	2,200
10,000-25,000	3,500
25,000-50,000	5,000

SAFETY FUSE

1. Safety fuses shall only be used where sources of extraneous electricity make the use of electric blasting caps dangerous.
2. Before capping fuse, a short length shall be cut from the end of the supply reel.
3. The length of safety fuse should not be less than 30 inches.
4. When hand lighting methods and devices are used, at least two must be present and not more than 12 fuses shall be lighted by each man. (When two or more safety fuses in a group are lighted as one, by means of igniter cord, etc., they may be considered one fuse).
5. The use of a fuse that has been hammered or injured is forbidden. Hanging fuses on nails, etc., is forbidden as well.
6. No fuse shall be capped or primers made up near any source of ignition or in any magazine.
7. Unused cap or short-capped fuses shall be removed from the working place and destroyed.
8. No one is permitted to personally carry detonators or primers.
9. Use of the “Drop Fuse” method is prohibited.
10. Cap and fuse shall not be used for firing mud cap charges unless charges are separated sufficiently to prevent one charge from dislodging other shots.

DETONATING CORD

1. The line of detonating cord shall be cut before loading the remainder of the hold or placing additional charges.

2. Knot-type or other cord-to-cord connections shall be made only with the detonating cord in which the explosive core is dry.

3. Trunk lines and branch lines shall be free of loops, sharp kinks, and angles that direct the cord back toward the oncoming line of detonation.

4. Manufacturer recommendations shall be followed when using milli-second delay connectors or short-interval delay electric blasting caps.

5. All detonating cord connections shall be inspected before firing the blast.

    a. Care in use. Only detonating cord consistent with the type and physical condition of the borehole, stemming and the type of explosive shall be used. It shall be considered and handled in the same manner as other explosives.

    b. Connections. Detonating cord connections shall be competent and positive in accordance with approved and recommended methods. Knot-type or other cord-to-cord connections shall be made only with detonating cord in which the explosive core is dry. Connections shall be inspected before firing.

    c. Use of delays. When detonating cord milli-second delay connectors or short-interval-delay electric blasting caps are used with detonating cord, the manufacturer's recommendations shall be followed.

    d. Connecting blasting caps. When connecting blasting caps to detonating cord, the cap shall be taped or otherwise attached securely along the side or other end of the cord, with the end of the cap containing the explosive pointed in the direction in which the detonation is to proceed.

    e. Detonators. Detonators for firing the trunk line shall not be brought to the loading area not attached to the detonating cord until everything else is ready for the blast.

6. Always handle fuse carefully to avoid damaging the covering. In cold weather, warm fuse slightly before using to avoid cracking the water-proofing.

    a. Use fuse of sufficient length, never less than 30 inches.

7. Do not cut fuse until you are ready to insert it into a blasting cap. Cut off an inch or two to insure a dry end. Cut fuse squarely across with a clean, sharp blade. Seat the fuse lightly against the cap charge and avoid twisting after it is in place.

8. Caps should be crimped only with a tool designated for that purpose and shall be fastened securely to the fuse.

WIRING OPERATIONS

1. Firing devices. All blasts shall be fired electrically with an electric blasting machine or a properly designed and installed power source, or by a single safety fuse with the fuse cap, properly crimped thereto, when the presence, or threat, of stray currents is known or assumed to be present. Cap and fuse firing shall not be used underground or in the excavation of shafts. Electric blasting caps shall not be used within 500 feet of energized high-voltage lines or facilities.

2. Wiring procedure. The manufacturer's shunt shall not be removed from the cap leg wires until the cap is connected to the lead lines or to another cap in preparation for the assembly of two or more caps in a single series. When two or more series of caps are to be fired as a series parallel system, the caps in each series shall be the same in number (quantity, not delay periods) and each series shall be separately tested with an approved blasting galvanometer to ensure that the series is complete.

3. Capping. Prior to capping a safety fuse, a short length shall be cut from the end to ensure a fresh-cut end in each blasting cap.

4. Crimper. Only cap crimpers of approved design shall be used for attaching blasting caps to safety fuse.

OBJECTIVE

Communicate standards which will protect the health and safety of employees who work in hot/cold environments.

COLD STRESS

1. Workers shall be trained in the signs/symptoms of cold stress. They should also be instructed on the precautionary measures to be taken to prevent cold stress and immediate first aid actions to be taken in the event of overexposure.
2. Pain in the extremities is often the first sign of cold stress and shivering a second and more advanced sign; if either of these signs becomes noticeable seek shelter.
3. Always wear warm dry clothing. If clothing becomes damp, dry clothes shall be changed into immediately.
4. Gloves shall be worn in cold temperatures to prevent loss of manual dexterity which may contribute to accidents. The combined exposure to cold temperatures and vibrating tools shall be avoided.
5. For work temperatures below 20° F, heated shelters shall be provided and work/rest regimens established.
6. Cold stress prevention shall be mentioned in tool box talks and included in pre-task planning.

HEAT STRESS

1. Workers shall be trained in the signs/symptoms of heat stress. They should also be instructed on the precautionary measures to be taken to prevent heat stress and immediate first aid actions to be taken in the event of overexposure.
2. Methods approved by the ACGIH must be used to evaluate and control the heat stress load on workers. Factors include the Wet Bulb Globe Temperature and the worker's work load, clothing, and health.
3. Suitable work/rest regimens shall be implemented. Cool/shaded areas shall be designated as worker rest areas.
4. Cool drinking water and sanitary drinking cups shall be provided to workers.
5. Ventilation in employee work areas shall be evaluated. Portable fans should be considered in "still" areas.
6. Heat stress prevention shall be mentioned in tool box talks and included in pre-task planning. Labor intensive tasks shall be planned for early morning and late evening hours when temperatures are lowest.

7. Workers who are unaccustomed to physically demanding work in hot environments shall be monitored closely when starting challenging jobs.

LASER SAFETY

PURPOSE

To establish a policy to assure the safe use of laser equipment and compliance with all applicable regulations and with American National Standards for safe use of lasers, ANSI Z 136.1 – 1993.

PROCEDURE

1. Lasers should not be left unattended during operation. Beam shutters or caps should be utilized, or the laser turned off when laser transmission is not actually required.
2. All personnel who work with lasers or laser aided equipment should be given instruction concerning potential eye hazards.
3. If required based on laser class, a warning sign should be attached to equipment in a conspicuous location indicating the potential eye hazard associated with the laser and warning against looking into the primary beam of reflections. 4. All potential electrical hazards should be safeguarded and proper procedures used.

ODOROUSE WORK/EXPOSURE MONITORING

PURPOSE

Define LASHER specific expectations for exposure monitoring for the protection of subcontractor employees, and/or LASHER employees in the surrounding area.

PROCEDURE

When there is potential or real exposure to hazardous materials in use on LASHER projects, contractor shall:

1. Identify and plan for the possible hazard in a pre-task plan.
2. Create and implement an employee exposure monitoring plan as necessary to ensure the safety of contractor's employees.
3. Implement notification and documentation procedures including notification written consent, results report, record retention and confidentiality.

4. Contractor agrees to immediately respond to exposure complaints from contractor's employees or other affected persons.

5. Contractor agrees to provide to Lasher's medical direction within 24 hours of Lasher's formal request, a copy of any occupational medical information by a process that maintains the employee(s) confidentiality.

6. Contractor agrees to allow LASHER to perform periodic work area air monitoring during performance of work. LASHER agrees to share the results of said monitoring as requested by affected company.

7. Contractor can request in writing, support from LASHER in classification and monitoring of work place exposure.