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<td>American Conference of Governmental Industrial Hygienists</td>
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<tr>
<td>ACM</td>
<td>Asbestos-Containing Material</td>
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<tr>
<td>AL</td>
<td>Action Level</td>
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<tr>
<td>ALARA</td>
<td>As Low As Reasonably Achievable</td>
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<td>ANSI</td>
<td>American National Standards Institute</td>
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<td>ASTM</td>
<td>American Society for Testing and Materials</td>
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<td>BBP</td>
<td>Blood Borne Pathogen</td>
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<td>BMPs</td>
<td>Best Management Practices</td>
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<td>CFR</td>
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<td>CHA</td>
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<td>Time Weighted Average</td>
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<tr>
<td>UL</td>
<td>Underwriter’s Laboratory</td>
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<tr>
<td>USC</td>
<td>United States Code</td>
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Message from the President

Each day Barton Malow builds people, projects and communities with the goal of sending every worker home unharmed and satisfied with a job well done.

Building safe without exception is our commitment and it’s embedded in our values of Integrity, Partnership and Empowerment. Together we work each day to provide a safer work environment through pre-task planning, workforce engagement, and standards that go above and beyond OSHA requirements.

I urge every individual on a Barton Malow jobsite to be vigilant when it comes to safe work practices. Together we will deliver results through safe practices without exception.

Thank you for your commitment to zero lost time incidents, zero recordables, and zero first-aid incidents.

Thank you,
Ryan Maibach
All Barton Malow Employees
- Stop and correct any unsafe acts or conditions as immediate as possible and lead with the zero tolerance for unsafe acts philosophy with the pursuit for zero incidents.
- Take responsibility for your own safety and for others around you.
- Promote safety, quality and productivity in all of our work efforts.

President / Vice President
- Knowledge of current safety performance and recent incidents.
- Hold leadership accountable to support the zero tolerance for unsafe acts philosophy and the goal for zero incidents.
- Hold leadership responsible for promoting safety, quality and productivity in all of our work efforts.

Officer
- Have an overall understanding and support of the safety performance and recent incidents or trends related to work within your respective area of leadership with focus on your projects.
- Support the Director of Safety in the successful management of the Barton Malow Safety Program with the appropriate tools and resources.
- Hold project staff, employees and all Contractors accountable for successful adherence to corporate and site specific safety policies so that every worker leaves the site each day the same way they arrived.
- Project visibility and presence.
- Participate periodically in Project Safety Performance Reviews – monthly.
- Participant in all Incident Reviews as necessary.
- Stop and correct any unsafe acts or conditions as immediate as possible and lead with the zero tolerance for unsafe acts philosophy with the pursuit for zero incidents.
- Promote safety, quality and productivity in all of our work efforts.

Director
- Responsible for overseeing the site safety plan and ensuring the compliance through the entire life cycle of the project.
- Monitor and ensure accountability of Project Staff, employees and Contractors to the adherence of established Safety Plan.
- Involvement and understanding of your Project Safety Performance.
- Participant in all Incident Reviews as necessary.
- Stop and correct any unsafe acts or conditions as immediate as possible and lead with the zero tolerance for unsafe acts philosophy with the pursuit for zero incidents.
- Promote safety, quality and productivity in all of our work efforts.

Project Manager
- Directly responsible for site safety.
- Manage the development of a successful site specific safety plan.
- Enforce the corporate and site specific safety policies so that every worker leaves the site each day the same way they arrived.
- Set direction so that the project team is clear on roles and responsibilities.
- Set clear understanding of Barton Malow Core Purpose as it relates to safety.
- Active participant in all Incident Reviews.
- Stop and correct any unsafe acts or conditions as immediate as possible and lead with the zero tolerance for unsafe acts philosophy with the pursuit for zero incidents.
- Promote safety, quality and productivity in all of our work efforts.
Safety Responsibilities

Superintendent
- Lead by example to implement and enforce the corporate and site specific safety policies so that every worker leaves the site each day the same way they arrived.
- Hold all project personnel; including contractors, to the philosophy that safety, quality and productivity are integral to our success.
- Active participant in all Incident Reviews.
- Stop and correct any unsafe acts or conditions as immediate as possible and lead with the zero tolerance for unsafe acts philosophy with the pursuit for zero incidents.
- Promote safety, quality and productivity in all of our work efforts.

Project Engineer
- Support the safety efforts of Project Manager, Superintendent, and Project Safety Representative.
- Stop and correct any unsafe acts or conditions as immediate as possible and lead with the “Zero Tolerance for Unsafe Acts” philosophy with the pursuit for zero incidents.
- Promote safety, quality and productivity in all of our work efforts.

Project Safety Representative
- Support, audit and monitor the project team’s adherence to corporate and site specific safety policies as a resource to the project team.
- Correcting any unsafe acts or conditions observed immediately or as soon as possible.
  - Those that cannot be resolved at the supervisory level will be reported to an elevated level of management.
- Motivate personnel to carry out the safety program by instruction, example, leadership and sincerity.
- Investigate incidents and all unplanned occurrences and document/report out appropriately.
- Stop and correct any unsafe acts or conditions as immediate as possible and lead with the zero tolerance for unsafe acts philosophy with the pursuit for zero incidents.
- Promote safety, quality and productivity in all of our work efforts.

Note: If there is not a dedicated Project Safety Representative the above responsibilities are assumed by the Superintendent.

Regional Safety Leader
- Responsible for Regional Safety Performance.
- Communicate success, strengths, improvements and initiatives.
- Effectively build and manage a team of Safety Professionals to act in carrying out, supporting and influencing one Barton Malow Safety Program.
- Manage training requirements.
- Supervise all Incident Reviews by regional safety personnel.
- Develop and maintain positive relationships with regulatory agencies and industry professionals to enhance partnerships and promote Barton Malow’s standing as an industry safety leader. For example, state project partnerships, participation on safety committees, pursuing safety awards, etc.
- Stop and correct any unsafe acts or conditions as immediate as possible and lead with the zero tolerance for unsafe acts philosophy with the pursuit for zero incidents.
- Promote safety, quality and productivity in all of our work efforts.

Workers Compensation Specialists
- Responsible for overall claim management.
- Works with Regional Safety Leadership in managing incidents including participation in incident reviews.
- Managing company safety communication including weekly safety updates.
- Responsible for documentation and reporting of all company safety related information including OSHA logs.
Definitions and Responsibilities

Job Hazard Analysis (JHA): A work control document that identifies the work tasks, hazards and controls of the overall project and provides the basis for the development of the Site Specific Construction Environmental, Health and Safety Plan (CEHSP).

Competent Person: One who is capable of identifying existing and predictable hazards in the surroundings or working conditions which are unsanitary, hazardous, or dangerous to employees, and who has authorization to take prompt, corrective measures to eliminate hazards. A Competent Person is also one who has extensive training knowledge and experience in a particular activity or job function. A Competent Person must be capable of demonstrating the “knowledge and skill-sets” that match their “Competent Person” designation.

Construction Activity: Is any combination of erection, installation, assembly, demolition, or fabrication activities involved to create new construction or to alter, add to, rehabilitate, dismantle, or remove an existing building or facility. It also includes the alteration and repair (including dredging, excavating, and painting) of buildings, structures, or other real property, as well as any construction, demolition, and excavation activities conducted as part of environmental restoration or remediation efforts.

Construction Environmental, Health and Safety Plan (CEHSP): A document prepared by the Construction Subcontractor and submitted to Barton Malow for review and concurrence. The CEHSP describes the Construction Subcontractor’s environment, safety and health plan for a particular construction project and the activity hazard analysis(s) for each definable activity/feature of work.

Construction Representative: Building area engineer, technical monitor, or Owner-delegated Representative authorized to approve and accept work, provide technical liaison, and interpret plans and specifications.

Construction Subcontractor: A person, corporation, or other entity, other than Barton Malow, who furnishes labor, supplies, materials, equipment, or services under a construction or similar contract including a task order agreement. A Construction Subcontractor’s site tenure may vary depending on the nature of the project, and its employees are not considered a permanent construction force.

Construction Safety Orientation Checklist: A form used to document the project relevant Environment Safety and Health (ES&H) information at the pre-construction meeting. Construction Subcontractors have the responsibility to ensure that the content covered in the checklist/orientation is effectively flowed down to all of their employees and their Subcontractors prior to the start of any work.

Graded Approach: A Graded Approach is recommended to be used for implementing the work, planning and control (i.e. – the CEHSP and accompanying JHA’s). The level of detail within each CEHSP and corresponding JHA should be based on the size, complexity and risk level of the construction work.

Hold Point: A point of defined circumstances (i.e. Excavation Permit) beyond which a construction activity must not proceed without the approval of a designated authority.

Imminent Danger: A condition or practice that could reasonably be expected to cause death or serious injury, severe property damage, or environmental impairment unless immediate actions are taken to mitigate the effects of the hazard created.

Prevention through Design (PTD): The concept of PTD can be defined as: Addressing occupational safety and health needs in the design process to prevent or minimize the work-related hazards and risks associated with the construction, manufacture, use, maintenance, and disposal of construction materials and equipment.

Qualified Person: One who by possession of a recognized degree, certificate or professional standing or who by extensive knowledge, training and experience, has successfully demonstrated their ability to solve or resolve problems relating to the subject matter, the work or the construction project.
Definitions and Responsibilities

**Safety Huddle:** Interactive meeting between a workers direct supervisor and workers to discuss the JHA for the next work task or activity period.

**Safety Stand Down:** A site wide safety meeting to address safety issues.

**Project Safety Officer:** An employee of Barton Malow and/or the Construction Subcontractor at the work site who is responsible for assisting in the implementation of the Project Safety Plan and compliance with applicable laws and regulations. The qualifications of the Project Safety Officer must be listed in the CEHSP.

**Task Safety Analysis (TSA):** A detailed review of the day’s work tasks to identify job steps, hazards and controls (See also Safety Huddle).

**Worker:** A union tradesman, leased worker, subcontractor, independent contractor/consultant, volunteer, or other individual providing construction services onsite.
Scope
This manual contains excerpts from, and references to, numerous regulations, codes, and standards which are not presented in their entirety. Similarly, not all Environmental, Safety and Health subject matter is covered in this manual. Each employer is responsible for ensuring compliance with “all applicable requirements” that govern their work on Barton Malow projects, including any consensus standards incorporated therein by reference. If the manual does not contain information relative to a particular Environmental, Health or Safety topic, the employer must ensure that the governing regulatory provisions or national consensus standards as applicable are implemented as part of their CEHSP. If there is a conflict between requirements, the most stringent should be used. Employers are always encouraged to apply best management practices in all of their endeavors. Nothing in this manual relieves Barton Malow or its’ Contractors of their own safety responsibilities.
Applicability
These requirements apply to the Barton Malow, Contractors, Subcontractors, Sub-subcontractors and suppliers who provide services or materials for construction.

Regulatory Requirements
All Barton Malow projects are subject to regulatory requirements of Federal OSHA, and/or State and Local requirements. The enforcement provisions of the Federal Occupational Safety and Health Act (OSHA) apply.

Specific Requirements Construction EHS Plan
Each Contractor on site must ensure that the requirements in this Manual are incorporated into their CEHSP and the Job Hazard Analysis (JHA’s) developed for this contract. The CEHSP must be submitted in accordance with the contract requirements document and undergo a review and concurrence by Barton Malow prior to being allowed to start work.

A new CEHSP must be submitted for each construction project, regardless of whether the Contractor has performed prior work onsite.

The level of detail within each CEHSP and corresponding JHA should be commensurate with the size, complexity and risk level of the construction project.

All affected personnel involved in the work being performed must review the CEHSP and any subsequent changes. The updated CEHSP must be made available for review and concurrence by the Barton Malow Safety Department prior to work being conducted on the project. The CEHSP must be kept at the worksite and available for review.

Training and Documentation
For all workers on this project, site-specific environmental, safety and health orientation training will be required. In addition to Barton Malow’s project orientation, each Contractor will conduct an additional safety orientation for their employees to ensure they understand the project safety requirements as well as their company’s requirements. This training will take place before any work operations take place (i.e. before work). Project orientation decals will be provided and must be visible while working on the project. An orientation record will be maintained.

For work activities in which specific training is required by safety regulations (e.g., OSHA mandated), the Contractor must maintain records on-site, showing proof of current training records for any particular qualified individual(s). Designated “Competent Persons” are expected to have a higher level of experience, training and qualification. Contractors must have in place a mechanism to verify that the “Competent Person(s)” knowledge and skill-sets match their “Competent Person” designation (i.e., written test).

Photocopies of training certificates, certification cards, wallet IDs, etc. identifying the individual, the specific training, who conducted the training and the date completed (and/or expiration date) are accepted in lieu of originals. Copies of all training should be provided to the Barton Malow Safety Department for review. A company training directory will be stored in the Barton Malow Safety office for review and continual updating.

Additionally, Supervisors including Superintendents and Foreman will be required to show proof that they have taken an OSHA 30 hour construction course.

Safety Bulletin Boards
The project team will install and maintain a safety bulletin board at the location where the majority of employees report to work. Workers must be advised of the location of the nearest bulletin board. Employees must be responsible for reviewing the bulletin board to keep informed of safety-related information. Safety bulletin boards must be sufficient size to display and post safety bulletins, newsletters, posters, accident statistics, and other safety educational material.
At a minimum, the safety bulletin board must display:

- OSHA Safety and Health Poster (Your Rights as a Worker)
- OSHA Safety and Health Complaint Form
- Requirements, provisions and number of the Employee Concern Program Hotline (Whistleblower Protection)
- Citations and notices as appropriate
- OSHA 300A form (when required)
- Barton Malow furnished safety bulletins and publications
- Any applicable permits

Additional items to be posted include:

- Topical Safety & Health posters (home and at work)
- Minutes of safety meetings
- Information on incidents and Lessons Learned
- Hazard communication information
- Results of the Safety Observation program
- ES&H Safety Committee minutes

**Incident Response Notification and Investigation**

Each Contractor will provide prompt verbal and electronic notification. Barton Malow will have oversight over all incidents investigations.

Investigations of incidents must contain:

- Photographs of the incident
- Identification of all incident causal factors (root and contributing causes) using investigative means
- Identification and documentation of all corrective actions
- Documentation of closure of all identified corrective actions including any discipline issued

For recordable injuries and above, a Barton Malow Safety Representative will participate in the investigation.

Injury/Incident full details (including root cause and corrective action) must be provided in writing within 24 hours of the injury/incident.

Once the complete report has been submitted an incident review meeting will be held. The purpose of the meeting is to examine and understand the details of the incident including any corrective actions.

At minimum, participants will include:

- Barton Malow Project Manager and Superintendent
- Contractor Project Manager Superintendent (all tiers)
- Barton Malow Project Safety Manager
- Contractor Safety Representative

Other participants may include additional management representatives of any party, involved workers etc.

Results of the Incident Review meeting will be communicated to appropriate parties. A summary of the incident including corrective actions will be posted on the Safety Bulletin Board.

All injuries will be classified in accordance with the United States Department of Labor Occupational Health and Safety Administration (OSHA) 29 Code of Federal Regulation Recordkeeping requirements.
Accountability
Every employee is responsible and accountable for his or her own health and safety plus the protection of fellow employees, third parties and property. No employee must attempt to work under conditions that appear to be unsafe.

All workers have the authority to stop work. If unsafe conditions are identified during construction activities, workers must be instructed to stop the work immediately and notify their Supervisor and Health & Safety Representative of this action. Work may not proceed until the circumstances are investigated and deficiencies corrected.

Any work-related incident (death, injury, illness, property damage or near miss) must be reported immediately to a Supervisor and to the Barton Malow Safety Department. After notification, an incident investigation will take place.

It is forbidden to retaliate against an employee who reports a safety incident or an unsafe practice or condition. However, an employee who submits a report knowing it to be false, or fails to report is subject to appropriate discipline.

Safety Recognition
A project safety recognition program will be established to reinforce safe work practices and to promote a “Proactive” safety culture. The program elements will include individual employees, contractors and the project site as a whole.
Disciplinary Program

Discipline of Employees
Each Contractor must advise employees and Subcontractors that unsafe acts or conditions must not be tolerated and that violators will be subject to the following:

Whenever an employee is found to be in violation of the rules contained in this manual, disciplinary actions are required and must be enforced by the Project Safety Team, Supervision and/or Owner's Representative. In general, these actions range from verbal to written warnings with temporary or even permanent expulsion from the site should violations continue. The following procedures for disciplinary actions may differ slightly from those of Subcontractors however; these procedures supersede those of Subcontractors if there is a disagreement on enforcement.

A progressive discipline program is described below:

- **Class 1 Violation (serious or life threatening)**
  - A Class 1 violation could potentially cause death, serious injury, or property damage. Examples include any serious violations of the following program elements: Failure to report an injury, Fall Protection, Control of Hazardous Energy (Lockout/Tagout), Energized Electrical Work, Confined Space, Trench and Excavation, Cranes Hoisting and Rigging, Fire Prevention.
  - A Class 1 violation must result in suspension from work without pay for three consecutive workdays and safety training related to the violation and/or reorientation. Any additional Class 1 violations will result in immediate, permanent removal from the project.
  - Any Barton Malow employee or Contractor employee who is terminated from the project must not be permitted to return to the same project for another Contractor or to a different Barton Malow project.
  - The project team may determine that the worker's actions warrant immediate and/or permanent removal from the project.

- **Class 2 Violation (less serious or non-life threatening offense)**
  - A Class 2 violation would not potentially cause death, serious injury, or property damage. Examples would include: not wearing a hardhat (no serious overhead hazards), safety glasses, failure to complete the JHA process, etc.
  - A Class 2 violation must result in a verbal documented or written warning. The second warning will result in suspension from work without pay for three consecutive workdays and safety training related to the violation and/or reorientation. Any additional Class 2 violations will result in immediate and/or permanent removal from the project.
  - Any Barton Malow employee or Contractor employee who is terminated from the project must not be permitted to return to the same project for another Contractor or to a different Barton Malow project.
  - An employee who violates safety requirements may be charged with a violation regardless of whether his or her action was intentional. It is the employee's obligation to know the pertinent safety requirements. It is the respective contractor's responsibility to respond to its employees' requests for information and/or work situation.

Discipline of Supervisors
Supervisors, including trade foremen, must take responsibility for enforcing the safety requirements. Each supervisor must administer disciplinary actions to subordinate employees as required. Depending on the circumstances, violations by subordinate personnel may justify issuing a violation against the supervisor as well. For example, a supervisor who observes a violation and does not attempt to correct it may also be cited for a violation.

Discipline of Contractors
A written Safety Hazard Notification may be issued against a Contractor that is not complying with project safety requirements or applicable law, or does not appropriately manage safety of its employees. This notification may be based on any of the following:

- One or more serious violations or incidents
- Excessive frequency of less serious violations and/or incidents
- Failure to cooperate with the Safety Program
Barton Malow must review the violating Contractor’s safety program and meet with the Contractor’s management, including an officer of the Contractor. The meeting must determine the measures that will be required for the Contractor to continue to work on site. Depending on the seriousness, appropriate contractual remedies may include notice of contractual default, withholding payment, suspension of work, requiring a change of Contractor personnel, or termination of the Contractor.

**Failure to Report**
Failure to report incidents is a zero tolerance item and a Class 1 violation. Workers will receive discipline as described above. Project personnel who know of but fail to report incidents will receive Class 1 discipline. In addition, the employer may be issued a Safety Hazard Notification which requires a corrective action plan be submitted.
Applicability
This program applies to all levels of workers assigned to the project site. Our goal is to have a drug-free workplace. To this end, Barton Malow has a zero tolerance substance abuse program. The Company may, from time to time and without prior warning, conduct searches of persons, personal effects, vehicles, lockers, desks, and construction areas. Any illegal drug- or alcohol-related items discovered through such searches may result in reasonable suspicion testing. Any illegal drug obtained as a result of such search may be turned over to the law enforcement authorities.

Testing
The following instances will require drug and alcohol testing:

Pre-Employment: All applicants will be required to pass a Company paid substance abuse test for the presence of alcohol and prohibited drugs before being hired by Barton Malow. This includes all applicants whether full time, part time, temporary, intern, contract, and non-bargaining trade.

Post Accident: If an employee suffers an occupational on-the-job injury (requiring treatment from a doctor) or following a serious or potentially serious accident or incident in which safety precautions were violated, equipment or property was damaged, unusually careless acts were performed, or where the cause was due to an employee or other person's failure to wear prescribed personal protective equipment or follow prescribed safety rules while working on Company premises or the property of a client.

Reasonable Cause: If an employee reports to work or is on Company premises in a condition giving a supervisor reasonable cause to suspect the influence of alcohol or drugs.

Requirements*
Participation in a drug and alcohol screening program (i.e. MUST/MOST) including at a minimum the following elements:

- Ten panel minimum drug screening for presence of Amphetamines, Benzodiazepines, Cocaine, Methadone, Barbiturates, Phencyclidine, Propoxyphene (Darvon), THC (Marijuana and Cannabinoids), MDMA and Opiates.
- Alcohol detection by a breathalyzer or Blood Alcohol testing.
- Provides for initial, for-cause, and post-incident screening.
- Designated medical reviewer.
- Clear pass/fail criteria.
- Scenarios
  - If the test is negative, they go to work after orientation.
  - If the test is positive, they will not work on the project.
  - If the test is inconclusive, it gets sent out to a lab and the worker is not allowed onsite until results indicating a negative are administered.
- A random drug/alcohol screen program will be implemented.
- Alcohol must not be used on the job or in a manner that interferes with safety or job performance.
- Working with a breath alcohol concentration of .02 percent or greater is prohibited and will result in the workers immediate removal and subsequent disciplinary action.

*Note: Substance abuse testing requirements may vary depending on Owner project requirements.

Random Substance Abuse Screening
Barton Malow will implement a project specific random drug and alcohol screening program. At any time throughout the project, institution of a random drug testing pool will be established and those picked, will be required to take the test.

Contractor must bear all costs of badging and drug testing unless their contract says otherwise prior to the first day of safety orientation.
Barton Malow and Contractors must be responsible for ensuring that all on-site vendors and visitors follow the established safety procedures in this document. Barton Malow Safety Department must post signs accordingly in conspicuous places to notify vendors and visitors of these safety procedures. Vendors must provide proper personal protective equipment for their employees and will enforce their use whenever on Project Site. Vendor’s non-compliance will not be tolerated.

All visitors must be required to wear hard hats and sturdy shoes while on Project Site. Tennis shoes, sandals, open toe shoes and high heel shoes are strictly forbidden. Eye protection is mandatory and ear protection must be worn where warranted. All personnel on site must wear a high visibility outer garment.

Enforcement of these policies regarding vendors and visitors is the responsibility of each Contractor and Subcontractor. The responsibility to communicate these policies lies with the Contractor with whom the visitor/vendor is meeting.

Also, it will be a requirement that each Contractor will meet and escort any visitors and/or vendors that have not attended site orientation. No vehicles will be allowed onsite without permission.

**Site Security**

Contractors and Subcontractors are responsible for directing their employees and vendors to use specified gates as required. Contractors are responsible for securing their own equipment, office trailers, and storage areas. Equipment should be properly secured in storage trailers or sheds. Care should be taken to eliminate all fire sources. Fuel reserves should be locked.
Barton Malow is committed to maintaining a workplace free from threats or acts of intimidation and violence. A professional demeanor must be maintained at all times. Any reported incident must be thoroughly investigated. If an employee is observed in violation of this policy, termination of employment may result.

- **Intimidation:** A physical or verbal act toward another person, the result of which causes that person to reasonably fear for his or her safety or the safety of others.
- **Threat of violence:** A physical or verbal act that threatens bodily harm to another person or damage to the property of another.
- **Act of violence:** A physical act, whether or not it causes actual bodily harm to another person or damage to the property of another.

Workers will be held accountable for aggressive behavior. Workers are required to report all “threatening” behavior to his/her direct supervisor who will then report it to the Barton Malow Company Project Team. All reports of aggressive or potentially violent behavior will be investigated and, if verified, appropriate responsive action will be taken. Such action could include:

- Monitoring of the situation
- Taking appropriate disciplinary action, including termination
- Warning of identified targets of the potential harm
- Reviewing and, if appropriate, upgrading security measures
- Consulting with local law enforcement officials

Firearms, ammunition, or other weapons at a Barton Malow workplace, including a jobsite or a parking lot, are prohibited. Knives are permitted for legitimate construction purposes.
Worker safety and health programs must be integrated into other related site-specific worker protection activities and within the integrated safety management system. There must be an open and continuous line of communication between Barton Malow and their Contractors to discuss any unsafe acts or conditions that may arise during the project. Each contractor has accountability for the safety of the project and must allocate the resources necessary for implementing all required safety-related codes and contract/subcontract requirements. Each contractor must:

- Follow all site specific environmental, health and safety (EHS) requirements and associated permits as defined by this manual.
- Establish EHS flow-down requirements in all subcontracts.
- Implement the appropriate requirements of this manual into their CEHSP.
- Provide qualified safety representation as follows: Numbers include all tiered subs added together.
  - Less than 40 employees, designated safety representative. Minimum qualifications: OSHA 30 hour for Construction or Safety Trained Supervisor (STS) designation. This individual must be full time on the project and have no other duties.
  - 40 to 80 craft employees, 1 full time safety representative. Minimum qualifications: OSHA 30 hour for Construction, or other recognized, accredited safety designation such as Certified Health and Safety Technician.
  - 80 to 150 craft employees an additional full time safety representative
  - Minimum qualifications: OSHA 30 hour for Construction or other recognized accredited safety designation such as Certified Health and Safety Technician.
  - Over 150 employees, 1 additional safety representative for each 100 workers.
  - Proposed safety staff will be evaluated by Barton Malow prior to mobilization.
- Monitor the workplace for unsafe conditions and take immediate action to correct unsafe conditions, acts, and other deficiencies identified during inspections.
- Perform necessary personal exposure monitoring.
- Coordinate and conduct pre-job planning with field supervisors, affected lab managers, and others, as required.
- Conduct a daily walk-around safety inspection. Instruct all employees, initially and periodically, on matters pertaining to employee safety and health rights, protections, obligations, and responsibilities.

### Injury Management

Injuries will be evaluated on site by the designated first aid/CPR provider or other qualified individual.

A company representative will take the employee to the project’s designated medical treatment facility if determined to be needed. Authorization for treatment of work related injuries should be obtained from the Safety Department. If timely response cannot be obtained, the Safety Representative, project manager, or superintendent are authorized to approve treatment. They will also explain the workers job duties and answer any medical staff questions. All Contractor’s must utilize the projects Injury Management Program which includes the Return to Work Program. Employers must accommodate any work restrictions issued by the doctor. Those work accommodations can be made at any of the Contractor work location with the exception of Controlled Insurance Programs. Contractors will keep Barton Malow apprised of the workers status.

Construction jobsites are unique, dynamic work environments. However, there are certain hazards and safety concerns common to many or all sites:

- Slip, trip and fall hazards must be carefully managed. Walkways, parking lots, heavily traveled paths, and work areas including platforms must be free from ice, snow, water, oil and debris.
- Back strains can result from lifting boxes or other objects.
  - Injuries associated with lifting and carrying building materials, tools, and equipment are very prevalent in the construction industry. Proper lifting techniques are important in preventing injuries to the back and other types of sprains or strains.
  - Repetitive motion injuries such as carpal tunnel syndrome may occur from keyboard use or other office activities if proper ergonomic practices are not followed.
Appropriate care must be taken to assure the safety of individuals having special vulnerabilities or health needs, including persons with disabilities and pregnant women.

Employees who have issues that could affect safety for themselves or others must notify their supervisor. Examples include: dizziness, trouble breathing, bad back, fainting spells, or drowsiness from medication.
Each project team must develop an Emergency Action Plan. The plan will be revised as necessary as construction operations progress. The Emergency Action Plan must consist of the following:

- Owner requirements and procedures
- Barton Malow Company Crisis Management and site logistics protocols
- Coordination with local emergency response personnel

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

The Emergency Evacuation Plan is to be posted throughout the jobsite and communicated to workers during the Safety Orientation and weekly safety meetings.

**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:

Non-life threatening emergency clinic:
- Phone Number:
- Clinic Address:
  - City:       State:       Zip:

Life threatening emergency:
- Name of Medical Center:
- Phone Number: 911  Main Telephone Number:
- Medical Center Address:
  - City:       State:       Zip:

WORKERS ARE TO BE INSTRUCTED NOT TO MOVE AN INJURED WORKER BEFORE MEDICAL ASSISTANCE ARRIVES UNLESS THE INJURED WORKER IS IN DANGER OF FURTHER INJURY.

**Fire**
In case of a fire, workers will evacuate their work area immediately and report to the closest guard shack where a head count will be taken.

Workers will not attempt to put a fire out unless they have received special instruction. After reporting the fire, workers will evacuate the work area and report to the pre-determined assembly area that was stated during the safety orientation.

**Severe Weather**
Should weather conditions, such as severe thunderstorms or tornadoes develop around or near this project, workers will follow the direction of their immediate supervisor. Work in areas where hurricane activity is possible will have a contingency plan in place. Workers may be directed to a safe area where they will remain until weather conditions improve. For thunderstorms, we will gather under the Campbell Suites area of the grandstand until the threat passes. Workers will be notified by cell phone, audio and word of mouth. A monitoring system is being setup to help with this endeavor.

**Site-Specific Emergency Evacuation Plan**
Project Management will ensure the project-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.

Barton Malow Safety Department will routinely assess project management, supervision, Contractors and workers to ensure that adequate knowledge of the project emergency action plan exists.

Each Contractor will provide the Barton Malow Safety Department with their Emergency Contact Numbers.
Emergency Action Plan

Hurricane Preparedness
Any project where the threat of hurricanes presents itself, will watch for advanced warnings and implement provisions to prepare the jobsite when one is approaching. The Emergency Action Plan with Hurricane Preparedness is located in the appendix.

Homeland Security
Should a Severe Condition “Red” threat advisory be issued indicating a terrorist attack occurrence or the severe risk of possible terrorist attacks, Barton Malow Project Management will determine whether the project should evacuate all workers or shelter them at the project.

Barton Malow Project Management will communicate to workers and contractors all known information of the threat and of the crisis plan.

Should a Bomb Threat be called in, evacuate to the nearest mustering point at the closest guard shack for a head count.

Crisis Management Plan
When an incident or crisis takes place on the jobsite, please contact the Regional Safety Leader immediately. Steps for jobsite personnel to handle crisis and incidents can be accessed via the crisis card.

The Regional Safety Leader will direct the flow of information and communication to necessary individuals. The officer-in-charge or corporate resources will manage all media inquiries in the event of an incident or crisis.

In the event that the media does contact the jobsite directly, the following statement should be used:

*My name is __________ and I am the ______________ for Barton Malow Company. Our first priority is the welfare of the workers. Due to the current emergency, we not have verifiable information at this time. Please give us time to gather facts and take care of our responsibilities. In the meantime, please remain in the safety area. Thank you for your cooperation.*
Site Specific

THIS PLAN MUST 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 MANAGEMENT PROGRAM.

PROJECT NAME:

WORK LOCATION:

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 worker harm.

It is each worker's responsibility to familiarize themselves with evacuation routes, alarms and assembly points in case an emergency evacuation of the work area is required.

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

In Case of MEDICAL EMERGENCY or RESCUE:

Emergency Phone Number: CALL 911 Give directions to get to site:

Alarm or Notification: Contact the closest Barton Malow Team member, guard or company supervision. Send someone to the guard shack\project entrance to help guide the emergency services to the injured worker.

Crew Actions: Barton Malow Management will meet the Emergency Crews at the Guard Shack\Construction Entrance. Send someone to the road to help guide the emergency services to the injured worker.

IN CASE OF SEVERE WEATHER:

Alarm or Notification: A Long Siren sound from the horn multiple times, Text, Radio or Verbal Notification.

Assembly Point:

Crew Actions: Workers will seek shelter until an All Clear is given.

IN CASE OF A FIRE, CHEMICAL RELEASE, EXPLOSION OR BOMB THREAT:

Alarm or Notification: 3 short blasts from a horn multiple times.

Evacuation Route:

Crew Actions: Exit the site in accordance with the Evacuation Route Plan and wait for the project to perform a headcount.

Spill Kit Location:

- 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.

- Workers are required to:
  1.) Report immediately to their designated assembly point and be accounted for.
2.) Failure to report may cause another to risk danger in an effort to search for you.
3.) **Do Not leave the project without prior authorization from first-line supervision.**
Applicability
The requirements of this section apply to all Contractors construction work activities onsite. This section provides the requirements for establishing a method for identifying, controlling, and documenting hazards associated with all work activities and communicating this information to all affected workers.

General Requirements
The Contractor is responsible for understanding the scope of work in sufficient detail to ensure that the work is effectively planned for each definable work activity, the hazards associated with the work are identified and the planned protective measures are implemented. This must be accomplished utilizing methods in the section below. Hazards identified in the JHA must be addressed in the CEHSP.

Job Hazard Analysis
Use the form provided in the appendix titled Job Hazard Analysis (JHA). Each Contractor must complete a JHA for their scope of work. Barton Malow will review the JHA before work commences.

At a minimum, JHA must consist of the following:
- The JHA must detail job steps, hazards and actions to eliminate or minimize hazards. Use the form provided in the appendix or equivalent.

Task Safety Analysis (TSA)
Use the form provided in the appendix titled Task Safety Analysis. Each Contractor work crew will complete a TSA for the day’s work operations. The TSA process must comply with the following minimum requirements:
- Conducted by the foreman or craft lead designated by the foreman, provided however, that the foreman reviews all pre-task plans/safe plan of action to ensure that they are appropriate, complete and accurate for the subject task(s).
- Documented in writing.
- Conducted for every job prior to the start of work or when the job task changes.
- Task Safety Analysis must be reviewed and revised whenever work conditions or crew membership experience change that may affect the ability to safely complete the work.
- All crew members must participate at the job location in a Huddle to review the TSA. Huddles will be held at the beginning of the work shift.
- Include hazards and precautions identified in applicable Job Hazard Analysis (JHA).
- Readily available at the work site (posted and/or placed where crew members have knowledge of its location at the work area) and turned into Barton Malow’s Safety Department the next morning for review.
- The Contractor must make the TSA available in a local language that the workforce can understand.

To assist contractors who are unfamiliar with the JHA or TSA process training will be available. Workers will be introduced to the process during the project orientation. Project management staff (including subcontractors) will periodically audit TSA forms and participates in daily huddles to show support, and monitor effectiveness.

Worker Training
The Contractor must ensure that affected workers are made aware of the foreseeable hazards and the protective measures described within the TSA prior to beginning work on the task. Workers will have the required safety training as specified in this safety program, OSHA safety and health regulations and all other applicable documents. The Barton Malow Site Orientation in no way relieves the Contractor from their orientation and training obligations.

Record of Training
Evidence of regulatory training must be provided by the employer to the Barton Malow Safety Department before work starts and as onsite training is given. An outline of required training records is located in the Site Specific Requirements. The Contractor must ensure that workers acknowledge being informed of the
hazards and protective measures associated with assigned work activities and understand those requirements. Each worker involved in that work must sign the TSA prior to performing work.

**Contractor Responsibilities**

The provisions of this procedure apply to the development and implementation of the contractors Hazard Identification and Control program. The contractor (all tiers) must be responsible for implementing an effective Hazard Identification and Control program that:

- Identifies, evaluates, and controls potential and existing hazards in the workplace through the JHA process.
- Incorporates the controls into the TSA pre-job safety planning process.
- Determines that engineering devices, administrative controls, and personal protective equipment are available, appropriate, tested, and utilized by employees.
- Determines employees are trained as required.
- Have provisions to manage and notify BMC when there are changes related to the work scope, materials, and/or processes that may introduce new or different hazards to the project.
- Develop, implement, and/or adhere to job hazard analyses (JHA) and other pre-job planning documents required by this manual.
- Provide training to employees in safe-work practices.
- Documents all required training and provide a copy to the Barton Malow Safety Department.
- Provide required personal protective equipment (PPE), training employees on how to use the equipment and enforcing its use in the field.
Applicability
The requirements of this section apply to all Contractors performing construction activities onsite.

Employee Site Access and Orientation
After successfully passing the pre-employment drug test, all workers will complete a site orientation before starting work on the project. Site orientation will include the following:

- Project purpose
- Site Description and Layout
- Site specific safety requirements
- Review of Safe Work Practices
- Emergency Action Plan
- Recognition program
- Disciplinary program
- Parking

The project orientation will be conducted by the Barton Malow Safety Department or their designee. Each meeting will include participation by a project manager or superintendent to reinforce the importance of the message.

Project Access decals will be issued to workers upon completion of site orientation and proof of successful (negative) substance abuse screening. Workers will not be allowed on site without a Project Access decal being readily visible.

Parking will be in a designated area. We reserve the right to tow improperly parked and/or marked vehicles. Local police or Owners may run drug dogs through the parking lots and Barton Malow controlled construction site depending upon agreements with the Owner.

Specific Requirements Weekly Progress Meetings
The project team will designate a weekly meeting time where the next weeks work operations will be reviewed. Each contractor who will be performing work will have a foreman or superintendent attend the meeting. Each contractor will review their upcoming work operations with the group to identify key safety factors, areas of coordination or interference, or other points needing clarification. A copy of the Job Hazard Analysis (JHA) for the upcoming work will be provided to the project team.

Task Safety Plan Briefings (Huddles)
EHS activity briefing (huddles) must be held each day prior to the start of work activities, after mid shift break (lunch), at the end of shift for sign out, and anytime there is a significant change in work scope. Records for these briefings documenting the meeting content and attendance must be maintained and a copy will be turned into the Barton Malow Safety Department for review. All crew members must acknowledge the information disseminated, by signing the Task Safety Analysis (TSA).

- EHS pre-task planning for the day’s work activities.
- Changes in work practices or environmental conditions.
- Required equipment/system daily inspections.
- Previous days incidents, near misses, lessons learned and/or other relevant issues as applicable.
- Other ongoing activities that may have project EHS implications
- New or modified site-wide procedures or requirements.

All lower-tier subcontractors must identify all planned tasks onsite. The level of detail must be appropriate to define all tasks' that may present a hazard to people, property or environment. The listed task(s) must include the corresponding previously reviewed JHA(s) or reference the applicable section from a current health and safety plan or program. If the task proposed does not have a corresponding JHA, then a new JHA will need to be developed and reviewed prior to the work moving forward.

The completed JHA must be submitted to the first tier Subcontractor for review against conflicting operations, regulatory hold points, required permits and acceptable level of detail. Upon approval by the
first tier Subcontractor, the approved JHA is then submitted to Barton Malow for review and work authorization.

Once work authorization is received, each Contractor must develop a Task Safety Analysis and conduct a safety huddle with each work crew member prior to the start of each work shift.

Weekly Management Group Safety Walks
A management representative of each Contractor will participate in a weekly safety walk of the project. Participants will evaluate compliance with the CEHSP requirements by observation and conversation with workers. Barton Malow will establish the meeting time and location.

Monthly EHS Meetings
A project EHS committee will be established and each Contractor (regardless of level) will have a designated representative. Membership will consist of a craft level employee along with the designated safety representative for the Contractor. The Barton Malow Safety Team will facilitate the meetings. A record of each meeting, documenting the meeting content and attendance must be maintained.

At a minimum, monthly EHS meetings must include:

- EHS and job-related issues/concerns related to the particular operation.
- Summary of relevant lessons learned from this project and other projects as applicable.
- Incident investigations conducted since the last meeting, to discuss if the cause of the unsafe acts or conditions were properly identified and corrected.
- EHS inspection findings (including Leading Indicators) since the last meeting.
- Ad hoc EHS or special emphasis training.
- Each company representative will relay detailed meeting information to their employees via a crew, group or company-wide meeting each month.

Audits and Inspections
At a minimum, weekly documented EHS audits must be performed to evaluate compliance with the EHS Plan and applicable regulations. Note: Contractors may choose to institute more stringent requirements. Audits will be completed by Contractor supervision (superintendent, project manager) and submitted to Barton Malow weekly. Deficiencies noted must be corrected, or an action plan for correction attached.

Results must be reviewed at the start of the weekly progress meeting or equivalent meeting on a weekly basis.

Records of audit reports, findings, and corrective actions must be submitted weekly and retained through project close-out.

Outside Inspections
Safety inspections may be conducted by outside parties, including the Owner, insurance carriers, OSHA, or other regulators. All contractors must inform Barton Malow immediately if any outside party is onsite to conduct an inspection.

All contractors must provide appropriate cooperation with OSHA representatives and other third party inspectors who have legitimate authority to conduct a safety review. General guidelines are as follows:

- Contact Regional Safety Leadership
- Verify that the safety inspector has proper identification and signs the visitor log.
- Confirm the reason and authority to conduct the inspection.
- Notify Contractors and make the jobsite available to the inspector.
- Accompany inspector at all times.
- Document what happened and was observed during the inspection.
- Correct deficiencies as required.
- Notify the BMC Safety Department and project manager regarding results; in the case of major issues, provide immediate notification.
Reporting

Weekly EHS Report
Weekly EHS reports must be compiled and maintained by the designated project personnel as part of the project record and made available for review by the management team. The weekly EHS report must be available by each Tuesday for the previous week’s activities. This report may be maintained as a hard copy report (on-site) or on an electronic server. The report must contain the following information as applicable for the week:

- Brief summary of significant EHS activities.
- Listing of man-hours, incidents and incident statistics.

Stretch and Flex Program

Stretching:
- This activity will be introduced at orientation to all attendees.
- Increases flexibility, improves range of motion of your joints, improves circulation, promotes better posture, relieves stress and may prevent injury.
- All employees working on a Barton Malow job site will participate in the stretch and flex program, see, Stretch and Flex Leaders Guide located in the appendix.
- Stretch and Flex will be performed at the start of each work shift. It should be performed in tandem with the work huddle, tool box talk meeting or other meeting prior to the start of the shift.
Applicability
The requirements of this section apply to all Construction Contractors and lower-tier subcontractors (hereafter referred to as “Subcontractor”) activities (i.e., included but not limited to; constructing, installing, setting up, adjusting, inspecting, modifying and maintaining/servicing equipment and components) where the unexpected release of hazardous energy (i.e., included but not limited to; electrical, hydraulic, pneumatic, chemical, thermal, compressed gases, mechanical & gravity) or startup of the machines, equipment, and systems could cause injury to personnel or property onsite.

Specific Requirements/Permits
Any control of hazardous energy work must be performed in accordance with applicable regulations.

Energized Electrical Work
Work on energized electrical systems is prohibited unless prior authorization has been given by the appropriate Barton Malow authority when determined that there is no reasonable alternative course of action. Prior to any Energized Electrical Hot Work the Owner or Owners Representative must submit a letter to Barton Malow stating why the electrical circuits cannot be de-energized. If energized electrical work must be performed on hazardous circuits, the contractor must perform the work in accordance with their electrical work plan that includes proper LOTO. A permit will be issued from Barton Malow’s Safety Department or Owner’s Representative once all safety precautions have been met and signoffs have been obtained.

Exception: Taking voltage, current measurements and verification of zero energy using standard test equipment such as voltmeters and current probes is permitted on energized electrical systems when performed in accordance with the contractor’s electrical safety plan and requirements of NFPA 70e.

Building Equipment and Systems Lockout/Tagout
Prior to conducting any work which requires LOTO within an existing building or that interfaces with an existing utility system, the Contractor must first notify Barton Malow. This includes LOTOs that occurs on building construction temporary and/or permanent electrical power tie-ins at the point of supplied power distribution. Barton Malow in conjunction with the property Owner must control, coordinate and approve LOTO work being conducted on these equipment/systems and must ensure that the Contractors are aware of and comply with the requirements of the LOTO program. When Owner equipment/system specific procedures are available, they must be provided to the Contractor and incorporated as part of the lockout/tagout procedure for the Project.

Tagout Only Requirements
When equipment/system cannot physically be locked out and a tagout is applied to equipment/system in place of lockout, the Contractor must attempt all feasible measures to renovate or modify the equipment to accept a lockout device or energy-isolating device(s). When this cannot be accomplished, the Contractor must:

- Implement additional measures to provide the equivalent level of safety. (i.e., remove isolating circuit element, valve handle) and document in the JHA.
- Apply a properly completed tag at the energy-isolating device and at the control panel.
- Verify that energy sources are eliminated and all lines are purged and any mechanical device is no longer moving or capable of moving or coasting to a stop.
- Check the tag frequently when working under a tagout to verify that it is still in place.

Equipment Specific Lockout/Tagout Procedures
Where required equipment specific program will be written that meets/exceeds both manufacturer and regulatory requirements.

Lockout/Tagout Inspection Procedures
The Contractor must ensure that weekly documented inspections are made for all active LOTO applications. These inspections must be turned into the Barton Malow Safety Department.
The Contractor must also perform daily informal (undocumented) inspections to verify LOTOs remain in place.

**Training Requirements**
Contractors that are trained in accordance with the requirements identified in 1926 Subpart K, Control of Hazardous Energy (LOTO) will be considered as meeting the necessary training requirements for working onsite. The Contractor is required to provide qualified and competent persons at the job site.

**Applying Lockout/Tagout**
Each exposed Contractor worker must apply their own lock and a properly completed tag to secure the energy source(s) prior to beginning work activities. When more than one individual is working on the same piece of equipment or project, a group lock box or multi-lock hasps (gang hasp) or other acceptable means must be used and each worker must apply his or her lock. Workers must not rely on another person's lock for protection.
General Electrical Work Safety Requirements
Contractors must identify the electrical hazards associated within each definable feature of work and establish the controls necessary to maintain an acceptable level of risk. To assist in the evaluation of electrical hazards, Contractors must employ an Electrical Hazard Analysis (see the appendix for the Energized Electrical Work Permit) consistent with requirements of NFPA 70E, Standard for Electrical Safety in the Workplace (Current Revision) for shock and arc flash hazards. The identified hazards and control measures must be documented in the associated Job Hazard Analysis (JHA) or other work control document that provides an acceptable level of hazard identification and control for the associated task or work sequence. The safe electrical work practices that are employed must prevent electric shock, burns, arc flash or other injuries that could result from either direct or indirect electrical contact. This may include specialized training, observing required approach distances, and the use of appropriate personal protective equipment (PPE) consistent with the requirements of OSHA and NFPA 70E, as applicable.

Personal Protective Equipment
Contractors are responsible for identifying, providing and maintaining their own PPE. Maintenance of PPE includes the required testing and certification. Records of such testing must be turned into the Barton Malow Safety Department.

Qualified Electrical Worker
Only qualified workers who maintain the necessary skills and knowledge related to the construction, operations of electrical equipment and the associated hazards are permitted to work on electrical systems. A “Qualified Electrical Worker” is a person who has skills and knowledge related to the construction and operation of the electrical equipment and installations and has received safety training on the hazards involved. The Contractor must be responsible for documenting the qualifications of the “Qualified Electrical Workers” utilized on the project.

Ground Fault Circuit Interrupter (GFCI) Protection
GFCI’s will be used on 120-volt circuits as specified below:
- In damp or wet (standing water) work areas.
- For temporary power (e.g., extension cords) during construction, remodeling, maintenance, repair or similar activities - outdoor receptacles must be enclosed with weatherproof (preferably metal) covers.
- When using portable, electric hand tools and equipment with cord/plug connectors.

The users of the GFCI’s must test portable GFCI’s using the test button provided before each use. If the GFCI breaker fails the test, tagout of service with a “DANGER — DO NOT USE” tag and (if portable) remove from service. Tripped circuit breakers may not be re-energized until it has been determined that the equipment and circuit can be safely re-energized. Do not reset or operate temporary or permanent construction circuit breakers unless you are a qualified member of the electrical Contractor onsite and you have proper knowledge of the system. Use of an assured grounding program is prohibited.

Flexible Cords and Cables
Use UL-listed flexible cords suitable for conditions of and location of use. Flexible cord sets used with grounding-type equipment must contain an equipment grounding conductor. Protect flexible cords and cables from damage. When possible, hang extension cord sets, welding leads, etc., overhead to avoid tripping hazards and damage caused by foot traffic and equipment. Avoid sharp edges, pinching, or improper storage. Cords sets that are damaged must be removed and discarded or repaired by a qualified person.

Lockout/Tagout
Contractors must ensure that electrical systems and equipment are effectively isolated, locked, and tagged out in accordance with the requirements, Control of Hazardous Energy, LOTO of this manual prior to performing any work on or near the energized systems. Contractors must make all feasible efforts to effectively isolated and lock and tagout energized electrical systems and equipment in order to avoid performing Hazardous Energized Electrical Work as defined below.
Hazardous Energized Electrical Work
Hazardous Energized Electrical Work is defined as “work performed on or close to exposed parts of electrical systems and equipment operating at greater than 50 volts to ground, or less than 50 volts to ground where the current exceeds 5mA, creating the potential for injury, explosion or injuries due to electric arcs.”

Controls may still be required for energized work on “non-hazardous circuits” to protect against secondary hazards such as startle or involuntary reactions from contact with low voltage high current sources. These would include circuits operating at 50 volts and less with a short circuit current of greater than 0.5ma or energy greater than 0.25 joules.

**Exception:** Taking voltage, current measurements and verification of zero energy using standard test equipment such as voltmeters and current probes is permitted on energized electrical systems when performed in accordance with the Contractor’s electrical safety plan and requirements of NFPA 70e.

Contractors must ensure that a second worker is present when hazardous energized electrical work is performed. The second worker functions as a safety observer and does not participate in the actual work. This worker must be trained in cardiopulmonary resuscitation and be prepared to initiate other emergency response procedures. They must have the same PPE on if they are in the area the energized work is taking place.
Equipment Inspection
All equipment will be inspected for deficiencies prior to being placed into service on the project. Inspections must comply with Regulator and Manufacturer requirements. Identified deficiencies must be corrected prior to using the equipment. Inspections must be documented and turned into the Barton Malow Safety Department. Forms for daily inspections of equipment are located in the appendix. Each piece of equipment will be given a site identification number for tracking purposes.

Heavy Equipment
Heavy equipment on site should meet all state and federal safety requirements. The equipment should be used only as intended and should be maintained in safe operating condition at all times while on site.

- Only trained and qualified employees must be allowed to operate moving equipment such as fork trucks, cranes, excavators, bulldozers, etc.
- The operator is responsible for the safe operation of the equipment at all times.
- Only authorized persons must be permitted in the cab or on the equipment.
- Follow operating and maintenance procedures as specified by the manufacturer.
- All dozers, loaders, tractors, end loader backhoes, and other equipment with an obstructed rear view must have functioning backup alarms.
- Rollover protective structures must be used for all material handling equipment.
- Operators must inspect the equipment and the area where work is to be performed before each shift.
- Equipment in operation must be attended at all times.
- Helpers must remain in sight of or in communication with the equipment operator.
- Riding on loads, fenders, running boards, sideboards, and gates, or with legs dangling over the ends or sides of trucks is prohibited.

Tools Use and Inspection
All hand, pneumatic and power tools will be kept in good condition with regular maintenance. Tools are to be operated according to manufacturer’s instructions and guidelines. Personal protective equipment appropriate for the hand, pneumatic or power tools will be worn at all times. Tools must be inspected for defects prior to each use. Inspections must comply with regulatory and manufacturer requirements. Guards and safety devices must not be modified or removed.

Tools **MUST** be detached from the energy source powering them, before changing blades, wheels, bits, etc.
Applicability
The requirements of this section apply to all Construction Contractors and lower-tier subcontractors (hereafter referred to as “Subcontractor”) excavation operations and activities onsite.

Excavation Plan
The Contractor is responsible for submitting to Barton Malow an “Excavation Plan” for review and concurrence prior to any disruption of ground, excavation, or trenching on this project. This plan must show the proposed boundaries on a site map including depth of the affected areas and the safety precautions required.

Barton Malow and the Contractor will verify the Excavation Plan with the appropriate Engineering and Construction "As-Built" takes proper precautions regarding existing underground utilities.

Utility Locates
Location service requirements must be identified in the Contractor's excavation plan and must be performed prior to Barton Malow authorizing the excavation permit. The Construction Representative will verify that the Contractor has located and identified all underground services with appropriate color coded markers.

When the Contractor is responsible for the underground utility location and identification, public utility locates can be coordinated through the State recognized utility location and identification process. Some utility locates on private property may require a private utility location company to complete. Barton Malow can provide drawings with approximate location of existing utilities and structures to aid in marking the utilities in some instances.

If there is any uncertainty as to the degree of safety protection anticipated on underground electrical power lines, the electrical service should be de-energized first with a planned outage arranged and coordinated through Barton Malow.

Pot Hole or Hydro Excavation Verification
The Barton Malow Representative or assigned representative must work directly with the Contractor who will hand dig or otherwise safely "pot hole" (daylight) to verify location and depth of the various utilities and underground project and/or lines which may conflict with the excavation activity.

When the Contractor excavating activities are within 4 feet of underground services, the Barton Malow Representative or designated representative will be physically present for onsite monitoring to ensure compliance.

Confined Spaces
When the configuration of an excavation is such that the excavation is deemed to be a confined space, the provisions of Barton Malow's confined space program will apply (refer to Confined Space Section) and a Confined Space Permit would be needed.

Training Requirements
Contractor excavation Competent Person(s) that are trained and knowledgeable about soils analysis, the use of protective systems, identification of existing and predicable excavation hazards and the requirements of OSHA Subpart P, Excavation, Trenching and Shoring will be considered as meeting the necessary excavation competent person training for working onsite. The Contractor must provide proof of such training as requested by the Barton Malow Safety Department. The Contractor is required to provide a qualified and competent person at the job site when excavations work is ongoing. The Contractor must ensure that the “Competent Person(s)” can demonstrate that their knowledge and skill-sets match the excavation and protective system(s) that are in place. In addition, all Contractors working in or around excavations must receive general excavation hazards awareness training.
Underground Services/Utilities
A potential hazard onsite is the presence of underground services and structures such as utility lines (water, electric, sewer, gas, or communication), tanks, various gas and liquid process piping, and sewers. If these services or structures are damaged in any way as a result of excavation activities, there may be injury or death to workers, contamination or interruption of services, disruption of processes, and expensive delays. Appropriate steps must be taken by the Contractor to assure the protection of underground utilities.

Responsibilities
The Contractor must be responsible for the following:
- Obtaining an approved Excavation Permit from Barton Malow.
- Barricading and posting appropriate signage.
- Making all excavations safely accessible by means of ladders every 25 ft. or earthen ramps before work starts.
- Providing fall protection for excavations over 6 feet.
- Monitoring/daily inspections of excavation, trenching and shoring operations.
- Designating a Competent Person, who has had the training to act in this position and providing the competent person the authority to effectively discharge their duties. Record of Competent Person Training should be given to the Barton Malow Safety Department.
- Ensuring the requirements of this section are effectively communicated and enforced with lower tier sub-contractors.
- Investigate and report to the Barton Malow all incidents involving excavations, trenching and shoring.
- Supplying design from a registered Professional Engineer for all excavations over 20 feet deep.
Applicability
Barton Malow or the Fire Protection Contractor must be responsible for the development and implementation of a fire protection program to be followed throughout all phases of the construction project and this program must apply to all Construction Contractors and lower-tier subcontractors (hereafter referred to as “Subcontractor”) Fire Protection activities performed onsite.

Working with Open Flame, Welding, Cutting or Grinding
The following requirements apply to Contractors conducting activities with open flames, welding, cutting, or grinding and other flame/spark producing tasks (hereafter referred to as “Hot Work”).

- The Contractor must perform Hot Work in accordance with the Hot Work Permit System.
- Barton Malow must ensure that all lower-tier subcontractors understand and comply with the requirements of the permit system.
- Contractor personnel who perform fire watch duties must be qualified and proof of training documented. Individual(s) performing fire watch duties must be proficient in the use of fire extinguishers.
- Alternatives to performing hot work (e.g., saw cutting instead of grinding wheel or torch cutting; crimp-type pipe fittings instead of soldered fittings) should be used where practical.
- Hot work should be performed in Contractor shops or designated areas (e.g., pre-approved weld booths or shop areas) where practical.

Storage and Handling of compressed gases will include:

- Valves, regulators and hoses removed with valve caps on securely.
- Secured upright at all times, including when transported.
- Never laid flat or lifted on someone’s shoulder.
- Fuel and oxygen cylinders secured and separated by a minimum of 20 feet.
- Empty cylinders stored separate from full cylinders.
- Flash arrestors will be located at the torch and at the regulator.

Hot Work Permit System
The Contractor will be responsible for providing all the required training, materials, personnel and protective equipment to conduct all hot work.

Prior to the start of any hot work activity, the Contractor must perform a walk-down of the work to facilitate thorough hazard identification and control. The Contractor is ultimately responsible for compliance with the requirements of the permit.

Hot Work Location Selection Hierarchy
The location of hot work must be determined by utilizing the following priority list:

- If work must be conducted onsite, combustibles must not be located within 35 feet of the work area.
- If work must be conducted onsite and combustibles cannot be removed from within 35 feet of the work area, fire barriers such as screens or blankets must be used to protect combustibles.
- Protect openings in walls, floors, roofs, and ceilings where sparks can travel beyond the work area to inaccessible or unprotected areas. Openings or cracks in walls, floors, roofs or ceilings within 35 feet of the hot work location must be tightly covered with fire-retardant or noncombustible material to prevent the passage of sparks to adjacent areas.
- Beware of heat conduction through penetrations. Hot work that is performed on pipes or other metal that is in contact with combustible walls, partitions, ceilings, roofs, or other combustibles, must not be undertaken if the work is close enough to cause ignition by conduction.

Fire Watch
The Contractor must establish a fire watch to protect the safety of workers and assets. The fire watch observes staff conducting the welding, cutting, or grinding operations and monitors adjacent areas. The worker assigned to this task of fire watch must have fire extinguishing equipment readily/immediately available.
The fire watch must observe the hot work area for 30 minutes (60 minutes for roof work) after the completion of hot work. For overhead work, a fire watch may be necessary on multiple levels. The fire watch may not be assigned any other duties during hot work operations. The fire watch must stop work if sparks travel beyond the area that fire watch can observe. Individuals assigned to fire watch duties must:

- Be a qualified, trained and understand the requirements of the hot work permit system.
- Be knowledgeable about fire and emergency reporting procedures and fire alarm pull box locations in buildings, if applicable.
- Have emergency communications, such as cellular phones or radios, available when working in remote or outside areas.
- Be trained in the use of fire extinguishing equipment.

Prior to leaving the site, the fire watcher must verify that the possibility of fire does not exist.

**Fire Protection Equipment**

Fire protection equipment must be sufficient for the hazards present. At a minimum, an appropriately rated fire extinguisher is required to be conspicuously located. Fire extinguishers will be certified annually, inspected monthly and must be readily available in the immediate work area. Free access must be maintained at all times to all exits, fire alarm boxes, fire extinguishing equipment, and any other emergency equipment. Free access means clear of all obstructions. Site protection fire extinguishers must not be used as hot work fire extinguisher unless an emergency warrants its use. If a fire extinguisher is discharged for any purpose, it should be reported to the Barton Malow Safety Department. Each temporary building and trailer (shops, field offices, storage boxes, etc.) will have its own appropriately sized and located ABC class fire extinguisher.

**Hot Work Protective Clothing**

Contractors must ensure that the personnel protective clothing selected for hot work minimizes the potential for ignition, burning, trapping hot sparks and electric shock as identified in ANSI Z49.1, “Safety in Welding, Cutting and Allied Processes,” sections 4.3 and E4.3, current revision. This includes skin, face, eye, ear, and clothing protection. Hard hat attached face shields are to be worn at all times over safety glasses.

**Hot Work Required Inspections**

In addition to the fire watch requirements, the Contractor’s authorized worker/permit holder must inspect the work area a minimum of once per day to verify compliance with permit requirements. Additionally, responsible Contractor personnel must also perform periodic inspections to ensure continued compliance with the requirements of the permit. When inspections identify unsafe conditions or the scope of work departs from that defined in the permit, the hot work must be stopped immediately.

**Hot Work Outdoors**

The Contractor must ensure that vegetation and other combustibles are removed, cut back, or otherwise protected to prevent ignition during hot work outdoors. A high level of caution must be exercised to prevent grass fires.

**Fire Protection System Outages and Impairments**

Contractors performing work must plan their work and take the necessary steps to minimize outages or impairments of fire suppression, detection, or alarm systems. When outages are necessary to perform a particular scope of work, they must be coordinated and approved by the Barton Malow Safety Dept. When Interim Life Safety systems will be interrupted, hazardous work operations such as hot work will be evaluated.

**Exits and Exits Access**

The Contractor must ensure that a clear path of at least 44 inches is maintained to exits on indoor projects. Exits must be marked by a readily visible sign. Access to exits must be marked by readily visible signs in all cases where the exit or way to reach it is not immediately visible to the occupants.
Flammable and Combustible Liquids Storage
Flammable and combustible liquids must be stored in approved containers and cabinets, such as those that are UL or FM listed, and quantities must be limited to minimize fuel loading in accordance with NFPA Codes. These cabinets should be grounded. Rags used to apply flammable liquids are to be disposed of in a self-closing approved safety containers designed for that use. Containers must be labeled as to contents and hazard. Any onsite fuel tanks should be stored in a double walled tank with appropriate measures taken to prevent spills from migrating offsite.

Smoking/Wildfire
Smoking is permitted in designated areas ONLY on the construction site. All contractors will be responsible for housekeeping of identifiable trash including cigarette butts. Field dress and throw away left over butts. Contractors must supply a nonflammable butt can for their work areas that is routinely cleaned out to prevent fires. There will be NO SMOKING on or in any part of the project buildings and flammable storage areas. Smoke outside the construction area. Due process and control must be employed to prevent grass fires. Open fires are prohibited.

Housekeeping/Trash
Barton Malow policy on housekeeping is that all equipment, tools, and materials will be stored, stacked, or set up to prevent an incident or injury. The area will be a clean and orderly work place. All contractors will be responsible for housekeeping of their identifiable trash. The Contractor must continuously police their work area as work progresses and maintain good housekeeping daily. Common garbage and other waste must be disposed of daily. Containers must be provided for the collection and separation of waste, trash, oily or used rags, and other refuse. Containers used for garbage and other oily, flammable, or hazardous wastes, (such as caustics, acids, harmful dusts or similar materials) must be equipped with covers. Chemical agents or substances, which might react to create a hazardous condition, must be stored and disposed of separately.

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

Tire wash areas will be located by each entrance to help eliminate mud and dirt tracked onto public streets. Onsite mud and dirt will be removed continuously during the workday. The following are the minimum housekeeping 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 a minimum of seven feet or the area marked with signage stating: "TRIP HAZARD." Covered protection should be in place to protect cords that cross walkways and roads.
- Welding rods, 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.
- All nails/screws will be removed from scrap/lumber immediately and swept up daily.
- Rubbish, trash, and debris will be removed as needed from the work area and at least daily.
- Materials may have to be positively secured depending on the structure design and elevation.
Applicability
The requirements of this section apply to all Contractors hoisting and rigging activities. The complete OSHA 1926 Crane Standard is to be considered a part of this program. The equipment covered under this procedure includes devices and associated equipment such as slings, ropes, and chains, which provide mechanical assistance in raising and lowering a load. This includes either power or manually operated equipment.

Specific Requirements/Permits
All construction contractors (regardless of tier) must use a hoisting and rigging program that meets or exceeds the provisions of this section and OSHA standards. All equipment brought on site must be in a new or like new condition free of hydraulic or oil leaks.

Operator Training and Certification
Contractors who provide and operate equipment, as part of a construction project or similar activity will be in compliance with all applicable parts of OSHA Subpart CC and must provide:

- Proof of Training/Certification: Prior to operating a crane, the operator will provide a copy of their crane operator certification certificate to Barton Malow.
- This certification/license must be current for the crane type they will be operating. (i.e., Mobile Crane Operator, Tower Crane Operator). Certification will be provided by one of 4 approved agencies:
  - NCCCO, NCCER, CIC or OECP.
- Medical Requirements: Crane operators must complete a medical certification examination at least every three years in accordance with ASME B.30.5. A valid medical card must be provided to document this requirement.

Hoisting and Rigging Operating Requirements Planning
The Contractor must evaluate and plan operations in advance. A competent person must identify the hazards and determine the controls necessary to maintain an acceptable level of risk through the JHA process. A Hoisting and Rigging Lift Plan is required for complex and critical lifts. This plan must be documented and given to Barton Malow for review.

Critical and Complex Lifts
The Contractor must utilize a Hoisting and Rigging Lift Plan or other Barton Malow accepted equivalent plan to document critical and complex lifts. All critical and/or complex lift plans require the review and concurrence of Barton Malow.

Hoisting of personnel with a crane or derrick is not allowed except with the authorization of Barton Malow, under emergency conditions.

Any revisions to the procedure must be reviewed and approved though the same cycle as the original procedure.

Critical Lifts are defined as lifts for which any of the following conditions exist:

- The weight of the lift exceeds 75% of the crane’s rated capacity in the configuration that will be used during the lift.
- Lifts involving non-routine or difficult rigging arrangements or where loads will require exceptional care in handling because of size, weight, close-tolerance installation or high susceptibility to damage.
- If the item being lifted were to be damaged or upset, it could result in a release of hazardous material into the environment or the release of airborne concentrations that could exceed established occupational exposure limits.
- The item being lifted is unique and, if damaged, would be irreplaceable or not repairable and is vital to a system, or project operation.
- The cost to replace or repair the item being lifted, or the delay in operations of having the item damaged, would have a negative impact on the construction project to the extent that it would affect project commitments.
• The item, although non-critical, is to be lifted above or in close proximity to a critical item or component.

Complex Lifts are defined as lifts that present logistical difficulties or lift coordination complications, thus requiring a higher level of planning and execution. Complex lifts may involve the following:

• A lift involving multiple cranes.
• Axial rotation of an object in the vertical plane or other complex movement of the load.
• A lift where the behavior of the load while in suspension is questionable.

Pre-Lift Meeting
Before the critical lift is performed, a pre-lift meeting with all participating personnel must be held. During the meeting, the critical lift procedures must be reviewed and questions must be resolved before the lift takes place. The following items must be reviewed:

• The scope and sequence of work
• Roles and responsibilities
• Hazards and controls
• Other relevant information identified in the Hoisting and Rigging Lift Plan

When performing lifts designated as critical and/or complex lifts, this meeting must be documented.

Communication
The Contractor will use OSHA standard hand signals or voice/radio communications during the course of crane operations. The signal person will have completed required training and a copy will be given to the Barton Malow Safety Manager.

Area Access Control
The Contractor must cordon off or manually control the lift area to prevent access by unauthorized workers by deploying barricades and warning signs and/or utilizing personnel to monitor and control access to the area. The Contractor must cordon off the swing radius area for mobile cranes with warning tape or other barricade apparatus, such as fencing.

Protection of People
Do not place people in jeopardy by moving a suspended load over people or an occupied section of a project. Work beneath a suspended load is prohibited unless the load is supported by cribbing, jacks, or a solid footing that safely supports the entire weight. All personnel must remain clear of moving and shifting loads. Occupied areas that are underneath the arc radius of the path of travel of the hoisted loads must be vacated during the hoist. Notification of the path of travel should be discussed with the crew and adjoining workforce before any lift is lifted. An audible signal (air horn) will be sounded to let personnel know a lift is about to be flown.

Rated Load Capacity
The rated load capacity of monorails and other structural elements, such as jibs, must match, at a minimum, the rated load capacity of a hoist placed upon it. Know the weight of the object being lifted or use a dynamometer or load cell to determine the weight. If the weight of the load is unknown, a minimum 50% safety factor must be employed. This means that the crane or hoist, slings, and rigging hardware must have twice the capacity of the estimated load. Fully extend outriggers or reduce the cranes rated load capacity as directed and allowed by the crane manufacturers operating manual.

Electrical Distribution Lines
Watch for overhead electrical distribution and transmission lines and maintain a safe working clearance of at least 15 feet or as required from energized electrical lines. Any overhead wire must be considered to be an energized line unless proven otherwise by a competent person. Exercise caution when working near overhead lines having long spans as they tend to move laterally or vertically due to the wind, which could cause them to breach the safety zone. The safety zone must be marked before work around them proceeds.
Environmental Factors
Environmental factors, such as weather and terrain can adversely affect a lift. When performing outdoor lifts, the following environmental factors must be considered:

High Winds
Lifts must be suspended if prevailing wind conditions may adversely affect the lift. As a general rule, this applies to wind speeds of 25 MPH or more. However, based on the nature of the load – such as size, surface area, or fragility – a lower wind speed limit may warrant suspension of a lift. The operator and/or lift master must evaluate behavior of the load in prevailing winds and the stresses placed upon equipment to the extent necessary to safely complete the lift.

Buried Loads
Check surface conditions to determine if the load may be buried. Do not use H&R equipment to “break loose” a load that is buried. This subjects equipment to severe and unintended loads. All loads should be placed on dunnage to prevent this.

Ground Conditions
Check ground conditions around the hoisting equipment for proper support, including settling under and around outriggers, ground water accumulation or other similar conditions. Geotechnical drawings and ground pressures should be reviewed to insure proper setup.
Crane Inspection, Maintenance and Testing

Crane Initial Inspection
Prior to being placed into service, all Contractors owned and/or rented cranes must undergo an initial third party inspection at their own cost. Cranes that will be onsite less than 5 days will be exempt from this independent third party inspection. An accepted checklist must be utilized to document these inspections. When qualified third party inspections are performed, a copy of the third party inspection must be submitted (which will satisfy the crane physical inspection portion of the checklist) to Barton Malow’s Safety Dept. Barton Malow may elect to oversee the Contractor’s initial inspection of the crane. All crane inspection deficiencies must be identified and documented and the safety implications must be determined. The Contractor must maintain the original copy of the inspection report and provide a copy to the Barton Malow Safety Dept. The crane owner must take immediate action to correct the identified deficiencies.

Daily Pre-Operational Inspections
Operators must visually inspect the following items each day or prior to first use if the hoist has not been in regular service (Records are required):
- Functional operating mechanisms for maladjustment interfering with proper operation.
- Deterioration or leakages in lines, tanks, valves, drain pumps and other parts of air systems.
- Hooks for cracks, deformation, latch engagement, and damage from chemicals.
- Hoist rope for significant wear, kinking, crushing, bird-caging, corrosion, or broken strands or wires.
- Hoist chains, including end connections, for excessive wear, twist, distorted links interfering with proper function, or stretch beyond manufacturer’s recommendations.
- Primary hoist upper-limit device for proper operation.

Deficiencies: Operators or other designated qualified workers must examine deficiencies and determine whether the equipment should be removed from service or if a more detailed inspection is required.

Monthly Inspections
Cranes active on the site for periods extending beyond 1 month must receive monthly documented inspections. The competent person must at a minimum visually inspect the following items for damage, wear, or other deficiency that might reduce capacity or adversely affect the safety of the crane. Critical items such as brakes and crane hooks
Hoist ropes

Signed and dated inspection records must be kept on file and a copy must be turned into the Barton Malow Safety Department. Before the crane is returned to service, correct deficiencies that could reduce its capacity or adversely affect its safety.

Annual Inspections
Annual crane inspections must conform to the requirements identified in OSHA Subpart CC and as recommended by the manufacturer. A copy of the annual inspection will be provided to Barton Malow prior to placing the crane into service.

Maintenance
A preventive maintenance program must be established and based on the recommendation of the crane manufacturer. If equipment maintenance procedures deviate from published manufacturer's recommendations, the alternate procedures must be approved in advance by the manufacturer or another qualified person and be kept readily available. A copy of dated maintenance records should be turned into the Barton Malow Safety Department. Replacement parts must be at least equal to the original manufacturer's specifications.

Rated Load Test
Prior to initial use, all cranes in which load sustaining parts have been modified, replaced, or repaired must be load-tested by a qualified inspector or under the direction of that inspector. All rated load tests must be performed in accordance with manufacturer’s recommendations.

Rigging Safety Requirements Rigging Component Procurement
Rigging components must be obtained from reliable sources and must be rated for applications. Do not use damaged or suspect rigging.

**Storage and Maintenance**
Rigging equipment must be stored and maintained in accordance with the manufacturer’s recommendations. Protect rigging hardware from weathering and harsh environments. Rust, corrosion, and/or UV damage can degrade rigging performance. Any rigging equipment found in dirt, water or mud must be removed from the project.

**Labeling**
Rigging hardware must be labeled for identification purposes with the manufactures tag.

**Rigging Safe Work Practices**
Ensure that the following safe work practices are utilized when rigging a load:

- Riggers should meet the training qualifications set forth in the new crane standard OSHA Subpart CC. Proof of this training should be turned in to the Barton Malow Safety Department prior to rigging activities taking place.
- Determine the weight of the load. Do not guess. The weight of the load must be within the rated load capacity of the rigging. Tags must be affixed with capacities clearly legible.
- Determine the proper size for slings and components. Refer to the manufacturer’s literature Select slings so that the rated load capacity is adequate when the appropriate de-ratings are applied based on sling angle and/or hitch angle considerations (choker angle de-rating).
- Verify that shouldered eyebolts are installed in accordance with the manufacturer’s recommendations. Beware of side pull applications. Eyebolts must be de-rated when subject to side loads.
- Do not use shoulder less eyebolts for lifting purposes.
- Use safety hoist rings (swivel eyes) as a preferred substitute for eyebolts when possible.
- Pad sharp and small diameter edges to protect slings. Machinery foundations or angle-iron edges may not feel sharp to the touch but could cut into rigging when under load. Dense foam, tire rubber, or other dense, pliable materials may be suitable for padding.
- Do not use slings, eyebolts, shackles, hooks, or other hardware that appear to have been cut, welded, brazed, or is otherwise suspect.
- Determine the center of gravity and balance the load before moving it. Keep the attachment points of rigging accessories as far above the center of gravity as possible.
- Lift the load initially just a few inches to test the rigging and balance.
- Place blocks beneath loads prior to setting down the load to allow removal of the sling, where applicable.

**Inspection Criteria for Slings, Below-the-Hook Lifting Devices and Rigging Hardware Prior to Use Inspection**
At the beginning of each shift or prior to use, the competent person must visually inspect the rigging equipment (slings, below the hook devices and rigging hardware) in accordance with the appropriate ASME/ANSI standard or according to the manufacturer’s instruction, whichever is more stringent. Defective rigging equipment must be removed from service and destroyed to prevent reuse.

**Periodic Inspections**
Rigging equipment must be inspected periodically in accordance with the appropriate ASME/ANSI standard or according to the manufacturer’s instruction, whichever is more stringent. This inspection must be performed by a qualified inspector and have a documented inspection history, with records readily available.

**Personnel Hoisting**

**Personnel Platform Lift Plan**
The use of a man basket to hoist workers onto a platform is prohibited, except when the use of a conventional means of reaching the work area, such as a ladder, scaffold, or man lift, would be more
hazardous or is not possible because of structural design or worksite conditions. Personnel lifts must be properly planned and executed. Barton Malow must authorize this type of activity in advance of the lift.

Pre-Lift Meeting
A pre-lift meeting must be conducted prior to initiating a personnel lift. All workers involved in the work activity must attend the pre-lift meeting, including, man basket occupants, and the operator.
Applicability
The requirements of this section apply to all Construction contractors and lower-tier subcontractors (hereafter referred to as “Subcontractor”) steel erection activities. No steel erection will begin without a written Notice to Commence Steel Erection is located in the appendix.

Fall Protection
Workers engaged in steel erection activities including but not limited to connecting, decking, and bolt up are not exempt from Barton Malow Company’s 100% fall protection requirements when working from surrounding elevations of six (6’) feet or greater. Barton Malow reserves the right to impose lower fall protection requirements depending upon the work to be performed and the perils in the work area.

Perimeter safety cables installed by the steel erector will remain in place unless otherwise instructed by Barton Malow. The steel erector will coordinate cable installation with Barton Malow to ensure span lengths are appropriate for future work (no more than two bays or 60 feet per turnbuckle, and a turnbuckle per cable around mechanical openings). NO ONE must dismantle perimeter cable without a Guard Rail Removal Permit.

Training
Training records indicating workers have received required steel erection and fall protection training will be maintained at the project and available for review by Barton Malow.

Steel Deliveries
All steel deliveries will be coordinated with the Barton Malow Company Project Team to ensure traffic around the project is controlled. No deliveries must be unbound until inspected and deemed secure by a qualified person. A ladder will be used to access all truck beds.

Hoisting and Working Overhead
Design criteria for any multi-lift device must be available for review by Barton Malow. Work will be planned that no load will be swung over the public, other workers, or occupied structures. Notification of the path of travel should be discussed with the H&R crew and adjoining workforce before any lift is lifted. An audible signal will be sounded to let personnel know a lift is about to be flown. During bolt-up activities all steps will be taken to protect workers below from falling objects. The Contractor must cordon off the erection area to prevent access by unauthorized workers by deploying Rigid Barricades and warning signs. Rigid barricades will be the only acceptable temporary barricade. The use of yellow caution tape and red danger tape will not be accepted. Rigid barricading will consist of standard guardrail with orange or blue construction fence attached, temporary chain link fencing, tube and coupler scaffold members with blue or orange construction fencing attached and concrete barriers.
Applicability
The requirements of this section apply to all Construction activities which require personnel to work or potentially be exposed to unprotected heights of six (6’) feet or more. Additionally, all workers who are constructing a leading edge above surrounding elevations of six (6’) feet or greater must not be exposed to unprotected heights without fall protection. Barton Malow reserves the right to impose lower fall protection requirements depending upon the work to be performed and the perils in the work area. All employees and contractor employees must be protected from falling by 100% continuous fall protection, guardrail systems, safety net systems, or personal fall arrest systems. **No exceptions are allowed.**

Fall Protection Program
Contractors providing services onsite must have in place a Fall Protection Program that ensures effective fall protection system(s) are in place anytime workers are exposed to falls at heights of six (6’) feet or more. All work will be planned with the intent to eliminate identified fall hazards through Prevention Through Design. Workers exposed to fall hazards that cannot be eliminated will be equipped, trained and given periodic refresher training in fall protection to minimize the adverse effects of accidental falls. When working at heights less than twenty (20’) feet and utilizing Personal Fall Arrest Systems, individuals will utilize retractable units, restraining devices or positioning devices.

Fall Protection Plan
Contractors must develop and submit a fall protection plan (FPP) to Barton Malow for concurrence prior to the start of work. The plan must be prepared by a qualified person or competent person for the Contractor and developed specifically for the activity and/or project where the work will occur, and must be available to Barton Malow for review. The FPP must be documented and contain the following elements at a minimum:

- Project/Job location/date(s).
- Project/Job description.
- Name of the Contractor Fall Protection Program Administrator, Qualified Person and the Competent Person(s) responsible for fall protection on this site/project.
- Fall Hazard Analysis(s) (FHA) conducted for each activity or similar activity type/grouping associated with the project. (Note: For projects that cannot identify all activities that will require fall protection during the life of the project, the Contractor must ensure that a FHA is performed, reviewed and accepted as required by Barton Malow and attached to the project Site Specific Fall Protection Plan prior to performing the work).
- Identify the means to be utilized for the prompt rescue of employees in the event of a fall as necessary.
- Provide verification of training certification for personnel affected by the fall protection plan including proper daily inspection criteria.
- Signature of the competent person preparing the plan and the Contractor Site Safety Representative.
- Document how the requirements of this plan will be passed down to workers and lower-tier sub-contractors.

Fall Hazard Analysis
A fall hazard analysis (FHA) must be conducted for each activity or similar activity type/grouping prior to the start of work and must be included in the FPP or as part of the Job Hazard Analysis (JHA) for the subject activity and/or definable feature of work. The FHA must be performed by a competent person and/or qualified person. This analysis must identify one or more methods to eliminate or mitigate fall hazards. The analysis must be comprehensive, thorough, and address the following elements:

- Describe the fall hazards associated with the proposed activity.
- Identify the controls that will be in place to eliminate or mitigate the fall hazard. The controls must achieve 100% continuous fall protection. The selection of controls must be in accordance with the Fall Protection Hierarchy of Control and Mitigation Methods.
- As necessary, identify the means to be utilized for the prompt rescue of employees in the event of a fall.
The Contractor may perform this analysis by using a separate form or this analysis may be conducted and included as part of the JHA prepared for the subject project/activity. The FHA and/or JHA must be revised and resubmitted to Barton Malow when they are no longer applicable.

Fall Protection Hierarchy of Control and Mitigation Methods
The Contractor must incorporate the following hierarchy of control when selecting methods to eliminate or mitigate fall hazards:

- **Hazard Elimination**: First consider eliminating fall hazards. This might involve moving the work surface to ground level or changing a task so that workers do not approach the fall hazard. Implementing Prevention Through Design, Prevention Through Planning in designing the project.
- **Passive Fall Protection**: Take actions that isolate or effectively separate the hazard from workers, such as installing floor coverings or handrail/guardrail systems.
- **Fall Restraint**: Establish a travel restraint system that prevents a worker from accessing a position from which he or she could fall.
- **Fall Arrest**: Configure a PFAS designed to arrest a fall after it has begun.
- **Administrative Fall Protection System**: Controlled access zones, and safety monitors are not allowed.

Fall Protection Equipment System Requirements
Fall protection equipment and systems must be used in accordance with the manufacturer's recommendations and the requirements of this procedure. Misapplication or use of this equipment in a way contrary to those requirements is prohibited. A competent person must supervise the work and verify that the fall protection system is properly established and maintained. Contractors will submit all engineered documentation on horizontal lifelines to Barton Malow for review and approval. All horizontal lifelines will be installed under the direct supervision of a qualified person.

Personal Fall Arrest System Strength Requirements
Contractors must ensure that the strength and testing requirements for personal fall arrest systems, components and subsystems must comply with the provisions of ANSI Z359.1, Safety Requirements for Personal Fall Arrest Systems, Subsystems and Components. All other applicable fall protection equipment and system requirements must at a minimum meet the requirements of ANSI A10.32 Standard for Personal Fall Protection used in Construction and Demolition Operations.

Personal Fall Arrest System (PFAS) Inspections & Storage Routine Inspection
PFAS equipment must be inspected by the worker using the equipment prior to each use. Equipment inspections must follow the guidelines established by the manufacturer. Damaged or questionable equipment must be immediately removed from service and tagged accordingly. Equipment that cannot be repaired must be destroyed.

Post-Fall Inspection
PFAS components subject to a fall must be immediately removed from service and destroyed or returned to the manufacturer for inspection, repair, and re-certification. Contact the manufacturer to determine the available options.

Periodic Inspection
A competent person, other than the user, must periodically inspect PFAS equipment. This inspection must follow the intervals and guidelines established by the manufacturer but must not be greater than 6 months. The results of these inspections must be recorded and available for review by the Barton Malow Safety Department.

Equipment Storage
Fall protection equipment must be stored in a manner that protects it from exposure to adverse conditions, such as ultraviolet light or harsh weather, that could result in damage or diminished performance and/or other specific requirements established by the manufacturer.
Safety Net Systems
The use of safety net systems as the means of fall protection will require prior approval of the Barton Malow Safety Department.

Portable Ladders
Fall protection is not required when using portable ladders in compliance with the following requirements.

- We encourage the use of platform ladders onsite. These ladders provide a larger working surface to aid in better balance and positioning.
- Portable ladders must be set up and used in accordance with OSHA and manufacturer requirements and be a minimum Type I, Heavy Duty Classification. Light and medium duty class ladders are prohibited.
- Extension ladders must be tied/secured off to prevent displacement.
- Ladder users must maintain three-point control (three limbs maintain contact on the ladder), and that their body remains centered between the side rails.
- Tools and materials may not be hand carried while using a ladder.
- Ladder users are not subject to a fall to a level lower than the base of ladder they are working from.
- By accessing the ladder, you have not negated the protection of adjoining fall protection such as guard rails. Should you negate the existing protection, fall protection would be required.

Guard Rails
If any component of a guardrail system must be removed, the Barton Malow Safety Department must issue a Guardrail Removal Permit that can be found in the appendix. Any contractor that must remove a fall protection system in the course of their work will be responsible for immediately replacing and restoring the protective system. Removal of guard rails without a permit must be a violation of the projects disciplinary program up to and including termination.

Training Requirements
Contractors that are trained in accordance with the requirements identified in OSHA will be considered as meeting the necessary fall protection training requirements for working at a Barton Malow project. The Contractor must provide proof of such training as requested by the Barton Malow Safety Department.

Personal Fall Arrest System (PFAS)
The Contractor must ensure that PFAS are employed when conventional systems are not feasible to achieve 100% continuous fall protection at working heights of six (6') feet or more. If PFAS’s or conventional fall protection systems are not feasible, this justification must be documented in the fall hazard analysis and reviewed before work starts by Barton Malow’s Safety Department.
Regulatory Requirements
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 140dB noise level. Barton Malow Hearing Conservation Program must meet or exceed requirements in the OSHA standard:

- OSH 1926.52, Occupational noise exposure.

Control Measures
Barton Malow uses a hierarchy of control measures to reduce noise levels as low as feasible. The order of precedence for mitigating hazards establishes the actions to be considered in an order of effectiveness to achieve intended risk reduction. The hierarchy is as follows:

- Elimination or substitution of the hazards
- Engineering controls
- Work practices and administrative controls that limit worker exposures
- Personal protective equipment (PPE).

Every feasible effort must be made to “engineer out” noise exposures greater than or equal to an 8-hr time-weighted-average (TWA) sound level of 85 decibels (dBA) on the A-weighted scale prior to using personal hearing protection as a noise attenuation device. When controls are not feasible or fail to reduce noise to acceptable levels, hearing protection must be required. Additionally, if work is to be performed in an environment that is suspected to exceed the allowable noise exposures, mandatory hearing protection requirements must be implemented.

Noise Evaluation
The Contractor must survey and evaluate suspected high noise areas and work efforts. Employees may observe surveys and evaluations, and the results must be made available to employees. Contractors must control employee exposures when noise levels exceed 85 dBA as an 8-hr TWA, or if impact/impulse noise exceeds 140 dBA. Maximum allowable noise exposure must not exceed the permissible noise exposures shown in 29 CFR 1910.95 or the ACGIH TLV’s. Noise exposure must be determined without regard to hearing protection provided.

High Noise Area Posting
High noise areas must be posted with appropriate warning signs at all entrances. With racing, testing and the Richard Petty Experience expected to be running at different times, hearing protection use will be required in certain areas.
The requirements of this section apply to all Contractors activities regarding industrial hygiene matters as they relate to the construction activities unless otherwise specifically exempted by Barton Malow.

This section defines the requirements and responsibilities for anticipating, recognizing, evaluating, and controlling employee exposures to chemical, physical, and biological agents encountered during construction activities. The Contractor Industrial Hygiene (IH) program must address the following elements (as applicable to the project):

- Noise
- Lead
- Hazardous Materials
- Hexavalent Chrome
- Contractor Work Control
- Asbestos
- Site dust
- Lasers
- Sanitation
- Safety Showers and Eyewash apparatus
- Personal Exposure Monitoring
- Ionizing Radiation
- Respiratory protection
- Blood-borne Pathogens
- Temperature Extremes
- Other significant hazards project-related
- Lighting and illumination
- Ventilation

The Contractor must provide personnel adequately trained/qualified to manage and implement their industrial hygiene program to a level required for the scope of work.

**General Requirements**

**Identification of Health Hazards**
The employer must identify and document, as part of the Job Hazard Analysis (JHA), existing and potential physical, chemical and biological health hazards. The JHA should include any additional hazards revealed by supplemental site information provided (e.g., site characterization data, as-built drawings, information regarding adjacent operations, etc.); and should be kept updated to reflect significant changes in exposure potential, new information, monitoring data, etc.

**Control Measures**
The employer's industrial hygiene program must require that controls are implemented to eliminate or reduce employee exposures to below recognized occupational exposure limits (PEL's & TLV's). Employers should strive to maintain exposures to As Low as Reasonably Achievable (ALARA). Control measures to eliminate or reduce industrial hygiene-related exposures must be identified during the pre-job planning process, and delineated in the JHA.

The implementation of control measures must follow the following hierarchy:

- Substitute to a less hazardous material if possible
- Use engineering controls
- Use administrative controls
- Use PPE

**Exposure Assessment**
The employer must perform monitoring as necessary to document employee exposures to chemical and physical hygiene hazards. Negative exposure assessments are encouraged even when not specifically required by a substance-specific standard. Exposure assessments may be performed using various methodologies (integrated sampling, direct-reading instrumentation, modeling, etc.), as appropriate for the material(s) of concern, the site conditions and the type of data needed.

**Control of Hazardous Materials**
A hazardous material is any substance that presents a physical or health hazard to humans. Hazardous material exposures should be maintained at the lowest exposure levels practical. A chemical must not be
used in any situation unless an individual has information indicating how the material can be used safely. Control measures to prevent overexposure to chemicals must be incorporated into the JHA as necessary.

**Carcinogen Control**
The Contractor must make every attempt to substitute less hazardous substances for any carcinogenic material (as defined by OSHA.) If hazardous materials containing carcinogenic components are used, the Contractor must ensure that exposures are eliminated or effectively maintained As Low as Reasonably Achievable (ALARA).

Where the Contractor’s use of carcinogens may impact any Barton Malow project workers, Barton Malow or the property Owner may impose additional, specific controls upon the Contractor.

**Worksite Dust Control**
Dust control must be addressed as part of the JHA. Outdoor areas to be cleared for construction must be limited to keep dust generation to a minimum. Fugitive dust emissions resulting from grading and/or wind must be controlled. Construction of permanent roadways and parking areas should be scheduled during the early stages of a project.

During construction renovation activities barriers are to be installed as needed to prevent dust migration from construction areas to other occupied space. Sufficient equipment must be kept at the jobsite to control dust whenever a nuisance or hazard occurs. Indoors, dry sweeping is discouraged.

**Sanitation**
Housekeeping must be maintained on a daily basis. All work areas, shops and offices must be kept clean to the extent the nature of the work allows. Walking/working surfaces must be maintained, so far as practicable, in a dry condition. Waste receptacles that do not leak and may be thoroughly cleaned and maintained in a sanitary condition must be used. All sweepings, wastes, refuse, and garbage must be removed in a timely and sanitary manner. Cleaning and sweeping must be done in a manner, which minimizes the contamination of the air with dust or particulate matter. Building entrances and openings must be maintained to minimize the entry of vermin.

**Toilet Facility**
Adequate chemical toilets are available on the jobsite for the use of workers. Chemical toilets must be serviced often enough to prevent overflowing and the creation of an unsanitary condition or nuisance. Toilets must be maintained in good repair so as to prevent leakage of the contents to the surrounding ground, floor, or other portions of the structure. Separate urinals will be available for females which will be locked and keys available for controlled use. Hand washing facility or hand sanitizing units will be provided for all workers on site.

**Drinking Water**
Every day contractors will provide 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 cleaned daily and have tape around the lid with the date of service and contents on the tape. A trash receptacle must be located next to the container.

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 area. Use of common utensils (e.g., sharing the same cup) is prohibited.

**Personal Exposure Monitoring**
The Contractor must perform monitoring as necessary to document employee exposures to chemical and physical hygiene hazards, and to meet regulatory requirements. Negative exposure assessments are encouraged even when not specifically required by a substance-specific standard. Workers must be informed of monitoring results within the OSHA-specified timeframe. Co-located workers (who have similar exposure potential as those who were monitored) must also be informed of the results, after removing any personal/confidential information.
The Contractor must notify the Barton Malow of the results of monitoring as soon as they are obtained, and provide copies of the results, field notes and other associated documentation.

**Temperature Extremes**
Provisions to prevent heat stress must be incorporated into the project JHA(s) when work conditions may reasonably be expected to present such hazards. The Thermal Stress section of the American Conference of Governmental Industrial Hygienists (ACGIH) Threshold Limit Values (TLV’s) must be the governing guidelines.

**Heat Stress**
The Contractor must provide for appropriate mitigating measures prior to heat stress becoming an issue. The American Conference of Industrial Hygienists (ACGIH) threshold limit value (TLV) guidelines must be followed for developing and implementing heat stress mitigation strategies. The use of heat stress controls must be addressed during the planning stages for all work that is to be performed in elevated temperature environments, and whenever impermeable clothing or multiple layers of clothing must be worn to conduct work.

**Lighting and Illumination**
The minimum lighting level for construction areas either indoors and outdoors must meet or exceed OSHA Illumination requirements. Auxiliary lighting must be used when needed for task specific activities. Care must be exercised with the use of halogen lamps so that fire hazards are not created.

**Ventilation**
Local exhaust ventilation is a primary engineering control and is required to reduce concentrations of hazardous, irritating, and odiferous air contaminants below allowable exposure limits (where feasible). The operability of such systems must be evaluated prior to the start of the work. The ACGIH's Industrial Ventilation manual is the reference of standard for the design, testing and operation of ventilation systems. Ventilation systems requiring HEPA filtration should be leak or DOP tested at least annually to verify their effectiveness.

**Silica Exposure**
The Contractor is responsible for keeping worker exposures to silica at, or below, the ACGIH TLVs, or the limits as calculated in OSHA’s 1910.1000, Table Z-3, whichever is lower. In general, engineering controls such as wet methods or ventilation should be employed whenever dust-producing activities are anticipated. Dry cutting of silica containing materials is prohibited.

**Lead Program**
Prior to performing work activities involving the use or potential release of lead, the Contractor must provide a Lead Compliance Plan to Barton Malow for review and concurrence.

**Hexavalent Chrome**
The Construction Industry Chromium (VI) Standard 1926.1126 will apply to all work performed by the Contractor that may expose workers to airborne hexavalent chromium. The Contractor must be responsible for compliance with all requirements of the Standard.

**Asbestos**
No disturbance of suspect or known asbestos-containing materials must take place unless performed by trained, certified and authorized entities. If suspect asbestos-containing materials are unexpectedly encountered during the course of construction activities, the Contractor must immediately cease work and contact Barton Malow. Asbestos-containing construction/building materials must not be brought on-site.

The Contractor conducting asbestos-related work must be responsible for compliance with the OSHA Construction Standard 602.
Lasers
Class 1 laser systems incorporated into commercially available devices for use by the general public are exempt from these requirements, unless opened, serviced or modified. Laser equipment must bear a conspicuously displayed label to indicate hazard classification. Laser use must comply with OSHA requirements. Warning signs will be placed in laser use areas.

Users of Class 1, Class 1M, Class 2, Class 2M, Class 3a, or Class 3R lasers must read and abide by the safety documentation provided in the operator’s manual. Only qualified and trained personnel may service, adjust, or repair laser equipment. Employees when working in areas in which a potentially hazardous exposure to direct or reflected laser radiation exists, must be provided with anti-laser protection devices. Setup of lasers should be above or below the sightline of adjacent workers to eliminate worker exposure.

Safety Showers and Eyewashes
Setup suitable station for quick drenching or flushing of the eyes and body (eyewash/shower apparatus) must be provided within the work area for immediate emergency use where the eyes or body of any person may be exposed to injurious corrosive materials, (e.g., corrosives, skin sensitizes, etc.). An eyewash/shower apparatus must be located such that it would require no more than 10 seconds to reach from the hazard. Access must be free of any impediments. For battery handling areas, station for quick drenching of the eyes and body must be provided within 25 feet.

Employees who may have a need for an eyewash/shower apparatus must know where the nearest eyewash/shower apparatus is located and how to operate it. Monthly functional testing of eyewash/shower apparatus must be documented. The potable water provided for a portable eyewash/shower apparatus must be flushed or changed according to manufacturer’s specifications.

Ionizing Radiation
Radioactive materials, sealed radioactive sources, or devices that generate ionizing radiation must not be brought on the site without express written permission of the Barton Malow Safety Dept. Any Contractor needing to bring radioactive material, sources or radiation-generating devices onto site must allow sufficient lead time in their schedule for review of their program, documentation, training records, other submittals, etc.

Blood-borne Pathogens
Employees who may reasonably be expected to be exposed to blood or other body fluids must comply with regulatory requirements relating to this subject. First aid kits must contain “Universal Precautions” items, including chemical splash goggles, medical gloves, cardiopulmonary resuscitation (CPR) masks (with one-way valve), antiseptic hand cleaner, drying cloths, and red bags labeled “BIOHAZARD.” Medical waste generated as a result of first aid response must be placed in labeled red bags, and disposed of in accordance with state and local requirements.

Other Health Hazards
Other hazards that may be present during the course of the Contractor's work which is not specifically addressed in this manual must be identified by the Contractor and addressed in their JHA(s). Contractors are encouraged to discuss their potential hazards in advance with Barton Malow Safety representative. As appropriate Barton Malow will coordinate with Contractors to help ensure minimal impact to the project schedule and the smooth coordination of logistics.

Responsibilities
The provisions of this procedure apply to the development and implementation of the Contractor’s Industrial Hygiene Program. The Contractor must be responsible for implementing an effective IH program that:

- Identifies, evaluates, and controls potential and existing hazards/agents in the workplace through the pre-job safety planning process. This included Prevention
- Through Design techniques by engineering hazards out of the workplace.
• Determines that engineering devices, administrative controls, and personal protective equipment are available, appropriate, tested, and utilized by employees.
• Determines employees are trained as required.
• Stops work that is not being safely performed.
• Reports occupational exposure data to affected employees in a timely manner.
Applicability
The requirements of this section apply to all Contractors construction work activities on the onsite. This section provides the requirements for the use of personal protective equipment, where substitution, engineering or administrative controls are inadequate to fully protect the worker's body (including eyes, face, feet, hands, head, and hearing) from hazards capable of causing injury, illness, or impairment of any bodily function.

Specific Requirements/Permits

General Requirements
Personal protective equipment (PPE) is not a substitute for engineering and administrative controls. These controls must be implemented, to the extent feasible, to mitigate the hazard so that the need for PPE is reduced or eliminated. Contractors must provide PPE to its employees in accordance with OSHA requirements.

At a minimum, all Contractor personnel and visitors must wear sturdy work boots, long pants (no sweat pants), and shirts as prescribed by their health and safety plan. Personnel working on construction activities or in the field must also wear hard hats, safety glasses with rigid side-shields, task specific gloves at a minimum must be on your person and worn while performing work and high visibility shirts or vests.

The Contractor is responsible for supplying and requiring the wearing of appropriate personal protective equipment in all operations where there is an exposure to hazardous conditions and/or where this manual indicates the need for using such equipment to reduce the hazards to the employees.

Training
Contractors must provide training to each employee who is required to use PPE. Each affected employee must show understanding of training to their specific PPE. Retraining may be necessary if work activities change or the employee exhibits lack of understanding of the PPE.

Specific Requirements

PPE Hazard Assessment and Selection
The appropriated PPE for the work being performed must be specified in the applicable JHA. The PPE selection must be based on the hazard assessment results conducted for the work activity. Examples of applicable hazard assessment documentation include:

- Job Hazard Analysis (JHA) or Task Safety Analysis (TSA)
- Fall Protection Plan
- Confined Space Entry Permit
- Hot Work Permit
- Energized Electrical Work Permit
- Other work control documents

The JHA must address at a minimum following PPE requirements as applicable to the work activity:

- Foot protection
- Hand Protection
- Fall Protection
- Respiratory Protection
- Head Protection
- Eye and Face Protection
- Hearing Protection
- Body protection

Responsibilities
The Contractor must:

- Perform an assessment identifying hazards or potential hazards and determine necessary PPE for activities to be performed.
- Include PPE requirements in project JHAs, as applicable.
- Adhere to prescribed postings and/or pre-job planning documentation requiring use of PPE.
Personal Protective Equipment (PPE)

- Provide adequate PPE for all its employees.
- Properly maintain, use and store PPE.
- Remove damaged and/or defective equipment from service.
- Provide appropriate training to PPE users and document through site-specific training, and/or daily safety meetings.

Gloves

Protective work gloves will be worn while performing all construction work on the project site. When not working, gloves must be immediately available for use when needed, i.e., kept on your person. Hand and finger protection must be specifically addressed in the development of project specific safety plans, JHA’s and daily TSA’s. The specific protection must be identified. Each employer’s competent person must assist in recommending the correct glove for the work task. The specific type of glove is dependent upon the work task (see chart for some examples). In general, the wearing of cut resistant style gloves is preferred. If the glove use creates an additional hazard due to a particular work task, for example working near rotating equipment, gloves will not be worn for that specific task. Pre Task planning will document glove use.

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<tr>
<th>WORK GLOVE SELECTION</th>
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<tr>
<td><strong>Exposure</strong></td>
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<tr>
<td>General Maintenance, Operation, Material Handling and Housekeeping Tasks</td>
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<tr>
<td>Potential cut exposure, razor knife use, sheet metal work or other exposure to sharp edges,</td>
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<tr>
<td>Temperature Extremes</td>
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<tr>
<td>Chemicals</td>
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<td>Bodily Fluids</td>
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<td>Welding and Burning Operations</td>
</tr>
<tr>
<td>Electrical work</td>
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Applicability
The requirements of this section apply to all Construction Contractors and lower-tier subcontractors (hereafter referred to as “Subcontractor”) activities involving hazardous materials as they relate to the construction activities onsite. This section defines the requirements and responsibilities for Contractors who use, apply, store or generate hazardous materials onsite.

The Hazard Communication Program must comply with the applicable statutory requirements of **Hazard Communication Standard 1910.1200.** Required components of a Hazard Communication Program include hazard determination, Safety Data Sheets (SDS), labels and other forms of warning, employee information training, and a written Hazard Communication Program defining the above.

Specific Requirements/Permits
In addition, the Contractor’s Hazard Communication program must meet the following requirements as applicable.

**General Requirements**
Contractors are responsible for maintaining an up-to-date chemical inventory and copies of SDSs (only of those chemicals brought on site). These must be turned into Barton Malow’s Safety Department so that they can be made readily available for review. A Master Chemical and Substances List can be found in the appendix. The list must include a site specific list of SDSs, appropriately labeled and periodically updated to reflect the workplace inventory.

Prior to using any newly introduced hazardous material or product, supervisors must obtain a copy of the appropriate SDS and review it with their employees. The project Job Hazard Analysis should be updated to reflect health and safety controls specific to chemical use.

Each original container of hazardous materials must have the manufacturer’s label affixed to it or be labeled, marked, or tagged showing the identity of the hazardous chemicals, the appropriate hazard warning, and the name and address of the chemical manufacturer, importer, or other responsible party.

Secondary and subsequent containers of hazardous chemicals must be labeled, marked, or tagged prior to use with the identity of the hazardous materials and the appropriate hazard warnings.

**Specific Communication Requirements**
If the Contractor uses a labeling system that is an unusual format, or not readily understandable, the Contractor must inform Barton Malow’s Safety Department, and other affected workers of how to read/understand their labeling system.

The Contractor must determine if their use of hazardous materials may affect (expose, or pose a potential danger in the event of an emergency) other Contractor, Barton Malow or Owner employees of any member of the general public. If the hazardous materials form or the way it will be used creates a potential for affecting other employees, the Contractor must take appropriate notification steps. The Contractor must inform the other employer(s) of any precautionary measures that need to be taken to protect other Contractor, Barton Malow or Owner employees of any member of the general public from inadvertent/unnecessary exposure to the Contractor’s hazardous materials during normal operating conditions and in foreseeable emergencies.

Work areas where chemical and/or biological hazards are known to pose an exposure potential must be clearly designated as such (with signs, placards, postings, etc.) along with control requirements (PPE requirements, ventilation, authorization for access required, etc.).

**Special Emphasis**
Some chemicals are considered to be extremely hazardous and have additional requirements for bringing onsite. Extremely hazardous materials include (but are not limited to) the following classes of chemicals:

- Alkali metals
- Asbestos
- Beryllium
• Perchloric Acid and other peroxide-forming chemicals
• Unstable, reactive, pyrophoric or explosive chemicals
• Hydrofluoric acid
• Radioactive materials
• Highly toxic chemicals and reproductive toxins (depending upon the form, the quantity and method of application or use)
• Pesticides/Herbicides
• Bio-chemicals

Use of these chemicals may necessitate additional control mechanisms such as establishing dedicated use areas, specific postings/warning signs, notification to adjacent workers, ventilation controls, decontamination procedures, personal hygiene stations, etc. It is the Contractor's responsibility to notify the Barton Malow prior to bringing the material on site (preferably during the project planning stages) if intending to use extremely hazardous materials on their project, in order to ensure that the proper controls are built in.

Responsibilities
The Contractor must be responsible for:
• Administering their Hazard Communication Program.
• Maintaining an on-site list of hazardous materials and SDSs to be used on the project.
• Determining the hazards of materials used in the workplace, making SDSs available to employees, labeling containers, and providing information and training to employees on hazardous materials.
• Developing work practice requirements for hazardous materials identified in the JHA.
• Bringing on-site only those chemicals needed to perform the work for which they are contracted, and only in quantities needed for the job at-hand.
• Identifying when the Contractor's use of hazardous materials may affect (expose or pose a potential danger in the event of an emergency) other Contractors, Barton Malow or Owner employees of any member of the general public and taking appropriate notification steps.
• Storing chemicals in accordance with the manufacturer's instructions, applicable regulations and best management practices.
• Remove chemicals from the work area and properly dispose of them when no longer needed.
• Comply with exposure monitoring and medical surveillance requirements associated with chemical use.
Applicability
The requirements of this section apply to all Contractor activities which require personnel to work in permit-required and non-permit-required confined spaces onsite.

Confined Space Work
All confined space work onsite will be in accordance with OSHA regulations and contractor specific confined space entry requirements. Confined space entry permits must be kept on file for review.

Confined Space Classification
Prior to entry, all confined spaces will be evaluated and classified as either permit- required or non-permit based on the actual and/or potential hazards related to entry into the space while the confined space is in its normal operating condition.

Labeling and Signage
When feasible, identified confined spaces are posted with a sign stating “Confined Space, Entry by Permit Only” or “Caution, Non-Permit Confined Space, Contact Barton Malow’s Safety Department before Entering”. When signage is not feasible Contractors will be informed of the location and classification of known confined spaces.

New or Previously Unidentified Confined Spaces
There is a possibility that construction activities may create new confined spaces (such as new utility vaults, manholes, ventilation ducts, tanks, sumps, and/or elevator pits). It is also possible that, during construction, Contractors may encounter a confined space that had not been previously identified. During project design, Barton Malow will attempt to identify situations that may result in the creation of new confined spaces; however it is not always possible to anticipate every potential confined space.

It is the Contractor’s responsibility to watch for new or previously unidentified confined spaces and to inform the Barton Malow’s Safety Department whenever new confined spaces are identified or created.

Identifying a Confined Space
All Contractors should be on the lookout for confined spaces. As defined by OSHA a confined space is:

1.) Is large enough and so configured that an employee can bodily enter and perform assigned work.
2.) Has limited or restricted means for entry or exit (for example, tanks, vessels, silos, storage bins, hoppers, vaults, and pits are spaces that may have limited means of entry.).
3.) Is not designed for continuous employee occupancy.

Hazard Recognition
Confined spaces must be considered hazardous until determined to be otherwise. Hazards will be identified and evaluated by a competent person prior to entry. The Contractor must be watchful of confined space work activities that may increase hazards – such as hot work, painting, cleaning or electrical work. Such work may change a non-permit-required confined space into a permit required confined space. The Contractor will continuously evaluate of confined space conditions and will stop work if hazards increase or change. Additional controls must be implemented to control the new hazards.

Verification of Compliance with Confined Space Entry
Barton Malow will require verification that the Contractor is able to safely perform confined space entries. The Contractor must have:

1.) A confined space competent person.
2.) Entry team/authorized personnel - adequate number of workers to staff an entry team including entry supervisor and that their training is current and documented.
3.) Functioning, calibrated monitoring equipment and that their staff are familiar with the use of the equipment.
4.) Appropriate PPE, ventilation equipment, supplemental lighting if necessary, rescue equipment/plan.
Barton Malow and the Contractor will discuss acceptable entry conditions. Barton Malow may request a copy of the Contractor’s LOTO program if energy isolation is necessary Barton Malow and the Contractor will determine whose permit system will be used – either Barton Malow’s or the Contractor’s. Project personnel may observe Contractor confined space entries until such time that they are comfortable that all performance expectations are being met.

Confined Space Entry Controls
Entries into confined spaces must be controlled either through administrative controls for non-permit confined spaces or through the permit procedure for permit-required confined spaces. Controls for confined space entries include, but are not limited to:

- Mechanical ventilation
- Use of isolation procedures (LOTO)
- Cleaning of confined space
- Electrical precautions
- Fire precautions
- PPE
- Communication procedures

Confined Space Entry Experience/History Review
Barton Malow must inform Contractors of Barton Malow’s experience, if any, with the confined space being entered, by reviewing Confined Space Evaluations, and associated confined space classification, and previous canceled permits for the space in question, if available.

Confined Space Post Entry Evaluation Review
Contractors must inform Barton Malow of their experience with the permit-required confined space following the entry by utilizing the “Entry Review/Critique” section as part of the Contractor’s accepted Confined Space Entry Permit. Completed permits must be turned in for review and cataloging.

Confined Space Entry Notification
In general, the following coordination and notification (Barton Malow will be responsible for providing the necessary phone numbers) is required for permit and non-permit required confined spaces prior to entry:

Non-permit Confined Space: Entries must be coordinated with Barton Malow’s Safety Department who will issue a Confined Space Permit.

Permit Required Confined Space: Entries must be coordinated with Barton Malow’s Safety Department who will issue a Confined Space Permit. Barton Malow will provide phone numbers and will instruct the Contractor of specific notifications to be made. Exact notification requirements may vary from job to job, particularly in cases of new confined spaces arising during construction.

Training Requirements
Contractors that are trained in accordance with the requirements identified in OSHA 1910.146, Permit Required Confined Spaces will be considered as meeting the necessary confined space entry training requirements for working onsite. The Contractor must provide Barton Malow’s Safety Department proof of such training prior to work starting.
Applicability
The requirements of this section apply to all Construction Contractors’ and lower-tier subcontractors’ (hereafter referred to as “Subcontractor”) work activities involving concrete construction onsite.

Requirements
All vertical and horizontal rebar, form stakes, metal and/or plastic conduit, and/or small pipe stub-ups will be protected with approved caps or other industry accepted alternatives to protect against impalement and injury. Workers that operate vibrators, pump nozzles, and concrete buckets will wear appropriate eye and foot protection. It is highly recommended that long sleeve shirts be worn to protect against exposure of concrete to the bare skin and the possibility of concrete burn and contact dermatitis.

Fall Protection
Workers engaged in vertical rebar assembly must comply with the project six (6’) 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.

General Practices
Pre-fabricated 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. Contractor 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 and forms for walls, piers, columns, stairs and similar vertical structures are adequately supported to prevent overturning and collapse and are designed and installed under the supervision of a qualified person. Ensure that coiled wire mesh is adequately secured to prevent uncoiling.

Associated Equipment Practices
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. When using bull floats, inspect the area to ensure there is 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 must be equipped with dead-man controls that automatically shut down the equipment when the operator’s hands are removed from the controls.
Scaffolds

Applicability
The requirements of this section apply to all Contractors construction work activities onsite. All scaffolding used on this project will meet the requirements established in Subpart L of OSHA 29 CFR 1926. Each contractor using scaffolds must designate a 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 other hazards present per tag details

The competent person will inspect the scaffolding daily prior to use and sign the tag at the time of inspection. The Daily Scaffold Safety Inspection Report (attached) will be used to document these inspections.

Training
Workers required to work from scaffolding will receive training on the following:
1. Nature of any known hazards, such as electrical, fall or falling objects.
2. Correct method of erecting, maintaining, and disassembling fall protection systems.
3. Falling object protection system.
4. Proper handling of equipment or material on the scaffold.
5. Maximum load-carrying capacity of the scaffold.
6. Any other pertinent requirements about the scaffold.

Records must be maintained of scaffolding training and copies turned into the Barton Malow Safety Department.

Scaffold Erection
Prior to erection, all scaffolding components must 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. Scaffold legs, poles, posts, frames and uprights will be pinned or locked to prevent uplift. No scaffold will be enclosed unless a qualified engineer designs and approves the attachment to the adjacent structure.

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 1 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 9½ inches. Scaffold planks must extend past the horizontal support a minimum of 6 inches and not more than 12 inches unless cleated or restrained by hooks.

Scaffold plank will not be overlapped unless:
1. Overlap occurs at a horizontal support
2. When the minimum planking overlap is 12 inches, only scaffolding-grade planking must be used.

Ladders or stairs must be used to access any scaffold platform that is more than two (2') feet above or below the point of access. End frames of tubular welded scaffold can be used as a ladder if the following criteria are used:
1. Specifically designed and constructed as ladder rungs
2. Rung length of at least eight inches
3. Spacing between rungs not to exceed 16 ¾ inches
4. A walk through frame or gate is provided for access at each landing No worker will climb up or down a scaffold using the cross bracing.

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.

Suspended Scaffolds
An erection and dismantling plan must be provided by the manufacturer and submitted to Barton Malow Company prior to mobilization of a suspended scaffold. A competent person will evaluate suspended
scaffolding, anchorages, and suspension lines before each use. Workers working from suspended scaffolding will wear a full body harness attached to an independent vertical lifeline. When welding is required from swing stage scaffolding, the scaffold will be grounded and suspension ropes protected.

**Mobile Scaffolds**

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 4 to 1 rule. Wheels on mobile scaffolding will be locked in place when workers are working from it (self-propelling is prohibited).

**Mast-Climbing Work Platforms (ANSI A92.9-1993)**

An erection and dismantling plan must be provided by the manufacturer and submitted to Barton Malow prior to mobilization. Fall protection must be provided when wall openings exist on the façade of the building in front of the work platform, the distance to the façade exceeds that permitted, the platform passes an in-set in the façade or it extends past the façade. In accordance with ANSI requirements, unless the scaffold is equipped with an emergency decent device an evacuation plan from the platform must be developed. Building access is prohibited underneath scaffold platforms. System specific training must be provided to all workers who will be on the work platform.
Applicability
The requirements of this section apply to all Contractor use of Aerial Lifts. The equipment covered under this procedure includes “Boom and Scissor” lifts and associated equipment. This includes either power or manually operated equipment.

Operator Training and Certification
Contractors who provide and operate Aerial Lift equipment, as part of a construction project or similar activity will be in compliance with all applicable parts of OSHA and, must provide:

1.) Proof of Training/Certification.
2.) Prior to operating an aerial lift, Contractors will provide a copy of their employee’s operator certification/license to the Barton Malow. This certification/license must be current for the lift type they will be operating. (i.e., Scissors, Boom, Manufacturer).

Operation
100% fall protection will be used in all aerial lifts. This is achieved by utilizing dual lanyards as part of fall protection system. The gates of aerial lifts will be properly engaged whenever the lift is in use.

Use must be suspended if prevailing wind conditions may adversely affect the lift. As a general rule, this applies to wind speeds of 25 MPH or more dependent on manufacturer’s recommendations. Travel in aerial lifts is prohibited while platform is elevated. No one must operate the scissors lift controls from outside the basket. Scissor lifts are considered to be an aerial lift and be used in accordance 29 CFR 1926.452 (w), related ANSI and manufacture standards. No one must operate the scissors lift controls from outside the basket. Aerial lifts must not be used as material hoists unless the load is contained within the basket and meets the lift’s rated capacity and the material is secured. The lift must not be modified for hoisting material unless the manufacturer approves it in writing.
Environmental Requirements

Applicability
The requirements of this section apply to all Contractors activities which have the potential to affect natural resources that include storm water, wetlands, streams, air quality, vegetation and wildlife. Potential impacts to existing historical and archaeological items as well as historical and archaeological items unearthed during construction onsite are also addressed in this section. Any exceptions to these requirements must be approved by Barton Malow.

Storm water Discharge Requirements
Applicable permits will be obtained.

Air Emissions Requirements
Barton Malow will direct Contractor or obtain any necessary air emissions permits.

Fugitive Dust
The Contractor must minimize fugitive dust whenever possible.

Vehicular Emissions
Construction vehicles, equipment, and Contractor’s personal vehicles must be operated to minimize emissions. Unnecessary idling of vehicles and equipment is prohibited. Idling of vehicles for occupant heating/cooling comfort is prohibited.

Pipe Flushing
Pipeline flushing of new water lines, storm and sanitary sewer lines, or fire line flushing requires preparation and approval by Barton Malow of a plan that describes the location and nature of activity to be performed, description of the discharge (duration, anticipated volume and rate, source of the water, potential pollutants in the water used), and the Best Management Practices to be used to prevent potential pollutants from reaching the storm drainage system, a stream, drainage channel, ditch or groundwater.

High Pressure Gas Blows
Natural Gas pipeline flushing with Natural Gas is prohibited without approval from Barton Malow Safety Dept. Flushing/Venting should be done in accordance with the Chemical Safety Board guidelines. A JHA will be reviewed and accepted by the Barton Malow Safety Department before any gas work is completed.

Trash, Construction Debris and Sanitary Waste
The Contractor must provide waste storage and removal as required to maintain the construction site in a clean and orderly condition with periodic disposal of waste off-site. Open free-fall chutes and containers without lids are prohibited. Trash and debris is prohibited from migrating outside the construction area. All trash and debris is to be collected daily. Depending on where the trash and debris accumulates, cleaning as you go will be necessary. Barton Malow reserves the right to ask for trash and debris to be cleaned up right away if a hazardous condition exists. Debris netting will be required on handrail where trash and debris can become airborne. Never pile trash, debris or materials above protective measures intended on protecting people below.

Wastewater
Barton Malow limits wastewater discharges to sewer or septic systems. Barton Malow does not permit other direct wastewater discharges to the environment, including land and surface water. Contact the Barton Malow if such a volume is planned on a routine, periodic, or occasional basis.

Hazardous Waste
Contractors must contact the Barton Malow Safety Department prior to any construction activity that will generate hazardous or chemical waste. All material will be disposed of in accordance with State, local and Federal requirements.
Asbestos
The use of Asbestos Containing Material (ACM) is not authorized. However it is possible that unidentified ACM may be discovered during construction activity. Should ACM be discovered, the Contractor must stop the affected work and notify Barton Malow immediately.

Noise
Noise levels will be kept as low as reasonably achievable.

Pesticide and Herbicide Use
All pesticide and herbicide use must be approved by Barton Malow prior to application, and must be used in a manner consistent with its labeling.

Traffic Control
Barton Malow will develop and implement a traffic control program that addresses the movement of construction related vehicles to and from the site.

Vegetation
Project design must attempt to minimize the elimination of existing trees/shrubs, which provide local wildlife habitat, reduce cooling needs in summer by providing shade, and remove carbon dioxide from the air, thus contributing to a reduction of greenhouse gases generated onsite. Those trees/shrubs that must be eliminated as a result of construction must be tagged/otherwise marked and noted on construction drawings.

Natural Resources - Wildlife
Natural resource protection at project is guided by NEPA, the Migratory Bird Treaty Act, Division of Wildlife Recommended Buffer Zones and Seasonal Restrictions for Raptors, the Threatened and Endangered Species Act, and other applicable state and federal wildlife guidelines. The following topics represent areas that may impact individual project costs and schedules.

Other Wildlife Species
Construction work must avoid adverse impacts to wildlife species, whenever possible.

Preservation of Historical Resources
In the event potential archeological items are unearthed or discovered during construction, work in the area must stop. Barton Malow Management will make a determination within twenty-four (24) to forty-eight (48) hours if work in the construction site can continue. Potential archeological items may not be moved or stockpiled upon discovery.

Wetland and Drainage Areas
No jurisdictional wetlands have been identified onsite. Each contractor must comply with the SWPP.

Responsibilities
The provisions of this procedure apply to Contractors performing activities which have the potential to affect natural resources that include storm water, wetlands, streams, air quality, vegetation and wildlife. The Contractor and all lower-tier subcontractors must be responsible for implementation and compliance with all federal, state and local laws as described above and referenced below.
Applicability
The requirements of this section apply to all Contractors activities regarding Demolition onsite. Prior to the 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 and location of utilities, whether hazardous materials (such as asbestos, lead, and mercury) exist, means and methods of performing the work, sequencing, etc. No work will commence until a written engineering survey has been completed and has been submitted to and reviewed by Barton Malow Company and a written Complete Demolition Plan has been submitted.

Debris and material must not be dropped through walls, floor holes, windows or other elevated work areas without the area below being barricaded and properly signed. Under no circumstances must materials be dropped more than 20 feet without using a chute. Debris chutes must have a substantial gate at all elevated openings. You will find a Demolition Survey in the appendix.