EMJ CONSTRUCTION

SAFETY MANUAL

SAFETY DELIVERED.

PLANNED. PROMOTED. PROVEN.

Corporate Safety Policy

It is the intent of EMJ Construction (the “Company”) as the General Contractor / Construction Manager to provide a safe and healthy working environment for all employees and project personnel. The Company considers accident prevention to be of paramount importance in its daily operations. Accidents which result in personal injury and damage to property or equipment represent needless waste and loss.

It is the Company’s policy that all functions and operations will be performed in the safest manner possible, consistent with good construction, environmental, health and safety practices. To fulfill the requirements of this policy, this program must be carried out by all contractors, subcontractors and employees.

The effectiveness of this safety program is highly dependent upon the commitment of contractor supervision, as well as the participation and cooperation of the craftsmen. Supervisors shall insist that all employees and subcontractors observe and obey every rule, regulation, and best management practice to conduct work safely, and shall take all action necessary to obtain compliance.

I, Burt Odom, state that the primary objective of this program is to ensure effective control in the prevention of accidents, which is essential for the protection of the company’s greatest assets – ITS PEOPLE. Accordingly, our beliefs in a strong safety culture and the prevention of accidents are of the highest importance. Safety of all workers has always had and will continue to have precedence over any and all production demands. Our Company has built a strong reputation for providing high-quality, safe workmanship. Because of this, shortcuts that compromise safety, production and/or quality shall not be tolerated or allowed.

Signature: 

Date: 1/20/2017

1. Safety Administration

2. General Safety Rules

3. Substance Abuse

4. Fleet Safety

5. Accident Investigation

6. OSHA Inspections

Chapter 1 Safety Administration

1. Program Objectives and Goals

The most important component of a safety program is clearly-written safety objectives and goals. The following objectives and goals have been established to ensure the effectiveness of the overall safety program.

1.1. Objectives

1.1.1. Provide a commitment from leadership that safety is a core value of the organization and that safety will be equal to all other considerations in all business decisions.

1.1.2. Establish procedures to hold all employees accountable for their safety performance just as they are for other assigned responsibilities.

1.1.3. Establish uniform procedures for pre-construction safety planning.

1.1.4. Provide a line of communication throughout the organization with regard to safety issues, including communicating decisions related to hazard control, accident investigations, inspections, and all other site safety activities.

1.1.5. Establish uniform safety training requirements to enable employees to make appropriate decisions pertaining to regulatory requirements, company policy, and practical safety issues.

1.1.6. Establish a uniform new-employee orientation program for all company employees and site-specific orientation programs for subcontractors.

1.1.7. Establish procedures to ensure frequent and regular safety inspections and to provide abatement assurance.

1.1.8. Establish accident/incident/near-miss reporting and investigation procedures in which root causes are determined and corrective action is taken to prevent future losses.

1.1.9. Establish procedures by which safety policies are reviewed for effectiveness, compliance, and practicality.

1.2. Goals

1.2.1. Establish a Zero Accident culture throughout the organization.

1.2.2. Provide for full participation in the safety process from all levels of the organization.

1.2.3. Prevent occupational injuries and illnesses by eliminating or significantly reducing hazards at every opportunity.

2. Responsibilities

In order for any business program to be effective, responsibilities and accountability must be incorporated and clearly understood. We have structured this safety program accordingly and assigned responsibility and accountability into the various positions.

2.1. Company CEO/President

Organizational values, goals, and objectives stem from and are promoted, supported, nurtured, and ultimately enforced through leadership positions. The company CEO/President sets the tone and standards by which all subordinates operate. Primary responsibilities under this program are to:

2.1.1. Promote safety performance at every opportunity as a core value of the organization, equal to all other business considerations.

2.1.2. Ensure that resources are made available to support the safety performance of the organization.

2.1.3. Review and approve policies, procedures, and practices necessary to ensure the safety performance of the organization.

2.1.4. Hold all subordinate positions accountable for their performance under this program.

2.2. Company Vice President

The company Vice President leads the “projects” aspects of the organization, and as such, must also promote, support, nurture, and enforce all aspects of the safety program. The Vice President must ensure that safety is instilled as an organizational value through communications and actions. The company Vice President is accountable to the company President. Primary responsibilities under this program are to:

2.2.1. Promote safety performance at every opportunity as a core value of the organization, equal to all other business considerations.

2.2.2. Ensure that resources are made available to support safety at the project level.

2.2.3. Consult with the Safety Director on matters of policies, procedures, and practices.

2.2.4. Hold all subordinate positions accountable for their performance under this program.

2.3. Company Safety Director

This position is the catalyst of the safety program. The company Safety Director develops, implements, monitors, and reviews the effectiveness of the company safety policy. The company Safety Director is directly accountable to the company CEO/President. Primary responsibilities under this program are to:

2.3.1. Promote safety performance at every opportunity as a core value of the organization, equal to all other business considerations.

2.3.2. Develop, implement, monitor, and review company safety programs, and submit them to the CEO/President for review and approval.

2.3.3. Be familiar with and receive training on current federal and state OSHA regulations and client requirements as necessary, to provide assistance to each job site and work area.

2.3.4. Provide safety approval for protective clothing, tools, machinery, and testing equipment. Ensure appropriate maintenance on any testing equipment.

2.3.5. Conduct frequent and regular job site safety audits. Stop work immediately if imminent danger exists.

2.3.6. Review safety inspections completed by Superintendents, Project Managers, and third-party entities, and follow up on corrective actions.

2.3.7. Participate in any regulatory inspections and review, address, and defend all alleged regulatory violations.

2.3.8. Ensure that all employees receive and maintain safety training appropriate to their job responsibilities.

2.3.9. Evaluate employee attitudes toward, opinions about, and overall awareness of this program. Enforce safety program compliance with disciplinary action in accordance with the Disciplinary Policy (See *Disciplinary Policy* in this chapter).

2.3.10. Assist the estimating department with project pre-qualification packets, client contract reviews, and subcontractor pre-qualification to identify potential risk and develop risk mitigation solutions.

2.3.11. Oversee, monitor, and ensure the completeness and accuracy of accident reports and investigations.

2.3.12. Coordinate and monitor the medical treatment of injured employees and the return-to-work program. Communicate with insurance carriers on all claims and work with the Project Manager in resolving, mitigating, and defending such claims.

2.3.13. Direct and enforce the company's Substance Abuse Policy.

2.3.14. Administer the company's Safety Recognition Program.

2.3.15. Collect, analyze, and maintain records of safety statistics, and maintain injury/illness/exposure records.

2.4. Estimators

Estimators prepare the budget and conduct the initial planning phases of the projects. They are responsible and held accountable for ensuring that safety is included in this phase. Estimators are directly accountable to the Vice President, and their primary responsibilities under this program are to:

2.4.1. Ensure that each project is equipped with a sufficient safety budget to provide the funds for equipment, materials, and personnel to perform the work safely, and maintain compliance with company policies and regulatory agencies.

2.4.2. Review with the Safety Director any plans or specifications that may be of special safety concern.

2.4.3. Communicate client and company safety, health, loss control, and environmental procedures to the project team and subcontractors.

2.4.4. Pre-qualify all subcontractors and vendors in regard to their safety record and required safety programs.

2.4.5. Assist in the pre-construction conference to ensure that all safety concerns are addressed, so that subcontractors clearly understand their safety obligations in regard to the signed contract.

2.4.6. Ensure that each subcontractor has accurately completed and signed the *Subcontractor Safety Pre-Qualification and Submittal* (See the Appendix, *Forms*) that is printed with each subcontractor agreement.

2.5. Project Managers

The Project Manager is the the company representative for the project. Project Managers must visibly promote, support, nurture, and enforce all aspects of the safety program through their actions and words. Project Managers are ultimately accountable for the safe conduct of operations on their sites; each Project Manager is directly accountable to the Vice President. The primary responsibilities of the Project Manager under this program are to:

2.5.1. Promote safety performance at every opportunity as a core value of the organization, equal to all other business considerations.

2.5.2. Ensure the adequate and efficient use of resources to support the safety function at the project.

2.5.3. Be familiar with, understand, and enforce OSHA, company, and project-specific safety regulations and requirements, and other pertinent and accepted safe work practices.

2.5.4. Conduct a pre-construction conference with the client, architect, and/or subcontractors to identify any safety concerns and issues throughout the pre-construction process, providing documentation to the site Superintendent and Safety Director.

2.5.5. Conduct monthly safety inspections and submit the inspections to the company Safety Director. Stop work immediately if imminent danger exists.

2.5.6. Monitor subcontractors' compliance with the company safety program and initiate correspondence to subcontractors concerning unresolved safety concerns.

2.5.7. Review results of all job site safety inspection reports and follow up to ensure that prompt action has been initiated and completed to correct unsatisfactory conditions and work practices.

2.5.8. Participate in all accident investigations that involve their respective projects and investigate and assist the Safety Director in the handling of insurance claims on their project.

2.5.9. Request OSHA Consultation on each project before the commencement of masonry and/or structural steel.

2.6. Superintendent

In a construction management environment, the Superintendent plays a crucial role in the implementation of the safety program. Superintendents work with the client and subcontractors to plan and ensure progress on the work as safely and efficiently as possible. The Superintendent is responsible for planning and coordinating the work so that hazards are identified as early as possible, and that they are abated in a responsible and efficient manner. Accountable for site safety, the Superintendent reports directly to the Project Manager. The primary responsibilities of the Superintendent under this program are to:

2.6.1. Promote safety performance, at every opportunity, as a core value of the organization, equal to all other business considerations.

2.6.2. Be familiar with, understand, and enforce OSHA, company, and project-specific safety regulations and requirements, and other pertinent and accepted safe work practices.

2.6.3. Hold employees and subcontractors accountable for the safe execution of projects.

2.6.4. Obtain a copy of each subcontractor's safety manual, hazard communication program (including Safety Data Sheet [SDS], OSHA 10-hour cards), and other special programs that may be required by the company/OSHA/client prior to starting that phase of work.

2.6.5. Request a safety job site start-up package from CORE Safety Group using the *Safety Start-Up Pack Checklist* (See the Appendix, *Forms*) and complete job-site setup in accordance with *Project Safety Start-Up* in this chapter.

2.6.6. Be sure all signs are posted and bulletin boards are maintained in a clear and legible condition.

2.6.7. Conduct weekly safety meetings with all company employees and subcontractors under their control. Document these meetings and submit documentation to the Safety Director.

2.6.8. Monitor for and abate all unsafe working conditions immediately upon discovery, and ensure that the situation is resolved appropriately. Stop work immediately if imminent danger exists.

2.6.9. Train employees under their control on the safe and efficient way to perform an assigned task, and procure and maintain all necessary safety equipment needed to perform the work safely.

2.6.10. Forward all worthwhile requests, suggestions, and complaints with regard to safe working conditions to their immediate supervisor or the Safety Director.

2.6.11. Report all safety incidents—including near misses—immediately, and complete all necessary forms in accordance with the Accident Investigation Policy in Chapter 2.

2.6.12. Keep accurate records of all safety related incidents, concerns, or requests in daily reports.

2.6.13. Attend all required safety training as mandated by this program and/or instructed by the Safety Director.

2.6.14. Follow up on recommendations and abate safety violations that were noted in inspection reports by the Safety Director, insurance company, and/or regulatory agencies.

2.7. All Employees

Each employee is accountable and held responsible for their actions and/or inactions pertaining to safety. Responsibilities of all employees are to:

2.7.1. Promote safety performance at every opportunity as a core value of the organization, equal to all other business considerations.

2.7.2. Adhere strictly to all regulatory and company policy work rules, regulations, posted signs, and established safe work practices.

2.7.3. Report any unsafe working conditions at once to the immediate supervisor or Safety Director. Stop work immediately if imminent danger exists.

2.7.4. Report all accidents and near-miss situations immediately to their immediate supervisor or the Safety Director, and participate in and cooperate with any safety incident investigations.

2.7.5. Report all possible personal injuries during the work shift when the incident occurs.

2.7.6. Attend all required safety training as mandated by this program and/or instructed by the company Safety Director.

2.7.7. Conduct only those tasks in which the employee has received training, to fully understand the safety requirements of the task.

2.7.8. Use the required safety equipment and personal protective equipment provided when necessary. Keep all work areas clean and orderly.

2.7.9. Learn to recognize unsafe conditions and procedures on the job site. If asked to do a task that the employee considers unsafe, the employee may question the supervisor without fear of reprimand; if still in doubt, contact the Safety Director.

2.7.10. Be familiar with the Emergency Action Plan for your job location and respond accordingly in the case of an emergency.

2.7.11. Understand that violations of this policy will be cause for immediate disciplinary action, up to and including termination.

3. Communication

Without a good system for communicating health and safety information, plans for our injury and illness prevention system would fail. Good communication allows us to stay in touch with the work force, so that we are constantly aware of health and safety needs throughout our operations. If we are communicating properly, our goals and rules are clearly understood and potential hazards are eliminated before they become harmful. With that in mind, we have developed a variety of ways to communicate our safety and health program:

3.1. Open-Door Policy

Our company maintains an open-door policy at all levels of the organization, so that ideas and concerns flow freely from leadership to employees and vice-versa. It is important for all employees to feel free to bring their safety concerns or suggested safety improvements to any level of management. If any individual feels this method is not receiving the necessary attention, they should speak directly to the Safety Director. Communications regarding safety related issues can always be made without fear of discrimination or retribution. Any employee who initiates a suggestion, points out a hazard, or wishes to voice a concern regarding safety and health will receive a written or verbal response within 5 working days.

3.2. Policy Changes

Any changes to company safety policies are communicated to all affected employee via e-mail, memo, or other written communication. In the case of significant changes, training is provided in a timely manner though conference calls or on-site meetings. Questions pertaining to these changes should be directed to the Safety Director.

3.3. Safety Flashes (Lessons Learned)

We often learn through our mistakes. However, these lessons should be communicated throughout the organization so all can learn and grow through them. Safety flashes are distributed throughout the organization to facilitate this process. Employees are encouraged to report lessons learned and submit them to the Safety Director for company-wide distribution.

4. Inspections

Documented safety inspections are an important part of a safety program. These inspections often reveal unsafe conditions and unsafe acts that go unnoticed. Furthermore, they are often used as supporting documentation in the legal defense of OSHA violations and insurance claims. For this reason, it is imperative that inspection reports are accurate and that responses to these reports are prompt.

4.1. Daily Inspections

The Superintendent conducts daily safety observations and inspections as part of their supervisory duties. The emphasis is on hazard identification and immediate abatement. Superintendents will exercise their responsibility to stop work until all identified hazards are abated. This inspection process is typically not documented, except in the Superintendent's daily report. However, the Superintendent documents repeat and imminent danger offenses through the use of the *Notice of Non-Conformance*. (See Appendix B, *The Standard of Excellence*)

4.2. Monthly Project Manager Inspections

The Project Manager conducts monthly job site inspections. These inspections are documented using the *Project Manager's Monthly Safety Checklist* (See the Appendix, *Forms*) and submitted to the Safety Director. All inspection reports must be completed on the job site and should be signed by the Superintendent. The Project Manager provides the Superintendent with a copy of each inspection report, and the Superintendent verifies abatement of each item noted. All monthly audits should be submitted to the Safety Director by the 15th day of the month for inspections conducted the previous month. For example, May's inspection should be submitted to the Safety Director by June 15th.

4.3. Corporate Safety Audits

In addition to the daily and monthly inspections, the Safety Director performs periodic safety audits to verify compliance. As a result of each audit, a report is documented in writing and copies are distributed to the appropriate parties. Upon receipt of the audit, the job-site Superintendent should take action immediately in correcting those items that have not been abated. When an item has been abated, the Superintendent will notify the Safety Department via email that the hazard has been abated. After all items have been abated, the Superintendent sends the report back to the Safety Director to be placed in the job site files.

4.4. Insurance Inspections

The Safety Director arranges for each project to receive an inspection by the loss control department of the current insurance carrier. Loss control reports generated by these inspections are treated as corporate safety audits, and all exposures will be abated.

4.5. OSHA Consultation

It is the responsibility of each Project Manager to schedule an OSHA Consultation visit at their project. The request for consultation must be made in writing before the commencement of masonry and/or structural steel. The Safety Director is copied on all requests for consultation. To contact the local OSHA Consultation office for your job site, go to:

http://www.osha.gov/dcsp/smallbusiness/consult_directory.html

5. Training

The key to this safety program, and to accident prevention, is the training of each employee. This policy sets forth the minimum training required of employees to enable them to make sound decisions as they pertain to their work scope and environment.

The company Safety Director is responsible for overseeing all facets of this program and has full authority to make decisions necessary to ensure it success. The Safety Director reviews the program annually for effectiveness and provides the CEO/President with alternative measures in areas of deficit.

5.1. New Employee Safety Orientation

A New Employee Safety Orientation is a part of the overall orientation program that all new hires must participate in. This orientation is conducted by the Safety Director, or a person appointed by the Safety Director, and it includes the following topics:

5.1.1. Company's Safety Policy Statement

5.1.2. Safety Policy Goals and Objectives

5.1.3. Safety Responsibilities

5.1.4. Accident Reporting Procedures

5.1.5. Substance Abuse Program

5.1.6. Disciplinary Policy

5.1.7. General Safety Rules

5.1.8. Blood-borne Pathogens

5.1.9. Hazard Communication

5.1.10. Fall Protection

Upon completion of this training, the employee completes the *Safety Orientation Quiz* (See the Appendix, *Forms*) documenting training on the policies and programs and returns the form to your manager to be graded. The manager will then return the form to Human Resources.

5.2. Project Safety Orientation

In addition to the general orientation, all employees assigned to a job site, subcontractors, and visitors receive a site-specific Project Safety Orientation. This orientation is conducted by the Superintendent, and it includes the following:

5.2.1. Location of SDS and First Aid Kit

5.2.2. Emergency Action Plan

5.2.3. Emergency Phone Numbers

5.2.4. Incident Reporting

5.2.5. General Project Safety Rules

5.2.6. Hazards Particular to the Project

5.3. First Aid and CPR Training

All Superintendents are trained in Basic First Aid and Adult CPR equivalent to the training prescribed by the American Red Cross or the American Heart Association. New employees that have not acquired this training with previous employers must meet this requirement within 3 months of their hire date. First aid and CPR training will also be made available to other employees upon request and as required by other chapters of this manual. (For example, see *Confined Spaces* in Chapter 2.)

5.4. OSHA 10-Hour Construction Outreach Training

All supervisors, including but not limited to job site Superintendents, Project Managers, Estimators, and site Safety Managers, must complete the OSHA-10 hour Construction Outreach Training. New employees that have not acquired this training with previous employers must meet this requirement within 3 months of their hire date. To take this course, contact the company Safety Director.

5.5. Annual Safety Training

In addition to the OSHA 10-hour Construction Course, the company holds annual safety training for all Superintendents and Project Managers. This training consists of approximately 8 hours of continued education in construction safety and related topics.

5.6. Weekly Safety Meetings

The company conducts regularly scheduled Weekly Safety Meetings (Toolbox Talks). The safety meeting topics are selected by the Superintendent; these talks are relative to the hazards associated with the current project and scope of work. Each attending employee and subcontractor must sign the safety meeting sheet. A copy of the safety meeting is maintained in a binder on the job site for auditing by the company Safety Director. In addition, Superintendents are responsible for getting the meeting filed on SharePoint.

5.7. Task Specific Training

The company conducts or provides for task-specific training for employees as required by the applicable OSHA standards and as deemed necessary for the safe conduct of our operations.

5.8. Recordkeeping

All training documentation must include a training attendance roster and a copy of the course curriculum. Training records are forwarded to the company Safety Director; these records are maintained in the employee's individual training file.

6. Job Hazard Analysis

A Job Hazard Analysis (JHA) is a technique that focuses on job tasks as a way to identify hazards before they occur. It focuses on the relationship between the worker, the task, the tools, and the environment. Superintendents can use the findings of a JHA to eliminate and prevent hazards in their workplaces and as a tool for training new employees in the steps required to perform their jobs safely.

6.1. Development

A JHA is required in any of the following situations:

6.1.1. When leadership and/or the project supervision believes the process, task, or procedure indicates a significant potential for injury and/or property damage.

6.1.2. When the project specifications require such development.

6.1.3. As a condition of approval for contractors that do not meet the safety pre-qualification requirements.

Project supervision uses the *Job Hazard Analysis* worksheet (See the Appendix, *Forms*) to complete the JHA. To complete this form:

6.1.4. List the key steps in the sequence in which they occur.

6.1.5. Determine the hazard(s) for each step.

6.1.6. Apply specific and effective safety measures to eliminate or control the hazard(s).

6.1.7. Be specific in designations of protective devices and equipment.

6.1.8. Include sufficient detail to preclude confusion and misunderstanding.

6.1.9. Make changes as needed; JHAs are living documents.

A JHA may be required initially before the commencement of work, weekly, or daily thereafter.

6.2. Posting

The JHA serves as an operating procedure, and it must be posted at the project for workers to review. Upon completion of the task or work assignment, the Superintendent must file the JHA on SharePoint.

6.3. Training

Prior to the work, project supervision instructs personnel involved with the operation as to the hazards involved and methods required to eliminate or control those hazards in accordance with the JHA.

7. Disciplinary Policy

Our company expects its employees to conduct themselves in a manner that is consistent with the objectives of this manual and the organization's values. The integrity of this manual and the safety culture of the organization depend greatly upon each employee's acceptance of individual responsibility. Consequently, the following disciplinary policy has been developed to ensure that fair and effective arrangements exist for dealing with disciplinary matters and that, as far as possible, common standards are observed for all employees.

7.1. Informal Action

Minor faults are dealt with informally by way of advice, coaching, counseling, or training, as appropriate. The employee should be advised clearly of the standard of behavior expected of them and informed that if they do not improve, then they will be subject to the formal disciplinary action set out below.

For matters that are more serious than minor breaches of conduct, the alleged conduct is dealt with formally and as speedily as possible.

7.2. Verbal Warning

When conduct does not meet acceptable standards, the employee is normally given a verbal warning by the supervisor authorized to do so. A brief note of the verbal warning is kept in the employee's personnel file and copied to the employee. The note makes it clear that the warning is the first stage of the formal disciplinary process. If no further action is taken against the employee within 24 months, the file note will be removed from the individual's file and disregarded for disciplinary purposes.

7.3. Written Warning

If the offence is of a serious nature, or a further offence occurs while a formal verbal warning is still active, a written warning is issued to the employee by the appropriate supervisor. The written warning gives details of the non-compliance, the improvement(s) required, and the timescale for improvement, if appropriate. The written warning warns that further action may result in suspension and/or termination. A copy of the warning is kept in the individual's personnel file. The warning will be disregarded for disciplinary purposes after 60 months, subject to satisfactory conduct.

7.4. Suspension/Termination

If conduct remains unsatisfactory and the employee still fails to meet the prescribed standards, or in the case of gross misconduct, suspension or termination of employment normally results. The employee will be given details of the non-compliance.

7.5. Gross Misconduct

Gross misconduct is conduct so serious that it effectively breaches the contract of employment and so justifies the company in effecting a summary dismissal without moving through the normal stages of the disciplinary program. The company reserves the right to determine what offences constitute gross misconduct and how these offences will be dealt with.

Movement through the stages of the disciplinary procedure will not necessarily be in relation to the same offence. The cumulative progress of the disciplinary process will be determined by the nature and seriousness of the offences. The company may take other actions as an alternative or in addition to a disciplinary warning as is considered justified in the circumstances of the case. This may involve the retraining or counseling of employees.

8. Subcontractor Safety Compliance

Our company is committed to providing a safe workplace for all workers. The success of a safe job lies greatly upon the efforts of each contractor on the project. Therefore, each subcontractor must comply with the rules and regulations as set forth by this manual and all other local, state, and federal laws that may apply.

8.1. Subcontractor Pre-Qualification

All subcontractor firms must complete and submit all safety pre-qualification forms. The Estimator reviews subcontractor safety information and approve the pre-qualification information before the subcontractor is allowed to commence work activities. Safety pre-qualification forms must be resubmitted by subcontractor firms on an annual basis to ensure acceptable safety performance.

8.1.1. Subcontractor Criteria

To be eligible for subcontract award, subcontractor firms must have:

8.1.1.1. EMR rating below 1.00.

8.1.1.2. Total Recordable Incident Rate (TRIR) below the nation average per SIC Code.

8.1.1.3. Days Away, Restricted, or Transferred Rate (DART) below the nation average per SIC Code.

8.1.1.4. Safety policies and procedures for activities pertaining to scope of work.

Contractors that do not meet these criteria may be subject to conditional approval. Conditional approval can only be given by the company Safety Director or Vice President of Construction.

8.1.2. Subcontractor Documentation

Each subcontractor must provide the company with the following documentation before commencing work on a project:

8.1.2.1. A signed subcontract agreement, agreeing to all provisions of safety under the agreement.

8.1.2.2. An insurance certificate naming the company and the client as additional insured.

8.1.2.3. A project or company safety program and SDS for all hazardous material that are expected to be used on the site. All SDS books must be kept in a common place as to serve for quick access in the case of an emergency. A specific project safety plan may be required when the scope of work indicates a significant potential for injury and/or property damage or when required by the client.

8.1.2.4. Completed *Subcontractor Safety Pre-Qualification and Submittal* (See the Appendix, *Forms*) with a designated on-site competent person. This individual(s) must be competent in understanding the potential hazards created by the work on site and the proper procedures to abate those hazards and must remain on site while work is being performed. In addition, this person must have at minimum the OSHA Construction 10-Hour Outreach Training. This training must have been completed within the last 5 years.

8.2. Additional Requirements

In addition to the documentation requirements above, each subcontractor must agree to:

8.2.1. Participate in safety orientations and complete the safety orientation documentation.

8.2.2. Follow all rules set forth by Chapter 2 of this manual and any client- or project-specific safety requirements.

8.2.3. Provide their employees with the necessary training pertaining to Title 29, Code of Federal Regulations Parts 1926 and 1910.

8.2.4. Perform periodic safety inspections of the job site to ensure compliance with the job-site safety program.

8.2.5. Attend the company's Weekly Safety Meeting (Toolbox Talks).

8.2.6. Immediately report all accidents and injuries to the Superintendent and train their employees in the project-specific Emergency Action Plan.

8.3. Subcontractor Compliance

8.3.1. Violations by subcontractors and their employees are documented on a *Notice of Non-Conformance* (See Appendix B, *The Standard of Excellence*).The subcontractor must sign this form acknowledging receipt of the notice and return the form within 72 hours documenting abatement of the violation. A subcontractor who refuses to sign the form or does not return the form within the 72 hours noted will be in breach of their contract.

8.3.2. Our company job sites reserve the right to make modifications to the Subcontractor Safety Compliance policy and remove subcontractor employees as it deems necessary for safety violations.

9. Project Safety Start-Up

The first few days of mobilization and project setup are vital to having a successful project. Project Managers and Superintendents should use these steps to ensure that they have the proper safety tools and equipment on site.

9.1. Project Safety Start-Up Pack

The Project Manager should fill out the *Safety Start-Up Pack Checklist* (See the Appendix, *Forms*) and return it to safetysupport@coresafety.com. The project safety start-up pack must include the following:

9.1.1. Physicians list of local health providers in the area

9.1.2. Directions to the local approved drug-testing collection center

9.1.3. One (1) Chain of Custody form for substance abuse testing

9.1.4. *Emergency Phone Numbers* (See the Appendix, *Forms*)

9.1.5. *Training Session on Hazard Communication* (See the Appendix, *Forms*)

9.1.6. *Emergency Action Plan* (See the Appendix, *Forms*)

9.1.7. OSHA 300A form (Required to be posted Feb. 1–April 30)

9.1.8. *Sign Purchase Order* (See the Appendix, *Forms*)

9.1.9. *Safety Equipment Purchase Order* (See the Appendix, *Forms*)

9.1.10. *Instructions for Re-Ordering First-Aid Supplies* (See the Appendix, *Forms*)

9.1.11. Indoor safety poster

9.1.12. Outdoor safety poster

9.1.13. State poster (English)

9.1.14. State poster (Spanish) – when required by state

The following items are by request only and must be requested on the form. However, copies of these documents can also be found at the corresponding web sites:

9.1.15. Safety manual (SharePoint)

9.1.16. Weekly Safety Meeting binder (SharePoint)

9.1.17. Subcontractor Safety Orientation binder (SharePoint)

9.1.18. OSHA 1926 Standards book (www.osha.gov)

10. Safety Equipment

The following safety equipment should be available on each project. Safety equipment can be ordered using the *Safety Equipment Purchase Order*. (See the Appendix, *Forms*)

10.1. Personal Protective Equipment

Each project should be appropriately equipped with the proper personal protective equipment (PPE) for company employees to perform tasks safely and to distribute to visitors that may want to tour the site. At a minimum, each project should be equipped with:

10.1.1. 4 Hard hats

10.1.2. 4 Pair of safety glasses

10.1.3. 4 Safety vests

10.1.4. 12 Pair of ear plugs

10.2. First-Aid Kit

Each project must be equipped with at least one first aid kit. The kit should be inspected weekly to ensure that expended items are replaced. Items may be re-ordered by using the instructions on the *Instructions for Re-Ordering First-Aid Supplies*. (See the Appendix, *Forms*)

10.3. Fire Extinguishers

In the case of fire, each project must have an adequate number of fire extinguishers. Fire extinguishers are required as follows:

10.3.1. One fire extinguisher rated not less than 2A for every 3,000 square feet.

10.3.2. One fire extinguisher rated not less than 2A adjacent to the stairway on each floor of a multi-story building.

10.3.3. See *Fire Prevention* in Chapter 2 of this manual for fire extinguisher requirements regarding fuel storage.

10.4. Safety Signs and Posters

Signs and posters play an important role in preventing injury and ensuring that workers and the public are aware of the potential hazards and risks associated with the project. Signs and posters should be conspicuously posted in accordance with the *Site Postings* and *Bulletin Board Design* forms. Signs can be ordered by completing the *Sign Purchase Order*. (See the Appendix, *Forms*)

11. Toilets and Sanitation

Each project must have one portable toilet per 10 workers serviced once per week, or one portable toilet per 20 workers serviced twice per week. In addition, each project must have potable water or anti-bacterial soap for clean-up and washing.

12. Drinking Water

Each project must have a water cooler and disposable cups for drinking.

Chapter 2 General Safety Rules

The safety rules in this section are general in nature and not an exhaustive list of the requirements by federal, state or local regulations or codes. Employees and subcontractors are responsible for abiding by these rules and all other regulations, codes, or safe practices that may apply to their work.

1. General Job Site Rules and Housekeeping

1.1. Job Site Rules

1.1.1. Report all accidents and injuries, no matter how slight, immediately to your supervisor and to company project supervision.

1.1.2. No horseplay or practical jokes are permitted. Running within the job site is strictly prohibited, except in the case of an emergency.

1.1.3. All workers must be at least 18 years of age and have legal working status.

1.1.4. No intoxicants of any kind are permitted on site. Workers under the influence of intoxicants will immediately be removed from the site.

1.1.5. No weapons of any type will be permitted on job-site property.

1.1.6. Workers must adhere to all site-specific rules, including the Emergency Action Plan.

1.1.7. No radios, tape players, or other music-playing devices, including those with headphones, are allowed on site.

1.2. Housekeeping

A basic concept in any effective prevention endeavor is good housekeeping. No one item has a greater impact on the overall success of a safety program on a construction site. Good housekeeping must be planned for at the beginning and followed through to the final clean-up.

1.2.1. Daily clean-up of each work area is required. Keep all scrap material, including form lumber, rolling stock, and insulation clear from work areas and passageways in and around the building.

1.2.2. Keep all aisles, stairways, emergency exits, and fire extinguishers clear of material storage and debris.

1.2.3. Place all refuse and waste materials in the recognized waste containers for disposal.

1.2.4. Containers used for oily rags, flammables, or hazardous wastes must have covers.

1.2.5. Store scrap or reusable lumber, formwork, and cribbing in an orderly fashion and remove or bend protrusions (For example nails and screws) before stacking.

1.2.6. All stacks or piles of material must be stable, with proper supports as necessary.

1.2.7. Rolling stock must be chalked or effectively secured from displacement.

1.2.8. Workers are not to drop or throw materials from one level to another without controlling the material with a chute or rope, or barricading the landing area.

1.2.9. Do not allow extension cords, air hoses, welding leads, and similar equipment to create a tripping hazard.

1.2.10. Immediately clean up spills that present a slip hazard.

1.2.11. Immediately contain spills that contain hazardous material and report them to the Safety Director. Clean up and dispose of hazardous material spills in accordance with local, state, and federal regulations.

1.2.12. Keep the areas in front and surrounding electrical installations (such as switch gear, temporary and permanent power panels, and transformers) clear. A minimum of 3 feet of space is required in front of these units.

1.2.13. All construction areas in which workers are performing work must be lighted to a minimum of 10 foot-candles.

2. Personal Protective Equipment

Engineering and administrative controls are the primary methods used to eliminate or minimize hazard exposure in the workplace. When such controls are not practical or applicable, employ personal protective equipment (PPE) to reduce or eliminate personnel exposure to hazards. PPE will be provided, used, and maintained when it has been determined that its use is required and that such use will lessen the likelihood of occupational injuries and/or illnesses.

2.1. Hazard Assessment

Hazard analysis procedures are used to assess the workplace to determine if hazards that necessitate the use of PPE are present, or are likely to be present. If such hazards are present, or likely to be present, take the following actions:

2.1.1. Select the proper PPE to protect the worker from the hazard.

2.1.2. Select PPE that properly fits each affected worker.

2.1.3. Communicate selection decisions to each affected worker and train the worker in the proper use, care, sanitation, and storage of the PPE.

2.1.4. Ensure that each affected worker uses the selected PPE.

Regularly inspect PPE, whether supplied by the worker or the employer, for damage. Do not use defective or damaged PPE. Employers are responsible for assuring that employee-owned PPE is adequate and properly maintained.

2.2. Training

All workers who are required to use PPE are trained to know at least the following:

2.2.1. When and what PPE is necessary.

2.2.2. How to properly don, remove, adjust, and wear the PPE.

2.2.3. The limitations of the PPE.

2.2.4. The proper care, maintenance, useful life, and disposal of the PPE.

Document PPE training. Retraining may be necessary when the workplace changes, making earlier training obsolete; when the PPE changes; or when the worker demonstrates lack of use, improper use, or insufficient skill or understanding.

2.3. Clothing

Appropriate work attire is required on all job sites.

2.3.1. At job sites, employees must wear:

2.3.1.1. A shirt with a 4-inch sleeve must be worn at all times.

2.3.1.2. Reflective vests must be worn when workers are exposed to public traffic areas and during site work activities.

2.3.1.3. All company employees must wear safety vests at all times while on the project.

2.3.2. Inappropriate clothing:

2.3.2.1. Shorts, sweat pants, and cut-offs.

2.3.2.2. Loose clothing, dangling sleeves, and drawstrings. This clothing can be hazards when working around rotating machinery, and are therefore inappropriate attire when operating such equipment.

2.4. Head Protection

2.4.1. Head protection (ANSI Z89.1) is required for all workers on our company projects. Head protection must be worn by engineers, inspectors, and visitors.

2.4.2. Wear head protection until all overhead hazards have been eliminated and the project has reached completion to the point that the public has access.

2.4.3. Not appropriate for head protection: Bump caps or skull guards, which are constructed of lightweight materials and are designed to provide minimal protection against hazards.

2.4.4. Workers exposed to high voltage are required to wear at minimum a Type 1 Class E hard hat, rated for up to 20,000 volts.

2.5. Eye and Face Protection

2.5.1. Wear approved eye and face protection (ANSI Z-87.1) when there is a reasonable possibility of exposure to flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or potentially injurious light radiation.

2.5.2. Eye protection that provides side protection is required when there is a hazard of flying objects. Detachable side protectors are acceptable.

2.5.3. Workers that wear prescription lenses while engaged in operations that involve eye hazards must wear eye protection that incorporates the prescription in its design or eye protection that can be worn over the prescription lenses without disturbing the proper position of the prescription lenses or the protective lenses.

2.5.4. Full-face shields are required when the operation presents hazards where the entire face needs protection. Such operations may include, but are not limited to, grinding, cutting, chipping, or handling of hazardous chemicals.

2.5.5. Workers must use eye protection with filter lenses that have a shade number appropriate for the work being performed for protection from injurious light radiation.

2.6. Foot Protection

2.6.1. Our company requires all workers to wear a sturdy work boot with a hard sole. Do not wear sandals, tennis shoes, or any other soft cloth shoe.

2.6.2. Where deemed necessary, wear steel-toe shoes and/or metatarsal guards to provide additional impact and compression protection. This type of protection may be required when you carry or handle excessively heavy materials or perform activities such as jack-hammering.

2.7. Hand Protection

2.7.1. Hand protection is required when a worker's hands are exposed to hazards such as those from skin absorption of harmful substances, severe cuts or lacerations, severe abrasions, punctures, chemical burns, thermal burns, and harmful temperature extremes.

2.7.2. To select hand protection, evaluate the performance characteristics of the hand protection relative to the task(s) performed, conditions present, duration of use, and the hazards and potential hazards identified.

2.8. Hearing Protection Devices

Hearing protection is required when sound levels exceed those listed in the table below:

Duration Per Day, in 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

Such protective devices may include earplugs, ear muffs, or a combination of the two. Do not use cotton balls and other unapproved hearing devices.

2.9. Fall Protection Equipment

2.9.1. When workers are at a height of 6 feet or greater from any location to a surface below when not protected by guardrails, covers, or safety nets, they must be protected by personal fall arrest equipment.

2.9.2. Do not use body belts for personal fall arrest protection. Body belts may only be used for positioning.

2.9.3. All safety harnesses, lanyards, lifelines, and anchorage points are inspected before each use for wear, damage, and other deterioration. Defective components are removed from service and tagged out.

2.9.4. Safety harnesses, lanyards, lifelines, and other personal fall-arrest equipment are used only for safeguarding workers and are not to be used for hoisting materials.

2.9.5. Personal fall arrest equipment that has been subject to in-service loading will be removed from service, not to be used again without inspection and approval by a Qualified Person.

2.9.6. All PPE hardware is drop forged, pressed or formed steel, or made of equivalent material.

2.9.7. For further information regarding fall protection requirements, see *Fall Protection* in this chapter.

2.10. Respiratory Protection

2.10.1. Workers are required to wear respirators when working in hazardous atmospheres that exceed OSHA Permissible Exposure Limits.

2.10.2. The respirator used must be sufficient for the atmosphere that is present and must reduce workers' exposure below the Permissible Exposure Limits.

2.10.3. All workers using respirators must have a medical evaluation and be fit-tested for their respirator.

2.10.4. All workers using respirators must be trained in their proper use.

2.10.5. For further information regarding the use of respirators, see *Respirators* in this chapter.

2.11. Working Over or Near Water

2.11.1. Workers working over or near water where the danger of drowning exists must wear U.S. Coast Guard approved life vests.

2.11.2. Ring buoys with at least 90 feet of line must be provided and readily available for emergency rescue operations and must be spaced every 200 feet.

2.11.3. At least one lifesaving skiff must be immediately available where workers are working over or adjacent to water.

3. Tools

The use of tools makes many tasks easier. However, the same tools that assist us, if improperly used or maintained, can create significant hazards in our work areas. Workers who use tools must be properly trained to use, adjust, store, and maintain tools properly.

3.1. General Requirements for Tools

3.1.1. All hand and power tools and similar equipment, whether supplied by the employer or the worker, must be maintained in a safe condition. The employer is ultimately responsible for ensuring that tools are in safe working condition to use on the project.

3.1.2. Use tools only be used for their intended purpose and design.

3.1.3. Workers must inspect tools for defects, and damaged tools are removed from service and tagged out until repairs are made.

3.1.4. Always use the appropriate PPE, including, but not limited to, eye protection, face protection, hearing protection, respiratory protection, and gloves.

3.1.5. Loose clothing and jewelry is prohibited when you are using tools around machinery with moving parts.

3.2. Woodworking Tools

3.2.1. Keep wooden handles tight and free from cracks or splinters.

3.2.2. Do not use impact tools with mushroomed heads.

3.3. Electric/Fuel/Pneumatic Tools

3.3.1. When power-operated tools are designed to accommodate guards, they must be equipped with such guards.

3.3.2. Use clamps and vises to secure work, freeing both hands to operate the tool.

3.3.3. Disconnect tools when not in use, before servicing, and when changing accessories such as blades, bits, and cutters.

3.3.4. Tools must either have a three-wire cord with ground and be grounded or be double insulated.

3.3.5. The use of electrical cords or air hoses for hoisting or lowering tools is not permitted.

3.3.6. Stop all fuel-powered tools while being refueled, serviced, or maintained.

3.3.7. When using pneumatic tools, securely fasten hoses and tools using a safety clip or short wire at all connections.

3.3.8. Nailers, staplers, and similar air-driven equipment, operating over 100 psi., must have a device to prevent operations unless the equipment is in contact with the surface.

3.3.9. Compressed air must not be used for cleaning if the pressure is over 30 psi.

3.3.10. The manufacturer's recommended safe operating pressure for hoses, valves, pipes, filters, and other fittings must not be exceeded when using hydraulic tools.

3.3.11. All hoses exceeding ½ inch inside diameter must have a safety device at the source of supply or branch line to reduce pressure in case of hose failure.

3.4. Powder-Actuated Tools

3.4.1. Only trained personnel may operate powder-actuated. Trained workers must carry their training certification with them so they can confirm training when requested.

3.4.2. Powder-actuated tools are tested daily to ensure all safety devices are in proper working order.

3.4.3. Do not load powder-actuated tools until just prior to the intended firing time. Do not leave loaded powder-actuated tools unattended.

3.4.4. All misfired loads from powder-actuated tools must be disposed of properly.

4. Electrical

As a source of power for our tools, equipment, and lighting, electricity is an integral part of our daily lives. However, its misuse and the disregard for safety measures can have fatal consequences. The following electrical requirements must be followed at all times.

4.1. Electrical Equipment and Components

4.1.1. All electrical equipment and components must be listed, labeled, and approved by a nationally recognized testing laboratory. All equipment must be used according to manufacturer's recommendations and inspected periodically for damage. All repairs made to electrical equipment are done by a Qualified Person.

4.1.2. The non-current-carrying metal parts of portable and/or plug connected equipment must be grounded. Portable tools and appliances protected by an approved system of double insulation need not be grounded. All double-insulated tools must be distinctively marked.

4.2. Ground-Fault Circuit Interrupters and Assured Equipment Grounding

A ground fault-circuit interrupter (GFCI) is a fast-acting circuit breaker that senses small imbalances in the circuit caused by current leakage to ground, and in a fraction of a second, shuts off the electricity. A GFCI is much more effective than a standard circuit breaker or fuse, which are really designed to protect wiring and equipment, not people.

4.2.1. Our company requires GFCI protection on all temporary outlets, including generators and extension cords connected to permanent power.

4.2.2. Our company does not require Assured Equipment Grounding Program on all projects. If the project has been designated to use an Assured Equipment Grounding Program or if the client requires such, the following inspections and test must be conducted:

4.2.2.1. Daily inspection of each cord set, attachment cap, plug, and receptacle of cord for external defects, such as deformed or missing pins or insulation damage, and for indications of possible internal damage.

4.2.2.2. Test for continuity of the ground at these times:

- Before first use.
- After any repairs or incidents involving the cord set.
- At intervals not to exceed 3 months (quarterly).

4.2.2.3. Equipment found damaged or defective may not be used until repaired.

4.2.2.4. The frequency of testing and inspection of the electrical tools and cord sets is indicated by attaching color-coded tape or color-coded tie wraps. The color codes and their corresponding scheduled inspection dates are:

MONTH	COLOR CODE	
	Quarterly	Monthly
January	White	White
February	White	White/Yellow
March	White	White/Blue
April	Green	Green
May	Green	Green/Yellow
June	Green	Green/Blue
July	Red	Red
August	Red	Red/Yellow
September	Red	Red/Blue
October	Orange	Orange
November	Orange	Orange/Yellow
December	Orange	Orange/Blue
Repair or Incident	Brown	Brown

4.3. Flexible Cords and Cables

4.3.1. All extension cords are of the three-wire type and are designed for hard or extra hard usage in accordance with the NEC code.

4.3.1.1. Hard (Type S, ST, SO, STO)

4.3.1.2. Extra hard (Type SJ, SJO, SJT, SJTO)

4.3.2. Flexible cords and cables must be protected from damage. Avoid sharp corners and projections. Do not use worn or frayed electrical cables.

4.3.3. Flexible cords and cables greater than No. 12 may be repaired if spliced so that the splice retains the insulation, outer sheath properties, and usage characteristics of the cord being spliced. Electrical tape is not an approved method for repairing extension cords.

4.3.4. Cords should be routed so they do not present a tripping hazard in designated walkways.

4.3.5. Provide strain relief for all non-rigid cords where necessary.

4.4. Electrical Boxes and Panels

4.4.1. Securely fasten all electrical boxes and panels to the surface upon which they are mounted and fit them with covers to protect workers from accidental contact with live parts.

4.4.2. Locate branch circuits where the conductors will not be subject to physical damage, and fasten the conductors at intervals not exceeding 10 feet. Do not lay any branch circuit on the floor.

4.4.3. Overcurrent protection is provided by fuses or circuit breakers for each feeder and branch circuit, and is based on the current carrying capacity of the conductors supplied and power load being used.

4.4.4. Each disconnecting means for motors and appliances must be legibly marked to indicate its purpose. Each service, feeder, and branch circuit at its disconnecting means or over current device must be legibly marked to indicate its purpose. These markings must be of sufficient durability to withstand the environment involved.

4.4.5. Cover all open spaces created from missing breakers and open knockouts with approved electrical fittings to prevent contact with live parts. Electrical tape is not approved for such protection.

4.4.6. Use watertight enclosures where there is a possibility of moisture entry from work operations or weather exposure.

4.4.7. Label all switch boxes and panels of 220 volts and higher as to the voltage, and provide warning signs prohibiting access by unauthorized personnel.

4.4.8. Maintain a clear approach and a 3 foot side clearance for all distribution panels.

4.4.9. Guard electrical distribution areas against accidental damage by: (1) locating these areas in specifically designed rooms; (2) using substantial guard posts and rails, or; (3) other structural means.

4.4.10. Access to electrical distribution rooms should be limited only to authorized personnel.

4.4.11. Lock and tag out equipment, circuits, or controls that are de-energized or deactivated during the course of work on energized or de-energized equipment or circuits. Place tags to identify plainly the equipment or circuits being worked on. For further information regarding Lock-out/Tag-out requirements, see *Lock-Out/Tag-Out* in this chapter.

4.5. Temporary Lights

4.5.1. Temporary lights must be equipped with a heavy duty electric cord, with the connection and insulation maintained in safe condition. Temporary lights may not be suspended by electric cords unless cords and lights are designed for this means of suspension. Splices must have insulation equal to that of the cable.

4.5.2. Equip temporary lights with guards to prevent accidental contact with the bulbs.

4.5.3. All sockets in the light strand must have a bulb in the socket.

4.5.4. Do not place lights and cords in working spaces, walkways, or other locations where they may be exposed to damage.

4.5.5. All construction areas, including stairways in which workers are performing work, must be lighted to a minimum of 10 foot-candles.

4.6. Overhead Power Lines

4.6.1. All equipment or machines (except cranes) must maintain a minimum distance from overhead power lines.

4.6.1.1. For lines 50 kV or below, minimum clearance must be 10 feet.

4.6.1.2. For lines 50 kV or greater, minimum clearance must be 10 feet plus .4 inch for each 1 kV over 50kV.

4.6.2. For further information approach distances for cranes, please refer to *Cranes and Hoists* in this chapter.

4.6.3. If work must encroach within the minimum clearances, the power company owning the line must be contacted and the line must be de-energized or protected.

4.7. Training and Safe Work Practices for Unqualified Workers

An unqualified worker is defined as one who has not been trained or authorized by his or her company to conduct electrical work.

4.7.1. Training for unqualified workers includes general electrical safety precautions, and it should provide awareness and understanding of electrical hazards. Elements of basic electrical training include:

4.7.1.1. Hazard awareness.

4.7.1.2. Ground fault protection.

4.7.1.3. Inspection of equipment.

4.7.1.4. Proper measures for removing equipment from service.

4.7.1.5. Safe work practices.

4.7.2. At no time should an unqualified worker operate equipment if they suspect an electrical problem.

4.7.3. Turn off and unplug electrical equipment before attempting to replace a part, clear a jam, adjust, or troubleshoot.

4.7.4. Only use dry hands and tools and stand on a dry surface when using electrical equipment.

4.7.5. Always pick up and carry portable equipment by the handle and/or base. Never carry equipment or tools by the cord.

4.7.6. Never remove the grounding pin from a three-prong plug.

4.7.7. Heed all warning signs, barricades, and/or guards that are posted when equipment or wiring is being repaired or installed or if electrical components are exposed.

4.7.8. Unqualified workers must not attempt to make any repairs to electrical equipment. All deficiencies should be immediately reported to their supervisor.

4.8. Training and Safe Work Practices for Qualified Workers:

A qualified worker is defined as one who has skills and knowledge related to the construction and operation of electrical equipment installation and has training on the hazards involved. He or she must be authorized to conduct electrical work by his or her employer.

4.8.1. Training for qualified workers should be sufficient enough to familiarize the worker with the proper use of special precautionary techniques, PPE, arc flash, insulating and shielding materials, insulated tools, wiring methods, testing techniques, grounding theory, grounding application, inspection techniques, basic electrical theory, and test equipment. A person can be considered qualified with respect to certain equipment methods, but still be unqualified for others. At minimum, the training includes:

4.8.1.1. The skills and techniques to distinguish exposed live parts.

4.8.1.2. The skills and techniques to determine nominal voltage.

4.8.1.3. The proper clearance distances and the corresponding voltages to which the worker may be exposed.

4.8.2. Only qualified workers may perform work, repairs, or tests on electrical cords, tools or equipment.

4.8.3. All qualified workers must follow established electrical safety procedures and precautions.

4.8.4. Areas under new installation or repair must be sufficiently guarded with non-conductive physical barriers and warning signs to prevent unauthorized entry. Where barricades and warning signs do not provide adequate protection, an Attendant must be stationed to warn and protect other workers.

4.8.5. It is our company's policy that all equipment be de-energized before performing any work. Therefore, it is the responsibility of the employer to determine before operations start if there are any energized circuits with which their employees may come in contact, and to provide protection and warning against all hazards.

4.8.6. In the case that it creates a greater hazard to de-energize or in the case of emergency, workers working on energized parts must follow the guidelines for Energized Work Procedures as laid out in this manual and the requirements of NFPA 70E.

4.8.7. A lock and tag must be placed on each disconnecting means used to de-energize circuits and equipment on which work is to be performed. All electrical circuits should be treated as "live" until they have been tagged, locked out, and tested in accordance with the Lock-out/Tag-out Policy. For more on Lock-out/Tag-out procedures, see *Lock-Out/Tag-Out* in this chapter.

4.8.8. Any worker working on electrical equipment on a crane or other elevated equipment must take necessary precautions to prevent a fall from reaction to electrical shock or other causes.

4.8.9. Portable ladders must have non-conductive side rails, if they are used where the worker or the ladder could contact exposed energized parts.

4.8.10. Do not wear conductive items of jewelry and clothing unless they are rendered non-conductive by covering, wrapping, or other insulating means.

4.8.11. Ropes and other hand lines used near exposed energized equipment must be non-conductive.

4.8.12. When workers work in confined or enclosed workspaces where electrical hazards may exist, barriers or insulating materials must be provided.

4.8.13. After a protective circuit is disconnected or opened, it may not be connected or closed until it has been determined that the equipment and circuit can be safely re-energized.

4.9. Energized Work Procedure

If it is determined that de-energizing electrical equipment creates a hazard, or if there is an emergency, the following procedures and the requirements set forth in NFPA 70E must be followed to protect workers. All energized work must be approved by the Safety Director.

4.9.1. Before any work may begin on energized equipment, an Energized Work Permit must be completed. Obtain a copy of this permit through the Safety Department. The purpose of this permit is to:

4.9.1.1. Demonstrate that de-energizing is infeasible or creates additional hazards.

4.9.1.2. Assess exposure risk.

4.9.1.3. Control exposure risks by determining the approach boundaries and PPE required in accordance with NFPA 70E.

4.9.2. Only qualified and authorized workers may work on energized electrical equipment.

4.9.3. Workers must wear PPE sufficiently rated to protect them from electrical shock and arc blast. This may include electrically-rated insulated gloves, aprons, rubber-soled shoes, and insulated shields.

4.9.4. PPE must be visually inspected and/or tested before use. Any damaged PPE is removed from service.

4.9.5. In cases where the insulation capabilities of the PPE may be damaged during the work, a protective outer cover such as leather must be used.

4.9.6. All protective insulating equipment is be inspected in accordance with the table below.

Type of Equipment	Frequency of Testing
Rubber insulating gloves	Before first use and every 6 months
Rubber insulating sleeves	Before first use and every 6 months
Rubber insulating blankets	Before first use and every 6 months
Rubber insulating cover	Upon indication that insulating value is suspect
Rubber insulating line hose	Upon indication that insulating value is suspect
Rubber insulating gloves	Before first use and every 6 months

4.9.7. Qualified workers must use insulated tools and testing equipment suitable for the voltage present and the working environment.

4.9.8. Tools and testing equipment must be visually inspected before each use, and damaged equipment must be removed from service.

4.9.9. Workers may not reach blindly or enter spaces containing exposed energized parts without proper illumination—illumination that enables the workers to perform the work safely.

4.9.10. Portable ladders must have non-conductive side rails.

4.9.11. All conductive articles such as jewelry and clothing must be completely removed.

4.9.12. Doors or other hinged panels must be constructed and secured to prevent them from swinging into a worker and causing contact with exposed energized parts.

4.9.13. Housekeeping in areas of exposed energized parts may not be completed unless adequate safeguards (insulations equipment or barriers) are present. Conductive cleaning materials such as steel wool, silicon carbide, or liquids may not be used.

4.9.14. A person certified in first aid and CPR must be on standby at all times while work on energized equipment is being performed.

5. Stairways and Ladders

Whenever there is a change in elevation of 19 inches or greater, workers must use a ladder, stairway, runway, or personnel hoist to gain access. Two or more separate points of access must be provided when there are 25 or more workers in an area.

5.1. General Requirements for Stairways

5.1.1. Stairways that will not be a permanent part of the building or structure, on which construction work is being performed must have landings of not less than 30 inches in the direction of travel and extend at least 22 inches in width at every 12 feet or less of vertical rise.

5.1.2. Temporary stairs must be installed between 30 degrees and 50 degrees from horizontal.

5.1.3. Riser height and tread depth must be uniform within ¼ inch.

5.1.4. Where doors or gates open directly on a stairway, a platform must be provided. The platform must extend a minimum of 20 inches past the swing of the door in the direction of travel.

5.1.5. Slippery conditions on stairways are to be eliminated before workers are allowed to use them for access.

5.1.6. Stairways that have open metal pan treads and landings are not to be used until they have been completely filled with wood, concrete, or other suitable materials.

5.1.7. Stairways having four or more risers or rising more than 30 inches, whichever is less, must be equipped with a stair-rail system along each unprotected side or edge. All stairways meeting the stair-rail requirement must also be equipped with at least one handrail.

5.1.8. Handrails must have a minimum of 3 inches of clearance between the handrail and the wall or any other obstruction, to allow adequate handhold for workers.

5.1.9. Unprotected sides and edges of stairway landings must have guardrail systems that meet or exceed the criteria established in *Fall Protection* in this chapter.

5.2. Portable Ladder Design

5.2.1. Job-built ladders must be built in accordance to ANSI A14.4.

5.2.2. Each portable ladder must be capable of supporting four times the intended load without failing.

5.2.3. Rungs, cleats, and steps of portable ladders must be uniformly spaced no less than 10 inches apart and no more than 14 inches apart, as measured between the center line of the rungs, cleats, and steps.

5.2.4. The minimum clear distance between side rails of portable ladders is 11 ½ inches.

5.2.5. The rungs and steps of portable ladders must be corrugated, knurled, coated with skid resistant material, or otherwise treated, to minimize slipping.

5.2.6. Ladder components must be surfaced, to prevent injury to workers from punctures and lacerations and to prevent snagging of clothing.

5.2.7. Only ladders with non-conductive side rails may be used while working near energized electrical parts.

5.2.8. Wooden ladders may not be painted or covered with any material that hinders the inspection of the ladder.

5.2.9. Ladders should be periodically inspected. Ladders should be inspected immediately after any occurrence that could affect their safe use. All defective ladders must be removed from service and tagged out.

5.3. Portable Ladder Use

5.3.1. All workers using or constructing ladders must be trained to recognize hazards related to ladders and to use proper procedures to minimize these hazards.

5.3.2. Place all ladders on solid footing and secured to prevent displacement.

5.3.3. Ladder rungs, cleats, and steps must be parallel, level, and uniformly spaced when the ladder is in position for use.

5.3.4. Ladders may only be used for the purpose for which they were designed.

5.3.5. When two or more ladders are used to gain access to an elevated work area, the ladders must be offset with a platform or landing between the ladders.

5.3.6. Step ladders must be fully extended with the spreader in the locked position before use.

5.3.7. The top and top step of step ladders may not be used to sit or stand on.

5.3.8. Workers must face the ladder at all times.

5.3.9. Workers must maintain three points of contact when ascending and descending all ladders.

5.3.10. When ladders are used to gain access to an upper landing, the side rails of the ladder must extend three (3) feet above the landing surface. When such extension is not possible due to ladder length, a grasping device, such as a grabrail or post, must be provided to assist workers in getting on and off the ladder.

5.3.11. Straight or extension ladders should be positioned so that the horizontal distance between the foot of the ladder and the support against which it is placed is equal to one-fourth (1/4) the height of the ladder at the top of support.

5.3.12. Keep ladders free of oil, grease, and dirt. Do not use ladders on slippery surfaces unless secured to prevent displacement.

5.3.13. Keep the areas at the top and bottom of ladders clear of debris and other hazardous materials.

5.4. Fixed Ladders

Do not use fixed ladders that are a permanent part of the building or structure unless they have been fully installed in accordance with specifications and drawings.

6. Fall Protection

Falls continue to be the number one killer among construction workers. For this reason, it is imperative that all fall hazards be eliminated where possible, and that all workers exposed to falls are protected by a fall-arrest system.

6.1. Conditions Requiring Fall Protection

The following are examples of situations where fall protection is needed. This list is by no means complete, and there are many other situations where a fall of 6 feet or more is possible. It should be noted that steel erection, ladders, and scaffolding are not included in this list because they are covered by other OSHA standards and other requirements of this safety manual.

6.1.1. **Unprotected Sides and Edges:** Workers who are working on walking or working surfaces with unprotected sides or edges that are 6 feet or more above a lower level must be protected from falling.

6.1.2. **Wall Openings:** Workers at, above, or near a wall opening (including those with chutes attached) where the outside bottom edge of the wall opening is 6 feet or more above lower levels and the inside bottom edge of the wall opening is less than 39 inches above the walking working surface, must be protected from falling.

6.1.3. **Holes:** By OSHA's definition, a *hole* is any gap or void 2 inches or more in its least dimension in a floor, roof, or other walking or working surface. All holes, regardless of depth, must be covered or barricaded to prevent workers from tripping into or through them.

6.1.4. **Excavations:** Each worker at the edge of an excavation 6 feet or more in depth must be protected from falling by guardrail systems, fences, barricades, or covers when the excavations are not readily visible because of plant growth or other visual barriers. Where walkways are provided to permit workers to cross over excavations, guardrails are required on the walkway if fall exposure is greater than 6 feet.

6.1.5. **Hoist Areas:** Each worker in a hoist area must be protected from falling 6 feet or more by guardrail systems or personal fall arrest systems. If the guardrail or portions thereof must be removed to facilitate hoisting operations, as during the landing of materials, workers receiving the material must be protected by a personal fall arrest system.

6.1.6. **Ramps, Runways, and Other Walkways:** Each worker using ramps, runways, and other walkways must be protected from falling 6 feet or more by guardrail systems.

6.1.7. **Low-slope Roofs (less than or equal to 4 in 12):** Each worker engaged in roofing activities on low-slope roofs with unprotected sides and edges 6 feet or more above lower levels must be protected from falling by guardrail systems, safety net systems, personal fall arrest systems, or a combination of a warning line system and guardrail system, warning line system and safety net system, warning line system and personal fall arrest system, or warning line system and safety monitoring system.

6.1.8. **Steep Roofs (greater than 4 in 12):** Each worker on a steep roof with unprotected sides and edges 6 feet or more above lower levels must be protected by guardrail systems, safety net systems, or personal fall arrest systems.

6.2. Fall Protection Systems

When there is a potential fall of 6 feet or more, contractors must provide protection from fall hazards using a guardrails system, personal fall arrest system, positioning device, warning lines, controlled access zone, safety monitors, and/or hole covers.

6.2.1. Guardrail System

6.2.1.1. Guardrail systems must be capable of supporting a minimum of 200 pounds.

6.2.1.2. The top edge height of the guardrails system must be 42 inches, plus or minus 3 inches, above the walking or working surface.

6.2.1.3. Midrails must be installed at a height midway between the top edge of the guardrail system and the walking or working level.

6.2.1.4. Guardrails must be made in a way that prevents punctures, lacerations, and snags.

6.2.1.5. Steel and plastic banding must not be used for top rails or midrails.

6.2.1.6. Wire rope top rails and midrails must be at least ¼ inch diameter thickness.

6.2.2. Personal Fall Arrest

6.2.2.1. Personal fall arrest systems must limit maximum arresting force on a worker to 1,800 pounds.

6.2.2.2. When using a body harness, workers must be rigged so that:

- They cannot free fall more than 6 feet or contact any lower level
- The system brings the worker to a complete stop and limits the maximum deceleration distance traveled to 3.5 feet.

6.2.2.3. All personal fall arrest systems must have sufficient strength to withstand twice the potential impact energy of a worker free falling a distance of 6 feet or the free fall distance permitted by the system, whichever is less.

6.2.2.4. All PPE hardware must be drop forged and made of pressed or formed steel or equivalent material. All PPE hardware must be ANSI or ASTM approved.

6.2.2.5. The use of body belts for fall arrest is prohibited, and a full body harness is required. Body belts may only be used for positioning.

6.2.2.6. Personal fall arrest equipment that has been subject to in-service loading must be removed from service and not used again for worker safeguarding until inspected by a Qualified Person.

6.2.3. Positioning Device

6.2.3.1. Positioning systems are to be set up so that workers can free fall no farther than 2 feet.

6.2.3.2. A body belt may be used as a positioning device, providing it limits the maximum arresting force on the worker to 900 pounds.

6.2.3.3. Positioning devices must be secured to an anchorage capable of supporting at least twice the potential impact load of a worker's fall or 3,000 pounds, whichever is greater.

6.2.4. Warning Line System

6.2.4.1. Warning line systems may consist of ropes, wires, or chains and supporting stanchions.

6.2.4.2. Warning lines must be rigged and supported so that the lowest point, including sag, is no less than 34 inches from the walking or working surface and its highest point is no more than 39 inches from the walking or working surface.

6.2.4.3. Stanchions, after being rigged with warning lines, must be capable of resisting, without tipping over, a force of at least 16 pounds applied horizontally against the stanchion.

6.2.4.4. The rope, wire, or chain must have a minimum tensile strength of 500 pounds, and after being attached to the stanchions, must support without breaking the load applied to the stanchions as prescribed above.

6.2.4.5. Warning lines must be attached to each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in the adjacent section before the stanchion tips over.

6.2.5. Controlled Access Zone

6.2.5.1. A **controlled access zone** is a work area designated and clearly marked indicating that only certain types of work (such as leading edge work or roof work) may take place without the use of conventional fall protective systems.

6.2.5.2. Controlled access zones, when created to limit entrance to areas where leading edge work and other operations are taking place, must be defined by a control line or other means of restricting access.

6.2.5.3. Control lines must consist of ropes, wires, tapes, or equivalent materials and supporting stanchions.

6.2.6. Safety Monitoring

6.2.6.1. Safety monitoring may only be used in connection with low-sloped roofs or leading edge work.

6.2.6.2. The safety monitor must be on the same walking or working surface as and within visual sight distance of the worker(s) being monitored.

6.2.6.3. The safety monitor may have no other responsibilities that could take the monitor's attention from the monitoring function.

6.2.6.4. The safety monitor must be plainly identified with a reflective vest.

6.2.7. Covers

6.2.7.1. Hole covers located in roadways and vehicular aisles must be able to support at least twice the maximum axle load of the largest vehicle to which the cover might be subjected.

6.2.7.2. All other covers must be able to support at least twice the weight of workers, equipment, and materials that may be imposed on the cover at any one time.

6.2.7.3. To prevent accidental displacement resulting from wind, equipment, or workers' activities, all covers must be secured.

6.2.7.4. All covers must bear the markings "HOLE" or "COVER."

6.3. Falling Object Protection

6.3.1. Where open sided floors, holes, or other areas create a hazard of falling objects to workers below, toeboards, screens, or barricades must be used to protect workers from falling objects.

6.3.2. Toeboards must be a minimum of 4 inches and capable of withstanding a force of 50 pounds.

6.3.3. Where tools and equipment are piled higher than the toeboards, screening must be used from the walking or working surface to the guardrail system.

6.4. Inspections

Equipment used for fall protection must be inspected by personnel before each use. If upon inspection a piece of equipment shows any signs of wear, it must be immediately removed from service and tagged out. Such signs include cut or frayed edges, cracks, mildew or mold, undue stretching, chemical burns, dryness, corrosion, broken stitches, and loosened or distorted rivets.

6.5. Rescue

A job-specific rescue procedure should be developed when workers are using personal fall protection. The rescue procedure may include self rescue, assisted rescue by a co-worker, or professional rescue service from a local fire department. The rescue procedure should be a part of the worker's fall protection training.

6.6. Training

Each worker who may be exposed to fall hazards must be trained to recognize the hazards and the procedures to follow to minimize the hazards. A Competent Person provides the training.

6.6.1. The Competent Person must train workers in the following areas:

6.6.1.1. Fall hazards in the work area.

6.6.1.2. Correct procedures for erecting, maintaining, disassembling, and inspecting the fall protection systems used.

6.6.1.3. Use and operation of the fall protection systems used.

6.6.1.4. Role of each worker in fall protection plans.

6.6.1.5. What rescue procedures to follow in case of a fall.

6.6.1.6. Overview of the OSHA fall protection standards.

6.6.2. A training record is maintained for each worker. The record contains the name of the workers trained, date of training, and the signature of the person who conducted the training. Re-training should be done if there is a change in the fall protection system being used or if a worker's actions demonstrate that the worker has not retained the understanding or skills important to fall protection.

7. Scaffolds

Scaffolding provides a large, stable work platform where workers can stack materials and set up their tools when working from heights. However, each year, more than 60 workers are killed from scaffold failure or falls. Most hazards from scaffolds are the result of poor planning and assembly.

7.1. Competent Person

7.1.1. A Competent Person should be assigned to each scaffold project to ensure proper assembly, use, and disassembly. Before each use, the Competent Person inspects the platform condition, framework, the base and supports, access ladders, scaffold connections, and the overall stability. If, at any time the scaffold is not fully completed or is found to be non-compliant, the Competent Person tags the scaffold out of service.

7.1.2. The Competent Person must have specific training in and be knowledgeable about the type of scaffold in use and must have extensive knowledge of OSHA Subpart L standards. In addition, the Competent Person must have the authority to take immediate action if a hazard exists.

7.2. Capacity

7.2.1. Follow the manufacturer's specification at all times.

7.2.2. All scaffolds and their components must support without failure at least four times the maximum intended load. All suspension ropes and hardware must support at least six times the maximum intended load.

7.3. Platform Construction

7.3.1. All platforms must be entirely planked and decked with scaffold-grade planks.

7.3.2. Gaps may not be more than one inch wide in between planks and no more than 9½ inches between the last plank and the upright.

7.3.3. All platforms must be at least 18 inches wide, and they may deflect no more than 1/60 of the span when loaded.

7.3.4. The front edge of any working platform must not be more 14 inches from the face of the work.

7.3.5. Scaffold planks 10 feet or less in length, unless cleated or secured with hooks, may extend at least 6 inches past the support but not more than 12 inches. Scaffold planks greater than 10 feet may extend no more than 18 inches past the support.

7.3.6. Where platforms are overlapped to create a long platform, the overlap may occur only over supports and not be less than 12 inches, unless secured to prevent movement.

7.3.7. Brackets used to support cantilevered loads must only be used to support personnel, unless the scaffold has been designed for other loads by a qualified engineer.

7.3.8. Keep all platforms clear of debris or other obstructions that might hinder the working clearance on the platform.

7.4. Supported Scaffolds

7.4.1. The footing or anchorage for scaffolds must be sound, rigid, and capable of carrying the maximum intended load without settling or displacement. Unstable objects may not be used to support scaffolds or planks. Mud sills must be used when required.

7.4.2. The pole's legs, or uprights, must be plumb and securely and rigidly braced to prevent swaying and displacement.

7.4.3. All supported scaffold with a height to base ratio greater than 4:1 must be restrained from tipping using ties, guys, or equivalent.

7.4.4. Do not mix scaffold components from one manufacturer to another unless the integrity of each component can be maintained and is approved by the Competent Person.

7.4.5. Do not use fork trucks and similar pieces of equipment to support scaffold platforms unless they have been specifically designed by the manufacturer for such use. If so designed, the platform must be securely fastened to the forks and must not extend 10 inches beyond the wheel base of the equipment.

7.5. Mobile Scaffolds

7.5.1. Brace scaffolds by cross, horizontal, or diagonal braces, or a combination thereof, to prevent collapse.

7.5.2. Lock scaffold casters to prevent movement of the scaffold while occupied.

7.5.3. Apply manual force to move the scaffold as close to the base as practical but not more than 5 feet above the supporting surface.

7.5.4. Platforms may not extend outward past the base unless outriggers are provided.

7.5.5. Pin or otherwise secure caster stems and wheel stems in the scaffold legs or adjustment screws.

7.5.6. Workers may not ride on scaffolds unless the surface on which the scaffolds is being moved is within 3 degree level and is free of pits, holes, and other obstructions; the height to base ratio is 2:1 or less; and the scaffold is moved at a speed of 1 foot or less per second.

7.6. Access

7.6.1. A safe access must be provided to each scaffold platform greater than 24 inches above the supporting surface. Acceptable means of accesses that are permitted include: hook-on ladders, portable ladders, stairways, stair towers, ramps, and integral pre-fabricated frames.

7.6.2. Cross braces may not be climbed or used as a means of access.

7.7. Scaffold Inspection and Tagging

7.7.1. Inspection and tagging of the scaffold are to be performed by a competent worker experienced in the erection of scaffold.

7.7.2. All scaffold identification tags are a solid green, yellow, or red color with black lettering. Identification tags must include must include:

7.7.2.1. Date Erected/Tagged

7.7.2.2. Inspected By: Name (print and signature)

7.7.3. After the initial inspection is complete, **green tags** are hung on scaffolds that have been inspected and are safe for use. Green "SAFE FOR USE" tag(s) should be attached to the scaffold at each access point.

7.7.4. **Yellow "CAUTION" tag(s)** replace all green "SAFE FOR USE" tag(s) whenever the scaffold has been modified to meet work requirements, and could, therefore, present a hazard to the user. This tag indicates special requirements for safe use. As a minimum requirement, the tag will have the unusual or potential hazard symbol marked on the reverse side.

7.7.4.1. The yellow tag should not to be removed until the scaffold has been returned to a safe condition and inspected by a Competent Person. Based on the results of the Competent Person's inspection, the appropriate tag (red or green) is hung on the scaffold and the yellow tag removed.

7.7.4.2. **Note:** Use of the "yellow tag" status is not intended to override the green tag system. All efforts should be made to return the scaffold to a "Green Tag" status as soon as possible.

7.7.5. **Red "DANGER–UNSAFE FOR USE" tag(s)** are used during erection or dismantling when the scaffold is left unattended. Red tags replace all green "SAFE FOR USE" tag(s) or yellow "CAUTION" tag(s) if a scaffold has been deemed unfit for use.

7.8. Fall Protection and Falling Object Protection

7.8.1. All scaffolds over 10 feet must be equipped with a guardrail system including a top rail, midrail, and toeboard in accordance with the Fall Protection requirements of this manual.

7.8.2. Toeboards must extend a minimum of 4 inches above the work platform. When it is anticipated that material will be stacked higher than 4 inches, screens must be provided from the work platform to the top rail to prevent material from falling from the scaffold.

7.8.3. When feasible, all erectors and dismantlers of scaffolds should be protected from falling, using a personal fall-arrest system. A Competent Person determines feasibility of such protection.

7.9. Use

7.9.1. All scaffold users must comply with the tagging system as described above.

7.9.2. Scaffolds may never be loaded to exceed their capacity.

7.9.3. Scaffolds may not be erected within 3 feet from insulated power lines carrying less than 300 volts and not within 10 feet from power lines carrying 300 volts or more. For each kilovolt over 50kv, add 4 inches.

7.9.4. Scaffolds may not be moved while occupied by workers, unless designed for such purpose.

7.9.5. Workers may not work on scaffolds that are covered with ice or snow. All ice or snow must be removed to prevent slipping.

7.9.6. No worker may work on scaffolds during storms or high winds.

7.9.7. The use of shore scaffolds and lean-to scaffolds is strictly prohibited.

7.10. Training

7.10.1. All workers who perform work on a scaffold must be trained annually to recognize the hazards associated with the type of scaffold being used and the procedures to control or minimize those hazards. This training includes:

7.10.2. The nature of electrical hazards, fall hazards, and falling object hazards in the work area.

7.10.3. Proper use of scaffolds and tagging system.

7.10.4. Proper handling of materials on scaffolds.

7.10.5. Proper erecting, maintaining, and disassembling of fall protections systems.

7.10.6. Proper construction, use, placement, and care in handling of scaffolds.

7.10.7. Maximum intended load and load carrying capacities of scaffolds used.

Note: This policy is not intended to be inclusive of every scaffold type. Suspension scaffolds and other specific types of scaffolds must be designed, constructed, and used in accordance to Subpart L 1926.450-1926.454.

8. Aerial Lifts

The leading cause of construction fatalities is falls. For this reason, many contractors seek the use of aerial lifts to provide easier and safer access to elevated work areas. However, aerial lifts may pose their own hazards if not used appropriately. Our company requires that all operators be trained in the safe operations of the lift, perform a pre-lift inspection, and follow the general safe operating guidelines for the lift in use.

8.1. There are generally two types of aerial lifts:

8.1.1. **Articulating boom lifts** are used for reaching up and over machinery, equipment, and other obstacles mounted on floors, and for reaching other elevated positions not easily approached by a straight (telescopic) boom lift. The machine's turntable may be rotated 360 degrees in either direction. The boom can be raised or lowered from vertical to below horizontal and extended (telescoped) while the work platform remains horizontal and stable.

8.1.2. **Scissor or vertical lifts** are used where less reach and height but more workspace and lifting capacity are required. They are designed to provide larger platform work areas and generally to allow for heavier loads than boom lifts. Scissor lifts may be maneuvered in a manner similar to boom lifts, but the platform may be raised only vertically, except for an available option that extends the deck horizontally.

8.2. Fall Protection

8.2.1. Unless required by manufacturer's requirements or by the project-specific safety plan, our company does not require fall protection in scissor or vertical lifts. However, workers must use full-body harnesses and lanyard fall protection and restraint when using an articulating boom lift.

8.2.2. The lanyard must be attached to an approved anchorage point as designated by the manufacturer of the lift, and at no time may a worker attach off to an adjacent structure or equipment.

8.2.3. The operator may not stand, sit, or climb on the edges of the basket, nor may a worker use a ladder, plank, or other device to increase his working position.

8.3. Inspections

8.3.1. Lift equipment and controls must be inspected upon delivery to the job site and daily prior to use.

8.3.2. All aerial lift devices must conform to ANSI standards applicable to the type of equipment being used.

8.3.3. Any lift that is found to be damaged or is not functioning properly is tagged-out and removed from service until repairs are made.

8.3.4. Permanent labeling must be conspicuously posted to indicate lifting capacity and travel height.

8.3.5. Aerial lift devices may only be used for the purpose(s) intended by the manufacturer. Do not make modifications to any aerial lift device without the express written authorization of the manufacturer.

8.4. General Requirements for Safe Use

8.4.1. All manufacturer warnings regarding operation, capacity, and safety precautions must be strictly followed.

8.4.2. Before extending or raising the boom or platform, position outriggers (if so equipped) properly so that the lift is level.

8.4.3. Place outriggers on mud mats or other solid surface. If the lift is not on level ground, choke the wheels and set the parking brake.

8.4.4. Check for sufficient clearance before raising the lift.

8.4.5. Workers must keep both feet on the floor of the bucket or platform at all times.

8.4.6. When the lift has to be moved, it may only be moved in accordance with the manufacturer's recommendations. Some manufacturers require the lift to be moved only when the bucket or platform is at the lowered position. For scissor and vertical lifts, this is lowered all the way down. For articulating boom lifts, this is lowered to the lowest point that the operator can safely see to drive the vehicle.

8.4.7. Lifts with obstructed views to the rear must be equipped with a working back-up alarm louder than the surrounding noise levels or use a spotter to signal the operator while backing up.

8.4.8. Do not position any aerial lifts closer than 10 feet to a power line that carries up to 50 kilovolts. For each kilovolt over 50, add 4 inches.

8.4.9. Do not drop or throw tools, parts, or any materials from the bucket or platform.

8.5. Training

8.5.1. Aerial lift operators must be trained and certified to use the various lifts on the job sites.

8.5.2. Training includes the pre-lift inspection, fall protection, hands-on operation, and safe work practices.

8.5.3. Training certification for workers is available to our company upon request.

9. Welding and Cutting

There are several hazards to consider when performing welding or cutting operations. These hazards include fires, explosions, electrocution, burns, welder's flash, oxygen depletion, and toxic fumes. To prevent these hazards from arising, the following requirements must be met on all company projects.

9.1. General Welding and Cutting Requirements

9.1.1. Objects to be welded, cut, or heated must be moved to a designated safe location. If the object cannot be easily moved, move all moveable fire hazards at least 35 feet from the work site or protect them with flame-proof covers, metal guards, or curtains.

9.1.2. A fire extinguisher must be immediately available in the work area, free of obstruction, and maintained for instant use. The fire extinguisher must be of suitable size and rating for the work being performed.

9.1.3. When conditions warrant, provide a fire-watch person during and for 30 minutes past the completion of the welding or cutting project.

9.1.4. When welding, cutting, or heating is performed on walls, floors and ceilings, take precautions on the opposite side to prevent possible fire.

9.1.5. No welding, cutting, or other hot work may be performed on empty drums, barrels, tanks, or other containers until they have been cleaned thoroughly to remove any flammable materials, fumes, or vapors.

9.1.6. Use portable welding screens, partitions, or curtains to protect other workers within 40 feet of the working area.

9.1.7. Keep the work area clear of welding rod studs and other debris.

9.1.8. When welding operations create fumes, smoke, or exhaust that could potentially create a hazardous atmosphere, use mechanical ventilation with sufficient capacity and arranged to produce the number of air changes necessary to remove the hazard.

9.1.9. If material to be welded is plated, coated, or painted with material which may emit toxic fumes or vapors, the welder must wear an appropriate respirator in addition to any local ventilation. Please refer to *Respirators* in this chapter for further guidance on the use of respirators.

9.1.10. All personnel engaged in welding or burning operations must wear the appropriate PPE. This includes, but is not limited to, eye and face protection against harmful radiation and flying particles, flame retardant clothing, and leather gauntlet-type gloves.

9.1.11. Visual inspections of welding equipment and compressed gas cylinders should be conducted daily. If welding equipment is found to be defective, remove it from service and tag it out until properly repaired.

9.2. Electric Welding

9.2.1. Ensure that electrical cord, electrode holder, and cables are free from defects (No cable splices or repairs are allowed within 10 feet of the electrode holder).

9.2.2. Lug connections on electric welders must be protected by a rubber boot or other protective means to prevent electrical shock.

9.2.3. Ensure that the welding unit is properly grounded.

9.2.4. If electrode holders are left unattended, remove the electrodes and place holders so they cannot make electrical contact with workers or conducting objects.

9.2.5. When the arc welder or cutter leaves their work or stops work for any appreciable length of time, or when the arc welding cutting machine is moved, the power supply to the equipment must be turned off.

9.2.6. To avoid overheating, ensure proper contact of work leads and connections and remove any metal fragments from magnetic work clamps.

9.3. Gas Welding

9.3.1. Inspect pressure gauges, hoses, and torches daily for defects. Ensure all fittings are tight. If cylinders, valves, regulators, plugs, or other safety devices are damaged, they must be tagged out of service and removed from the work area.

9.3.2. When parallel sections of oxygen and fuel-gas hoses are taped together, not more than 4 inches out of each 12 inch length can be covered by tape.

9.3.3. Keep hoses, cables, and other equipment clear of walkways, ladders, and stairs.

9.3.4. Flashback arrestors must be installed at the gauge on all oxygen and fuel gas setups if not built into the torch handle by the manufacturer.

9.3.5. Cylinder valves must be opened slightly and closed immediately before a regulator is connected to the cylinder. This is called “cracking,” and it clears the valve of dust and dirt. The worker must stand to the side of the outlet, not in front. Valves must be cracked away from welding work, sparks, flames, or other sources of ignition.

9.3.6. Valves must not be opened more than 1½ turns. If a wrench is required, it must stay in position in case of emergency for a quick shut off.

9.3.7. When work is complete, cylinders must be closed and the gas released from the regulator before removing the regulator.

9.3.8. Oxygen cylinders and fittings must be kept free of oil or greasy substances and may not be handled with oily hands or gloves.

9.3.9. Clogged torch tip openings must be cleaned with approved cleaning wires, drills, or other devices designed for that purpose.

9.3.10. Torches may be lit only with friction lighters or other approved devices. Matches, small butane lighters, or hot work may not be used to ignite torches.

9.3.11. Compressed Gas Cylinders:

9.3.11.1. Compressed gas cylinders must be visually inspected before use for leaks, cracks, and other damage. If a cylinder is thought to be defective, it should be returned to the supplier for replacement. Under no circumstances should workers attempt to repair defective cylinders.

9.3.11.2. Compressed gas cylinders must be legibly marked with either the chemical or trade name of the gas. Use stenciling, stamping, or labeling, to mark cylinders so that marks are not readily removable.

9.3.11.3. Cylinders must be kept in an upright position and secured at all times.

9.3.11.4. Keep cylinders far enough away from actual welding or cutting operations so that sparks, hot slag, or flame will not reach them. When this is impractical, provide shields.

9.3.11.5. Do not place cylinders where they can become part of an electrical circuit.

9.3.11.6. Do not take cylinders containing oxygen or other fuel gas into confined spaces.

9.3.11.7. Store cylinders in an upright position in a safe, dry, well-ventilated place prepared and reserved for the purpose.

9.3.11.8. Do not keep cylinders in unventilated enclosures such as gang boxes, lockers, or job trailers.

9.3.11.9. Do not store cylinders in the same area as flammable substances, such as oil and volatile liquids, or near sources of heat, such as radiators or furnaces.

9.3.11.10. Do not store cylinders near elevators, gangways, stairwells, or other places where they can easily be knocked down or damaged.

9.3.11.11. Oxygen cylinders should not be stored within 20 feet of highly combustible materials, oil, grease, wood shavings, or cylinders containing flammable gases. If closer than 20 feet, cylinders should be separated by a 5 foot wall with a fire-resistance rating of at least 30 minutes.

9.3.11.12. When acetylene cylinders are transported by powered vehicles, they must be in a vertical position.

9.3.11.13. Cylinders must be moved or transported in special racks or cradles to prevent them from being dropped or falling over in transit.

9.3.11.14. Lifting cylinders from one level to another is not permitted by means of attaching rope, cable or chain chokers, or slings. Use only enclosed cages or carrying cradles designed for this purpose.

9.3.11.15. Workers may not attempt to lift compressed gas cylinders, empty or full. Cylinders should be moved on cylinder carts designed for such purpose or rolled on their bottom edge.

9.3.11.16. Shut off cylinder valves and put valve caps in place during transit from location to location. Do not hoist cylinders by the valve or valve cap.

9.3.11.17. Take cylinders that have been dropped during transit out of service and return them to the supplier for inspection.

9.3.11.18. Install cylinder manifolds, under the supervision of an experienced person. Comply with proper practices in reference to their construction and use.

10. Fire Protection

Fires can often wreak havoc on a job site by causing thousands of dollars in property loss and threatening the lives of workers. Fire safety is every worker's responsibility, and that responsibility starts with a good housekeeping program.

10.1. General Fire Prevention Requirements

10.1.1. No welding, flame cutting, or other operation involving the use of flame, arcs, or sparking devices is permitted without adequate protection and shielding.

10.1.2. Remove all flammable or combustible material from the immediate work area. If removal is impossible, protect all flammable or combustible materials with a fire blanket or suitable noncombustible shield to prevent spark, flames, or hot metal from reaching the flammable or combustible materials.

10.1.3. Remove all oil-soaked rags, papers, and other combustible materials from any building at the close of each day's work, or more often if necessary, and place them in metal containers with self-closing lids.

10.1.4. Inspect temporary heating devices regularly. Do not use heating devices to dry clothes or other flammable materials.

10.2. Storage and Use of Flammable Liquids

10.2.1. Only approved containers and portable tanks may be used for storage and handling of flammable and combustible liquids. Portable fuel containers must be UL-labeled safety cans that have flame arrestors, spring loaded spouts, and vents. Plastic fuel containers may not be used on our projects.

10.2.2. Portable containers of flammable liquids may not exceed 5 gallons.

10.2.3. Not more than a one-day supply of flammable liquids, such as oil, gasoline, paint or paint solvent, may be brought into any building at any one time.

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

10.2.5. Not more than 60 gallons of flammable or 120 gallons of combustible liquids may be stored in any one storage cabinet. Not more than three such cabinets may be located in any single storage area.

10.2.6. Do not store flammable or combustible liquids in areas used for exits, stairways, or normally used for the safe passage of people.

10.2.7. Portable outdoor storage tanks must be a minimum of 20 feet from any building or structure and any yard storage of building materials.

10.2.8. All tanks must be double-walled or have secondary containment of 110% capacity to prevent leaks from spilling onto the ground.

10.2.9. Tanks must be grounded and bonded when dispensing flammable liquids from one tank to another.

10.2.10. No flames, hot work activity, or smoking are permitted in flammable or combustible liquid storage areas. Areas which constitute a fire hazard must have conspicuously posted “No Smoking or Open Flame”.

10.2.11. Maintenance and operating practices of all flammable liquid equipment must be in accordance with established procedures, to control leakage and prevent the accidental escape of flammable or combustible liquids. Clean up spills promptly.

10.3. Automatic Sprinkler Protection

10.3.1. If the building includes automatic sprinkler protection, the installation must closely follow the construction and be placed in service as soon as applicable laws permit following each story.

10.3.2. Maintain clearance of at least 36 inches between the tip level of the stored material and the sprinkler head.

10.4. Fire Extinguishers

10.4.1. A fire extinguisher rated not less than 2A must be provided for each 3,000 square feet of the protected building area. Travel distance from any point of the protected area to the nearest fire extinguisher may not exceed 100 feet.

10.4.2. Provide one or more fire extinguishers rated not less than 2A on each floor. At least one fire extinguisher must be located adjacent to stairways.

10.4.3. A fire extinguisher rated not less than 10B must be provided within 50 feet of wherever more than 5 gallons of flammable or combustible liquids or 5 pounds of flammable gas are being used on the job site.

10.4.4. At least one fire extinguisher rated not less than 20-B must be located not less than 25 feet, no more than 75 feet, from any flammable liquid storage area outside.

10.4.5. Fire extinguishers must be visually inspected monthly, receive an annual maintenance check, and be serviced as needed.

10.4.6. All workers, before initial assignment and annually, should be properly trained in the use of fire extinguishers. Generally, this training can be covered in a weekly safety meeting by the acronym PASS:

10.4.6.1. **P**ull the pin

10.4.6.2. **A**im the nozzle

10.4.6.3. **S**queeze the handle

10.4.6.4. **S**weep back and forth at the base of the fire

10.5. Fire Hydrants and Fire Lanes

In the case of a large fire, it is extremely important that the local fire department has unobstructed access to the building and/or fire protection systems, such as fire hydrants. Therefore, these areas must be marked and proper clearances maintained.

10.6. Hot Work Permit

When required by the client or on projects where fire poses a significant risk of damage, a Hot Work Permit may be required by the project-specific safety plan. In the case that Hot Work Permits are required, the following procedures must be followed:

10.6.1. The written permit may be obtained by the contacting the Safety Department.

10.6.2. The written permit must be completed, signed by our company project supervision, and posted at the area where the work is to take place.

10.6.3. A fully-charged and operable fire extinguisher, appropriate for the type of possible fire, must be available at the work station.

10.6.4. The worker performing the hot work activity must inspect the work area for flammable or combustible materials, liquids, or gases. All possible fire hazards must be removed from the work location or properly protected.

10.6.5. If combustible material is closer than 35 feet to the point of operation and cannot be relocated, a fire watch must be assigned to the work location. The fire watch must remain at the work location for 30 minutes after the hot work activity has been completed.

10.6.6. Openings or cracks in walls, floors, or ducts must be tightly covered to prevent the passage of sparks to the adjacent areas.

10.6.7. Upon completion, remove the permit and return it to our company project supervision for filing.

11. Excavations and Trenching

Trenching and excavation procedures are performed thousands of times each day. Unfortunately, cave-ins are a major source of fatalities within the construction industry. Therefore, contractors must take all necessary steps to protect employees working in excavations or trenches.

11.1. Underground Utilities, Surface Encumbrance, and Contaminated Soils

11.1.1. Remove all surface encumbrances that are located so as to create a hazard to workers, or support those encumbrances as necessary. Surface encumbrances may include rocks, trees, or any other object that is likely to roll or fall into the excavation.

11.1.2. Where the stability of adjoining buildings, walls, or other structures is endangered by excavation operations, provide support systems such as shoring, bracing, or underpinning, to ensure stability.

11.1.3. Install and remove support systems in a manner that protects workers from cave-ins, structural collapses, or from being struck.

11.1.4. Determine the estimated location of utility installations, such as water, sewer, telephone, electric, fuel, and all other underground installations prior to opening an excavation. Contact utility companies or clients and ask them to establish the location of the all underground installations, in accordance with state and federal law. Generally this can be accomplished by using the state's one-call system or 811. If the exact location of underground utilities cannot be determined, work may proceed provided the contractor does so with caution, and provided detection equipment or other acceptable means to locate utility installations is used.

11.1.5. While excavations are open, protect, support, or remove underground installations as necessary to safeguard both the utility and workers.

11.1.6. If, during the excavation, oil and/or hazardous material (OHM) impacted soil is encountered, a Soil Management Plan must be developed. All workers coming in contact with the OHM material must protect themselves by following the procedures and wearing the PPE outlined in the Soil Management Plan.

11.2. Inspections

11.2.1. The Competent Person performs daily inspection of excavations, the adjacent areas, and protective systems. The Competent Person looks for evidence of a situation that could result in a cave-in, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions. All inspections by the Competent Person are conducted prior to the start of work and as needed throughout the shift. Inspections are made after every rain storm or any other increasing hazard.

11.2.2. In the case where a Competent Person will be classifying soils for the purpose of protecting workers, the determination of classification must be based on at least one visual analysis and one manual analysis.

11.3. General Requirements

11.3.1. Protect all excavations greater than 5 feet in depth from cave-in.

11.3.2. All spoil piles or other materials or equipment that pose a hazard by falling or rolling into the excavation must be stored a minimum of 2 feet from the sides of the excavation. These materials or equipment must not block the safe means of egress.

11.3.3. If a trench or excavation is 4 feet deep or greater, stairways, ramps, or ladders must be used as a safe means of access and egress. For trenches, workers must not have to travel any more than 25 feet of lateral travel to reach the means of egress.

11.3.4. Protect all walkways crossing excavations greater than 6 feet in depth with an adequate guardrail system. All walkways must be a minimum of 18 inches wide.

11.3.5. Structural ramps used solely by workers as a means of access must be designed by a Competent Person. Structural ramps used for access or egress of equipment must be designed by a Competent Person qualified in structural design.

11.3.6. No worker may perform work in an excavation where water is accumulating unless adequate measures are used to protect the workers. Water removal equipment must be monitored by a Competent Person to ensure proper operation.

11.3.7. Excavations and trenches 4 feet or deeper that have the potential for toxic substances or hazardous atmospheres are tested at least daily. If the atmosphere is inadequate, the excavation or trench will be treated as a permit-required confined space. See *Confined Space Entry* in this chapter for confined space entry procedures.

11.3.8. When mobile equipment is operated adjacent to an excavation, or when such equipment is required to approach the edge of an excavation, and the operator does not have a clear and direct view of the edge of the excavation, use a warning system such as barricades, hand or mechanical signals, or stop logs.

11.3.9. No worker is permitted underneath loads handled by lifting or digging equipment. Require workers to stand away from any vehicle being loaded or unloaded to avoid being struck by any spillage or falling materials. Operators may remain in the cabs of vehicles being loaded or unloaded when vehicles are equipped with adequate cab protection.

11.3.10. If work is in or around vehicular traffic areas, workers must be supplied with and wear reflective vests. Signs and barricades must be utilized to ensure the safety of workers, vehicular traffic, and pedestrians.

11.3.11. An adequate barrier to safeguard the public, to warn vehicular traffic, and to prevent unauthorized entry must protect excavations where needed.

11.3.12. Dust conditions should be kept at minimum level by use of water or other safe means.

11.4. Protective Systems

11.4.1. The three basic protective systems for excavations and trenches are sloping and benching systems, shoring, and shields.

11.4.2. Sloping and Benching Systems

11.4.2.1. The maximum allowable slopes for each type of soils are as follows:

Soil or Rock Type	Maximum Allowable Slope
Stable Rock	Vertical (90º)
Type A	¾: 1 (53º)
Type B	1: 1 (45º)
Type C	1 ½: 1 (34º)

11.4.2.2. Sloping and benching systems for excavations greater than 20 feet in depth must be designed and stamped by a Registered Professional Engineer.

11.4.2.3. No benching is allowed in type C soils. All type C soils must be sloped.

11.4.3. Shoring Systems and Shield Systems

11.4.3.1. Designs of support systems, shield systems, and other protective systems must be certified by a Registered Professional Engineer or based on manufactured tabulated data that has been certified by a Registered Professional Engineer. All systems must comply with 1926.652 Appendix A, C, D, and E.

11.4.3.2. Removal of supports of shoring systems must begin at and progress from the bottom of the excavation. Release members slowly so as to note any indication of possible failure of the remaining members.

11.4.3.3. Do not allow workers in shields when shields are being installed, removed, or moved vertically.

11.4.3.4. Shoring and shielding systems can be 2 feet above the bottom of an excavation if they are designed to resist loads at the full depth and if there are no indications of caving below the support of shield.

11.4.3.5. When shoring or shielding is used in combination with sloping, the support or shield must extend at least 18 inches above the point where proper sloping begins.

11.4.3.6. The open end of all shored or shielded excavations must be protected from any exposed excavation wall.

11.5. Training

11.5.1. The Competent Person must have specific training in the hazards associated with excavations and trenches, and be able to demonstrate their knowledge about soil analysis and the use of protective systems. In addition, the Competent Person must have the authority to take immediate action if a hazard exists. Training must be documented and available upon request.

11.5.2. All other workers working in and around the excavation must be trained in the recognition of hazards associated with trenching and excavating.

11.6. Excavation/Trenching Permit

11.6.1. When required by the client or on projects where trenching poses a significant risk due to soil type or other conditions, an Excavation/Trenching Permit may be required.

11.6.2. The Excavation Permit may be obtained by contacting the Safety Department. The written permit must be completed by the Competent Person and posted at the area where the work is to take place.

11.6.3. Upon completion, remove the permit and return it to our company project supervision for filing.

12. Material Handling and Rigging

Material handling is the largest single cause of lost workday injuries in construction. Workers should be properly trained in the proper use, storage, rigging, and handling of materials.

12.1. Safe Lifting

12.1.1. All workers must obtain assistance in lifting heavy objects. When possible, mechanical equipment should be used to assist in material handling.

12.1.2. When workers must lift heavy objects, they should:

- Crouch or squat with their feet close to the object to be lifted.
- Secure good footing.
- Take a firm grip.
- Keep the back vertical.
- Lift by bending at the knees and using the leg and thigh muscles.

12.1.3. Workers may not attempt to lift compressed gas cylinders, empty or full. Cylinders should be moved on cylinder carts designed for such purpose or rolled on their bottom edges.

12.1.4. No worker is allowed under a suspended load. Workers must stand clear of loads about to be lifted.

12.1.5. Tag lines must be used when hoisting large loads, unless the use of a tag line creates an unsafe condition

12.2. Storage

12.2.1. All materials stored in tiers must be stacked, racked, blocked, interlocked, or otherwise secured to prevent sliding, falling, rolling, or collapse.

12.2.2. Materials stored inside the building should not be placed within 6 feet of any hoistway or inside floor opening, nor within 10 feet of an exterior wall that does not extend above the top of the material stored.

12.2.3. Materials may not be stored or leaned against a column unless they can be protected from accidental fall over.

12.2.4. Materials may not be stacked more than two pallets high.

12.2.5. Brick stacks must not be more than 7 feet in height. When a loose brick stack reaches a height of 4 feet, it must be tapered back 2 inches in every foot of height above the 4 foot level.

12.2.6. When masonry blocks are stacked higher than 6 feet, the stack must be tapered back one-half block per tier above the 6 foot level or must be secured from tipping. No stack may exceed 10 feet.

12.2.7. Structural steel, poles, pipe, bar stock, and other cylindrical materials must be chocked to prevent spreading.

12.2.8. Dunnage, cribbing, banding, and other materials used for transportation of materials to the site must be cleared from work areas on a regular basis. Lumber must have nails pulled or bent over before disposing.

12.3. Rigging Equipment

12.3.1. Rigging equipment must be inspected daily prior to use. Defective rigging must be removed from service and tagged out.

12.3.2. Do not load rigging equipment in excess of its recommended safe working load.

12.3.3. All rigging slings (wire, rope, nylon, chain) and shackles must have permanently affixed durable identification markings stating size, grade, and rated capacity by the manufacturer.

12.3.4. Wire rope slings may not be kinked or knotted. Slings showing signs of “bird-caging” or having heat damage should be removed from service.

12.3.5. Banding and other materials used for transportation of materials may not be used for rigging unless specifically designed for such purpose.

12.3.6. All hooks used for overhead lifting must have a working safety latch.

12.3.7. Do not use manila rope and other synthetic rigging material in or near operations involving the use of corrosive substances.

12.3.8. Makeshift devices formed from bolts, rods, and reinforced steel, for example, may not be used.

12.3.9. Spreader bars must be tagged or stamped with their rated capacity.

12.4. Training

A Qualified Rigger can perform simple, repetitive rigging tasks when the load weight, center of gravity, the rigging, and rigging configuration are provided to or known by the rigger through experience or on-the-job training prior to the rigging activities.

12.4.1. All workers performing rigging tasks must be properly trained.

12.4.2. Training must include, at the minimum:

- Pre-use inspection of rigging equipment.
- Basic knowledge and use of hitch configurations, capacities, and basic knots.
- Recognized associated hazards.
- Crane and hoist signaling.

13. Traffic Control, Motorized Vehicles, and Fork Trucks

Vehicles and equipment that are improperly operated can present a serious hazard on a work site. Operators must be trained and abide by all of the following requirements of this section.

13.1. Traffic Control

13.1.1. Traffic control devices must be installed and maintained as prescribed by OSHA and by DOT Federal Administration's Manual Uniform Traffic Control Devices (MUTCD).

13.1.2. Contractors performing work requiring traffic control devices must ensure that all operations have routine inspections of traffic control elements for acceptable levels of operation.

13.1.3. When traffic exposures are such that signs, signals, or barricades do not provide the necessary protection on, or adjacent to, a highway or street, then traffic regulators (Signal Person) or other appropriate traffic controls must be provided. A Qualified Person who is responsible for the project traffic control must determine modification of traffic controls, such as additional signs or devices, or a change in work operations.

13.1.4. Signaling directions by traffic regulators must conform to the provisions of OSHA and DOT.

13.1.5. If signaling by a traffic regulator is necessary on a project that is within a public right-of-way, then a hand-held paddle sign must be used. The hand-held paddle sign must conform to these standards:

13.1.5.1. The sign must have two faces and be attached to a staff of suitable design that will allow the entire unit to be held and controlled by one traffic regulator.

13.1.5.2. The bottom of the sign must be a minimum of 6 feet above the roadway surface.

13.1.5.3. The sign must be fastened to the staff so that no part of the legend is obscured.

13.1.5.4. The portion of the staff within the sign face must match the sign colors.

13.1.5.5. The sign may not be less than 18" x 18" and the letters must have a minimum height of 6 inches.

13.1.6. In periods of darkness, use appropriate lighting to illuminate the traffic regulator and the traffic regulator station. The lighting must be as required in OSHA and DOT standards. Appropriate lighting means lighting that illuminates the traffic regulator so that he/she is visible to oncoming traffic and does not impair either the traffic regulator's or motorists' visibility due to blinding or shadowing.

13.1.7. The traffic regulator must be properly trained in the use of the traffic control devices.

13.1.8. The traffic regulator must wear at all times a high visibility shirt or vest with reflective material.

13.2. General Requirements for Motorized Vehicles

13.2.1. All vehicles and equipment should be inspected at the beginning of each shift.

13.2.2. All equipment left unattended at night, adjacent to a highway in normal use, or adjacent to construction areas in progress must have appropriate lights or reflectors, or barricades equipped with appropriate lights or reflectors, to identify the location of the equipment.

13.2.3. Parked equipment must not block emergency equipment such as fire equipment, fire lanes, or fire hydrants.

13.2.4. All cab glass must be safety glass or equivalent that introduces no visible distortion affecting the safe operation of the machine or equipment.

13.2.5. All vehicles must be equipped with an adequate audible warning device at the operator's station and in an operable condition.

13.2.6. All vehicles with an obstructed view to the rear must have a reverse signal alarm audible above the surrounding noise level.

13.2.7. All equipment should be shut off before the operator leaves the operating station.

13.2.8. Vehicles used to transport workers must have seats firmly secured and adequate for the number of workers to be carried.

13.2.9. With the exception of vehicles without rollover protection, seat belts must be installed and worn on all motor vehicles, including fork trucks.

13.2.10. When discharging from a slope, block a ready-mix truck's wheels and set the brakes to prevent movement.

13.2.11. Do not use recreational ATV's on our projects unless approved by the Safety Director. When such use is approved, the manufacturer's operating instructions must be followed, including the use of a helmet.

13.2.12. The speed limit on a company project is 10 mph, unless otherwise posted.

13.3. Fork Trucks

13.3.1. No worker may operate a fork truck without successfully completing fork-truck training. An experienced and Qualified Person must conduct all training. Training must be documented in writing and the operator should carry their card to verify training.

13.3.2. Lift capacity must be clearly marked on all fork trucks. The operator must ensure that loads do not exceed rated weight limits.

13.3.3. The forks or mast of a fork truck must not be used for "free rigging." Only approved attachments may be used for such operations.

13.3.4. Fork trucks and similar pieces of equipment may not be used to support scaffold platforms unless they have been specifically designed by the manufacturer for such use.

13.3.5. No modifications or additions that affect the capacity or safe operation of the equipment may be made without the manufacturer's written approval.

14. Cranes and Hoists

Many types of cranes, hoists, and rigging devices are used on company projects for lifting and moving of materials. Our company's policy is to maintain a safe workplace for its employees and subcontractors. Therefore, it cannot be overemphasized that only qualified and licensed individuals may operate these devices. The safety rules and guidance in this policy apply to all operations on our company projects that involve the use of cranes and hoists.

14.1. General Requirements

14.1.1. Hoisting equipment such as cranes may not be used unless ground conditions are firm, drained, and graded to a sufficient extent necessary to maintain manufacturer's recommendations in regards to adequate support and degree of level of the equipment being used.

14.1.2. All underground hazards within the setup area must be located, including voids, tanks, and utilities. Site drawings, as-builts, and soil reports may be used to identify such hazards.

14.1.3. An Assembly/Disassembly (A/D) director must be on site and direct the assembly and disassembly of all cranes. The A/D director must be both competent and qualified to direct such operations.

14.1.4. Lifts that exceed 75% of the crane capacity or lifts that involve the use of more than one crane must have a written lift plan. The plan must be developed by a Qualified Person and submitted to our company before proceeding with the lift.

14.2. Power Line Safety

14.2.1. All power lines are presumed energized unless the utility owner/operator has confirmed that the power line is de-energized and is visibly grounded at the work site.

14.2.2. Cranes, hoists, or loads may not be assembled, disassembled, or operated closer than 20 feet to a power line that carries up to 350 kilovolts and 50 feet to a power line that carries up to 1,000 kilovolts. Cranes that must encroach closer to a power line must de-energize and ground the power line or follow the approach distances in the following table:

Minimum Clear Distances	
Voltage (Nominal, KV, AC)	**Voltage (Nominal, KV, AC)**
Up to 50	10
Over 50 to 200	15
Over 200 to 350	20
Over 350 to 500	25
Over 500 to 750	35
Over 750 to 1,000	45
Over 1,000	Established by utility owner/operator or registered professional engineer

14.2.3. If the table above is used or if the equipment's maximum working radius is closer than 20 feet, the responsible contractor must:

14.2.3.1. Meet with the operator and other workers to review the location of the power line and the steps that will be implemented to prevent further encroachment and electrocution.

14.2.3.2. Use non-conductive taglines.

14.2.3.3. Use an elevated warning line or barricade in view of the operator at the minimum clear distance requirement.

14.2.3.4. Provide a proximity alarm, spotter, a range limiting device, or an insulating link.

14.2.4. Operations that involve any part of a crane or hoist to be closer than the clear minimum distances in the table above to an energized power line are not permitted unless approved by the company Safety Director. Such operations must follow the requirements of 1926.1410.

14.2.5. When equipment must be moved under power lines, the following clear minimum distances must be maintained.

14.2.5.1. The boom, mast, and support system must be sufficiently lowered to maintain minimum clear distances.

14.2.5.2. The effects of speed and terrain on equipment movement must be considered, and a spotter must be used to effectively communicate with the operator and assist in maintaining clear distance requirements.

Minimum Clear Distances While Traveling (No Load)	
Voltage (nominal, KV, AC)	**Minimum clear distance (feet)**
Up to 0.75	4
Over .75 to 50	6
Over 50 to 345	10
Over 345 to 750	16
Over 750 to 1000	20
Over 1,000	Established by utility owner/operator or registered professional engineer

14.3. Inspections

14.3.1. A Qualified Person must inspect each crane and hoist as follows:

14.3.1.1. After any repair or adjustments that relates to the safe operation of such equipment

14.3.1.2. Upon completion of assembly or on any piece of equipment that has been idle for more than 3 months

14.3.1.3. Annually (documented)

14.3.2. A Competent Person must inspect each crane and hoist as follows:

14.3.2.1. Before each shift

14.3.2.2. Monthly (documented)

14.3.3. The annual inspection and monthly inspections must include the items checked, the results of the inspection, and the name and signature of the person who conducted the inspection. Inspections must be on site and available upon request.

14.3.4. More frequent inspections may be required if the severity of use or conditions of the equipment are such that there is a reasonable probability of damage or excessive wear.

14.3.5. Any crane or control that is found to be damaged or is not functioning properly and creates a safety hazard must be tagged out and removed from service until repairs are made.

14.4. Wire Rope

14.4.1. A Competent Person must inspect each wire rope in use as follows:

14.4.1.1. During the course of each shift

14.4.1.2. Monthly (documented)

14.4.2. A Qualified Person must inspect each wire rope annually and document this inspection.

14.4.3. All deficiencies that create a safety hazard must be immediately corrected before returning to use, or the wire rope must be removed and tagged out of service.

14.4.4. Wire rope must be designed to have, in relation to the equipment's rated capacity, a sufficient breaking force and design factor to prevent sudden rope failure.

14.5. Safety Devices and Operational Aids

14.5.1. The following safety devices are required on all cranes:

14.5.1.1. Crane level indicator

14.5.1.2. Boom stops and jib stops (except derricks and hydraulic booms)

14.5.1.3. Locks for all equipment with foot pedal brakes

14.5.1.4. Integral holding device or check valve for all hydraulic outrigger or stabilizer jacks

14.5.1.5. Horn

14.5.1.6. Fire extinguisher rated not less than 5 BC

14.5.2. The following operational aids are required on all cranes:

14.5.2.1. Boom hoist limiting device

14.5.2.2. Luffing jib limiting device

14.5.2.3. Anti two-blocking device

14.5.2.4. Boom angle or boom radius indicator

14.5.2.5. Load weighing device

14.6. Operations

14.6.1. All operations involving cranes must comply with the manufacturer's specifications and limitations. Where manufacturer's specifications are not available, the limitations assigned to the equipment must be based on the determinations of a qualified engineer competent in this field, and such determinations must be appropriately documented and recorded with the project files.

14.6.2. There may be no modifications or additions that affect the capacity or safe operation of the equipment made without the written approval from the manufacturer.

14.6.3. Attachments used with cranes may not exceed the capacity, rating, or scope recommended by the manufacturer.

14.6.4. Operating procedures, including rated capacities (load charts), recommended operating speeds, special hazard warnings, and instruction and operation manuals must be available in the cab at all times to the operator.

14.6.5. Cranes must not be operated in excess of their rated capacities.

14.6.6. Crane operators must not engage in any activity that diverts their attention while operating the equipment. This includes the use of cellular phones except when used for signal communications.

14.6.7. The operator must not leave the controls while the load is suspended unless the area is barricaded and no workers are exposed to the suspended load, and the Competent Person has determined that it is safe to do and implements measures necessary to restrain the boom hoist and telescoping, load, swing, and outrigger or stabilizer functions.

14.6.8. Cranes may not be operated in severe weather. Crane operating capacities should take into consideration the effects of wind, ice, and snow.

14.6.9. The weight of all loads must be known before lifting.

14.6.10. The boom or other parts of the equipment must not contact any obstruction.

14.6.11. Cranes may not be used to pull or drag loads sideways.

14.6.12. Traveling with a load is prohibited, unless the crane has been specifically designed for such operation.

14.6.13. The crane operator has the authority to stop and refuse to handle loads until a Qualified Person has determined that safety has been assured.

14.6.14. Hand signals to operators must be those prescribed by OSHA Subpart CC Appendix A for the type of crane in use. Post an illustration of the hand signals on the job site. Radios may be used where hand signal are not feasible. The operator's reception of radio signals must be by a hands-free system.

14.6.15. Accessible areas within the swing radius of the rear of the rotating superstructure of the crane must be barricaded in such a manner as to prevent a worker from being struck or crushed by the crane. Where barricades are not feasible, a combination of warning signs and training must be used.

14.6.16. Hoisting routes should minimize the exposure of workers to falling loads. No workers should be allowed in the fall zone except when workers are:

14.6.16.1. Engaged in hooking, unhooking, or guiding a load.

14.6.16.2. Engaged in the initial attachment of the load to a component or structure.

14.6.16.3. Operating a concrete hopper or concrete bucket.

14.6.17. Boom and load line free-fall is prohibited where workers' exposure to falling loads exist.

14.6.18. All crane and hoist hooks must have self-closing latches.

14.6.19. All loads must be rigged by a Qualified Rigger.

14.6.20. Tag lines must be used when loads must traverse long distances or must otherwise be controlled.

14.7. Fall Protection

14.7.1. For non-assembly/disassembly work, all workers who are on a walking or working surface with an unprotected side or edge more than 6 feet above a lower lever must be protected by personal fall arrest or fall restraint systems, except for workers on a horizontal lattice boom or for workers engaged in assembly or disassembly work where the protective fall distance is 15 feet or more.

14.7.2. A personal fall arrest system is permitted to be anchored to the crane hook as long as the setup and rated capacity of the crane exceeds 5,000 pounds, there is no load on the hook other than the equipment used for the fall arrest system, and the crane operator has been informed that the crane hook is being used for such purpose.

14.8. Qualifications and Training

14.8.1. Competent and Qualified Persons: The Competent Person and Qualified Person must be able to demonstrate their qualifications by recognized degree, certificate, or professional standing.

14.8.2. Operators: Cranes may only be operated by operators who have been certified by an accredited crane operator testing organization.

14.8.2.1. Operators must be certified based on the type of equipment and capacity that will be used.

14.8.2.2. Operators must carry their certification with them at all times and show it upon request.

14.8.3. Signal Person: Each signal person must be properly trained and have a certification showing such training.

14.8.4. In addition to the training above, all workers who are subject to the following conditions must have training in these specific areas:

14.8.4.1. Overhead power lines.

14.8.4.2. Crush and pinch point hazards.

14.8.4.3. Tag out.

14.8.5. All training should be documented and provided to our company project supervision upon request.

14.9. Suspended Personnel Platforms

It is our company's policy that suspended personnel platforms are not to be used unless approved by the company Safety Director. In the case that such approval is given, the design and use of such platform must be in strict adherence with 1926.1431.

14.10. Tower Cranes

Tower cranes are not common on our job sites. However, if a tower crane is used, it must be erected, operated, inspected, and dismantled in accordance with 1926.1435.

14.11. Overhead and Gantry Cranes

All overhead and gantry cranes must be plainly marked with the rated load capacity on each side and the rated load capacity must be clearly legible from the ground or floor from which the crane is being used.

14.12. Rigging

14.12.1. All rigging performed during assembly and disassembly must be done by a Qualified Rigger.

14.12.2. All rigging equipment must be inspected daily before use. Defective equipment is to be removed from service or destroyed to prevent inadvertent reuse. The load capacity limits must be stamped or affixed to all rigging components.

14.12.3. Remove from service nylon slings with abnormal wear, torn stitching, broken or cut fibers, or deterioration.

14.12.4. Remove from service wire-rope slings with kinking, crushing, bird caging, cracks, deformation, or evidence of heat damage. All wire-rope slings with 6 randomly broken wires or 3 broken wires in one strand of rope in a single lay must be removed from service.

14.12.5. All hooks opened more than 15% at the throat or twisted sideways more than 100 from the plane of the unbent hook must be removed from service. All crane and hoist hooks must have safety latches.

14.12.6. Alloy steel chain slings with cracked, bent, or elongated links or components must be removed from service.

15. Concrete and Masonry

Concrete and masonry construction is an integral part of nearly every one of our jobs. Therefore, this policy has been developed in an effort to eliminate hazards associated with this type of work.

15.1. General Requirements for Concrete and Masonry Construction

15.1.1. All reinforcing steel and form pins that present an impalement hazard must be capped with approved rebar caps. Mushroom caps are designed for scratch protection and are not sufficient for impalement hazards.

15.1.2. Workers are required to wear proper clothing, boots, gloves, hard hat, and safety glasses to prevent cement burns.

15.1.3. No worker may be allowed to apply concrete through a pneumatic hose unless the worker is wearing protective head and face equipment.

15.1.4. Blades of concrete and masonry saws must be covered with a semi-circular enclosure.

15.1.5. Wire mesh rolls must be secured at each end or turned over to prevent recoiling.

15.1.6. Powered trowels must have pressure switches that shut off when hand pressure is removed.

15.1.7. The handles of a concrete buggy may not extend horizontally beyond the wheels on either side of the buggy.

15.1.8. A concrete bucket that is equipped with a hydraulically or pneumatically operated gate must have a positive safety latch or similar safety device installed to prevent premature or accidental dumping.

15.1.9. Riding on concrete buckets is prohibited. No workers is allowed to work under concrete buckets while buckets are being elevated or lowered into position.

15.1.10. Bull float handles constructed of non-conductive material must be used where there is a possibility of coming in contact with energized electrical conductors.

15.1.11. When discharging from a slope, a ready-mix truck's wheels must be blocked and the brakes set to prevent movement.

15.1.12. Formwork, reinforcing steel, and vertical structures must be designed, fabricated, erected, supported, braced, and maintained so that it will be capable of supporting without failure all vertical and lateral loads that may reasonably be anticipated to be applied to the formwork.

15.1.13. All shoring equipment must be inspected prior to erection and immediately prior to, during, and immediately after the placement of concrete. Any shoring equipment that is found to be damaged, displaced, or weakened must be immediately reinforced or re-shored.

15.1.14. Manufacturer's recommendations, drawings, or plans for the jack layout, formwork, working decks, shoring, bracing, and scaffolds must be available at the job site.

15.1.15. Do not use reinforcing steel as a scaffolding hook, stirrup, or as a load-bearing member in a lifting device.

15.1.16. Do not remove forms and shores (except those on slab on grade and slip forms) until the concrete gains sufficient strength to support its weight and superimposed loads.

15.1.17. Do not place construction loads on a concrete structure or portion of a concrete structure unless, based on information received from a Qualified Person that the structure or portion of the structure is capable of supporting the loads.

15.2. Masonry Construction Requirements

15.2.1. A Limited Access Zone (LAZ) must be established whenever a masonry wall is being constructed. The LAZ must:

15.2.1.1. Be established on the unscaffolded side of the wall.

15.2.1.2. Be equal to the height of the wall plus 4 feet.

15.2.1.3. Run the entire length of the wall.

15.2.1.4. Restrain access to only those workers engaged in constructing the wall.

15.2.1.5. Remain in place until the wall is adequately braced or supported.

15.2.2. Unless specifically designed otherwise, masonry walls greater than 8 feet in height must be adequately braced.

15.2.3. Masonry wall bracing must be designed by a Registered Professional Engineer or in accordance with the designs established by the Masonry Institute of America.

15.3. Tilt-Wall Construction Requirements

15.3.1. Lifting inserts that are embedded or attached to tilt-up panels must be capable of supporting at least two times the maximum intended load.

15.3.2. Lifting hardware must be capable of supporting at least 5 times the maximum intended load.

15.3.3. Precast concrete wall units and tilt-up panels must be adequately braced until permanent connections are completed. Bracing designs must be approved by a Registered Professional Engineer.

15.3.4. No worker is allowed under precast concrete members being lifted or tilted into position, except those workers required for the erection of those members.

16. Steel Erection

Steel erection continues to be a high hazard occupation. However, planning and forethought can provide workers with a safer working environment that will allow contractors to maximize productivity and minimize costs due to lost time accidents.

16.1. Site Layout

16.1.1. The steel erector may not proceed with steel erection until he/she has received written notification indicating that 75% of the designed strength of all concrete and masonry footings, piers, and walls has been achieved.

16.1.2. All repairs, replacements, and modifications to anchor bolts must be approved by a Structural Engineer. Written notification of repairs will be provided to the steel erector.

16.1.3. An adequate road for the movement of equipment must be provided.

16.1.4. An adequate laydown area that is firm, properly graded, drained, and readily accessible to the work must be provided for the storage of steel and other materials.

16.2. Hoisting and Rigging

16.2.1. Cranes being used in steel erection must be visually inspected daily.

16.2.2. A Qualified Rigger must inspect rigging before each shift.

16.2.3. Do not use the headache ball, hook, or load to transport personnel.

16.2.4. Do not use bundle packaging and strapping for hoisting, unless specifically designed for such use.

16.2.5. Hooks must have safety latches that are operable at all times.

16.2.6. Loads may not be hoisted over workers, with the exception of connectors who are engaged in the initial connection of the steel, or workers who are necessary to hook or unhook the load.

16.2.7. Multiple lift rigging is permitted provided the crane manufacturer's specification or limitations does not prohibit such loads.

16.2.8. No more than five members may be hoisted during multiple lift rigging. Each member must be a minimum of 7 feet apart.

16.2.9. The forks or mast of a fork truck may not be used for "free rigging". Only approved attachments may be used for such operations.

16.3. Structural Steel Assembly

16.3.1. The permanent floors must be installed as the erection of structural members progress. A fully-planked or decked floor must be maintained within two stories or 30 feet, whichever is less.

16.3.2. At no time may there be more than 8 stories between the erection floor and the uppermost permanent floor. At no time may there be more than 4 floors or 48 feet, whichever is less, of unfinished bolting or welding above the foundation or uppermost permanently secured floor.

16.3.3. Shear connectors may not be installed until after the metal decking.

16.3.4. No bundles of metal decking may be placed on the joist until all bridging has been installed and anchored and all joist bearing ends are attached.

16.3.5. Framed metal deck openings must have structural members turned down to allow for continuous deck installation. If holes and openings are cut, they must be covered immediately (preferably with metal decking). Hole covers must support twice the anticipated working load, be labeled “HOLE” or “COVER,” and be secured to prevent displacement.

16.3.6. Smoke, dome, or skylight fixtures are not considered hole covers unless they meet the requirement of a sufficient hole cover.

16.3.7. All columns must be leveled and secured by a minimum of four anchor bolts prior to beam attachment. Solid web joists may not be released from load line until members are secured with at least two bolts per connection. A Competent Person must determine if more than 2 bolts are necessary to ensure stability of cantilevered members.

16.3.8. Double beam connections must allow for positive securing of the first beam by a minimum of one bolt before the second beam can be attached.

16.3.9. Open web joists may not be placed on any structural steel framework unless such framework is safety bolted or welded. When steel joists are landed, they must be secured to prevent unintentional displacement prior to installation.

16.3.10. The erection of steel joists, steel joist girders, and bridging must be in accordance with 1926.757.

16.3.11. Plumbing-up equipment must be placed and removed under the supervision of a Competent Person.

16.3.12. Purlins may only be used as a walking or working surface after all permanent bridging has been installed and fall protection is provided.

16.3.13. Bolts, nuts, washers, and pins may not be thrown. When bolts or drift pins are being knocked out, means must be provided to keep the bolts or drift pins from falling.

16.3.14. All materials, equipment, and tools must be secured while aloft to prevent accidental displacement. This requirement includes metal decking that has not been secured by the end of a work shift.

16.3.15. No load bearing structural member may be materially weakened by cutting, grinding, burning, or other means except in accordance with the approval of the project structural engineer of record.

16.4. Fall Protection

16.4.1. All workers engaged in steel erection must be trained in fall protection. Documentation of the erector's fall protection plan and training must be on site and available upon request.

16.4.2. Special training is required for those workers involved in multiple lift rigging, connecting, and workers using the Controlled Decking Zone (CDZ).

16.4.3. With the exception of connectors and workers in a CDZ, all workers performing steel erection activities must be protected from falling at heights 15 feet or greater.

16.4.4. Connectors and workers in CDZs must be protected from falling more than two stories or 30 feet, whichever is less.

16.4.5. Unsecured decking in a CDZ may not exceed 3,000 square feet.

16.4.6. CDZs must be clearly marked with control lines and may not be more than 90 feet wide and 90 feet deep.

16.4.7. Upon completion of the deck, perimeter cables must be installed at the final interior and exterior perimeter of all multi-story structures. Perimeter cables must meet the Fall Protection requirements of this manual and may not deflect more than 3 inches under 200 pounds of pressure in any direction.

17. Demolition and Blasting

Demolition involves many of the hazards associated with construction. However demolition incurs additional hazards due to unknown factors such as changes in the structure's design, materials hidden within the structural members, and unknown strengths and weaknesses of construction materials. To counter these unknowns, all workers involved in a demolition project must be fully aware of the hazards and the safety precautions to take to control the hazards.

17.1. General Requirements for Demolition

17.1.1. A Competent Person must make an engineering survey of the structure to determine the condition of the framing, floors, and walls and possibility of unplanned collapse of any portion of the structure.

17.1.2. During demolition, continuing inspections by a Competent Person must be made as the work progresses to detect hazards resulting from weakened or deteriorated floors, walls, or loosened materials.

17.1.3. Walls and floors must be shored and braced as determined by the above survey.

17.1.4. At no time may allowable floor loads be exceeded.

17.1.5. All utilities must be completely shut off, capped, or otherwise controlled before demolition work is started.

17.1.6. Hazardous materials such as chemicals, gases, explosives, and glass must be removed before demolition work is started. All areas presumed to be containing asbestos or lead must abated by a certified contractor prior to demolition activities that could disturb such areas, thus creating exposure to workers.

17.1.7. Stairways, passageways, and ladders must be periodically inspected and properly illuminated for safe access.

17.1.8. Openings cut in a floor for the disposal of materials may be no larger in size than 25% of the aggregate of the total floor area.

17.1.9. Floor openings must be cut the full span of the arch between supports.

17.1.10. 2' x 10' planks must be provided for workers to stand on while breaking down floor arches between beams. Planks may not be spaced more than 16 inches apart. Walkways must be a minimum of 18 inches in width. Planks must be laid together over solid bearings with the ends overlapping at least 1 foot.

17.1.11. The area onto which material is dropped must be completely enclosed with barricades not less than 6 feet back from the projected edge of the opening above.

17.1.12. All material chutes into which workmen dump debris must be protected by a substantial guardrail system meeting the requirements of the Fall Protection policy of this manual.

17.1.13. Material chutes at an angle greater than 45 degrees must be fully enclosed. Chute openings may not be greater than 48 inches and must be kept closed when not in use.

17.1.14. All holes or wall openings where workers are subject to a fall hazard must be protected with hole covers or guardrails. Chute openings must be protected with guardrails. Workers must be protected from falling by the use of a personal fall arrest system when guardrails around a chute opening are removed for dumping debris.

17.1.15. A toeboard or bumper at least 4 inches thick and 6 inches in height must be provided at chute openings where mechanical equipment or wheelbarrows are used for dumping material. Curbs or stop logs must be used to prevent mechanical equipment from running over the edge of a floor or floor opening.

17.1.16. Worker entrances into multi-story structures being demolished must be completely protected by sidewalk sheds or canopies. All canopies must be at least 2 feet wide and a minimum of 8 feet from the face of the building.

17.1.17. Masonry walls greater than 8 feet in height must be laterally braced, unless such wall was originally designed and constructed to stand without such lateral support.

17.1.18. Structural steel framing must be cleared of all loose material as the masonry demolition progresses downward.

17.1.19. Do not remove retaining walls supporting earth or adjoining structures until the earth or adjoining structures is properly braced or adjoining structures have been properly underpinned.

17.1.20. Storage areas into which material is dumped must be blocked off, except for openings necessary for the removal of material. Such openings must be kept closed at all times when material is not being removed.

17.1.21. When balling or clamming operations are used for demolition, only those workers necessary for the performance of such operations are permitted in the area.

17.1.22. The weight of a demolition ball may not exceed 50% of the crane's capacity based on the angle and boom length to be used and should not exceed 25% of the nominal breaking strength of the line by which it is suspended.

17.1.23. The demolition ball must be secured with a swivel-type connection to prevent twisting and in such a manner that the weight cannot become accidentally disconnected.

17.2. Blasting General Requirements

17.2.1. Only a Qualified Person should transport, handle, or use explosives for blasting. Qualifications of Qualified Persons must be submitted to the company Safety Director before mobilization of explosive are permitted on site.

17.2.2. Explosives not in use must be stored in a locked magazine. Explosives must be accounted for at all times with a written inventory. Appropriate authorities must be notified of any loss, theft, or unauthorized entry into a magazine.

17.2.3. No explosive are to be destroyed or disposed of on site.

17.2.4. Smoking and open flames are not permitted within 50 feet of any explosive.

17.2.5. Warning signs must be properly displayed around any area where blasting will take place.

17.2.6. Blasting mats, overburden, or other methods must be used to control the throw of fragments during blasting operations.

17.2.7. Blasting operations may only be conducted from sunup to sundown.

17.2.8. Utility owners must be notified whenever blasting operations are in close proximity to such services.

17.2.9. A fire extinguisher should be within close proximity of any area where explosive are located, including vehicles used for transporting explosives. However, no fire may be fought where the fire is in imminent danger of contact with explosives.

17.2.10. All blasting operations must be done in accordance with the requirements of OSHA's Subpart U (CFR 1926.900 though CFR 1926.914).

18. Barricade Tape and Signs

Barricade tape and signs can be effective means of warning others of potential hazards or restricting an area from entry altogether. However, the improper use and placement of these items can also create confusion and complacency. Therefore, this policy has been developed to instruct workers in the proper use of these items.

18.1. Barricade Tape

While there are many different types and colors of barricade tape for different purposes, this policy focuses on the two primary barricade tapes used in on construction sites.

18.1.1. **Caution Tape (Yellow/Black**). This type of barricade tape serves as a caution, to indicate to workers that a potential hazard exists. Workers may enter or pass through caution barricades upon stopping and recognizing the hazards within the barricade and using caution when passing through the barricade. Examples where caution tape may be used include, but are not limited to:

- Excavation less than 4 feet in depth.
- Identification of trip hazards and low hanging objects.
- Material storage on the site.

18.1.2. **Danger Tape (Red/Black)**. This type of barricade indicates danger, specifically that a potential serious hazard may be present. No worker, other than those who have been personally assigned to work inside the barricade, may enter without first obtaining permission from the contractor that erected the tape. Examples where danger tape may be used include, but are not limited to:

- Overhead work.
- Scaffolding under construction.
- Around swing radius of equipment with a rotating super structure.

18.2. Barricade Erection

18.2.1. Barricade tape must be erected at least 6 feet on the outside of the work being performed.

18.2.2. The tape must be suspended approximately 42 inches above the walking working surface and must be kept taught.

18.2.3. The tape must be suspended from metal, wood, or plastic stands or stations and should not be tied to valve handles, instrument gauges, or fire extinguishers.

18.2.4. Tape should only enclose the specific area to be protected.

18.2.5. Passageways or access ways may not be blocked by tape unless entirely necessary. If such need arises, company project supervision must be notified to allow coordination of access for other trades and possible changes to the emergency evacuation plan.

18.2.6. Tape must be maintained for the duration of work requiring its usage.

18.2.7. Barricade tape must be removed upon completion of the work and the abatement of hazards.

18.2.8. Barricade tape may not be used in lieu of a guardrail where a fall hazard exists. Such areas include perimeter protection, wall openings, holes, leading edge work, and warning lines (roof work).

18.3. Signs

Signs and symbols must be visible at all times when work is being performed and must be removed or covered promptly when the hazards no longer exist.

18.3.1. **Caution signs** are used to warn against potential hazard or caution against unsafe practices. Caution signs must have yellow as the predominating color; black upper panel and borders; yellow lettering of “Caution” on the black panel; and the lower yellow panel for additional sign wording. Black lettering must be used for additional wording.

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

18.3.3. **Exit signs** must be placed at all exits used for emergency evacuation. Exit signs, when required, must be lettered in legible red letters, not less than 6 inches high on a white field, and the principal stroke of the letters must be at least ¾ inch in width.

18.3.4. **Safety instructions signs** must be white with green upper panel with white letters to convey the principal message. Any additional wording on the sign must be black letters on the white background.

18.3.5. **Traffic signs and control devices** must conform to the Manual on Uniform Traffic Control Devices (MUTCD) for Streets and Highways.

19. Emergency Action Plan

Emergency Action Plans (EAP) have been prepared so that conditions arising from emergencies and unanticipated natural events can be addressed in an organized and expedient manner. The emergency procedures and the organizational framework outlined in this program are to provide protection for lives, property, and operations through effective communication and use of on-site and local emergency services. Our company recognizes the importance of an effective Emergency Action Plan and requires each job site to have a plan in writing and to effectively communicate the plan with all subcontractors.

19.1. EAP Program Elements

19.1.1. Our company acknowledges that all construction job sites are different by the nature of work and therefore, a single emergency action plan could never suffice for all job sites. Therefore, a specific job site EAP must be developed by using the *Emergency Action Plan*. (See the Appendix, *Forms*)

19.1.2. In addition to posting this form, a job site map identifying evacuation areas must be posted, and an air horn or other alarm system must be identified and communicated to workers.

19.1.3. Emergency phone numbers must be posted in each job trailer using the *Emergency Phone Numbers*. (See the Appendix, *Forms*)

19.2. Reporting

19.2.1. In the event of a fire, hazardous chemical spill, bomb threat, weather emergency, or medical emergency, divert occupants from the hazard area, and immediately report the emergency to your supervisor by providing a clear description of the location, nature, and magnitude of the emergency.

19.2.2. All emergencies must be reported to the company Safety Director.

19.3. Emergency Procedures

The building emergency alarm system or a designated air horn is the most commonly used evacuation warning system. Depending on the emergency, the following procedures should be followed:

19.3.1. Emergency Evacuation/Shelter Procedures

19.3.1.1. Upon receiving the alarm to evacuate or take shelter, workers should immediately cease work, secure their work area, warn others, and move in a calm orderly manner to the designated assembly/shelter area.

19.3.1.2. All subcontractor foremen will wait for their employees in the assembly/shelter areas. Foremen will ensure employees working in remote areas and in confined spaces have been alerted and have proceeded to the assembly/shelter area.

19.3.1.3. Foremen will conduct a roll call of their employees. If any workers are found to be missing, the company Superintendent must be informed immediately of the worker's name and last known location.

19.3.1.4. Workers should not leave the assembly/shelter area until emergency personnel notify that it is safe to do so. No attempt will be made to locate missing workers until it has been determined that a search and rescue party can be reasonably protected during such search.

19.3.2. Medical Emergencies

19.3.2.1. In the case of severe or life threatening medical emergencies, immediately call 911.

19.3.2.2. Secure the accident site and eliminate, diffuse, or reduce potential hazards to prevent further injury.

19.3.2.3. Those trained in first aid and CPR should render treatment to those injured.

19.3.2.4. Blood and body fluids should be cleaned up following the bloodborne pathogens procedure described in this chapter.

19.4. Training

All workers are potentially affected by workplace emergencies and should receive training in appropriate response. Each contractor is responsible for training their employees in the Emergency Action Plan. Training includes the following:

19.4.1. Reporting procedures.

19.4.2. Location of emergency reporting phone numbers.

19.4.3. Emergency escape routes, assembly areas, and shelter areas.

19.4.4. The alarm system.

19.4.5. Emergency equipment (For example fire extinguishers and man-baskets).

20. Confined Space Entry

This policy has been developed to protect workers from the serious hazards associated with entering and working within confined spaces such as manholes, vaults, tunnels, and tanks.

20.1. Definitions

20.1.1. **Confined Space** is defined as an area that has limited means of entry or exit, is large enough for workers to enter and perform the task assigned, and is not designed for continuous worker occupancy. Examples of confined spaces may include, but are not limited to, storage tanks, pits, trenches, ventilation ducts, pits, vessels, manholes, boilers, furnaces, sewers, tunnels, attics, crawl spaces and silos.

20.1.2. **Non-Permit Confined Space** is a confined space that does not contain, or have the potential to contain, any hazard capable of causing death or serious physical harm.

20.1.3. **Permit-Required Confined Space** is a confined space that contains, or has the potential to contain, one or more of the following:

20.1.3.1. An atmospheric hazard.

20.1.3.2. An engulfment hazard.

20.1.3.3. A configuration hazard.

20.1.3.4. Any other recognized serious safety or health hazard.

20.2. Confined Space Hazard Evaluation

Before entry, all confined spaces must be initially evaluated by a Competent Person to determine the extent of the hazards present. Each confined space must be evaluated for atmospheric hazards, engulfment hazards, configuration hazards, and any other serious hazard capable of causing death or serious physical harm. If it is determined that no hazards are present, the space will be considered a non-permit confined space. When evaluating confined spaces for hazards, three different concerns should be addressed:

20.2.1. Hazards inherent to the space itself.

20.2.2. Hazards that will be brought to the space by the job performed inside it.

20.2.3. Hazards that may exist on the outside of the space that could potenially affect the inside.

20.3. Permits

Before entry into a permitted space, an entry permit must be signed by the entry supervisor verifying that pre-entry preparations have been completed and that the space is safe to enter. Permits must be posted at entrances and made available to entrants before they enter a permitted space. The information gathered in completing the hazard evaluation can be used to complete the permit. A permit may not be authorized until all conditions of the permit have been met.

The duration of the permit may not exceed the time required to complete the assigned task or job identified on the permit. Following completion of the permit space entry job, the supervisor must cancel the permit and send a copy to the Safety Director. A copy of our company's confined space permit may be obtained by contacting the company Safety Director.

20.4. Training

Before participating as a member of an entry team, each worker must be given authorization to enter the space and have received documented training. The training must provide workers with the necessary knowledge and skills needed to perform their duties safely. This training includes:

20.4.1. Identification of permit-required confined spaces.

20.4.2. Hazards associated with permit-required confined spaces.

20.4.3. Roles and responsibilities of each confined space team member.

20.4.4. Procedures and equipment of confined space entry.

20.4.5. Confined space emergency rescue.

20.4.6. First Aid / CPR for at least one confined space team member.

20.5. Responsibilities of the Confined Space Entry Team

20.5.1. Entry Supervisor

20.5.1.1. Know the hazards that may be faced during entry.

20.5.1.2. Verify that acceptable entry conditions are present at the time of entry.

20.5.1.3. Check the permit to verify that appropriate tests have been conducted.

20.5.1.4. Verify that all procedures and equipment specified by the permit are in place before endorsing the permit and allowing entry to begin.

20.5.1.5. Verify that rescue services are available and that the means for summoning them are operable.

20.5.1.6. Inform all authorized entrants and attendants of the hazards that may be faced during entry and of the acceptable entry conditions.

20.5.1.7. Terminate the entry and cancel the permit when operations are completed, when prohibited conditions occurs, or at the end of the shift.

20.5.1.8. Remove any unauthorized individuals who enter or attempt to enter the confined space during entry operations.

20.5.1.9. Ensure that the entry operations remain consistent with the terms of the entry permit.

20.5.2. Authorized Entrant

20.5.2.1. Participate and/or review calibrated air monitoring data before entry. If not comfortable with air monitoring data, entrants are allowed to request the space be re-evaluated at any time.

20.5.2.2. Be responsible for self-monitoring, using both test equipment and a knowledge of personal physical limitations.

20.5.2.3. Be aware of any unusual physical reactions, signs, or symptoms that could be caused by the environment.

20.5.2.4. Alert the attendant to changing conditions within the space.

20.5.2.5. Maintain constant communication with the attendant.

20.5.2.6. Signal the attendant and exit the space immediately if any reaction to the environment is sensed or a prohibited condition is detected.

20.5.2.7. Exit the space if ordered by the attendant or entry supervisor, a sign or symptom of exposure is observed, or an evacuation alarm is activated.

20.5.2.8. Use all equipment properly.

20.5.3. Attendant

20.5.3.1. Know the hazards associated with the space entered.

20.5.3.2. Be able to identify signs and symptoms of any unusual developments within the space and be able to operate air monitoring equipment.

20.5.3.3. Know who is in the space by name and count.

20.5.3.4. Maintain constant communication with the authorized entrants.

20.5.3.5. Monitor activities within and around the space.

20.5.3.6. Keep unauthorized personnel away from the space.

20.5.3.7. Order authorized entrants to exit the space if conditions require.

20.5.3.8. Summon help if an emergency situation arises.

20.5.3.9. Never leave the space or attempt rescue until relieved by another attendant.

20.5.3.10. Perform rescue, if necessary.

20.5.3.11. No attendant is allowed to monitor more than 1 entry operation.

20.6. Confined Space Entry Procedures

The following safe operating procedures must be followed before entering any confined space.

20.6.1. Identify the hazards associated with the confined space and plan for the entry and work to be performed. If multiple trades are required to perform work activities in the same confined space, then a safety meeting must be held between the trades working in the confined space so that employees of one employer do not endanger employees of any other employer. The safety meeting determines communication procedures, identifies existing and potential hazards associated with each trade's work tasks, and determines proper rescue procedures.

20.6.2. Identify the confined space team and provide the proper training.

20.6.3. Identify the equipment necessary for confined space entry. All confined spaces are different and some require more equipment than others. Some equipment often used in confined space entry includes barricades, lighting, fire extinguishers, and non-sparking tools.

20.6.4. Complete the confined space permit.

20.6.5. Post danger signs and construct and barricades around the confined space to prevent unauthorized entry of other workers, pedestrians, or vehicular traffic.

20.6.6. Perform atmospheric testing before entry and continuously while occupied.

20.6.6.1. All testing equipment must be calibrated as instructed by the manufacturer.

20.6.6.2. The test equipment should be tested in a known atmosphere to ensure its accuracy.

20.6.6.3. Ventilation equipment must be shut off before conducting any atmospheric tests.

20.6.6.4. The atmosphere must be tested at the bottom, top, and middle of all confined spaces.

20.6.6.5. The atmosphere must be continuously monitored to ensure acceptable conditions are being maintained.

20.6.6.6. If the permit space is left for any reason, the atmosphere must be tested before re-entering the space.

20.6.7. Maintain constant communication with the entrant; communication equipment may be necessary. This may include such devices as radios, telephones, beepers, or distinctive alarms.

20.6.8. Use continuous forced-air ventilation when there is the possibility of an atmospheric hazard. The method and equipment chosen to ventilate the space should be based upon the size of the confined space openings, the gases to be exhausted, and the source of makeup air.

20.6.9. Isolate and protect against the release of energy and material into the space. This includes all mechanical, electrical, or heat-producing equipment. This process may include locking out, tagging out, blanking, blinding, blocking, for disconnecting the mechanical linkages or energy sources.

20.6.10. Identify and use necessary PPE. Proper PPE may include hard hat, safety glasses or goggles, steel toe shoes, hearing protection, work gloves, impermeable clothing, and respirator. Respirators must be used in all hazardous atmospheres. Entrants must wear a full body harness when performing work in a confined space. A retrieval line must be attached to the entrant's back, near shoulder level or above their head. Wristlets or anklets may be used in lieu of the fully body harness if the employer can demonstrate that the use of the full body harness is infeasible or creates a greater hazard for rescue.

20.6.11. Provide an early-warning system, such as sensors or an observer posted upstream, that continuously monitiors for non-isolated engulfment hazards, such as flash flooding in a storm sewer. The system must alert entrants and attendants in sufficient time for entrants to safely exit the space.

20.6.12. Ensure emergency rescue procedures and retrieval systems are in place in the case of emergency. There are two types of rescue procedures:

20.6.12.1. **Non-entry rescue.** In this type of rescue, rescue personnel remain outside the space and pull the victim out of the space with the retrieval system attached to the entrant's fully body harness.

20.6.12.2. **Rescue by entry.** In this procedure, one or more rescue personnel enter the space. They remove the victim with the assistance of other rescue personnel who are stationed outside the space. This type of rescue must only be considered when supply-air respirators are available or when emergency services with this capability are in close proximity and on standby.

20.6.12.3. When relying on local emergency services for rescue services, arrangements shall be with emergency services to give the entry team advance notice if they will be unable to respond for a period of time due to responding to another emergency or attending department-wide training.

20.6.13. Under no circumstances may unauthorized personnel enter a confined space to attempt a rescue. At the present time there are no employees in our company authorized to perform confined space rescues by entry into the space. In the event that rescue by entry is needed, the contractor will coordinate such services with either:

20.6.13.1. The client (host employer) rescue team; or

20.6.13.2. Outside rescue team (local fire/rescue services).

20.6.14. Entry into a confined space that has conditions Immediately Dangerous to Life and Health (IDLH) are not permitted unless rescue services are on site and prepared for entry rescue.

20.7. Recordkeeping

The Safety Director will retain all canceled entry permits for at least one year. Permits will be used to facilitate review of the permit system. Any problems encountered during an entry operation must be noted on the entry permit, and the Safety Director will be notified so that appropriate revisions can be made to the written Confined Space Entry Program annually.

21. Lock-Out/Tag-Out

All workers will be protected from injuries caused by unexpected energizing; start-up of machines or equipment; or release of stored energy during service, repair, maintenance, operation, and associated activities. This policy establishes minimum performance requirements for the control of such potentially hazardous conditions. This will be accomplished by locking out and tagging out energy isolating devices, and otherwise disabling machines or equipment to prevent unexpected energizing, start-up, or release of stored energy.

21.1. Definitions

21.1.1. **Authorized Worker.** A person who locks out or tags out machines or equipment in order to perform servicing or maintenance on that machine or equipment.

21.1.2. **Affected Worker.** A person whose job requires him/her to operate or use a machine or equipment on which servicing or maintenance is being performed under lock-out or tag-out, or whose job requires him/her to work in an area in which such servicing or maintenance is being performed.

21.2. General Lock-Out/Tag-Out Procedures

Before working on, repairing, adjusting, or replacing machinery and equipment, the following procedures will be utilized to place the machinery and equipment in a neutral or zero mechanical state.

21.2.1. Before a machine or piece of equipment is turned off, the authorized worker must have knowledge of the type and magnitude of the energy, the hazards of the energy to be controlled, and the means to control the energy.

21.2.2. The authorized worker will notify all affected workers that the machinery, equipment, or process will be out of service.

21.2.3. The machine or equipment will be shut down using the specific procedures for that machine. An orderly shutdown will be utilized to avoid any additional or increased hazards to workers as a result of equipment de-energizing.

21.2.4. All energy control devices that are needed to control the energy to the machine or equipment will be physically located and operated in such a manner as to isolate the machine or equipment from the energy source.

21.2.5. Lock-out or tag-out devices will be affixed to energy isolating devices by authorized workers. Lock-out devices will be affixed in a manner that will hold the energy isolating devices in the "safe" or "off" position and prevent the machine or equipment from being restarted.

21.2.6. All lock-out and tag-out devices must indicate the identity (name) of the worker applying the device.

21.2.7. Where tag-out devices are used, they will be affixed in such a manner that will clearly state that the operation or the movement of energy isolating devices from the "safe" or "off" positions is prohibited.

21.2.8. The tag-out devices will be attached to the same point a lock would be attached. If the tag cannot be affixed at that point, the tag will be located as close as possible to the device in a position that will be immediately obvious to anyone attempting to operate the device.

21.2.9. Following the application of the lock-out or tag-out devices to the energy isolating devices, all potential or residual energy will be relieved, disconnected, restrained, and otherwise rendered safe.

21.2.10. Release stored energy (capacitors, springs, elevated members, rotating fly wheels, and hydraulic/air/gas/steam systems) must be relieved or restrained by grounding, repositioning, blocking, and/or bleeding the system.

21.2.11. Where the re-accumulation of stored energy to a hazardous energy level is possible, verification of isolation will be continued until the maintenance or servicing is complete.

21.2.12. After assuring that no worker will be placed in danger, test all lock-outs and tag-outs by following the normal start-up procedures (For example depress start button).

IMPORTANT! After the test, place controls in neutral position.

21.2.13. Should the shift change before the machinery or equipment can be restored to service, the lock and tag must remain. If the task is re-assigned to the next shift, those workers must lock-out and tag-out the equipment before the previous shift may remove their lock and tag.

21.3. Removal of Lock-Out/Tag-Out

Before lock-out or tag-out devices are removed and the energy restored to the machine or equipment, the following actions will be taken:

21.3.1. The work area will be thoroughly inspected to ensure that nonessential items have been removed and that machine or equipment components are operational.

21.3.2. The work area will be checked to ensure that all workers have been safely positioned or removed. Before the lock-out or tag-out devices are removed, the affected workers will be notified that the lock-out or tag-out devices are being removed.

21.3.3. Only the worker that locks out and tags out machinery, equipment, or processes may remove their lock and tag. However, should the worker leave the facility before removing their lock and tag, our Superintendent may remove the lock and tag. The Superintendent must be assured that all tools have been removed, all guards have been replaced, and all workers are free from any hazard before the lock and tag are removed and the machinery, equipment, or process are returned to service. The Superintendent must attempt to notify the worker who placed the lock and tag prior to removal.

21.4. Group Lock-Out/Tag-Out

In situations where more than one authorized worker will be required to perform work on a system or equipment, a designated authorized worker assigned by the contractor performing the work will physically install a group lock-out device as well as a personal lock-out device prior to the attachment of other locks/tags, and will coordinate all activities for worker protection.

21.4.1. A scissors clip or hasp will be installed on the device to allow all authorized workers a place to lock-out/tag-out the device to protect themselves from accidental start-up or operation.

21.4.2. Each worker working on energy sources or equipment that is affected must place a padlock and tag on the scissors clip or hasp.

21.4.3. Each authorized worker should retain their lock-out key until the job has been completed and is responsible for personally removing their lock-out/tag-out device.

21.4.4. The authorized supervisor will be the last person to remove their lock after verifying that all workers have been accounted for.

21.4.5. In situations where group lock-outs could extend for several shifts or days and involve numerous workers, crafts, or trades, the one lock for each person rule is deviated from, providing the following conditions are met:

21.4.5.1. One authorized worker from each trade on each shift must be designated and assigned the responsibility of ensuring continuity of lock-out/tag-out procedures and verify that all energy sources are locked out.

21.4.5.2. Documentation to verify this procedure must be performed by the assigned authorized worker.

21.4.5.3. All authorized workers must be individually accounted for prior to full or partial release of the lock-out.

21.5. Training

Each contractor performing lock-out/tag-out must ensure that:

21.5.1. Authorized workers will be trained in the recognition of hazardous energy sources, the type and magnitude of the energy available in the workplace, and methods and means necessary for energy isolation and control.

21.5.2. All affected workers will be trained in the purpose and use of the energy control procedure and the prohibiting of the attempt to restart or re-energize machines or equipment that are locked out or tagged out.

21.5.3. Re-training will be provided for all authorized and affected workers whenever there is a change in their job assignments, a change in equipment or processes that present a new hazard, or when there is a change in the energy control procedures. Additional re-training will also be conducted whenever a periodic inspection reveals, or whenever there is reason to believe that there are deviations from or inadequacies in the worker's knowledge or use of the energy control procedures.

21.5.4. Training records must be available upon request.

21.6. Inspections

An annual inspection of the energy control procedure will be performed and documented by the Safety Director. The inspection will include a review of the responsibilities and procedures of authorized workers and the worker's knowledge of the program.

22. Respirators

Our company requires that exposure to hazards in the workplace be maintained below the acceptable limits. Where practical, engineering controls such as ventilation, confinement of the process, or the substitution of a toxic substance for a safer product will be used to prevent occupational exposure to air contaminated with harmful dusts, mists, fumes, vapors, or radioactive or toxic particles. However, NIOSH certified respirators will be required when the contractor has determined that the Permissible Exposure Limit (PEL) is exceeded or it is anticipated that the limit will be exceeded.

Regardless of respirator use, it is our company's policy not to allow workers into areas that have conditions Immediate Danger to Life and Health (IDLH).

22.1. Respirator Selection

Respirator selection should be based on the following:

22.1.1. Nature of the hazard (chemical and physical properties of the contaminant).

22.1.2. Conditions of exposure (open or confined spaces and percent of oxygen).

22.1.3. Concentration of the contaminant.

22.1.4. The individual's physical limitations and characteristics.

22.1.5. Limitations of the respirator.

If a worker chooses to provide their own respirator, they should report this use to their supervisor so that he/she may determine that the respirator is adequate for use.

22.2. Types of Respirators

A respirator is any device worn by an individual to supply air or to reduce the concentration of a hazardous material in the air. There are generally two types of respirators: air-purifying and supplied-air.

22.2.1. **Air-purifying respirators** are divided into two types. Particulate filtering respirators remove particles such as dust, mists, aerosols, and fumes; and vapor. Gas filtering respirators remove vapors and gases you inhale. Air-purifying respirators can be worn when the oxygen is at least 19.5% and when the contaminant identity and concentration in known. Each cartridge is designed for use against specific contaminants. Therefore, it is extremely important to know the contaminant present in the environment to make the appropriate cartridge selection.

22.2.2. **Supplied-air respirators** provide a clean source of breathable air. They are used when work environments contain contaminants in concentrations such that air-purifying respirators cannot filter them out and in oxygen-deficient atmospheres. Supplied-air respirators are also divided into two types. With the Self Contained Breathing Apparatus (SCBA), the air tank is carried by the user. With the air line respirator, the air supply is some distance from the user and is supplied to the face piece by an air-line hose.

IMPORTANT! Dust masks are not respirators and should never be used in conditions where respirator use is necessary.

22.3. Medical Examination

Using a respirator may place a physiological burden on a worker that varies with the type of respirator worn, the job and workplace conditions in which the respirator is used, and the medical status of the worker. Contractors should provide a medical evaluation to determine the worker's ability to use a respirator before the worker is fit tested or required to use the respirator in the workplace. This medical evaluation should be performed by an approved Occupational Health Provider. Workers should have a chance to discuss results of the medical evaluation with the Occupational Health Provider.

22.4. Respirator Fit Testing

Before a worker is required to use any respirator with a negative or positive pressure tight-fitting face piece, the worker must be fit tested with the same make, model, style, and size of respirator that will be used. The contractor must ensure that a worker using a tight-fitting face piece respirator is fit tested prior to initial use of the respirator, whenever a different respirator face piece (size, style, model, or make) is used, and at least annually thereafter. Fit testing, including a qualitative and quantitative fit test, may only be performed by a Qualified Person or an approved Occupational Health Provider.

22.5. Training

Only authorized and trained workers may use respirators. Both personnel who are required to wear respirators and their immediate supervisor will be properly trained to ensure the safe and effective use of respirators. The training includes:

22.5.1. How to properly inspect, don, check the fit, and wear the respirator.

22.5.2. How to properly maintain and store the respirator.

22.5.3. How to recognized emergency situations.

22.5.4. The operation, capabilities, and limitations of the respirator.

22.5.5. When and why respiratory protection is needed.

Re-training must be conducted annually, when changes in the workplace or the type of respirator render previous training obsolete, and when inadequacies in the worker's knowledge or use of the respirator indicate that the worker has not retained the required understanding or skill.

22.6. Program Evaluation

The Safety Director is responsible for the administration of the Respiratory Program. Likewise, the Safety Director will evaluate the program annually to ensure that the provisions of the current written program are being effectively implemented and that the program continues to be effective. Program evaluation will include discussions with employees required to use respirators to assess the employees' views on program effectiveness and to identify any problems. Any problems that are identified during this assessment must be corrected.

22.7. General Guidelines for Respirator Use

22.7.1. Workers should check the respirator for a good fit before each use. Positive and negative fit checks should be conducted.

22.7.2. All facial hair that comes between the sealing surface of the face piece and the face or that interferes with valve function must be removed.

22.7.3. If a worker wears corrective glasses or goggles or other PPE, the worker must ensure that such equipment is worn in a manner that does not interfere with the seal of the face piece to the face.

22.7.4. Users may not remove respirators while in a hazardous environment for any reason, including changing or replacing cartridges, filters, or canisters.

22.7.5. Each contractor must ensure that all filters, cartridges, and canisters used in the workplace are labeled and color coded with the NIOSH approval label and that the label is not removed and remains legible.

22.7.6. Workers should recognize indications that cartridges and canisters are at their end of service. If in doubt, change the cartridges or canisters before using the respirator.

22.7.7. Supplied-air respirators must meet the following requirements:

22.7.7.1. Compressed breathing air must meet the requirements for Grade D breathing air.

22.7.7.2. Pure oxygen is not to be used in respirators. Oxygen concentrations greater than 23.5% may create explosive atmospheres.

22.7.7.3. Breathing air couplings must be incompatible with outlets for other gas systems.

22.7.7.4. Cylinders used for respirators must be tested and maintained in accordance with DOT 49 CFR Part 173 and 178.

22.7.7.5. Compressors must be situated to prevent contaminated air from getting into the system.

22.7.7.6. Compressors must be equipped with in-line air purifying sorbent beds and/or filters that are maintained or replaced following the manufacturer's instructions.

22.7.7.7. Compressors must be tagged with information on the most recent change date of the filter and an authorizing signature.

22.7.7.8. A carbon monoxide monitor must be in place to alarm at 10 ppm or must be monitored often enough to ensure that carbon monoxide does not exceed 10 ppm.

22.8. Respirator Care, Maintenance, and Storage

22.8.1. Respirators, when practical, should be assigned to individual workers for their exclusive use.

22.8.2. Respirators should be regularly cleaned and disinfected. Those used by more than one worker must be thoroughly cleaned and disinfected after each use.

22.8.3. Respirators used routinely must be inspected during cleaning. Respirators that fail an inspection or are otherwise found to be defective will be removed from service to be discarded, repaired, or adjusted in accordance with the manufacturer's specifications.

22.8.4. Repairs or adjustments to respirators are to be made only by persons appropriately trained to perform such operations and must use only the respirator manufacturer's NIOSH-approved parts designed for the respirator.

22.8.5. All respirators must be stored to protect them from damage, contamination, dust, sun light, extreme temperatures, excessive moisture, and damaging chemicals. They must be packed or stored to prevent deformation of the face piece and exhalation valve.

22.9. Recordkeeping

Each contractor must retain written records regarding medical evaluations, fit testing, and the respirator program. Medical records must be retained for the duration of the worker's employment plus 30 years. These records must be available upon request.

23. Hearing Conservation

From time to time, heavy equipment and other site activities may produce elevated noise levels, which may increase the potential for hearing loss. If a worker is subjected to noise levels that exceed the table below, the contractor must institute engineering and/or administrative controls in the work area. If these controls fail to reduce worker exposure to acceptable levels, the contractor must provide and enforce the use of hearing protectors.

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 below	115

23.1. Monitoring

Where host employer monitoring has been done, the results of that monitoring will be used, provided the current exposure situation is similar to the historical monitoring. If no monitoring data is available, monitoring must be completed to assess the potential noise exposure. The following monitoring guidelines must be followed:

23.1.1. The sampling strategy must be designed to identify workers for inclusion in the hearing conservation program and to enable the proper selection of hearing protectors.

23.1.2. Where circumstances such as high worker mobility, significant variations in sound level, or a significant component of impulse noise make area monitoring generally inappropriate, the contractor will use personal sampling to comply with the monitoring requirements, unless the contractor can show that the area sampling produces equivalent results. In any case, instruments used to measure worker noise exposure must be calibrated to ensure measurement accuracy.

23.1.3. All continuous, intermittent, and impulsive sound levels from 80 decibels to 130 decibels must be integrated into the noise measure.

23.1.4. Monitoring must be repeated whenever a change in production, process, equipment, or controls increases noise exposures to the extent that additional workers may be exposed at or above action levels, or when hearing protection being used by workers may be rendered inadequate to meet the requirements.

23.2. Worker Notification

The contractor must notify each worker exposed at or above the TWA action level of the monitoring results and provide affected workers with an opportunity to observe any noise measurements conducted.

23.3. Automatic Testing Program

If it has been determined that the contractor has workers exposed to sound levels that exceed an 8-hour time weighted average of 85 dBA or more, the contractor must establish and maintain an audiometric testing program. The following audiometric testing guidelines must be followed:

23.3.1. Testing must be made available to all workers whose exposure equals or exceeds the TWA action level of 85 dBA. The testing must be at no cost to the worker.

23.3.2. Tests must be performed by a licensed or certified audiologist or equivalent physician or certified technician.

23.3.3. Within 6 months of a worker's first exposure at or above the action level, the contractor must establish a valid baseline audiogram against which subsequent audiograms can be compared. Testing to establish a baseline audiogram must be proceeded by at least 14 hours without exposure to workplace noise. Hearing protection may be used as a substitute for the requirement that baseline audiogram be preceded by 14 hours without exposure to workplace noise.

23.3.4. At least annually, after obtaining the baseline audiogram, the contractor must obtain a new audiogram for exposure at or above the TWA action level.

23.3.5. Each worker's annual audiogram must be compared to their baseline audiogram. If the audiogram indicates the worker has suffered a standard threshold shift, the worker may obtain a re-test within 30 days and consider the results of the re-test as the annual audiogram.

23.3.6. **Follow-up procedures.** If a comparison of the annual audiogram to the baseline indicates a standard threshold shift due to occupational noise exposure has occurred, the worker must be informed of this in writing within 21 days of the determination. The contractor must:

23.3.6.1. Require workers not using hearing protectors be fitted with hearing protectors and trained in their use and care.

23.3.6.2. Require workers already using hearing protectors to be re-fitted and re-trained, or to be provided with different hearing protectors offering greater protection.

23.3.6.3. If additional testing is indicated, refer the worker for a clinical audio logical evaluation examination as appropriate.

23.4. Hearing Protectors

Hearing protectors must be made available to all workers who are subjected to noise levels in excess of the permissible limits or exposed to an eight-hour TWA of 85 dBA or greater and who have experienced a standard threshold shift in hearing on an annual audiogram.

23.4.1. All testing and hearing protectors will be provided at no cost to the worker.

23.4.2. The contractor must ensure a proper initial fit, show the correct use, and replace the hearing protector in accordance with wear factors and manufacturer's recommendations.

23.4.3. Whenever worker noise exposures increase, the adequacy of the hearing protectors will be re-evaluated to ensure that the equipment can provide adequate protection.

23.5. Training

The contractor must institute a training program for all workers who have been exposed to noise levels at or above the Permissible Exposure Limits. The training program must be repeated annually for each worker included in the hearing conservation program. Information provided in the training program must be updated to be consistent with changes in protective equipment and processes. The company must ensure that each worker is informed of:

23.5.1. Effects of occupational noise on hearing.

23.5.2. The purpose of hearing protectors. The various types and instructions on selection, fitting, use, and care.

23.5.3. The purpose of audiometric testing and explanation of the procedures

23.6. Recordkeeping

Records must be maintained for at least 2 years, with the exception of the audiometric test record, which must be kept for the duration of the worker's employment. Records must be made available to workers upon request.

24. Bloodborne Pathogens

The purpose of this policy is to limit occupational exposure of our employees to blood and other potentially infectious body fluids and materials that may transmit bloodborne pathogens and lead to disease or death. It is our company's policy that all employees must use universal precautions in an attempt to eliminate or minimize employee exposure to bloodborne pathogens.

24.1. Exposure Determination

Our company has determined that our scope of work, whether in the field or office setting, presents minimal anticipation of occupational exposure to bloodborne pathogens by our employees. This exposure is limited to:

24.1.1. Employees that are trained in and have cause to render first aid, or

24.1.2. Employees that may have cause to conduct clean-up or decontamination of surfaces or materials that could reasonably be anticipated to contain infectious materials

24.2. Procedures for Reducing Exposure Risks

24.2.1. Universal Precautions

24.2.1.1. Universal precautions refer to approaches to infection control in which all blood and certain body fluids are treated as if known to be infectious for HIV, HBV, or other bloodborne pathogens. These approaches recognize that there is no practical way to determine the health status of all persons who may be sources of bloodborne pathogens. Using this assumption when dealing with infectious materials eliminates the need for decision-making to determine the extent of actual or potential disease hazards and establishes minimum standards for contamination control that will effectively control bloodborne pathogens if they are present.

24.2.1.2. Universal precautions must be observed to prevent contact with blood or other potentially infectious materials. In situations where differentiation between body fluid types is difficult or impossible (For example poor lighting and uncontrolled or emergency situations), all body fluids must be considered potentially infectious materials.

24.2.2. Engineering Controls

24.2.2.1. Engineering controls include all measures designed to reduce the potential for contact between workers and potentially infectious materials by either removing the hazard or isolating the worker from exposure. All employees that are not essential to the administrating of medical treatment or to the clean-up operation of infectious materials must be removed from the area to eliminate exposure to bloodborne pathogens.

24.2.2.2. Only trained employees may administer first aid when the potential for exposure to bloodborne pathogens reasonably exists.

24.2.3. Work Practice Controls

24.2.3.1. Work practice controls are those measures that reduce the likelihood of exposure by altering the manner in which a task is performed.

24.2.3.2. To the extent possible, employees administering first aid must have the injured employee clean their own wounds, apply compresses, and clean up spilled body fluids.

24.2.3.3. All procedures involving direct handling of blood or other potentially infectious material should be accomplished in a manner that minimizes splashing, spraying, spattering, or aerosol production of other potentially infectious material.

24.2.3.4. Hands and any other exposed skin surfaces must be washed with soap and running water, and mucous membranes should be flushed with water as soon as possible after contact with blood or other potentially infectious material. If hand washing facilities are not available, employees must use hand sanitizers or antiseptic towelettes/solutions located in the first aid kit.

24.3. Personal Protective Equipment (PPE)

24.3.1. PPE includes any item which the employee wears or uses on their person to provide barrier protection of the skin or mucous membranes from contamination by blood or other potentially infectious material. Examples include gloves, face shields, masks, eye protection, resuscitation bags, pocket masks, and other ventilation devices.

24.3.2. The use of appropriate PPE is required as supplementary protection in all situations where exposure remains after institution of both engineering controls and work practice controls. Our company requires the use of appropriate PPE for all employees when engaged in tasks involving contact with blood, body fluids, or any potentially infectious material for which occupational exposure is reasonably anticipated. PPE will be provided to our employees at no cost. PPE must be repaired or replaced as needed to maintain it effectiveness.

24.3.3. Disposable latex or vinyl gloves must be worn where it is reasonably anticipated that employees will be in contact with potentially infectious material.

24.3.4. Employees administering mouth to mouth resuscitation must use micro-shields with one way valves.

24.3.5. The only exception to this requirement is those rare and extraordinary occasions when, in the professional judgment of the employee, wearing of required PPE would have prevented delivery of health or public safety services or would have posed an increased hazard to the employee or coworkers. Such situations must be investigated and documented to determine whether such occurrences can be prevented.

24.4. Communication of Hazards

24.4.1. Warning labels must be affixed to containers and bags of regulated waste containing blood or other potentially infectious material. These labels must include the biohazard legend depicted below, have a fluorescent orange or orange-red colored background with lettering or symbols in a contrasting color, and be affixed as close as feasible to the container by string, wire, adhesive, or other method that prevents their loss or unintentional removal.

24.4.2. Signs that are fluorescent orange or orange-red, with lettering or symbols in a contrasting color, and bearing the biohazard legend, must be posted at the entrance to work areas where the clean-up or disposal of blood or other potentially infected material is taking place.

24.5. Training

All employees with occupational exposure to bloodborne pathogens must participate in bloodborne pathogen awareness training upon hiring or initial assignment and annually thereafter. Training records will be maintained for a minimum of 3 years from the date of training. The content of the training program must contain at a minimum the following elements:

24.5.1. A copy of the Bloodborne Pathogen Policy.

24.5.2. A general explanation of the epidemiology and symptoms of bloodborne diseases.

24.5.3. An explanation of the modes of transmission of bloodborne pathogens.

24.5.4. An explanation of the use and limitations of methods that will prevent or reduce exposure including appropriate engineering controls, work practices, and PPE.

24.5.5. Information on the appropriate actions to take and persons to contact regarding a personal exposure involving blood or other potentially infectious materials.

24.5.6. Information on the post-exposure evaluation and follow-up that our company is required to provide for the employee following an exposure incident.

24.6. Clean-up and Disposal of Bloodborne Pathogens

If blood or other potentially infectious body fluids are encountered in the workplace, always observe Universal Precautions first and foremost. While fluids such as urine and vomit are not considered infectious by themselves, they are considered infectious if observable blood is present; Use Universal Precautions in any case. The clean-up procedure for blood and other potentially infectious fluids is as follows:

24.6.1. Apply appropriate PPE.

24.6.2. Use absorbent material to pick up the bulk of the fluid.

24.6.3. Use a straight edged scraper to gather the absorbent material for pick-up.

24.6.4. Use disposable toweling to finish wiping up remaining fluid.

24.6.5. Dispose of absorbent material and toweling in an appropriate bag. Use red, biohazard labeled bags for known infectious fluids.

24.6.6. Wash the affected area thoroughly with a solution consisting of 5.25% sodium hypochlorite (household bleach) mixed 10:1 with water. Again, blot with disposable toweling, and discard in the same bag.

24.6.7. Dispose of waste in accordance to local, state, and federal regulations.

24.6.8. Use emergency management personnel to perform clean-up of large amounts of potentially infectious liquids, organs, or other human body parts.

24.7. Hepatitis B Vaccination

The Hepatitis B vaccine must be made available to all employees of our company who are identified as having potential occupational exposure on a daily or near daily basis to bloodborne pathogens.

24.7.1. Vaccinations will be available to employees within 10 working days of initial assignment to jobs with occupational exposure. All vaccinations will be at no cost to the employee.

24.7.2. Any employee who initially declines the recommended vaccination is required to read and sign the declination form. Employees who decline the vaccination initially may elect to accept it at a later date if still employed in a position with potential occupational exposure.

24.8. Post Exposure Evaluation and Follow-Up

Exposure incidents are defined as any specific occupational incident involving eye, mouth, other mucous membrane, or skin contact with blood or other potentially infectious materials. Upon exposure, the following steps must be taken:

24.8.1. Employees must thoroughly clean the affected area.

24.8.2. A report must be made immediately to their supervisor and to the company Safety Director.

24.8.3. The company will direct the exposed employee to a qualified local healthcare provider with a copy of the exposure report and Hepatitis B vaccine status.

24.8.4. The company will attempt to obtain the source individual's HBV/HCV/HIV consent for testing and provide test results to the healthcare provider.

24.8.5. The healthcare provider will evaluate the exposure report, arrange for testing of the exposed employee, notify the employee of the test results, and provide counseling and post-exposure prophylaxis if medically indicated.

24.8.6. The written opinion of the healthcare provider must be provided to the employee, and a record of the exposure must be filed.

24.9. Recordkeeping

The Safety Director must establish and maintain records for employees with occupational exposure to bloodborne pathogens for the duration of employment and 30 years after termination of employment. Each medical record must include the employee's name and social security number, Hepatitis B vaccination status, copies of results of all exams, tests, and follow-ups related to reported exposure incidents, and written medical opinion of post-exposure incidents. Records must be provided to employees upon request in a timely and reasonable manner within 15 working days of request.

25. Heat Illness Prevention (California)

Construction workers are generally exposed to the environmental risk factors for heat illness and have the risk of developing heat related illnesses if they do not protect themselves. The objective of this program is worker awareness regarding symptoms, prevention methods, and procedures to follow if symptoms occur. Therefore, it is our company's policy that all contractors comply with the procedures of this policy.

25.1. Training and Written Program

25.1.1. Worker Training

Each supervisor and worker must be trained in the following topics before work begins whereby exposure to heat related illnesses is present.

25.1.1.1. Environmental and personal risk factors for heat illness, as well as the added burden of heat load on the body caused by exertion, clothing, and PPE.

25.1.1.2. Procedures for identifying, evaluating, and controlling exposures to the environmental and personal risk factors for heat illness.

25.1.1.3. The importance of frequent consumption of water.

25.1.1.4. The importance of acclimatization.

25.1.1.5. Different types of heat illness and common signs and symptoms of heat illness.

25.1.1.6. The importance of immediately reporting to the employer or designee symptoms or signs of heat illness.

25.1.1.7. Procedures for responding to symptoms of possible heat illness, including how emergency medical services will be provided should they become necessary.

25.1.1.8. Procedures for contacting emergency medical services including ensuring that communicating clear and precise directions to emergency personnel and / or transporting the affected worker to a point where they can be reached by an emergency medical service provider.

25.1.2. Supervisor Training

Each supervisor responsible for overseeing workers exposed to heat related illnesses must be trained in the following topics:

25.1.2.1. Procedures the supervisor will follow to implement controls as determined by the contractor.

25.1.2.2. Procedures the supervisor will follow when a worker exhibits symptoms consistent with possible heat illness, including emergency response procedures.

25.1.2.3. How to monitor weather reports and how to respond to hot weather advisories.

25.1.2.4. How to provide clear and precise directions to the work site.

25.1.3. Written procedures

The contractor must have on-site and available to all employees the written procedures for complying with the Heat Illness Prevention Policy and specific job site emergency procedures. Training documentation must be available upon request.

25.2. Provisions for Water

An adequate supply of potable drinking water will be supplied by each contractor for their employees.

25.2.1. At a minimum, the contractor must supply 1 quart per hour, per person for the entire shift. The contractor may begin the shift with smaller quantities of water if they have effective procedures for replenishment during the shift.

25.2.2. Employees will be notified of the location of potable drinking water and encouraged to drink.

25.2.3. Portable containers used to dispense drinking water must be capable of being tightly closed and equipped with a tap. Water may not be dipped from containers.

25.2.4. The common drinking cup is prohibited. Where single-service cups are supplied, both a sanitary container for the unused cups and a trash receptacle for disposing of the used cups must be provided.

25.2.5. Our company will have a bottled water service supply the potable water for their employees and the bottled water will be located in the job site trailer.

25.3. Provisions for Shade

Contractors are required to provide access to shade for worker relief from the heat as follows:

25.3.1. When the temperature exceeds 85 degrees Fahrenheit.

25.3.2. When the temperature is below 85 degrees Fahrenheit but is requested by a worker.

25.3.3. The shade structures must either be open to the air or provided with ventilation or cooling.

25.3.4. The amount of shade present must be at least enough to accommodate 25% of the workers on the shift at any time so that they can sit in a normal posture without having to be in physical contact with each other.

25.3.5. The shaded area must be as close as practicable to the areas where workers are working.

25.3.6. Where the contractor can demonstrate that it is infeasible or unsafe to have a shade structure, alternative procedures such as using a misting machine may be provided in lieu of shade if the contractor can demonstrate that these measure are at least as effective as shade in allowing workers to cool.

25.3.7. Workers should be allowed and encouraged to take a cool-down rest in the shade for a period of no less than five minutes at a time when they feel the need to do so to protect them from overheating. Such access to shade must be permitted at all times.

25.3.8. The job site trailer will be used as the shade structure for our employees.

25.4. High-Heat Procedures

When temperatures exceed 95 degrees Fahrenheit, contractors must implement the following procedures:

25.4.1. An effective communication system must be established by voice, observation, or electronic means so that workers may contact a supervisor when necessary. Cell phones and electronics may only be used if reception in the area is reliable.

25.4.2. A continuous monitoring of workers for signs or symptoms of heat illness.

25.4.3. A reminder to all workers that hydration with water is important to prevent heat illnesses.

25.4.4. Close supervision of a new workers by a supervisor or designee for the first 14 days of the worker's employment by the contractor, unless the worker indicates at the time of hire that he or she has been doing similar outdoor work for at least 10 of the past 30 days for four or more hours per day.

First Aid Awareness and Actions in the Event of a Heat-Related Illness

	Symptoms	Treatment
Heat cramps	Muscle spasms in legs or abdomen	• Move person to a cooler location • Stretch muscles for cramps • Give cool water or electrolyte-containing fluid to drink
Heat exhaustion	• Headaches • Clumsiness • Dizziness/lightheadedness/fainting • Weakness/exhaustion • **Heavy sweating/clammy or moist skin** • Irritability/confusion • Nausea/vomiting • **Paleness**	• Move person to a cooler place (**do not leave alone**) • Loosen and remove heavy clothing that restricts evaporative cooling • If conscious, provide small amounts of cool water to drink • Fan person, spray with cool water, or apply a wet cloth to skin to increase evaporative cooling • **Call 911** if not feeling better within a few minutes
Heat stroke	• **Sweating may or may not be present** • **Red or flushed / hot dry skin** • Bizarre behavior • Mental confusion or loss of consciousness • Panting/rapid breathing • Rapid, weak pulse • Seizures or fits	• **Call 911** • Move person to a cooler place (**do not leave alone**) • Cool worker rapidly • Loosen and remove heavy clothing that restricts evaporative cooling • Fan person, spray with cool water, or apply a wet cloth to skin to increase evaporative cooling

26. Hazard Communication

This program provides detailed safety guidelines and instructions for receipt, use, and storage of chemicals at our facility and job sites by employees and subcontractors. It is a matter of company policy to provide our employees with information about hazardous chemicals on the work site through our Hazard Communication Program, which includes a chemical inventory, container labeling, Safety Data Sheets (SDS), and employee information and training. Each job site will retain a copy of the written Hazard Communication Program and an SDS binder.

26.1. Employee Training

26.1.1. All new workers must receive safety orientation training covering the elements of the HAZCOM and Right to Know and Understand Program, including requirements for the adoption of the UN Globally Harmonized System (HazCom 2012/GHS). This training will consist of general training covering:

26.1.1.1. Location and availability of the written Hazard Communication Program.

26.1.1.2. Location and availability of the List of Chemicals used in the workplace.

26.1.1.3. Methods and observation used to detect the presence or release of a hazardous chemical in the workplace.

26.1.1.4. The specific physical and health hazard of all chemicals in the workplace.

26.1.1.5. Specific control measures for protection from physical or health hazards.

26.1.1.6. Explanation of the chemical labeling system (labels, posters, and forms of warning).

26.1.1.7. Procedures to follow if exposed.

26.1.1.8. Location, use, and understanding of Safety Data Sheets (SDS).

26.1.2. In addition to the safety orientation training, our employees will receive on-the-job training. This training will cover the proper use, inspection, and storage of chemicals they will be using or will be working around, the location of SDS sheets and the location of emergency equipment, first aid kit and emergency phone number in the case of exposure. Upon completion of the job site orientation, each employee must complete the *Training Session on Hazard Communication* form. (See the Appendix, *Forms*)

26.1.3. No worker will be allowed to perform non-routine work without first being oriented to the chemical hazards involved. A review of safe work procedures and use of required PPE will be conducted prior to the start of such non-routine tasks. Pipes containing hazardous chemicals will be labeled wherever possible. If they cannot be labeled, workers will be informed of their contents and associated hazards before entering the work area. All workers are required to review Safety Data Sheets before using any hazardous chemical for the first time and with every new shipment to the job site thereafter.

26.2. SDS Binders and Chemical Hazard Lists

Safety Data Sheets (SDS) are written documents which are provided by manufacturers for each hazardous chemical or product that they produce, sell, or distribute. Chemical manufacturers and suppliers are mandated by law to provide the SDS along with their product to the customer or user. The SDS contains valuable information about the characteristics, safety and health hazards, protective measures, and emergency response procedures for the hazardous chemical or product.

26.2.1. Each job site must maintain an SDS for all products containing hazardous chemicals used or stored on the job site. To accomplish this task, each subcontractor must provide our company with a Hazard Communication Policy and an SDS binder for all chemicals they anticipate using on the project. These SDS binders will be kept in a central location in the job site office trailer and will be available to all workers on site to review. Each binder must be equipped with an index listing all chemicals (Hazardous Chemical Inventory List).

26.2.2. Maintaining an accurate SDS binder is essential to an effective Hazard Communication Program. Therefore, it is necessary that all new hazardous chemicals that are purchased or received have an SDS and is filed properly in the SDS binder. Check all deliveries of chemicals for the SDS. An SDS should accompany the first shipment of all new or re-formulated chemicals. If an SDS is not provided with the shipment, immediately contact the manufacturer and have the SDS faxed or mailed.

26.2.3. When a chemical is received with an SDS, place it in the binder and add the product name to the Chemical Inventory List. Discard any old or out of date SDS for the same or similar product that no longer exists.

26.3. Container Labeling

26.3.1. It is extremely important that all containers of chemicals are properly labeled to the regulated requirements of HazCom 2012 (GHS). This includes every type of container from a 5000 gallon storage tank to a spray bottle of degreaser. Incoming chemicals are to be checked for proper labeling. All chemicals will be stored in their original or approved containers with the appropriate label including chemical name, hazard pictogram(s), signal word, hazard statements, and precautionary statements.

26.3.2. All warning labels and tags must be maintained in a legible condition and not be defaced. When hazardous materials are transferred from original container to secondary containers, each secondary container must be labeled, tagged, or clearly marked to identify the container's contents, the appropriate hazard warnings, and any recommended PPE. Container labeling does not apply to chemicals transferred for the immediate use of the worker doing the transfer.

26.3.3. Labels should be of prominent size and should be firmly attached to the container in such location as to be easily read and should not obstruct other labels or create a hazardous handling situation.

26.3.4. Stationary vessels, tanks, or pipes which contain hazardous materials should have clearly affixed labels, signs, or placards which identify the container contents and have appropriate hazard warnings.

26.3.5. Empty containers must not be reused for anything other than the originally contained substances unless the original labels are removed or defaced and a new label is attached to identify the new contents and associated hazard warnings.

26.4. General Requirements for Chemical Safety

26.4.1. Some chemicals are explosive, corrosive, flammable, or toxic. Other chemicals are relatively safe to use and store but may become dangerous when they interact with other substances. To avoid injury and/or property damage, persons who handle chemicals must understand the hazardous properties of the chemicals. Before using a specific chemical, safe handling methods and health hazards must always be reviewed. Supervisors are responsible for ensuring that the equipment needed to work safely with chemicals is accessible and maintained for all workers on all shifts. The following general safety rules must be observed when working with chemicals:

26.4.1.1. Read and understand the Safety Data Sheets.

26.4.1.2. Keep the work area clean and orderly.

26.4.1.3. Use all necessary safety equipment and PPE.

26.4.1.4. Store incompatible chemicals in separate areas.

26.4.1.5. Substitute less toxic materials whenever possible.

26.4.1.6. Limit the volume of volatile or flammable material to the minimum needed for short operation periods.

26.4.1.7. Provide means of containing the material if equipment or containers should break or spill their contents.

26.4.1.8. Do not pour chemicals onto the ground.

26.4.1.9. Do not dispose of chemicals through the storm drain system.

26.4.1.10. Do not dispose of highly toxic chemicals down sinks or sewer drains.

27. Asbestos Awareness

Our company is committed to providing workers with an asbestos-free workplace. It is our company's policy that only asbestos abatement contractors must be permitted to work in areas where airborne concentrations of asbestos may occur. Therefore, the purpose of this program is to establish a procedure to identify asbestos-containing areas and implement control measures to prevent workers exposure to those areas.

27.1. Definitions

27.1.1. **Asbestos** is a generic term describing a family of naturally occurring fibrous silicate minerals. As a group, the minerals are noncombustible, do not conduct heat or electricity, and are resistant to many chemicals. Although there are several other varieties that have been used commercially, the most common asbestos mineral types likely to be encountered in buildings are chrysotile (white asbestos), amosite (brown asbestos), and crocidolite (blue asbestos). Among these, white asbestos is by far the most common asbestos mineral.

27.1.2. **Asbestos Containing Material (ACM)** is any material that contains more than 1% asbestos.

27.1.3. **Presumed Asbestos Containing Material (PACM)** is thermal insulation and surfacing material found in buildings constructed no later than 1980, or any other material that is suspected of containing asbestos.

27.1.4. **Friable asbestos** material means finely divided asbestos or asbestos-containing material, or any asbestos-containing material that can be crumbled, pulverized, or powdered by hand pressure. Individual fibers in friable asbestos-containing material can potentially become airborne and can then present a health hazard. Friable material commonly used in buildings includes sprayed fibrous fireproofing, decorative or acoustic texture coating, and thermal insulation.

27.1.5. **Non-friable asbestos** includes a range of products in which asbestos fiber is effectively bound in a solid matrix from which asbestos fiber cannot normally escape. However, cutting, braking, sanding, drilling, or similar activities can release asbestos fiber from even non-friable asbestos materials. Non-friable material commonly used in buildings include cement tiles or boards, resilient floor coverings, and asphalt roofing products.

27.2. Training

All workers working in areas where exposure to ACM or PACM exists are required to have documented asbestos awareness training. The training must be provided prior to initial assignment and at least annually thereafter. The training should include:

27.2.1. Asbestos uses and forms.

27.2.2. Health effects of asbestos exposure.

27.2.3. Identification of ACM or PACM locations.

27.2.4. Recognition of damaged, deteriorated, or delaminated ACM or PACM.

27.2.5. Procedures to follow when encountering ACM or PACM.

27.3. General Guidelines for Controlling ACM or PACM

27.3.1. All ACM or PACM must be identified, and workers should be made aware of its location in the building or project. When asbestos-contained material is discovered during the course of construction, a report must be immediately made to the company Superintendent or the Safety Director.

27.3.2. When the job requires work in the area of non-friable ACM, one should avoid disturbing the ACM.

27.3.3. All operations where airborne concentrations of asbestos may be exceeded must be conducted in a regulated area.

27.3.4. The abatement contractor must employ a Competent Person to supervise and make sure all asbestos work performed is within regulated areas.

27.3.5. The abatement contractor performing work requiring the establishment of a regulated area must inform all other workers on the project of:

27.3.5.1. The nature of the abatement work with asbestos or PACM.

27.3.5.2. The existence of and requirements pertaining to regulated areas.

27.3.5.3. The measures taken to ensure that workers on the project are not exposed to asbestos.

27.3.6. The regulated area must be demarcated in any manner that minimizes the number of persons within the area and protects workers outside the area from exposure to airborne asbestos. Where critical barriers or negative pressure enclosures are used, they may demarcate the regulated area. Signs must be provided and displayed to warn others.

27.3.7. All workers working adjacent to regulated areas established by the abatement contractor must take steps on a daily basis to ascertain the integrity of the enclosure and/or the effectiveness of the control method relied on by the primary asbestos contractor to assure that asbestos fibers do not migrate to such adjacent areas.

27.3.8. Access to regulated areas must be limited to authorized persons and to persons authorized by the abatement contractor.

27.3.9. All workers entering a regulated area where workers are required to wear respirators must be supplied a respirator in accordance with *Respirators* on page 75.

27.3.10. The abatement contractor must ensure that workers do not eat, drink, smoke, chew tobacco or gum, or apply cosmetics in regulated areas.

28. Lead Awareness

Exposure to lead occurs in construction related activities such as abrasive blasting, welding, cutting, torch burning, and some maintenance operations. This is not to say that all welding or soldering compounds would contain lead. Subcontractors should check material content before starting such operations. If the work to be done has lead or lead-containing materials that will become "airborne" through dust, mist, or fumes there are specific procedures that must be followed.

28.1. Training

Workers exposed to lead must receive training upon hiring or initial assignment and annually thereafter. Workers are to be informed and trained on the contents of:

28.1.1. The OSHA Lead Standard (Subpart D – 1926.62) and company policy.

28.1.2. The specific nature of work operations that could result in exposure.

28.1.3. The adverse health effects associated with excessive exposure to lead.

28.1.4. The proper selection and use of respiratory protection and other PPE.

28.1.5. The purpose of medical surveillance programs.

28.1.6. Engineering and work practice controls.

28.1.7. Employees' rights to access medical records.

28.2. Accreditation/Licensing

Any subcontractor performing lead abatement work must be certified as a lead abatement firm. The subcontractor is responsible to ensure that a certified lead abatement supervisor is appointed and on site at all times that abatement work is being performed. Proof of certification must be submitted to the company Superintendent prior to mobilization on site.

28.3. General Guidelines for Controlling Lead Exposure

28.3.1. Exposure assessments and monitoring must be done to determine the airborne concentration of lead to which workers may be exposed.

28.3.2. The subcontractor must implement engineering and work practice controls, including administrative controls, to reduce and maintain worker exposure to lead to at or below the permissible exposure limit to the extent that such controls are feasible. Wherever all feasible engineering and work practices controls that can be instituted are not sufficient to reduce employee exposure to or below the permissible exposure limit, the employer must nonetheless use them to reduce employee exposure to the lowest feasible level and must supplement them by the use of respiratory protection.

28.3.3. Respirators must be used and maintained in accordance with *Respirators* on page 75.

28.3.4. The subcontractor must inform all workers and other trades by posting signs or by other appropriate means necessary to warn of the potential for lead exposure.

28.3.5. The subcontractor must document the description of each activity in which lead is emitted, equipment used, material involved, controls in place, crew size, employee job responsibilities, operating procedures, and maintenance practices, if applicable.

28.3.6. A medical surveillance program must be implemented for workers engaged in lead work or for those who are exposed at or above the permissible limit.

28.3.7. Proper hygiene facilities and practices must be implemented to control lead exposure.

28.3.8. When mechanical ventilation is used to control lead exposure, the subcontractor must evaluate the mechanical performance of the system in controlling exposure as necessary to maintain its effectiveness.

28.3.9. If administrative controls are used as a means of reducing workers' time weighted average (TWA) exposure to lead, the subcontractor must establish and implement a job rotation schedule which includes:

28.3.9.1. Name or identification number of each affected worker.

28.3.9.2. Duration and exposure levels at each job or work station where each affected worker is located.

28.3.9.3. Any information that may be useful in assessing the reliability of administrative controls to reduce exposure to lead.

28.3.10. The subcontractor should implement an effective housekeeping program whereby all surfaces must be maintained as free as noticeable of accumulations of lead by using a vacuuming system. Dry or wet sweeping can be used in areas where vacuuming is not effective.

28.3.11. Protective clothing and equipment must be kept clean or disposed of properly, depending on the equipment, clothing, respirators, and gloves. All protective clothing and equipment will be provided to workers at no cost.

28.4. Hygiene Facilities and Work Practices

The following hygiene facilities and work practices must be implemented where it has been determined that lead exposure is at or above the Permissible Exposure Limit:

28.4.1. The subcontractor must provide workers with eating facilities or designated areas that are readily accessible to workers and must ensure that the eating area is free from lead contamination.

28.4.2. Workers exposed to lead must wash their hands and faces prior to eating, drinking, using tobacco products, or applying cosmetics.

28.4.3. Workers must not enter lunchroom facilities or eating areas while wearing protective work clothing or equipment unless surface lead dust has been removed from the clothing or equipment by vacuuming or another cleaning method that limits dispersion of lead dust.

28.4.4. Workers must not eat, drink, use tobacco products, or apply cosmetics in any work area where the Lead Permissible Exposure Level is exceeded and the use of respirators is in place.

28.4.5. Workers who do not shower and change into clean clothing before leaving the work site may contaminate their homes and vehicles with lead dust. Therefore:

28.4.5.1. The subcontractor must provide workers with a clean change area that is equipped with storage facilities for street clothes and a separate area with facilities for the removal and storage of lead-contaminated protective work clothing and equipment.

28.4.5.2. The subcontractor must provide workers with suitable shower facilities, where feasible, so that exposed workers can remove accumulated lead dust from their skin and hair prior to leaving the work site.

28.4.5.3. Where shower facilities are available, workers must shower at the end of the work shift before changing into their street clothes and leaving the work site. Showers must be equipped with hot and cold water, in accordance with OSHA standards.

28.4.5.4. Where showers are not provided, the subcontractor must ensure that employees wash their hands and faces at the end of the work shift.

28.5. Air Sampling and Monitoring

28.5.1. Exposure assessments and monitoring must be done to determine if the exposure level is above the Permissible Exposure Limit (PEL) of 50 micrograms 50 µg/m^3 TWA, unless there is objective data which demonstrates conclusively that no worker will be exposed to lead in excess of the action level of 30 micrograms 30 µg/m^3.

28.5.2. The subcontractor must inform all workers exposed to lead at or above 30 µg/m^3 of the provisions of the standard and all its appendices, the purpose and description of medical surveillance, and provisions for medical removal protection if temporary removal is required.

28.5.3. If a worker is exposed to lead and air sampling is performed, the subcontractor must notify the worker in writing within 5 working days of the air monitoring results which represent the exposure.

28.5.4. If the results indicate that the worker's exposure exceeds the PEL, then the contractor/subcontractor must also notify the employee of this in writing, and provide a description of the corrective action that has been taken or will be taken to reduce the exposure.

28.5.5. Worker exposures must be re-checked by monitoring at least every 6 months if the exposure is at or over the action level but below the PEL.

28.5.6. The subcontractor may discontinue monitoring if 2 consecutive measurements, taken at least 7 days apart, are at or below the action level.

28.5.7. Air monitoring must be repeated every 3 months if a worker is exposed over the PEL.

28.5.8. The subcontractor is required to keep all records of exposure monitoring for airborne lead in accordance with applicable regulations. Such records are to be retained for at least 30 years.

28.6. Medical Surveillance

28.6.1. The subcontractor is responsible and required to provide initial medical surveillance consisting of biological monitoring to include blood lead and zinc protoporphyrin (ZPP) level determination to workers exposed to lead at or above the action level on any one day as determined by exposure monitoring.

28.6.2. The subcontractor must provide full medical surveillance to all workers exposed to lead above 30 µg/m^3 TWA for more than 30 days each year and whose blood lead levels (BLL) exceeds 40 ug/dl.

28.6.3. The subcontractor is required to notify in writing each worker whose blood lead level exceeds 40 ug/dl. In addition each such worker is to be informed that the standard requires medical removal with Medical Removal Program (MRP) benefits when an employee's blood lead level exceeds the above defined limit.

28.6.4. The subcontractor must obtain from the physician and provide the worker with a written medical opinion containing blood lead levels, the physician's opinion as to whether the worker is at risk of material impairment to health, and any recommendations.

28.6.5. Medical examination and consultations will be made available to workers as follows:

28.6.5.1. At least annually for any worker who had a blood lead level at or above 40 ug/dl.

28.6.5.2. When a worker notices signs or symptoms associated with lead intoxication.

28.6.5.3. When a worker desires medical advice on ability to have a healthy child.

28.6.5.4. When a worker demonstrates difficulty in breathing during respirator fit test.

28.6.6. Medical surveillance will be provided by the subcontractor at no cost to the worker and will be performed by or under the supervision of a licensed physician.

28.6.7. The subcontractor is required to keep all medical surveillance records in accordance with applicable regulations. Medical surveillance records must be kept for the duration of employment plus 30 years except in cases where the employment was less than one year.

28.6.8. If the duration of employment is less than one year, the subcontractor need not retain this record beyond the term of employment if the record is provided to the worker upon termination of employment. Medical removal records also must be maintained for the duration of employment.

29. Medical Management

Occupational health concerns receive high priority. It is essential that each job site be able to adequately respond to first-aid events and resolve all other occupational health problems quickly. The health and wellness of each employee is a key segment of the overall safety environment.

29.1. Employee Medical Records

29.1.1. Medical records are permanent records and will be filled out for any injury or illness that requires treatment beyond first aid (on the job). This may include all of the following:

29.1.1.1. Visits to an occupational clinic for first aid.

29.1.1.2. Visits to an occupational clinic for medical treatment.

29.1.1.3. Visits to any emergency room or hospital.

29.1.1.4. Visits to any personal doctor or outside physician.

29.2. First Aid Kits and First Aid Training

29.2.1. Each subcontractor on site must have a well-stocked first aid kit for employee use. The job site Superintendent must perform a weekly inspection of the first aid kit to ensure that the expended items have been replaced. These kits will be located so as to allow easy and quick access. First aid kits and required contents are to be maintained in a serviceable condition. All items which must be kept sterile must be individually wrapped and sealed. Items such as scissors, tweezers, tubes of ointments with caps, or rolls of adhesive tape need not be individually wrapped, sealed, or disposed of after a single use or application.

29.2.2. Each subcontractor must provide at least one first-aid trained employee, recognized by valid certificate from the American Red Cross, American Heart Association or equivalent, to be on the project work shift while work activities are performed to render first aid to company employees.

29.3. Preferred Medical Provider

The preferred provider network is a list of physicians who have agreed to treat company employees when such injuries arise out of the performance of their job duties. This preferred provider list is available for each project based upon location and type of injury to be treated. The preferred provider will provide the necessary loss data, work restrictions, and medical records to allow our company management and the workers' compensation administrator to sufficiently manage the Return to Work Program.

29.4. Medical Referrals

The Safety Director will arrange for employees to see appropriate medical care providers for injuries or illnesses other than first aid. A designated occupational medical clinic or hospital will be assigned to each job site and will be posted in a conspicuous location. The posting must include the name of the occupational clinic or hospital, the address, the phone number, and a map.

29.5. Modified Duty

When an employee has been identified by proper medical authority as having a condition that would limit them in their normal job function, the treating physician must initiate a modified duty assignment sheet. This sheet will list the limitations and advise management of the need for assignment to duties that will not exceed the limitations. Management will assign limited duties in accordance with the modified duty assignment sheet.

The original must remain in a Pending & Review file, held by the Safety Director, to prompt periodic monitoring of the employees condition. Copies must be provided to the employee and their supervisor.

29.6. Return To Duty

When conditions have changed, such that the employee no longer has limitations, the treating physician must initiate a return to duty assignment sheet. The original form must be filed in the employee's medical record and copies provided to the employee and their supervisor.

29.7. Non-Compliance

Failure to comply with a modified duty assignment, a return to duty assignment, or any other section of this policy and/or the Return to Work Program, will lead to immediate disciplinary action, up to and including termination.

30. Silica Exposure Plan

The purpose of this policy is to provide awareness about hazards associated with respirable silica dust and outline the precautions to take to ensure employees and subcontractors who work with, or around silica are not exposed to hazardous levels of silica dust. Furthermore, this policy provides procedures for common silica related work duties to minimize exposure to workers in accordance with the OSHA Respirable Crystalline Silica standard (29 CFR 1926.1153).

Crystalline silica is a basic component of soil, sand, granite and many other minerals. Quartz is the most common form of crystalline silica. All materials containing silica can result in the presence of respirable silica particles when chipping, cutting, drilling or grinding takes place. Silica exposure occurs through inhalation of silica-containing particles and occurs through many construction methods. Exposure to excessive silica dust over long periods of time can result in silicosis, lung cancer, other respiratory diseases, and kidney disease.

Activities that may result in severe silica exposure include:

Abrasive blasting	Jack hammering
Concrete crushing	Hoe ramming
Rock drilling	Mixing of concrete, mortar, or grout
Drilling of concrete, blocks or bricks	Sawing of concrete, blocks or bricks
Chipping of concrete, blocks or bricks	Demolition of concrete, blocks or bricks
Tuckpointing of blocks or bricks	Grinding or polishing of concrete
Moving or dumping of concrete or rocks	Rock crushing
Using coatings containing silica	Removing coatings containing silica

30.1. Definitions

30.1.1. **Action Level** means a concentration of airborne respirable crystalline silica of 25 µg/m3, calculated as an 8-hour time weighted average (TWA).

30.1.2. **Assigned Protection Factor (APF)** means the workplace level of respiratory protection that a respirator or class of respirators is expected to provide to employees when the employer implements a continuing, effective respiratory protection program. (For example, an APF of 10 for a respirator means that a user could expect to inhale no more than one tenth of the airborne contaminant present).

30.1.3. **Competent Person** means an individual who is capable of identifying existing and foreseeable respirable crystalline silica hazards in the workplace and who has authorization to take prompt corrective measures to eliminate or minimize them. The Competent Person must have the knowledge and ability to make frequent and regular inspections of job sites, materials, and equipment to implement the written exposure control plan.

30.1.4. **Employee Exposure** means the exposure to airborne respirable crystalline silica that would occur if the employee were not using a respirator.

30.1.5. **Engineering and Work Practice Controls** means the employer shall use engineering and work practice controls to reduce and maintain employee exposure to respirable crystalline silica to or below the PEL, unless the employer can demonstrate that such controls are not feasible. (EWPC examples are wet methods, local exhaust ventilation, and vacuum tool system).

30.1.6. **High-Efficiency Particulate Air [HEPA] Filter** means a filter that removes at least 99.97% of airborne particulates of 0.3 micrometers in diameter.

30.1.7. **Objective Data** means information, such as air monitoring data from industry-wide surveys or calculations based on the composition of a substance, demonstrating exposure to respirable crystalline silica associated with a particular product or material or a specific process, task, or activity. The data must reflect workplace conditions closely resembling or with a higher exposure potential than the processes, types of material, control methods, work practices, and environmental conditions in the employer's current operations.

30.1.8. **Permissible Exposure Limit (PEL)** limits worker exposures to 50 µg/m^3 of respirable crystalline silica per cubic meter of air, calculated as an 8-hour TWA. This is OSHA's limit for silica dust exposure.

30.1.9. **Respirable Crystalline Silica** means quartz, cristobalite, and/or tridymite contained in airborne particles that are determined to be respirable by a sampling deviceefficient in removing mono-dispersed particles of 0.3 micrometers in diameter.

30.2. General Guidelines for Controlling Silica Exposure

30.2.1. For each employee engaged in a task identified on Table 1 (below), the employeer shall fully and properly implement the engineering controls, work practices, and respiratory protection specified for the task on Table 1, unless the employer assesses and limits the exposure of the employee to respirable crystalline silica in accordance with section (30.2.3) of this plan.

Table 1

Equipment/ Task	Engineering and work practice control	Required respiratory protection and minimum assigned protection factor (APF)	
		≤ 4 hours/shift	> 4 hours/shift
Stationary masonry saws	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. --- Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None ----	None ----

Handheld power saws (any blade diameter)	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions: ---------- - When used outdoors - When used indoors or in an enclosed area	 ---------- None APF 10	 ---------- APF 10 APF 10
Handheld power saws for cutting fiber-cement board (with blade diameter of 8 inches or less)	For tasks performed outdoors only: Use saw equipped with commercially available dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide the airflow recommended by the tool manufacturer or greater and have a filter with 99% or greater efficiency.	None	None
Walk-behind saws	Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions: ---------- - When used out doors - When used indoors or in an enclosed area	 ---------- None APF 10	 ---------- None APF 10
Drivable saws	For tasks performed outdoors only: Use saw equipped with integrated water delivery system that continuously feeds water to the blade. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None
Rig-mounted core saws or drills	Use tool equipped with integrated water delivery system that supplies water to cutting surface. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None	None
Handheld and stand-mounted drills (including impact and rotary hammer drills	Use drill equipped with commercially available shroud or cowling with dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide the airflow recommended by the tool manufacturer or greater and have a filter with 99% or greater efficiency and a filter-cleaning mechanism. Use a HEPA-filtered vacuum when cleaning holes.	None	None
Dowel drilling rigs for concrete	For tasks performed outdoors only: Use shroud around drill bit with a dust collection system. Dust collector must have a filter with 99% or greater efficiency and a filter cleaning mechanism. Use a HEPA-filtered vacuum when cleaning holes.	APF 10	APF 10

Vehicle-mounted drilling rigs for rock and concrete	Use dust collection system with close capture hood or shroud around drill bit with a low-flow water spray to wet the dust at the discharge point from the dust collector. --- Or --- Operate from within an enclosed cab and use water for dust suppression on drill bit.	None -------------- -------------- None	None --------------- --------------- None
Jackhammers and handheld powered chipping tools	Use tool with water delivery system that supplies a continuous stream or spray of water at the point of impact: --- - When used outdoors - When used indoors or in an enclosed area --- Or Use tool equipped with commercially available shroud and dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide the airflow recommended by the tool manufacturer or greater and have a filter with 99% or greater efficiency and a filter-cleaning mechanism: --- -When used outdoors -When used indoors or in an enclosed area	 -------------- None APF 10 -------------- -------------- None APF 10	 --------------- APF 10 APF 10 --------------- --------------- APF 10 APF 10
Handheld grinders for mortar removal (i.e., tuckpointing)	Use grinder equipped with commercially available shroud and dust collection system. --- Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism.	APF 10 --------------	APF 25 ---------------
Handheld grinders for uses other than mortar removal	For tasks performed outdoors only: Use grinder equipped with integrated water delivery system that continuously feeds water to the grinding surface. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. --- Or Use grinder equipped with commercially available shroud and dust collection system. Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.	None --------------	None ---------------

Handheld grinders for uses other than mortar removal (continued)	Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism: --- - When used outdoors - When used indoors or in an enclosed area	 --- None None	 --- None APF 10
Walk-behind milling machines and floor grinders	Use machine equipped with integrated water delivery system that continuously feeds water to the cutting surface. --- Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Or --- Use machine equipped with dust collection system recommended by the manufacturer. --- Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide the airflow recommended by the manufacturer or greater and have a filter with 99% or greater efficiency and a filter-cleaning mechanism. When used indoors or in an enclosed area, use a HEPA-filtered vacuum to remove loose dust in between passes.	None --- --- None ---	None --- --- None ---
Small drivable milling machines (less than half-lane)	Use a machine equipped with supplemental water sprays designed to suppress dust. Water must be combined with a surfactant. Operate and maintain machine to minimize dust emissions.	None	None
Large drivable milling machines (half-lane and larger)	For cuts of any depth on asphalt only: Use machine equipped with exhaust ventilation on drum enclosure and supplemental water sprays designed to suppress dust. --- Operate and maintain machine to minimize dust emissions. --- For cuts of four inches in depth or less on any substrate: Use machine equipped with exhaust ventilation on drum enclosure and supplemental water sprays designed to suppress dust. --- Operate and maintain machine to minimize dust emissions. Or ---	None --- --- None --- ---	None --- --- None --- ---

Large drivable milling machines (continued)	Use a machine equipped with supplemental water spray designed to suppress dust. Water must be combined with a surfactant. Operate and maintain machine to minimize dust emissions.	None	None
Crushing machines	Use equipment designed to deliver water spray or mist for dust suppression at crusher and other points where dust is generated (e.g. hoppers, conveyors, sieves/sizing or vibrating components, and discharge points). Operate and maintain machine in accordance with manufacturer's instructions to minimize dust emissions. Use a ventilated booth that provides fresh, climate-controlled air to the operator or a remote control station.	None	None
Heavy equipment and utility vehicles used to abrade or fracture silica-containing materials (e.g. hoe-ramming, rock ripping) or used during demolition activities involving silica-containing materials	Operate equipment from within an enclosed cab. --- When employees outside of the cab are engaged in the task, apply water and/or dust suppressants as necessary to minimize dust emissions.	None --- None	None --- None
Heavy equipment and utility vehicles for tasks such as grading and excavating but not including demolishing, abrading or fracturing silica-containing materials	Apply water and/or dust suppressants as necessary to minimize dust emissions. --- Or When the equipment operator is the only employee engaged in the task, operate equipment from within an enclosed cab.	None --- None	None --- None

30.2.2. Where an employee performs more than one task on Table 1 during the course of a shift:

30.2.2.1. And the total duration of all tasks combined is more than four *(> 4)* hours, the required respiratory protection for each task is the respiratory protection specified for more than four *(> 4)* hours per shift.

30.2.2.2. If the total duration of all tasks on Table 1 combined is less than or equal to four *(≤ 4)* hours, the required respiratory protection for each task is the respiratory protection specified for less than or equal to four *(≤ 4)* hours per shift.

30.2.3. For tasks not listed in Table 1, or where the employer does not fully and properly implement the engineering controls, work practices and respiratory protection described in Table 1:

30.2.3.1. The employer shall assess the exposure of each employee who is or may reasonably be expected to be exposed to respirable crystalline silica at or above the action level (25 µg/m3). This exposure assessment can be performed by air monitoring or objective data.

30.2.3.2. Air monitoring: For a list of different air monitoring methods and directives, see OSHA 1926.1153(d).

Objective data: For a list of requirements on objective data, see OSHA 1926.1153(j)(2).

30.3. Housekeeping

30.3.1. The employer shall not allow dry sweeping or dry brushing where such activity could contribute to employee exposure to respirable crystalline silica. Use the following:

- Wet sweeping or wet mopping
- HEPA-filtered vacuuming

30.3.2. The employer shall not allow compressed air to be used to clean clothing or surfaces where such activity could contribute to employee exposure to respirable crystalline silica.

30.4. Written Exposure Plan

30.4.1. The employer shall establish and implement a written exposure control plan using the *Written Exposure Control Plan* form that contains at least the following elements:

30.4.1.1. A description of the tasks in the workplace that involve exposure to respirable crystalline silica;

30.4.1.2. A description of the engineering controls, work practices, and respiratory protection used to limit employee exposure to respirable crystalline silica for each task;

30.4.1.3. A description of the housekeeping measures used to limit employee exposure to respirable crystalline silica; and

30.4.1.4. A description of the procedures used to restrict access to work areas, when necessary, to minimize the number of employees exposed to respirable crystalline silica and their level of exposure, including exposures generated by other employers or sole proprietors.

See sample at the end of this section.

30.4.2. The employer shall review and evaluate the effectiveness of the written exposure control plan at least annually and update it as necessary.

30.4.3. The employer shall make the written exposure control plan readily available for examination and copying, upon request, to each employee covered by this section and their designated representatives.

30.4.4. The employer shall designate a Competent Person to make frequent and regular inspections of job sites, materials, and equipment to implement the written exposure control plan.

30.5. Medical Surveillance

30.5.1. The employer shall make medical surveillance available at no cost to the employee, and at a reasonable time and place, for each employee who will be required under this plan to use a respirator for 30 or more days per year.

30.5.2. Employees exposed on an ongoing basis to silica dust or any employee working with silica develops signs or symptoms of excessive exposure should be enrolled in a medical surveillance program.

30.5.3. The medical surveillance program consists, at a minimum, of baseline examination and chest X-ray.

30.5.4. Employees enrolled in the medical surveillance program should be examined annually to track any changes as a result to exposure to silica dust.

30.6. Training and Recordkeeping

30.6.1. Hazard Communication on Silica and Silica Awareness Training shall be conducted initially upon hiring or before placing employees to work with silica, and consist of:

30.6.1.1. Respirable crystalline silica information

30.6.1.2. Access to labels on containers of crystalline silica

30.6.1.3. Potential health effects and symptoms of exposure to respirable silica

30.6.1.4. Safety Data Sheets for silica, quartz and applicable products containing silica

30.6.1.5. Setup of regulated area to mark the boundaries of work areas containing silica dust

30.6.1.6. The use of engineering controls, work practices and good housekeeping to control silica dust

30.6.1.7. Use and care of PPE

30.6.1.8. Expected exposures to silica dust

30.6.1.9. Exposure monitoring process

30.6.1.10. Medical surveillance process

30.6.1.11. Employer requirement to maintain all training, medical surveillance, and exposure monitoring results

Sample- Written Exposure Control Plan

Company: ABC Construction, Inc.

Person Completing the Plan: John Doe, Owner

Description of Task:

Demolishing concrete and tile floors inside commercial buildings using a jackhammer.

Control Description:

Controls:

- Use jackhammer equipped with the appropriate, commercially available shroud and a vacuum dust collection system with the flow rate recommended by the jackhammer manufacturer, a filter that is at least 99% efficient, and a filter cleaning mechanism.
- Use a portable fan to exhaust air and prevent the buildup of dust.

Work Practices:

- Check shrouds and hoses to make sure they are not damaged before start of work.
- Make sure the hoses do not become kinked or bent while working.
- Use switch on vacuum to activate filter cleaning and the frequency recommended by the manufacturer.
- Replace vacuum bags as needed to prevent overfilling.
- Use the jackhammer and vacuum controls according to the manufacturer's instruction for reducing the release of visible dust.
- If visible dust increases, check the controls and adjust as needed.

Respiratory Protection:

- Use respirator with an Assigned Protection Factor (APF) of 10 the entire time the task is being performed.
- See the written respiratory protection program for information on selection, training and fit-testing requirements, in addition to proper use instruction for respirators (for example, being clean shaven when using a respirator that seals against the face).

Housekeeping:

- Dust containing silica on work surfaces and equipment must be cleaned up using wet methods or a HEPA-filtered vacuum.
- Do not use compressed air or dry sweeping for removing dust and debris containing silica from work surfaces.
- Dispose of used vacuum bags in a container and keep the container sealed.

Procedures Used to Restrict Access to Work Areas:

- Schedule the work so that only employees who are engaged in the task (the jackhammer operator and employees helping the operator) are in the work area.

Chapter 3 Substance Abuse Policy

Our company is committed to providing a safe working environment, and it expects its employees to report to their jobs physically and mentally fit for work. Furthermore, the company is committed to ensuring its continued representation as a quality business enterprise. To achieve these goals, our company must take a firm and positive stand against drug and alcohol abuse. This policy is intended to ensure a drug-free environment for the benefit of the employees, subcontractors, customers of the company, and the general public.

1. Policy Requirements

1.1. The use, possession, sale, or transfer of an illegal drug by an employee on company premises and/or job sites, in performance of company business, while operating company-owned equipment, or at company-sponsored events, is prohibited.

1.2. The use of any legally obtained drug by an employee while performing company business or while on company premises is prohibited to the extent that such use may adversely affect the employee's job performance, safety of the employee, or the safety of others. Employees who believe that the use of a legal drug may adversely affect job performance or behavior are to report such drug's use and possible side effects to the Vice President or company Safety Director.

1.3. The unauthorized use, possession, sale, or transfer of alcohol on company premises and/or job sites or while operating company owned equipment is prohibited.

1.4. The presence in specified amounts of any illegal drug or the presence of alcohol above a BAT level of .02 in any employee's system while on company premises, while otherwise performing company business, or while operating company-owned equipment at any time is prohibited.

1.5. Employees must notify the company immediately of any arrest or conviction from a drug or alcohol related offense.

1.6. For the purposes of this policy, **company premises** or **property** includes all property or equipment that is owned, leased, used, or under the control of our company.

1.7. Employees must sign the *Substance Abuse Acknowledgement and Release* form to be maintained in the employee's personnel file. This form is a part of all new employee paperwork.

2. Testing Procedures

2.1. Our company performs the following employee drug and alcohol tests: pre-employment, random, post-accident, reasonable suspicion, and follow-up.

2.2. Our company uses Substance Abuse and Mental Health Service Administration (SAMHSA) certified laboratories for all drug and alcohol screening and cut-off levels.

2.3. Testing procedures may include, but are not limited to, urine, breath, saliva, blood, hair, or sweat. The company Safety Director determines the testing method.

2.4. An **observed** or **direct observation** drug screening may be requested for any of the following conditions: reasonable suspicion, post-accident, hot or cold specimen, dilute specimen, or adulterated specimen.

2.5. The Safety Director provides each office and job site location with an approved testing facility. The supervisor ordering the substance abuse test must follow the procedures below in conjunction with the reason for testing.

2.5.1. Pre-Employment Testing

All prospective new hires must submit to a pre-employment substance abuse test. At no time shall an applicant start work without receiving notification of a negative result. Results can be generally received within 48–72 hours; therefore, hiring managers should plan ahead. Procedures for administering a pre-employment test are as follows:

2.5.1.1. All hiring managers should contact Procruit to register the applicant for a drug screening and to receive an electronic chain-of-custody form. If the electronic chain-of-custody forms are not available in the area, a paper chain-of-custody form is sent to the applicant for testing.

2.5.1.2. The applicant should report to the laboratory listed on the chain of custody form for testing.

2.5.2. Random Testing

A percentage of the company's employees are randomly selected quarterly for drug screening. Selected employees have 24 hours from the time of notification to complete the test. If the employee is traveling and unavailable, up to 48 hours may be granted by the Safety Director. If the employee fails to complete the test within this time period, the result may be considered positive. Procedures for administering the random drug screening are as follows:

2.5.2.1. Selected employees receive an electronic or paper chain-of-custody form.

2.5.2.2. The employee should report to the laboratory listed on the chain of custody form for testing.

2.5.3. Reasonable Suspicion Testing

Testing is required when an employee appears to be under the influence (For example by observation, appearance, odor, or slurred speech). Procedures for administering a reasonable suspicion drug screening are as follows:

2.5.3.1. Immediately notify the Safety Director.

2.5.3.2. The requesting manager must complete a fitness-for-duty certification provided by the Safety Director.

2.5.3.3. The employee receives an electronic or paper chain-of-custody form.

2.5.3.4. The requesting manager must provide transportation for the employee to an approved laboratory for testing. Once testing has been completed, transportation must be provided for the employee to his/her home.

2.5.3.5. The employee in question is temporarily suspended from work until the result of the test has been returned. If the test is negative, the employee is allowed to return to work immediately.

2.5.4. Post-Accident Testing

Testing is required when an employee has been associated with an accident to himself or herself and/or fellow co-workers. Testing for post-accident must take place immediately after the accident—not more than 24 hours after the accident. Procedures for administering a post-accident drug screening are as follows:

2.5.4.1. Immediately notify the Safety Director.

2.5.4.2. The employee is given an electronic or paper chain-of-custody form.

2.5.4.3. The employee should report to the laboratory listed on the chain of custody form for testing.

2.5.4.4. If the employee is being medically treated, a request for drug screening should be made at the clinic or hospital. In these cases, a chain-of-custody form may be provided by the treating physician.

2.5.4.5. Complete the *Accident Investigation Report* and *Accident Witness Statement*, and return these forms to the Safety Director (See the Appendix, *Forms)*.

3. Results

3.1. All test results other than negative including, but not limited to, non-human urine or adulterated specimens, are considered positive. Therefore, policies based on such positive results will be followed. All results that are negative but diluted result in re-testing.

3.2. The failure or refusal to provide or complete the necessary paperwork to submit to a drug or alcohol test is grounds for immediate termination for cause.

3.3. In the case of a positive result, a Medical Review Officer (MRO) contacts the subject to verify prescriptions. Upon review, the MRO reports the final result to the Safety Director.

3.4. A violation of our Substance Abuse Policy may result in disciplinary action, up to and including discharge, at the company's sole discretion, and may include the loss of worker's compensation, medical, and indemnity benefits.

3.5. All test results, assistance requests, and treatment records are maintained in a file separate from the employee's personnel file and are held with as much confidentiality as possible. Results will only be disclosed to those having a legitimate need to know such information.

4. Subcontractors

4.1. The use, sale, or distribution of illegal drugs or alcohol on our company's job sites is strictly forbidden. Violators will be immediately removed from the project.

4.2. If the company has reason to suspect an employee is impaired by the use of drugs or alcohol, the worker will be immediately removed from the project.

Chapter 4 Fleet Safety

One of the most dangerous yet overlooked activities that employees carry out is driving a motor vehicle. Over half of the fatalities that occur every year in the workplace occur on the highway. Apart from the devastation due to injury and loss of life, these incidents represent serious economic burden in both direct and indirect costs.

Although the risk to drivers can never be completely eliminated, it is the intent of this policy to significantly reduce the associated hazards presented to employees and the general public through education and strict enforcement.

1. Driver Selection

It is important that the operators of company-owned vehicles and personal vehicles driven for company use are safe drivers. Safe drivers know how to operate a vehicle properly. They do not make the common driving errors that cause most accidents. They also have learned to compensate for the lack of skill and attention of other drivers on the road who may otherwise involve them in an accident. Safe drivers can recognize accident-causing situations and take corrective actions to prevent them. Therefore, the selection of drivers is a very important element in fleet safety.

For the purposes of this policy, a **fleet vehicle** is defined as any vehicle owned, leased, or rented under the control of our company. In addition, the rules and regulations applicable to this policy also apply to all personal vehicles that are used for company business and obtain mileage reimbursement or auto allowance.

1.1. Each driver of a fleet vehicle is required to be in good standing with the requirements of this policy as follows:

1.1.1. Each driver of a fleet vehicle must submit an application for a criminal background and motor vehicle record check, and must be approved by the People Department as a Qualified Driver. Each employee will submit the *Fleet Safety Policy & MVR Record Consent Agreement* as a part of the new hire process.

1.1.2. Qualified Drivers must possess and carry their current driver's license on their person. The type and class of the operator's license must be sufficient for the vehicle the driver is to operate as regulated by the enforcing Department of Transportation.

1.1.3. Qualified Drivers must be in good standing with the company's Substance Abuse Policy. Employees suspended or on probation with this policy are not considered Qualified Drivers.

1.2. Failure to provide any of the following information, or the existence of any of the conditions listed below, may disqualify the employee from being a Qualified Driver and may lead to a job transfer, suspension, or termination for cause:

1.2.1. Falsification or omission of personal information, including experience, accidents, and driving information;

1.2.2. Driving privileges temporarily or permanently revoked, suspended, withdrawn, or denied at any time during the past three years;

1.2.3. A conviction of or guilty plea to operating a vehicle while under the influence of alcohol or drugs;

1.2.4. A conviction of or guilty plea to vehicle hit and run, or leaving the scene of an accident involving property damage, personal injury, or death;

1.2.5. Three or more moving violations in the previous 12 months, or a total of five or more during the previous three years;

1.2.6. Three or more preventable vehicle accidents, or property damage or loss incidents in the previous 12 months, or a total of five or more during the previous three years; or

1.2.7. Any physical or mental condition diagnosed by a physician which may interfere with the safe operation of the motor vehicle.

2. Fleet Driving Regulations

Qualified Drivers are responsible for the following:

2.1. Operating it in compliance with company, local, state, and federal regulations;

2.2. Ensuring that the manufacturer's recommended maintenance schedule is followed and that tire pressure and operating fluids are regularly checked for optimal performance levels (per the vehicle's operating manual);

2.3. Checking all four sides to be sure that the surrounding area is clear of hazards before entering the vehicle;

2.4. Wearing a seat belt and requiring every passenger to wear a seat belt at all times;

2.5. Obeying all company, local, state, and federal regulations, and for paying all parking and traffic violation fines and associated costs incurred while operating or being responsible for a fleet vehicle;

2.6. Following the vehicle's operating manual for loading and load securement;

2.7. Not operating a fleet vehicle while under the influence of alcohol or illicit drugs, or impaired by illness, fatigue, injury, or prescribed medication;

2.8. Reporting any fleet-related reports or information to the company in an accurate and timely manner;

2.9. Removing the ignition key, locking all doors, and securing or removing valuable items or materials whenever it is left unattended and unsupervised;

2.10. Refueling a fleet vehicle with the engine off;

2.11. Reporting every accident and property-damage incident involving the fleet vehicle to their supervisor within one work day, and immediately notifying their supervisor for all incidents involving bodily injury, regardless of how slight;

2.12. Remaining at the scene of an accident, with the exception of leaving to summon police or medical assistance;

2.13. Ensuring that no physical damage to a fleet vehicle is caused or allowed to be caused by their failure to act; and

2.14. Participating in fleet safety training programs and successfully completing corrective driving programs, if required.

Violation of these regulations will result in disciplinary action up to and including termination.

3. Distracted Driving

Distracted driving is any behavior that diverts a driver's focus away from the primary task of safely operating a motor vehichle. In order to ensure the safety of our employees and to comply with state and federal regulations regarding hand held cellular phone usage, the company has adopted the following policy:

3.1. All Qualified Drivers are allowed to initiate, answer, or terminate a call by touching a single button on a cellular phone or headset, provided it can be done while seated in a normal manner and seat-belted as required by law. Any such movement must be accomplished without removing the driver's eyes from the roadway. Thus hands-free technology is permissible, provided the use does not cause distraction. State and federal laws must always be followed regarding the use of hand-held devices, even in hands-free mode.

3.2. If, while the vehicle is in motion, an employee determines that use of a cell phone is required and requires more than the touch of a single button, the employee must pull over to the side of the road or find a safe place to stop before responding.

3.3. Use of a cell phone or hand-held device while driving is not required by the company.

3.4. Qualified Drivers may not respond to e-mails or text messages, use mobile apps or search the Internet while driving.

3.5. Additional driving distractions include using a hand-held device to text, talk, type, watch videos, listen to music, or read (including navigation); grooming; eating; smoking (including e-cigarettes or similar devices); talking to passengers; reading; using a navigation system; and making any adjustments to equipment inside the vehicle (For example the radio, climate controls, and seats). Qualified Drivers should be conscious of these distractions and keep these activities to minimal or none.

3.6. Employees charged with traffic violations or involved in accidents resulting from actions in violation of this policy are solely responsible for all liabilities.

4. Employee Personal Vehicle Use on Company Business

4.1. Our company may, from time to time, find that the efficiency of our operations is improved if an employee uses their personally owned or leased vehicle for company business. When the company and the employee agree to this, the company will reimburse the employee for the business use of their personal vehicle. Every employee, while engaged in company business, must abide by the rules for drivers of company-owned or leased vehicles and must be considered a Qualified Driver. At no time will motorcycles be allowed for such use.

4.2. An employee who is to be reimbursed for the business use of their personally owned or leased vehicle must maintain the vehicle in a safe operating condition and provide, at their expense, vehicular property damage and liability insurance. Liability insurance minimum limits required are $100,000.00 per person, $300,000.00 per accident, $100,000.00 property damage.

Note: No employee may use their personal vehicle for company business without proper insurance coverage. If insurance is cancelled or allowed to lapse, the employee must immediately notify the company, and no further business use of their vehicle will be allowed until insurance is reinstated and the company grants permission to resume business use of the vehicle.

Chapter 5 Accident Investigation

Accident investigation and loss control are two closely related subjects. A proper accident investigation is needed to prevent more accidents and to conserve our resources. Without a prompt and proper investigation, the results of a lawsuit or litigation can be disastrous. It is absolutely essential that accidents are promptly and properly investigated when they occur on a project. A complete accident investigation report can mean a major savings in resources, reduced incidents, and the difference between winning and losing a lawsuit.

1. Investigation Procedures

1.1. See that all injured workers are properly cared for

The first concerns at an accident scene, regardless of its seriousness, are the care of the injured and the prevention of more damage either to person or property. Nothing should interfere with these concerns except the safety of the rescuers themselves. Survey the scene; if the accident is serious, call 911. If trained emergency personnel are available, see that they are sent to the accident scene to render first aid until professional emergency service arrives.

1.2. Protect other people and property

Secure the area to restrict access. Only after the accident site is safe to approach should the actual investigation begin.

1.3. Have someone call our Safety Department: 423-643-2045

1.4. Preserve the scene as it was after the accident

Keep all curious bystanders out of the area and note who was present in the area. Keep personnel from destroying or moving evidence.

1.5. Make a visual walk-through of the accident site

Take charge and start performing a visual analysis of the scene. Remember that a proper investigation is FACT FINDING not FAULT FINDING. Review the entire scene and note the following. Conditions at an accident scene will change rapidly.

1.5.1. Take notice of all items of evidence.

1.5.2. Remember to record all information as you walk through the area.

1.5.3. Mark the location of people or items likely to be moved, such as injured people, lightweight or high-value items, and mobile equipment.

1.6. Identify all people who might have information about the accident

Record their names, crafts, and company worked for. If members of the public are involved, obtain their addresses and telephone numbers.

1.7. Examine the evidence

Identify and examine the items that will provide information about what happened, how it happened, and why it happened.

1.8. Photograph all evidence

Photographs of the general area, major elements of the accident site, and articles of evidence should be taken as soon as possible after the accident. Always take plenty of pictures from all 4 sides. Photograph anything that is likely to be quickly displaced. Show enough scenes to give a good orientation. Make a log of all photos taken indicating date, time, exact location, and what it shows.

1.9. Make a diagram of the accident site

Make a sketch of the accident scene, showing the location of all evidence essential to understanding the accident situation. Measure distances involved and record them on the sketch. At a later time, information from the sketch can be used to prepare a scaled diagram for inclusion in the accident report.

1.10. Interview and obtain statements from all witnesses

All persons who may be able to contribute information about the accident should be interviewed as soon as possible after the accident. Witnesses should complete the *Accident Witness Statement* (See the Appendix, *Forms*). Promptness helps ensure the integrity of the witness's statements. Try to keep witnesses apart. Record all information and try to confine their statements to facts and observations, not opinions. Try to approach witnesses carefully and be the "good guy" seeking help. Let the witness tell the story in their own terms first, then try to fill in the holes.

1.11. Prepare an accident report

Superintendents are responsible for obtaining complete information concerning every accident that happens on their project.

Any accident may result in a claim against our company. Report the accident immediately (while the facts are still fresh in your mind), using the *Accident Investigation Report* (See the Appendix, *Forms*). As you write the report, if you notice missing items, find that information. The report should contain details of what happened, when it happened, and who was involved. The report should develop conclusions regarding the physical cause of the accident, but it should not place legal liability upon any party.

Send the report to the company Safety Director (electronically if available) and keep a copy on site for the Superintendent's files. Remember that the form is for INTERNAL/COUNSEL USE ONLY.

2. Accidents Involving Company Personnel

2.1. Our company employees in need of medical attention should be sent to an occupational health clinic that is on the approved list provided by the insurance company. If the injury is serious, the employee should go to the local emergency room or call 911.

2.2. All company employees who are involved in an accident that is job-related and requires medical attention or that involves damage to property must be sent immediately (either after or during medical care) to the nearest medical and or testing facility for a substance abuse test. This requirement includes not just injured personnel, but any employee who may have had a causal relationship to the incident.

2.3. If medical attention is required, the state-specific *First Report of Injury and Accident Investigation Form* must be obtained from your Safety Director. The completed form must be immediately sent to the company Safety Director and to Brock Insurance on the day of the accident.

2.4. If an employee refuses medical attention at the time of an accident, the employee must sign a statement that medical attention was offered to them. If they still refuse to get any medical attention, they may be in jeopardy of losing workers' compensation benefits regarding this incident.

3. Accidents Involving Subcontractor Personnel

3.1. At the time of the accident, the Superintendent or Project Manager must complete the *Accident Investigation Report* (See the Appendix, *Forms*).

3.2. If the accident resulted in injury, a copy of the accident report should be immediately sent to the company Safety Director and Brock Insurance.

4. Accidents Involving Third Parties (Public/Pedestrian)

4.1. All accidents must be reported immediately by phone to the company Safety Director with as much information as possible. The *Accident Investigation Report* (See the Appendix, *Forms*) must be completed and electronically sent to Brock Insurance and the company Safety Director. Copies of reports made by third parties (For example the ERMC, owner, police, or fire department) should also be forwarded as part of the accident investigation.

4.2. All claims need to be reported to Brock Insurance as “notice only” claims unless our company has received a legal notice.

4.3. If a subcontractor is involved in or responsible for any type of claim, then the Project Manager is responsible for notifying the subcontractor in writing. The letter should instruct the subcontractor to notify their insurance carrier of the claim and to indemnify our company. Copies of this letter should be sent Brock Insurance and the Safety Director.

5. Contact Numbers for Reporting Accidents

	Brock Insurnace	Russ Bartholomew, VP of Safety
Phone	(706) 866-3394	(423) 855-1550
Fax	(706) 861-4619	(423) 855-6857
Cell	(423) 991-6644	(423) 240-5939

These are general guidelines for reporting and handling claims. No two claims are the same, and claims may need to be handled differently. Specific claims need to be discussed between the Project Manager, the overseeing Vice President, and the Safety Director.

6. Recordkeeping

6.1. A comprehensive OSHA 300 log is maintained at the main office. This log includes all work-related recordable injuries and illnesses incurred by company employees as prescribed by 29 CFR 1904. This log must be available to government representatives, employees, and employee representatives upon request.

6.2. The company Safety Director shall prepare the OSHA Form 300-A by the 15th day of January, following the recording year. The completed form will be distributed to the respective sites and posted therein from February 1st through April 30th. After the required posting period, the form must be filed with the corresponding OSHA 300 for a period of five (5) years.

6.3. The company Safety Director also provides semi-annual and annual reports to upper-management of accident statistics and trends. These reports are used to evaluate safety performance and to focus on eliminating recurring trends to prevent future accidents.

Chapter 6 OSHA Inspections

Under the Occupational Safety and Health Act of 1970, the Occupational Safety and Health Administration (OSHA) is authorized to conduct workplace inspections to determine whether employers are complying with standards issued by the agency for safe and healthful workplaces. Inspections are usually conducted without advance notice.

Your behavior during the inspection is very important. The following outline provides you, the project Superintendent, with the steps that should be taken during an OSHA or Cal/OSHA inspection.

1. Opening Conference

1.1. Have someone call our Safety Department: 423-643-2045

1.2. Introduction

During the opening conference, the compliance officer should introduce himself or herself and show official credentials. The Superintendent should take a business card or make a copy of the credentials for future use.

1.3. Attendees

This conference should be attended by any subcontractor's superintendent, any labor union representative, any employee, or any foreman that the compliance officer requests, if applicable.

1.4. Purpose

The purpose of this conference is to:

1.4.1. Allow OSHA or Cal/OSHA to explain the reasons for the inspection.

1.4.2. Generally lay out the inspection steps.

1.4.3. Obtain the consent of the employer to conduct the inspection.

1.4.4. Clarify other general questions about the inspection.

1.5. Type of Inspection

You may ask questions about the nature of the inspection. An inspection may result from:

1.5.1. An imminent danger condition.

1.5.2. An accident on the job site that resulted in:

1.5.2.1. Work-related in-patient hospitalization;

1.5.2.2. Work-related amputation; or

1.5.2.3. Work-related loss of an eye.

1.5.3. A complaint. The Superintendent has the right to obtain a copy of the complaint but does not have the right to ask who made the complaint.

1.5.4. A random inspection.

1.5.5. A follow-up to a previous inspection

1.6. Questions

You should take this opportunity to provide the compliance officer with useful information, such as what PPE they must utilize on the project. Begin preparing company safety and health programs and policies along with required records.

1.7. Consent

For the inspection to proceed beyond the office or conference room in which the opening conference was held, OSHA or Cal/OSHA must have the consent of the employer. It is our policy that consent is given to the compliance officer; however, if faced with a complaint inspection, politely but firmly inform the compliance officer that consent is given only for the inspection of the items under complaint, and that no consent is being given for the inspection of any other area beyond that complaint.

2. Walk-Around Inspection

2.1. Escort

The Superintendent or Project Manager must escort the compliance officer at all times.

2.2. Notes

Take detailed notes of the compliance officer's findings and comments.

2.3. Pictures

Pictures taken by the OSHA compliance officer should also be taken by the Superintendent. The picture should be in the same direction and view as the picture taken by the compliance officer.

2.4. Measurements

Measurements taken by the compliance officer should also be taken by the Superintendent and documented.

2.5. Interviews

The compliance officer has the right to consult with employees in private.

2.6. Abatement

Immediately abate any violations that are noted and have the compliance officer mark them as abated on their notes.

2.7. Documentation

OSHA may also verify training, record keeping, and postings. Listed below is an example of what is commonly review during an inspection:

2.7.1. OSHA Form 300, *Log of Injuries and Illnesses*

2.7.2. The written Hazard Communication Program

2.7.3. The Safety Program

2.7.4. Training records

2.7.5. Accident Reports

2.7.6. Emergency Action Plans

2.7.7. Weekly Toolbox Talks

3. Closing Conference

3.1. Violations Noted

The compliance officer should discuss all unsafe or unhealthful conditions observed during the inspection and indicate all apparent violations for which they may issue or recommend a citation and a proposed penalty.

3.2. Questions

Employers have the right to ask further questions in regard to the inspection and to provide further documentation in regard to violations that were noted.

Forms

Accident Investigation Report

Accident Witness Statement

Bulletin Board Design

Emergency Action Plan

Emergency Phone Numbers

Instructions for Re-Ordering First Aid Supplies

Job Hazard Analysis

Project Managers' Monthly Safety Checklist

Safety Equipment Purchase Order

Safety Hazard Notice

Safety Orientation Quiz

Sign Purchase Order

Site Safety Postings

Subcontractor Safety Pre-Qualification Submittal and Rules

Training Session on Hazard Communication

Written Exposure Control Plan

EMJ CONSTRUCTION

Accident Investigation Report

Job Name: _____ Job #: _____

Type of Accident: ☐ Personal Injury ☐ Property Damage ☐ Other: _____

Personal Injury

Employed By: ☐ EMJ Construction ☐ Subcontractor ☐ Other: _____

Name: _____ Phone: ( ) _____

Address: _____

City:_____ State:_____ Zip code:_____

Date of injury: _____ Date reported: _____ Time of injury:_____ AM / PM

Name of employer: _____

Exact location where accident occurred: _____

Job or activity being performed at time of accident: _____

Nature of injury: _____

Type of Treatment:
☐ First Aid ☐ Occupational Clinic ☐ Hospital ☐ Personal Doctor ☐ Other: _____

Name of physician, clinic or hospital: _____

Property Damage

Property owner: _____ Date of damage: _____

Property owner address: _____

City:_____ State:_____ Zip code:_____

Phone: ( ) _____ Fax: ( ) _____

Description of vehicle or property: _____

Year: _____ Make: _____ Model:_____ License:_____

Description of damage: _____

Reported to police: ☐ Yes ☐ No
Was anyone injured? ☐ Yes ☐ No (If "YES", complete section above.)

EMJ CONSTRUCTION

Accident Description

_____

_____

_____

_____

_____

Please use an additional sheet of paper for sketches and drawings of the accident scene if necessary.

Witnesses

(Witness #1) Name: _____ Phone: ( ) _____

Address: _____

City:_____ State:_____ Zip code:_____

(Witness #1) Name: _____ Phone: ( ) _____

Address: _____

City:_____ State:_____ Zip code:_____

All witnesses must complete the *Accident Witness Statement* form.

Unsafe Acts & Conditions

Describe any unsafe acts: _____

_____

Describe any unsafe conditions: _____

_____

Investigation and report completed by:

Print Name: _____ Date: _____

Signature: _____

Send completed accident reports to the Safety Director, Vice President, & Executive Vice President.

EMJ CONSTRUCTION

Accident Witness Statement

Name: _____

Date: _____

Project Name: _____

Location: _____

Job #: _____

Employer: _____

Description of accident:

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

Witness address: _____ City: _____

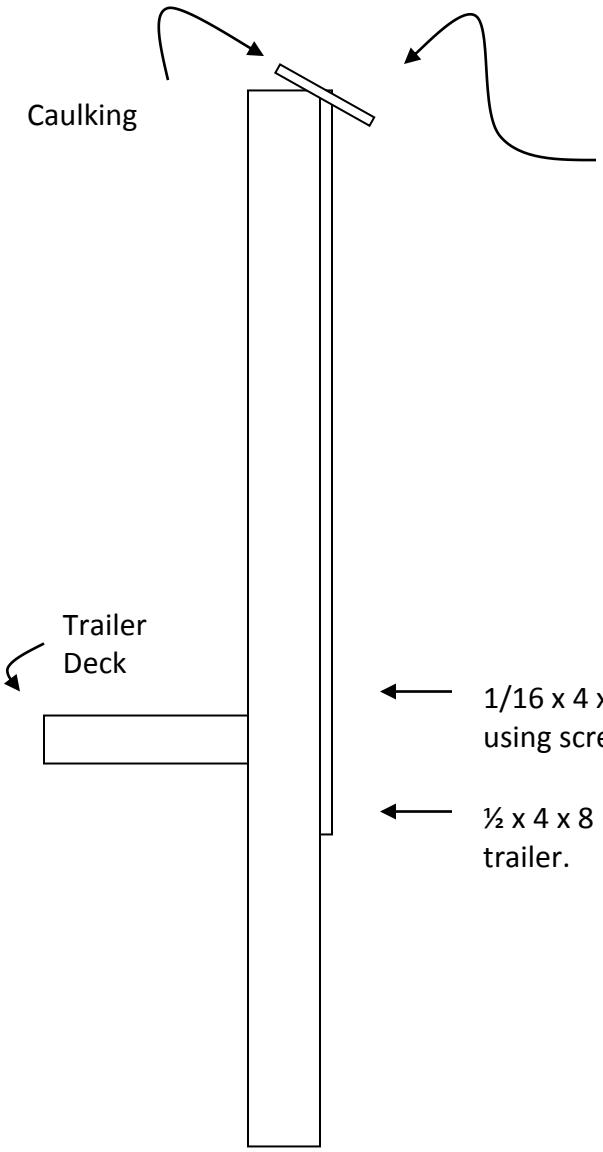
State: _____ Zip code: _____ Phone: ( ) _____

Signature: _____ Date: _____

EMJ CONSTRUCTION

Bulletin Board Design

Note: This application prohibits water infiltration to signage and eliminates the problem of wind blowing the sliding panels from sign tracks.



EMJ CONSTRUCTION

Emergency Action Plan

EMJ will explain to each employee the preferred means of reporting emergencies, such as manual pull alarms, public address systems, radio, or telephone. Emergency telephone numbers must be posted near telephones or employee bulletin boards and other conspicuous locations. The Superintendent will coordinate the emergency evacuation plan and assign procedures to personnel for critical tasks before evacuation. The Superintendent will assign, by name and job title, a person to account for all personnel, direct personnel to the nearest safe exit, and direct emergency equipment and personnel to the job site. If necessary, a subcontractor foreman may be utilized to direct these efforts.

Procedures

_____ will assess the situation and determine whether an emergency exists, sound the alarm (air horn), and call emergency personnel.
(Superintendent)

_____ will direct all efforts to evacuate the area.
(Assigned Person)

_____ will direct emergency personnel services to the job site.
(Assigned Person)

_____ , who is certified in First Aid and/or CPR, will assist injured person(s) until emergency personnel arrive.
(Assigned Person)

_____ will account for all personnel at the designated area.
(Assigned Person)

EMJ CONSTRUCTION

EMERGENCY PHONE NUMBERS

EMERGENCY NUMBER: 9-1-1

PROJECT NAME:_____

PROJECT ADDRESS:_____

PROJECT PHONE NUMBER:_____

HOSPITAL NAME:_____

HOSPITAL ADDRESS:_____

HOSPITAL PHONE NUMBER:_____

CLINIC NAME:_____

CLINIC ADDRESS:_____

CLINIC PHONE NMBER:_____

ONE CALL UTILITIES LOCATING PHONE NUMBER:_____ **OR (8-1-1)**

POLICE:_____**OR (9-1-1)**

FIRE DEPT:_____

GAS COMPANY:_____

ELECTRIC COMPANY:_____

WATER COMPANY:_____

POISON CONTROL:_____**(CDC: 1-800-311-3435)**

OTHER:_____

Revised 6/2015

EMJ CONSTRUCTION

Instructions for Re-Ordering First-Aid Supplies

These instructions are for if you currently have a first aid box from First-Aid Only or First-Aid Exchange (They are now the same company). Fulfillment for re-ordered supplies now comes from FIRSTAIDPRODUCT.COM.

When first-aid supplies are low or the yellow "SMART TAB" is showing, please use the following instructions to re-order necessary supplies from FIRSTAIDPRODUCT.COM.

IMPORTANT! Do not use these instructions for re-ordering supplies for Cintas, Zee Medical, Minor Medical, or any other first-aid company.

1. Upon arrival of your first aid box from First-Aid Only/Exchange, fill out the registration card and send it back to First-Aid Only/Exchange. This allows your first aid box to be registered in the First-Aid Only/Exchange computer system so they can contact you in case of OSHA compliance changes.
2. Call FIRSTAIDPRODUCT.COM at 1-888-228-6694.
3. You will be required to give the billing address, which is 2034 Hamilton Place Blvd, Suite 400, Chattanooga, TN 37421.
4. You will also be required to give our customer record number, which is **105664**.
5. Use the project number as the P.O. number.
6. Place the order using the number on the yellow "SMART TAB".
7. Confirm shipping address.
8. The invoice will be sent directly from FIRSTAIDPRODUCT.COM to Russ Bartholomew.

"SMART-TAB"

Revised 6/2015

EMJ CONSTRUCTION

Job Hazard Analysis

Job/Task: _____ Date: _____

Job Location: _____ Completed By: _____

Contractor: _____ Supervisor / Foreman: _____

Personal Protective Equipment required: _____

	Sequence of Basic Job Steps	Potential Hazards of Each Job Step	Plan of Action to Control or Eliminate any Hazard(s)
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			

Signatures of Employees Verifying the Review of Potential Hazards

Print Name	Signature	Print Name	Signature

IDENTIFY HAZARDS: Potential Examples: • striking against, being struck by, or making harmful contact with an object • being caught in, by or between objects; • slipping, tripping or falling; • developing a strain from pushing, pulling, lifting, bending or twisting; • coming in contact with electricity or other power source • receiving thermal or chemical burn • being exposed to a hazardous environment

Sequence of Basic Job Steps	Potential Hazard of Each Job Step	Plan of Action to Control or Eliminate the Hazard(s)
Break the job down into steps. Each step of a job should accomplish some major task. The task will consist of a set of movements. Look at the first set of movements used to perform a task and then determine the next logical set of movements. For example, the job might be to move a box from a truck in the receiving area to a shelf in the storage area. How does that break down into job steps? Picking up the box from the truck and putting it on a hand truck is one logical set of movements, so it is one job step. Everything related to that one logical set of movements is part of that job step. The next logical set of movements might be pushing the loaded hand truck to the storeroom. Removing the boxes from the truck and placing them on the shelf is another logical set of movements. And finally, returning the hand truck to the receiving area might be the final step in this type of job. Be sure to list all the steps in a job. Some steps might not be done each time – checking the casters on a hand truck for example. However, that task is a part of the job as a whole and should be listed and analyzed. Number the steps. The number will provide a reference point for the hazards and procedures developed.	Examine each step to find and indentify hazards, actions, conditions, and possibilities that could lead to an accident. Create a numbered hazard list to correspond with your steps. It is not enough to look at the obvious hazards. It's also important to look at the entire environment and discover every conceivable hazard that might exist. Be sure to list health hazards as well, even though the harmful effect may not be immediate. Ex: the harmful effect of inhaling a solvent or chemical dust over a long period of time. It's important to list all hazards because hazards contribute to accidents, injuries, and occupational illnesses. In order to do Part 3 of a JHA effectively, you must identify potential and existing hazards. That's why it's important to distinguish between a hazard, an accident, and an injury. Each of these terms has a specific meaning: HAZARD: A potential danger. Oil on the floor is a hazard. ACCIDENT: An unintended happening that may result in injury, loss, or damage. Slipping on the oil is an accident. INJURY: The result of an accident. A sprained wrist from a fall would be an injury. Some people find it easier to identify possible accidents and illnesses and work back from them to the hazards. If you do that, you can list the accident and illness type in parentheses following the hazard. Be sure you focus on the hazard for developing recommended actions and safe work procedures.	Using the first two columns as a guide, decide what actions are necessary to eliminate, minimize, or monitor the hazards that could lead to an accident, injury, or occupational illness. Number the actions to correspond with the steps and indentified hazards. Among the actions that can be taken are: 1). Engineering the hazard out. 2.) Providing personal protective equipment. 3.) Job instruction training. 4.) Good housekeeping. 5.) Good ergonomics (positioning the person in relation to the machine or other elements in the environment in such a way as to eliminate stresses and strains). List recommended safe operating procedures on the form and also list required or recommended personal protective equipment for each step of the job. Be specific. Say exactly what needs to be done to correct the hazard, such as "Lift using you leg muscles". Avoid general statements like, "Be careful". Give a recommended action or procedure for every hazard. If the hazard is a serious one, it should be corrected immediately. The JHA should then be changed to reflect the new condition.

EMJ CONSTRUCTION

Project Manager's Monthly Safety Checklist - Summary

Project Name: ______________________________

Location: ______________________________

Job #: ______________________________

Project Manager: ______________________________

Superintendent: ______________________________

Date: ______________________________

Comments on unsafe acts, unsafe conditions, or positive observations:

Comments / Violations:	Abatement Plan

EMJ CONSTRUCTION

Project Manager's Monthly Safety Checklist

Listed below is a general checklist for reference while completing monthly safety inspections. Please refer to Section II of the Safety Manual for more specific guidance on a particular topic. Once an inspection has been completed, the Project Manager should complete the summary page, the Superintendent should sign the summary, and the signed copy should be submitted to the Safety Director.

	Administrative Controls and Employee Training	YES	NO	N/A	Corrective Action
1.	Is the company Safety Manual on site?				
2.	Have revisions and updates been incorporated into the Safety Manual?				
3.	Is there a copy of each subcontractor's safety program on site?				
4.	Is the company SDS book on site?				
5.	Is there an SDS book for all subcontractors on site?				
6.	Are all SDS books kept in a central location and accessible?				
7.	Have Certificates of Insurance (COI) been collected for each subcontractor and vendor on site?				
8.	Is the OSHA 300 form posted? (Feb. 1 - April 30th)				
9.	Are emergency phone numbers posted?				
10.	Are federal and state labor law posters posted as required?				
11.	Are safety signs posted to restrict access to the public?				
12.	Is there an Emergency Action Plan with a designated assembly point shown (map)?				
13.	Is there an emergency evacuation horn or siren on site?				
14.	Is there a designated medical facility?				
15.	Is there a first aid kit on site?				
16.	Is there a fire extinguisher in the office or trailer?				

EMJ CONSTRUCTION

Administrative Controls and Employee Training (cont.)		YES	NO	N/A	Corrective Action
18.	Are substance abuse chain of custody forms, request forms, and release forms on site and being used?				
19.	Are weekly safety meetings (Toolbox Talks) being performed and documented?				
20.	Have project management team members (Project Manager, Superintendent and Foremen) completed required safety training? (OSHA 10-Hr, First Aid, CPR)				
21.	Have subcontractor employees completed required safety training? (For example fall protection, fork lifts, aerial lifts, confined space, lock-out / tag-out)				
22.	Is necessary safety equipment on site?				
	Hard Hats				
	Safety Glasses				
	Gloves				
	Hearing Protection				
23.	Is a Competent Person on site for the company?				
24.	Is a Competent Person on site for each subcontractor?				
25.	Is the *Training Session on Hazard Communication* form completed for all company field personnel and temporary laborers?				
Notes:					

EMJ CONSTRUCTION

General Conditions		YES	NO	N/A	Corrective Action
1.	Are hazardous conditions (Such as gases, vapors, fumes, dusts, asbestos, silica and lead) controlled in a manner to prevent employee exposure?				
2.	Are noise levels above 85 db TWA; if so, is PPE being worn?				
3.	Are hard hats, safety glasses, and gloves being worn when necessary?				
4.	Is respiratory protection being used when necessary?				
5.	Are work areas well illuminated?				
6.	Are EXIT locations clearly marked with signage?				
7.	Are walkways and aisles kept clear from obstructions and tripping hazards?				
8.	Are work areas orderly and free from debris?				
9.	Are materials stacked and stored neatly?				
10.	Are nailes removed or bent over to prevent injuries?				
11.	Are trash cans and dumpsters provided?				
12.	Are toilet facilities available for workers?				
13.	Is potable water available?				
14.	Is perimeter fencing in adequate condition to provide protection?				
Notes:					

Hazard Communication		YES	NO	N/A	Corrective Action
1.	Are primary and secondary containers labeled with their product identity and hazard warnings?				
2.	Is there an SDS readily available for each hazardous substance on site?				
3.	Is appropriate PPE being used when handling hazardous chemicals?				
Notes:					

EMJ CONSTRUCTION

Fire Prevention and Protection		YES	NO	N/A	Corrective Action
1.	Are all flammable liquids kept in approved containers and stored properly?				
2.	Are flammable liquid tanks double-walled or have secondary containment of 110% capacity to prevent leaks and spills onto the ground?				
3.	Are appropriate fire extinguishers available for every 3,000 square feet?				
4.	Are appropriate fire extinguishers available within 50 feet of fueling areas?				
5.	Are appropriate fire extinguishers available at "hot work" operations?				
6.	Are all fire extinguisher charged and in safe operating condition?				
7.	Are fire hydrants free from parked vehicles and other obstructions?				
Notes:					

Hand and Power Tools		YES	NO	N/A	Corrective Action
1.	Are power tools equipped with ground pins or of the double insulated type?				
2.	Are power tools equipped with guards provided by the manufacturer?				
3.	Are powder-actuated tools being operated by trained personnel?				
4.	Are pneumatic air-tools and hoses secured by a pin, clip, or wire?				
5.	Are hand tools free from defects, missing parts, bends, breaks, or cracked handles?				
6.	Are fuel-powered tools being stopped or turned off during refueling, servicing, and/or maintenance?				
Notes:					

EMJ CONSTRUCTION

Welding and Cutting		YES	NO	N/A	Corrective Action
1.	Is a "hot work" permit required for any open-flame or spark-producing activities?				
2.	Are areas of welding and cutting free from flammable or combustible materials by at least 35 feet?				
3.	Are cables free from repairs and splices 10 feet from the electrode holder?				
4.	Are current-carrying parts and other surfaces of the jaws insulated?				
5.	Are regulators and gauges free from damage and working properly?				
6.	Are welding hoods and appropriate eye protection being worn?				
7.	Are compressed gas cylinders secured in an upright position and protected with caps when not in use?				
8.	Are fuel gas cylinders and oxygen cylinders stored at a minimum of 20 feet apart or separated by a 5 foot firewall with a 30 minute rating?				
Notes:					

EMJ CONSTRUCTION

Electrical		YES	NO	N/A	Corrective Action
1.	Are all tools using GFCI protection?				
2.	Are extension cords a minimum of 12 gauge, equipped with a ground pin, and are free from frays, cuts, nicks, and splices?				
3.	Are all energized (live) parts guarded against accidental contact by approved cabinets or enclosures?				
4.	Are all temporary lamps properly hung with non-conductive material and protected from accidental contact (baskets or cages)?				
5.	Are all disconnecting switches and circuit breakers properly labeled to indicate their use?				
6.	Are all electrical boxes maintaining a minimum of 30 inches of clear space for accessibility?				
7.	Are electrical rooms secured to prevent unauthorized access?				
8.	Do doors or gates to electrical rooms have safety signs posted to keep out unauthorized personnel?				
9.	Is the lock-out / tag-out procedure being effectively implemented?				
10.	Are only trained electricians performing "live" electrical work with proper NFPA 70E protection?				
11.	Are all 240-Volt or greater cables ran overhead and not subjected to vehicular traffic (such as aerial lifts and fork lifts)?				
Notes:					

EMJ CONSTRUCTION

Scaffolding and Aerial Work Platforms		YES	NO	N/A	Corrective Action
1.	Are all scaffolding activities including erection, dismantling, and maintenance being overseen by a Competent Person?				
2.	Are scaffold tags being used to indicate the condition of the scaffold?				
3.	Is scaffolding plumb and square with cross bracing?				
4.	Are all support poles equipped with mud sills, base plates, and placed on stable surfaces?				
5.	Are handrails provided or fall protection in place for scaffolds over 10 feet?				
6.	Is scaffolding fully planked or decked on all working levels?				
7.	Are scaffold planks cleated or do they extend the correct distance over the horizontal supports?				
8.	Is a safe means of access provided on all scaffolds?				
9.	Are casters (wheels) locked on mobile scaffolds when occupied?				
10.	Are poles of Pump Jack Scaffolds secured at the top and bottom?				
11.	Are Pump Jack Scaffolds equipped with guardrails on the back, side, and ends?				
12.	Are workers on Pump Jack Scaffolds using personal fall protection equipment when guardrails are not present?				
13.	Are lifts in good operating condition?				
14.	Are chains fastened or gates in the safe position when the aerial lift platform is occupied and raised?				
15.	Are tools, equipment, and materials carried on the platform within the maximum rated capacity and not exceeding the manufacturer's recommendations?				
16.	Is personal fall protection being worn in articulating boom lifts?				
17.	Are traffic areas properly controlled with pylons, barricades, or flagging?				
18.	Are aerial work platforms being operated at least 10 feet from electrical conductors?				
Notes:					

EMJ CONSTRUCTION

Fall Protection		YES	NO	N/A	Corrective Action
1.	Are workers at levels above 6 feet protected from falling by guardrails, covers, or personal fall arrest equipment?				
2.	Are guardrails constructed between 39" and 45" above the walking or working surface?				
3.	Does the perimeter cable have less than 3 inches of deflection?				
4.	Are warning line systems a minimum of 6 feet from unprotected edges?				
5.	Are all holes greater than 2 inches covered with material capable of supporting twice the maximum intended load, secured from displacement, and labeled as “hole” or “cover”?				
6.	Is personal fall arrest equipment being inspected?				
7.	During wood framing projects, is a written site-specific fall protection plan on site?				
Notes:					

Cranes		YES	NO	N/A	Corrective Action
1.	Are cranes, boom trucks, and other hoisting equipment used on firm and level ground conditions?				
2.	Have underground hazards (For example tanks, pits, voids, and utilities) within the set-up area been identified?				
3.	Is an Assembly/Disassembly (A/D) Director on site to direct the assembly and disassembly of the crane?				
4.	Are lifts that exceed 75% of the crane’s capacity or lifts involving more than one crane have a written lift plan developed by a Qualified Person?				
5.	Are cranes being operated at least 20 feet from overhead power lines?				
6.	Has the crane had a documented annual inspection by a Qualified Person within the last year?				
7.	Is a Competent Person performing an inspection before each shift and a documented inspection once a month?				
8.	Does the Operator have documentation of training certified by an accredited crane operating testing organization (For example NCCCO)?				

EMJ CONSTRUCTION

Cranes (cont.)		YES	NO	N/A	Corrective Action
9.	Does the signal person have documentation of training?				
10.	Does the Qualified Rigger have documentation of training?				
11.	Is the swing radius of the crane's superstructure barricaded to protect against struck-by / crushing / pinch-point accidents?				
12.	Are outriggers fully extended and on outrigger pads?				
13.	Are hoisting routes minimizing exposure to workers from overhead falling loads?				
14.	Are tag-lines being used to control loads?				
15.	Do crane hooks have working self-closing latches?				
16.	Are illustrations of hand signals posted on the job site?				
17.	Is the annual inspection for the crane on site?				
18.	Are cranes being operated within their maximum rated load capacity?				
Notes:					

EMJ CONSTRUCTION

Heavy Equipment and Fork Trucks		YES	NO	N/A	Corrective Action
1.	Are speed limits controlled in work areas?				
2.	Is equipment equipped with a horn and audible back-up alarm?				
3.	Is the cab glass free of cracks that would distort the operator's vision?				
4.	Are fork trucks and other heavy equipment only operated by trained operators?				
5.	Is unattended equipment left with the ignition off, forks or bucket lowered, controls neutralized, and the brake set?				
6.	Are baskets used for lifting employees designed and certified to do so?				
7.	Is the fork truck approved by the manufacturer to lift employees in baskets?				
8.	Is an approved device being used instead of using the forks or mast for “free rigging”?				
9.	Are signs needed to identify overhead power lines to heavy equipment and crane operators?				
Notes:					

EMJ CONSTRUCTION

Excavation and Trenching		YES	NO	N/A	Corrective Action
1.	Are excavation and trenching activities being overseen by a Competent Person?				
2.	Are utilities marked prior to excavating?				
3.	Are employees in excavations deeper than 5 feet protected from cave-ins by sloping, shoring, shielding, or benching?				
4.	Are soil piles at least 2 feet away from the excavation edge?				
5.	Have adjacent structures such as rocks, trees, poles, sidewalks, and buildings been supported or braced to prevent collapse?				
6.	Are the vertical sides of shoring and shielding protective systems (For example trench boxes) at least 18 inches above				
7.	Is a safe means of access and egress (For example ladders, ramps, or walkways) provided for excavations deeper than 4 feet?				
8.	Are excavations and trenches barricaded?				
Notes:					

EMJ CONSTRUCTION

Concrete and Masonry		YES	NO	N/A	Corrective Action
1.	Are all reinforcing steel and vertical pins or stakes protected with approved impalement caps?				
2.	Are employees cutting masonry protected from silica exposure by use of respiratory protection and/or wet cutting methods?				
3.	Has a Limited Access Zone (LAZ) been established on the non-scaffold side of the wall?				
4.	Does the LAZ run the entire length of the wall and equal to the height of the wall plus 4 feet?				
5.	Are concrete or masonry walls braced to prevent collapse?				
Notes:					

Steel Erection		YES	NO	N/A	Corrective Action
1.	Are all steel erection activities being overseen by a Competent Person?				
2.	Are erection areas secured to protect steel erectors and other trades people from overhead loads and falling objects?				
3.	Do steel erection employees have documented fall protection and rigger training?				
4.	Are wire rope and synthetic sling rigging in good condition?				
5.	Is personal fall protection being utilized when steel connectors are more than 30 feet or 2 or more stories, whichever is less?				
6.	Is personal fall protection being utilized by steel workers when performing activities (other than connecting) 15 feet or higher?				
7.	Are Controlled Decking Zones (CDZ) being used properly?				
8.	Is a minimum of 2-bolt erection being maintained?				

EMJ CONSTRUCTION

Steel Erection		YES	NO	N/A	Corrective Action
9.	Are tag lines being used?				
10.	Are all tools, materials, and equipment secured while aloft to prevent accidental displacement?				
Notes:					

Stairways and Ladders		YES	NO	N/A	Corrective Action
1.	Is a stairway or ladder provided at changes in elevation of 19 inches or more?				
2.	Is a stair rail and handrail provided for each stairwell having 4 or more risers or more than 30 inches in height?				
3.	Are ladders being used for the purpose for which they were designed?				
4.	Are step ladders being used in the fully opened position?				
5.	Are employees prohibited from standing or sitting on the top (cap) or top step of a step ladder?				
6.	Are extension ladders used for accessing upper landings secured from displacement and extend more than 3 feet above the landing?				
7.	Are ladders set up on solid footings?				
8.	Are all extension ladders tied off to prevent displacement?				
9.	Are employees facing the ladder while in use?				
Notes:					

EMJ CONSTRUCTION

Material Handling		YES	NO	N/A	Corrective Action
1.	Are workers obtaining assistance when manually handling heavy objects or materials?				
2.	Are workers standing clear of overhead suspended loads?				
3.	Are materials stored neatly and safely to prevent sliding, falling, rolling, or collapse?				
4.	Have nails in lumber piles been removed or bent over to prevent lacerations or punctures?				
5.	Do rigging slings (wire rope, nylon, chain) have attached and legible capacity tags?				
6.	Are rigging slings in good working condition?				
7.	Are safety latches on hooks in working condition?				
8.	Are spreader bars visibly marked, tagged, or stamped with their rated capacity?				
Notes:					

Renovations		YES	NO	N/A	Corrective Action
1.	Are safety signs posted at the mall/store entrance and the immediate work areas properly marked to notify the public of uneven surfaces and other construction activities?				
2.	Are walking surfaces in safe condition for the public to use?				
3.	Are safety cones at least 28" in height?				
4.	Are floor boxes protected with cones or other means to protect against trip hazards?				
5.	Are the transitions secured with yellow tape?				
6.	Is the tape used on transitions installed without creating a trip hazard?				
7.	Are carpet runners, rugs and metal trench plates taped to prevent trip hazards?				

EMJ CONSTRUCTION

Renovations (cont.)		YES	NO	N/A	Corrective Action
8.	Are hard barricades taped at the joints and edges to prevent splinters and pinch points?				
9.	Are hard barricades free of staples, nails, screws, handles, and hinges that could create a laceration or puncture?				
10.	Are tools, equipment, and machinery utilizing GFCI protection at the electrical outlets?				
11.	Is dust protection (plastic or visqueen) being used at storefronts, kiosks, and push carts to protect against damage from dust?				
12.	Are "wet cutting" methods or tools with vacuums being used to control dust?				
13.	Are work and storage areas adequately barricaded and secured during non-working hours?				
14.	Are safety signs posted on outdoor fencing and gates?				
15.	Do fencing and gates swing towards the site and not towards vehicular or pedestrian traffic?				
16.	Are traffic routes properly marked with barricades, barrels, striping, and signs?				
17.	Are sidewalks and other walkways free from tripping hazards?				
18.	Are barricades and flashing lights installed around new light pole bases until the lights are in use?				
19.	Are temporary lights used in the parking lot when existing lights are out of service?				
20.	Have all incidents involving the public been reported to CORE Safety?				
Notes:					

Safety Equipment Purchase Order

All products ordered will be charged to the project under code # 011020-00

Simply fill out the information below and fax or email to
CORE Safety Group, LLC
Fax: 423-855-6857 Email: safetysupport@coresafety.com
Phone: 423-643-2045

				Date:	
Project Name:				Job #:	
Shipping Address:					
City:		State:		Zip:	
Contact Name:		PM:			
Phone:					

PART NUMBER	HEAD & FACE PROTECTION	UNIT QTY	UNIT PRICE	ORDER QTY	ITEM TOTAL
HONE1RW01AG820	Full Brim Hard Hat w/COMPANY logo	1 ea	$22.00		
HONE2RW01AG821	Baseball Style Hard Hat w/COMPANY logo	1 ea	$19.25		
RAD 64051024	Radnor Smooth Dome Red Visitor Hat	1 ea	$13.00		
RAD 64051222	Safety Glasses Indoor/Outdoor Clear Lens	1 ea	$2.50		
3MR11674-00000	Safety Glasses Virtua Indoor/Outdoor Mirror Lens	1 ea	$4.00		
RAD64051066	Faceshield Hard Hat Mounting Bracket	1 ea	$9.00		
RAD64051750	Clear Faceshield	1 ea	$8.00		
PART NUMBER	**HEARING & RESPIRATORY PROTECTION**	**UNIT QTY**	**UNIT PRICE**	**ORDER QTY**	**ITEM TOTAL**
RAD 64051821	NRR30 Corded Earplug	100 ea	$27.00		
MOL 1200N95	N95 Particulate Disposable Respirator	20 ea	$24.50		
PART NUMBER	**PROTECTIVE WORKWEAR**	**SIZE**	**UNIT PRICE**	**ORDER QTY**	**ITEM TOTAL**
RAD 64057514	Economy Leather Palm Gloves (Priced Per Pair)	Medium	$2.25		
RAD 64057515		Large	$2.25		
RAD 64057516		X-Large	$2.50		
	COMPANY LOGO Safety Vest	Medium	$17.00		
		Large			
		X-Large			
		2XL			
		3XL			
		4XL			
PART NUMBER	**FALL PROTECTION EQUIPMENT**	**UNIT QTY**	**UNIT PRICE**	**ORDER QTY**	**ITEM TOTAL**
HONE650-4/UGN	DuraFlex Universal Harness	1 ea	$184.50		
HONT4500/UAK	Titan T-Flex Full Body Harness w/Back &	1 ea	$75.00		
MSA 10072474	Single Tie-Back Shock-Absorbing Lanyard	1 ea	$70.50		
MSA 10073708	Twin Shock-Absorbing Lanyard	1 ea	$100.00		
MSA 10072475	Twin Leg Shock Absorbing Lanyard w/Pelican Hook Anchors	1 ea	$157.50		
D62 1003000	3' Pass-Thru D-Ring Anchorage Connector	1 ea	$70.50		

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D62 2104700	Glyder 2 Sliding Beam Anchor	1 ea	$306.25		
MSA 415940	Rope Grab with 3' Shock Absorbing Lanyard	1 ea	$311.75		
HON300L-Z7/50FTBL	50' Lifeline Rope With Locking Snap Hook	1 ea	$100.25		
MSA10157847	10' Self Retracting Lifeline (Nylon Strap)	1 ea	$273.00		
D623590500	30' Self Retracting Lifeline	1 ea	$578.25		
MSA10150420	Horizontal Lifeline 20' Steel Cable	1 ea	$616.00		
MSA 10150418	Horizontal Lifeline System With 60' Steel Cable	1 ea	$724.75		
D62AJ730A	SafeWaze Reusable Roof Anchor	1 ea	$42.25		
D622104000	Roof Anchorage for Wood Frame Structure	1 ea	$41.00		
MSA 10042794	Concrete Anchorage Strap w/steel D-Ring	1 ea	$20.25		
HON496/	3/4" Single Use Anchorage for Concrete	1 ea	$170.00		
PART NUMBER	**FACILITY SUPPLIES**	**UNIT QTY**	**UNIT PRICE**	**ORDER QTY**	**ITEM TOTAL**
A61 B500	5 Pound ABC Fire Extinguisher*	1 ea	$61.00		
A61 B456	10 Pound ABC Fire Extinguisher*	1 ea	$120.50		
*Due to high shipping costs, we recommend purchasing fire extinguishers locally when possible.					
A81 MFXG545VS	Fire Extinguisher Sign (arrow), 18"x4", Adhesive Vinyl	1 ea	$11.00		
A81 MFXG545VP	Fire Extinguisher Sign (arrow), 18"x4", Plastic	1 ea	$12.00		
A81 MFXG545VA	Fire Extinguisher Sign (arrow), 18"x4", Aluminum	1 ea	$17.00		
JB2RS70032C	28" Orange Traffic Cone With Orange Base	1 ea	$12.00		
N01 3984020000	Yellow Duct Tape 2" x 60 yard	1 ea	$11.25		
RAD 64055722	3" X 1000' Red 2 Mil Barricade Tape "Danger"	1 ea	$11.00		
RAD 64055720	3" X 1000' Yellow 2 Mil Barricade Tape "Caution"	1 ea	$11.00		
M19 6835BLK	Masterlock Padlock - Keyed Differently	1 ea	$17.00		
BRDSKA-BKT	Brady 6.5 gal Bucket SPC Allwik Spill Kit	1 ea	$110.00		
PART NUMBER	**FIRST-AID PRODUCTS**	**UNIT QTY**	**EMJ PRICE**	**ORDER QTY**	**ITEM TOTAL**
AU31000FAE0103	Smart Compliance First-Aid Kit	1 ea	$114.50		
M99 70-160	CPR Microshield w/gloves	1 ea	$10.25		
FEN 320004600000	Fend-all 16 Ounce Eyesaline® Single Bottle Wall Eyewash Station	1 ea	$33.50		
FEN 320004550000	Fend-all 32 Ounce Eyesaline® Sterile Eyewash (bottle only)	1 ea	$14.75		

FOR OFFICE USE ONLY	
Sub-Total:	
Shipping:	
TOTAL:	

Safety Orientation Quiz

Name:_____ Date:_____

Graded By (Print Name):_____ Date:_____

Safety Orientation: (PowerPoint)

1. All accidents and injuries, no matter how slight, must be immediately reported to your supervisor.
   A. True
   B. False

2. No running or horseplay in the office or on the jobsite.
   A. True
   B. False

3. It is fine to stand on unstable items such as desks or chairs.
   A. True
   B. False

4. Our company is committed to providing a safe working environment and likewise, expects its employees to report to their jobs physically and mentally fit for work. Furthermore, the company is committed to ensuring its continued representation as a quality business enterprise.
   A. True
   B. False

5. Bloodborne pathogens are disease causing organisms (viruses and bacteria) carried in human blood and certain other body fluids.
   A. True
   B. False

6. _____ _____ is a prevention strategy in treating all contaminated materials as potentially infected regardless of perceived status of the source individual.
   A. Universal Studios
   B. Universal Protection
   C. Universal Precaution
   D. None of the above

7. Employees have a need and right to know and understand about the hazards and identities of chemicals they are exposed to in the workplace.
   A. True
   B. False

OFFICE ADMINISTRATIVE SERVICES AND **SHARED SERVICES STAFF**: STOP HERE!
OPERATIONS AND **LEADERSHIP STAFF**: FINISH ENTIRE QUIZ.

"Jobsite Safety: An Orientation for Construction Workers" (Video)

8. Wear your hard hat with the bill facing _____.
   A. Forward
   B. Backwards
   C. Sideways

9. Eye protection is required to be worn when there is danger from _____.
   A. Flying objects
   B. Working overhead
   C. Working with splash-type chemicals
   D. Working with materials that create dust or particles in the air
   E. All of the above

10. To properly lift an object, you should get close to the object, bend at the knees, keep your back straight, and lift with your legs.
   A. True
   B. False

11. Any opening that exposes an employee to a fall of 6 feet or more must have fall protection.
   A. True
   B. False

12. Guardrail systems must be capable of withstanding at least _____lbs. of force.
   A. 100
   B. 200
   C. 300
   D. 500

13. Do not use aluminum ladders near electrical power lines.
   A. True
   B. False

14. Electrical extension cords with cracks, wear, exposed wire, or a missing ground prong should be immediately removed from service.
   A. True
   B. False

15. All tools should be inspected before use to ensure they are in safe working condition.
   A. True
   B. False

16. Operators of powder actuated tools must be qualified and authorized to use the tool.
   A. True
   B. False

17. Compressed gases are highly flammable and explosive and should be used in well ventilated areas, secured in an upright position, separated from flammables, and stored outside with a fire extinguisher in the nearby area.
   A. True
   B. False

Understanding the GHS Labeling System: (Video)

18. In _____, OSHA published the revised Hazard Communication Standard stating the requirements for container labels and employee training.
    A. 2010
    B. 2012
    C. 2013
    D. None of the above

19. There are now only two signal words: Danger and Warning.
    A. True
    B. False

20. There are _____ standardized icons called pictograms in the GHS Labeling System.
    A. 7
    B. 8
    C. 9
    D. 10

21. More than one pictogram can appear on the label of chemicals.
    A. True
    B. False

Understanding GHS Safety Data Sheets (SDS): (Video)

22. Material Safety Data Sheets (MSDS) are now called Safety Data Sheets (SDS).
    A. True
    B. False

23. There will be _____ sections of an SDS under the new format.
    A. 10
    B. 12
    C. 16
    D. 21

24. In Section ____, you can find the GHS Hazard Classifications, Signal Words, Hazard Statements, Precautionary Statements, and Pictograms.
    A. 1
    B. 2
    C. 3
    D. 5

25. Sections 12, 13, 14 and 15 are not regulated by OSHA, but appear in the SDS to be consistent with the GHS format.
    A. True
    B. False

Safety Start-Up Pack Checklist

Return form to safetysupport@coresafety.com.

Project #:			
Project Name:			
Address:			
Superintendent(s):			
PM:			
Yes	**No**	Description	
Standard		Occupational Clinic Information Sheet	
Standard		Substance Abuse Testing Facility Sheet	
Standard		Chain of Custody Forms (Substance Abuse Testing)	
Standard		Emergency Numbers Form	
Standard		Training Session on Haz-Com Form	
Standard		Emergency Action Plan Form	
Standard		OSHA 300A Form **(Required Feb 1 - April 30 only)**	
Standard		Signs: No Trespassing, Hard Hat Required, No Weapons, Visitors Must Check In	
Standard		Safety Equipment Purchase Order	
Standard		Safety Sign Purchase Order	
Standard		First Aid Kit Re-order Instructions	
Standard		(per 100) Safety Orientation Stickers ($35.00)	
Standard		Quality- Building Inspection Sign-in Sheet (10)	
Standard		Quality- Testing Lab Sign-in Sheet (10)	
		SWPPP Form #4 (if NOI is filed)	
		OSHA State Poster (Approx. $35.00)	
		OSHA State Poster (Spanish) (Approx. $35.00) Required: AZ, CA, CO, FL, GA, IA, MN, NC, NY, TN, TX, UT	
		Outdoor Safety Poster ($54.00)	
		Indoor Safety Poster ($76.00)	

Safety Start-Up Pack Checklist

		SWPPP Poster ($31.00)	
		Quality Poster ($40.00)	
		Safety Manual (18.00)	Request Only
		Subcontractor Safety Orientation Manual ($26.00)	Request Only
		Weekly Safety Meeting Manual ($15.00)	Request Only
		Stormwater Manual ($15.00)	Request Only
		OSHA 1926 Construction Safety Standards Book ($40.00)	Request Only
		Hazard Communication Diesel and Gasoline Sticker ($4.00)	Request Only
		Hazard Communication Reference Sheet with Toolbox Talks ($5.00)	Request Only

CIRCLE YOUR COMPANY LOGO

EMJ SPECIAL PROJECTS | REDSTONE CONSTRUCTION | EMJ CONSTRUCTION

Sign Purchase Order

The following signs, banners, and flags are available for your projects.
All items ordered will be charged to the project under code **#001160-00**.

Simply fill out the information below and send to safetysupport@coresafety.com

Project Name:	Date:	Job #:
Address:		
City:	State:	Zip:
Superintendent:	PM:	Phone #:

SAFETY/ DANGER/ CAUTION SIGNS

All signs are 24" x 24" and are available in plasticore, di-bond, or mesh. All signs are single faced.
All plasticore and mesh signs come with grommet holes in each corner.

Plasticore signs = $20 **Di-bond signs** = $35 **Mesh signs** = $20, minimum order of 3

	Qty.
Plasticore	
Di-bond	
Mesh	

	Qty.
Plasticore	
Di-bond	
Mesh	

	Qty.
Plasticore	
Di-bond	
Mesh	

	Qty.
Plasticore	
Di-bond	
Mesh	

	Qty.
Plasticore	
Di-bond	
Mesh	

	Qty.
Plasticore	
Di-bond	
Mesh	

	Qty.
Plasticore	
Di-bond	
Mesh	

	Qty.
Plasticore	
Di-bond	
Mesh	

Revised: 1/2018

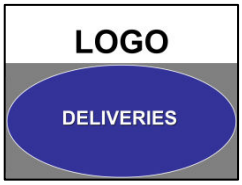
NOTICE SIGNS

All signs are 24" x 24" and are available in plasticore, di-bond, or mesh. All signs are single faced.
All plasticore and mesh signs come with grommet holes in each corner.

Plasticore signs = $20 **Di-bond signs** = $35 **Mesh signs** = $20, minimum order of 3

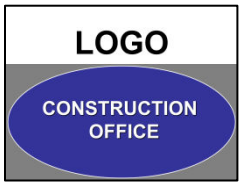
	Qty.
Plasticore	
Di-bond	
Mesh	

	Qty.
Plasticore	
Di-bond	
Mesh	



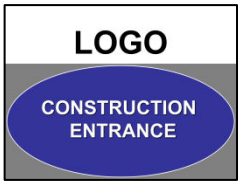
	Qty.
Plasticore	
Di-bond	
Mesh	

	Qty.
Plasticore	
Di-bond	
Mesh	



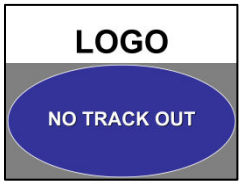
	Qty.
Plasticore	
Di-bond	
Mesh	

	Qty.
Plasticore	
Di-bond	
Mesh	



	Qty.
Plasticore	
Di-bond	
Mesh	

	Qty.
Plasticore	
Di-bond	
Mesh	



	Qty.
Plasticore	
Di-bond	
Mesh	

	Qty.
Plasticore	
Di-bond	
Mesh	

Revised: 1/2018

SAFETY POSTERS

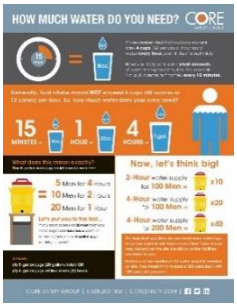
All posters are 11" by 17" and are laminated.

All posters are single faced. $3 each

Numbers Poster	Qty.
Laminate	

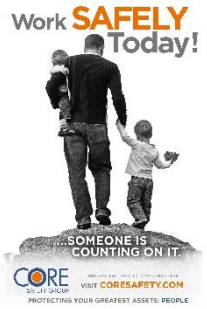
Trench Safety	Qty.
Laminate	

Ladder Safety	Qty.
Laminate	



Water Poster	Qty.
English	
Spanish	

PPE Poster	Qty.
English	
Spanish	



Work Safely	Qty.
English	
Spanish	

Revised: 1/2018

SITE SIGNS

Site signs are available in 2 sizes.

18" x 36" and 18" x 30" Plasticore = $25
18" x 36" and 18" x 30" Di-bond = $40
18" x 36" and 18" x 30" Aluma-core = $60
18" x 36" and 18" x 30" Mesh = $25 (Min of 3)

48" x 96" and 48" x 80" Plasticore = $155
48" x 96" and 48" x 80" Di-bond = $250
48" x 96" and 48" x 80" Aluma-core = $330
18" x 36" and 18" x 30" Mesh = $25 (Min of 3)

NOTES

SF= Single Faced DF= Double Faced
Add $20.00 for double-faced signs. (18" x 36" and 18" x 30")
Add $75.00 for double-faced signs. (48" x 96" and 48" x 80") - Plasticore and Di-bond
Add $125.00 for double-faced signs (48" x 96" and 48" x 80") - Aluma-core
All Plasticore 48" x 96" signs will need a backer board such as 1/2" plywood to prevent wind damage.

(18" by 30")

	Qty.		Qty.
Plasticore SF		Plasticore DF	
Di-bond SF		Di-bond DF	
Aluma-core SF		Aluma-core DF	
Mesh SF			

(48" by 80")

	Qty.		Qty.
Plasticore SF		Plasticore DF	
Di-bond SF		Di-bond DF	
Aluma-core SF		Aluma-core DF	
Mesh SF			

(18" by 36")

	Qty.		Qty.
Plasticore SF		Plasticore DF	
Di-bond SF		Di-bond DF	
Aluma-core SF		Aluma-core DF	
Mesh SF			

(48" by 96")

	Qty.		Qty.
Plasticore SF		Plasticore DF	
Di-bond SF		Di-bond DF	
Aluma-core SF		Aluma-core DF	
Mesh SF			

Revised: 1/2018

VINYL BANNERS

Vinyl banners are available in 2 sizes.

4' by 6' SF Vinyl = $65

4' by 6' DF Vinyl = $130

5' by 8' SF Vinyl = $108

5' by 8' DF Vinyl = $216

(4’ by 6’)

	Qty.
Vinyl SF	
Vinyl DF	

(5’ by 8’)

	Qty.
Vinyl SF	
Vinyl DF	

FLAGS

Flags are available in 2 sizes.

3' by 5' (Standard) = $203

5' by 8' (Larger Option) = $533

(3’ by 5’)

	Qty.
Standard Size	

(5’ by 8’)

	Qty.
Larger Size	

FENCE SCREENING

Printed on mesh fence screening. Can be decorated with company logo only or co-branded with the client and/or architect at no extra cost for color.

General pricing $5 per ft. (6’ by 50’)

** Please contact marketing to order fence screening. Carisa Knight: carisa.knight@emjcorp.com

Revised: 1/2018

EMJ CONSTRUCTION

Site Postings

At Site Entrance

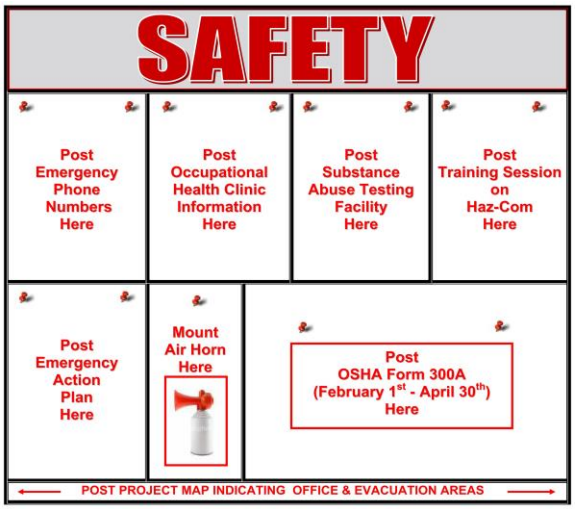
- EMJ Construction logo sign with internet address
- No Trespassing sign

Bulletin Board (Outside)

State Poster

Spanish
State Poster
(if required)

Safety Poster (Inside)



SUBCONTRACTOR SAFETY PRE-QUALIFICATION & SUBMITTAL

SUBCONTRACTOR NAME:

PROJECT NAME:

The following requirements apply to all subcontractors. A company officer must agree by initialing each section and signing below. This document must be completed and returned with your executed Subcontract.

INITIALS **PRE-JOB REQUIREMENTS:**

_____ I. **Designated On-Site "Competent Person"**: This will be the point of contact on the job for all safety related issues. This will be the superintendent/foreman who will responsible for receiving and completing any corrective actions. The On-Site Safety Contact will be responsible for all daily inspections, safety meetings, and other required safety documentation. This person will be accountable for conducting your company's safety program while on-site. This person must hold an OSHA Outreach Construction 10-hour certification that has been completed within the past 5 years. If this person does not currently hold the required OSHA 10-hour certification this individual will need to complete the web-based course at www.coresafety.com prior to commencing work on the project. Verification of the certification will be done by EMJ's Superintendent and work may not proceed until it is received. The Competent Person shall be on-site during all activities that require their supervision such as, but not limited to, Demolition, Trenching & Excavation, Scaffolding (Erection/Dismantle & Use), Fall Protection, and Steel Erection.

Name:_____ Job Title:_____

_____ II. **Designated On-Site First-Aid Contact**: Each subcontractor must have at least one person who is current with First Aid training that is equivalent with the training prescribed by the American Red Cross or American Heart Association. This person is responsible for providing First-Aid to the rest of your employees. Subcontractors are required to provide as many responders as necessary to cover multiple crews or locations while on-site. Verification of training will be done by the EMJ Superintendent and work may not proceed until it is received.

Name:_____ Job Title:_____

_____ III. **Training Certifications**: All employees operating machinery and/or equipment that require specific training per OSHA regulations shall be provided this training and it shall be documented accordingly. The training shall include required daily inspections along with a method of documenting those inspections. The items below are just a few areas that require specific training per OSHA regulations. Please check all applicable items that apply to your work on this project and certify by initialing to the side that each of your company's on-site employees has received all documented training required by OSHA and/or ANSI standards. Please have individual employee training and equipment inspection documentation available upon request by EMJ Corporation, OSHA or other regulatory agencies.

☐ Forklift ☐ Crane ☐ Aerial Lifts ☐ Respirators ☐ Powder Actuated Tools

_____ IV. **General Safety Rules:** Each subcontractor is responsible for reading and abiding by the policies outlined in Section II of EMJ's Safety Manual that are associated with their scope of work. A copy of EMJ's Safety Manual can be reviewed at the project site or is available electronically upon request.

Name of Company Designated Safety Director: _____

Contact Phone # for Designated Safety Director: _____

Signature of Company Officer: _____ **Date:**_____

EMJ CONSTRUCTION

Training Session on Hazard Communication

- ☐ I know where the Safety Data Sheets for my work are kept.
- ☐ I understand the safe work procedures and precautions to be taken when working with these products, including the use of personal protective equipment.
- ☐ I know where emergency supplies are kept.
- ☐ I know where the emergency phone numbers and Hazard Communication information are posted.
- ☐ I am aware that I may review copies of the hazardous chemicals list, the company's written program, and SDS's.
- ☐ Provide updated subcontractor and vendor contact lists

Signatures

Employee: _____ Date: _____

Witness: _____ Date:_____

EMJ CONSTRUCTION

Written Exposure Control Plan

Company: _____

Job #: _____

Date: _____

Person Completing the Plan: _____

Desciption of Task:

_____

_____

_____

Control Description:

Controls: _____

_____

_____

Work Practices: _____

_____

_____

Respiratory Protection: _____

_____

_____

Housekeeping:

_____

_____

_____

Procedures Used to Restrict Access to Work Areas:

_____

_____

_____