Site-Specific Safety, Health and Management Program

Allentown Arena Development Project
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This program embodies the prevention of incidental injury, property damage, fire damage and occupational illness. No phase of operations or administration is of greater importance than injury and illness prevention.

It is our policy to provide a safe place to work with the prevention of incidents recognized as necessary at all times. All persons employed on this project are expected to conduct their work in a safe manner. Performing work in a manner that presents risk of injury is unacceptable in our business. Each contractor has a contractual obligation to perform their part of the work using safe methods.

The elimination of injuries and illnesses to employees and the public, and damage to property and the environment are equally as important as any other part of the safety program. Therefore, work must be performed in a safe manner to control all hazards.

Each Subcontractor shall provide and maintain a safe, hazard-free work place for their employees, fellow workers, and the general public. At a minimum, the Subcontractor's Safety and Health Program shall incorporate all the principles of Alvin H. Butz, Inc. Site-Specific Safety & Health Program and shall be submitted for review prior to commencing work activities. In addition, all contractors must review and understand the Site Safety, Health and Management Program in its entirety prior to the commencement of any work activities in reference to the contractor's contractual scope of work onsite.

As the project moves forward, new hazards may be recognized. Therefore, the required health and safety requirements may be changed at the discretion of the Alvin H. Butz, Inc.

Greg L. Butz
President and CEO
SAFETY AND HEALTH PROGRAM

This program was prepared to assist project management, supervision, subcontractors and workers in understanding the incident/injury-free philosophy and the health and safety expectations and requirements of Alvin H. Butz, Inc. (AHB) while working on the Allentown Arena Development Project. *Compliance with this Site-Specific Safety and Health Program is expected and is a condition of employment on this project.*

Project managers/superintendents have overall responsibility for the implementation and execution of this Site-Specific Safety and Health Program.

PROJECT SAFETY RESPONSIBILITIES

Owner

1. Shall provide for reporting to Federal, State and Local Regulatory Agencies regarding the hazardous status of the property prior to the start of construction and as required during construction, as required.

2. Shall provide AHB with documents/reports relative to the existing site conditions.

Superintendent

1. Shall enforce compliance with the Site-Specific Safety and Health Program, OSHA Standards, and all other Federal, State, and Local Safety Codes and Regulations.

2. Shall be responsible for coordination of AHB workforce and subcontractors to ensure that a logical, systematic progression of work takes place.

3. Shall assist subcontractors in pre-planning their operations to prevent personal injury and property damage. Pre-task plans for new or modified operations are to be reviewed prior to the operation's commencement.

4. Shall schedule, distribute notification of, and chair the weekly Project Foremen's meetings.
5. Shall notify Subcontractors of safety noncompliance either verbally or in writing, dependent upon the severity of the issue. This notification will include the allowable time limit for compliance or correction shall be made by AHB and back-charged to the Subcontractor. A copy of any written notice, including all noncompliance items and date of correction will be filed in the project files.

6. Shall assist in the investigation of accidents, incidents and near misses in conjunction with the subcontractor foreman, safety representative, and AHB Project Safety Manager.

7. Shall conduct a formal, documented safety inspection of the project once per week.

8. Shall attend/participate in each pre-construction safety meeting for subcontractors of every tier.

9. Shall enforce the use of JSAs as required for high-hazard work under his scope of responsibility.

**Project Safety Manager**

1. Shall enforce compliance with the Site-Specific Safety and Health Program, OSHA Standards, and all other Federal, State, and Local Safety Codes and Regulations.

2. Shall implement a Safety and Health Orientation process for all employees assigned to the Project prior to their commencing work on the project.

3. Shall assist subcontractors in pre-planning their operations to prevent personal injury and property damage.

4. Shall schedule, distribute notification of, and chair the weekly Project Safety Representative/Foremen’s meetings.

5. Shall issue monthly Safety Bulletins pertinent to the Project, or more often as deemed necessary and maintain the project safety board.

6. Shall receive all safety-related correspondence and copies of all accident reports.

7. Shall inspect activities for safety compliance during project walk-throughs.

8. Shall participate at least once monthly in subcontractor tool box talks.

9. Shall notify Subcontractors of a safety noncompliance either verbally or in writing, dependent upon the severity of the issue. This notification will include the allowable time limit for compliance or correction shall be made by AHB and back charged to the Subcontractor. A copy of any written notice, including all noncompliance items and date of correction will be filed in the project files.
10. Shall investigate accidents, incidents, and near misses. Investigative reports will be submitted to the AHB Corporate Safety Director and causal factors shall be reviewed at the weekly safety meeting.

**Subcontractor Superintendent/Foreman**

1. Shall have overall responsibility for ensuring the safety and health of the workers reporting to him/her.

2. Shall ensure that his/her employees comply with their company's safety program and all Federal, State, and Local Codes and Regulations, and AHB Inc.'s Site-Specific Safety and Health Program.

3. Shall ensure compliance with the site-specific safety and health orientation process for all their personnel assigned to the Project.

4. For activities where pre-task plans are required, shall ensure that daily pre-task plans are completed, submitted to AHB for review, and then reviewed with the work crew(s) prior to commencing.

5. Shall ensure that workers under his/her command have the adequate training and knowledge to complete the task at hand.


7. Shall investigate all accidents, incidents, and near misses.

8. Shall ensure their employees are trained in accordance with OSHA and manufacturer requirements.

9. Shall ensure their employees are trained to perform their work in a safe manner and to recognize and correct potential and actual hazards and unsafe acts.

10. Shall make a minimum of one (1) complete documented safety inspection of their work per week with a written report to the AHB Project Safety Manager noting corrective action to identified hazards.

11. Shall attend each Project Safety Representative/Foremen's Meeting.

12. Shall chair each weekly Tool-Box Talk, with written minutes and provide copies weekly to the AHB Project Safety Manager.

13. Shall report all safety-related matters to the AHB Project Safety Manager and AHB Area Superintendent.

14. Shall be responsible for the Subcontractor Accident Reporting Requirements.
15. Shall investigate any accident involving their employees and submit accident investigation reports to AHB’s Project Safety Manager within 24 hours.

16. Shall ensure that workers under his/her command have the adequate training and knowledge to complete the task at hand.

Project Employees

1. Shall attend the Project Safety and Health Orientation and complete the form prior to beginning work on this Project. See Appendix A for the Orientation form.

2. Shall perform their work in a safe manner for prevention of accidents to themselves, fellow workers, the general public, and property of all concerned.

3. Shall attend weekly Tool-Box Talks.

4. Shall alert their foreman of hazards and unsafe acts.

5. Shall notify their foreman immediately of any accident.

6. Shall comply with their company’s Safety Program, the AHB Site-Specific Safety and Health Program, and all Federal, State, and Local Codes and Regulations.

SAFETY LEADERSHIP TEAM

A safety leadership team made up of project managers and safety representatives from Allentown Arena Development Project representatives, AHB, Inc. and all subcontractors will meet regularly to discuss project safety rules, discuss any incident trend, compliance issues, and upcoming project work or activities that may require additional safety controls. The frequency of these meetings will be determined by the AHB project management team. Meeting minutes will be prepared.

A representative of each subcontractor shall participate in the project Safety Leadership Team.

To make each meeting productive and informative, subcontractors must be prepared to discuss any items and/or issues provided by AHB prior to each meeting.

NOTIFICATION OF UNSAFE OR HAZARDOUS CONDITIONS

Each worker on this project has the right and responsibility to notify project management or supervision, without fear of retribution, of any unsafe or hazardous condition that may be present.

Project management, supervision, and/or competent persons will take immediate action to correct or remove or order the correction or removal of any hazard brought to their attention.
SAFETY REGULATIONS

AHB and subcontractors will incorporate site-specific rules and regulations and at a minimum, OSHA 29 CFR 1926 Construction Safety Standards, OSHA 29 CFR 1910 General Industry Standards (as applicable), other specific governmental regulations and requirements (as applicable), and this Safety and Health Management Program when determining the safe work practices and protection of workers on this project. If any of these standards, requirements, rules or procedures conflict, the most stringent requirement(s) will prevail.

INCIDENT/ACCIDENT REPORTING REQUIREMENTS

This project has established designated medical facilities for the treatment of injured workers. Any worker injured on-site must treat at a designated medical facility for the first 90-days. Designated Medical Facilities will be posted in each job trailer and will be reviewed with all employees during the Safety Orientation.

Minor Injuries

Minor injuries are defined as those that require only immediate first aid treatment and do not result in lost work time. All injuries, no matter how small, **MUST** be reported to the AHB Project Safety Manager immediately. The AHB Project Safety Manager will issue the required paperwork to be completed by the injured employee and/or the foreman. In the event of a minor injury, all employees must report to their Superintendent/Foreman for treatment.

All incidents shall be a topic of discussion at the subcontractor’s next scheduled safety meeting, to include cause of incident and preventive measures to be taken to avoid future similar incident.

**Note:** All appropriate documentation must be completed and forwarded to the AHB Project Safety Manager within 24 hours of the incident/accident.

Major Injuries (Other than First Aid)

Major injuries are those that require emergency medical treatment. The first person to encounter the injured shall call 911 or if unable to do so summon others call 911. They shall then immediately notify AHB and provide the appropriate first aid treatment, if qualified. Personnel shall be instructed to guide emergency vehicles to the location of the injured individual(s). Upon entering the project, the emergency vehicle shall be directed to the exact location of the injured.

All OSHA recordable incidents and serious near misses will be investigated by the subcontractor superintendent/foreman, AHB Area Superintendent, and AHB Safety. A post-accident review meeting will be conducted following completion of the investigation. Required attendees include the subcontractor owner/PM, subcontractor outside superintendent, subcontractor foremen (all on-site), subcontractor safety
representative, injured party, union steward(s), and AHB PM/PS/Project Safety Manager/Safety Director. The purpose of the meeting is to compile methods for future prevention. Action items compiled during this meeting must be complied with.

Note: Injured persons with a potential spine/neck injury **shall not** be moved unless they are in immediate danger of additional injury in their current location. In addition, equipment and material involved in or responsible for the accident **shall not** be disturbed unless it presents additional danger to the injured.

Immediately after the incident/accident the AHB Project Safety Manager will meet with the responsible subcontractor's Superintendent and/or Foreman to review the conditions and direct the appropriate corrective action. The Superintendent and/or foreman shall complete and submit a copy of all required reports to AHB within 24 hours of the incident/accident. See Appendix B for the Incident Investigation form.

**Note:** All applicable incident/accident documentation must be fully completed and submitted to AHB within twenty-four (24) hours of the incident/accident.

**FAILURE TO REPORT A KNOWN INCIDENT TO THE INSURANCE CARRIER AND SUBMIT THE REQUIRED INCIDENT/ACCIDENT DOCUMENTATION, FULLY COMPLETED, TO THE AHB SAFETY DEPARTMENT WITHIN TWENTY-FOUR (24) HOURS WILL RESULT IN A FINE OF FIVE HUNDRED DOLLARS ($500.00) PER INCIDENT.**

**THIS PROJECT WILL HAVE A TRANSITIONAL WORK POLICY (MODIFIED DUTY) IN EFFECT. SUBCONTRACTORS ARE REQUIRED TO COMPLY WITH THIS POLICY PRIOR TO THE COMMENCEMENT OF WORK. RESTRICTED WORK SHALL BE PROVIDED WITHIN THE LIMITS OF THE PHYSICIAN’S RELEASE REQUIREMENTS AND SHALL BE PROVIDED UNTIL THE EMPLOYEE HAS RECEIVED A FULL-DUTY RELEASE, OR THE EMPLOYEE IS NO LONGER EMPLOYED BY THE PROJECT. FAILURE TO COMPLY WITH THE TRANSITIONAL DUTY REQUIREMENTS WILL RESULT IN A FINE OF ONE THOUSAND FIVE HUNDRED DOLLARS ($1,500.00) PER WEEK.**

Subcontractors shall be individually responsible for notifying OSHA within eight (8) hours in the event of a fatality or a single incident/accident in which three (3) or more employees are hospitalized.

If a member of the public is injured AHB shall be notified immediately. A copy of the Supervisor’s Incident Report shall be forwarded within twenty-four (24) hours to AHB.
Near Misses

Subcontractors are responsible to report and submit the necessary documentation to the AHB within 24 hours of a near miss. This information will be used to assist in the elimination of similar occurrences in the future.

An incident is defined as any unplanned or undesired event that results in or has the potential to result in a work-related injury/illness, property damage, or disruption of business where the cause was from human errors of omission or commission.

A near miss is any situation that could have resulted in a work-related injury/illness, property damage, serious environmental impact, or disruption of business under slightly different circumstances.

SITE VISITORS

Any person not directly involved with the on-site construction of this Project shall first proceed to the AHB Construction Office to obtain permission to enter. In addition, visitors will not be allowed access to the site until they sign a visitor’s release, have an escort, and are wearing proper personal protective equipment. See Appendix C for the Visitor Release form.

OSHA INSPECTIONS

It is the policy of the Allentown Arena Development Project team, and AHB, Inc to allow OSHA to conduct an inspection of the project(s). The AHB, Inc. superintendent shall contact the AHB, Inc. Corporate Safety Director (Ty Reed) as well as the on-site Project Safety Manager. Both representatives will accompany the OSHA Compliance Officer at all times and make arrangements for the meetings between OSHA, subcontractors, and organized labor representatives. Subcontractors will inform AHB, Inc. of the issuance of any OSHA citations and provide a copy when requested.

AHB, Inc. shall immediately notify a representative of the Allentown Arena Development Project team of all OSHA inspections.

PROJECT MANAGEMENT/FOREMEN MEETINGS

Weekly project meetings shall be conducted by the AHB, Inc. team and the first item of discussion shall be safety and any incidents that may have occurred.

Nonconformance with statutory health and safety regulations or the project requirements contained in this Program will not be tolerated. It is expected all nonconformance issues identified will be abated immediately.

Failure to correct nonconformance(s) may result in suspension of part or all work.
WORK SITE SAFETY INSPECTION

The AHB, Inc. superintendent and subcontractors shall perform daily visual work site safety inspections. These inspections are separate from the superintendent’s required weekly documented inspection to be completed on the superintendent safety checklist. In addition, the AHB, Inc. Project Safety Manager shall conduct periodic inspections of the site. Any violations found must be corrected immediately.

DISCIPLINARY PROGRAM

At-risk behavior on this project that could contribute to an incident or injury will not be tolerated. Each worker has an individual responsibility to work safely, and each first-line supervisor is responsible to correct at-risk behavior of workers under their direction.

At-risk behaviors that may result in immediate termination from the project consist of, but are not limited to:

- Failure to follow the Fall Protection Policy
- Possession of firearms, explosives or dangerous weapons
- Theft and other criminal activity
- Fighting, horseplay, or practical joking
- Entering or allowing to enter, a confined space without following procedures.
- Unsafe and/or reckless operation of motorized vehicles or equipment
- Failure to follow lockout/tagout procedures
- First occurrence: verbal, written warning and/or re-training
- Second occurrence: written warning, re-training, suspension, or termination from the project
- Third occurrence: Termination from the project

For those acts or practices not considered Immediately Dangerous to Life or Health, the following will apply:
RESPONSIBILITY AND ACCOUNTABILITY

AHB, Inc. has committed to create a work environment absent of incidents and injuries. Incident and Injury-Free is not a goal or a result but a mindset intolerant of any level, frequency, or severity of incident or injury.

Everyone associated with this project must understand their responsibilities with regard to health and safety on this project. With the responsibilities defined, project management, supervision, subcontractors and workers will be held accountable for their health and safety performance.

SUBCONTRACTOR REQUIREMENTS

SUBCONTRACTOR HEALTH AND SAFETY COMMITMENT AGREEMENT

Each subcontractor working on this project must complete the Subcontractor Health and Safety Commitment Agreement prior to commencing work on this project. This agreement is to be signed and dated (after reviewing the health and safety requirements contained in this Safety & Health Program) by the senior representative of the subcontractor company who has the authority to commit the subcontractor company to compliance with the Site-Specific Safety and Health Program.

SUBCONTRACTOR SITE-SPECIFIC SAFETY PROGRAM

All Subcontractors shall submit their site-specific safety program in writing to the AHB Project Safety Manager prior to the start of their work. As a minimum, the program shall incorporate all the principles of AHB Site-Specific Safety and Health Program and shall list the positive steps the Subcontractor intends to utilize for the prevention of accidents to their employees, fellow workers, the general public, and property of all concerned. All subcontractors shall ensure that their employees know what is contained within, and agree to comply with, the AHB Site-Specific Safety and Health Program and their own site-specific safety program.

Each Subcontractor shall ensure that their Subcontractors and suppliers, regardless of tier, shall comply with AHB’s Site-Specific Safety and Health Program and the Subcontractor’s site-specific safety program and all Federal, State, and Local Codes and Regulations.

All costs to AHB for Federal, State, and Local citations, fines, penalties, and/or summons resulting from the Subcontractor’s operations shall be back-charged to the Subcontractor plus administrative costs.
SUBCONTRACTOR SAFETY PERFORMANCE

AHB, Inc. expects each subcontractor to execute their work on this project with a visible, proactive, and extraordinary vision and commitment to safety at all levels. Each subcontractor must plan its work with a focus on protecting its workers from incidents and injuries.

Immediate corrective action will be taken to eliminate observed hazards, at-risk behavior, or nonconformance to the Site-Specific Safety and Health Program.

DESIGNATED SUBCONTRACTOR SAFETY REPRESENTATIVE

Each subcontractor will designate a competent person as its project safety representative prior to mobilization. A competent person means one who is capable of identifying existing and predictable hazards in the surrounding or working conditions which are unsanitary, hazardous or dangerous to employees and who has the authorization to take prompt, corrective measures to eliminate them. Safety representatives may have other project responsibilities and duties unless the Subcontractor has 40 or more employees on the jobsite for a period of 20 consecutive work days or more.

If the Subcontractor has 40 or more employees on the jobsite for a period of 20 consecutive work days or more, AHB, Inc. reserves the right to require such subcontractor to provide, at no additional cost to the project, a qualified, full-time dedicated Safety Representative who must be on-site full-time during that time of high employment. This Safety Representative’s sole responsibility must be safety during the period of high (40 or more employees) employment on-site.

See Appendix D for the Competent Person Assignment form.

SUBCONTRACTOR TOOL BOX TALKS and DAILY SAFETY HUDDLES

Each subcontractor shall be required to conduct documented weekly tool box talks relevant to the work they are performing on the project and submit them to the AHB, Inc. Project Team with the signed document for that topic.

In addition to the weekly tool box talks, each subcontractor shall be required to conduct a daily pre-shift safety huddle with their personnel where they will review:

- The work to be performed during that shift
- The hazards involved in or related to that work
- The means and methods that will be used to eliminate or control those hazards

Documentation of these daily safety huddles must be maintained and available for review by AHB, Inc.
SUBCONTRACTOR SAFETY SUBMITTALS

Prior to beginning work, each subcontractor shall submit to AHB, Inc. the following:

- A copy of its Site-Specific Safety Plan
- Executed Subcontractor Safety and Health Commitment Agreement
- Name(s) of designated safety representative(s) (competent person)
- Name(s) and training verification of trained and qualified equipment operators as required by the scope of work for cranes, forklifts, aerial lifts, etc.
- Name(s) and training verification of employees trained in first aid and CPR
- Current annual crane inspections, by an independent third party crane inspection firm for all cranes brought onto the project
- Master Chemical and Substance Inventory Sheet and Material Safety Data Sheets for all hazardous chemicals and materials to be used or stored on the project
- Training verification of OSHA-mandated or project-required training as necessary. Verification shall include training rosters. Examples of OSHA-mandated or project-required training are:
  - Fall Protection
  - Confined Space
  - Ladders
  - Excavations and Trenches
  - Scaffolding
  - Crane Signals
  - Hazard Communications

WORKER SITE-SPECIFIC SAFETY ORIENTATION AND TRAINING

Prior to beginning work on the project, every worker must attend a site-specific safety orientation conducted by AHB, Inc., which will review project safety and health information, work rules and procedures, including Job Safety Analysis (JSA) expectations, accident and incident reporting, and local medical treatment facilities.

Safety Training

Each employer on this Project is required to provide their employees adequate safety and health training in accordance with all Federal, State and Local regulations, and site-specific training requirements. Such training must be documented and submitted to the AHB Safety Department upon request. Training documentation should, at a minimum, consist of the following: training subject, date of training, and employee’s name and signature attending the training. Training shall be updated as appropriate to ensure compliance with all applicable policies, procedures and regulations.
Subcontractors are required to submit the name(s) of their competent persons for the type of work they will perform. (i.e., excavations, scaffolds, confined space entry, fall protection, cranes, etc.) A competent person must be onsite at all times during the performance of this work. During the scope review a list of competent personnel on site must be submitted to AHB before work is to begin.

Each Subcontractor shall have at least one (1) certified first-aid/CPR person on the Project at all times. The name(s) of this individual and his/her date of certification shall be submitted to AHB Safety Department at the start of their work and any change shall be noted in the weekly Tool-Box Talk Meeting Minutes.

**Participation in Safety Meetings**

All workers assigned to this project will participate in safety meetings conducted by AHB or their employer. AHB reserves the right to remove subcontractor management/supervision that continually fails to attend or conduct weekly safety meetings on the project.

Safety meetings should communicate any incident that occurred on the project, safety concerns, new hazards that may appear on the project, etc.

**Job Safety Analysis (JSA)**

Subcontractors will submit JSAs to AHB, Inc. for review prior to start of high-hazard work as required. JSAs are required for at least the following types of activities:

- Confined Space Entry
- Hot Work
- Excavation and Trenching
- Critical Lifts
- Work from Heights of Six Feet or More
- Guardrail Interruption
- Lockout/Tagout
- Roofing
- Steel Erection
- Other work activities as deemed necessary
Alvin H. Butz, Inc.

SUBCONTRACTOR SAFETY AND HEALTH
COMMITMENT AGREEMENT

I, _____________________________________ representing _______________________________________
(Senior Subcontractor Representative)                               (Name of Company)

have reviewed this Site-Specific Safety and Health Program and fully understand its contents. I understand our responsibilities and will hold each worker assigned to work on this project accountable for complying with the health and safety rules and requirements, regulations, and procedures contained in the Project Site-Specific Safety and Health Program. I will further allocate the necessary personnel, equipment, and supplies required to comply with this Site-Specific Safety and Health Program.

I fully understand that if my company or a worker fails to comply with any part of the Site-Specific Safety and Health Program, client work rules, or regulations, that part or all of the work being performed by my company may be suspended until such time that a corrective action plan has been developed, accepted by Alvin H. Butz, Inc. and implemented.

__________________________________ is being submitted by my company as the Designated Subcontractor Safety Representative for this project. He or she has met or exceeded the requirements established for the position and has full authority to implement any and all necessary corrective actions to maintain compliance with the Safety and Health Management Program.

Signature:___________________________________________ Date: ______________

Title: ____________________________________________________________________

THIS DOCUMENT MUST BE SUBMITTED TO ALVIN H. BUTZ, INC. BEFORE START OF WORK.
GENERAL SAFE WORK PRACTICES

Clean and safe working conditions are absolutely essential for achieving an Incident and Injury-Free Environment, as well as for the promotion of construction efficiency and progress. The following general safe work rules are a partial list of the general rules that apply to each worker on this project. There will be no tolerance for any worker who carelessly or callously disregards these rules or the other applicable health and safety rules. No worker will attempt to work under conditions that appear to be unsafe.

1. It is the responsibility of each worker to perform their assigned duties so as to provide:
   a. safety for themselves
   b. safety for their fellow worker
   c. protection of the general public and all other workers
   d. protection of equipment, materials and tools

2. Workers at all times will wear the minimum personal protective equipment (hard hat, safety glasses, shirt, trousers and work boots).

3. No worker will use damaged tools or equipment. Damaged tools must be removed from the work site.

4. No work will be performed on any equipment, machinery, or system without it being locked out and tagged.

5. It is every worker’s responsibility to maintain his work area in a clean and orderly manner. Each Subcontractor shall be responsible for maintaining general housekeeping in their work area as the material is generated and on a daily basis. All debris shall be placed in debris containers, or as otherwise directed by AHB. Any area found to be deficient in housekeeping will be cause for AHB to conduct cleaning on behalf of the contractor responsible for the debris. All costs associated with cleaning will be charged to the contractor.

6. Tools and equipment will not be operated without proper guards and safety devices in place.

7. Each worker will report work-related injuries or illnesses immediately to his supervisor.

8. If a worker is unsure as to the safe performance of his work, instruction should be requested from the supervisor.

9. No worker will enter a confined space without authorization and training.
10. No worker will attempt to operate equipment or machinery or any specialty tool (e.g., powder-actuated tools) unless authorized and properly trained.

11. No worker will cut, weld, grind, chip, or perform other tasks where the danger of flying debris exists without wearing proper eye and face protection.

12. Workers will use safe lifting techniques when required to lift material or other loads.

13. Workers will not remove respiratory protection when the work area requires it.

14. No worker will ride in the bed of pickup trucks.

15. Alcoholic beverages as well as illegal drugs shall not be allowed on this Project. No worker will be under the influence of drugs/alcohol or engage in any horseplay, fighting or gambling of any form.

16. No worker will cross, disregard, or enter a red barricaded, taped, or flagged area.

17. No worker will intentionally discharge or remove fire-fighting equipment.

18. No worker will remove barricades or floor covers without authorization.

19. Appropriate fall protection shall be instituted for the various fall hazards that arise.

20. All types of AM/FM radios/Walkman-type radios, iPods, etc. shall not be allowed on this Project.

21. If the decibel level of any tool or piece of equipment reaches 90db (no matter the duration), then proper hearing protection will be required for that task.
EMERGENCY ACTION AND EVACUATION PROCEDURES

Each subcontractor shall follow the Site-Specific Emergency Evacuation Plan and Emergency Action Plan. That plan addresses the following:

- Owner requirements and procedures
- AHB, Inc. crisis management and site logistics protocols
- Coordination with local emergency response personnel
- Handling of materials possibly contaminated with blood-borne pathogens

The Emergency Action Plan will be communicated to all first-line Supervisors.

The Emergency Evacuation Plan is to be posted throughout the jobsite(s) and communicated to workers during the Safety Orientation.
MEDICAL EMERGENCY

During the safety orientation, workers will be given information on how to summon medical assistance in case of a medical emergency. Workers should know the following information:

- **Emergency Phone Number**: 911
- **Project Address**: 7th and Hamilton St.
- **City**: Allentown, PA

When reporting a medical emergency, the worker will state his/her name, the nature of the emergency, severity of the emergency, and where assistance is needed. A worker may be required to meet medical personnel and guide them to the location of the emergency.

**WORKERS ARE TO BE INSTRUCTED NOT TO MOVE AN INJURED WORKER BEFORE MEDICAL ASSISTANCE ARRIVES UNLESS FURTHER INJURY IS POSSIBLE.**

FIRE

In case of a fire, workers will evacuate their work area immediately and report to the pre-determined assembly area.

Workers will not attempt to extinguish fires except in their incipient stages and only if such worker(s) has received special instruction in use of fire extinguishers. After reporting the fire, workers will evacuate the work area and report to the pre-determined assembly area that was designated during the safety orientation.

SEVERE WEATHER

Should weather conditions such as severe thunderstorms or tornados develop around or near this project, workers will follow the direction of their immediate supervisor. Workers may be directed to a safe area where they will remain until weather conditions improve.

SITE-SPECIFIC EMERGENCY EVACUATION PLAN

Project Management will ensure the site-specific Emergency Evacuation Plan is communicated to all workers during orientation. Specific emergency procedures and emergency phone numbers will be posted in lunch areas, near all telephones and on project bulletin boards.
Homeland Security Emergency

Should a Severe Condition “Red” threat advisory be issued indicating a terrorist attack occurrence or the severe risk of possible terrorist attacks, Allentown Arena Development project management and AHB, Inc. project management will determine whether the project should evacuate all workers or shelter them at the project.

AHB, Inc. Project Management will communicate to workers and subcontractors all known information of the threat and of the crisis plan.
ALVIN H. BUTZ, INC.

SITE-SPECIFIC EMERGENCY EVACUATION PLAN

THIS PLAN SHALL BE REVIEWED BY ALL WORKERS AND POSTED WITH A SITE PLAN IN PROMINENT LOCATIONS ACCESSIBLE TO ALL WORKERS. THIS PLAN IS A SUPPLEMENT TO THE PROJECT-SPECIFIC SAFETY & HEALTH PROGRAM.

PROJECT NAME: Allentown Arena Development Project
WORK LOCATION: 7th & Hamilton St., Allentown, Pa

1. This is a project-specific Emergency Evacuation Plan communicating evacuation procedures, specific alarms, and assembly points, should an emergency evacuation become necessary because of severe weather, fire, hazardous chemical release, explosion or other emergencies that could cause a worker harm.

2. All workers are responsible for familiarizing themselves with evacuation routes, alarms and assembly points in case an emergency evacuation of the work area is required.

3. Caution: Evacuation routes, alarms or assembly points for one emergency may differ from another emergency. Workers should familiarize themselves with each of the emergency plans below.

4. IN CASE OF FIRE OR MEDICAL EMERGENCY:

   Emergency Phone Number: 911
   Alarm or Notification: Air horns
   Evacuation Route: Safest, most direct route to assembly area(s)
   Primary Assembly Point: TBD
   Secondary Assembly Point: TBD

5. IN CASE OF SEVERE WEATHER OR HOMELAND SECURITY EMERGENCY:

   Alarm or Notification: Air horns
   Evacuation Route: Safest, most direct route to assembly area(s)
   Assembly Point: TBD
6. **IN CASE OF A CHEMICAL RELEASE OR EXPLOSION:**

   - **Alarm or Notification:** Air horns
   - **Evacuation Route:** Safest, most direct route to assembly area(s)
   - **Primary Assembly Point:** TBD
   - **Secondary Assembly Point:** TBD
   - **Spill Kit Location:**

7. Workers will immediately evacuate their work area upon hearing the alarm or being notified of the emergency and ordered to evacuate. No worker is exempt from evacuation even if the evacuation is a drill.

8. Workers are required to report immediately to their designated assembly point and be accounted for. Failure to report may cause another to risk danger in an effort to search for you. Do NOT leave the project without prior authorization from the first-line supervision.
PROJECT HAZARD COMMUNICATION PROGRAM

All workers on this project are entitled to know the properties and potential safety and health hazards of chemicals or substances that they may come in contact with on this project.

Each subcontractor will submit to AHB, Inc. a Master Chemical and Substance Inventory List and a copy of the Material Safety Data Sheet (MSDS) of all known hazardous chemicals that are in his/her work area. Prime subcontractors will be responsible for obtaining all sub-tier subcontractors’ Master Chemical and Substance Inventory Lists/MSDS and forwarding them to AHB, Inc.

The Master Chemical and Substance Inventory List will be maintained, even if they do not have or will not use any hazardous chemicals or substances. *This is an OSHA requirement.*

Subcontractors will maintain a project-specific MSDS on site for each hazardous chemical or substance listed on the Master Chemical and Substance Inventory List. Prime subcontractors will be responsible to ensure all sub-tier subcontractors have their project-specific MSDS sheets at the project.

It will be the responsibility of each worker’s supervision or project manager to assure Material Safety Data Sheets are received prior to, or at the time of, delivery of a hazardous chemical.

Project management and first-line supervision will ensure all hazardous chemicals are properly labeled in accordance with the MSDS. Containers into which hazardous chemicals have been transferred for use during a single work shift will be labeled as to contents.

Every worker on this project shall receive instruction from their employer on their Hazard Communication Program, the location of the Master Hazardous Chemical and Substance Inventory list, the location of the Material Safety Data Sheets, labeling requirements and specific safety or health instructions about the hazardous chemical or substance.
Recommended minimum Hazard Communication Training will consist of:

1. The contents of the program

2. Prior to use of or the potential exposure to any hazardous chemical or substance, workers are to be instructed in:
   - Physical and health hazards
   - Procedures to protect against the hazards
   - Engineering and administrative controls
   - Personal protective equipment
   - Emergency procedures in case of exposure or accidental spill

3. Labeling requirements

4. Whenever a new chemical or substance is introduced into the workplace, workers will be briefed of its hazards. The client, vendors and subcontractors that may have business in or near a work area will be notified that hazardous chemicals are being used and the hazards they may encounter.

   If a worker believes he/she has encountered an unfamiliar hazardous chemical or substance, the worker should immediately notify his/her supervisor. Project management or supervision will attempt to identify the hazardous chemical or substance and initiate all precautions to handle and dispose of the material, if required, and to properly protect workers.
PROJECT HAZARD COMMUNICATION PROGRAM

THIS PROGRAM WILL BE REVIEWED BY ALL PROJECT PERSONNEL AND POSTED IN A PROMINENT AND ACCESSIBLE LOCATION. THIS PROGRAM IS A SUPPLEMENT TO THE SITE-SPECIFIC SAFETY & HEALTH MANAGEMENT PROGRAM.

PROJECT NAME: Allentown Arena Development Project

WORK LOCATION: 7th & Hamilton St., Allentown Pa

1. This is a project-specific Hazard Communication Plan ensuring that information on hazardous chemicals and substances is communicated to workers in accordance with OSHA 29 CFR 1926.59.

2. An inventory of known hazardous chemicals and substances used on this project has been conducted and listed on the Master Chemical and Substance Inventory which is located and can be reviewed at the AHB, Inc. Project office.

3. A copy of the Material Safety Data Sheets (MSDS) for known hazardous chemicals and substances used on this project is located and can be reviewed at the AHB, Inc. Project office.

4. If a copy of a MSDS cannot be located, contact the AHB, Inc. Superintendent, at the project.

5. Project management and first-line supervision are responsible for obtaining MSDS and ensuring they are received prior to, or at the time of delivery of, a hazardous chemical.

6. Hazardous chemicals will be properly labeled in accordance with the MSDS. Containers into which hazardous chemicals have been transferred for use during a single work shift require secondary labeling.

7. Workers who work with, or may be potentially exposed to, a hazardous chemical or substance will be informed of the physical and health hazards and procedures to protect against those hazards. Included in the procedures are engineering and administrative controls, personal protective equipment, and emergency instructions for accidental exposure, emergency evacuations or spill containment of the hazardous chemical or substance.

8. When new hazardous chemicals or substances are introduced into the work environment, workers will be informed of the physical and health hazards.

9. Workers performing non-routine tasks will be informed of chemical hazards associated with the work activity and the appropriate protection measures.
PROJECT-SPECIFIC SAFE WORK REQUIREMENTS

The project-specific safe work requirements are the minimum requirements for this project. The purpose of these requirements is to ensure an incident/injury-free environment and compliance of regulatory standards and regulations. The goal of AHB, Inc. is to reduce/eliminate incidents and/or near miss activities.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

All personnel accessing this project including vendors, and third-party individuals will, at a minimum, wear the following personal protective equipment while on this project (except in office areas):

Head Protection:

Hard hats meeting current ANSI Z89.1 standards will be worn at all times on this project. In addition, the following rules apply:

- HARD HATS WILL BE WORN IN ACCORDANCE TO MANUFACTURERS’ INSTRUCTIONS.
- Company name and/or orientation sticker displayed on hard hat.
- Ball caps, stocking caps, or other headgear not specifically designed to wear with a hard hat will not be authorized at any time.

Eye and Face Protection:

Safety glasses with side-shields that meet current ANSI Z87.1 standards are to be worn at all times while in work areas. Workers with prescription glasses must meet ANSI Z87.1 requirements or will be required to wear over the glasses (OTG) safety eyewear.
In addition, the following eye/face protective equipment must be used when performing the following work activities:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Safety Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welding</td>
<td>Welding Hood*</td>
</tr>
<tr>
<td>Burning</td>
<td>Burning Goggles</td>
</tr>
<tr>
<td>Abrasive grinding or cutting</td>
<td>Face Shield*</td>
</tr>
<tr>
<td>Drilling</td>
<td>Safety Glasses/Face Shield*</td>
</tr>
<tr>
<td>Reaming</td>
<td>Goggles/Face Shield*</td>
</tr>
<tr>
<td>Chemical Handling</td>
<td>Goggles/Face Shield*</td>
</tr>
<tr>
<td>Molten Materials</td>
<td>Goggles/Face Shield*</td>
</tr>
<tr>
<td>Corrosive Liquids</td>
<td>Goggles/Face Shield*</td>
</tr>
<tr>
<td>Concrete Pouring</td>
<td>Safety Glasses</td>
</tr>
</tbody>
</table>

* Safety glasses will be used in conjunction with face shields and welding hoods.

Foot Protection:

Sturdy work boots that are in good condition must be worn (heel and sole will not show excessive wear). Tennis shoes, sandals, or other street-type shoes are not allowed.

Reflective Vest:

Every worker, visitor, and vendor will wear a high-visibility reflective vest/shirt when working and/or conducting business on the exterior of this facility.

Work Attire:

Shirtsleeves will have a minimum sleeve length of three (3) inches. No shorts, tank tops, or cut-off shirts are permitted.

Long trousers are required that fit properly around the waist and ankles. Trousers that are worn low on the hips or high are not allowed. The length of the trouser will be such as to no present a tripping hazard.

Respiratory Protection:

First-line supervision will determine if hazards exist requiring respiratory protection prior to start of work. Written documentation supporting this hazard assessment will be made available to AHB, Inc. upon request.
Whenever respiratory protection is deemed required or requested by a worker on this project, the requirements outlines in OSHA 29 CFR 1926.103 will be followed, which include:

1. Have affected workers complete a Medical Questionnaire for Respirator Use.

2. Submit questionnaires to a Physician or Licensed Health Care Professional (PLHCP) for review and further testing.
   a. Once medical approval to wear a respirator is received from the PLHCP:
      1) Select the appropriate type of respirator to protect workers from the hazard(s).
      2) For air purifying respirators, choose the appropriate filter/cartridge.
      3) For supplied air respirators, ensure breathing air source provides “Grade D” breathing air.
      4) Train affected workers about the specific type(s) of respirator(s) being used.
      5) Fit-test the workers with the specific type(s) of respirator being used.

If a worker desires to voluntarily wear a filtering face piece (dust mask) and a respirator is not required, the first-line supervisor must inform the worker about the limitations of the selected respirator.
Hearing Protection:

Approved hearing protection will be worn as specified in posted areas and while working with or around high-noise level producing machines, tools, or equipment. A good rule to follow is: When you must raise your voice to be heard, you need hearing protection. Exposure to impulsive or impact noise will not exceed 140 dB noise level.

<table>
<thead>
<tr>
<th>Duration per day, hours</th>
<th>Sound Level dBA Slow Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>90</td>
</tr>
<tr>
<td>6</td>
<td>92</td>
</tr>
<tr>
<td>4</td>
<td>95</td>
</tr>
<tr>
<td>3</td>
<td>97</td>
</tr>
<tr>
<td>2</td>
<td>100</td>
</tr>
<tr>
<td>1 ½</td>
<td>102</td>
</tr>
<tr>
<td>1</td>
<td>105</td>
</tr>
<tr>
<td>½</td>
<td>110</td>
</tr>
<tr>
<td>¼ or less</td>
<td>115</td>
</tr>
</tbody>
</table>

**NOTE:** Any tool or equipment, which produces noise levels that require you to shout to be heard, will be considered to have exceeded the Permissible Exposure Level for noise and hearing protection is required – no matter the duration of use.

<table>
<thead>
<tr>
<th>Impulsive or Impact Noise</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Equipment or tools</strong></td>
</tr>
<tr>
<td>Pneumatic chip hammer</td>
</tr>
<tr>
<td>Jack hammer</td>
</tr>
<tr>
<td>Concrete joint cutter</td>
</tr>
<tr>
<td>Chop saw</td>
</tr>
<tr>
<td>Stud welder</td>
</tr>
<tr>
<td>Bulldozer</td>
</tr>
<tr>
<td>Crane</td>
</tr>
<tr>
<td>Hammer</td>
</tr>
<tr>
<td>Backhoe</td>
</tr>
</tbody>
</table>

Above hearing exposure based on an 8-hour exposure.

Hand Protection:

Workers performing tasks that include the risk of hand lacerations are expected to wear protective gloves designed for the exposure at all times to prevent hand and finger injuries. Each subcontractor’s competent person can assist in recommending the correct glove for the task.

Additional Protection:

During the course of work or activity, AHB, Inc. may require workers to wear additional personal protective equipment to reduce the likelihood of a work-related injury or illness.
HOUSEKEEPING AND ORDERLINESS

The AHB, Inc. policy on housekeeping is that all equipment, tools, materials, or apparatuses will be stored, stacked, located, placed, temporarily spotted, or set up for manipulation in such a manner as to render it highly improbable that an incident or injury could occur in the work area. The area will give the direct and obvious impression of a clean and orderly workplace.

Project management, supervision, workers, vendors and third-party persons will maintain all work locations in an orderly and clean manner at all times.

Mud/dirt tracked onto public streets, alleyways corridors or offices will be removed continuously during the workday.

The following are the minimum housekeeping and orderliness requirements for this project:

- Access walkways, roadways, and fire lanes will not be blocked with material, tools, ladders, scaffolds, welding leads, air hoses or electrical cords
- Electrical extension cords, light stringers, air hoses, and welding leads will be elevated above walkways seven feet or kept to the side of all corridors and walkways
- Welding rod, nuts, bolts, and washers will be kept in proper containers
- Shackles, slings, chokers, ladders, and safety equipment will be removed from the work area when not needed and properly stored
- Trash containers will be placed at appropriate locations
- Rubbish, trash, and debris will be removed from the work area daily
- At all locations where drinking water is dispensed, an adequate trash container will be located for disposal of used drinking cups
FALL PREVENTION/PROTECTION

This project is committed to the philosophy of 100% continuous fall protection whenever workers are exposed to fall hazards of six feet or more above lower levels.

AHB, Inc., subcontractors, vendors, or other third-party individuals will take all practical measures to eliminate, prevent, and control fall hazards. All work will be planned with the intent to eliminate identified fall hazards.

Workers exposed to fall hazards that cannot be eliminated must be uniformly equipped, trained and given periodic refresher training in fall protection to minimize the adverse effects of accidental falls. Fall protection training records will be maintained on the project and available for review by AHB, Inc.

On this project, 100% FALL PROTECTION MEANS PROTECTED FROM FALLS OF SIX FEET OR MORE. This means it is mandatory for all trades, including but not limited to:

- Structural steel erection (bolt-up and connectors)
- Re-bar assembly
- Concrete forming
- Pre-cast erection
- Roofing
- Masonry
- Carpentry
- Scaffold erection/disassembly

Workers may work from ladders without personal fall protection when the following criteria are met, without exception:

- Working height does not exceed 12 feet
- Work can be performed without reaching (worker remains inside the area between the vertical side rails)
- Ladder is properly tied-off or in the case of a stepladder, spreaders are fully extended and locked
- Work does not involve working within 15 feet or above an open side, leading edge, or shaft, even if the edge has a proper guardrail
A Personal Fall Arrest System will consist of an ANSI-certified full-body harness, double lanyard with shock absorbing device or retractable lifeline, locking snap hook and properly engineered anchorage points.

Workers will not use guardrail systems as anchorage points for personal fall arrest systems.

When wire rope is used to construct guardrail systems, at least 1/2” diameter cable shall be used with three cable forged clamps per connection and turnbuckles shall have NO overlapping joinings.

Subcontractors will submit all engineered documentation on horizontal lifelines to AHB, Inc. for review. Rope will not be approved as a component of a horizontal lifeline without approval of a qualified PE in fall protection. All horizontal lifelines will be designed, installed, and used under the direct supervision of a qualified person.

Lanyards will not be tied back to themselves unless the lanyard is specifically designed to tie back to itself.

Workers on this project who are exposed to falls while working off scaffolding, elevated decks, elevated platforms, low-slope roofing, stairways, stairwells, reinforced steel, and any other elevated area or equipment will be protected from falls starting at 6’. There is no set safe distance from any unprotected side or edge, leading edge, or shaft that would exempt a worker from fall protection.

On properly constructed scaffold, elevated decks and elevated platforms that have perimeter guardrail systems consisting of a top and mid rail, workers are not required to tie off. If the perimeter guardrail system must be removed, workers will wear full body harnesses with double shock-absorbing lanyards.

Floor openings two inches or greater and all wall openings will be guarded or covered with an appropriate cover or guardrail. Floor covers will be secured to the floor to prevent easy removal. The floor or wall cover will be properly marked with a Danger sign stating, “COVER-DO NOT REMOVE”. Spray painting “hole” on plywood is not allowed.

Any contractor that must remove a guardrail, hole cover, or other fall protection system in the course of its work will be responsible for immediately replacing the protective system.

When no other practical means of fall protection can be used, workers will be tied-off at all times utilizing a full body harness and double shock-absorbing lanyard.

Workers will be protected from falling objects from above.

In the event any deviation of this fall protection procedure is required, the site superintendent and AHB, Inc. safety representative will be required to approve.
Guardrail Interruption Policy:

If it is determined that the guardrail system, floor opening covers, or any other safety related item must be removed or altered, the Subcontractor will obtain and complete a Guardrail Disruption Permit request. Permits are only available from the AHB, Inc. Project Superintendent or AHB, Inc. Project Safety Manager and must be submitted at least 24 hours prior to the proposed Disruption. See Appendix E for the Guardrail Disruption Permit form.

Any contractor that must remove a guardrail, floor opening covers, or any other safety device in the course its work will be responsible for immediately replacing the protective system.

AHB, INC. RESERVES THE RIGHT TO ASSESS FINES TO ANY CONTRACTOR THAT FAILS TO COMPLY WITH THIS DIRECTIVE. SUCH FINES SHALL NOT EXCEED FIVE THOUSAND DOLLARS ($5,000.00) FOR EACH INSTANCE OF NON-COMPLIANCE.
LADDERS AND STAIRWAYS

Stairways having four or more risers or rising 30 inches or more shall have a stair rail system 37 inches high on each unprotected side.

Metal pan stairs shall not be used until the pans are filled to prevent a tripping hazard.

Ladders, stairs or ramps will be provided where there is a change in elevation of 19 inches or greater.

Ladders used on this project will meet the requirements established in OSHA 29 CFR 1926.1050.

Workers must be trained on the safe use of ladders.

Ladders are required to ascent or descent truck beds and/or trailers.

Ladders will extend past the bearing point no less than 36 inches.

Ladder landings shall remain clear of all obstacles and obstructions to allow easy access on and off the ladder.

Each contractor is required to inspect ladders daily prior to use. Ladders with broken or bent rungs, steps or side rails will be immediately destroyed and removed from the project.

When ladders are used to access upper levels, they must be secured at the base and at the top by tying to prevent displacement.

Aluminum ladders are prohibited.

All ladders, including job-made ladders, will conform to OSHA and ANSI standards.

All ladders will be extra-heavy-duty (Type 1A) with a minimum capacity rating of 300 lbs.

Stepladders:

Stepladders will not be used as straight ladders. Stepladders will only be used with the spreaders fully extended and spreader bar locked in place.

Workers will not stand on the top or top step of a stepladder. No workers will work when their knees are above the top of the stepladder.

Straight/Extension Ladders:

Ladders will be set up so the horizontal distance at the bottom is not less than 1/4 of the vertical distance to the bearing point.
Workers will not stand on the top three rungs of a ladder. No workers will work when their knees are above the top of the ladder.

All straight ladders will have non-skid feet at the base.

Job-Made Ladders:

Job-made ladders shall be constructed for intended use. If a ladder is to provide the only means of access or exit from a working area for 25 or more employees, or simultaneous two-way traffic is expected, a double-cleat ladder shall be installed.

Job-made ladders will be constructed in accordance with OSHA and ANSI standards.

HAND AND POWER TOOLS

All hand and power tools will be kept in good condition with regular maintenance. Hand and power tools are to be operated according to manufacturers’ instructions and guidelines and the personal protective equipment appropriate for the hand or power tool will be worn.

Hand Tools:

- Impact tools such as chisels, wedges, etc., are not to have mushroomed heads
- Wooden handles will not be splintered or cracked
- Pocketknives will not be used for stripping wire

Electric Tools:

- Never lift or carry a power tool by its cord
- Guards and safety switches will not be removed or made inoperative
- Electric tools must have a three-wire cord unless it is double-insulated

Portable Abrasive Wheel Tools:

- Guards will not be removed
- Grinding disks and wheels will be checked to verify they are the correct ones for the grinder and rpm
Pneumatic Tools:

- Air hoses 1/2 inch in diameter or greater will have a safety excess valve installed at the source of the air
- Clips, whips or retainers are required at each air hose coupling end to prevent attachments from being ejected from the tool
- Only the pneumatic nail gun, where the muzzle is pressed against the work surface to fire, is allowed
- Hose couplings will be secured to prevent displacement
- Pneumatic nail guns shall be disconnected from the air supply when unattended

Powder-Actuated Tools:

- Workers must be trained to operate a powder-actuated tool and required to carry their training card at all times
- Fired cartridges are not to be discarded on the floor but placed in a container or bucket and disposed of properly
- The powder-actuated tool must not be able to fire until it is placed against the surface with a force of 5 pounds or greater
- Misfire cartridges are to be placed in water for five minutes
FIRE PROTECTION/PREVENTION

Fire Protection:

Temporary fire protection measures, such as fire extinguishers, temporary hose lines, and temporary standpipes, are required near hazardous locations.

The AHB, Inc. project team shall develop a fire protection plan in accordance with OSHA 29 CFR 1926 Subpart F.

Fire extinguishers will be:

- Conspicuously located
- Inspected monthly
- Protected from freezing
- Placed within the immediate area of any welding/cutting operation or flammable liquid storage area
- Placed within five feet whenever gasoline-operated equipment is used

If a fire extinguisher is discharged for any purpose, it should be reported to AHB, Inc.

All temporary buildings and trailer complexes (shops, field offices, conex's, etc.) will have a class ABC fire extinguisher located within the building.

Access to fire hydrants, buildings and other structures will be maintained at all times.
Fire Prevention:

Temporary buildings located within another building or structure shall be constructed of non-combustible material or have a fire-resistance rating of at least one (1) hour. Plastic tarps or covers (visqueen) used for any purpose inside a building where welding, cutting, or open flame is present will be made of fire-retardant material.

Combustible refuse from construction operations will not be burned or dumped anywhere on the construction site. Such refuse will be removed at frequent intervals, as needed. Storage of large quantities of construction debris will be placed in metal dumpsters.

Storage of compressed gases will be:

- Stored with valve caps securely on when not attached to a regulator
- Secured upright at all times, including when transported in vehicles
- Separated in accordance with OSHA requirements
- Empty cylinders stored separately from full cylinders

Only approved high flash point solvents are to be used for cleaning purposes.

Oily rags and waste are to be stored separately in metal containers fitted with self-closing lids and must be removed from the building and disposed of properly at the end of each shift. Trash and refuse must be placed in trash containers provided for that purpose.

A minimum clearance of 15 feet from fire hydrants must be maintained at all times.

All fire safety rules and signs on this project will be observed and obeyed.
Fire and Flammable Liquid Storage and Dispensing:

High flash and methylene chloride solvents are prohibited.

Flammable Liquids will be:

- Stored outside, not within 20 feet of any structure or in a properly constructed storage locker, whenever possible
- Stored in approved portable containers that are marked as to its contents
- No more than 25 gallons stored inside any trailer or room
- Posted with “NO SMOKING” signs. When a large number of workers speak a foreign language, the warning signs will be posted in that language, as well
- Outside storage areas kept free of weeds and other combustible material

All flammables will be stored in approved containers and marked as to the contents. If storing flammables for more than one day, contact AHB, Inc. for approval.

Storage of flammables will be in an enclosure away from open flame, heat, direct sun or other sources of ignition.

Transportation and transferring of volatile liquids will be made in Underwriter Laboratory or Department of Transportation approved containers.

All gasoline or diesel storage tanks/drums will be placed in a berm or other secondary containment. Berms will be lined with minimum 6-mil plastic sheeting that is fuel-resistant. PVC linings are not allowed.

Fuel and flammable liquid tanks, drums, or barrels will have the proper DOT placard and be labeled as to content. If workers speak a foreign language, the labels will also be in that language.

LP gas storage tanks will be protected from vehicle traffic.
At fuel dispensing points, the following is required:

- Portable 20 B-C fire extinguisher within 25 to 75 feet from the fueling point
- No smoking signs posted. Additional signs in a second language, if required
- Self-locking fuel nozzle prohibited
- Spill kit stored nearby
- Tanks will be grounded and when dispensing flammable liquids, the containers will be bonded
HOT WORK

Hot work is defined as the use of open flames, other heat sources and/or spark-producing devices in areas where combustible materials may be or do exist or where there is potential for explosion or fire. Hot work activities include burning, welding, cutting, grinding or other operations that produce a flame or sparks that could cause catastrophic results if not controlled. Therefore, prior to performing “Hot Work” operations, workers will obtain a Hot Work Permit from the AHB, Inc. superintendent.

A Hot Work Permit must be obtained daily. See Appendix F for the Hot Work Permit form. The following precautionary measures will be taken when a Hot Work Permit is required:

- Grating, openings, etc., will be completely covered in such a way to prevent sparks and slag from falling to a level below
- Fire extinguisher in the immediate area or work
- No flammable or combustible material stored within 35 feet in any direction
- Combustible/flammable materials that cannot be moved must be covered with fire blankets or other suitable material
- Worker(s) designated as fire watch will be trained and remain for one-half hour after work has ended
- Follow confined space entry procedures, if required

When burning or welding using compressed gases, back-flame arrestors will be installed on the regulator side of the oxygen and gas hoses or in accordance with the torch manufacturer’s recommendations.

Welding screens will be used whenever possible to protect workers from welding flash.

Each subcontractor is responsible for training workers prior to performing any hot work. The training will consist of:

- A review of the work to be performed
- Emergency procedure in case of fire
- Precautions to be taken
- How to use the fire extinguisher correctly
- Duties of fire watch
SCAFFOLDING

All scaffolding used on this project will meet the requirements established in OSHA 29 CFR 1926 Subpart L.

Each contractor using scaffolds must designate a scaffolding competent person to direct and supervise the erection and dismantling of all scaffolding on this project. The competent person will sign and attach one of the following color-coded scaffold tags to each scaffold:

- Green tag: Scaffolding complete and ready for use
- Red Tag: Scaffolding incomplete and not for use
- Yellow Tag: Scaffolding usable but personal fall protection required

Scaffolding will be inspected daily by the competent person prior to use.

Workers required to work from scaffolding will receive training from their employer on the following:

- Nature of any known hazards, such as electrical, fall or falling objects
- Correct method of erecting, maintaining, and disassembling fall protection systems
- Falling object protection
- Proper handling of equipment or material on the scaffold
- Maximum load-carrying capacity of the scaffold
- Any other pertinent requirements about the scaffold

During erection and dismantling of scaffolding, if deviation of the fall protection procedure is required, approval will be required by the AHB, Inc. Project Safety Manager.

Records of scaffolding training will be maintained and will be available for review by AHB, Inc.

Prior to erection, all scaffolding components will be inspected for defects and any damaged components will not be used.

Scaffolding will be erected on a firm foundation/footing. Scaffold poles, legs, posts, frames and uprights will bear on metal base plates and mud sills, where required.

Scaffold legs, poles, posts, frames and uprights will be pinned or locked to prevent uplift. No scaffold will be enclosed unless a qualified engineer designed the enclosure.
Scaffold platforms will be constructed with no space between the platform components. The space between the platform components and the scaffold uprights will not exceed one inch.

Because of special circumstances such as building a scaffold around a pipe, the space opening between the scaffold and the object/structure cannot exceed 9-1/2 inches.

Scaffold planks shall extend past the horizontal support a minimum of six inches and not more than 12 inches unless cleated or restrained by hooks.

Scaffold plank will not be overlapped unless:

- Overlap occurs at a horizontal support
- The minimum planking overlap is 12 inches

Scaffold plank will be only scaffolding-grade planking.

Ladders or stairs must be used to access any scaffold platform that is more than two feet above the point of access.

End frames of tubular welded scaffold can be used as a ladder if the following criteria are used:

- Specifically designed and constructed as ladder rungs
- Rung length of at least eight inches
- Spacing between rungs not to exceed 16-3/4 inches

No worker will climb up or down a scaffold using the cross bracing.

Any worker working on an incomplete scaffold six feet or more in height without standard handrails will wear a full body harness and be tied off to a fixed anchorage point.

Workers will not stand or place any platform on the middle rail of a scissor lift to gain added height.

The chain gates of scissor lifts will be properly extended across the opening and connected whenever the lift is in use.

Wheels on mobile scaffolding will be locked in place when workers are working form it.

A competent person will evaluate suspended scaffolding and anchorages before use, and its suspension lines daily.

Workers working from suspended scaffolding will wear a full body harness attached to an independent vertical lifeline.
Scaffold platforms **six feet or more above lower levels** will be equipped with guardrail systems.

If guardrails cannot be used on a scaffold, workers will wear a full body harness and be appropriately tied-off.

Workers working from a scaffold will be protected from falling objects such as hand tools, debris, and other small objects from above.

Workers working below scaffolding will also be protected from falling objects. Scaffold will be equipped with toe plates, screening, debris netting, catch platforms, or a canopy structure.

When welding is required from swing stage scaffolding, the scaffold will be grounded and suspension ropes protected.

Interior or dry wall scaffolding (Perry or Baker type scaffolding) greater than one section high will be equipped with outriggers. All other built-up scaffolding will follow the four-to-one rule.
STEEL ERECTION

No steel erection will begin without conducting a pre-erection meeting and the submission of a JSA.

An erection plan must be developed by a qualified person to address the safe erection of steel and to mitigate hazards to others related to falling object hazards.

Workers engaged in steel erection activities to include connecting, decking and bolt-up must provide fall protection in accordance with the project fall protection policy.

Perimeter safety cable installed by steel erector will remain in place unless otherwise instructed by AHB, Inc.

Training records indicating workers have received required steel erection training will be maintained at the project and be available for review by AHB, Inc.

All steel deliveries will be coordinated with AHB, Inc. Project Management to ensure maintenance of traffic around the project is maintained.

Subcontractor is not permitted to Christmas Tree unless AHB gives permission to do so. Design criteria for any multi-lift device that may be used on this project will be available on the project site for review by AHB, Inc.

Work will be planned so that no load will be swung over the public or other workers. During bolt-up activities, all steps will be taken to protect workers below from falling objects.
CONFINED SPACE

Workers may be required to work in an area that is defined as a confined space. A confined space is any space large enough and so configured that a person can bodily enter and perform work; has limited openings for entry and exit; and was not designed for continuous human occupancy.

All Project Confined Spaces shall be considered “Permit-Required” until otherwise reclassified:

Confined spaces include, but are not limited to:

- Storage tanks
- Excavations and trenches
- Ventilation and exhaust ducts
- Sewers
- Open-top spaces more than four feet in depth
- Pits and tubs
- Pipelines
- Underground vaults and utility tunnels

No contractor will allow a worker to enter or work in any space that meets the definition of a confined space without developing a detailed Confined Space Entry Permit and written entry plan. Refer to OSHA 29 CFR 1910.146 for further direction. The confined Space Entry Plan will be submitted to AHB, Inc. for approval and issuance of a confined Space Entry Permit.

Prior to working in any confined space, worker’s first-line supervision will determine what hazards exist. Any operating system or equipment will be locked out and tagged to prevent accidental operation. Contact the operating facility representative prior to any confined space entry work.

Confined spaces will have the atmosphere tested and a permit completed and authorized prior to any worker entering the space. The atmosphere will be tested for oxygen deficiency, toxic gases or vapors, and combustible or flammable gases or vapors.
Prior to any worker entering a confined space, they will be trained in:

- Contents of the Confined Space Entry Plan
- Known hazards in the confined space
- Emergency procedures in case of emergency
- Correct use of personal protective equipment, when required
- Fall protection, if required
- Hot Work Permit, if required
- Atmosphere testing requirements
- Lockout/tagout procedures
EXCAVATION AND TRENCHING

Prior to the commencement of trenching and excavation work, the subcontractor shall submit a JSA and confirm with AHB, Inc. as to the presence of hazardous contaminants in the soils such that proper personal protective equipment, training, and/or air monitoring can be provided.

Prior to any disruption of ground, excavation or trenching on this project, the following will be performed:

- No groundbreaking, excavation or trenching work will be performed without the presence of a competent person
- Underground utility locating authorities must be given the required advance notices to locate and mark the utility
- If underground utilities are known or suspected, proper notification will be given to AHB, Inc. Project Management
- The competent person will analyze the soil of the work area to determine the condition and type of soil to ascertain proper sloping or shoring requirements

During excavation or trenching operations on this project, the following requirements will be followed:

- All trenches and excavations six feet or deeper will have as a minimum rigid barricades, signage posted at the work area, and appropriate fall protection, if needed
- Trenches or excavations will be sloped or benched in accordance with applicable rules and regulations, and as determined by the competent person
- Supporting systems (i.e., shoring, piling, etc.) will be utilized for all trenches and excavations where sloping or benching could not be performed. Trench boxes or shields will be utilized if neither of the above is used
- Spoil piles and all other material will be placed a minimum of two feet from the edges of all trenches or excavations
- When underground utilities are suspected, they will be located first by hand digging
- Adequate access must be maintained at all times during trenching or excavating activities. When ladders are used, they will be placed such that no worker travels more than 25 feet lateral in any direction
- The competent person will inspect excavations and trenches at the beginning of each day and when conditions change
• Excavations in Type C soil will not be benched

• Excavations and trenches four feet or greater in depth will be evaluated for confined space

• A registered professional engineer must design all excavations over 20 feet in depth. In addition, a registered professional engineer must also design all protective systems for use in excavations more than 20 feet in depth
MAINTENANCE AND PROTECTION OF TRAFFIC

There will be no temporary blocking or occupying of any street, alley or walkway without prior approval of Allentown Arena Development Project and AHB, Inc. personnel.

When it becomes necessary to temporarily close a public street or alley, a written traffic control plan is required showing how the closure will occur and submitted to AHB, Inc for review. Refer to the Manual of Uniform Traffic Control Devices (MUTCD), Part VI, when developing a traffic control plan.

At a minimum, the written Traffic Control Plan for submission to appropriate officials will contain:

- Time the street(s) will be required to be closed
- Detail drawing showing temporary signage, tapers, etc.
- Detail plan illustrating detour routes for traffic impacted by the closed streets

All workers and supervision will wear high-visibility vests in accordance with current ANSI requirements and applicable traffic speeds. Workers assigned as flagmen must be trained as recommended in the Manual Uniform of Traffic Control Devices and PA DOT.

Work that fails to follow the traffic control plan or occupies a city street without authorization will be stopped.

No deliveries to the site will be accepted during break times and/or without the direct oversight of a trade subcontractor foreman. Load stability must be confirmed before any unbinding or unsecuring of loads that are being delivered from offsite.
CONCRETE AND MASONRY OPERATIONS

All vertical and horizontal rebar, form stakes, metal and/or plastic conduit, and/or small pipe stub-ups will be protected with impalement-rated caps or wood troughs to protect against impalement and injury.

Workers that will operate vibrators, pump nozzles, and concrete buckets will wear appropriate eye and foot protection. It is highly recommended that long-sleeved shirts be worn to protect against exposure of concrete to the bare skin and the possibility of concrete burn and contact dermatitis.

Workers engaged in vertical rebar assembly shall comply with the project six-foot fall protection rules. Positioning devices alone are not approved fall protection but can be used in conjunction with personal fall protection equipment.

Walkways along form walls will be constructed in accordance with OSHA scaffold and fall protection standards.

Cast-in-place concrete drawings and specifications will be onsite and readily available to field personnel for reference.

Prefabricated forms and form-making material will be stacked neatly at all times. When stripping concrete forms, all material will be immediately removed and stacked in an orderly manner. Forming material or debris will not block walkways and aisles. Subcontractor will remove rebar, tie-wire and other debris from the work area daily.

No employee is permitted to ride a concrete bucket.

Ensure that reinforcing steel for walls, piers, columns and similar vertical structures is adequately supported to prevent overturning and collapse. Ensure that uncoiled wire mesh is adequately secured to prevent recoiling.

Equip buckets with a discharge device that an employee can operate without being exposed to the load. Equip buckets with safety devices to prevent premature or accidental dumping, and ensure that the release is self-closing.

Follow safe rigging practices when handling concrete buckets. Employees controlling the concrete bucket must use tag lines.

When using bull floats, inspect the area to ensure there are no energized equipment or power lines nearby that the handles could touch.

Concrete buggy handles must not extend beyond the wheels on either side of the buggy.

Rotating-type, powered concrete trowels shall be equipped with dead-man controls that automatically shut down the equipment when the operator’s hands are removed from the controls.

Finishers shall wear kneepads and gloves when hand finishing concrete.
A limited access zone is required to be in place prior to the construction of any masonry wall.

Masonry walls over eight feet in height shall be adequately braced to prevent collapse and remain in place until permanent support is in place.
TEMPORARY BARRICADES

Whenever the following hazards or processes are encountered on this project, temporary barricades will be erected to protect workers:

- Floor or wall openings
- Exposure to vehicular traffic
- Working above other workers
- Low light work areas
- Open excavations/trenches
- Startup operations and testing of equipment
- Unguarded equipment
- Process hazards

When barricading is required, the following guidelines should be kept in mind:

- **Yellow “Caution” tape** is used to limit the passage or workers through the barricaded area. This barricading should only be used to protect workers from hazards that are not severe or the potential for severe injury or death is unlikely.

- **Red “Danger” tape** is used to prohibit the passage of unauthorized workers through the barricaded area. This barricading should be used to protect workers from hazards that have the potential to cause serious injury or death. Danger tape is not to be used if the hazards cannot be eliminated or removed during a single work shift.

- **Rigid barricades** will be used when protection is required beyond a work shift or longer. It will be used to protect workers from unguarded moving machinery/equipment, vehicular or heavy equipment traffic and low light conditions. Rigid barricading will consist of standard guardrail, temporary chain-link fencing, tube and couple scaffold members with blue construction fencing attached, and concrete barriers.

- **Radiation “Danger” tape** is used to identify x-raying operations and warn of a radiation hazard in the area.
When using “Caution” or “Danger” tape barricading:

- Install the tape on rigid supports every six feet and at a height of 42 inches above the surface
- Install at least six feet from excavations, trenches, holes, leading edges and floor or wall openings. Install barricading at least five feet from all other hazards
- Install a standard “Caution” or “Danger” sign that identifies the hazard at ten-foot intervals around the barricaded area and the name and contact information that erected the barricade
- Do not impede walkways, driveways or aisles, if possible. Identify alternative passageways when that is impossible
- Install for temporary protection only and remove barricading after 48 hours and install rigid barricades

Rigid barricading must be capable of supporting and withstanding a 200 lb. force in any direction. Concrete barriers used along public roads must been the requirements of the local jurisdiction or the Manual of Uniform Traffic Control Devices.

When using rigid barricading:

- Install it in a way to prevent tipping or sagging. Support construction fencing every eight feet
- Install pins in concrete barriers whenever there is a danger of vehicles or heavy equipment striking them
- Provide sufficient points of access to the work area
LOCKOUT/TAGOUT

When necessary, each subcontractor’s project management will establish a lockout/tagout procedure to ensure that workers are not exposed to the hazards from moving machinery or equipment and those hazards posed by an energized source pneumatic, steam, hydraulic, chemical, etc. Lockout/Tagout Checklist, shall be utilized as a planning and management tool prior to the commencement of any work that requires the isolation of hazardous energy.

Safety locks and tags will be applied to all circuits, switches, valves, isolating devices and any other energy sources to ensure equipment, machinery, or processes that have been considered functioning, charge or could otherwise be operable and render it non-operational or de-energized.

No person will remove another worker’s safety lock or attempt to energize any piece of equipment, machinery or process that has been locked out and tagged.

If a worker fails to remove his/her safety lock at the completion of the job or assigned duties, his/her immediate supervisor will immediately notify management and AHB, Inc. Every attempt should be made to contact the worker and require his/her return to the project to remove the lock. If the worker is unwilling or cannot return to the project, it must be verified that he/she is not physically at the project before the safety lock can be removed. All safety lock removal incidents will be investigated following the incident investigation process and disciplinary action will occur.
ELECTRICAL

No work will be performed on any energized electrical circuit, buss bars, equipment, or panels unless an approved written work plan is developed in accordance with NFPA 70E and submitted to AHB, Inc. for review prior to performance of work.

Electrical equipment and tools used on this project will be inspected to prevent any worker from receiving an accidental electrical shock. This rule will apply to all cord sets, portable electrical equipment, tools and appliances not part of any permanent building or structural electrical systems.

All temporary cords will be three-wire types S, ST, SO or STO with a 16 or greater wire gauge.

Ground Fault Circuit Interrupters (GFCI):

All cord sets and cord-plug electrical equipment, tools or appliances that are 120-volts will be connected to a ground fault circuit interrupter (GFCI). No cord set or cord-plug electrical equipment, tool or appliance will be plugged directly into any permanent building or structural electrical system not equipped with a GFCI. Exemptions are office equipment and appliances in site offices.

Double-Insulated Tools:

Double-insulated tools are allowed on the project if the case bears the Underwriter Laboratories “double-insulated” label. No tool where that label has been removed, painted over or is otherwise not legible will be allowed on the project.

Inspection Program:

An inspection program will be established to inspect all cord sets, portable electrical equipment, tools and appliances as described below and before first use, before returned to service following any repair, and after an incident that could have caused damage.

Daily Inspection:

Each cord set, attachment cap, plug, and receptacle or cord sets, portable electrical equipment, tools or appliances connected by a cord and plug, will be visually inspected daily by workers for external damage, such as deformed or missing ground pins, insulation damage, frayed wires or indications of possible internal damage. Exceptions include cord sets and receptacles that are fixed to the permanent electrical system and are not exposed or damaged.

Any electrical equipment, tool, appliance or cord set that is damaged or defective will be immediately removed from service and tagged out as defective equipment for repair. A qualified electrician will repair tagged electrical items.
General Electrical Rules:

All cord sets will be elevated above the work surface when practical.

**Cord sets and electrical tools that have the grounding prong missing will be cut and the offending subcontractor shall roll back within 24 hours all cord sets and inspect for other damage. Subcontractor will supply written certification to AHB, Inc. that this inspection was completed.**

Wire, nails or other conductive material will not be used to hang or attach cord sets or welding leads.

Cord sets that cross roadways will be protected from damage by vehicle and equipment traffic by devices such as hose bridges.

Light stringers will have the light bulbs protected from accidental contact or breakage.

Necessary steps will be taken to prevent unauthorized or unqualified workers access to energized electrical parts or equipment.

**EQUIPMENT AND VEHICLES**

Heavy equipment (cranes, forklifts, dump trucks, excavators/back hoes, man-lifts, etc.) used on this project will be inspected prior to use and comply with applicable OSHA and ANSI standards, which will be documented.

Forklifts will be equipped with rollover devices. Operators of forklifts can complete the Daily Forklift Safety Inspection Report or an acceptable equivalent.

Equipment that is equipped with a windshield will be free of cracks or other visible damage.

All equipment will be equipped with rollover protective structures (ROPS).

Seatbelts are required to be worn at all times in moving equipment.

Only company and/or delivery vehicles used for the sole purpose of conducting work tasks onsite are permitted in construction areas. Vehicles or equipment with an obstructed rear view must have an audible backup alarm. The driver and all passengers of any vehicle will wear seat belts.

No equipment or vehicle will be used to transport personnel unless it is specifically designed to do so and equipped with seat belts. That includes beds of pickup trucks.
Equipment operators are responsible to check their equipment daily to verify it is working properly. As a minimum, each operator will check:

- Brakes
- Operating controls
- Lights
- Mirrors
- Backup alarm
- Fire extinguisher
- Hydraulic systems
- Limit switches
- Steering mechanism
- Leaks

Equipment operators will possess the required training, certification and licenses as required by law for the equipment that they are required to operate.
MOBILE CRANES

Cranes will be operated in strict accordance with OSHA 29 CFR 1926 Subpart CC and applicable ASME requirements.

No crane will be brought onto the project without a current annual inspection by an independent qualified third party and applicable load charts. A copy of the current annual inspection will remain in the crane at all times.

Crane operators will perform shift and monthly documented crane safety inspections. Crane operators are to turn the Daily Crane Safety Checklist into their supervisor daily and made available for the AHB, Inc. safety officer.

All crane operators must possess a valid Certified Crane Operators (CCO) hoisting license and PA Crane Operator License.

All cranes will be equipped with anti-two block devices on both the main and auxiliary hoist lines.

Use of cranes to hoist personnel will not be allowed on this project without prior approval of Allentown Arena Development Project and AHB, Inc. representatives.

Subcontractor supervision will review the safe operations of the crane with each operator.

The crane manufacturer’s operating manual, instructions and load charts for a specific crane will be used to determine the safe operation of that crane.

Therefore, the following guidelines should be adhered to:

1. The ground where the crane will be set up must be solid and able to support the weight of the loaded crane. Determine if underground utilities exist near where the crane will be set up.

2. Ensure the crane is level 360° and maintained during operation.

3. Extend outriggers fully or set per the manufacturer’s recommendation for a particular lift configuration. Weight must be off the tires.

4. Cribbing or mats under outrigger pads should be of sufficient size and properly placed to ensure adequate soil bearing. A commonly-used rule of thumb is: tonnage of the crane divided by 5 = square feet of cribbing required for the crane.
5. Before a lift, determine the load weight and load capacity. Crane capacity charts are the gross capacity of the crane at certain boom lengths, boom angles and load radius from the crane center pin.

   a. Deductions to the net capacity should be made per manufacturer’s load chart or operating manual for attachments such as jibs (stowed or attached), headache balls, wind, less than ideal setups, etc. to determine the load that can be safely lifted.

   b. Additional deductions to the net capacity are the weight of the cranes load block, rigging and amount of load line required to make the lift. Some manufacturers include the load line in their load charts but others, like Manitowoc, do not.

6. A designated, qualified person will determine the load weight. Note: OEM drawings listing the equipment or machinery assemblies are not always accurate. Refer to the shipping weight or have the equipment or machinery assembly weighed. Calculate all structural loads and determine the center of gravity. **Cranes equipped with systems that provide weight of a load as it is lifted will not be used to weigh equipment or machinery assemblies.**

7. Determine the radius from the center pin of the crane to the load using a steel tape measure.

8. Determine the boom length, counterweight and crane configuration to determine the correct load chart required.

9. Position the hook over the “Center of Gravity” of the load before starting the lift.

10. Position the crane so there is a minimum swing and load path clearance of two feet. Distance from overhead electrical will be a minimum of ten feet. When working near electrical sources (overhead lines or lighting), the crane should be grounded and a safety spotter required.

Crane Operators are to know the weight of the load they are lifting.
**Critical Lift:**

A written critical lift or rigging plan is required for any lift where:

- The load is greater than 75% of the crane capacity as configured for the lift or as defined by the crane manufacturer
- Two cranes are used
- Any non-routine or critical equipment lift (The Project Manager/Superintendent or Safety Supervisor determines any lift to be non-routine.)

The written critical lift or rigging plan will be submitted to AHB, Inc. for review and approval. See Appendix G for the Critical Lift Plan form.

**MAST-SUPPORTED SCAFFOLDS AND MATERIAL HOISTS**

The erection of exterior material or personnel hoists, and mast-supported scaffolds shall not take place until a plan developed by a qualified person has been submitted and approved by AHB, Inc. The plan must address at a minimum the safe erection, inspection, operation, maintenance, and dismantling of said equipment. This plan and subsequent work must take place with fully trained personnel under the direction and oversight of a manufacturer’s representative and/or a third party with engineering or other qualifications needed to assure its safe provision and use.

**RIGGING**

Qualified riggers will rig material or equipment lifted by a crane. Riggers will have a hardhat decal or other means of identification.

Hooks will be equipped with safety latches. Moused and/or cargo/shakeout hooks will not be allowed.

All rigging equipment and spreader bars shall have a manufacturer’s tag or otherwise marked noting its safe working load. Rigging equipment and spreader bars not tagged or marked will be immediately removed from the project.

Subcontractors that will be required to lift any material or equipment by crane or other lifting equipment will designate a qualified person(s) to monitor all rigging. When the rigging does not fall within the expertise of the designated person, the load will not be lifted until a more qualified person has reviewed the rigging.

All rigging will be inspected daily before each shift by the qualified rigger and documented in writing. Inspection reports will be made available to AHB, Inc. for inspection.
DEMOLITION

Prior to start of any demolition work, the contractor must ensure a competent person has performed an engineering survey of the building or area to be demolished to determine the condition of the area, means and methods of performing the work, sequencing, etc. No work will commence until a written engineering survey has been completed.

Debris and material shall not be dropped through walls, floor holes, windows or other elevated work areas without the area below being barricaded and properly posted with signage.

Debris chutes shall have a substantial gate at all elevated openings.

AHB, Inc. will require the demolition contractor to submit a specific safety plan to address fall protection and personal protective equipment plan.

Demolition activities shall follow OSHA 29 CFR 1926 Subpart T rules.

If demolition of a building will involve implosions, demolition contractor shall submit to AHB, Inc. a detailed safety plan to specifically address site preparation, installation of explosives, debris/dust control and blaster qualifications.
PRECAST CONCRETE

A competent person is required who will be responsible for the inspection of all rigging and hardware and the supervision of the rigging of precast concrete members.

Unloading of Precast Concrete Members:

Prior to precast concrete members being unloaded, the following will occur:

- Inspect all rigging and hardware
- Ensure load is stable before releasing binders
- Ensure precast member is properly rigged

Placement of Precast Concrete Members:

The following will be followed:

Precast members are not to be moved over other workers.

Worker(s) involved in the setting or connection of precast members will strictly adhere to the 100% fall protection policy with no exception.

No worker(s) will use their hands to reach under a precast member to adjust a shim or bearing pad.

No worker(s), except those essential to the post-tensioning operation, will be permitted behind the jack. Warning signs and barriers will be erected to limit access to the post-tensioning area during post-tensioning operations.
CAISSONS

When a worker(s) must enter a caisson, a qualified person will develop a detailed work plan. The plan will include, but not be limited to:

- Type of shield to be used
- Means of access for the worker(s)
- Method of atmosphere monitoring to be used
- Training to be provided to worker(s)

When worker(s) are required to enter a caisson four (4) feet in depth or greater, the workspace will be considered a “permit-required” confined space. All requirements of the confined space section of this SHMP and OSHA 29 CFR 1910.146 will be strictly followed.

Guardrails must be erected around the caisson opening(s) when the sleeve does not extend 42 inches above ground level.

All worker(s) required to work or enter a caisson will receive confined space entry training and understand the contents of the written work plan.
PILE DRIVING

No pile driving work will occur until verification that no underground utility exists in those areas where piles will be driven.

When any work must be conducted under the hammer, the hammer will be secured.

Fall protection will be required when personnel climb leads over six feet.

Hose connections will be secured by at least ¼ inch diameter chain or equivalent wire rope to prevent whipping.

Stirrups will be provided on sheet piling to aid in guiding the pile in place.

No worker will ride the hammer at any time.

For pile other than sheet piles, a driving head or bonnet is required to bell the head.

Stop blocks are required for the leads to prevent the hammer from striking the head block.

A designated signalman will be assigned to give direction to the winch men.

Equipment will meet the OSHA construction standards on cranes and derricks.

Pits or excavations that piles are being driven into shall be properly braced, sheet-piled or sloped.

When pile tops are cut, operations will stop for a distance not less than the longest pile that is to be cut.

When driving jacked piles, the pits will be provided with ladders and curbs to prevent material from falling into the pit.
LASERS

Precautions will be taken to ensure all workers that will use a laser are trained in proper use and the hazards associated with lasers. Each worker is to be issued a qualification card, which must be carried by the worker and available upon request by AHB, Inc.

No worker will install, adjust, or operate any laser equipment without a valid qualification card.

Standard “Laser” warning signs will be placed around the perimeter of the area where the laser is being used.

No laser equipment will be used that does not contain a label indicating make, maximum output, and beam spread.

Whenever a laser is not in use, shudders or caps will be used and the laser turned off.

When performing internal alignment, lasers will only be guided by mechanical or electronic means.

No laser beam will be directed at any worker.

When environmental conditions exist such as rain, fog, snow or extremely dusty conditions, use of lasers will not be permitted.

Workers using lasers will have appropriate laser safety goggles available.
QUALITY OF LIFE REQUIREMENTS

SMOKING POLICY

AHB, Inc. encourages a Smoke-Free Workplace. No worker will smoke any tobacco product within any building or structure on this project designated as Smoke-Free. In Smoke-Free workplaces, smoking is only authorized in designated areas or inside your personal vehicle. Workers who violate this rule will be subject to immediate removal from the project.

SMOKELESS TOBACCO POLICY
Use of any smokeless tobacco product (e.g. chew, snuff, etc.) shall be limited to designated areas outside of any building or structure. Workers who violate this rule will be subject to immediate removal from the project.
SANITATION

Toilet Facilities:

Contractors will ensure adequate chemical toilets are available on the jobsite for the use of workers. Toilets should be located on or within 200 feet of each work area within the project. The following is the minimum requirement for toilets on this project:

<table>
<thead>
<tr>
<th>Number of Employees</th>
<th>Number of Toilets Required</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 or less</td>
<td>1 Toilet and 1 Urinal</td>
</tr>
<tr>
<td>20 or more</td>
<td>1 Toilet and 1 Urinal per 40 Workers</td>
</tr>
<tr>
<td>200 or more</td>
<td>1 Toilet and 1 Urinal per 50 Workers</td>
</tr>
</tbody>
</table>

Chemical toilets shall be serviced often enough to prevent overflowing, creation of unsanitary condition, a health hazard or nuisance, and shall be maintained in good repair so as to prevent leakage of the contents to the surrounding ground or onto the floor other portions of the structure.

Drinking Water:

Contractors will provide daily, fresh clean drinking water to their employees. Drinking water will be dispensed in containers with a tight-sealing lid and labeled as Drinking Water. Drinking water containers are to be cleansed daily.

Adequate cups will be made available at each drinking water container. Cups will be stored in a durable clean dispenser. A trash can or other type receptacle will be provided to collect used cups. Contractors are responsible for cleaning up around the water container.

The use of a common cup, soda cans and bottles, drinking directly from the spout, and the placing of hands or material into drinking water is prohibited.

HAZARDOUS MATERIALS

Prior to the commencement of trenching and excavation work, the subcontractor shall confirm with AHB, Inc. as to the presence of hazardous contaminants in the soils such that proper personal protective equipment, training, and/or air monitoring can be provided.
LEAD

When welding, cutting, burning, grinding, chipping, abrasive blasting or rivet busting on painted or coated surfaces, a pre-assessment will be required to determine if the surface(s) contain lead-based paint. If sampling results indicate lead-based paint 0.02% lead by weight, OSHA Standard 29 CFR 1926.62 will be followed.

An initial hazard assessment is required and will be performed to determine worker exposure levels. The assessment will involve personal sampling of a representative group of workers performing different tasks. During the initial exposure assessment, workers will wear protective clothing and the proper respiratory protection until the results of the assessment are known.

Copies of sampling results will be made available to AHB, Inc. Area sampling of a work area will not be used for determining worker exposure levels.

If sampling results indicate the exposure limits are above 30 μg/m³ but below 50 μg/m³, the following are required:

- Written compliance plan
- Medical surveillance (Blood Lead and ZPP)
- Personal monitoring
- Hazard communication training for lead

If sampling results are above 50 μg/m³ the following are required:

- Written compliance plan
- Clean change rooms and showers
- Engineering controls
- Clean lunchrooms
- Respiratory protection
- Warning signs
- Protective clothing
- Training
- Medical surveillance
Each worker is to be notified in writing of their blood and/or personal monitoring results within five working days after the results are known.
SILICA

Workers who perform any of the following work tasks will be protected from exposure to silica dust:

- Chipping, hammering, or mixing of refractory
- Abrasive blasting using silica sand as a blasting medium
- Abrasive blasting of concrete regardless of the type of medium
- Sawing, hammering, drilling, grinding, or chipping of concrete or masonry products
- Chipping, hammering, or mixing of concrete grout
- Demolition of concrete or masonry structures
- Dry sweeping or compressed air blowing of concrete, masonry, rock or sand dust

Workers performing any of the above tasks or who could be exposed to silica dust must receive hazard communication training on silica.

Acceptable engineering controls must be used when exposure to silica is likely. Examples of acceptable engineering controls are:

- Substitute blasting medium for less hazardous material with less than 1% silica
- Maintain an effective dust control program
- Use internal blast-cleaning machines
- Wet saw
- Use water through the drill stem

When acceptable engineering controls cannot be used, workers will wear respiratory protection, protective coveralls and gloves. Respirators equipped with a NIOSH N-95, R-95, or P-100 are approved for silica. **Note: The common dust mask is not permitted for silica protection**

Workers will follow these safe work rules when exposed to silica:

- Do not eat, drink or use tobacco products in areas where silica dust is present
- Always wash hands and face before eating, drinking or using tobacco products

First-line supervisors should consult their safety representative of AHB, Inc. Safety Department or further assistance.
INCIDENTAL EXPOSURE TO PRESUMED ASBESTOS-CONTAINING MATERIAL (PACM)

If presumed asbestos-containing material (PACM) is anticipated on the project or during the scope of a contractor’s work, then evidence of a minimum of 2 hours of asbestos awareness training shall be submitted prior to mobilization. If presumed asbestos-containing material (PACM) is found during performance of the work, the following procedure will be followed:

- Workers observing PACM should immediately stop work
- Warn other workers nearby of the disturbed or damaged material
- Contact your immediate supervisor
- Barricade the immediate area around the disturbed or damaged material
- Do not enter the barricaded area until the area is deemed safe by AHB, Inc. or subcontractor

AHB, Inc. will investigate and develop an action plan that may include testing PACM and/or abating suspected material.

ONLY A LICENSED CONTRACTOR WILL REPAIR AND CLEAN UP DISTURBED OR DAMAGED MATERIAL.
MOLD CONTROL

Necessary steps will be taken to control the formation of mold from occurring in the work and storage areas. Mold will occur when there is water and a source of food (i.e., wall board, wood and/or other building material).

Work will be planned to:

Prevent moisture accumulation:

- Double-check points where moisture may enter
- Doors
- Windows
- Flashings and caulking
- Waterproof membranes (proper lapping at joints and corners)
- Roofing systems and penetrations

Properly store material

- Dry location
- Off the ground
- Loose tarps or sheets to allow air flow

Have drying equipment readily available:

- Fans
- Dehumidifiers
- Wet-dry vacuum

If mold is observed, work will not continue in the area until AHB, Inc. supervision has made an evaluation of the exposure and developed an abatement plan.
DRUG AND ALCOHOL POLICY

The Drug and Alcohol Policy states that the use of illegal drugs or the abuse of alcohol by project employees is inconsistent with a safe, healthy, and productive work environment. The policy directs the establishment and maintenance of an effective program for achieving a drug and alcohol free workforce.

The intention of this program is to establish the project as a drug and alcohol free workplace in order to ensure safe and productive working conditions with due regard for the personal privacy interests of project employees. It is not the intention of the parties to intrude on off-duty activities of project employees away from the project site unless those activities have a job-related impact.

The basic elements of the program are simple:

1. Use, possession or sale of alcohol and/or illegal drugs on this project is prohibited. Persons who violate this rule will not be permitted access to the project.

2. Employees who report for work with illegal drugs, legal drugs causing impairment or alcohol in their system will not be permitted to remain on the project site and will be barred from the project. The program will apply to all personnel, including on-site management.

The policy will apply to all contractors/subcontractors working on this project regardless of tier and will be enforced by drug and/or alcohol testing. Special safeguards have been undertaken to ensure that testing will be conducted by a qualified vendor, under strict guidelines, including provisions to ensure test reliability, employee privacy and confidentiality. All confirmatory testing will be conducted by approved laboratories in accordance with the Mandatory Guidelines for Federal Workplace Testing programs established by the U.S. Department of Health and Human Services, as amended.

Each employer on this project shall bear the entire cost of all drug and alcohol testing for its own employees working on this project unless otherwise directed by the Owner and/or AHB, Inc. Employers shall plan for the following costs:

- 10 panel instant testing at the designated clinic:
  - $53 for a Negative test result
  - $27 additional if the test is initially Inconclusive and must be sent to a laboratory for further analysis.

- 10 panel instant testing on-site:
  - $44 for a Negative test result
  - $27 additional if the test is initially Inconclusive and must be sent to a laboratory for further analysis.

- Alcohol screens will cost $30 and an additional $40 for confirmation testing.

All drug and alcohol testing must be performed at designated facilities.
All on-site collections must have a minimum of 5 collections with 72 hours notice.

**REASONABLE SUSPICION/FOR CAUSE – DRUG AND ALCOHOL TESTING**

All project employees are subject to a Reasonable Suspicion Drug and Alcohol Test when there is a cause to suspect that they are impaired on duty. An employee will not be tested (under this paragraph) unless an authorized person (which includes, but is not limited to, AHB, Inc.’s staff, Project Safety Manager, Subcontractor Superintendent/Safety Representatives and/or Owner’s Staff) can cite reliably objective facts and circumstances which warrant a prudent belief that an employee may be intoxicated or under the influence of illegal drugs while on the project site.

Observations which provoke for cause, reasonable suspicion drug and alcohol testing must be confirmed by a second authorized person who has received appropriate reasonable suspicion referral training. Observations may be reviewed with a union steward, if applicable, provided that a steward is readily available.

Employees removed from duty for reasonable cause testing will remain off duty until test results are received. If the employee tests “Negative” for drugs and/or alcohol, the employer shall be responsible for back pay for the time missed. Such payment will not be subject to reimbursement from the Owner or AHB, Inc. If the employee tests “Positive”, the employee will be immediately dismissed and permanently barred from the project.

**POST ACCIDENT/INCIDENT/INJURY – DRUG AND ALCOHOL TESTING**

An employee who is injured during the course of their employment on site or involved in an accident/incident in the course of job duties which results in an injury or substantial property damage or disruption to the project shall be required to undergo a post accident drug and alcohol test as soon as possible after the employer’s knowledge of such incident. Any employee involved in a near-miss incident which could have caused injury, disruption or property loss may be tested under the following circumstances:

1. The incident was caused by human error or could have been avoided by reasonably alert action; or

2. The employee to be tested was an active participant in the incident circumstances; or

3. Substance use cannot be discounted as a contributing factor.

In the event that drug and alcohol testing is deemed to be warranted following a near-miss incident, such testing shall be as soon as possible after the employer’s knowledge of the near-miss incident. If the employee tests “Positive”, the employee will be barred from the project effective the date and time of the specimen collection. Any employee so barred will not be eligible to return to the project.
TEST PROCEDURES

Confirmatory testing procedures, including which drugs are to be screened and chain of custody shall comply with the Mandatory Guidelines for Federal Workplace Testing Programs established by the U.S. Department of Health and Human Services (DHHS). Initial screening shall be conducted utilizing instant test methodology for Cannabinoids metabolites (marijuana), Cocaine metabolites, Amphetamines/Methamphetamine, Phencyclidine (PCP) and Opiates, Barbiturates, Benzodiazepine, Propoxyphene, Ecstasy (MDMA) and Oxycodone with an adulterant screen.

Post Accident/Incident/Injury and Reasonable Suspicion drug tests shall be by instant test methodology. If the instant test is “Negative”, there shall be no further testing. If the drug test is “Inconclusive”, the specimen will be sent to a DHHS lab. If the Gas Chromatograph/Mass Spectrometry (GC/MS) test comes back from the DHHS lab as “Negative”, the employer shall be responsible for any back pay owed to the employee at no cost to the Owner or AHB, Inc. Urine specimens shall be collected in such a manner as to give the employee as much privacy as possible without compromising the reliability of the test.

The employer shall also contact the Third Party Administrator for any employee whose test result is initially “Inconclusive” and shall continue to contact the Third Party Administrator until the test result is confirmed “Negative” or confirmed “Positive”.

ALCOHOL SCREENING

Alcohol screening will be conducted in reasonable suspicion/for cause circumstances and for post-accident/incident/injury circumstances. All alcohol screening shall be conducted utilizing a federally approved evidential breath testing device. All screening tests that are .02 BAC or greater shall require a confirmatory test, which must be administered after 15 but no longer than 30 minutes. A confirmatory test result of .02 BAC or greater shall be considered a “Positive” result and in violation of the policy. Persons in violation of the policy will be barred from the project.

TEST RESULTS

Any “Positive” test for drugs shall be reported to a Medical Review Officer (MRO) directly from the DHHS laboratory. The MRO shall review the test result and shall attempt to interview the employee to determine if there is any physiological or medical reason why the result shall not be deemed positive. If the MRO declares the test “Positive”, notification shall be provided first to the employee and then to the employer's Designated Employer Representative (DER). If the employee is a member of a local union, the employer shall notify the area business agent that the individual “failed to satisfy the employment requirements of the project.”

SPLIT SPECIMEN TEST

In the event of a confirmed “Positive” result, the following shall apply for split specimen testing. The employee may request a split specimen test within three business days from notice of a “Positive” test result by the MRO.
The drug testing laboratory shall package the split specimen and send the specimen to a designated certified laboratory at the request of the employee. The cost associated with the split specimen test shall be at the expense of the employee. Costs for the split specimen test will be paid in advance by the requesting party.

Split specimen tests shall be conducted by a different DHHS approved laboratory. The laboratory shall endeavor to notify the MRO of “Positive” test results within five working days after receipt of the specimen. In the event the initial test proves to be a “Negative” result instead of the original “Positive” result, and the employee has paid for the test, costs for the split specimen test shall be reimbursed to the employee by the employer at no cost to the Owner or AHB, Inc. No employee for whom a split specimen test is requested shall be permitted access to the project until such time as the result is confirmed “Negative”.

CUSTODY AND CONTROL FORM (CCF)

The collection facility and the laboratory shall establish and maintain a forensically acceptable CCF.

The collection facility must establish and maintain a forensically acceptable CCF, which includes the specimen identification number, urine specimen collector’s name, the substance testing laboratory and the MRO. It will be the responsibility of the Third Party Administrator and the laboratory to ensure that the appropriate CCF and chain of custody is maintained for all urine specimens.

REFUSAL

Failure to comply with the testing procedures, failure to report for a test and/or complete the test shall result in the employee being barred from the project. Signing the consent form shall not waive any individual rights available under federal and state law.

CONFIDENTIALITY REQUIREMENTS

Strict confidentiality shall be maintained at all times for all substance abuse testing program activities. All information generated in connection with the testing program is inherently sensitive and is to be treated as confidential. In implementing this program care must be taken to:

1. Safeguard all written reports by maintaining separate, secured files and limiting written and verbal communications to the necessary functions of this procedure.

2. Conduct testing as privately as possible.

3. Limit the number of persons involved in testing activities to essential personnel only.

4. Prohibit the communication of confidential information about searches, tests, investigations, or the results of same to persons not authorized to receive it; those not authorized to receive such information would include, but not be limited to: family members and friends of the person tested, union representatives, or law
enforcement agencies (other than where a law enforcement agency acts by court order or is otherwise legally entitled to have the information).

5. Release information only to those necessary to administer site employment, safety, and security; in response to legal process or when a written release has been obtained from the individual involved.

6. Drug and/or alcohol test results shall only be released to designated employee representatives from the employer, AHB, Inc., or CCIP Administrator. Written authorization from the donor of the urine specimen and/or breath alcohol test shall be required for any others requesting drug and/or alcohol results. Federal, state, and/or local authorities will be able to obtain drug and/or alcohol test results only with a subpoena. The procedure to release drug and/or alcohol results is per 49 CFR Part 40 of the federal guidelines.

STATISTICAL REPORTS

The Third Party Administrator shall provide a report indicating the individuals that passed the drug test by the end of each month. The reports and method of reporting shall also meet strict confidentiality protocol. The Third Party Administrator shall provide monthly reports on all test results to the AHB, Inc. and CCIP Administrator. The reports shall be but not limited to, by employer, number of tests performed percent of Negative test results, number of tests for the month and the number of tests to date.
### APPENDIX A – PROJECT SAFETY ORIENTATION FORM

<table>
<thead>
<tr>
<th>NAME OF EMPLOYEE (PRINT):</th>
<th>STICKER #:</th>
<th>DATE:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>COMPANY:</th>
<th>PERSON CONDUCTING THE ORIENTATION:</th>
</tr>
</thead>
</table>

**TOPICS TO BE REVIEWED WITH ALL EMPLOYEES DURING THEIR INITIAL SITE ORIENTATION INCLUDE BUT MAY NOT BE LIMITED TO THE FOLLOWING:**

1. INFORMATION TO ACQUAINT THE EMPLOYEE WITH SPECIAL SAFETY REQUIREMENTS OF THE WORK SITE, INCLUDING SECURITY AND TRAFFIC REGULATIONS;
2. DESCRIPTION OF THE NATURE OF THE PROJECT;
3. SUBSTANCE ABUSE POLICY;
4. ACCIDENT REPORTING PROCEDURES;
5. HOW TO REPORT UNSAFE ACTS OR CONDITIONS;
6. SITE DISCIPLINARY PROCEDURES;
7. PERSONAL PROTECTION EQUIPMENT REQUIREMENTS;
8. HAZARDS PREVALENT FOR THE WORK BEING PERFORMED (FALL PROTECTION, TRENCHING, LADDER USAGE, SCAFFOLD SAFETY, ETC.); AND
9. HAZARD COMMUNICATION PROGRAM
10. EMERGENCY EVACUATION PROCEDURES
11. OTHER

**COMMENTS:**

**BY SIGNING THIS SITE ORIENTATION FORM, I HEREBY ACKNOWLEDGE THAT THE BASIC SITE SAFETY CONTROLS OUTLINED ABOVE HAVE BEEN THOROUGHLY REVIEWED WITH ME AND THAT I AGREE TO OBEY THE SITE SAFETY REQUIREMENTS.**

<table>
<thead>
<tr>
<th>EMPLOYEE SIGNATURE:</th>
<th>DATE:</th>
</tr>
</thead>
</table>

**NOTE: ANY EMPLOYEE QUESTIONS REGARDING THE SAFETY REQUIREMENTS SHALL BE DIRECTED TO THE PROJECT SAFETY MANAGER/PROJECT SAFETY REPRESENTATIVE.**

<table>
<thead>
<tr>
<th>EMPLOYEE EMERGENCY CONTACT NAME:</th>
<th>RELATIONSHIP TO EMPLOYEE:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>EMERGENCY CONTACT #:</th>
<th>SECONDARY EMERGENCY CONTACT NAME:</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>SECONDARY EMERGENCY CONTACT #:</th>
<th>EMPLOYEE DRIVERS LICENSE # AND STATE:</th>
</tr>
</thead>
</table>
# APPENDIX B – SUPERVISOR ACCIDENT/INCIDENT INVESTIGATION REPORT

## PROJECT DATA

**Must be completed in full**

<table>
<thead>
<tr>
<th>Date of Incident</th>
<th>Time: AM/PM</th>
<th>Day of Week:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date of Report</td>
<td></td>
<td>Weather:</td>
</tr>
<tr>
<td>Project Manager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Superintendent/Foreman</td>
<td></td>
<td>Project Name:</td>
</tr>
<tr>
<td>Exact Location of Incident</td>
<td></td>
<td>Drug Screen(s) Administered: Yes No</td>
</tr>
<tr>
<td>Street Address:</td>
<td></td>
<td>If Yes, list employees:</td>
</tr>
<tr>
<td>City/State/Zip:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Are there any Witnesses? Yes No See Page 5 for Witness Instructions

<table>
<thead>
<tr>
<th>Type of Incident:</th>
<th>WC</th>
<th>GL</th>
<th>Auto</th>
<th>Equipment</th>
<th>Theft/Vandalism</th>
<th>Property</th>
<th>Utility</th>
</tr>
</thead>
</table>

Injured Employee Name: Employee ID#:

Employee Home Address:
Street Address:
City/State/Zip:

Phone:
Date of Birth:

Occupation/Job Title: Years Experience: Date of Hire:

Time Employee Started Work: AM PM

Onsite First Aid Given: Yes No Is Yes, by Whom & What Given:

Offsite Medical Treatment: Yes No Is Yes, Treating Facility: (Name, City, State)

Date Treatment Given:

List PPE worn at the time of incident:

### PERSONAL INJURY – WC

(To be completed for all employee injuries)

Shade the Specific Body Part(s) Injured:

### INCIDENT TRACKING

(See Page 6 for Code #s)

- Body
- Part:
- Injury:
- Detailed Description of Injury:

**For PA claims only: The employee and supervisor must sign the attached Medical Treatment Rights form.**
### SUPERVISOR ACCIDENT/INCIDENT INVESTIGATION REPORT CONTINUED

<table>
<thead>
<tr>
<th>Property Owner Name:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Property Owner Address:</td>
<td></td>
</tr>
<tr>
<td>Street Address:</td>
<td></td>
</tr>
<tr>
<td>City/State/Zip:</td>
<td></td>
</tr>
<tr>
<td>Detailed Description of Damages: (draw diagram – next page)</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>GENERAL LIABILITY</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Damage:</td>
<td>Pictures Taken:</td>
</tr>
<tr>
<td>If Utility Strike Please Indicate the Following:</td>
<td></td>
</tr>
<tr>
<td>□ Electrical Line</td>
<td>□ Phone Line</td>
</tr>
<tr>
<td>□ Marked</td>
<td>□ Mismarked</td>
</tr>
<tr>
<td>Was Call Made: Yes/No By Whom:</td>
<td>Date:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>EQUIPMENT</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Operator Name:</td>
<td>Equipment/Vehicle #:</td>
</tr>
<tr>
<td>Rental: Yes</td>
<td>No</td>
</tr>
<tr>
<td>Rental Company Phone #:</td>
<td>Estimated Damages:</td>
</tr>
<tr>
<td>Did Operator obey all applicable safety rules? Yes/No – If no, list exceptions:</td>
<td></td>
</tr>
<tr>
<td>Did Authorities Respond (fire, police, ambulance, etc.)?</td>
<td>Responding Authority:</td>
</tr>
<tr>
<td>Contact Person:</td>
<td></td>
</tr>
<tr>
<td>Phone #:</td>
<td></td>
</tr>
<tr>
<td>Was there Property Damage? Yes/No – If yes, please specify:</td>
<td>Report/Incident #:</td>
</tr>
</tbody>
</table>
### Description of Accident

Describe, in detail, the circumstances of the incident. Give a chronological sequence of events. In your words below, if materials, equipment and/or vehicles were involved, start before they were brought to the incident scene and describe the who, what, where, when and how the incident happened and why you believe it occurred:

### Diagram of Incident

Show position and any relative distances of employee(s), vehicle(s), equipment, pedestrians, property, etc. and indicate an arrow of direction for each if travel or moving equipment was involved:
### SUPERVISOR ACCIDENT/INCIDENT INVESTIGATION REPORT CONTINUED

**Was there any type of planning (ex: Pre-con, daily huddle, toolbox talk, etc.) that discussed the potential for this incident and the safe work procedures to be followed to prevent it?** Yes or No – please attach document to support your findings.

**What was the root cause(s) for the incident?**

**Contributing factor(s) for the incident (weather, lighting, traffic control plan, communication of hazards, etc.)**

**CORRECTIVE ACTIONS**

(To be completed for all accidents)

<table>
<thead>
<tr>
<th>Corrective Action(s) Taken or Planned</th>
<th>By Whom</th>
<th>Estimated Completion Date</th>
<th>Date Completed</th>
<th>Confirming Initials</th>
</tr>
</thead>
<tbody>
<tr>
<td>Incidents discussed with employee to prevent recurrence?</td>
<td>Yes</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Any disciplinary action taken?** Yes

If yes, what type?

**Possible actions to be taken to prevent similar incidents (circle appropriate action):**

1. Repair/replace or modify equipment 6. Ergonomic enhancement 11. Retraining of employees involved
2. Improve job site housekeeping 7. Establish a safe work procedure 12. Preventive maintenance
3. Update inspection procedure 8. Improve environmental conditions 13. Improve enforcement
5. Change design 10. Install safety guard/device 15. Reassign employee to another job

**Follow-Up Communication**

| Injury site reviewed by supervisor/safety representative with employee | Yes | No |
| Supervisor reviewed incident with employees | Yes | No |

**Lessons learned posted in safety review – if yes, what?** Yes

**LESSONS LEARNED**

(To be completed for all incidents)

Contributing factor(s) for the incident (weather, lighting, traffic control plan, communication of hazards, etc.)
### EMPLOYEE WITNESS STATEMENT FORM
**TO BE COMPLETED FOR WORKERS’ COMPENSATION INCIDENTS ONLY**

<table>
<thead>
<tr>
<th>Witness Name:</th>
<th>Work #:</th>
<th>Home #:</th>
<th>Cell #:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Street Address:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>City/State/Zip:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Date and Time of Incident:** AM PM
**List other witnesses:**

**Supervisor notified date and time:** AM PM
**Supervisor Name:**

This is what happened (include who, what, where, when, how and why):

**Do you recall anything unusual or unexpected that happened?** Yes or No, if yes explain?

**Are there work conditions that contributed to this injury?** Yes or No, if yes explain?

**How would you prevent this incident from happening in the future?**

**PLEASE USE AND ATTACH ADDITIONAL PAGES IF NECESSARY**

**Participants of the Incident Analysis**

<table>
<thead>
<tr>
<th>Name/Title or Trade</th>
<th>Date</th>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foreman:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Superintendent:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>General Superintendent:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Safety Manager:</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Employee Name (Print):**

**Management Review**

<table>
<thead>
<tr>
<th>Name</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### ACCIDENT TYPE

1. **Falls On Same Level:** Slips, trips, or falls on foot level surfaces such as the ground, floors, stairs, work platforms, or rebar. Includes slips on mud, liquids, ice and other slippery surfaces and trips over obstacles such as tools, cords, rocky or uneven surfaces.

2. **Falls From Elevations:** Falls to a lower level from elevated surfaces. Includes falls from structural steel, scaffolds, work platforms, form work, equipment, etc.

3. **Falls From Ladders:** Falls from portable or fixed ladders including stepladders.

4. **Falls into Opening:** Falls into floor holes, openings in the ground (i.e., caisson holes, unguarded ditch/excavation, etc.)

5. **Material Handling – Manual:** Injuries from manually moving tools, equipment, or material. This includes overexertion due to lifting or carrying material manually and usually results in sprains/strains of the back and other body parts.

6. **Caught In/Under/Between:** Injuries caused by power tools or equipment and resulting in crushing or pinching of fingers and/or other body parts.

7. **Struck By/Against Object:** Injuries caused by employees being struck by flying or moving objects, or injuries caused by employees bumping into/against stationary objects.

8. **Struck By Flying Object-Eye:** Eye injuries only caused by grinding, chipping or other operations. Includes windblown dust and foreign bodies entering the eye.

9. **Occupational Illness** – includes the following:
   a. Skin diseases/disorders – poison ivy, heat rash, contact dermatitis, etc.
   b. Dust disease of lungs – silicosis, asbestosis, etc.
   c. Poisoning due to toxic materials – lead or other metal poisoning and poisoning by carbon monoxide or other gases
   d. Illness due to physical agents – sunstroke, heat exhaustion, frostbite, or other illnesses caused by temperature extremes or environmental conditions
   e. Disorders caused by repeated trauma – carpal tunnel syndrome, noise-induced hearing loss.

10. **Electrical Contact:** Injuries resulting in electrical shock caused by flow of electric current through the body. Includes shock from power tools, electrical cords, and contact with overhead power lines.

11. **Burns:** Injuries resulting in thermal (heat) or chemical burns. Includes burns caused by welding/cutting operations, or use of chemicals.

12. **Miscellaneous:** Avoid using this category. Only mark this category if the injury or illness doesn’t fit into another general accident type.

<table>
<thead>
<tr>
<th>Cause Code</th>
<th>Part of Body</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Improper handling of material</td>
<td>1. Ankle</td>
</tr>
<tr>
<td>2. Improper fitting</td>
<td>2. Arm</td>
</tr>
<tr>
<td>3. Improper use of tools/equipment</td>
<td>3. Back</td>
</tr>
<tr>
<td>5. Failure to use PPE</td>
<td>5. Elbow</td>
</tr>
<tr>
<td>6. Taking unsafe position</td>
<td>6. Eye</td>
</tr>
<tr>
<td>7. Clean, adjust, etc. of moving equipment</td>
<td>7. Face</td>
</tr>
<tr>
<td>8. Horseplay, distracting, fighting</td>
<td>8. Foot/toe</td>
</tr>
<tr>
<td>11. Improper/defective walk area</td>
<td>11. Head</td>
</tr>
<tr>
<td>13. Poor housekeeping</td>
<td>13. Leg</td>
</tr>
<tr>
<td>15. Windblown dust</td>
<td>15. Shoulder</td>
</tr>
<tr>
<td>17. Poor working conditions</td>
<td>17. Wrist</td>
</tr>
</tbody>
</table>
APPENDIX C – VISITORS RELEASE FORM

DUE TO THE HAZARDS AND RISKS ASSOCIATED WITH ANY CONSTRUCTION SITE, WE REQUIRE EVERY VISITOR TO THE SITE TO BE ALERT FOR THEIR OWN SAFETY AND TO SIGN A WRITTEN WAIVER AND RELEASE ABSOLVING THE OWNER AND OTHERS ASSOCIATED WITH THIS PROJECT OF ANY AND ALL RESPONSIBILITY IN CONNECTION WITH ALL RISKS ENCOUNTERED AT THE SITE.

While on the Owner’s Property, please be on guard constantly and follow good safety practices including but not limited to the following:
1. Hard-hats must be worn by all visitors at all times.
2. Although work boots are not required, all visitors shall wear low-heeled leather shoes. High heels of any kind or open-toed sandals are not permitted.
3. All visitors are to be escorted at all times while on the Project Site.
4. BE ALERT for changing conditions and ongoing construction activities while walking on the Project Site. LOOK and LISTEN before you move from one position to another.
5. Be aware of uneven walking surfaces and extreme care shall be taken with each step.
6. No firearms, drugs or alcoholic beverages are permitted on the site.
7. All warning signs and barricades must be obeyed.
8. Do not stray from the approved path for ingress and egress.
9. Do not enter areas with inadequate lighting.
10. Be aware of and stay clear of any overhead hazards.
11. Smoking is only permitted in designated areas.
12. Do not touch construction materials of any kind without written authorization from the Contractor.
13. Do not lean on or reach beyond any handrails or barricades.
14. Report any hazards to the Contractor prior to leaving the site.
15. No written correspondence regarding any hazards observed on the site shall be written or forwarded after leaving the site unless previously agreed upon at the site.

I agree to abide by the Instructions set forth above.

VISITOR: ___________________________ DATE: ______________

VISITOR NAME: ______________________

COMPANY: ___________________________

TO SEE: _____________________________

DATE: ______________________________

WAIVER AND RELEASE

In consideration of granting the undersigned permission to enter upon the premises at the Project and for other good and valuable consideration, I hereby waive and forever discharge the Owner, its officers, trustees, students, and employees, Owner’s representatives, Contractor, all Subcontractor(s) on the project (the “Released Parties”) from and against any claim for damages that may arise due to injury to my person or property while on the project whether caused in whole or in part by any negligence, actions or inactions of the Released Parties. As a licensee, I assume the risk of all dangerous conditions on or about the premises and waive notice of the existence of any such conditions.

I acknowledge the confidential nature of the Owner construction procedures and processes and agree not to photograph, reproduce or divulge the same without the written consent of the Owner.

I HAVE READ THE ABOVE AND AGREE TO SAME:

SIGNATURE: ________________________
APPENDIX D – COMPETENT PERSON ASSIGNMENT FORM

The Contractor/Subcontractor designated Competent Person is responsible for recognizing and correcting safety risks/hazards. This person has the authority to stop work in the event of any potential safety concern in the work area they are responsible for. This form must be completed by the Contractor/Subcontractor’s Project Safety Manager/Safety Representative and the designated Competent Person. Each Contractor/Subcontractor must submit this completed form to the Project Safety Manager/Safety Representative prior to beginning work on the project and update the forms any time there is a change in designated representative(s) or exposure.

ACKNOWLEDGEMENT BY EMPLOYER

By my signature below, I acknowledge that the Employee listed on this form is the Competent Person for the areas indicated below and furthermore acknowledge that he has been thoroughly trained, has experience in hazard recognition and that he possesses the authority to stop work and correct hazards in the event of a potential hazardous or imminent danger situation.

<table>
<thead>
<tr>
<th>EMPLOYER PRINCIPAL NAME (PRINT):</th>
<th>EMPLOYER PRINCIPAL NAME (SIGNATURE):</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE:</td>
<td>DATE:</td>
</tr>
</tbody>
</table>

ACKNOWLEDGEMENT BY EMPLOYEE

By my signature below, I acknowledge that I am the Competent Person for the areas indicated below and furthermore acknowledge I have been thoroughly trained, have experience in hazard recognition and that I possess the authority to stop work and correct hazards in the event of a potential hazardous or imminent danger situation.

<table>
<thead>
<tr>
<th>EMPLOYEE NAME (PRINT):</th>
<th>EMPLOYEE NAME (SIGNATURE):</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE:</td>
<td>DATE:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ASBESTOS</th>
<th>HEARING PROTECTION</th>
<th>WELDING/CUTTING</th>
</tr>
</thead>
<tbody>
<tr>
<td>CRANES/DERRICKS</td>
<td>SCAFFOLDING</td>
<td>RIGGING</td>
</tr>
<tr>
<td>FALL PROTECTION</td>
<td>ELECTRICAL (INCLUDING LOCKOUT/TAGOUT)</td>
<td>LEAD</td>
</tr>
<tr>
<td>DEMOLITION (INCLUDING MECHANICAL DEMOLITION)</td>
<td>LADDERS</td>
<td>TRENCHING/EXVACATION</td>
</tr>
<tr>
<td>HAZMAT/WASTE</td>
<td>FORKLIFT TRUCKS</td>
<td>FIRST AID/CPR</td>
</tr>
<tr>
<td>BOLTING/RIVETING/FITTING</td>
<td>MATERIAL HANDLING</td>
<td>CONCRETE/FORMS/SHORING</td>
</tr>
<tr>
<td>OTHER</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Page 86
## APPENDIX E – GUARDRAIL DISRUPTION PERMIT

<table>
<thead>
<tr>
<th>PROJECT:</th>
<th>SUBCONTRACTOR REQUESTING PERMIT:</th>
</tr>
</thead>
<tbody>
<tr>
<td>DATE/TIME OF PERMIT APPLICATION:</td>
<td>PROPOSED DATE/TIME OF DISRUPTION:</td>
</tr>
<tr>
<td>PROPOSED DATE/TIME OF TERMINATION:</td>
<td>ACTUAL DATE/TIME OF DISRUPTION:</td>
</tr>
<tr>
<td>ACTUAL DATE/TIME OF TERMINATION:</td>
<td></td>
</tr>
</tbody>
</table>

Reason for disrupting (removing, altering, or changing) the guardrail system (weights, sizes, material measurements, hoist restrictions, building component placement description, etc.)

<table>
<thead>
<tr>
<th>LOCATION OF PROPOSED DISRUPTION:</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION:</td>
</tr>
<tr>
<td>Location:</td>
</tr>
<tr>
<td>FLOOR/AREA:</td>
</tr>
<tr>
<td>LOCATION AND DESCRIPTION OF ANCHORAGE POINT:</td>
</tr>
<tr>
<td>MATERIAL USED FOR DESIGNATION OF TEMPORARY WORK AREA PERMIETER:</td>
</tr>
<tr>
<td>NAMES OF PERSONNEL TRAINED IN FALL PROTECTION WHO ARE TO BE WORKING IN THE GUARDRAIL DISRUPTION AREA:</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>REQUIREMENTS:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of Contractor/Subcontractor's Competent Person who has training, knowledge and authorization as per the guidelines set forth in OSHA 29 CFR 1926. Competency must be for all proposed activities and equipment (see Appendix F).</td>
</tr>
<tr>
<td>COMPETENT PERSON NAME (PRINT):</td>
</tr>
<tr>
<td>COMPETENT PERSON SIGNATURE:</td>
</tr>
<tr>
<td>CELL PHONE # OF COMPETENT PERSON:</td>
</tr>
<tr>
<td>PROJECT SAFETY MANAGER/REPRESENTATIVE (PRINT):</td>
</tr>
<tr>
<td>PROJECT SAFETY MANAGER/REPRESENTATIVE (SIGNATURE):</td>
</tr>
<tr>
<td>DATE/TIME:</td>
</tr>
</tbody>
</table>
## APPENDIX F – HOT WORK PERMIT
(Cutting, Grinding, Welding, Open Flame, or Soldering)

<table>
<thead>
<tr>
<th>CONTRACTOR/SUBCONTRACTOR PERFORMING HOT WORK:</th>
<th>APPLICATION DATE:</th>
</tr>
</thead>
<tbody>
<tr>
<td>LOCATION:</td>
<td>FLOOR:</td>
</tr>
<tr>
<td>AREA AFFECTED:</td>
<td></td>
</tr>
<tr>
<td>WORK TO BE DONE:</td>
<td></td>
</tr>
<tr>
<td>SPECIAL PRECAUTIONS:</td>
<td></td>
</tr>
<tr>
<td>IS A FIRE WATCH REQUIRED?</td>
<td>YES</td>
</tr>
<tr>
<td></td>
<td>NO</td>
</tr>
<tr>
<td>FIRE WATCH DURATION:</td>
<td>MINUTES</td>
</tr>
<tr>
<td></td>
<td>HOURS</td>
</tr>
<tr>
<td></td>
<td>N/A</td>
</tr>
<tr>
<td>THE LOCATION WHERE THIS WORK IS TO BE DONE HAS BEEN EXAMINED, NECESSARY PRECAUTIONS TAKEN AND PERMISSION FOR THIS WORK IS GRANTED (PER HOT WORK PROGRAM REQUIREMENTS).</td>
<td></td>
</tr>
<tr>
<td>PERMIT START TIME:</td>
<td>PERMIT EXPIRATION TIME:</td>
</tr>
<tr>
<td>TIME OF START:</td>
<td>TIME OF TERMINATION:</td>
</tr>
<tr>
<td>PERSON ISSUING THE PERMIT SIGNATURE:</td>
<td>TITLE &amp; COMPANY:</td>
</tr>
</tbody>
</table>

### WORK COMPLETION CHECK-OFF:

<table>
<thead>
<tr>
<th>SUBCONTRACTOR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>30 MINUTE CHECK</td>
<td></td>
</tr>
<tr>
<td>TIME:</td>
<td></td>
</tr>
<tr>
<td>BY:</td>
<td></td>
</tr>
<tr>
<td>60 MINUTE CHECK</td>
<td></td>
</tr>
<tr>
<td>TIME:</td>
<td></td>
</tr>
<tr>
<td>BY:</td>
<td></td>
</tr>
<tr>
<td>90 MINUTE CHECK</td>
<td></td>
</tr>
<tr>
<td>TIME:</td>
<td></td>
</tr>
<tr>
<td>BY:</td>
<td></td>
</tr>
<tr>
<td>2 HOUR CHECK</td>
<td></td>
</tr>
<tr>
<td>TIME:</td>
<td></td>
</tr>
<tr>
<td>BY:</td>
<td></td>
</tr>
<tr>
<td>3 HOUR CHECK</td>
<td></td>
</tr>
<tr>
<td>TIME:</td>
<td></td>
</tr>
<tr>
<td>BY:</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>CONTRACTOR</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>END OF SHIFT</td>
<td></td>
</tr>
<tr>
<td>TIME:</td>
<td></td>
</tr>
<tr>
<td>BY:</td>
<td></td>
</tr>
</tbody>
</table>
APPENDIX G – CRITICAL LIFT SAMPLE PLAN

<table>
<thead>
<tr>
<th>CRITICAL LIFT SAMPLE PLAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>PRE-CRITICAL LIFT PLANNING MEETING</td>
</tr>
</tbody>
</table>

Contractor, Project Safety Manager/Project Safety Representative, crane rental representatives (when applicable), Subcontractor, Safety Representative, and PIC (Person In Charge from Contractor or Subcontractor) shall attend the pre-lift planning meeting to plan the lift. This meeting is required for all critical life crane activities on projects. **Obtain the following information for review at the meeting:**

1. Lift plan submittal with drawings
2. Engineering calculation for lifting beams.
3. Rigging capacities.
4. Crane’s most recent annual certification will be required the date of the crane’s arrival on-site.
5. Maintenance and inspection records (most recent monthly/daily inspection).
6. Crane’s make, model, and brief overview of the age and history of the crane.
7. Crane’s complete load chart for boom length, counterweight, and configuration of the planned lift.
8. Certificate of insurance for the crane.
9. Crane operator’s experience and special certification (i.e. CCO designation, long boom license, etc.)

**REVIEW THE FOLLOWING LIFT CRITERIA:**

<table>
<thead>
<tr>
<th>Type of lift</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type and size of crane</td>
</tr>
<tr>
<td>Need for jib or lattice boom extension</td>
</tr>
<tr>
<td>Crane set-up/configuration</td>
</tr>
<tr>
<td>Rigging calculations</td>
</tr>
<tr>
<td>Staging location for load (unloading and placement locations)</td>
</tr>
<tr>
<td>Crane’s capacity based on:</td>
</tr>
<tr>
<td>1. Total weight of the load only (excluding rigging/block/etc.)</td>
</tr>
<tr>
<td>2. Structural or stability part of the load chart</td>
</tr>
<tr>
<td>3. Maximum radius</td>
</tr>
<tr>
<td>4. Boom length</td>
</tr>
<tr>
<td>5. Number of parts of hoist line and line pull</td>
</tr>
<tr>
<td>6. Crane’s configuration</td>
</tr>
</tbody>
</table>
## Critical Lift Sample Plan Continued

**Review the following lift criteria:**

1. Capacity and weight of the hook block
2. Weight of rigging
3. Type and size of cribbing or mats (size = crane weight/5)
4. Subsurface conditions (i.e., underground utilities, voids or poor soil conditions)
5. Site conditions (i.e., power lines, tight site, traffic, etc.)
6. Communications with the operator (i.e., designated signalman, radios are required for night, blind and tandem picks)
7. Swing radius protection
8. Anti-two block requirements
9. Assign lift responsibilities (i.e., operator, signalman, rigger, etc.)
10. Lift personnel with authority to abort a lift (include all personnel signing "Critical Lift Checklist"

### Critical Lift Checklist

<table>
<thead>
<tr>
<th>Project:</th>
<th>Date:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description of Lift:</td>
<td></td>
</tr>
</tbody>
</table>

### Crane Data

<table>
<thead>
<tr>
<th>Lattice Boom or Mobile Hydraulic</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Crane (make/model/size)</td>
<td></td>
</tr>
<tr>
<td>Counterweight (lbs.)</td>
<td></td>
</tr>
<tr>
<td>Maximum Load Radius (ft.)</td>
<td></td>
</tr>
<tr>
<td>Boom Length (ft.)</td>
<td></td>
</tr>
<tr>
<td>Line Pull (lbs.)</td>
<td></td>
</tr>
<tr>
<td>Load Chart Capacity @ Max. Radii (lbs.)</td>
<td></td>
</tr>
</tbody>
</table>
## Critical Lift Sample Plan Continued

### Load Data

<table>
<thead>
<tr>
<th>Gross Load Weight (lbs.)</th>
<th>+ Rigging Weight (lbs.)</th>
<th>+ Main Block (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Load Data

<table>
<thead>
<tr>
<th>+ &quot;Effective&quot; Jib Weight (lbs.)</th>
<th>+ Cable Weight (lbs.)</th>
<th>+ Overhaul Ball Weight (lbs.)</th>
<th>= Total Weight of Load (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Load Chart Capacity @ Max. Radii (lbs.)</th>
<th>(Load Chart Capacity @ Max Radii)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Rigging Data

<table>
<thead>
<tr>
<th>Sling Construction: Diameter in inches</th>
<th>Core Type</th>
<th>Number of legs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sling Angle (horizontal)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Sling Capacity (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Means of connecting (rigging) the load</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Capacity of connectors (rigging accessories) (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

### Pre-Lift Requirements (All Questions Must Be Answered Yes)

<table>
<thead>
<tr>
<th>Load chart utilized is for exact crane model; serial number, boom type, length, tip, counterweight?</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Person in charge (PIC) of lift/Employer</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Signal person: Name</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pre-lift meeting with crew</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Valid crane certification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Daily inspection completed</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Swing path not over personnel or other construction activities</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Footing is sound and level (soil conditions/compaction, underground utilities)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
</tbody>
</table>
### CRITICAL LIFT SAMPLE PLAN CONTINUED

#### PRE-LIFT REQUIREMENTS (ALL QUESTIONS MUST BE ANSWERED YES):

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Planning for radio or hand signal communication</td>
<td></td>
</tr>
<tr>
<td>Minimum clearances from power lines can and will be maintained</td>
<td></td>
</tr>
<tr>
<td>The load radius has been measured with a tape measure</td>
<td></td>
</tr>
<tr>
<td>Wind gusts do not exceed 25 mph. Postpone lift if gusts exceed or are expected to exceed 25 mph.</td>
<td></td>
</tr>
<tr>
<td>Load will not touch boom at any time</td>
<td></td>
</tr>
</tbody>
</table>

#### PRE-LIFT REQUIREMENTS (ALL QUESTIONS MUST BE ANSWERED YES):

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adequate head room/clearance</td>
<td></td>
</tr>
<tr>
<td>For tandem lifts, diagrams have been prepared</td>
<td></td>
</tr>
<tr>
<td>Non-essential personnel/activities are removed from critical lift area</td>
<td></td>
</tr>
</tbody>
</table>

#### PRE-LIFT REQUIREMENTS (ALL QUESTIONS MUST BE ANSWERED YES):

<table>
<thead>
<tr>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tag lines (if necessary) are long enough, tied only to the load (no knots), and in good condition – loose end controlled by designated person.</td>
<td></td>
</tr>
<tr>
<td>Operating locations are far enough away from shoring, excavations and trenches to eliminate risk of collapse.</td>
<td></td>
</tr>
<tr>
<td>Application of hardwood mats has been carefully considered.</td>
<td></td>
</tr>
<tr>
<td>Outriggers or crawler tracks are properly extended, and tires are clear of ground.</td>
<td></td>
</tr>
<tr>
<td>Application of blocking under outrigger pads has been carefully considered.</td>
<td></td>
</tr>
<tr>
<td>Adequate swing clearance (minimum 2') between the counterweight and any obstacles.</td>
<td></td>
</tr>
<tr>
<td>Boom configuration meets manufacturer's requirements.</td>
<td></td>
</tr>
<tr>
<td>Machine is rigged with proper length/type of cable and number of parts of hoistline.</td>
<td></td>
</tr>
<tr>
<td>Load block is of adequate capacity and sheaves are of proper size for hoist cable.</td>
<td></td>
</tr>
<tr>
<td>All rigging has been inspected for capacity and condition.</td>
<td></td>
</tr>
<tr>
<td>Underground structures and conditions have been considered.</td>
<td></td>
</tr>
</tbody>
</table>