Safety Manual

v. March 2020

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SAFETY POLICY STATEMENT

The leadership of **Kasco, Inc**. and its subsidiaries, affiliates and divisions sincerely cares about its employees and is committed to working with them to provide and maintain a safe and healthful workplace in our offices, shops, jobsites and in the services we provide through our maintenance operations.

We believe all incidents and accidents are preventable and we are committed in assisting our employees to achieve this same mentality and outcome.

Our policy requires that each one of us take on the personal responsibility to properly understand the hazards we face in the execution of our work tasks and mitigating the hazard prior to commencement of the work at hand. We are all empowered to act to ensure our own safety. Should an employee face an unsafe condition they cannot mitigate and perform the work tasks safely, they are to report the matter at hand immediately to their supervisor and not proceed with the work. At no time should an employee proceed in an unsafe condition or environment. NO EXCEPTIONS. Employees must immediately report all accidents and injuries as well as allow the company to learn from the situation and avoid a repeat event in the future.

Employee recommendations to improve safety and health conditions are strongly encouraged. Each recommendation will be evaluated for possible application. **Kasco, Inc**. will review each project at close as well as safety audits, employee input, near-misses, etc. to help improve safety on future projects.

It should be everyone's goal to ensure that all make it home safe to our families each and every day. Safety is a non-negotiable element of our company culture. Management will take disciplinary action against any employee who willfully violates safety rules or procedures. This action may include verbal or written reprimands and may ultimately result in termination of employment. Compliance with the company's commitment to safety and our procedures that are designed to promote a safe work environment will be required of all employees as a condition of employment. Policies and procedures contained within the Safety and Health Manual are incorporated as standard practice for **Kasco, Inc**.

In an effort to ensure safety of all parties involved, we will pre-qualify all potential subcontractors through review of safety programs, safety training documents and safety statistics. All subcontractors will have an EMR below one.

The commitment to safety is across the board from management to field operations. From top to bottom, the primary focus on what we do will be on the presence of a safe working environment.

Thank you for your commitment to our company's overarching goal of eliminating all worker injuries.

DEFIINITIONS:

Contract: A written agreement between an Owner and **Kasco, Inc**., between **Kasco, Inc**. and a Subcontractor, between the Owner and Other Contractor(s), or between Other Contractor(s) and their Subcontractor(s).

Contractor: Any company performing work under Contract at the project.

Employer: Any contractor, supplier or vendor performing work under Contract.

Owner: An entity which has engaged **Kasco, Inc.** for services.

Project Premises: all parts of any office, work site, or other work location, including parking lots under the control of the client and/or **Kasco, Inc**.
Authorized Employee: an employee, designated by **Kasco, Inc**. supervision or their employer, who is certified and knowledgeable in performing service or completing a specific task.

Competent Person: individual who can identify existing and reasonable, predictable hazards in the surroundings or working conditions. The person is authorized to take prompt corrective measures to eliminate such hazards.

Controlling Employer: any individual or company that provides workers to perform work on the project premises and is responsible for their hiring, advancement, payment, discipline, and termination, including the client, the architect, **Kasco, Inc**., all contractors, all sub-tier contractors, all vendors, all suppliers, all material dealers, any other contractors, and any others coming on the project premises.

Qualified Employee: a person who, through experience and/or training, is familiar with the operation to be performed and the hazards involved.

Worker(s): any individual, salaried or hourly, of any employer who will be performing work on the project premises.

ADMINISTRATION

MANAGEMENT POLICY STATEMENT

The **Kasco, Inc**. **Safety Program** embodies the policies and procedures for prevention of injury, property damage, fire damage and occupational illness. **No single feature of our work is of greater importance.** It is **Kasco, Inc**.'s intention to commit itself each day to the maintenance and assurance of an accident-free workplace. There is never an acceptable reason for compromising safety. This document, the **Kasco, Inc**. contractor selection process, and site field activities are all designed to support and reinforce thisgoal.

It is **Kasco, Inc**.'s policy to provide a safe place to work at all times and to conduct all operations in a manner as to provide protection for all individuals who might come into contact with these operations. **Kasco, Inc**. employees, Contractor and Subcontractor employees, and all others employed on our projects, as well as all visitors who come on our projects for any reason during construction, are expected to conduct their work in a safe manner and are required to comply with the established safety programs. By contract, Contractors on our projects are obligated to perform all work in a safe manner. By contract, Contractor on our projects are obligated to conform to the requirements of the Federal Occupational Safety and Health Act of 1970 (OSHA) and all additions and revisions thereto, as well as other applicable Federal, State and Local requirements and the SafetyProgram.

All supervisory employees must accept their responsibility for the prevention of accidents and for conducting all operations under their direction in a safe and efficientmanner.

The results of our safety efforts will affect our overall success in constructing our projects. **Our goal is accident- free work** with the traditional defect-free quality. We know this is the most efficient method and that all individuals working on our projects will subscribe to the Safety Program.

With the cooperation, dedication and assistance of everyone, we will have successful and safe projects.

MANAGEMENT STATEMENT – STATEMENT OF FINAL AUTHORITY

All persons who come into work areas, for any reason during construction, will be required to comply with the established safety regulations that govern our projects.

Contractors are committed by contract to observe and comply with all applicable safety regulations and procedures. Each Contractor will participate in the Safety Program.

If **Kasco, Inc**. finds Contractor areas of work or individuals being, or acting in noncompliance with the Occupational Safety and Health Act of 1970 (OSHA), as amended, or any other applicable regulations, **Kasco, Inc**. shall have the authority to order immediate correction and cessation of the non-compliant occurrence. **Non-compliance with safety regulations will be grounds for Contractor dismissal and/or employee(s) being forbidden entry onto the site.** All costs of correction shall be forfeited by the Contractor deemed responsible.

Kasco, Inc. shall have the final decision of who is the responsible party.

Nothing contained herein, however, shall serve to relieve the Contractor of their liabilities and/or obligations under the "Occupational Safety and Health Act of 1970" and all additions and revisions thereto, as well as all other applicable Federal, State and Local requirements.

Responsibilities – KASCO, INC. Project Manager

The Project Manager directs and administers the Safety Program for our projects. All reports, surveys, accident reports and other information relating to safety are to be submitted to the Project Manager. The Project Manager shall have final authority over safety issues regarding all Contractors and employees.

The Project Manager establishes a safety organization to assure the involvement of all personnel in the safety effort and to provide for their participation. The Project Manager appoints the Project Superintendent, as his representative to monitor all safety activities. The Project Manager evaluates individual Subcontractor's safety performance for compliance with all Federal, State, Local, **Kasco, Inc**.'s and the Owner's safety requirements.

Responsibilities – KASCO, INC. Project Superintendent

The Project Superintendent is responsible for the active control of the Safety Program. All work is to be done in compliance with the Safety Program, and shall be planned and overseen by the Project Superintendent.

The Project Superintendent shall conduct safety orientations and weekly inspections relating to safety which will be documented and submitted to proper personnel.

Responsibilities – KASCO, INC. Safety Manager

The Safety Manager is responsible for the overall safety of our projects. The Safety Manager directs and administers the Safety Program. All reports, surveys, accident reports, and other information relating to safety are to be submitted to the Safety Manager.

The Safety Manager shall conduct monthly safety audits on each project. Subcontractor JSA's, and all required documentation, shall be reviewed by the Safety Manager.

Responsibilities – (Sub)Contractors

The name of and resume for each Contractor's project-site safety representative will be provided to **Kasco, Inc**. for review prior to the Contractor starting work. Contractors with a staff and crew of 25 or more on site shall appoint a full time safety representative. Contractors with a staff and crew on site of less than 25 shall anticipate that the safety aspects of this position will encompass 20 hours or more of the work week and may occasionally require full time attention. For this reason, serious consideration shall be given to the ability of a superintendent or foreman to simultaneously meet the responsibilities of both positions.

Contractors must submit the resume to include any construction safety experience of the individual being considered for the role of safety representative.

Each Safety Representative has the right and authority to stop any and all hazardous work being performed by the Contractor whenever imminent danger to life and health exists; and shall meet the OSHA definition of "Competent Person".

Contractors shall conduct regular and frequent inspections for their work areas, and take immediate action to eliminate unsafe acts and/or conditions.

Contractors shall ensure daily, prior to the start of any work activity, that every foreman has reviewed

each task assignment with every affected employee to assure a comprehensive understanding of the safety requirements and precautions to be taken while performing this work.
Contractors shall ensure that appropriate personal protective equipment is provided and its use enforced.
Each Safety Representative shall participate in accident and incident investigation involving their work and employees and those of their subcontractors.
Each Safety Representative shall attend safety meetings as scheduled by **Kasco, Inc**. Contractor shall instruct each employee in the recognition and avoidance of unsafe acts and/or conditions applicable to its work environment to control or eliminate injury or illness.
Each Safety Representative is required to attend & provide proof of completion of an OSHA 30 Hour Construction Course or approved equal prior to starting work. Contractor is responsible for providing and requiring the use of appropriate personal protective equipment in all operations where there is an exposure to hazardous conditions. All records shall be maintained at a location accessible to **Kasco, Inc**.

Contractor is responsible for notifying **Kasco, Inc**. of any hazardous chemicals or substances that are brought or cause to have been brought on projects. Contractor shall provide **Kasco, Inc**. with a copy of Contractor's Hazardous Communication Program, Chemical information list, and Safety Data Sheet(s) (SDS) for the chemical(s) or substance(s) intended for use on the site. **Kasco, Inc**. will provide a centrally located place for this information. Contractor is responsible for maintaining a copy of Contractor's Hazard Communication Program, Chemical Information List, and Safety Data Sheet(s) on site for Contractor's own reference and employee training. The proper storage, use and disposal of wastes of any hazardous chemicals or substances are the responsibility of Contractor.
Contractor is responsible for conforming to OSHA and NFPA standards of fire protection and prevention practices. Contractor shall also comply with all fire and safety rules and regulations established on the project.

If Contractor fails to correct safety violations, **Kasco, Inc**. will issue the Contractor written notification, outlining safety violations. Failure of the contractor to abate may result in the removal of the Contractor, and **Kasco, Inc**. approved bidders list, or other appropriate measures.
Compliance with Federal, State, Local Laws and regulations is the contractual obligation of Contractors. Conflicts between current laws or contractual requirements shall be resolved by adhering to the more stringent requirement. Any project site safety regulations, which exceed the minimum standards established by OSHA, shall be incorporated in Contractor's safety program.
The Contractor shall ensure that its supervisors are aware of their responsibilities, which include:

- Become familiar with the requirements of all accident prevention standards and safety rules pertaining to their job.
- Be responsible for carrying out the procedures required by the Safety Program.
- Ensure that each employee under their supervision has received the initial project safety orientation provided by **Kasco, Inc**.
- Explain to all employees applicable safe practice rules and regulations under their direct supervision.
- Supervise the instruction and training of new employees either personally or through delegated experienced persons until the new employee satisfactorily demonstrates their ability to perform the work in a safe and efficient manner.
- Be responsible for continuous housekeeping in their area and for the use and maintenance of

all personal protective devices, equipment, andsafeguards.

- Notify their direct supervisor and/or the contractor's safety representative concerning work areas where they believe protective devices arerequired. **NOTE: Such safety devices will include, but not limited to, the following: machine guards, operational shields, exhaust vent hoods and systems, welding shields, approved personal protective equipment, automatic stops and controls, barricades, railings, etc.*
- Report to their own direct supervisor all cases of employees who, in their opinion, are not qualified for the work to which they have been assigned or who engages in unsafepractices.
- Attend and participate in all supervisors' safety meetings.
- Conduct or arrange for weekly "toolbox" safety meetings for all employees under their supervision as required. Minutes of Tool Box Talks are to be maintained and a copy of each Talk is to be given to **Kasco, Inc**. before end-of -shift the daygiven.
- Report immediately, all accidents in which personal injury, property damage or a near-miss occurs. Should an accident occur involving a Contractor's employee, the Principal/Owner of the Contractor shall attend a "Principals" meeting to review the incident. **Kasco, Inc**. will conduct thismeeting.
- Assist in accident investigation and submit a report promptly on required forms. Lessons learned from such investigations shall be incorporated into all future daily activities and plans of the contractor. In the event a contractor utilizes employees whose primary language is not English, the contractor shall provide for appropriate interpretation to assure complete comprehension.
- Periodically analyze work methods in detail for the purpose of job simplification and for the establishment of safe work methods. Safety inspections are to be an ongoing process and documented at least weekly. Contractors should document inspections on the Safety Audit Checklist or approved Contractor's form and submit to **Kasco, Inc**.
- Ensure that all hazards created in an area as a result of work activities are addressed before the crew leaves the area, including breaks or lunch.

RESPONSIBILITIES – EMPLOYEES

No employee shall be required or knowingly permitted to work in an unsafe environment except for the purpose of making safety corrections and then only after proper precautions have been taken for their protection.

Each employee is responsible for learning and abiding by those rules and regulations which are applicable to the assigned tasks and for reporting observed or anticipated hazards to their immediate supervisor. If the hazard is not immediately corrected, the affected employee will report the hazard to **Kasco, Inc**.

All employees shall observe the following rules of conduct:

- **Courtesy:** Employees shall observe standards of behavior and conduct their work in a manner to avoid offending any Owner employees or visitors. **Each individual must be given the courtesy that would be extended to one's family or best friend.**
- **Personal Protective Equipment:** All persons will wear hard hats, eye protection, and work boots in good condition with substantial soles. All other personal protective equipment, including respirators or gloves, as appropriate to assigned tasks, shall be utilized in the proper manner at all times while there is exposure to thehazards.
- **Clothing:** Clothing suitable for the weather and work shall be worn. Torn or loose clothing,

cuffs or neckwear, which may be a hazard, are not allowed. Shirts must be worn and have sleeves. Pants must have legs (no shorts allowed). Clothing shall be maintained in a clean, neat and repaired fashion.

- **Vehicle:** Employees shall park their vehicles in designated areas. Operation of vehicles shall conform to all local traffic laws. The maximum speed limit is 15 miles per hour. ***There will be no cell phone usage permitted while operating any type of vehicle.***
- **Smoking:** Smoking or tobacco is NOT allowed on our projects.
- **Intoxicants:** Consumption of alcoholic beverages or controlled substances is not allowed. All workers who are taking physician-prescribed or over-the-counter medication must be fit for work. **All employees are specifically directed to the "Drug Policy" which is a part of this Safety Program.**
- **Accidents:** All employees must immediately inform their supervisor of any injury or any non-injury accident, which involves damage to property, person or equipment. This incident must be reported to **Kasco, Inc**.immediately.
- **Personal Conduct:** Practical jokes, horseplay, scuffling, wrestling or fighting is prohibited.
- **Good Housekeeping:** Good housekeeping is mandatory and every employee must do their part daily to minimize dust and to clean up their work area to keep the project clean for safety and efficiency. **Controls shall be observant to ensure dirt is not tracked into areas outside the workspace.** Clean up methods shall follow prescribed techniques to minimize the distribution of dust into the air.
- **Authorized Access:** Employees shall confine their activities to the areas designated as the work site. The employee's supervisor shall obtain permission from the **Kasco, Inc**. representative prior to entry into any areas outside the work site.
- **Fire Protection:** Employees shall adhere to all fire protection regulations, and shall conduct their work in a manner to preserve the fire safety integrity of the building.
- **Music:** No televisions, radios, MP3 players, CD players or cassette tape players are allowed.

GENERAL REQUIREMENTS

ACCIDENT INVESTIGATION

For all injuries or near-misses, **Kasco, Inc**. is to be notified immediately. Copies of **ALL** accident reports must be filed with **Kasco, Inc**. immediately.

It will be each Contractor's responsibility to complete the First Report of Injury for his employees and to transmit copies of these reports immediately to **Kasco, Inc**. Any accident or incident resulting in a lost-time injury, fatality, damage to property or equipment, a serious "near-miss" or the recognition of a potential hazard to health and environment is to be investigated by a committee comprised of the following, as appointed by the Project Manager, Project Superintendent, Project Safety Representative, Emergency/Health Safety Manager and Contractors supervisor or anyone familiar with the practices involved in the incident who can contribute to its analysis and make recommendations for action to prevent a reoccurrence. The investigation shall begin promptly after the incident. Results of the investigation and recommendations for preventative action shall be documented within five (5) workdays of the incident. If the Owner agrees, a brief news release shall be posted, to inform workers, covering fatalities and serious occurrences. The occurrences are to be discussed at the regular and/or special safety meetings. This investigation and report shall be completed immediately, but release may await any similar investigation and/or reports required by government regulations.

Kasco, Inc. shall also review first aid injuries to establish trends and practices that deviate from work standards, and shall report and take corrective actions.

Kasco, Inc. shall provide the Owner with the Monthly Progress Report, a safety report covering safety activities for the preceding month. The report shall include:

The accident experience, recordable, lost-time, first aid and near-hit incidents for themonth.

The relationship of accident experience to number of people employed using a recognized national standard for recordable injuries and lost-time injuries.

Review and summary of the safety activities, problem areas and contemplated action, including fire hazards and environmental hazards.

ACCIDENT REPORTING PROCEDURES

For all fatalities, cases requiring hospitalization, OSHA recordable events or possible lost-time injuries, **Kasco, Inc**. is to be notified immediately. **Kasco, Inc**. will immediately notify Owner and proceed to follow **Kasco, Inc**. Emergency Action Plan. **Kasco, Inc**. will follow up with the insurance carrier's Claim Representative of all accidents and will immediately forward Employer's First Report of Injury Forms, General Liability Loss Notice Forms, subsequent inquiries or correspondence received relative to the matter, including Court Summons or other legal documents, to the Claim Representative with copies to the **Kasco, Inc**. Corporate Attorney. Copies of **ALL** accident reports must be filed with the Project Manager immediately.

Aerial Lift Platforms

This section applies to equipment that has a primary function of elevating personnel, together with their tools and necessary materials, on a platform which is mechanically positioned. This equipment includes boom-supported elevating work platforms, manually propelled elevating work platforms, and self-propelled elevating work platforms. Common names for these items include: JLG Lifts, Boom Lifts, Scissors Lift and the like.

Construction and Design

Aerial work platforms shall be designed, constructed and tested so as to be in compliance with the requirements of the American National Standards Institute (ANSI).

Aerial work platforms shall not be field-modified for uses other than those intended by the manufacturer, unless the manufacturer has certified the modification in writing.

Directional controls shall be of the type that will automatically return to the off or neutral position when released, protected against inadvertent operation, and clearly marked as to their intended function.

Special workings, cautions, restrictions, rated workload and a clear statement of whether or not the aerial work platform is electrically insulated shall be clearly marked in a permanent manner on each aerial work platform.

Rotating shaft, gears and other moving parts that are exposed to contact shall be guarded.

Maintenance and Repair

Each aerial work platform shall be maintained, repaired and kept in proper working condition in accordance with the manufacturers or owner's operating or maintenance and repair manual or manuals.

Any aerial work platform found not to be in a safe operating condition shall have a tag affixed that reads "DO NOT USE" or similar wording and be removed from service until repaired.

All repairs shall be made by a qualified person in accordance with the manufacturers or owner's operating or maintenance and repair manual or manuals.

All danger, caution and control markings and operational plates shall be legible and not obscured or damaged in such a way to make markings and/or wordings unreadable.

The operating instructions shall be located and maintained on each aerial work platform.

Operator Permits/Certification

Kasco, Inc. shall ensure that each Contractor who operates an aerial work platform has the proper training for the equipment in questions and that each operating employee has been issued an aerial work platform permit or operator certificate.

A permit shall be carried by the operator or be available at the job site.

A permit shall indicate the type of aerial work platforms an operator has been trained on and is qualified to operate.

A permit shall be valid for a period of no more than three years from date of issuance.

A permit shall contain the firm/company name, operator's name, name of issuing authority, types of aerial work platforms the operator is authorized to use, date of issuance and expiration date.

INSTRUCTION AND TRAINING

Kasco, Inc. shall ensure that each employee who will operate an aerial work platform has completed instruction and training regarding the equipment he/she will operate. Such instruction shall comply with and contain the following:

A qualified person shall deliver the instruction and training. The qualified person shall ensure that the training is documented and filed.

Each operator shall be instructed in the intended purpose and function of each of the controls.

Each operator shall understand by reading or by having a qualified person explain the requirements as outlined in this procedure.

The training shall include a written test or opportunity for questions to ensure the operator comprehends the instruction and information presented.

PRE-OPERATION RULES AND PROCEDURES

Before use on each shift, an aerial work platform shall be given a visual inspection by the operator. The operator will look for:

- Backup alarm must be audible and in working condition.
- Cracked welds.
- Bent or broken structural members.
- Hydraulic or fuel leaks.
- Damaged controls and cables.
- Loose wires.
- Tire condition.
- Fuel and hydraulic fluid levels.
- Platform is clean and free of existing debris, material, etc.
- Ensure safety gate and/or guardrails are in good condition and operate properly.
- Slippery conditions on the platform.
- Inspect all anchorage points for any cracked welds, bent members, etc.

Before use on each work shift, the operator will operate all platform and ground controls to ensure that they perform their intended function.

Before the aerial work platform is used, and during use on the job site, the operator shall inspect the work area for ditches, drop-offs, holes, floor obstructions, debris, overhead obstructions, power lines, extension cords, hoses and any similar conditions that may present an unsafe condition.

All unsafe items or conditions identified, as a result of the inspection of the aerial work platform and work area, shall be corrected before further use of the aerial work platform.

OPERATING RULES AND PROCEDURES

Aerial work platforms shall be used in accordance with the manufacturer or owner's operating instructions and safety rules.

A minimum of 20 feet clearance shall be maintained between the aerial work platform and energized electrical power lines operating at voltages up to 50kV. The local safety manager should be consulted before working under or near electric power lines operating at voltages greater than 50 kV.

The manufacturer's rated load capacity shall not be exceeded.

Only the operator, their tools and necessary materials shall be on or in the platform.

The platform guardrail system shall not be used to support materials, other work platforms or

employees. The operator shall maintain firm footing on the platform while working on the platform.
The operator shall not stand on the platform guardrail system.
The use of railings, planks, ladders or any other device on the platform for achieving additional height is prohibited. See FALL PROTECTION/RESTRAINT for guidance in fall protection and restraint requirements when operating aerial work platforms.
Small compressed gas cylinders, 24 inches or less in length, can be placed on the platform deck. These cylinders must be positioned upright, rest on the platform deck, be secured and totally contained within the platform.
A fully charged and inspected fire extinguisher must be present on the platform deck with an aerial work platform is in use.
Do not travel horizontally in a scissor-type lift while the platform is in the extended position. The scissor-lift platform must be lowered to its lowest position before the lift can be moved.
Look in the direction of, and keep clear view of, the path of travel and make sure that the path is firm and level. Maintain a safe distance from obstacles, debris, drop-offs, leading edges, holes, depressions, ramps, overhead obstructions, overhead electrical lines and other hazards.
Outriggers or stabilizers, when provided, are to be used in accordance with the manufacturer's instruction. Outriggers and stabilizers shall be positioned on pads or a solid surface.
Aerial work platforms shall be elevated only when on a firm and level surface or within the slope limits allowed by the manufacturer's instructions.
Platform gates or safety chains shall be closed while the platform is in the elevated position.
Stunt driving and horseplay on aerial work platforms is prohibited.
Altering, modifying or disabling safety devices or interlocks is prohibited.
Care shall be taken to prevent hoses, cords and ropes from becoming entangled in the aerial work platform. Platform operators shall ensure that the area surrounding the lift is clear of workers and equipment before lowering the platform.

FALL PROTECTION/RESTRAINT

When operating aerial work platforms, fall protection in the form of a full-body harness equipped with shock- absorbing lanyard shall be worn when the manufacturer instructions recommend such use and an approved anchorage point is provided as part of the platform.
When operating aerial work platforms, a full-body harness equipped with shock-absorbing lanyard shall be worn as a fall restraint when required by the customer, state or local codes/requirements or when required by contract.

ASSURED GROUNDING/ELECTRICAL GROUND FAULT PROTECTION

When an electrical ground fault occurs, the current flows through the path with minimum impedance to the ground. It is imperative that an employee does not become the conductor of this current.
There are two approved methods for protecting workers from ground fault incidents:
Use of a ground fault circuit interrupter, commonly referred to as GFCI or GFI.
Implementation of an assured grounding program.
Ground Fault Circuit Interrupter (GFCI)
All 120 volt, single phase 15 and 20 amp receptacle outlets on work sites, which are not part of the permanent wiring of the building or structure and which are in use by employees, shall have

an approved ground fault circuit interrupter for personnel protection.
Receptacles on a two-wire, single phase portable or vehicle-mounted generator, rated not more than 5 kW, where the circuit conductors of the generators are insulated from the generator frame and all other grounded surfaces, need not be protected with ground fault circuit interrupters.
Attention shall be given to the proper installation and maintenance of GFCIs within the National Electric Code (NEC). The system shall be tested prior to being put into service and the test results documented and kept on file. If a fault trip-out occurs after the circuit has been tested and put into service, a thorough investigation must be made to determine the cause. The necessary repairs or corrections shall be made before reusing.
In purchasing GFCIs, they shall conform to the Underwriters Laboratories (UL), Standard 943, GFCI. Each circuit protected by a circuit breaker GFCI requires its own neutral conductor.

ASSURED EQUIPMENT GROUNDING PROGRAM

An established and implemented assured equipment grounding program shall cover all cord sets, receptacles which are not part of the permanent wiring of the building or structure and equipment connected by cord and plug, which are available for use or used by workers.
Inspections of included equipment shall be conducted:
Before each use
Before equipment is returned to service following repairs
Before equipment is used after any incident, which can be reasonably suspected to have caused damage to the equipment.
Every calendar quarter
Each cord set, electrical tool, receptacle and piece of electrical equipment shall be tested to assure continuous ground circuit, and that the equipment- grounding conductor is connected to its proper terminal. The testing equipment shall be capable of testing for ground conductor continuity and resistance, line fault and proper connection of conductors and terminals. All testing equipment shall be calibrated and tested every three months and these results shall be documented.
Receptacles, which are a permanent part of the wiring of the permanent building or structure, are excluded from the quarterly testing and inspection requirement of this procedure. However, after installation and before initial use, each receptacle shall be tested.
To verify inspection and testing, a color coding system shall be developed. Each item inspected shall be coded with the appropriate color for that quarter. Colored tape affixed to the cord at the plug end is used to indicate a piece of equipment has been inspected and tested. The color coding system shall be in conformance with the following matrix:

COLOR	QUARTER
Yellow	1st (January to March
Green	2nd (April to June)
White	3rd (July to September)
Red	4th (October to December)

Any electrical tool, cord set or piece of electrical equipment which bears an expired inspection color or is missing an inspection color shall be considered defective and shall be removed from service until it has been inspected and properly coded.
Any individual who authorizes the use of expired equipment is subject to disciplinary action(s).
Daily, each cord set, electrical tool or piece of electrical equipment shall be visually inspected by

the user before use for signs of damage. Equipment found to be damaged or defective shall be immediately removed from service until repaired and processed through the electrical equipment testing protocol outlined in this section.

Concrete (Cast-In-Place)

All equipment and materials used in concrete construction and masonry work shall meet the applicable requirements as prescribed in ANSI A10.9 most recent version, "Safety Requirements for Concrete Construction and Masonry Work".

Confined Space Entry

Contractors shall develop an entry procedure to be used when Contractor's employees are required to enter confined areas or spaces. Confined space entry procedures will conform to OSHA 1926 Subpart AA and the Owner's requirements.

A confined space entry permit must be completed and posted at the entrance to the confined area. Documentation of appropriate formal training for all involved in the confined space activity (entrants, attendants, supervisors and rescue personnel) shall be submitted to **Kasco, Inc**. for approval prior to any entry.

Crane Safety and Rigging

Contractors whose activities require the use of cranes shall be responsible for their proper set up and operation, and shall advise **Kasco, Inc** prior to the arrival on-site.

The Contractor shall supply **Kasco, Inc** with documented evidence of their competent person's training.

Inspection

Contractors shall provide **Kasco, Inc** evidence of annual inspection by a third-party inspection agency not under the control or ownership of the crane owner and approved by the **Kasco, Inc** Regional Safety Manager. All repairs and adjustments noted on the inspection shall be corrected prior to nextuse.

This applies to power-operated equipment used in construction that can hoist, lower and horizontally move a suspended load. Such equipment includes, but is not limited to: articulating cranes (such as knuckle-boom cranes), crawler cranes, floating cranes, cranes on barges, locomotive cranes, mobile cranes (such as wheel-mounted, rough-terrain, all-terrain, commercial truck-mounted, and boomtruck cranes), multi-purpose machines when configured to hoist and lower (by means of a winch or hook) and horizontally move a suspended load; industrial cranes (such as carry-deck cranes), dedicated pile drivers, service/mechanic trucks with a hoisting device, a crane on a monorail, tower cranes (such as fixed jib "hammerhead" boom, luffing boom and self-erecting), pedestal cranes, portal cranes, overhead and gantry cranes, straddle cranes, side-boom tractors, derricks, and variations of such equipment.

Daily and Pre-Shift Inspections

Daily and pre-shift inspections shall be performed by a competent person designated by the contractor in accordance with the manufacturer's recommendation and ANSI B30 Standard for

the type of crane being inspected and the most current version. This inspection shall be completed prior to each shift starting work.

OPERATION

This certification will be for each crane and lifting device and associated rigging equipment brought onto the project. If one year has elapsed since the last inspection, or if the crane or its associated rigging has sustained any incident which may have resulted in damage, the crane and its associated rigging shall be fully re-inspected with proof of inspection provided to **Kasco, Inc**. No work shall proceed without evidence of a current annual inspection meeting **Kasco, Inc** requirements. No claims will be accepted for losses sustained by the Contractor for delays caused by failure to comply with these requirements.

Cranes and other powered lifting devices shall be inspected by the operator:

- After set-up and prior to initial lift.
- Before each shift.
- After every malfunction.

OPERATIONAL AIDS

ANTI-TWO BLOCKING DEVICE

Telescopic boom cranes manufactured after February 28, 1992, shall be equipped with a device which automatically prevents damage from contact between the load block, overhaul ball, or similar component, and the boom tip (or fixed upper block or similar component). The device(s) must prevent such damage at all points where two-blocking could occur. *Temporary alternative measures:* Clearly mark the cable (so that it can easily be seen by the operator) at a point that will give the operator sufficient time to stop the hoist to prevent two- blocking, and use a spotter when extending the boom.

LATTICE BOOM CRANES

Lattice boom cranes manufactured after February 28, 1992, shall be equipped with a device that either automatically prevents damage and load failure from contact between the load block, overhaul ball, or similar component, and the boom tip (or fixed upper block or similar component), or warns the operator in time for the operator to prevent two-blocking. The device(s) must prevent such damage/failure or provide adequate warning for all points where two-blocking could occur.

Lattice boom cranes, and derricks, manufactured one year after the effective date of this standard shall be equipped with a device which automatically prevents damage and load failure from contact between the load block, overhaul ball, or similar component, and the boom tip (or fixed upper block or similar component). The device(s) must prevent such damage/failure at all points where two-blocking could occur.

Exception: The requirements do not apply to such lattice boom equipment when used for dragline, clamshell (grapple), magnet, drop ball, container handling, concrete bucket, marine operations, and pile driving work.

Temporary Alternative Measures: Clearly mark the cable (so that is can easily be seen by the operator) at a point that will give the operator sufficient time to stop the hoist to prevent two-blocking, or use a spotter.

SPECIAL PROCEDURES

A lift procedure shall be developed by the Contractor for the following and submitted to **Kasco, Inc** prior to the lift taking place:

Critical Lift (defined as when lifting a load where the weights are at or over 50% of the rated

capacity of the crane and rigging as determined by the manufacturer)
Multi-Crane Lift
100 Tons or greater Lift
Any application that deviates from the manufacturer's recommendations
When special or unique hazards are under or adjacent to the load at any time during the lift
When **Kasco, Inc** determines such a procedure is necessary
The lift procedure will include a Hazard Analysis developed by the Contractor and submitted to **Kasco, Inc** along with Pre-Lift Meetings, which shall be held at 30 days prior to the lift, the day prior to the lift and immediately prior to the lift with the actual crew doing the lift.
All concerned parties must be present for the meetings with minutes of the meeting recorded by **Kasco, Inc**.
The lift procedure will include documentation of calculations which incorporates weight deductions of all rigging equipment, a load chart for the crane(s) that will be used, a project plan and layout sheet which will include the path of travel of the load, swing radius protection and any other necessary factors.
The crane operator(s) shall be proficient in the operation of the crane(s) and licensed in the State/City where the operation is being performed. Certification by the National Commission for the Certification of Crane Operators (NCCCO) is required.

RECORDKEEPING

All records pertaining to crane inspections shall be kept with the crane or in the trade contractor's project field office.
If during any safety inspection, the operator or supervisor cannot produce the required crane inspection sheets, the crane shall be shut down as soon as possible and shall be inspected.
Where crane operators are required to be licensed by the State, where the project is being built, they shall have a current license and provide by a copy to **Kasco, Inc** when requested.
Duplicates of certification records shall be maintained on the project by the Contractor and made available to **Kasco, Inc** upon request.The Contractor shall provide evidence of competency of the operator to **Kasco, Inc**.

RIGGING

A competent rigger appointed by the Contractor shall inspect all rigging equipment. Inspection shall be done and documented prior to each shift starting work.
All defective or damaged rigging equipment shall be immediately removed from the project.
Chain slings are not permitted to be used for any lifting operation unless specifically designed for a unique application.
Tag lines shall be used on all loads.

DEMOBILIZATION

The Project Superintendent and each contractor shall organize and schedule the orderly removal of their offices and trailer facilities, the termination of temporary utility services, the transfer of telephone services to their offices, and the forwarding of mail.
All projects shall be left in the conditions specified by the contract documents.
The Project Superintendent shall inspect each project with the Owner to verify all permanent security and safety devices are in place and performing their intended function.

DEMOLITION

Prior to any demolition work, a demolition plan shall be developed and implemented. Any such plan shall include the following:
A survey completed by a competent qualified person to determine the condition of the structure; including framing, floors, walls, and the possibility of unplanned collapse of any portion of the structure or any adjacent structure where persons may be exposed.
Proper disconnection of all utilities
Method of removal/abatement of any hazardous conditions such as asbestos, lead, or hazardous waste.
Dust control methods if demolition work will create dust.
When permitted, a Job Safety Analysis (JSA), Pre-Task Analysis (PTA) or any similar document shall suffice for a demolition plan.

DISCIPLINE – ENFORCEMENT

All contractors and suppliers shall participate in the Safety Program. Should an imminent dangerous condition be discovered, all work in the area of danger will be stopped until corrective actions have been implemented.

Should **Kasco, Inc** find Contractor work areas or individuals being or acting in non-compliance with OSHA or the Safety Program, **Kasco, Inc** shall have the authority to order immediate corrective action of the non- compliant occurrence.

All costs of corrective action shall be paid by the trade contractor deemed responsible. If more than one contractor is deemed responsible, **Kasco, Inc** division of responsibility shall be final. Nothing contained herein, however, shall serve to relieve the Contractor of their liabilities and/or obligations under OSHA as well as other applicable Federal, State and Local requirements as well as the Safety Program.

Kasco, Inc may withhold payment to Contractor(s) for failure to follow the Safety Program policies and procedures.

Kasco, Inc shall issue a written, 24-hour notice in this regard requiring immediate response by the contractor.

Repeated violations or lack of cooperation with regard to the Safety Program by employees of a contractor will indicate non-compliance with provisions included in the contract and may be reason for the employee to be barred from the project and/or termination of the Contractor's contract.

At orientation, new employees are given their first warning: These are the rules; if you fail to abide by them, you will receive a citation.

- **1st Citations**: Notice is sent to employer. Employee must come in and see **Kasco, Inc** to review violation so we can be sure the employee knows how serious this citation is and what corrective action must be taken. A fine to the Contractor will be imposed.

- **2nd Citations:** The individual will be removed from the property. A fine to the Contractor willbe imposed. **This constitutes three (3) warnings. Without delay, the individual will be banned from further access to the project.**
- **'Immediate Removal from the Property' Citations** will result when:
  - Any employee, supervisor or manager exposes themselves or others to eminent loss of life.
  - Any employee, supervisor or manager openly exhibits disregard, defiance or disrespect for the Safety Program.
  - Any employee, supervisor or manager knowingly falsifies any investigative document or testimony involved in an investigation.
  - Violent physical encounters (fighting) occur. All individuals involved in the incident are subject to removal.
  - Threats are made against any safety personnel performing their duties.
  - Theft or destruction of property occurs.
  - Any employee, supervisor or manager consumes, possesses, distributes or is under the influence of alcohol and/or drugs.
- Other Citations: Violations of safety, traffic, housekeeping or material storage rules.

Dispute Resolution

Kasco, Inc shall have the final decision in the resolution of all disputes involving the Safety Program.

DISCIPLINE – FINES

Fines (Refer to Appendix A: Table of Fines)

Fines **<u>are not</u>** to be collected from the individual violator.

Kasco, Inc.'s Project Manager will collect them from the Owner of the respective company at the monthly safety meeting. This is to be paid by a separate check.

These funds will be used to fund a reward/incentive program for those who work and are safe individuals or groups. Any money remaining at the completion of the project will be donated on behalf of all workers and companies employed on the project to a local charity.

DRUG DETECTION/ENFORCEMENT POLICY

Kasco, Inc. prohibits the use, possession, distribution, or sale on project premises, facilities, or work places of any of the following: alcoholic beverages, intoxicants, drugs and related drug paraphernalia.

Workers must not report for duty or perform work while under the influence of any drug, alcoholic beverage, or intoxicant. Workers on project premises will be subject to search as provided herein. Workers will be required to consent to drug testing as provided herein.

This policy will apply where state law or regulation and/ or collective bargaining agreements allow.

RIGHT TO SEARCH

Kasco, Inc. reserves the right, upon reasonable cause, to search any personal effects, vehicles, lockers, baggage, lunch boxes, toolboxes or other suspect item(s) for contraband. Any individual who enters project premises is deemed to consent to this safety procedure. Searches will be

conducted on an "as needed" basis as determined after consultation with **Kasco, Inc**. corporate management. There will be a worker representative and/or other witnesses, which may include law enforcement officers, to all searches conducted by the company. A worker who refuses to submit to a search as described in this policy is subject to disciplinary action, up to and including immediate discharge by the controlling employer. Contractors and/or workers who refuse to submit to a search are subject to removal and denial of futureaccess to the project premises. A worker on project premises, facility, or work place in possession of contraband is subject to disciplinary action, up to and including immediate termination by the **Kasco, Inc**. and/or Contractor. Contractors and/or workers who are in possession of contraband are subject to removal and denial of future access to projectpremises.

DRUG DETECTION THRESHOLD TABLE

Drug, Drug Group or Drug Metabolites	Typical Detection Threshold, mg/mL
Amphetamines	300 – 1250
Cannabinoids (marijuana)	20 – 100
Cocaine	300
Opiates	300
Phencyclidine (PCP)	25 – 75
Benzodiazepine	200
Methadone	500
Phencyclidine	100
Propoxyphene	50

All confirmatory drug testing shall be done in an NLCP certified facility

PRESCRIPTION DRUGS

Any worker using a prescription drug, which may impair mental or motor function, shall notify their employer, as soon as possible, who is to notify **Kasco, Inc**. For the safety of all workers, **Kasco, Inc**. may direct the Contractor to not permit the worker on project premises until released as fit for duty by the prescribing physician. **Kasco, Inc**. reserves the right to obtain a confirming medical opinion before allowing the worker to return toduty.

WORKER PRE-ASSIGNMENT TASKING

All workers, salaried or hourly, who are hired, transferred or temporarily assigned to project premises, shall be required to consent to drug testing prior to assuming project responsibilities. Contractors shall certify to **Kasco, Inc**. in writing on company letterhead, signed by an officer of the company, their current workers have passed a drug test within the last three (3) months prior to assignment to working on project premises or have been subject to a random drug/alcohol testing program which has tested a representative sample of at least twelve percent of the employer's workforce over the last year prior to commencing work on projectpremises.

WORKER TESTING

After an accident or incident, **Kasco, Inc**. will ask the Contractor to test all those involved. **Kasco, Inc**. will also ask the Contractor to test workers when a reasonable suspicion exists that the worker has been using drugs or alcohol. The maximum level or alcohol blood content shall not exceed 0.08g/100mL blood orequivalent.

All drug and alcohol testing, pre-assignment or post-accident/incident, shall be administered by a third party.

DISCIPLINE AND REHABILITATION

Each Contractor shall certify they have a Drug Enforcement Policy which incorporates, as a minimum, the following requirements:

When an applicant submits to pre-assignment testing and passes the required test, s/he will be eligible for further employment consideration.

If the applicant fails the required test, s/he may reapply for employment consideration after a period of no less than sixty (60) calendar days have elapsed. The Contractor may waive this sixty-day waiting period if the applicant completes an acceptable drug/alcohol rehabilitation program and presents acceptable proof of completion of the program to the Contractor. An applicant who fails the second test will not be considered for employment at the project premises for a period of no less than oneyear.

All workers who refuse to submit to a drug and alcohol test, or who fail to pass a drug and alcohol test will be removed from the project premises and will be referred to their personnel management for disciplinary action.

FINANCIAL OBLIGATION OF THE CONTROLLING EMPLOYER

The Contractor will bear the cost of time, transportation and testing for workers who are being given drug and alcohol tests.

CONFIDENTIALITY

Kasco, Inc. will take steps to maintain the confidentiality of information generated by the implementation and enforcement of this policy and these procedures. Disclosure will be made only in appropriate circumstances. The Contractor shall be responsible for maintaining the confidentiality of all information generated by the implementation and enforcement of this policy and these procedures for their own workers. **Kasco, Inc**. shall have the right to audit compliance with this policy and these procedures by the Contractor which shall include access to this confidential information.

TRAINING

Contractors shall be training to recognize appropriate symptoms and to administer the policy in a consistent, confidential and intelligent manner.

CONTRACTOR AND SUPPLIERS

Kasco, Inc. and all contractors shall include the provisions of this policy and these procedures, or another acceptable program, in their contracts with contractors, suppliers, consultants, agents and others involved in providing goods or services on the project premises, and will require they do the same with respect to their lower- tier contractors, suppliers, etc.

POSTING AND DISTRIBUTION

Significant sections of this policy and these procedures will be given to each applicant and worker upon request.

A warning notice will be posted in a conspicuous location on the project premises. This Minimum Drug Enforcement Policy will be included in each pre-bid and pre-construction meeting as well as an integral part of the Safety Program and contract documents.
Kasco, Inc. may revise and amend this policy and these procedures as required.

PROCEDURES FOR EXAMINATION

POST-ACCIDENT SCREENING WHEN REQUIRED BY KASCO, INC

A company supervisor is to accompany injured company worker(s) or those involved in the accident or incident involving a company worker to the clinic or medical facility.
A Contractor's supervisor will be required to accompany their injured worker(s) to the medical facility.
Contractors shall certify any worker(s) involved in an accident or incident tested negative for drugs and alcohol prior to allowing them to return to the project premises.
If the injured worker refuses to give a specimen of bodily fluid, the supervisor is to notify the Contractor. The worker is to be advised, again, that the refusal to submit to drug screening is a violation of the Safety Program's drug, alcohol and other prohibited articles safety policy and refusal will result in removal from project(s).
Results of all drug screenings and analyses must remain strictly confidential.
Workers must report all injuries immediately to their supervisor, whether the injury requires medical treatment or first aid only. **Late reporting may result in denial of a claim.

RANDOM TESTING POLICY

Urine and/or blood drug screening analysis of workers and others on the project premises may be conducted on a random basis at periodic, unannounced intervals during the construction of the project. Controlling employers must certify negative results; otherwise worker shall not be permitted to return to the project premises.

ELECTRIC – TEMPORARY

All electrical work, installation and wire capacities shall be in accordance with the pertinent provisions of the National Electrical Code (most recent version), ANSI and OSHA standards.
All 120 volt, singe phase, 15 & 20 amp temporary power circuits (with the exception of temporary lighting) shall have ground fault circuit interrupters installed. In addition, all tools, cords and power sets shall have an assured equipment inspection program maintained on quarterly basis.
The color codes used for identifying inspected and tested equipment on this project are:

January, February, March	**White**
April, May, June	**Green**
July, August, September	**Red**
October, November, December	**Orange**

(NOTE: The cycle of colors is repeated for the following year)
Portable tools will have the appropriate color code affixed to the male (plug) end following inspection. Extension cords will have the appropriate color code affixed to both ends (plug and receptacle). The previous quarter's color code will be removed to avoid confusion.
When using permanent power, once established in new construction or in renovation work, Ground Fault Circuit Interrupters must be used in conjunction with the AEGC inspections.
All necessary open wiring must be made inaccessible to unauthorized employees or visitors and not be subject to damage. Open wiring in NOT acceptable for temporary lighting circuits.
Lighting on barricades, fences or sidewalk coverings shall be encased in metal raceway.
Temporary lighting must have guards to prevent accidental contact with the bulb except where the bulb is deeply recessed in the reflector.

Temporary lights shall not be suspended by the cord unless the fixture was specifically designed in that manner. Portable electric lighting used in moist or other hazardous locations such as drums, tanks, vessels, bins, bunkers, etc. shall be operated at a maximum of 12 volts (non-explosive).

All shop lighting and portable task lighting shall have a cover and guard installed when in use or available for use. Extension cords used with portable tools must be a heavy-duty 3-wire type minimum 12ga.

Flat extension cords are prohibited. Damaged electrical cords shall not be used.

All extension cords will be suspended seven feet (7') above finish floor or work platform.
Extension cords will not be fastened with staples, hung from nails, or suspended by non-insulated wire.

All non-current carrying parts of electrical equipment must be grounded or have an approved double-insulated setup. Grounded circuits must have enough capability to carry all currents likely to be imposed on it.

Contractor shall determine before operations start if there is any energized equipment or electrical circuit in the work area, which might have risk to the worker. Equipment and conductors that must be de-energized shall be identified to the **Kasco, Inc**. who will arrange to de-energize the equipment under the Lockout/Tagout procedure/system.
Contractor shall use the project Lockout/Tagout procedure and strictly adhere to the use of this requirement. **Kasco, Inc**. will monitor adherence to the procedure on a regular basis.
All temporary power panels shall have covers installed at all times. All open or exposed breaker spaces shall be adequately covered, and labeled.

All electrical equipment and wiring in hazardous locations must conform to the National Electrical Code standards. The frames of all cutting, welding (arc, heli-arc, gas-plasma-arc) machines shall be grounded.

Fish tapes or lines made of metal or any other conductive medium are prohibited.
Nonconductive tapes and lines will be used in their place.

All temporary wiring shall be effectively grounded in accordance with the National Electrical Code (Articles 305 and 310). All wiring used for temporary lighting shall be in accordance with the most recent NEC.

Electrical tie-ins shall be conducted only on de-energized (locked out/tagged out) systems. If a condition makes this procedure impossible then a pre-task safety meeting with **Kasco, Inc**. is required. All such "live work" shall conform to NFPA 70E, most recent edition**.** Defective Electrical Tools and Equipment

All electrical tools and extension cords found to be defective (Examples: missing or broken ground pins, exposed internal conductors) will immediately be rendered in-operative by cutting off the plug end or by immediately removing from the project.

Elevated Work (Other Than Fall Protection)

Ladders

Manufactured ladders on the project shall comply with the regulations of ANSI-A14.1-1968 (or most recent version), Safety Code for Portable Wood Ladders or ANSI-A14.2-1972 (or most recent version), as required by OSHA. All ladders shall be used in the manner and for the purposes for which they were designed and constructed. The side rails or extension shall extend 36 inches above the landing. When this is not possible, grab rails shall be installed. All ladders in use shall be tied, blocked, stabilized by a second worker or otherwise secured against accidental displacement. Where adequate anchorages are available, workers shall tie off using a Personal Fall Arrest System or utilize a different means ofgaining access (i.e. scissor lift, scaffold, etc.) Portable metal ladders shall not be used.

Scaffolding

All employees erecting, using and/or dismantling scaffolds shall be trained in the hazards present and the safe procedures to be followed to eliminate exposure to those hazards and shall be provided with fall protection when 6-feet or more above the next lower level. The person or persons erecting the scaffolding must be designated as
a competent person. This person must be present during all aspects of the scaffolding being used and inspect such scaffolding before each use.

Concrete and Masonry

All equipment and materials used in concrete construction and masonry work shall meet the applicable requirements as prescribed in ANSI-A10.9-1970 (or most recent version) "Safety Requirements for Concrete Construction and Masonry Work".

Stairways

Upon delivery to the project, all office trailers and material storage trailers shall be provided with stairway access to all doorways and shall have landings with railings which allow for at least 20 inches of clearance in front of any door swing.

Hoists and Elevators

Temporary personnel elevators and materials hoists shall be constructed, installed and maintained in compliance with the manufacturer's instructions and the provisions of applicable statutes and regulations of governing authorities. No elevators or hoists are to be used for the movement of materials and personnel until the devices have been certified and licensed by a

third party inspector qualified to approve the equipment. No person shall be allowed to ride on a material hoist except for the purposes of inspections andmaintenance.

EMERGENCY ACTION PLANS

Emergency Action Plans are intended to establish protocol for preparing and responding to an emergency that may arise out of business operations. This document outlines and reviews the basic principles for the development of an "Emergency Action Plan" to ensure the safety and efficiency when responding to emergencies.

An emergency action plan has the following objectives:

- To provide effective action to minimize injuries and loss of life among company personnel in the case of emergency during businesshours.
- To protect company property.
- To implement, as soon as possible, recoveryoperations.
- To provide effective education to all personnel, in the area of preparedness, in case of an emergency during business hours.
- In the event of an emergency, **Kasco, Inc** Corporate Safety Officer shall be contacted immediately.

EMERGENCY CALLING PROCEDURES

In case of an emergency, when outside emergency services are required, these steps should be taken:

- Pick up the nearest phone and dial 9-1-1 (for outside emergencyservices).
- Give the following information:
- Your name
- The Company's Name
- Location (address, intersection, location onsite)
- Nearest cross street
- Type of emergency (fire, medical, chemicalspill)
- Telephone number you are calling from
- Do not hang up until you are certain the person receiving the call has all the information necessary.

EVACUATION PROCEDURES

For each office, project and shop location, develop an evacuation plan. Designate specific responsibility to employees and supervisors.

Develop a communication system, which will alert employees of the need to evacuate. Train employees in the communication process.

Designate specific reunion/meeting locations Conduct evacuation drill semi-annually.

FIRE PROCEDURES

Fire preparedness:

- Locate the fire extinguisher nearest to your workstation.
- Be familiar with the locations of all emergency exits and evacuation routes. Keep exits and evacuation routes clear.
- Know what action to take in the event of a fire. In the event of a fire nearyou.

Upon discovery of a fire, notify the fire department by calling 9-1-1, giving them the following information:

- Address you are calling from
- Name
- Phone number
- Type of Emergency
- Stay on the phone until the emergency operator hangsup.

In the event of a fire and you elect to fight the fire by use of a fire extinguisher, you should know these steps:

- Pull the pin off the fire extinguisher.
- Aim the nozzle of the extinguisher so it discharges at the base of thefire.
- Sweep the nozzle with a side to side motion across the entire width of thefire.
- Always fight the fire with your back to an exit.
- Do not allow yourself to become trapped.

After extinguishing the fire, move back and watch for a possible flashback of the fire. Do not turn your back on the fire or fire affected area. Always back away from thescene.

After the extinguisher is discharged, remember to have the fire extinguisher re-serviced and re-hang it. Never re- hang a used or discharged extinguisher.
If it is safe to do so, the fire should be fought with portable extinguishers until the fire department arrives. Keep in mind that your personal safety is of prime importance.

WHEN INSTRUCTED TO EVACUATE

Evacuate by the nearest, safe exit and evacuation route. Report to a designated reunion/meeting location.
Render assistance only when requested from the fire department or emergency services.

EMERGENCY PROCEDURES – MEDICAL: BLOODBORNE PATHOGENS

The Occupational Safety and Health Act (OSHA) 1910.1030, requires each employee exposed to blood and other infectious materials be advised of the potential blood-borne pathogen hazards and how to guard against those hazards.
Each contractor, and each subcontractor, whose employees are occupationally exposed to blood and other potentially infectious materials (including all bodily fluids in situations where it is difficult or impossible to differentiate between bodily fluids, etc.) must develop a list of such tasks on the project; instruct the employees in the potential risks involved; develop a labeling system for all infectious materials; train all potentially exposed personnel in the hazards and the proper controls for all listed tasks; provide safety materials and equipment; and offer appropriate medical treatment and advice for any exposure. These steps are outlined in detail in the following material.
Employee training for this requirement will be documented and acknowledged by signatures following each session using the documentation statement included in this Blood-Borne Pathogen Safety Program.

EXPOSURE CONTROL PLAN

Every contractor will be responsible for development and maintenance of a list of tasks within the project operations, which involve occupational exposure to blood and other infectious materials.

Each contractor will be further responsible for training their employees, obtaining medical services for their employees, and maintaining medical records for their employees assigned to all such hazardous tasks.
One copy of the list identifying the hazardous tasks and each employee assigned to perform those tasks will be forwarded to **Kasco, Inc**.
Employees will be allowed access to this Blood-Borne Pathogen Safety Program and to information regarding those specific tasks in their work area identified as involving exposure to blood and other infectious materials.
All questions relating to the Contractor's plan should be directed to the Contractor's Superintendent or safety officer.
All questions relating to the Safety Program are to be directed to **Kasco, Inc**.

EMPLOYEE INFORMATION AND TRAINING

All new and present employees will be given information regarding to the requirements of this Blood-Borne Pathogens Safety Program, the hazardous tasks present in their work place and the potential health risks of these tasks.
**This requirement must be met through orientation sessions for all employees prior to assignment to the specifically identified hazardous tasks and through annual refresher courses for all employees currently performing those tasks.
The information and training shall include the following elements:

- Risks and symptoms of exposure to blood-borne pathogens shall beidentified
- How to determine the presence of blood or other infectious materials in the workplace.
- Methods to be used to reduce or prevent the exposure to blood and other infectious materials, such as control procedures, work practices or personal protective equipment.
- Procedures to follow in the event of an exposure to blood or other infectious materials.
- Identification log maintained in the project office which lists all tasks involving occupational exposure to blood and other infectious materials on the project.
- When a task involves the handling of blood and other infectious materials, how those materials are to be contained, labeled and properly disposed.
- The necessity for proper housekeeping and personal hygiene techniques, including hand washing, shall be emphasized.

Employees must have the opportunity to ask questions and obtain answers from the trainer, who must be knowledgeable in the subject matter.

CONTAINER LABELING AND DISPOSAL

The Contractor and **Kasco, Inc**. will verify that all containers used to store or transport blood and other infectious materials generated at the project are clearly labeled with warning labels which include the orange or orange-red biohazard symbol and indicate the contents, the hazards involved and the name and address of the project. Red bags or containers may be used instead of labeling, but employees specifically trained in this program shall control the management of these receptacles.

The Contractor and **Kasco, Inc**. will ensure that all secondary containers of the blood and other infectious materials have clear warning labels with the same information as the original container.

Each contractor's Superintendent, or safety representative if one is assigned, shall perform the above responsibilities for all their material generated.
All containers of blood and other infectious materials shall be controlled until delivered to an authorized disposal facility for incineration or decontamination by legally approved means.
Arrangements may be made with a local hospital to receive and dispose of limited quantities of these regulated wastes in cases of first aid treatment.
Each contractor shall be responsible for proper disposal of all regulated wastes generated by their work.

HAZARDOUS NON-ROUTINE TASKS AND NEARBY WORK

In the event an employee is assigned to perform a non-routine task, or is assigned to work in an area where a non- routine hazardous task to their work is being performed, the employee will be given the additional information and training related to the hazards, which may be encountered in the non-routine task.
This information and training will be provided as described elsewhere in this plan by the first-line foreman, contractor safety representative or a trainer who must be knowledgeable in this subject.
This information will include the specific hazards of the task, the controls and protective measures required, the types of personal protective equipment required, how to use the equipment, the nature of other work being performed in or near the non-routine task and what emergency procedures are involve with the task.

UNIVERSAL PRECAUTIONS

To ensure employees who work on tasks presenting an exposure to blood and other infectious materials are afforded the greatest protection available, the following policy has been established:

- Prior to starting work on any task involving blood and other infectious materials, all employees will review safety precautions, which should be taken.
- Universal precautions shall be observed which means treating all blood and other potentially infectious material as if infectious.
- Particular attention shall be given to contaminated sharp objects which may penetrate the skin including, but not limited to, needles, broken glass and exposed ends of wires.
- Work practices and engineering controls shall be followed diligently including the provision and use of the following:
    - Gloves, latex
    - Masks and eye protection
    - Resuscitation bags and mouthpieces
    - Gowns, aprons or specialized clothing where required by established engineering practices
    - Hand washing facilities and other decontamination where required by established engineering practices. Trained personnel following approved procedures shall conduct decontamination with the above personal protective

items.

- Disposable items shall be discarded into red bags or properly labeled containers and delivered for disposal as required elsewhere in this plan.
- Items, which are reusable, and any work areas, which were contaminated by blood and other infectious materials, shall be cleaned and disinfected with a solution containing a strong concentration of chlorinebleach.

AUDIT AND REVIEW

It will be the responsibility of **Kasco, Inc**. to review the entire Blood-Borne Pathogen Safety Program at least annually, and revise and update the material contained herein to reflect all changes in the management, disposal, storage and handling of blood and other infectious materials generated at theproject.

It will be the further responsibility of **Kasco, Inc**. to periodically audit procedures in use on tasks identified as exposing employees to blood and other infectious materials in order that they meet the requirements as set forth in the OSHA 1910.1030 standards.

Each contractor's Superintendent, or safety representative, shall perform the above responsibilities for all of their tasks and procedures.

HEPATITIS B VACCINATION

Hepatitis B vaccinations shall be made available to all employees who have occupational exposure to blood within ten (10) working days of assignment, at no cost, at a reasonable time and place, under the supervision of a licensed physician or health care professional and according to the latest recommendations of the U.S. Public Health Service (USPHS).

Prescreening may not be required as a condition of receiving the vaccine.

Employees must sign a declination form if they choose not be vaccinated, but may later opt to receive the vaccine at no cost to theemployee.

Should booster doses later be recommended by the USPHS, they must be offered to employees.

POST-EXPOSURE EVALUATION AND FOLLOW-UP

OSHA standard 1910.1030 specifies detailed procedures to be made available to all employees who have had an exposure incident.

An accredited laboratory, at no cost to the employee, must conduct these procedures and any laboratory tests. Follow-up procedures must include a confidential medical evaluation documenting the circumstances of exposure, identifying and testing the source individual.

If feasible, testing the exposed employee's blood, with the employee's consent, post-exposure prophylaxis, counseling and evaluation of reported illnesses.

Health care professionals must be provided specific information to facilitate the evaluation and their written opinion on the need for Hepatitis B vaccination following the exposure.

Information such as employee's ability to receive the Hepatitis B vaccine must be supplied to the employer.

****ALL DIAGNOSES MUST REMAIN CONFIDENTIAL****

RECORDKEEPING

Medical records shall be maintained on each employee, with occupational exposure to blood and other infectious materials, for the duration of employment plus thirty (30) years.

Medical records must be made available to the subject employee, anyone with written consent of the employee, OSHA and NIOSH.

Medical records are not available to the employer.
Disposal of medical records must be in accord with OSHA's standard covering access to records.
These employee medical records must be confidential and must include the following information:

- Employee's name and social security number
- Hepatitis B vaccination status, including dates
- Results of any examinations, medical testing and follow-up procedures
- Copy of the health care professional's written opinion
- Copy of the information provided to the health care professional
- Training records shall be maintained for a period of three (3) years and must include the dates, contents of the training program or summary, trainer's name and qualifications, names and job titles of all persons attending the sessions.

EMERGENCY PROCEDURES – MEDICAL SERVICES

CONTRACTOR'S RESPONSIBILITIES

Prior to commencement of work, provisions must be made for prompt medical attention in case of serious injury. Each Contractor shall have a minimum of one first aid/CPR trained individual on the project during work hours and inform **Kasco, Inc**. of their name(s).
Ensure adequate first aid supplies shall be easily accessible when required.
Provide proper equipment for the prompt transportation of the injured person to a physician or hospital, or a communication system for contacting necessary ambulance service.
Telephone numbers and addresses of the physicians, hospital and ambulance shall be conspicuously posted. Contractor shall complete and provide to **Kasco, Inc**. an "Employer's First Report of Injury" within 24 hours of any/all incidents involving work activities associated with the project.
Contractors are advised to maintain their own OSHA 300 Log as an OSHA requirement.
Contractor shall ensure that each of its lower-tier contractors meet these medical requirements.
If the injured employee is released by the doctor for light or restricted work duty, the Contractor shall make available restricted duty work for the injured employee.
Each occupational illness or injury shall be reported immediately by Contractor's employee to Contractor's first aid attendant and **Kasco, Inc**.
Contractor's first aid attendant or other competent person shall treat the injured employee as often as necessary to ensure complete recovery, or until a decision is made to seek medical treatment.
Contractor must provide prompt transportation for the injured person, to a hospital or other emergency facility. A representative of the Contractor shall drive the injured employee to the medical facility and remain at the facility until the employee is ready to return.
Contractor's representative shall carry necessary forms (i.e. authorization slips, return to work notices, etc.) to the medical facility.
If it is necessary for the Contractor's first aid attendant to accompany the injured employee, provisions must be made by Contractor to have another employee, properly trained and certified in first aid, available to render same during the absence of the regular first aid attendant.
If the employee is able to return to the project the same day, he/she must return with a statement from the doctor stating same and containing such information as date, employee's name and date of return to regular or restricted duty, date he/she is to return to doctor, diagnosis, signature and address ofdoctor.

If the injured employee is unable to return to the project the same day, the employee who transported him/her shall bring this information back to the project and report to **Kasco, Inc**.
If it is necessary to call an outside medical facility, this call should be made by **Kasco, Inc**. Project Manager while the injured employee is being transported.
Medical cases requiring ambulance services would be such cases as severe head injuries, amputations, heart attacks, severe bleeding, stopped breathing, etc.
Should ambulance service be necessary, the Contractor first aid attendant (or nearest employee properly trained and certified in first aid) and **Kasco, Inc**. shall be contacted immediately.

EMERGENCY PROCEDURES – ALARMS, FIRES, BOMBS (threats), WEATHER, ENVIRONMENTAL or PUBLIC DEMONSTRATION

To ensure emergency services may be performed promptly, each Contractor and Subcontractor shall post, in a conspicuous place, a list of emergency telephone numbers along with the type of information to be transmitted for each emergency situation.
All accidents are to be handled by the ranking person present, with whoever is available to assist.
The ranking person shall direct someone to notify first aid personnel, and to call for emergency services as necessary.
The Project Superintendent is to be notified as soon as this can be done without delaying assistance to the injured. The Project Superintendent will take appropriate action.
In accidents resulting in injury to personnel, individuals qualified to administer first aid will assist the injured, stabilize their condition and arrange for transportation to a hospital if further treatment is required.
Except when necessary to avoid further injury, or to prevent additional damage to the work, equipment will not be moved, or the position of items, parts, pieces, controls, etc. will not be changed until photographs have been made and notes taken by the Project Superintendent or the person designated to make the investigation and report.
As soon as the Project Superintendent can release the area from this constraint, Contractors concerned will clean up and make repairs to return to a normal situation.
**Where a specific procedure has not been established, reasonable judgment should be used in determining what course to follow.

ALARMS

Kasco, Inc. shall be notified of all emergencies and notify the appropriate emergency service of the incident and initiate appropriate action.
Fire alarms within the area of new construction will consist of three short blasts on an air horn or other suitable alarm located at the egress, stairway, ladder, or building entry.
Telephone notification to the first department will be initiated immediately after sounding the air horn alarm. **Kasco, Inc**. shall inform all concerned regarding the fire.
A continuous long blast on the air horn may be used to summon first aid assistance in the event of an accident.

FIRE

The following procedures are to take effect in the event of a fire: “RACE”

R Rescue…anyone in immediate danger
A Alarm…activate pull station; go to phone and dial 911
C Contain…close doors and windows, isolate fire
E Extinguish…use correct extinguisher

ACCIDENT INVOLVING SERIOUS INJURY OR DEATH (FOLLOW KASCO, INC.'S CRISIS MANAGEMENT POLICY)

The following procedures are established in the event of an accident involving serious injury or death to employees or members of the general public.

Individuals qualified to administer first aid will assist the injured, stabilize their condition and, if further treatment is required, arrange for transportation to the hospital emergency room.

Kasco, Inc. is to be notified immediately. Immediate notification (within 8 hours) of the local OSHA office is required in the event of a fatality or serious injury, which may lead to a fatality.

All non-essential personnel shall be removed and/or kept back from the area. Rescue personnel shall be provided assistance as requested.

No comments shall be made to the press/media. All inquiries shall be referred to the Project Manager.

No on-site photographs are to be taken without the specific approval of the Project Manager and the Project Superintendent.

Kasco, Inc. shall make a full investigation and file an Accident/Injury Report within twenty-four (24) hours of the occurrence.

Within the immediate area of the accident scene, nothing is to be disturbed nor removed after proper evacuation of the injured personnel.

Except when necessary to avoid further injury, equipment will not be moved, or the position of items, parts, pieces, controls, etc. will not be changed until photographs have been made and notes taken by the Project Superintendent or other person designated to make the investigation and report.

As soon as **Kasco, Inc**. can release the area from the above constraint, Contractors concerned will clean up and make repairs to return to a normal situation.

PROPERTY DAMAGE ACCIDENTS

The following procedures are to take effect in the event of accident involving property damage:

Kasco, Inc. is to be notified as soon as this can be done without delaying efforts to prevent further damage; and will take appropriate action and direct other personnel to assist as necessary.

Efforts shall be taken to protect against further damage wherepossible.

All non-essential personnel shall be removed and/or kept back from the area.

No comments shall be made. All inquiries shall be referred to **Kasco, Inc**.

No on-site photographs are to be taken without the specific approval of **Kasco, Inc**.

Kasco, Inc. shall make a full investigation and file an Accident/Injury Report within twenty-four (24) hours of the occurrence.

Within the immediate area of the accident scene, nothing is to be disturbed nor removed after proper evacuation of the injured personnel.

Except when necessary to avoid further injury, equipment will not be moved, or the position of items, parts, pieces, controls, etc. will not be changed until photographs have been made and notes taken by **Kasco, Inc**.

As soon as **Kasco, Inc**. can release the area from the above constraint, Contractors concerned

will clean up and make repairs to return to a normal situation.

SEVERE WEATHER

Since severe weather may be reasonably anticipated to occur during the duration of the project, yet without significant advance warning, all work activities and project conditions must be planned with a concern for emergency preparations.

The following procedures are intended to prepare the project in the event of severe weather conditions:

- Each Contractor at the time of mobilization shall deliver to **Kasco, Inc**. a complete list of the Contractor's supervisors with the complete after-hours telephone numbers. The list shall be keptup-to-date.
- Each Contractor shall ensure the field trailers, and Subcontractors' field trailers are anchored in at least three locations.
- Upon notification of a Severe Weather Watch by the U.S. Weather Bureau, the following actions are to be initiated:
- Each Contractor having on-site generators which are fuel-powered is requested to notify **Kasco, Inc**. of the numbers and wattage. Generators may be needed to provide temporary power for rescue or clean-up activities.
- All materials shall be secured to prevent them from becoming air borne duringhigh winds.
- Particular attention needs to be given to picking up scrap materials and hauling or covering trash containers. Crawler and mobile cranes shall have booms lowered at the end of the shift.
- Cranes not capable of lowering booms shall be permitted to weathervane or free swing.
- **Check to ensure swinging booms will not come into contact with other objects such as power lines, structures, etc.
- Sufficient flashlights, batteries, and bulbs, shall be provided to assigned emergency response personnel. A supply of fresh batteries shall be maintained at the project for use in an emergency.

OTHER MAJOR CATASTROPHES

Examples of other major catastrophes include:

- Major fire
- Collapse of large portions of structures or large sections ofscaffolds
- Heavy damage by winds or floods

The Owner's security or local authorities will be provided with an emergency call list to summon **Kasco, Inc**. and the Contractor personnel to the project in the event of a major catastrophe outside working hours, on Saturdays or Sundays, etc.

The **Kasco, Inc**. Project Superintendent, or the most-qualified alternate, will cooperate fully with the directives of the hospital staff or local emergency authorities in the event of a major catastrophe.

He/She will take any or all of the following actions as necessary:

- Initiate fire-fighting, tie down building, etc.
- Call for assistance from outside (fire trucks, ambulances, electricians, life flight helicopters, Civil Defense Support, police, etc.)
- Stop work

- Call for site evacuation, to clear site access roads
- Issue instructions to supervisors and others, asnecessary
- Set up security control at the disaster area
- Set up communications center in project trailers (i.e. radios, telephones, etc.)
- Call in operators for heavy equipment such as front loaders, cranes, etc.
- Other actions considered necessary in the particular situation

BOMB THREAT

When a bomb threat is received, or if a suspicious article is found, **Kasco, Inc**. will take the following actions.
Work shall be stopped immediately.
The project and office shall be evacuated of all personnel. A count will be made to assure that all are present.
Local police, fire or bomb disposal authorities shall be notified. A search of the premises will be made as directed by appropriate authorities.
If a suspicious article is found, DO NOT TOUCH IT; notify the appropriate authorities.
Do not allow anyone except authorized personnel to re-enter the area.
If necessary, to stop or detour traffic away from the affected area, local police or flagmen shall be utilized.
No comments shall be made. All inquiries shall be referred to **Kasco, Inc**.
No on-site photographs are to be taken without the specific approval of **Kasco, Inc**.
Kasco, Inc. shall make a full investigation and file a report within twenty-four (24)hours of the occurrence.
If repeated threats occur within a short period of time, **Kasco, Inc**. will evaluate the situation and take appropriate action. This action may include shutting down the project.

ENVIRONMENTAL SPILL

In the event of a spill of environmentally damaging materials, immediate response is required to prevent or minimize the impact this event will have upon the environment and the public welfare.
All personnel shall continue to observe standard precautions for handling the materials as detailed in the manufacturer's product Safety Data Sheet (SDS), including the use of personal protective equipment.
Where conditions warrant, the Contractor shall have emergency spill containment supplies available for immediate use.
The following general procedures apply to the immediate response which must be initiated:
Immediately, all personnel in the immediate area of the release shall be alerted to the hazardous material and the nature of the immediate danger to themselves and the environment.
As soon as possible, **Kasco, Inc**. shall be notified and requested to initiate emergency containment and clean up procedures.
The Local Fire Department shall be notified to mobilize their hazardous materials response units and shall be given the necessary information regarding the materials which were released.
If safe to do so, every effort shall be made to contain the materials, by absorbent materials, or through other appropriate means, until proper handling and disposal personnel may be mobilized at the project. Particular attention needs to be taken to avoid contamination of surface water, storm sewers, sanitary sewers, ground, plants and animals.

All non-essential personnel shall be removed and kept back from the area.
No comments shall be made. All inquiries shall be referred to the Project Manager.
No on-site photographs are to be taken without the specific approval of the Project Manager and the Project Superintendent.
Kasco, Inc. shall make a full investigation and file an Accident/Injury Report within twenty-four (24) hours of the occurrence.
Within the immediate area of the accident scene, nothing is to be disturbed nor removed after proper evacuation of the injured personnel.
Except when necessary to avoid further injury, equipment will not be moved, or the position of items, parts, pieces, controls, etc. will not be changed until photographs have been made and notes taken by the Project Superintendent or other person designated to make the investigation andreport.
Kasco, Inc. shall be notified to initiate the response of available Environmental Remediation Contractors, who are under standby contract.
As soon as the Environmental Remediation Contractor has cleared the project, the Project Superintendent will release the area for contractors concerned to clean up and make necessary repairs to return to a normal situation.

PUBLIC DEMONSTRATIONS

When a public demonstration is expected or occurs, **Kasco, Inc**. will take the following actions:
Work on the project shall continue where not encumbered by the public demonstration; however work in the immediate area shall be stopped and all project employees shall be evacuated. A count will be made to assure all are present.
Local police shall be notified, and all employees shall cooperate fully with the law enforcement authorities.
Do not allow anyone except authorized personnel to enter the project. All visitor passes are revoked and all visitors shall be escorted from the project.
If necessary, to stop or detour traffic away from the affected area, local police or flagmen shall be utilized.
No comments shall be made. All inquiries shall be referred to the Project Manager.
No on-site photographs are to be taken without the specific approval of **Kasco, Inc**.
Kasco, Inc. shall make a full investigation and file a report within twenty-four (24)hours of the occurrence.
If repeated public demonstrations occur within a short period of time, **Kasco, Inc**. will evaluate the situation and take appropriate action. This action may include shutting down the project for that day or obtaining a judicial restraining order.

ENVIRONMENTAL – ASBESTOS

Occupational Safety and Health Administration (OSHA) regulations have been promulgated to protect workers from exposure to airborne asbestos fibers.
Under the Asbestos Control and Licensing Act, a contractor must be licensed by the Department of Labor and the State in which the work is being performed in order to remove asbestos.

NOTIFICATION

Before starting asbestos removal work, the United States Environmental Protection Agency (USEPA) and the Local Department of Environmental Management must be notified in writing by the Contractor and appropriate permits must be on file. **Kasco, Inc**. and/or its agent will verify

this information by way of contract requirements.

TRAINING

Employees of the Contractor must be appropriately trained and licensed prior to the removal of any asbestos contaminated material**. All Contractors employee(s) on-site must be trained in the recognition of hazards and appropriate controls.**

POSTING

Asbestos material removal area shall be cordoned off to discourage entry.

Appropriately worded caution signs must be posted at all approaches to the area at such interval to allow individuals to take any necessary protective steps before entering the removal area.

ASBESTOS HANDLING

The encapsulation, removal and/or disposal of ACM shall be performed by a Contractor licensed to do such work in which the work is being performed and in accordance with all applicable Federal, State and Local Regulations per approved abatement plans.

WORK PRACTICES

Asbestos containing materials shall be worked in a wet state sufficient to prevent the emission of airborne fibers in excess of the permissible exposure limits.

Work areas are to be adequately protected through appropriate enclosures, to ensure no asbestos contaminated material will be permitted to leave the controlled area.

PERSONAL PROTECTIVE EQUIPMENT

In instances where reusable clothing is used, the following precautions must be followed: Contaminated clothes must be appropriately bagged and labeled. Notification and transportation to authorized laundries and haulers.

All employees working in asbestos removal areas shall wear appropriate personal protective equipment.

CLEANUP

There shall be no dry sweeping of asbestos material. Use floor coverings to prevent debris from falling to lower floors and to speed up housekeeping.

LABELING AND WASTE DISPOSAL

Appropriately worded labels must be affixed to all materials, waste, debris, etc. containing asbestos materials. Asbestos waste and/or asbestos contaminated material must be collected and discarded in sealed, labeled, impervious containers by contractor.

The following label content is acceptable to both the EPA and OSHA:

CAUTION:

CONTAINS ASBESTOS FIBERS

AVOID CREATING DUST BREATHING ASBESTOS DUST MAY CAUSE SERIOUS BODILY HARM

Kasco, Inc. shall be provided with copies of all air monitoring reports and certified disposal receipts prior to final payment.

ENVIRONMENTAL – LEAD

LEAD PAINTED COMPONENTS

Lead based paint can possibly be identified on numerous surfaces throughout these facilities. In keeping with the requirements of the Occupational Safety & Health Administration's (OSHA's) Lead Exposure in the Construction Industry Standard (29 CFR 1926.62), every painted surface shall be considered a potential lead hazard.

A potential source of lead emission is the disturbing of painted surfaces of structures and

components within these facilities.
Typical activities which would significantly disturb a painted surface include the following:

- Removal of all, or part of, the paint by hand or power tools
- Removal of all, or part of, the paint by blast cleaning
- Removal of all, or part of, the paint by other means such as the use of chemical strippers or a heat gun
- Structural work to the surface such as welding, burning, cutting, ordrilling
- Manual demolition of buildings, portions of buildings, or the buildingcomponents

The primary consideration when specifying work methods shall be the requirement to protect workers from exposure to lead above the Permissible Exposure Limit (PEL).
Further considerations when specifying work methods shall be the effort to reduce the release of lead into the air, water and soil, and to reduce to a minimum the generation of debris.
At all times, when activities which disturb paint are in process, the project competent person for lead shall have unrestricted access to the work area for inspection.
The competent person shall have the authority to stop work when the control measures being utilized are not as specified in this section or the OSHA Standard, if the control measures are not adequately controlling exposures or if other hazards are identified which require work to be stopped.
All air monitoring conducted by the project competent person for lead, or other qualified representative, shall be performed in accordance with the OSHA Standard.
Detailed and accurate records of all monitoring and other relevant data used in conducting employee exposure assessments shall be kept and maintained in accordance with the OSHA Standard.
Signs shall be posted in each work area where work on painted surfaces disturbs the paint in such a way so as to expose personnel to lead contaminated dust, debris, or lead fumes. At minimum they shall read: "**WARNING: LEAD WORK AREA POISON. NO SMOKING OR EATING"**
All worker protection requirements will, at minimum, meet the current OSHA Standard. These requirements include but are not limited to:

- Signage, Barriers and Access
- Exposure Monitoring
- Respiratory Protection
- Medical Surveillance and Records
- Education and Related Training

Decontamination and Clearance
All work involving lead removal or re-coating shall be conducted in a manner that minimizes the release of lead and lead containing materials into the environment.
All lead containing hazardous wastes that are generated shall be contained, collected, segregated, labeled and held at a location designated or approved by the Owner or **Kasco, Inc**. pending the appropriate disposition.
Contractor shall provide for proper disposal of waste, including EPA identification number, notification, certification, manifest, etc.
All waste containers must be leak proof and capable of being securely covered.
All waste containers shall be clearly labeled with weather resistant labels using indelible ink to identify the type of waste they contain. **Everyone on site not removing lead must have a current lead awareness training cert. on file with Kasco, Inc. on-site Safety Reps.**

ENVIRONMENTAL – Mold and Moisture Prevention

Kasco Employees shall work to assure the prevention of moisture and water intrusions on all Kasco sites to eliminate the potential for mold growth where possible before it develops.

Kasco Employees shall receive regular training on the identification of hazardous materials, every 12 or 24 months as required. The intent of this training is for Kasco field staff to immediately identify and report any suspicious fungi, contain them and to execute proper remediation protocols.

When suspected mold is encountered, Kasco staff respond so as to:

- Facilitate a timely response immediately following its discovery.
- Minimize damage caused by mold and water intrusion.
- Define work practice and removal protocol, with help from our third party consultant, to ensure proper mold remediation and elimination of water intrusions.

Kasco shall engage 3rd party consultants to assist with identification, testing and remediation protocols when mold is encountered on jobsites. Our current consultant for these Envoirnmental Services is:

Performance Environmental
30553 Wixom Rd,
Wixom, MI 48393

Contacts:
Dave Varcoe, Cell #: (248)-467-0768
Dennis Wood, Cell # (248) 467-0469
Office Line: (248) 926-3800.

When potential mold is encountered on a jobsite, field staff shall report this to the Project Manager, then contact 3rd party consultant to arrange for immediate field testing of suspected mold substances.

The following Water Intrusion and Mold Mitigation information is provided for reference:

MOLD PREVENTION

Minimizing the cost of mold damage starts with prevention. Because it is a primary factor in mold development, controlling moisture is essential for mold control. Address moisture problems in their early stages to eliminate the potential for mold growth:

- Fix leaky plumbing and leaks in the building envelope as soon as possible.
- Watch for condensation and wet spots. Fix the sources of all moisture problems as soon as possible.
- Prevent moisture due to condensation by increasing the surface temperature or reducing the moisture level in air (humidity). To increase the surface temperature, insulate or increase air circulation. To reduce the moisture level in air, repair leaks, increase ventilation

if the outside air is cold and dry, or dehumidify if the outdoor air is warm and humid.

- Keep heating, ventilation, and air conditioning (HVAC) drip pans clean, flowing properly, and unobstructed.
- Vent moisture-generating appliances, such as dryers, to the outside where possible.
- Maintain low indoor humidity, below 60 percent relative humidity (RH), and ideally 30 to 50 percent, if possible.
- Clean and dry wet or damp spots within 48 hours.
- Don't let foundations stay wet. Provide drainage and slope the ground away from the foundation.

RESPONSE

When a water intrusion is discovered, an immediate response is necessary to prevent mold from developing. As a general rule, a response should be underway within the first 24 to 48 hours.

If mold has already begun to grow by the time a water intrusion is discovered, it is important that it is addressed quickly. Waiting to start remediation can allow for mold growth to increase, threatening employee health and causing additional property damage.

Identify and Eliminate the Moisture Source

The source of the water or moisture must be identified and eliminated. If not addressed, the cause of the water intrusion can hamper cleanup efforts and greatly increase the chance that the situation will repeat itself in the future.

Types of Water/Definitions:

- **Clean Water** – That which is clean at the releasing source and does not pose a hazard if consumed by humans. Clean water may become progressively contaminated as it mixes with soils on or within floor coverings or building assemblies (walls, decking, subflooring). Time and temperature, which promote the growth and amplification of microorganisms in water can cause Clean water to degrade. Examples: burst water pipes, failed supply lines on appliances, vertically falling rainwater.

- **Grey Water** – That which begins with some degree of contamination and could cause sickness or discomfort if consumed by humans. As with Clean water, time and temperature can cause Grey water to become progressively more contaminated.

- **Black Water** – That which is highly contaminated and could cause death or serious illness if consumed by humans. Examples: sewage, rising flood water from rivers and streams, ground surface water flowing horizontally into buildings.:

Planning Remediation

To develop a plan for remediation, Kasco field staff shall contact the Project Manager, and third party consultant. Third party consultant shall be used to:

- Asses the scope of the problem.
- Define how the cause of the water or moisture will be eliminated.
- Define the cleanup methods to be used.
- Cover the appropriate personal protective equipment (PPE) needed for remediation work.

- Address any health related concerns for those that may be living or working in the area and are not directly involved in the cleanup efforts.

For larger jobs requiring more than two or three employees, it may help to assign an incident manager to oversee the project. The plan does not have to be an official or in-depth document, but should provide simple answers to the bullet points laid out above so it can be referred to throughout the process.

Remediation

After the water or moisture source has been identified and a plan has been established, the cleanup process can begin. The Environmental Protection Agency (EPA) has developed guidelines, broken into two tables, which help identify the proper work practices based on your situation.

Table 1

If water intrusion is discovered at an early enough stage (within the first 24 to 48 hours), it may be possible to avoid the need for mold remediation. This requires immediate action to remove wet materials and sufficiently dry an area quickly and thoroughly. For guidance in this situation refer to EPA Table 1.

Table 2

If mold has already begun to develop, the cleanup process becomes more complicated. Proper practices must be used to ensure the health of employees as well as the complete remediation of mold. For guidance in this situation refer to EPA Table 2.

EPA Table 1

The following table was developed by the EPA to act as a guide when responding to ***clean water*** damage within the first 24-48 hours of an incident. These guidelines help eliminate the primary causes of mold growth before it can start, reducing the chances that future mold remediation will be needed.

Water-Damaged Material	Actions
Books and papers	• For non-valuable items, discard books and papers. • Photocopy valuable or important items. Discard the originals. • Freeze if in a frost-free freezer or meat locker or freeze-dry.
Carpet and backing—dry within 24 to 48 hours	• Remove water with a water extraction vacuum. • Reduce ambient humidity levels with a dehumidifier. • Accelerate the drying process with fans.
Ceiling tiles	• Discard and replace.
Cellulose	• Discard and replace.

insulation	
Concrete or cinder block surfaces	• Remove water with a water extraction vacuum. • Accelerate the drying process with dehumidifiers, fans, and/or heaters.
Fiberglass insulation	• Discard and replace.
Hard surface, porous flooring (e.g., linoleum, ceramic tile, vinyl)	• Vacuum or damp wipe with water and mild detergent and allow to dry. Scrub if necessary. • Check to make sure underflooring is dry, and dry underflooring if necessary.
Non-porous, hard surfaces (e.g., plastics, metals)	• Vacuum or damp wipe with water and mild detergent and allow to dry. Scrub if necessary.
Upholstered furniture	• Remove water with a water extraction vacuum. • Accelerate the drying process with dehumidifiers, fans and/or heaters. • It may be difficult to completely dry within 48 hours. If the piece is valuable, you may wish to consult a restoration or water damage professional who specializes in furniture.
Wallboard (e.g., drywall and gypsum board)	• May be dried in place if there is no obvious swelling and the seams are intact. If not, remove, discard and replace. • Ventilate the wall cavity, if possible.
Window drapes	• Follow laundering or cleaning instructions recommended by the manufacturer.
Wood surfaces	• Remove moisture immediately and use dehumidifiers, gentle heat, and fans for drying. Use caution when applying heat to hardwood floors. • Treated or finished wood surfaces may be cleaned with a mild detergent and clean water and allowed to dry. • Wet paneling should be pried away from the wall for drying.

If mold growth has occurred or materials have been wet for more than 48 hours, consult Table 2 guidelines. Even if materials are dried within 48 hours, mold growth may have occurred. Items may be tested by professionals if there is any doubt. Note that mold growth will not always occur after 48 hours, this is only a guideline.

These guidelines are for damage caused by clean water. If you know or suspect that the water source is contaminated with sewage, or chemical or biological pollutants, then PPE and containment are required by the Occupational Health and Safety Administration (OSHA). Our third party consultant should be consulted if you and/or your remediators do not have expertise remediating in contaminated water situations. Do not use fans before determining that the water is clean or sanitary.

EPA Table 2

Table 2 is designed to ensure proper remediation while also protecting the health and safety of those employees working on remediation efforts. It focuses on remediation for materials that have or are likely to have mold growth.

In cases when particular toxic forms of mold have been identified or are suspected, when chances that mold may be airborne are high or when mold growth may extend inside walls or HVAC systems, remediation may no longer be able to be performed by in-house personnel. If you are not comfortable handling the cleanup yourself an experienced mold remediator should be contacted.

Material or furnishing affected	Cleanup methods †	PPE	Containment
Small—total surface area affected less than 10 square feet (ft^2)			
Books and papers	3	**Minimum** N-95 respirator, gloves, and goggles	None required
Carpet and backing	1, 3		
Concrete or cinder block	1, 3		
Hard surface, porous flooring (e.g., linoleum, ceramic tile, vinyl)	1, 2, 3		
Non-porous, hard surfaces (e.g., plastics, metals)	1, 2, 3		
Upholstered furniture and	1, 3		

drapes			
Wallboard (e.g., drywall and gypsum board)	3		
Wood surfaces	1, 2, 3		
Medium—total surface area affected between 10 and 100 (ft^2)			
Books and papers	3	**Limited or full** Use professional judgment. Consider the potential for remediator exposure and the size of the contaminated area.	**Limited** Use professional judgment. Consider the potential for remediator and occupant exposure and the size of the contaminated area.
Carpet and backing	1,3,4		
Concrete or cinder block	1,3		
Hard surface, porous flooring (e.g., linoleum, ceramic tile, vinyl)	1,2,3		
Non-porous, hard surfaces (e.g., plastics, metals)	1,2,3		
Upholstered furniture and drapes	1,3,4		
Wallboard (e.g., drywall and gypsum board)	3,4		
Wood surfaces	1,2,3		
LARGE - Total Surface Area Affected Greater Than 100 (ft^2) or Potential for Increased Occupant or Remediator Exposure During Remediation Estimated to be Significant			
Books and papers	3	**Full** Use professional judgment. Consider the potential for remediator exposure and the size of the contaminated area.	**Full** Use professional judgment. Consider the potential for remediator exposure and the size of the contaminated area.
Carpet and backing	1,3,4		
Concrete or cinder block	1,3		
Hard surface, porous flooring (e.g., linoleum, ceramic tile, vinyl)	1,2,3,4		
Non-porous, hard surfaces (e.g., plastics,	1,2,3		

metals)			
Upholstered furniture and drapes	1,2,4		
Wallboard (e.g., drywall and gypsum board)	3,4		
Wood surfaces	1,2,3,4		

* Use professional judgment to determine prudent levels of PPE and containment for each situation, particularly as the remediation site size increases and the potential for exposure and health effects rises. Assess the need for increased PPE, if, during the remediation, more extensive contamination is encountered than was expected. Consult Table 1 if materials have been wet for less than 48 hours, and mold growth is not apparent. These guidelines are for damage caused by clean water. If you know or suspect that the water source is contaminated with sewage, or chemical or biological pollutants, then the OSHA requires PPE and containment. An experienced professional should be consulted if you or your remediators do not have expertise in remediating contaminated water situations.

† Select the method most appropriate to the situation. Since molds gradually destroy the things they grow on, if mold growth is not addressed promptly, some items may be damaged such that cleaning will not restore their original appearance. If mold growth is heavy and items are valuable or important, you may wish to consult a restoration or water damage remediation expert. Please note that these are guidelines; other cleaning methods may be preferred by some professionals.

Cleanup Methods

- **Method 1—wet vacuum:** Wet vacuums are vacuum cleaners designed to collect water. They can be used to remove water from floors, carpets, and hard surfaces where water has accumulated. They should not be used to vacuum porous materials, such as gypsum board. They should be used only when materials are still wet—wet vacuums may spread spores if sufficient liquid is not present. The tanks, hoses, and attachments of these vacuums should be thoroughly cleaned and dried after use since mold and mold spores may stick to the surfaces. Steam cleaning may be an alternative for carpets and some upholstered furniture.

- **Method 2—damp wipe:** Whether dead or alive, mold is allergenic, and some molds may be toxic. Mold can generally be removed from nonporous or hard surfaces by wiping or scrubbing with water, or water and detergent except wood, where wood floor cleaner should be used instead. It is important to dry these surfaces quickly and thoroughly to discourage further mold growth. Instructions for cleaning surfaces, as listed on product labels, should always be read and followed. Porous materials that are wet and have mold growing on them may have to be discarded. Since molds will infiltrate porous substances and grow on or fill in empty spaces or crevices, the mold can be difficult or impossible to remove completely.

- **Method 3—HEPA vacuum:** HEPA (High-efficiency Particulate Air) vacuums are recommended for final cleanup of remediation areas after materials have been thoroughly dried and contaminated materials removed. HEPA vacuums are also recommended for the cleanup of dust that may have settled on surfaces outside the remediation area. Care must be taken to ensure that the filter is properly seated in the vacuum so that all the air must pass through the filter. When changing the vacuum filter, remediators should wear PPE to prevent exposure to the mold that has been captured. The filter and contents of the HEPA vacuum must be disposed of in well-sealed plastic bags.

- **Method 4—discard:** Building materials and furnishings that are contaminated with mold growth and are not salvageable should be double-bagged using 6-millimeter polyethylene sheeting. These materials can then usually be discarded as ordinary construction waste. It is important to package mold-contaminated materials in sealed bags before removal from the containment area to minimize the dispersion of mold spores throughout the building. Large items that have heavy mold growth should be covered with polyethylene sheeting and sealed with duct tape before they are removed from the containment area.

Personal Protective Equipment

- **Minimum:** Gloves, N-95 respirator, goggles/eye protection
- **Limited:** Gloves, N-95 respirator or half-face respirator with HEPA filter, disposable overalls, goggles/eye protection
- **Full:** Gloves, disposable full-body clothing, head gear, foot coverings, full-face respirator with HEPA filter

Containment

- **Limited:** Use polyethylene sheeting from the ceiling to the floor around the affected area with a slit entry and covering flap. Maintain the area under negative pressure with a HEPA filtered fan unit. Block supply and return air vents within hte containment area.
- **Full:** Use two layers of fire-retardant polyethylene sheeting with one airlock chamber. Maintain the area under negative pressure with HEPA filtered fan exhausted outside of building. Block supply and return air vents within containment area.

Please note that Table 1 and Table 2 contain general guidelines. Their purpose is to provide basic information for remediation managers to first assess the extent of the damage and then to determine whether the remediation should be managed by in-house personnel or outside professionals. The remediation manager can then use the guidelines to help design a remediation plan or to assess a plan submitted by outside professionals.

ENVIRONMENTAL – ON-SITE HAZARDS

Material designated as a hazardous substance requires special attention by the Contractor and workers to minimize the exposure.
A plan addressing the proper handling, storage and disposal of hazardous material must be developed. **Kasco, Inc**. and the Owner must be immediately notified of any hazardous material leak or spill.

Any Contractor-caused oil spills must be reported immediately to **Kasco, Inc**.

ENVIRONMENTAL – SILICA

Contractors shall submit their silica protection program for review by **Kasco, Inc**. prior to the pre-construction conference.

As a minimum, the Contractor's silica protection plan shall comply with OSHA regulations and shall address the following items:

Statement of the Contractor's commitment to prevent silicosis and to comply with OSHA's standards.

Description of air monitoring to determine the silica levels generated by tasks to provide a basis for:

- Selecting engineering controls,
- Selecting respiratory protection,
- Selecting work practices to reduce dust, and
- Determining if a medical surveillance program is necessary.

Description of engineering controls proposed for the project to eliminate or reduce the amount of silica in the air and the build-up of dust on equipment and surfaces.

Description of less hazardous materials than crystalline silica proposed for abrasive blasting and automatic blast cleaning machines or tools to be utilized.

Description of high-efficiency particulate air filter vacuums to be used by employees and work practices to vacuum, hose down, or wet clean work areas and equipment.

Description of warning slips and other barriers proposed to identify work areas where breathable silica may be present and to limit access to only authorized employees.

Description of personal protective equipment and clothing to be provided to employees and changing facilities if needed by the level of silica dust exposure.

Certification of training provided to employees about health effects of silica exposure, engineering controls and work practices that reduce dust, the importance of maintenance and good housekeeping, as well as the proper type and fitting of respirators; and include a statement that the employee is or is not enrolled in a medical surveillance program.

ENVIRONMENTAL – POWERED EQUIPMENT INSIDE ENCLOSED STRUCTURES

If internal combustion engines are used on powered equipment in enclosed areas, the Contractor is responsible for monitoring the quality of breathing air for harmful contaminants and adequate oxygen and is responsible for providing adequate ventilation. **(Bio diesel fuel only to be used on this site)**

EXCAVATIONS AND TRENCHES

This guideline is intended to prevent potentially serious accidents involving workers from being engulfed by unsupported sides of excavations. The proper preparation of earth support of the open sides of excavations is outlined. This guideline outlines the terminology, responsibilities and reviews the basic principles to ensure safety and efficiency.

RESPONSIBILITY

Responsible Manager - The Responsible Manager is responsible for designating, in writing, a Competent Person for the safe oversight of excavation and trenching activities.

Project Manager - The Project Manager is responsible for gathering all available information on utilities and structures in the area of the excavation/trench and notifying landowners, utilities and owners of any underground structures that may be affected by the excavation. The Project Manager shall provide the crew performing the excavation with all pertinentinformation.

Competent Person - The Competent Person shall determine whether or not the excavation constitutes a permit- required confined space. A daily inspection of the excavation site shall be performed to assess current conditions, following which the Competent Person shall declare the excavation safe for employees to enter at the beginning of each shift. The Competent Person is also responsible for ensuring the following tasks are accomplished:

Determine the classification of the soil in each layer of theexcavation.

Perform air quality test for excavations deeper than four feet to establish that there is adequate oxygen and no toxic gases and/or vapors are present.

Obtain a licensed, professional engineer's assistance when an excavation is deeper than twenty feet.

Determine if Emergency Rescue Services will be needed for each excavation, and if so, arrange for rescue services to be "on call." All members of the excavation crew shall be informed of the proper method for summoning emergency help.

Employees - Employees shall be familiar with the Competent Person for the excavation by name and by sight and shall enter the excavation only after the Competent Person has given approval. Employees shall report any of the following conditions to the Competent Person immediately upondiscovery:

- Water accumulation.
- Cracks/Fissures in sidewalls of excavation.
- Sloughing of sidewall material.
- Changes in air quality in the excavation.

Safety Representative - The Safety Representative is responsible for ensuring that this guideline is being followed. Further responsibilitiesinclude:

- Provide or locate training for the Competent Person forexcavations.
- Provide awareness level training for all **Kasco, Inc**. employees entering the excavation.
- Assist the Competent Person in locating an appropriately trained Emergency Rescue Team, if required.

GENERAL RULES

The following rules shall be considered when working around excavations:

- No one shall be allowed in the excavation until the Competent Person has approved entry for that shift.
- The Competent Person shall determine the classification of the soil at each layer that is uncovered. The classification shall be updated asneeded.
- All excavations deeper than five feet must be shored or slopes according to the drawings in Examples of
- Sloping, Benching and Shielding based on the classification of the soil as determined by the Competent Person.
- The quality of air in excavations deeper than four feet shall be tested before each work

shift with attention to oxygen and heavier-than-air toxic gases/vapors.

- A means of egress (ladder, stairs, walkable ramp, etc.) shall be available within 25 feet lateral travel of all personnel who enter the excavation.
- Water accumulation shall not be allowed. Personnel shall not work in standing water in an excavation without specific approval from the Competent Person. Pumps shall be used to remove water that enters the excavation and their operations shall be continuously monitored. If the excavation interferes with the natural drainage of surface water (streams or runoff), dikes or diversions shall be used to prevent surface water from entering the excavation.
- Barricading, signal guards, stop logs or other warning systems shall be in place if mobile equipment will be used around the excavation.
- Nothing shall be stockpiled within two feet of the edge of the excavation. Spoils (loose soil) must be laid back more than two feet from the edge.
- Pedestrian and vehicle traffic shall be kept from the edge of the excavation at a distance to be adjusted to reflect the weight and frequency of thetraffic.
- Where employees or equipment are allowed to cross over and excavation, adequate walkways with guardrails and toe boards are required.
- Materials for sheeting, shoring or bracing the sidewalls shall be in good condition. Timbers shall be sound, free of large or loose knots and of adequatedimension.
- Mechanical support systems shall be removed from the bottom first when the excavation is being backfilled.

SOIL CLASSIFICATION AND IDENTIFICATION

The Competent Person shall classify soils in the field based on the results of at least one visual and at least one manual analysis performed by the Competent Person.

Visual Analysis - visual analysis shall be conducted to determine qualitative information regarding the excavation site and the soil as follows:

- Identify excavated soil and the surface area adjacent to the excavation, as well as soil in the sides of the excavation.
- Estimate the range of particle sizes and the relative amounts of the particle sizes.
- Soil that is primarily fine-grained material that remains in clumps when excavated is cohesive material.
- Soil that is coarse-grained sand or gravel that breaks up easily and does not stay in clumps is granular material.
- Crack-like openings indicate fissured material. If chunks of soil spall off a vertical side, the soil could be fissured.
- Small spalls are evidence of moving ground and are indicators of potentially hazardous situations.
- Identify previously disturbed soils.
- Observe the opened side of the excavation to identify layered systems to determine if the layers slope toward the excavation. Estimate degree of slope of thelayers.
- Examine area adjacent to and within the excavation for evidence of thefollowing:
- Existing utility and other underground structures.
- Surface water, water seeping from the sides of the excavation or the location of the level of the water table.
- Sources of vibration that may affect stability of the excavationface.

Manual Analysis - manual analysis shall be conducted to determine the quantitative properties of soil and to provide more information to classify soil properly:

- ***Plasticity*** - mold a moist sample of soil into a ball and attempt to roll into thread as thin as 1/8-inch diameter. Cohesive material can successfully be rolled into threads without crumbling and can be held on one end without tearing.
- ***Dry Strength*** - if the soil is dry and crumbles on its own or with moderate pressure into individual grains orfine power, it is granular. If the soil is dry and falls into clumps that break up into smaller clumps, but the smaller clumps can only be broken up with difficulty, it may be clay in any combination with gravel, sand or silt. If the soil breaks into clumps that do not break up into small clumps that can only be broken with difficulty and if there is no visual indication that the soil is fissures, the soilmay be considered unfissured.
- ***Thumb Penetration*** - used to estimate the unconfined compressive strength ofcohesive soils. The thumb can readily indent Type A soils, however, the thumb, only with very great effort, can penetrate them. Type C soils can be easily penetrated several inches by the thumb and can be molded by light finger pressure. Thumb penetration should be conducted on an undisturbed soil sample as soon as practicable after excavation to minimize the effects of exposure to drying influences. If the excavation is later exposed to wetting influences such as rain or flooding, the classification of the soil must be changed accordingly.
- ***Other Strength Tests*** - estimates of unconfined compressive strength of soils can be obtained by the use of a pocket penetrometer or by using a hand-operated shearvane.
- ***Drying Tests -*** used to differentiate among cohesive material with fissures, unfissured cohesive material and granular material. Dry a sample of soil that is one-inch thick and six-inches in diameter until it is thoroughly dry and make the following determinations:
    - If the sample develops cracks as it dries, significant fissures areindicated.
    - Samples that dry without cracking are to be broken by hand. If considerable force is necessary to break a sample, the soil has significant cohesive material content. The soil can be classified as an unfissured cohesive material and the unconfirmed compressive strength should be determined.
    - If a sample breaks easily by hand, it is fissured cohesive material or a granular material. Pulverize the dried clumps of the sample by hand or by stepping on them. If the clumps do not pulverize easily, material is cohesive with fissures. If they pulverize easily into very small fragments, material is granular.

Soil Classification - each soil type encountered in excavation shall be classifiedper:

- ***Rock*** - presents the most stable excavation walls. No wall support isneeded.
- ***Type A Soil*** - includes cohesive soils such as clay, silty clay, sandy clay, clayloam and in some cases, silty clay loam. Cemented soils such as hard pan are Type A soils. Soil is NOT Type A if it falls in any of the following categories:
    - Fissure soil.
    - Soil subject to vibration from heavy traffic, pile driving or similareffects.
    - Soil that is part of a sloped, layered system where the layers dip into the excavation on a slope of four to one (horizontal to vertical) orgreater.
- Soil subject to other factors requiring it to be classified as less stablematerial.
- ***Type B Soil*** - included cohesive soil and granular cohesionless soils including angular gravel (crushed rock), silt, silt loam, sandy loam and in some cases silty clay loam and sandy clay loam.

Type B soil includes material that is part of a sloped, layers system where the layers dip into the excavation on a slope less than 4:1 but only if the material would otherwise be classified as Type B.

- ***Type C Soil*** - includes granular soils such as gravel and sand (alone or mixed), loamy sand, submerged soil or soil from which water is freely seeping as well as submerged rock that is unstable.

Maximum Slope by Soil Type - the following table presents the maximum slope by soil type allowed for the sidewalls of excavations less than twenty feet deep, based on the soil classification. If this degree is sloping is not possible, support systems must be used. Note - sloping requirements may vary from state to state if the state has a state run OSHA plan.

SOIL CLASSIFICATION	MAXIMUM ALLOWABLE	
ROCK/STABLE ROCK	**VERTICAL**	**90°**
TYPE A SOIL	**.75 : 1**	**53°**
TYPE B SOIL	**1 : 1**	**45°**
TYPE C SOIL	**1.5 : 1**	**34°**

SUBCONTRACTORS INVOLVED IN EXCAVATIONS

Subcontractors involved in excavations, either through creation of or work in excavations shall utilize their own excavation procedure and Competent Person. The subcontractor's procedure should be submitted to **Kasco, Inc**. for review and approval prior to start of work.

TRAINING

The Competent Person (for excavations) shall receive initial training in excavations, air monitoring, soil classifications, support systems and rescue teams.

All excavation entrants shall receive awareness training on excavation safety prior to entering any excavation. Emergency rescue teams, whether in-house or external, shall be specifically trained in excavation rescue. The Competent Person, working in conjunction with the Safety Representative, shall determine the adequacy of the training of external Emergency Rescue Teams for responding to excavation emergencies. This training shall include:

- Hazards of using equipment for recovery.
- Maintenance of air supply to the trapped.
- Continuance of water removal measures.
- Red Cross Emergency First Aid, or equivalent.
- Cardiopulmonary Resuscitation (CPR).

RECORDS

When there has been an incident, records of the Competent Person's daily inspection notes shall be retained for the duration of the investigation and an additional three years thereafter. When there has been no incident, the records shall be retained only until the excavation has been backfilled.

EYE AND FACE PROTECTION

Care should be taken to recognize the possibility of multiple and simultaneous exposure to a variety of hazards. Adequate protection against the highest level of each hazard should be provided:

Eye protection devices do not provide unlimitedprotection.

Face shields and welding helmets should be worn over primary eye protection (approved safety glasses or goggles).
Protection from light radiation is directly related to filter lens density. Select the darkest shade that allows task performance.
While performing work on customer property, customer eye and face protection requirements may differ from those presented in this policy.
If customer requirements do differ from those in this policy, the more stringent requirement shall be followed. The safety manager can help in making adetermination.

RESPONSIBILITY

Employees - All employees shall comply with the policy outlined in this document.
Supervisors - Supervisors shall ensure that employees under their supervision comply with this policy.
Managers - Managers shall ensure that employees within their area of management are performing their responsibilities as outlined in this document.

SAFETY GLASSES

Safety glasses meeting ANSI Z87.1 standards equipped with permanently affixed sideshields shall be worn as standard eye protection.
Eye/Face protection in addition to safety glasses may be required for certain tasks. The following safety glasses are approved for use by **Kasco, Inc**. employees:
Clear plastic safety glasses meeting ANSI Z87.1 standards equipped with sideshields.
Prescription safety glasses meeting ANSI Z87.1standards.
Note: prescription safety glasses meeting ANSI Z87.1 standards shall have "Z87" stenciled in the temple bar of the glasses. The "Z87" stencil is a requirement of the standard. Prescription safety glasses that do not have "Z87" stenciled on the temple bar are not approved safetyglasses.
Equipped with permanently affixed sideshields.
Tinted plastic safety glasses meeting ANSI Z87.1 standards equipped with sideshields (only for outdoor work during daylight hours).
Photo-Gray .5 or less prescription safety glasses meeting ANSI Z87.1 standards equipped with permanently affixed sideshields.
Note: Photo-Gray lenses are designed to darken when exposed to sunlight and lighten when exposed to indoor lighting.
Tinted safety glasses are not approved for useindoors.
Tinted safety glasses are approved for outdoor work during daylight hours when sun glare presents a hazard.
Approved safety glasses must be worn on the project at all times. No exceptions. This includes indoors and in the field.
Approved safety glasses shall not be required while driving vehicles in field locations unless required by customer policy.
Approved safety glasses must be worn in office, plant, field or outside of project areas when there is the potential for exposure to flying particles.
Approved safety glasses must be worn in areas designated with "Safety Glasses Required" or "Eye Protection Required" signage.

GOGGLES

Chemical goggles must be worn when there is a potential for exposure to irritant chemical splash or mist. If the chemical presents a severe hazard or is destructive to skin tissue, a faceshield must be worn over the goggles.

Goggles must be worn when there is a potential for exposure to nuisance dust. Examples would include: sandblasting, using hot glass shot machines, woodworking, sanding and generally dusty conditions.

Welding goggles or welding faceshield must be worn when doing gas welding.

FACESHIELDS

Clear faceshields must be worn over approved safety glasses when using pedestal grinders and portable grinders. Clear faceshields must be worn when there are potentials for exposures to severe hazard chemicals or chemicals that are destructive to skin tissue.

Clear faceshields and goggles must be worn when making "first breaks" on lines that contain hazardous chemicals. Welding or filtered lens faceshields must be worn with using torches or "rosebuds."

WELDING HELMETS

Welding helmets must be worn when performing electric arc welding. Welding helmets must be worn when performing electric arc gouging.

Welding helmets used for electric arc welding or gouging shall be equipped with lenses rated from 10-4.

TRAINING

Training shall be provided as part of an employee's initial orientation and when it is determined that the employee does not have the understanding and skill required to properly use the eye and face protection required for the task.

Any training in the eye and face protection shall be documented to reflect, at a minimum:
Name of trainee
Date of training
Subject of training

The employee's supervisor shall ensure that employees receive required training before they are exposed to eye and face hazards.

FALL PROTECTION

A Fall Protection Plan must be developed by the Contractor for all work with a fall exposure greater than 6-feet with a copy provided to **Kasco, Inc**. prior to start of work.

"Controlled Access Zones", "Safety Monitoring" and "Warning Lines" are not permitted. GENERAL

Fall protection systems or practices, such as guardrails, fall restraint systems, personal fall arrest systems, warning lines or safety monitors are required under the followingconditions:

When a fall exposure hazards of six feet or more exists

When a fall exposure hazards of less than six feet exists under particularly hazardous circumstances such as work over objects or equipment that present physicalhazards.

All fall protection equipment adheres to applicable ANSI, ASTM, or OSHArequirements.

FALL EXPOSURE HAZARDS

The following are common fall exposure hazards:

- Areas of metal deck during installation and when floor openings are made to accommodate elevators, ladder openings and mechanical/ventilation shafts.
- Unprotected sides and edges such as on roofs, ramps and platforms at elevations greater than six feet.
- Leading edges created during the installation of floor, roof, decking orformwork.

- Excavations six feet deep or deeper.
- Wall openings where a fall exposure of six feet or more exist and the inside bottom edge of the wall opening is less than 39 inches above the walking/working surface.
- Skylights located on roofs or where a fall potential of six feet or greater exists. Work on articulating booms lifts (man-lifts, JLG's) at heights greater than six feet.

APPROVED FALL PROTECTION SYSTEMS AND PRACTICES

The systems and practices listed below are approved for use in protecting employees from fall exposure hazards:

- Personal fall arrest systems.
- Warning line systems.
- Safety monitoring systems
- Guardrail systems
- Covers for holes

Site conditions and configurations may require the use of multiple systems and practices to protect employees from fall exposure hazards. Fall protection systems and practices may be used in tandem to provide additional levels of fall protection. For example, a warning line system in conjunction with a safety monitor may be used on rooftops during equipment setting operations.

PROJECT FALL PROTECTION ASSESSMENT

The designated Project Manager shall ensure that a fall protection assessment is completed prior to the start of the project. Completion of the checklist during or prior to the pre-construction/kick-off meeting is preferred.

The Project Fall Protection Assessment is completed to identify potential fall exposure hazards and corresponding fall protection systems and practices that will be utilized to protect employees for identified fall exposure hazards. A Project Fall Protection Assessment Checklist form will be used to document the fall protection assessment. See Project Fall Protection Assessment Checklist.

The completed Project Fall Protection Assessment Checklist will be distributed to all project foreman and trade supervisors for review and to be used to address fall exposure hazards.

The Project Manager shall post the completed Fall Protection Assessment Checklist on the project safety bulletin board for review by all employees.

PERSONAL FALL ARREST SYSTEMS

Personal Fall arrest systems and their use shall comply with the following requirements:

- Connectors shall be drop-forged, pressed or formed steel, or of equivalent material.
- Connectors shall have a corrosion-resistant finish and all surfaces and edges shall be smooth to prevent damage to interfacing parts of the system.
- D-Rings and snaphooks shall have a minimum tensile strength of 5,000 pounds.
- D-Rings and snaphooks shall be proof tested to a minimum tensile load of 3,600 pounds without cracking, breaking or taking permanent deformation.
- Snaphooks shall be a locking type snaphook designed and used to prevent disengagement of the snaphook by the contact of the snaphook keeper with the connected member.
- Horizontal lifelines shall be designed, installed and used, under the supervision of a qualified person, as part of a complete personal fall arrest system, which maintains a safety factor of at least two.

- Vertical lifelines shall be installed and used, under the supervision of a qualified person, as part of a complete personal fall arrest system, which maintains a safety factor of at least two.
- Vertical lifelines shall have a minimum breaking strength of 5,000pounds.
- Vertical lifelines to which rope grabs will be attached shall be of synthetic material and be between 5/8 and 3/4 inches in diameter.
- Lifelines shall be protected from being cut orabraded.
- Personal fall arrest systems are generally not required when working on the following structures or equipment (always check with supervisor or safety manager):
- Permanent platforms enclosed by proper handrails.
- Complete and inspected scaffolding equipped with proper decking and guardrails.
- Fixed cage ladders.
- Portable ladders that are properly placed andsecured.

WARNING LINE SYSTEMS

Warning line systems and their use shall comply with the following requirements:

- The warning line shall be erected around all sides of the roofarea.
- When mechanical equipment is not being used, the warning line shall be erected not less than six feet from the roof edge.
- When mechanical equipment (forklift, pallet jacks, etc.) is being used, the warning line shall be erected not less than six feet from the roof edge which is parallel to the direction of mechanical equipment operation, and not less than ten feet from the roof edge perpendicular to the direction of mechanical equipmentoperation.
- Points of access, material handling areas, storage areas and hoisting/landing areas shall be connected to the work area by an access path formed by two warninglines.
- When the part to a point of access is not in use, a rope, wire, chain or other similar barricade, equivalent in strength and height to the warning line, shall be placed across the path at the point where the path intersects the warning line erected around the work area, or the part shall be offset such that a person cannot walk directly into the work area.

Warning lines shall consist of ropes, wires or chains, and supporting stanchions erected as follows:

- The rope, wire or chain shall be flagged at not more than six foot intervals with high-visibility material.
- The rope, wire or chain shall be rigged and supported in such a way that its lowest point (including sag) is not less than 34 inches from the walking/working surface and its highest point is not more than 39 inches for the walking/working surface.
- After being erected, with the rope, wire or chain attached, stanchions shall be able to resist, without tipping over, a force of at least 16 pounds applied horizontally against the stanchion, 30 inches above the walking/working surface, perpendicular to the warning line, and in the direction of the floor, roof or platform edge.
- The rope, wire or chain shall have a minimum tensile strength of 500pounds.
- The line shall be attached at each stanchion in such a way that pulling on one section of the line between stanchions will not result in slack being taken up in adjacent sections before the stanchion tips over.

No employee shall be allowed in the area between a roof edge and a warning line unless the employee is protected from fall exposure by other approved fall protection system.

SAFETY MONITORING SYSTEMS

Safety monitoring systems and their use shall comply with the following requirements:

- The foreman or trade supervisor shall designate a competent person to monitor the safety of other employees
- The safety monitor shall be competent to recognize fall hazards.
- The safety monitor shall warn the employee when it appears that the employee is unaware of a fall hazard or is acting in an unsafe manner.
- The safety monitor shall be on the same walking/working surface and within visual sighting distance of the employee(s) being monitored.
- The safety monitor shall be close enough to communicate orally with employee(s).
- The safety monitor shall not have other responsibilities, which could take the monitor's attention from the safety monitoring function.

GUARDRAIL SYSTEMS

Guardrail systems and their use shall comply with the following provisions:

- Top edge height of top rails, or equivalent guardrail system members, shall be 42 inches plus or minus 3 inches above the walking/working level. When conditions warrant, the height of the top edge may exceed the 45 inch height, provided the guardrail system meets all other criteria of this section.
- Midrails, when used, shall be installed at a height midway between the top edge of the guardrail system and the walking/working level.
- Intermediate members (such as balusters), when used between posts, shall be not more than 19 inches apart.
- Other structural members (such as additional midrails and architectural panels) shall be installed such that there are no openings in the guardrail system that are more than 19 inches wide.
- Guardrail systems shall be capable of withstanding, without failure, a force of at least 200 pounds applied within 2 inches of the top edge, in any outward or downward direction, at any point along the top edge.
- Midrails, screens, mesh, intermediate vertical members, solid panels, and equivalent structural members shall be capable of withstanding, without failure, a force of at least 150 pounds applied in any downward or outward direction at any point along the midrail or other member.
- Guardrail systems shall be so surfaced as to prevent injury to an employee from punctures or lacerations, and to prevent snagging of clothing.
- The ends of all top rails and midrails shall not overhand the terminal posts, except where such overhang does not constitute a projection hazard.
- Steel banding and plastic banding shall not be used as top rails or midrails.
- Top rails and midrails shall be at least one-quarter inch nominal diameter or thickness to prevent cuts and lacerations. If wire rope is used for top rails, it shall be flagged at not more than 6-foot intervals with high- visibility material.
- When guardrail systems are used at hoisting areas, a chain, gate or removable guardrail section shall be placed across the access opening between guardrail sections when hoisting operations are not taking place.

- When guardrail systems are used at holes, they shall be erected on all unprotected sides or edges of the hole.
- When guardrail systems are used around holes used for the passage of materials, the hole shall have not more than two sides provided with removable guardrail sections to allow the passage of materials. When the hole is not in use, it shall be closed over with a cover, or a guardrail system shall be provided along all unprotected sides or edges.
- When guardrail systems are used around holes which are used as points of access (such as ladderways), they shall be provided with a gate, or be so offset that a person cannot walk directly into thehole.

COVERS FOR HOLES

Covers for holes in floors, roofs, and other walking/working surfaces shall meet the following requirements:

- Covers shall be capable of supporting, without failure, at least twice the weight of employees, equipment, and materials that may be imposed on the cover at any one time.
- Covers shall be secured when installed so as to prevent accidental displacement by the wind, equipment, or employees.
- Covers shall be color coded or they shall be marked with the word "HOLE" or "COVER" to provide warning of the hazard.

WORK OVER WATER

The potential for drowning is an additional hazard to be considered when working on a water intake, water discharge structures, dock facilities or any other location over water. The following precautions shall be taken:

- A PFD capable of lifting the mouth of an exhausted or unconscious person out of the water shall be provided and worn by each person while working on docks, barges, watercraft or similar facilities.
- An observer shall be assigned whenever work is being done over water. The observer shall maintain communication with workers at alltimes.
- Adequate illumination of the work area shall be provided at alltimes.

FALLING OBJECT PROTECTION

When the potential exists for employees to be exposed to falling objects, employees shall wear hardhats and one of the following measures shall be implemented:

- Toe boards, screens and guardrail systems will be installed to prevent objects from falling from higher levels, OR
- Erect canopies that are strong enough to prevent collapse and penetration by objects that may fall from a higher level, OR
- Barricade the area to which objects could fall and prohibit entry into thisarea.

RESCUE CONSIDERATIONS

Prior to the start of each project, the assigned **Kasco, Inc**. Project Manager shall determine how employees will be rescued in the event of a fall or injury. In the event of a fall or injury, prompt rescue of employee shall be performed. The availability of rescue personnel, ladders or other rescue equipment shall be evaluated. **Kasco, Inc**. may utilize rescue plans established by the controlling contractor (CM or GC) after coordinating such use. The method to be used to rescue

employees shall be noted on the Project Fall Protection Assessment Checklist.

EQUIPMENT INSPECTION

Body Harness - Body harnesses shall be inspected before each use. The body harness shall be removed from service if any defects listed below are present.

- Cracked, dry or rotten leather.
- Nylon or cords that have worn thin.
- Cuts or worn places deep enough to weaken the strap or belt.
- Broken stitches at buckles, D-rings or snaps.
- A snap with weak springs behind the tongue or defective tongues that have been bent or sprung.
- Loose tongues in buckles.
- Cracked, bent or heavily worn buckles, D-rings or snaps.
- Other wear, damage or defect that could affect the protection afforded by the assembly.

After being removed from service, the body harness shall be discarded.No repair of safety harnesses, lanyards or fall protection equipment is permitted unless performed and guaranteed by the manufacturer.

Self Retracting Lifeline - Self retracting lifelines shall be inspected prior to being installed and used for fall protection. The self-retracting lifeline shall be removed from service and returned to an authorized service center for repair if any of the defects below are present:

- Loose or missing bolts and bent or damaged parts.
- Distortion, cracks or other damage to housing.
- The lifeline will not pull out and retract fully. Approximately ¼ of the lifeline length should be pulled from the housing and then released.
- The locking mechanism does not lock when the lifeline is sharply jerked. There should be no slipping.
- Cuts, abrasions or breaks on the wire rope.
- Broken or cracked ferrules.
- Bent, damaged or broken snaphook or self-locking mechanism.
- The self-retracting lifeline has been subjected to impact loading from a fall or misuse.

Additionally, each self-retracting lifeline shall be inspected and serviced according to the manufacturer's instructions.

EQUIPMENT USE

Anchorage - Anchorage used for attachment of personal fall arrest equipment shall be independent of any anchorage being used to support or suspend platforms and capable of supporting at least 5,000 pounds per employee attached. Guardrail systems to include wire rope guardrails shall not be used as an anchorage for fall protection systems.
Body Harness - Adjust the body harness to fit the chest and under the arms and legs snugly before each use. Wear only harnesses that fit properly. Belts used to secure the harness to your legs must fit snugly and pass through both sides of the buckle. Position the D-ring in the center of your back, between the shoulder blades. The back D-ring is the attachment point for the lanyard.

Lanyard - Attach the lanyard as high above your head as possible as to reduce fall distance. Never tie a knot in a lanyard. This can reduce its strength by 50%. Use only approved lanyards. Do not use substitutes for lanyards (i.e. wire or rope). Lanyards shall be attached above the

point of operation and moved during work as necessary to ensure that the attachment point will not allow the harness wearer to reach a lower level before stopping the fall. Protect lanyards from sharp edges to reduce possibility of ripping or tearing. Lanyards shall be no longer than six feet. Damaged lanyards should be removed from service immediately.

Rope Grabs - Rope grabs shall be used in accordance with the manufacturer's recommendations. Environmental conditions such as rain, snow or ice may affect the operation of rope grabs. Consult the manufacturer's instructions when these conditions exist. Employees shall test the rope grab by moving it along the lifeline to ensure that it is locking properly. This test shall be completed prior to attaching the body harness to the rope grab.

Self Retracting Lifelines - Self retracting lifelines, which automatically limit free fall distance to two feet or less, shall be capable of sustaining a minimum tensile load of 3,00 pounds, applied to the device with the lifeline or lanyards in the fully extended position. Self retracting lifelines shall be installed under the supervision of a qualified person, as part of a complete personal fall arrest system. Self retracting lifelines shall be installed so that the reel and housing are positioned perpendicular to the ground or lower level. Oil or any other lubricants shall never be applied to self retracting lifelines.

Snaphooks - Snaphooks must be equipped with a double-lock mechanism that requires two movements to open the snaphook. When released, the snaphook must return to the closed position. Never connect two snaphooks into one D-ring or connect snaphooks together. Snaphooks should be positioned vertically when attached to an anchorage point. The strength of a snaphook is greatly reduced when positioned horizontally or perpendicular to the lanyard. Never connect snaphooks directly to the body harness webbing, rope or wire rope. Never connect snaphooks to a D-Ring to which another snaphook or other connector is attached.

TRAINING

All employees required to work at elevations shall be trained in the recognition or unsafe practices or working conditions that could lead to a fall.
Workers shall be instructed as to the inspection, function, use and operation of body harness systems and other fall protection to be used including how to perform the work requiring body harnesses and how to adjust body harnesses to fit properly.
Employee training shall also include training in state or federal fall protection standards as they apply to the employee's work and exposure to fall hazards.
Retraining of an employee shall be conducted when:

- Lack or improper use of fall protection equipment isobserved
- Insufficient skill of understanding of fall protection equipment isdemonstrated
- An employee is found to be noncompliant with the fall protectionpolicy
- A change in the workplace occurs and/or new, or unfamiliar, task isassigned

RECORDS

Kasco, Inc. shall prepare a certification record of training. The certification record shall contain the name of the employee trained, the dates of training and the signature of the person that administered the training.
This certification shall be retained for the duration of the employee's employment.

ACCIDENT/NEAR-MISS REPORTING

Kasco, Inc. safety department shall be informed of any accident or near-miss that occurs. **Kasco, Inc**. safety department will use the information obtained to create a "Lessons Learned" presentation to prevent similar accidents/near-misses from happening.

ROOF ACCESS

All roof access must be approved by **Kasco, Inc**. site safety, all trades accessing roof must attend Roof Access orientation before working on any roofs on this project.

STEEL ERECTIONS

Refer to section titled "Steel Erection".

PRECAST/PRESTRESSED CONCRETE

Refer to section titled "Precast/Prestressed Concrete".

FIRE PREVENTION AND PROTECTION

GENERAL

This guideline is intended to prevent potentially serious incidents involving incipient fires by providing training in the proper use of portable fire extinguishers and fire prevention.
All employees shall be informed about the uses and limitations of portable fire extinguisher.
This guideline outlines terminology, responsibilities and reviews basic principles for the development of procedures to ensure safety and efficiency.

EXPECTATIONS/REQUIREMENTS

General rules - *f*or using portable fire extinguishers are as follows:

- Approved portable fire extinguishers shall be mounted, located and identified so that they are readily accessible.
- Portable fire extinguishers using carbon tetrachloride or chlorobromomethane extinguishing agents shall be removed from service and replaced with anapproved modelextinguisher.
- Use acceptable dry chemicals. Do not mix chemicals (especially Foray) withany bicarbonate-based or B:C dry chemical.
- Portable fire extinguishers shall be maintains in a fully charged and operable condition and shall be kept in their designated places at all times. If removed for repair, testing or use, the extinguisher shall be replaced immediately with one of the reserve units of equal or greatercapacity.
- Portable fire extinguishers shall be selected and distributed based on the classes of anticipated workplace fires and on the size and degree of expected hazard.

Inspections - The Safety Manager/Representative shall visually inspect all fire extinguishers monthly and document the inspection to determine that all portable fire extinguishers meet the following criteria:

- Extinguisher shall be in its designated place and shall not have beendischarged.
- If the extinguisher is pressurized, the gauge shall reflect that the unit is charged in the correct range.
- If the extinguisher is the dry powder type, ensure that the shift of the powder can be

detected when the unit is inverted.
- If the extinguisher is a funnel-nozzle equipped unit, ensure the nozzle isclear.
- The extinguisher should not have any apparent physical damage orcorrosion.
- All fire extinguishers that do not pass the inspection will be removed and replaced immediately. *Maintenance and Testing* - only trained, qualified persons, contractors of the manufacturer's representative shall maintain or test fireextinguishers.

Mounting Fire Extinguishers - Fire extinguishers shall be located along normal paths of travel. Access to portable fire extinguishers shall not be obstructed. The following shall be considered when mounting fire extinguishers:

- Fire extinguishers located outdoors shall be protected from theelements.
- Identify the location of fire extinguishers using the followingmethods:
- Paint a 12 inch red stripe on the column on which the fire extinguisher is mounted.
- Paint a 12 inch red square on the wall above a mountedfire extinguisher.
- Install a metal "FIRE EXTINGUISHER" sign perpendicular to the wall or column if the painted marking is not visible from 25 feet.
- Install a "FIRE EXTINGUISHER" sign on any housing that protects a wheeled fire extinguisher.
- Utilize fabricated fire extinguisher stands.

Minimum Installation by Location - The location of fire extinguishers shall be based in part on the longest distance allowed for a person to walk from a potential fire hazard to the fire extinguisher protecting the area. Additional placements are discretionary. Placement shall ensure that the following Maximum Travel Distances (MTDs) for these types of fire hazards are not exceeded:

- Class A Fire - 75 feet MTD
- Class B Fire - 50 feet MTD
- Class C Fire - 50 feet MTD

Training - All employees shall receive prior to initial assignment, and annual classroom, training to familiarize them with the general principles of fire extinguisher use and the hazards involved with fire extinguishers every other year. Qualified instructors may include manufacturer's representatives or externally trained fire fighters.

FIRE PREVENTION

Housekeeping Techniques/Procedures -

- Keep storage and working areas free of trash.
- Place oily rags in covered containers and dispose of daily.
- Do not use gasoline or other flammable solvents/finish to clean floors.
- Use noncombustible oil-absorptive materials for sweeping floors consisting of sawdust or some other combustible material treated with oil.
- Dispose of materials in noncombustible containers that are emptied daily.
- Remove accumulation of combustible dust.
- Do not refuel gasoline powered equipment in a confined space, especially in the presence of equipment such as furnaces or water heaters.
- Do not refuel gasoline-powered equipment while it is hot.
- Follow proper storage and handling procedures.
- Ensure combustible materials are present only in areas and in quantities required for the work operation.
- Clean up and spill of flammable materials immediately.
- Change clothing that has become contaminated with flammable liquids before

continuing with work.

- Post “No Smoking” signage near storage areas.
- Report any hazardous condition, such as old/faulty wiring, worn insulation and broken electrical equipment to the supervisor.
- Keep motors clean and in good working order.
- Do not overload electrical outlets.
- Ensure all equipment is turned off at the completion of the work shift.
- Maintain the correct type of fire extinguisher available for use.
- Ensure that all passageways and fire doors are unobstructed.
- Stairwell doors shall never be propped open and materials shall not be stored in stairwells.
- Periodically remove overspray residue from walls, floors and ceilings of spray booths and ventilationducts.
- Remove contaminated spray booth filters from the building as soon as replaced or keep immersed in water until disposed.
- Do not allow materials to block automatic sprinkler systems or to be piled around fire extinguisher locations.
- To obtain the proper distribution of water, a minimum of 18 inches of clear space must be maintained below sprinkler deflectors.
- If there are no sprinklers, a three-foot clearance between piled material and the ceiling must be maintained to permit use of hose streams.
- These distances must be doubled when stock is piled higher than 15 feet.
- Check daily for any discarded lumber, broken pallets or pieces of material stored on site and remove properly.
- Immediately reposition any pile of material that falls into an aisle or clearspace.
- Use weed killers that are not toxic and do not pose a fire hazard.

Storage and Handling Procedures -

The storage or material shall be arranged such that adequate clearance is maintained away from heating surfaces, air ducts, heaters, flue pipes and light fixtures.

All storage containers or areas shall prominently display signs to identify the material stored within. Storage of chemicals shall be separated from other materials in storage, from handling operations and from incompatible materials.

All individual containers shall be identified as to their contents.

Only containers designed, constructed and tested in accordance with the US Department of Transportation specifications and regulations are used for storage of compressed or liquefied gases.

Compressed gas storage rooms will be areas reserved exclusively for that purpose with good ventilations and at least a one-hour fire rating.

Gas cylinders shall never be used without pressure regulators.

Wooden pallets will not be stacked over six feet in height. If feasible, extra pallets will be stored outside or in separate buildings to reduce fire risk.

Piles of combustible materials shall be stored away from buildings and located apart from each other sufficiently to allow firefighting efforts to control and existing fire.

Bulk quantities of flammable liquids shall be stored outdoors and away from buildings.

Flammable liquids shall be stored in and dispensed from approved safety containers equipped with vapor- tight, self-closing caps, screens or covers.

Flammable liquids shall be stored away from possible ignition sources.
Flammable liquids shall only be used in areas having adequate and, if feasible, positive ventilation. If the liquid is highly hazardous, the liquid shall only be used in areas with local exhaust ventilation.
Flammable liquids shall never be transferred from one container to another by applying air pressure to the original container. Pressurizing such containers may cause them to rupture, creating a serious flammable liquid spill.
When dangerous liquids are being handled, a warning sign will be posted near the operation notifying other employees and giving warning that open flames are hazardous and are to be kept away.
The storage and usage areas will include fire-resistive separations and separation of incompatible materials and the separation of flammable materials from other materials.

RECORDS

Equipment Inspections - Records of the monthly inspection shall be retained for the most recent year. The date of the monthly inspection and the initials of the inspector shall be recorded on a metal or fabric tag attached to the fire extinguisher. Records of the annual maintenance, specifying the date, shall be retained for one year plus the current year.
Fire Extinguisher Use Training Records - Shall be retained for one year plus the current year.
Instructor Training Records - Qualification records of fire extinguisher training instructors shall be retained for one year plus current year.
Maintenance Training Documentation - Records of personnel qualified to perform maintenance shall be retained 13 years.

CONTRACTOR RESPONSIBILITIES

Contractor shall be responsible for fire protection in its work and operational areas, including offices, tool rooms, and storage areas twenty four (24) hours per day, seven days per week through the duration of this Contract.
Contractor, as required by OSHA and the local fire protection code, must provide appropriate fire suppression equipment.
Contractor shall be responsible for monthly visual inspections of extinguishers. At a minimum, fire extinguishers shall meet the following criteria:
Extinguisher shall be in its designated place and shall not have beendischarged.
If the extinguisher is pressurized, the gauge shall reflect that the unit is charged in the correct range.
If the extinguisher is a dry powder unit, ensure that the shift of the powder can be detected when the unit is inverted.
If the extinguisher is a funnel-nozzle unit, ensure the nozzle is clear.
Extinguisher shall not have any apparent physical damage orcorrosion.
**Any fire extinguisher that does not pass the inspection, it shall be removed and replaced immediately.* Contractor for all Hot Work Operations will provide a fire watch and at least one fire extinguisher of appropriate size & type.
Only safety containers approved by UL and the local Fire Marshall, and properly labeled as to their contents, are to be used for handling and/or storage of flammable liquids in quantities more than one gallon.
All tarpaulins and plastic used for temporary covers shall be of fire resistant manufacturer.

HAND PROTECTION

GENERAL REQUIREMENTS

Employers shall select and require employees to use appropriate hand protection when employees' hands are exposed to hazards such as those from skin absorption of harmful substances; severe cuts or lacerations; severe abrasions; punctures; chemical burns; thermal burns; and harmful temperature extremes.

HAND PROTECTION

When metal materials with sharp edges are being handled such as:

- Handling or working around sheet metal siding, roofing, etc.
- Metal unistrut materials and all thread rods
- Handling or working around tie-wire
- Handling metal floor grating
- Handling wire rope during rigging operations
- Handling or working around metal studs
- Handling of metal duct work
- Cutting operations involving hand-held, non power-operatedcutters:
- Using hand-held tubing cutters for cutting metal and hard plastic-typepiping
- Using hack saws for cutting metal
- Using cross-cut saws for wood cutting
- Handling of wood materials:
- Placing plywood sheeting on floors, scaffolds, etc.
- Unloading and loading wood of any type
- Moving and transfer of wood
- Concrete operations where hands areexposed:
- Power and hand troweling operations
- During the cleaning of chutes used for delivery ofconcrete
- During concrete removal operations
- During the use of utility knives or exacto knives:
- Cutting sheet rock
- Trimming wire sheathing or other strippingoperations
- Cutting insulation
- Trimming temporary plastic walls
- Cutting/scoring paper, vinyl tiles, etc.
- Sharpening knives, saws and blades
- While pulling wire in or around electrical panels
- While performing Energized Electrical Work (EEW) operations
- During use of impact-type tools:
- Using impact hammers to chip concrete
- Using jackhammers on concrete and similaroperations
- Using fence post drivers for driving posts and/orstakes
- Using power-actuated power tools
- During welding operations
- While operating a grinder - The grinding helper shall also utilize gloves to prevent impalement by flying debris

- Working on or near materials affected by extremetemperatures:
- Mechanics working on or around hotparts
- Workers performing operations around refrigerant or argonlines
- Handling hazardous materials which require the use of hand protection to avoid skin contact, as indicated on the Safety Data Sheet (SDS) for the material, to include but not limited to:
    - Paints, solvents, adhesives, caustics orcorrosives
    - Petroleum products such as gasoline, diesel, hydraulic fluids and used motoroil
    - Working with glass materials where the edges are exposed and present ahazard
    - Personnel involved in the removal and handling oftrash

Protective gloves may be worn for hand protection in the Clean Rooms when hands are exposed to hazards described by this procedure.

Proper Glove Selection

Different exposures require the use of different types of gloves. Evaluate each situation to ensure which is the appropriate type of hand protection. (See chart below)

OPERATION	GLOVE TYPE
Energized electrical Work (EEW)	Electrically insulated-rated rubber gloves with leather protectors
Welding operations	Gauntlet-type leather welding gloves
Grinding Operations	Tight-fitting leather gloves
Exposure to sharp edges & metal burrs	Cut-resistant gloves (Kevlar® or tight-fitting leather)
Utility knives, hacksaws, & cross-cut	Cut-resistant gloves (Kevlar®)
Concrete work	Rubber or leather gloves
Exposure to petroleum products	Chemical-resistant gloves per the MSDS requirements & manufacturers requirements (Neoprene, PVC, Nitrile or
Exposure to hazardous materials such as solvents, paints, adhesives, etc.	Chemical-resistant gloves per the MSDS requirements & manufacturers requirements (Neoprene, PVC, Nitrile or
Working around machinery	Tight-fitting leather gloves should be utilized when hand protection is necessary around rotating equipment to prevent entanglement of gloves/hands in machinery
Proximity & exposure to excessive heat, or hot piping and equipment.	Kevlar® heat resistant gloves and sleeves.
Using saws – portaband, and	Tight-fitting leather gloves.
Handling wire rope/rigging.	Tight-fitting leather gloves.
Handling glass	Cut-resistant gloves - Kevlar®
Handling wood	Tight-fitting leather gloves

HAZARD COMMUNICATION PROGRAM

The Occupational Safety and Health Act (OSHA) requires each employee potentially exposed to hazardous chemicals be advised of the potential hazards and how to guard against those hazards. Each contractor whose employees are potentially exposed to hazardous chemicals must develop a list of all such chemicals used on the project, gather safety data sheets (SDSs) for those materials, develop a labeling system for all materials, and train all potentially exposed

personnel in the hazards and their controls for all listed compounds.
These steps are outlined in detail in the following material.
Employee training for this requirement will be documented and acknowledged by signatures following each session using the acknowledgment statement found at the end of this section.

SAFETY DATA SHEETS (SDSS)

Every contractor will be responsible for development and maintenance of a list of hazardous chemicals utilized within the project operations and will be further responsible for obtaining and maintaining SDS for all such hazardous chemicals.
Employees will be allowed access to this information and the specific SDS for chemicals utilized in their work areas. All questions relating to the program should be directed to the Contractor's Superintendent or safety representative.
A copy of each SDS will be delivered to **Kasco, Inc**. prior to work starting involving that substance. **ALL SDS sheets will be kept in the on-site safety office**.

EMPLOYEE INFORMATION AND TRAINING

All new and present employees will be given information regarding the requirements of the Chemical Hazard Communication Program, the hazardous chemicals present in their work place, and the physical and health risks of these chemicals.
This requirement may be met through orientation sessions for new employees and refreshers for all during toolbox talks.
The information and training will also include the following elements:

- The symptoms of overexposure to the chemicals.
- How to determine the hazardous presence or release of a chemical in the work place.
- Methods to reduce or prevent the exposure to hazardous chemicals, such as control procedures, work practices, or personal protective equipment.
- Procedures to follow in the event of an exposure to hazardous chemicals.
- The location of the log containing the SDS, which apply to their work place and the location of the written Chemical Hazard Communication Program.
- How to review SDSs to obtain the hazard information for the chemical, and how to read the labels, whichare required on the chemical containers.
- When a new hazardous chemical is obtained for use, each employee who could be exposed will be given the information and training as described above, and a copy of the MSDS for the chemical will be obtained and distributed to those who actually use the chemical in the work place. The MSDS will be available to all employees during each work shift.
- Proper disposal procedures of waste materials shall be enforced.
- Labeling of waste containers and disposal of all hazardous materials by a licensed disposal facility is required.
- Container Labeling
- All chemical containers at the project must be clearly labeled as to the contents, the hazards involved, and the name and address of the manufacturer.
- All secondary containers of hazardous chemicals are to be clearly labeled with the same information as the original container.
- Each contractor's Superintendent or safety representative shall perform the above responsibilities for all their materials.

HAZARDOUS NON-ROUTINE TASKS AND NEARBY WORK

In the event an employee is assigned to perform, or is assigned to work in an area where a

hazardous task, non- routine to their work, the employee will be given the additional information and training related to the hazardous chemicals which may be encountered in the non-routine task.
The first-line foreman, Contractor Superintendent, or safety representative, will provide this information and training.
The information will include the specific chemical hazards of the task, the controls and protective measures required the types of personal protective equipment required, how to use the equipment, the nature of other work being performed in or near the non-routine task, and what emergency procedures are involved with the task.

CHEMICALS IN UNLABELED PIPES, VESSELS AND CONTAINERS

To ensure that employees who work on unlabeled pipes, vessels or containers have been informed as to the hazardous materials contained within, the following policy has been established:
Prior to starting work on unlabeled pipes, vessels or containers, employees are to contact their foreman for the following information:
Type of chemical in the pipe, vessel or container.
Potential hazards.
Safety precautions which should be taken.

AUDIT AND REVIEW

It will be the responsibility of each Contractor's Superintendent, and/or safety representative, to review theentire Hazard Communication Program.
Each Contractor's Superintendent, and/or safety representative, shall revise and update the material contained herein to reflect all changes in the purchase, use, storage, and handling of hazardous chemicals at the project.
Each Contractor's Superintendent, and/or safety representative, shall periodically audit procedures in the use of the hazardous chemicals meet the requirements as set forth in the SDS.

CONTRACTOR RESPONSIBILITIES

Prior to beginning work, each Contractor shall prepare a hazard analysis that defines the activities to be performed and identifies the sequence of the work, the specific hazards, and the methods to be used to eliminate or minimize eachhazard.
The hazard analysis shall be submitted prior to, and will be reviewed during the pre-construction meeting by **Kasco, Inc**. and the Contractor's supervisors and safety representative.
The hazard analysis shall be written in a form acceptable to **Kasco, Inc**.
Hazard Analysis shall be done when the scope of the work or conditions change.
Each Contractor foreman will inform their work crew of the Hazard Analysis for their work activity each day prior to start of work or when conditions change.
Each contractor shall submit for review by **Kasco, Inc**., a project specific safety program which addresses all the elements of this Safety Program as they will be implemented by the Contractor, its contractors, vendors and suppliers.

IDENTIFICATION OF HAZARDS

Hazard Identification shall be used for **all** hazards observed on a work site, prior to starting a new job or task that is deemed "high hazard" work, and while preparing a JSA or PTA.

Hazards can be identified by observation, SDS, Safety Audits, JSA or PTA, or Record Analysis. There are two types of hazards: (1) Health and (2) Safety.
Health Hazards cause bodily harm from excessive exposure of chemical hazards, physical hazards, biological hazards, ergonomic hazards, or workplace stressors.
Safety Hazards have potential to cause injury, non-compliance of safety standard, or unsafe act or condition. All high risk or serious hazards identified shall be immediately reported to supervisor and work shall stop until hazard has been abated.

ASSESSMENT OF HAZARDS

Once a hazard has been identified, the risk of the hazard shall be assessed. Hazard assessment is based on combining *frequency* and *severity*.

Hazard Frequency

- **Low:** Unlikely to occur
- **Medium**: Possibly to occur
- **High**: Likely to occur

Hazard Severity

- **Low**: May not affect personal health or safety (i.e. superficial injuries, minor cuts or abrasions, irritation or slight discomfort)
- **Medium**: May cause injury but not life threatening (i.e. lacerations, burns, fractures, sprains)
- **High**: May cause death, loss of a facility, or lost work time

Hazards Assessment = Frequency x Severity

	(1) Low Severity	(2) Medium Severity	(3) High Severity
(1) Low Frequency	1	2	3
(2) Medium Frequency	2	4	6
(3) High Frequency	3	6	9

All hazards observed on the work site, regardless of assessment, shall be reported and abated.
After reporting and abating hazards, the following actions shall be taken for hazards observed on the work site:

- Hazards assessed as one (1) or two (2) – No further action to be taken
- Hazards assessed as three (3) or four (4) - Written corrective action shall be submitted to Safety Representative and/or Safety Director, and retraining of employee, if necessary.
- Hazards assessed as six (6) or nine (9) - Work shall be stopped IMMEDIATELY. Written corrective action submitted to Safety Representative and Safety Director. Retraining of employee and Safety Violation Form to be filled out and filed in employee records.

HAZARD RANKING

Once all hazards have been assessed, all high risk or serious hazards (6 and 9) shall be addressed first. All non-serious hazards, will be addressed in the order of their assessed risk.

EMPLOYEE TRAINING

All employees shall be trained in proper methods for identifying hazards.
All employees involved in repeated hazards, or any serious hazard, shall be retrained in the topic related to the hazard.

HOUSEKEEPING

On a daily basis, all debris and scrap material shall be removed from the work area. Debris and other loose materials shall not be allowed to accumulate in stairwells.
Containers shall be provided for the collection and separation of waste, trash, oily and used rags and other refuse. Metal (dumpster type) containers must be used and emptied promptly.
Garbage and other waste shall be disposed of at frequent or more regular intervals in a manner approved by **Kasco, Inc**.
Contractor shall notify **Kasco, Inc**. of any hazardous waste it will generate during performance of the work. Contractor has the direct responsibility of maintaining proper storage of these wastes while on the project and will verify to **Kasco, Inc**., in writing, the wastes have been disposed of in a legal manner.
A copy of the haulers manifest must be provided to **Kasco, Inc**.
Contractor shall not pour, bury, burn, nor in any way dispose of a chemical on the project.
Contractor shall clear all combustible debris to a solid waste disposal project properly licensed under the laws of the State having jurisdiction.
NO OPEN BURNING OF DEBRIS, OR RUBBISH WILL BE PERMITTED ANYWHERE ON THE PROJECT
Materials and supplies shall be stored in locations, which will not block access-ways, and arranged to permit easy cleaning of the area.
In areas where equipment might drip oil or cause other damage to the floor surface, a protective cover of heavy gauge, flame resistant, oil proof sheeting shall be provided between the equipment and the floor surface sheeting so that no oil or grease contacts the concrete.
This requirement is applicable to both finished and unfinished floors.
All hoses, cables, extension cords, and similar materials shall be located, arranged and grouped so that they will not block any access-way and will permit easy cleaning and maintenance.

INFECTION CONTROL

INFECTION CONTROL MEASURES FOR USE DURING MAINTENANCE, CONSTRUCTION, AND RENOVATION

GENERAL

The level of risk in any given area is determined by the Owner in conjunction with Industrial Hygiene professionals, and may be modified with changes in patient population.
The Owner will complete an Infection Control Risk Assessment (ICRA) before work begins. Contractors will be required to comply with infection control measures.
The infection control measures to be taken for any given project will be determined on the basis of the guidelines of the ICRA.

Prior to the start of work the Owner will confirm to **Kasco, Inc**., areas under construction are free of any hazardous materials or medical wastes.

KASCO, INC. RESPONSIBILITIES

- **Kasco, Inc**. and responsible contractors will review blueprints and be involved in pre-construction planning meetings.

- This involvement is to provide input into project planning to identify infection control issues in the planned space and, to help implement and monitor measures to control infection risk generated by construction.
- **Kasco, Inc**. will assist the Owner and Architect in pre-construction planning
- **Kasco, Inc**. will monitor the implementation of infection control measures and document any nonconforming conditions.
- **Kasco, Inc**. will implement a work permit system whereby **Kasco, Inc**. will walk the project with Contractor personnel to determine that all appropriate controls are in place according to the ICRA.
- **Kasco, Inc**. will coordinate with the Owner, to identify conditions that may change, which may alter the Infection Control Risk Assessment.
- **Kasco, Inc**. will monitor the project's infection control measures, including the infection control measures of the Contractors.
- **Kasco, Inc**. will contact the Owner's Infection Control Representative upon completion of each phase of the project for final assessment, before occupancy.
- **Kasco, Inc**. will notify the Owner of any known breaches of the infection control requirements and implement corrective actions with the trade contractors.
- **Kasco, Inc**. will report all sewage spills to the Owner, and coordinate the clean-up.

CONTRACTOR RESPONSIBILITIES

All project employees will comply with the infection control measures, including blood borne pathogen training. All project employees will be required to attend a project orientation, which includes infection control requirements, prior to start of work.

All workers exposed to sewage or bodily fluids must report the exposure immediately to their supervisor. Their employer should offer any workers, who may have been exposed to sewage, as a part of their job, vaccination. Employers must offer vaccine at no additional cost to the worker.

Construction workers with communicable infections or exposure to communicable infections, such as chickenpox or tuberculosis, must have the permission of their occupational health provider to work.

Each Contractor will identify a person responsible for monitoring their employees' compliance with the ICRA. The person must be present onsite during all working hours of their personnel.

GUIDELINES FOR ORIENTATION TO INFECTION CONTROL

- Review of color coded floor plan of areas to be worked showing moderate and high risk areas as developed by the Owner's ICRA.
- Review project specific ICRA including classes of cork and associated precautions.
- Facility access restrictions and security measures.
- Worker circulation routes.
- Working around the building exterior
- General work practices on controlling dust, odor, vibration and noise.
- Required use of Personal Protective Equipment (provided by employer) – only in containment and patient areas.
- Cautions relating to existing MEP equipment.
- Access into enclosed spaces (above ceilings, into chases, behind walls and as otherwise determined by **Kasco, Inc**.
- Barrier requirements and monitoring.
- Exiting a containment area, both in emergency and routine cases.
- Reporting an emergency.

- Removal of equipment, tools or trash/debris from a containment area.
- Cleaning requirements, techniques and frequency.
- Attendance is to be documented with a dated, signed sheet showing the attendees employer and the full name of the attendee both printed and with signature. This is to be stored with the safety file.

INSPECTION AND AUDITING

PURPOSE AND SCOPE

To establish a basic inspection/audit program for the elimination of unsafe practices by employees and to establish a hazard free work environment for all employees on the project.

OBJECTIVES

To reaffirm the trade contractor's basic responsibility for the actions of the employees as originally assigned under the General Provision of the Occupational Safety and Health Act of 1970 (revised). The exercise of these responsibilities, by all project trade contractors will be the effective deterrent to accidents arising from unsafe practices and physical conditions will materially enhance the construction efficiency of thisproject.

PROCEDURES

Control will be achieved only when each trade contractor fulfills their contractual and statutory responsibilities and applies all practical steps to maintain safe and healthful work practices and conditions.

PROJECT CONTROLS

Continued monitoring/audit of the performance of the Contractor and their supervision under this section will be made by **Kasco, Inc**. Contractors will be notified of any unsafe practices observed. The Contractor's safety supervisor, the project safety representative and the construction manager's field staff shall utilize the "Construction Safety Survey".

SUPERVISORY CONTROL

CONTRACTOR

Each Contractor will be responsible for conducting continuous daily surveys of their operationsto ensure they are aware of the probable sources of potential injury or loss due to unsafe acts of procedures.

PLANNING

Contractors must extensively plan the procedures to be followed for each operation using Hazard Analysis procedures and submit such plans to **Kasco, Inc**.
Personnel chosen to perform any such planned operation shall be thoroughly briefed in all aspects of the procedure, including emergency actions to be taken in the event of a mishap.

INSPECTIONS

In addition to inspections conducted by **Kasco, Inc**. Insurance Representatives, and each Contractor, construction activities are subject to periodic inspection by OSHA Compliance Officers.
*Each Contractor is required to notify **Kasco, Inc**., in writing, prior to starting work if, by their company*

policy, they will require a warrant for OSHA to inspect their work. ***Kasco, Inc****. does not require a warrant.*

Contractors shall forward copies of any and all inspection reports and/or citations received by the Contractor from OSHA to **Kasco, Inc**. All information will remainconfidential.

In the event an OSHA Compliance Officer visits the project, he/she will be directed to the **Kasco, Inc**. office. The appropriate Contractors will then be notified so that an Opening Conference may be conducted.

Kasco, Inc. will organize an inspection party, consisting of both employer and employee representatives.

Each contractor shall perform monthly, a 3rd party safety audit. Each contractor shall perform a weekly project safety audit.

NOTIFICATION OF HAZARDS

Each Contractor shall notify **Kasco, Inc**., verbally or in writing, of the existence of any hazardous conditions, property, or equipment at the project, which are not under the Contractor's control. However, it is the Contractor's responsibility to take all necessary precautions against injury until corrected by the responsible party.

EQUIPMENT AND FACILITIES

All operating equipment and facilities used by Contractors shall be, inspected, and maintained as directed by this manual; as dictated by the applicable Federal and State safety and health regulations. In the event of conflict, the more stringent requirement will take precedence.

OSHA/MIOSHA INSPECTIONS

Owner personnel will be notified as soon as any regulatory agency appears onsite.

PRE-SHIFT INSPECTIONS

The project safety officer or Superintendent shall do a pre-shift inspection prior to all shifts on the project. These documents are available upon Owner request.

INSPECTION REPORTS

Owner representatives will have access to safety and health inspection reports upon request.

INTERIM LIFE SAFETY MATTERS FOR OCCUPIED FACILITIES

SPECIFIC MEASURES

Whenever construction affects the facility's ability to accommodate occupants (either because of disruption of services, interruption of normal operations, or when hazards are present), it will become necessary to implement interim life safety measures, as follows:

- Ensure that all exits are clear. This includes areas directly affected as well as all otherexits.
- Ensure that there is free access to emergency services, that vehicles, material, etc. are not blocking the access route.
- Disabling of fire protection systems. A small disaster could escalate if the fire protection system is not functional. Care should be given to provide an alternate system while the primary system isoff-line.
- **This includes scheduled maintenance, upgrade, repairs, or adding of coverage resulting in

disabling system, and disabling system to allow maintenance or repairs to be completed on other systems (e.g. hot work).

- Fire alarm, detection, and suppression systems must not be impaired. A temporary (but equivalent) system shall be used if the system is impaired. These temporary systems must be testedmonthly.
- Temporary construction partitions shall be smoke tight and noncombustible. Adequate signage shall discourage casual observers from opening or entering thepartitions.
- Additional (double) fire-fighting equipment must be provided, as well as personnel trained in its use.
- Smoking is prohibited in and adjacent to all construction areas. Strict enforcement mustoccur.
- Construction project shall be kept clean and orderly. This includes material piles, debris, platforms, and break areas.
- Hazard surveillance of projects shall be increased and documented. Attention is to be given to evacuation routes, construction areas, storage, office/lunch areas, and fuelstorage.
- Whenever the safeties of adjacent areas are compromised because of construction, staff shall be informed. Alternate exit routes shall be identified.
- Facility-wide education programs are conducted explaining interim life safety matters and current life safety deficiencies.
- The construction project must be restricted from all but authorized staff. Adequate signage shall be provided.
- Alternate access must be provided for public and emergency traffic whenever disruption occurs.
- Policy and procedures must ensure that roads and pathways are clear of mud, debris, materials, etc.
- Proper notification must be made to local authorities (fire, police, other) whenever life safety isdiminished.
- Governing body shall be kept apprised of status of life safety duringproject.
- Construction workers must be made aware of egressroutes.
- Construction workers' egress routes must be inspected daily to ensure noobstacles.
- Effective storage, housekeeping, and debris-removal policies and procedures must be in place to reduce collection of combustibles in construction areas.
- Whenever fire zones are altered, the Owner's staff will be informed in regard to new or different life safety measures regarding their changed compartmentation and fire safety.

LADDER SAFETY

Ladders are used for many purposes. This guideline outlines terminology, responsibilities and reviews basic principles to ensure safety and efficiency with using ladders.

GENERAL

Defective or damaged ladders shall not be used. Before each use, ladders shall be inspected for the following:

- Missing non-skid feet
- Worn or frayed ropes
- Cracks in sides, frame and/or rungs
- Missing rivets or other fasteners

- Bent or missing spreaders
- Loose rungs
- Any condition that could pose a safety issue or cause asafety problem
- Ladders shall not be painted, as paint can obscure damage to the ladder and defects in the materials of construction.
- The correct type of ladder shall be selected for the job or task. Only fiberglass ladders shall be used at electricity generating facilities. Only non-conductive ladders shall be used for work involving electricity or the use of electrically powered tools.
- Ladders shall be secured by tying the top or bottom rung to a fixed structure that will support more than the anticipated total load of the ladder. Ensure that an adequate slope is maintained where the base is placed at least
- ¼ the length of the ladder away from the supporting structure.
- The feet of the ladder shall be placed securely on the ground or work floor and not on other objects in an attempt to extend the reach of a ladder.
- Ladders shall not be lengthened by splicing additional sections to it. Always face a ladder when ascending or descending it.
- Ladders shall be positioned so that work can be performed without leaning and shall be moved as work progresses. Ladders shall not be placed near power lines or against movable objects or vehicles.
- Ladders shall not be placed in front of door or doorways that open toward the ladder unless the door is locked in the open position, locked shut or guarded by another employee. If the door is locked shut because of ladder work, post the locked door with a “DO NOT OPEN - WORK IN PROGRESS,” or similarsignage.
- Unattended step or straight ladders shall not be left standing but should be closed, lowered to the ground and placed where they do not present tripping hazards.
- The area around the base and top of the ladder shall be kept free of tripping hazards and barricaded if the base or top projects into a passageway.
- Ensure that the shoes are free of mud, oil and/or grease before ascending or descending a ladder. Ladder rungs shall be cleaned immediately if they become soiled to reduce slipping hazards.
- Workers shall use a tool pouch or raise and lower materials using a line or line and bucket rather than carrying them while ascending or descending a ladder.
- Only one employee shall work from a ladder at a time so that the design load capacity of the ladder is not exceeded.
- Every excavation, bell hole or trench that is more than four feet deep shall have a ladder(s) that extends at least three feet above the grade surface and be placed so that personnel shall not travel more than 25 feet to get to a ladder.Ladder rungs must be uniformly spaced or meet OSHA/ANSI specifications. Ladders shall only be used for their intended use.

LADDER SELECTION

SELECT TYPE - The first step in ladder selection is choosing the right style of ladder for the job. Different styles of ladders are designed to keep you safe and productive when climbing or standing. Using the wrong style of ladder or simply ignoring the limitations of climbing equipment can result in a fall or serious injury. The most common selections will be basic step and extension ladders, however, there are many options available.

SELECT PROPER LADDER MATERIAL - use only non-conductive ladders when working on or in proximity

to any electrical system or device.
SELECT PROPER HEIGHT - Extension ladders should be 7 to 10 feet longer than the highest support or contact point, which may be the wall or roof line. This will allow enough length for proper setup, overlap of ladder sections, height restrictions of the highest standing level, and where appropriate, the extension of the ladder above the roof line. The highest standing level is four rungs down from the top. The highest permitted standing level on a stepladder is two steps down from the top. A person standing higher may lose their balance and fall. A person's maximum safe reaching height is approximately 4' higher than the height of the ladder. For example, a typical person can safely reach an 8' ceiling on a 4'ladder.
SELECT PROPER DUTY - Ladders are designed and constructed to safely hold up to a specific amount of weight. Most ladders come in five different Duty Ratings identified by their grade and type. The Duty Rating is defined as the maximum safe load capacity of the ladder. A person's fully clothed weight plus the weight of any tools and materials that are carried onto the ladder must be less than the duty rating. Ladders are also built to handle the demands of various applications. For example, a ladder used frequently on a construction site by rugged workers should typically be stronger and have a corresponding higher Duty Rating than a ladder used by a lighter person for light chores around the home. Workers should be advised to consider both the weight which will be on the ladder and the work application and to select the proper grade of ladder which is designed to handle anticipated usage. Duty Rating is the maximum safe load capacity of the ladder. Duty Ratings are described in terms of pounds. Refer to the chart below for a duty rating summary:

LADDER TYPE	DUTY RATING	DESCRIPTION
TYPE 1AA	375 LBS.	Extra Heavy-duty industrial ladder
TYPE 1A	300 LBS.	Heavy-duty industrial ladder
TYPE 1	250 LBS.	Heavy-duty industrial ladder
TYPE 2	225 LBS.	Medium-duty commercial ladder
TYPE 3	200 LBS.	Light-duty household ladder

STEPLADDERS
Stepladders that wobble shall be removed from service, marked "DO NOT USE - DEFECTIVE" (or similar) and repaired or replaced.
Spreaders shall be fully opened and locked before using a ladder.
The top step of a stepladder shall never be used. Rather, use a larger stepladder, a longer straight ladder or another method of accessing work.
Tools or materials shall not be left on the top step of a stepladder but shall be removed before descending a ladder and/or relocating the ladder.
NEVER use a stepladder in the closed position. Use the proper ladder for the task.

STRAIGHT LADDERS
Straight ladders shall be leaned against the structure being climbed so that the distance from the ladders feet to the base of the structure is ¼ the distance along the ladders length to its upper contact point with the structure in order to ensure a safe slope.
*Quick Tip - count the ladder rungs from the feet to the point of contact and divide by 4 - the feet of the ladder should be that many feet from the structure base.
At least three feet of ladder should extend above the upper point of contact with the structure being

climbed. Use ladder of the length needed. Never work from top two rungs of a straight ladder.
When either the length or the weight of a ladder makes it difficult to handle, two people shall raise and secure the ladder. One should secure the feet while the other walks under the ladder from the opposite end until it is raised enough to place or move. Raise the extension, if needed. Reverse the process for lowering the ladder.
When the ladder extends more than four feet above the top tie-off, a barrier or flag shall be placed on the ladder to prevent personnel from climbing beyond a safe point.

EXTENSION LADDERS

Extension ladders shall be equipped with necessary irons, locks and hooks and shall be assembled so the sliding (upper or fly) section is on top of the base (lower) section.
Extension ladder sections should overlap by at least three feet.
If the ladder extends more than four feet above the top tie-off, a barrier or flag shall be placed on the ladder to prevent personnel from climbing beyond a safe point.
When either the length or the weight of a ladder makes it difficult to handle, two people shall raise and secure the ladder. One should secure the feet while the other walks under the ladder from the opposite end until it is raised enough to place or move. Raise the extension, if needed. Reverse the process for lowering the ladder.
The fly section of an extension ladder shall never be used independently.

STORING LADDERS

Support ladders stored or hung horizontally in a sufficient number of places to prevent sagging and permanent set.
Tie together or otherwise secure ladders that are stored vertically to keep them from falling into aisles or equipment.
Wood ladders shall not be stored near radiators, stoves or other heat sources that could dry the wood and cause deterioration.
Wood ladders shall not be stored near steam lines or otherwise placed where they are kept wet or damp enough to rot the wood.
Ladders shall be cleaned after every use before returning to storage. All mud, oil and/or grease shall be removed.

FIXED LADDERS

Fixed ladders more than 20 feet high shall be caged unless other fall protection safety devices are installed and used.
Fixed ladders with cages exceeding 20 feet in height shall have landing platforms installed at every 30 feet.
Fixed ladders should be securely attached to an immovable structure and attachments shall be inspected annually for signs of deterioration or detachment. Repairs shall be made immediately.

SECURING LADDERS

Ladders that are stored vertically shall be tied together or otherwise secured to keep them from falling into aisles and equipment.
All ladders that are not self-supporting shall have an adequate tie-off rope securely attached to the top section of the ladder and to the fixed structure at all times.
Have a co-worker hold and brace the ladder in place when the ladder cannot be tied off at the top, when the feet are on a slanting or slippery surface or when the ladder feet cannot be placed between ¼

of the length away from the structure.

INSPECTIONS

Ladders shall be kept in good condition at all times and shall be inspected before each use. Regular inspections help ensure that ladders are safe to use.

Ladders found to have defects or damage shall be removed from service, tagged/marked "DO NOT USE - DEFECTIVE", sent in for repair or destroyed.

The quarterly safety inspection shall be recorded and documented by the Supervisor. Proper ladder inspection should include the following points:

- Ensure that there are no broken or missing step/rungs, broken or split side rails or other defects.
- Ensure that connections between the rungs and side rails are not loose.
- Ladders that have fallen or have been misused shall be checked for excessive dents or damage.
- Ensure that tie-off rope is attached and in good condition.
- Ensure that the spreaders and locking mechanism on stepladder are in good, working condition.
- Ensure that hinges move easily and are in goodcondition.

TRAINING

All employees using ladders shall be trained in safe ladder use.

RECORDKEEPING

Training records shall be retained for the duration of employment.

Inspection records and/or maintenance/repair records shall be retained for the life of the ladder.

LINE BREAK

POLICY

Any entry into an operating Process System under installation, testing, or operating conditions is subject to the procedures for "line breaking".

All employees are to be informed of the inherent dangers of working on operating process systems.

Entries can be made only with approval of the Owner and **Kasco, Inc**.

Added hazard potential exists when cooling occurs, vacuums, which may be holding liquids in pockets often break without warning and liquid is released to run to the lowest point.

Plugs (particularly solidified process materials) can move and release of materials after the first connection has been broken.

The Owner and **Kasco, Inc**. must agree on the location of first breaks.

All systems must be considered as having the potential to discharge contained energy/material from open ends of lines or broken flanges at any time even after the line has been drained and vented.

CAUTIONS

No Contractor may enter an operating piping system or equipment until the requirements of this procedure are met.

Systems activated for testing purposes fall under this procedure.

Under no circumstances will any line/system be violated other than via the lock and tag procedure.

LOCKOUT/TAGOUT PROCEDURES

The Contractor must adhere and strictly follow either the project lockout/tagout requirements, the Owner's requirements or the Contractors own requirements, whichever is the most stringent.
No employee is permitted to work on any energized circuit.
All circuit disconnects must be locked in the open position or otherwise appropriately identified with affixed tags stating "DANGER - DO NOT ENERGIZE" or other equivalent wording prior to working on the system or equipment. **LOCKOUT DEVICES**
Only individually keyed padlocks shall be used.
Padlocks are to be painted per the craft color code for easier detection and craft identification.
A lockout device of the standard scissor type that will allow the placing of more than one padlock is required, when more than one individual is working on a circuit or mechanical process.
A piece of chain or cable may be necessary to complete a lockout on some valves or controls and shall be used wherever needed.

DANGER TAGS

'Danger Tags' ***are not*** 'Danger Signs', and shall not be used where a sign is needed.
Two standardized Danger Tags shall be used on this project. They are described as follows:
"DANGER - DO NOT USE": This tag must be attached to each padlock on a lockout.
"UNSAFE - DO NOT USE": This tag does not require an attachment to a padlock, but may be used if needed. This tag shall be used to identify tools, equipment, vehicles, etc.

PROCEDURE

If device, valve, switch, or piece of equipment is locked out, a "Danger Tag" shall be attached.
No device, valve, switch or piece of equipment shall be operated with a "Danger Tag" and/or lockout attached regardless of circumstances.
Systems consisting of electrical components will be checked, locked and tagged first by electrical craft employee working on the circuit.
The electrical craft will be the first lock on, and the last lock off.
Where placing of lock is not feasible, the circuit conductor will be disconnected from the breaker and tagged out. The panel cover must be of the type that will cover all breakers when closed and must be equipped with a hasp in order to secure a lock to prevent the panel door from being opened.
If panel cover is of a type that cannot be locked closed, a cover must be secured over the panel cover and be locked closed and tagged while any work is being performed on any of those circuits.
If the above cannot be accomplished, each circuit will be tagged out as prescribed and an electrician will stand by the panel board to prevent breakers from being tampered with.
This physical presence will continue daily until the work is complete.
All "Danger Tags" must be dated and signed. Also on tag, must be the intended work and equipment for which tag has been placed.
If employees of more than one craft or crew are to work on a system, circuit, machinery, or component, the supervisor from that craft shall place his individual lock and tag; and verify that the system, circuit, machinery or component being tagged, is indeed the system that is to be worked on.
Only the person that placed the lock and tag shall remove it without special authorization from the Project Manager, construction manager or craft Superintendent.
Padlocks, lockout devices and "Danger Tags" shall be made available as specified above.

Padlocks shall be color coded for craft identification and shall only be used by that craft for lockout purposes, i.e. valves, switches, electrical components, etc.
Padlocks shall be issued from the contractor responsible where a sign in/out log will be maintained.
Locks and tags shall be issued to the foremen or supervisor responsible for the craft performing the work.
The Contractor of each craft discipline will be responsible for assuring all padlocks are personally identified, that will be used for lock and tag purposes.
The Contractor Superintendent(s) will be responsible for ordering their own craft's padlock. A master key will also be provided.
Any employee(s) or person(s) found to have removed another's lock and/or tag will be subject to disciplinary action up to and including dismissal from the project.

SPECIAL SITUATIONS

When due to the nature of work, a supervisor who has employees assigned to work on systems that are between construction and client turnover that is to be locked and tagged out in order to perform work, the below shall be applied:
Prior to the electrical foreman de-energizing the system, the foreman will ascertain whether system or device has been turned over and accepted by the client; If system is signed off, the client shall assume responsibility for de-energizing system and becoming the tagging authority.
Contractor electrical foreman/craft journeyman places lock and tag and tries to engage the equipment.
The electrical journeyman or lead man will meter the tagged equipment to verify that it is de-energized.

OPERATING FACILITIES AND EQUIPMENT

All systems covered under this section whether electrical, mechanical or others are considered those systems where no future construction activity is warranted.

ELECTRICALLY OPERATED SYSTEMS

Client representative or designee de-energizes system demonstrating accuracy to construction electrical supervisor, then locks and tags.
Construction electrical foreman/journeyman ascertains that fuses, breakers or throws have been removed, when applicable; tags, locks and tries system.
Electrical foreman/journeyman, meters the side of the system to be worked on to verify it is de-energized and safe.
Upon completion of work, the journeyman removes their lock/tag and advises the construction electrical supervisor.
Client representative or designee clears system, removes lock and tag and re-energizes if necessary.

OTHER SYSTEMS

Plant engineer or designee de-energizes system and makes system safe.
Client mechanics or designee(s) makes first break in flanges, places blanks, blinds or valves, and demonstrates that the system is empty and decontaminated.
Construction (Client) Coordinator or designee verifies that the system is de-energized and tagged.
Construction Craft supervisor locks, tags and tries system, surrenders the key to the journeyman who will then perform the assigned task.
Upon completion of work, the journeyman will return the key to the assigned supervisor and tag and lock are removed.

Construction (Client) Coordinator or designee assures that system is clear, and then removes lock and tag. Client mechanics or designee(s) re-energize system.

CONSTRUCTION

All systems under this section whether electrical, mechanical or others, are considered those systems that are still in the construction phase.
Equipment or circuits that are de-energized shall be maintained inoperative at their main power source and shall have locks and tags attached to prevent accidental turn on.
A staff member shall be designated from the electrical department (Superintendent or General Foreman), to assume the responsibility, for the removal of locks and tags, and activation of power from the main switchgear through end line component.

MEETING – PRE-CONSTRUCTION

The Contractor, before starting work at the project, shall attend a pre-construction "award" meeting with **Kasco, Inc**. to understand the project conditions and safety requirements.
A project tour shall be made to confirm the Contractor's awareness of potential safety hazards.
The Contractor to ensure a safe work place shall provide appropriate methods, equipment, devices and material. The Contractor shall provide or develop his own project specific safety program and submit it to **Kasco, Inc**. for review prior to starting work at the project.
Such review shall not relieve the Contractor of responsibility for safety, nor shall such reviews be construed as limiting in any manner.
It is the Contractor's obligation to undertake any action, which may be required to establish and maintain safe working conditions at the project.

MEETINGS

A Project Start Safety Conference will be held with the Superintendent(s), safety representative and foremen of each new Contractor prior to coming on the project.
Kasco, Inc. will issue the project start package information and will issue special instructions to the Contractors in support of the Safety Program when needed.
Kasco, Inc. will conduct regularly scheduled meetings with the supervisors of new Contractors coming on the project and explain safety goals, contents of this manual and otherwise provide project orientation, safety activities and information.
All Supervisors will be required to attend this orientation after coming on the project. Contractor meetings will be held as necessary and as directed by **Kasco, Inc**.
All Contractors actually working on the project will have a representative at the safety meeting to maintain all safety requirements for their trade.
Kasco, Inc. will conduct safety meetings on a regularly scheduled basis. Minutes of the meeting will be a topic of all scheduling and progress meetings.
All Contractors are required to hold weekly 10-15 minutes **"Tool Box" safety meetings** for all employees. Topics related to work assigned, and current safety problems will be discussed.
Monthly meetings for supervisory and clerical employees will be held.
Kasco, Inc. will monitor these "Tool Box" meetings through personal attendance or by reviewing a copy of the meeting report.
Prior to starting any major operation, which would involve locking and tagging procedures, a meeting must be set up involving **Kasco, Inc**. and every Contractor Superintendent and every Contractor safety

representative affected by the work.
Specific procedures must be adopted and reviewed by all concerned with the operation prior to commencement of the work.

MOTOR VEHICLES AND EQUIPMENT

ALL EQUIPMENT MUST BE APPROVED BY KASCO, INC. BEFORE BEING BROUGHT ON A SITE
All equipment must be inspected daily before use by Contractor's operator. Contractor must also make documented and complete inspections at 30-day intervals with proper documentation maintained at the project by Contractor and copies shall be made available to **Kasco, Inc**. upon request.
Defective equipment shall be repaired or removed from service immediately.
All Contractors' operators of construction equipment should be properly licensed and certified by a competent person.
Copies of the certifications shall be maintained on site by Contractor and made available to **Kasco, Inc**. upon request.
Vehicles used to transport employees shall have seats firmly secured and adequate for the number of employees to be carried and all passengers shall be properly seated with seat belt used.
Standing/kneeling on the back of moving vehicles is prohibited.
Locations for storage of all fuels, lubricants, starting fluids, etc., shall be reviewed by **Kasco, Inc**. prior to use by Contractor for storage and shall conform to the requirements of the NFPA as well as the local Fire Marshal. **No fuel storage tanks allowed on this project**.
Where required, contractors shall provide equipment diapers to protect from environmental spills.
Drivers of motor vehicles shall have a valid state driver's license (CDL when applicable) and be instructed to exercise judgment as well as observe posted speed limits.
All Contractors' means of ingress and egress shall be adequately marked and kept clear of stored material, debris and equipment.
Pedestrians always have right-of-way over motorized traffic.
Horns shall be sounded at blind corners, when passing, and/or for warning. Established hand signals or turn signals are to be used.
Reckless driving or other non-observance of these instructions will be cause for withdrawal of driving privileges on the project.
Any ATV's used on the project shall be "four"- wheeled, not three-wheeled.
All vehicles permitted access to the project must display an appropriate vehicle identification badge from the rear view mirror or other conspicuous location at all times while on the project.
Seat belts shall be worn by all employees operating motor vehicles and any equipment with rollover protection structures during performance of work.
Properly trained and equipped flag persons shall be used whenever construction traffic accesses or exits from public highways as well as when construction traffic and deliveries interfere with the planned flow of traffic on public highways.

OCCUPATIONAL NOISE EXPOSURE

Protection against the effects of noise exposure shall be provided when the sound levels exceed those shown in the table below, when measured on the A-scale of a standard sound level meter at slow response.
When employees are subjected to sound levels exceeding those listed in the table below, feasible administrative or engineering controls shall be utilized. If such controls fail to reduce sound levels

within the levels of the table, personal protective equipment shall be provided and used to reduce sound levels.
If the variations in noise level involve maxima at intervals of 1 second or less, it is to be considered continuous.
In all cases where the sound levels exceed the values shown herein, a continuing, effective hearing conservation program shall be administered.
Permissible Noise Exposure

Duration per day, hours	Sound level dBA slow response
8	90
6	92
4	95
3	97
2	100
1 ½	102
1	105
½	110
¼ or less	115

When the daily noise exposure is composed of two or more periods of noise exposure of different levels, their combined effect should be considered, rather than the individual effect of each.
Exposure to different levels of various periods of time shall be computed according to the formula set forth below: $F(e) = (T_1/L_1) + (T_2/L_2) + \ldots + (T_n/L_n)$ where:

- F (e) = The equivalent noise exposure factor
- T = The period of noise exposure at any essentially constant level
- L = The duration of the permissible noise exposure at the constant level (from the table above) If the value of F (e) exceeds unity (1) the exposure exceeds permissible levels.

Exposure to impulsive or impact noise should not exceed 140 dB peak sound pressure level.

OSHA REQUIRED TRAINING

Instruction and training of employees is a requirement of OSHA and will be enforced on this project.
Training of Contractor personnel is the responsibility of the Contractor.
All Contractor personnel must attend the **Kasco, Inc**. New Employee Orientation prior to their starting work on their first day on the project. **Proper documentation will be submitted to Kasco, Inc. and kept on site.**

OSHA – INSPECTION

It is **Kasco, Inc**. policy to allow OSHA to conduct an inspection of the project (subject to review by **Kasco, Inc**. Legal Team if necessary).
If a Contractor wishes to assert their rights under the U.S. Constitution regarding inspection by OSHA, then the Contractor must so notify OSHA prior to the start of an inspection.

Kasco, Inc. will accompany the OSHA inspection party at all times and will make arrangements for the necessary meetings between OSHA, contractors and organized labor representatives (if any).
Kasco, Inc. does not assume liability or responsibility for the presence of any alleged hazards or their correction. Contractors will inform **Kasco, Inc**. of the issuance of any OSHA citations and provide a copy when requested.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Precautions shall be taken to prevent personal injury due to hazards associated with the performance of tasks under hazardous conditions. This guideline outlines terminology, responsibilities and reviews basic principles to ensure safety and efficiency through proper use of personal protective equipment (PPE).

RESPONSIBILITY

Responsible Manager/Supervisor - The Responsible Manager/Supervisor shall ensure that adequate supplies of PPE are on hand and enforce the use of required PPE. The Responsible Manager/Supervisor shall complete and sign the PPE hazard assessment form.
Employees - Employees shall be trained to know when to use PPE and shall use the appropriate PPE at all times. Employees shall remove damaged PPE from use and report the need for replacement.
Safety Representative - The Safety Representative shall perform job/task safety analyses and document the findings in order to identify PPE needs. The Safety Representative shall ensure that the annual inspection of personally assigned PPE is performed and documented. The Safety Representative shall ensure that adequate supplies of appropriate PPE are available for use. The Safety Representative shall perform an analysis of the possible need for flame retardant clothing (FRC). The Safety Representative shall train employees, or arrange training, on the proper use of PPE.

GENERAL

PPE shall meet ANSI standards, or equivalent, be NIOSH or MSHA approved, or equivalent. Affected employees shall be trained in the selection, use, care and limitations of the PPE they use and shall wear PPE that is appropriate to the job of that is required for the area in which they are working. PPE shall be inspected by the user before each use and defective or damaged PPE shall be removed from service and replaced immediately. PPE shall be fitted to each affected employee. Areas with specific PPE requirements shall be marked appropriately. **Kasco, Inc**. shall supply employees with all required PPE. EMPLOYEE PPE IS NOT PERMITTED. Necessary PPE shall be provided to visitors during their visit to **Kasco, Inc**. projects or facilities. A hazard assessment shall be performed and signed on all PPE.

CLOTHING

Clothing shall be reasonably clean. Clothing contaminated with oil, dirt or other materials can cause skin irritations by holding those materials in contact with the wearer's skin. Flammable substances on clothing constitute a fire hazard.
The use of Flame Retardant Clothing (FRC) shall be evaluated by the Safety Representative for the specific jobsite or facility. Identified FRC requirements shall be met with the appropriate grade of Nomex, or equivalent. Areas requiring FRC shall be posted.
Clothing shall be kept close to the body so that it does not snag or get caught in machinery. Long-sleeved shirts shall be buttoned at the wrist and shirt tails shall be tucked into trousers.
Sleeveless shirts and blouses, tank-tops, muscle shirts, mesh fabric shirts, uncontrolled long sleeves

and similar inappropriate non-work clothing shall not be worn in project areas.
Clothing shall not be used to clean welding torch tips as acetylene impregnated fabric is highly flammable.
Welding apparel should adhere to the following requirements:

- Clothing shall protect skin from hot sparks, electric arc and welding rays. Leather chaps, aprons and sleeve guards shall be worn when necessary.
- Clothing with synthetic fabrics, open shirt pockets or pant cuffs that can catch sparks or slag shall not be worn.

Electrical workers shall wear long sleeved, non-synthetic shirts with the sleeves rolled down in the following circumstances:

- When rubber gloves are required.
- When climbing poles is required.
- When working in manholes or vaults, on overhead lines, in underground installations, with hot compounds, oils, metals or open flame or near hot boiler piping.
- When working with chemically treated poles.
- When working with chemicals.

Fire Retardant Clothing (FRC) shall be worn when switching, grounding or performing other work where high voltage arcing or flash-over could occur and when working around energized high voltage conductors in confined spaces.
Chaps or other thigh to shoe top protection shall be worn when operating a chain saw.

JEWELRY AND HAIR

Employees shall review the tasks to be performed and consider whether there is a danger of catching jewelry on equipment. This can result not only in the loss of the jewelry, but in personal injury. When performing fieldwork, employees shall remove any item that could present a hazard when performing such work (i.e. finger rings, watches, bracelets, necklaces and other jewelry). Long, uncontrolled hair can be caught in machinery and result in severe injury. Hair shall be maintained short or controlled in a manner that does not pose a hazard where appropriate.

EYE AND FACE PROTECTION

Eye and face protection is not required in offices, meeting rooms, parking lots and enclosed cab vehicles. Fixed- tint or shaded lenses shall not be worn inside buildings, enclosures or at night. Photogray glasses are acceptable. Areas where additional eye and face protection is required shall be clearly marked and the appropriate PPE shall be made readily available. Tasks requiring additional eye and face protection, regardless of where take is performed, shall be identified and eye and face protection made available. Eye and face protection shall be cleaned and returned to the storage area after use.
When wearing safety glasses, the following precautions are to be adhered to:

- Rigid side shields shall be required on all safety glasses. The side shields shall be manufactured for the specific frames by need not be permanently attached.
- Glasses damaged in the course of work shall be replaced by **Kasco, Inc**.
- Visitors shall be furnished with safety glasses during visits. Non-safety prescription glasses wearers shall be required to wear goggles or fit-over safety glasses over the prescription glasses.
- Goggles generally provided more complete protection that safety glasses for both impact and chemical exposure and shall be required in the following circumstances:

- On windy days when working with dry materials out ofdoors.
- When working with lawn equipment, such as trimmers andedgers.
- When working in lab areas or anywhere in a facility withchemicals.
- Welding goggles or safety glasses shall be worn by welders and welder's helpers with American Optical Caliber Super Armor Plate lenses with Breeze Catcher side shields and Comfort Cable temples or equivalent. The protection level of these goggles is required and comfort of this model of welder's goggle is highly recommended. Lens shades shall be selected based on the type of welding to bedone.
- Face shields shall adhere to the following requirements:
- Face shields shall be equipped with a means of firmly attaching them to the appropriate head protection.
- Shields shall be used with safety glasses or goggles when working at grinders or drill presses and when handling caustics, acids, epoxies other chemicals and wet cellbatteries.
- Face shields shall never be used as primary eye protection. Safety glasses or goggles shall be worn with them at all times.

HEAD PROTECTION

Head protection must meet ANSI Z89.1m Class A or Class B standards, or equivalent. Head protection shall be inspected by the wearer regularly to ensure that the suspension system is secure and undamaged. In addition, the shell shall be free of gouges, dents and other damage and not brittle from age or exposure to chemicals. Damaged head protection shall be removed from service and replaced immediately. Aluminum or other metal head protection (Class C) shall not be worn. Head protection shall not be decorated with stickers, paint, decals or any other items that may hide damage or defects that may affect the protection level afforded. The only items permitted shall be:

- Company logo.
- Orientation stickers.
- Employee's name on plastic tape.
- Only approved winter liners may be worn with headprotection.
- When there is danger of the head protection fall off or being blown off, a chin strap shall be provided and worn.

FOOT PROTECTION

Approved safety shoes must meet ANSI Z41.1 standard or equivalent standards and be suitable for field work. Toe and/or metatarsal guards that meet ANSI A41.1 standard or equivalent are approved for use as foot protection. These guards shall be provided by **Kasco, Inc**. for the use of employees who are unable to wear safety shoes or who, due to the nature of their job tasks, required additionalfoot protection.

HAND PROTECTION

Gloves shall be worn at all times when the hands are exposed to potential injury. Gloves shall not be worn when working on or around rotating equipment such as lathes, mills, drill presses and similar equipment. Employees shall request gloves based on the work to be done and/or the chemicals they shall handle. The MSDS for the chemicals to be handled shall be consulted to determine to type of glove needed to handle safely. Several types of gloves shall be stocked at all times. Unusual (not typically stocked) gloves shall be requisitioned for a given task. Requirements for care of electrical protection rubber gloves are asfollows:

- Gloves shall be stored in glove bags with the cuffs down.
- Gloves shall not be stored or worn inside out.
- Employees shall inspect the gloves before each use using the air test method for detection of holes. Lookfor scratches, cracked rubber, snags, blisters, embedded foreign matter or other defects. Defective gloves and their protectors shall be returned to the supply point or other location, as appropriate.
- Gloves shall be electrically tested every 6 months. Records of the issue and test dates shall be kept with the gloves.
- Leather protectors shall be worn over the rubber gloves when there is a possibility of making contact with a wire or when on a pole or structure carrying a wire.

ELECTRICAL PROTECTION

Electrical protection rubber gloves classifications and requirements are as follows:

- Class 0 - for voltages from 50 to 1,000 volts
- Class 2 - for voltages from 50 to 5,000 volts
- Class 4 - for voltages greater than 5,000 volts

HEARING PROTECTION

Hearing protection shall be worn by employees and visitors in areas marked as high noise areas and when exposed to noise levels equal to or greater than 85 dBA. Hearing protection is recommended whenever the employee judges the noise levels may exceed 85 dBA, whether the area is marked or not. Unmarked high noise areas shall be reported to the Safety Representative for sound level evaluation. Specific hearing protection is required when exposed to hot sparks or molten metal. Certain noise sources are necessarily extremely loud. These sources include compressors and turbines. When working with or near these noise sources, compliance with the following is required:
Work as far away as possible from the noise source
Increase hearing protection by wearing both earplugs and earmuffs. Remember, hearing protection devices are additive.

RESPIRATORY PROTECTION

Respiratory protection shall be NIOSH approved, or equivalent. Respiratory protection shall be selected based on the work to be performed and the information contained in the MSDS when using chemicals or welding materials. The Respiratory Protection Program shall be consulted andfollowed.

FALL PROTECTION

Fall protection (body harness and lanyard) is required whenever there is a possibility of falling more than 6 feet to the ground or another surface. Requirements for fall protection are contained in the Safety Guideline “Fall Protection.”

FLOATATION DEVICES

Floatation devices shall be fire retardant and capable of keeping an unconscious person’s head out of the water. A floatation device shall retain 95% of its buoyancy for at least 24 hours in fresh water. Personal floatation devices shall be worn whenever working near or over water or from the deck of a watercraft. Additional information on the use of floatation devices is contained in the Safety Guideline “Fall Protection.”

SEAT BELTS

Seat belts shall be available in powered equipment and over-the-road vehicles having a standard operator's seat and shall be used at all times while the equipment or vehicle is in operation.

TRAINING

Affected employees shall be trained in the selection, use and limitations of PPE required while performing their duties. Affected employees shall be trained in the maintenance and care of PPE, including proper sanitary conditions. Affected employees shall wear fitted PPE and be trained on how to properly fit PPE to their person. Retraining of an employee shall be conducted when:

- Lack or improper use of fall protection equipment is observed
- Insufficient skill of understanding of fall protection equipment is demonstrated
- An employee is found to be noncompliant with the fall protection policy
- A change in the workplace occurs and/or new, or unfamiliar, task is assigned.

RECORDS

The most recent record of employee training in the selection, use, care and limitations of PPE shall be retained. The current PPE Reimbursement Policy shall be retained. The current job/task safety analysis reports shall be retained.

POSTINGS AND RECORDKEEPING

POSTING REQUIREMENTS – JOBSITE SAFETY/EEO PACKET

As soon as practical, after the arrival on a new jobsite, the Project Manager should place a bulletin board in or near the Company project office area. If the Project Manager is stationed offsite, the on-site Supervisor shall install. Should the board be located outdoors, it shall be adequately protected from the elements.

The bulletin board will carry information regarding project specific doctor and ambulance services, safety bulletins and all applicable federal, state, local and OSHA regulatory posters/information.

INJURY AND ILLNESS RECORDKEEPING REQUIREMENTS

The following forms are to be completed after every reportable injury or illness. A reportable injury is one that requires medical attention and/or follow up treatment and as defined by OSHA or state regulations:

- Medical Treatment Authorization Forms
- Foreman's and Supervisor's Accident Investigation Report
- Injury and Illness Report, OSHA 301
- Log and Summary of Occupational Injuries and Illness, OSHA Form 300

PROTECTION OF THE PUBLIC

ACCESS TO THE PROJECT

No work shall be performed in any area occupied by the public unless specifically reviewed and permitted by **Kasco, Inc**.

In the event the project interfaces with the public, precautions to be taken include, but are not limited to:

- Each Contractor shall take such necessary action as is needed to protect and maintain public use of sidewalks, entrances to buildings, lobbies, corridors, aisles, doors, exits and vehicular roadways.
- The Contractor shall protect the public with appropriate sidewalk sheds, canopies, catch platforms, fences, guardrails, barricades, shields, and adequate visibility as required by laws and regulations of governing authorities.
- Such protection shall guard against flying materials, falling or moving materials and equipment, hot or poisonous materials, flammable or toxic liquids and gases, open flames, energized electric circuits or other harmful exposures.
- Guardrails shall be made of rigid materials complying with the requirements for standard guardrails as defined by OSHA and the Safety Program.
- Temporary sidewalks, ramps or stairs shall be provided with guardrails on both sides whenever permanent sidewalks, ramps or stairs are obstructed by the work.
- **Kasco, Inc**. may authorize barricades, secured against accidental displacement, meeting the requirements of local authorities, where fences, sheds, walkways and/or guardrails are impractical.
- During the period when any barricade, fence, shed, walkway, or guardrail is removed for the purpose of work, a watchman shall be placed at all openings.
- Appropriate warnings, signs and instructional safety signs shall be conspicuously posted where necessary. In addition, a signalman shall control the moving of motorized equipment in areas where the public might be endangered.
- Warning lights, including lantern, torches, flares and electric lights, meeting the requirements of governing authorities shall be provided and maintained from dusk to sunrise along guardrails, barricades, temporary sidewalks and at every obstruction to the public.
- These warning signs and lights shall be placed at both ends of such protection or obstruction and not over 20 feet apart alongside of such protection or obstructions.
- With respect to operations being performed on public roadways, all DOT and/or municipality requirements towards public safety will be strictly observed.
- Access to the project is limited to the entrance designated for construction traffic as indicated on the project plans issued with the construction documents.
- At no time is Contractor personnel or vehicles to obstruct traffic on public streets or Owner entrydriveways.
- All material deliveries shall be scheduled in advance with the Project Superintendent and shall be completed within the time segment allocated for the specificdelivery.
- A temporary six-foot high fence, in compliance with laws and regulations of governing authorities, shall be provided and maintained around the perimeter of operations on the project site to control access to the work by employees, to protect the public, and to restrict access by unauthorized individuals.
- The above shall be implemented only where allowed by the governing authority. Where the owner of the property specifically prohibits such protective devices, rules and regulations of the governing authority shall apply.

AUTHORIZED VISITORS

All visitors to the project are required to register with **Kasco, Inc**. upon arrival. Each Contractor will be expected to regulate their visitors accordingly.

All visitor passes expire upon departure from the project.

PARKING

No parking on-site.
All vehicles delivering materials to the project shall be authorized to do so by **Kasco, Inc**.
Unauthorized vehicles may be removed at the direction of **Kasco, Inc**. and all towing charges will be the responsibility of the vehicle owner.
Fire hydrants and all designated fire lanes shall remain clear at all times for the use of emergency vehicles.

EMPLOYEE IDENTIFICATION

All persons without a hardhat identification sticker shall report to **Kasco, Inc**.'s office for verification of employment status, attendance at an orientation session, or issuance of a single day visitor pass.

TOURS

It is of the utmost importance that a high degree of protection be afforded all persons touring the project.
All personnel who are responsible for the organization, direction and safe conduct of the tours shall be in compliance with the following guidelines:

- All group tours will be cleared through the Owner's representative and **Kasco, Inc**. allowing for maximum notice.
- All tours will be coordinated by **Kasco, Inc**. to accommodate the Project schedule, to make necessary preparations, and to assure safety precautions are observed.
- **Kasco, Inc**. will review the following items with the person requesting thetour:
- Number of visitors.
- Individual tour groups in non-hazardous areas should be limited to no more than 10 persons per tour guide (i.e. a tour group of 20 will require at least two tourguides).

CLOTHING

Tour groups will be required to wear appropriate clothing (i.e. slack and low-heeled shoes).

CHILDREN

Children under the age of 12 will not be permitted to accompany tours. An adult must accompany each child age 12 to 15.
Only those 18 years of age and older are permitted to work on the project.

PROTECTIVE EQUIPMENT

Hard hats, boots, raincoats, eye protection, etc., will be supplied as required.

RELEASE AND HOLD HARMLESS AGREEMENT

Each visitor will be required to sign this form prior to the start of the tour. In the case of children, an adult must sign for them, preferably a parent.
Immediately prior to entering the project, all visitors shall be briefed about the need for careful and orderly conduct, including mention of any special hazards, which may be encountered.
Technical and official visitor tours will be conducted in accordance with the above safety precautions. Since technical tours are often conducted through areas of more hazardous work, it is recommended that the number of people on such tours be proportionate to the degree of hazard involved.

RESPIRATOR PROTECTION

GENERAL REQUIREMENTS

The employer shall select and provide an appropriate, NIOSH-certified respirator based on the respiratory hazard(s) to which the worker is exposed and workplace and user factors that affect respirator performance and reliability.
The respirator shall be used in compliance with the conditions of its certification.
The employer shall identify and evaluate the respiratory hazard(s) in the workplace; this evaluation shall include a reasonable estimate of employee exposures to respiratory hazard(s) and an identification of the contaminant's chemical state and physical form.
The employer shall select respirators from a sufficient number of respirator models and sizes so that the respirator is acceptable to, and correctly fits, the user.

USE OF RESPIRATORS

Appropriate surveillance shall be maintained of work area conditions and degree of employee exposure or stress. When there is a change in work area conditions or degree of employee exposure or stress that may affect respirator effectiveness, the employer shall reevaluate the continued effectiveness of therespirator.
The employer shall ensure employees leave the respirator use area:

- To wash their faces and respirator face pieces, as necessary to prevent eye or skinirritation associated with the respirator use
- If they detect vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece
- To replace the respirator or the filter, cartridge, or canister elements.

**If the employee detects vapor or gas breakthrough, changes in breathing resistance, or leakage of the facepiece, the employer must replace or repair the respirator before allowing the employee to return to the work area.

STORAGE

All respirators shall be stored to protect them from damage, contamination, dust, sunlight, extreme temperatures, excessive moisture, and damaging chemicals, and they shall be packed or stored to prevent deformation of the facepiece and exhalation valve.
Emergency respirators shall be kept accessible to the work area. Emergency respirators shall be stored in compartments or in covers that are clearly marked as containing emergency respirators, and in accordance with any applicable manufacturer instructions.

INSPECTION

The employer shall ensure that respirators are inspected as follows:

- All respirators used in routine situations shall be inspected before each use and during cleaning.
- All respirators maintained for use in emergency situations shall be inspected at least monthly and in accordance with the manufacturer's recommendations, and shall be checked for proper function before and after each use
- Emergency-only respirators shall be inspected before being carried into the workplace foruse.

- The employer shall ensure that respirator inspections include a check of respirator function, tightness of connections, and the condition of the various parts including, but not limited to, the facepiece, head straps, valves, connecting tube, and cartridges, canisters or filters.
- A check of elastomeric parts for pliability and signs of deterioration shall be also be conducted.

RIGGING SAFETY

Rigging Practices
Do not damage machines and soft surfaces with the liftingapparatus.
Avoid sharp bends in slings and protect slings from sharp edges and abrasions.
Set loads on proper blocking/cribbing - never directly on asling.
Do not side load.
Maintain an angle between the sling and the load horizontal greater than 45 degrees to reduce stress on the sling.
Attach cable clips properly. The saddle should be on the load cable, the U-bolt on the dead end.
Remember - NEVER SADDLE A DEAD HORSE.
Do not stand or walk under suspended loads.
Do not leave loads unattended at any time. Use tag lines of sufficient length to control the lift.
Tag lines shall be used to receive all loads.

RIGGING EQUIPMENT

Know the safe carrying capacity of sling chains, wire rope and other lifting apparatus and do not overload them.
Inspect all rigging equipment before each use.
Immediately discard defective lifting/rigging equipment.
Do not tie knots in sling chains, rope slings or wire cables to shorten orsplice it.
Do not exceed the lifting device's load capacity.
Do not use rope for riggingor lifting loads except where it is impractical to use other methods.
Modify lifting equipment only after engineering approval.
Rigging equipment shall be properly stored in a manner which is not hazardous for an employee.
Latches shall be in place on all hooks to eliminate the hook throat opening.

SAFETY INSPECTIONS

RESPONSIBILITY

Each supervisor will be responsible for making a daily informal tour of the work area(s) under their supervision. The supervisor will make a weekly formal documented safety and health inspection of the work area(s) undertheir supervision.
Subcontractors will in attendance for safety inspections and hazard assessments.

INSPECTION PROCEDURES

The supervisor will observe work methods as well as working conditions. Prior to the inspection, the supervisor should review past accidents and near-misses to determine specific causes and high hazard areas and/or operations. Such areas will be given special attention during each inspection
In addition to the contents of the inspection check sheet, the supervisor will note unsafe acts such as:

- Using equipment without authority
- Insecure or disorderly piling or arranging ofmaterials
- Operating equipment at dangerous or unsafespeeds
- Using defective tools or equipment
- Unsafe loading or unloading of trucks, skids, racks, etc.
- Lifting improperly, or handling loads that are tooheavy
- Using tools, equipment or vehicles improperly
- Making guards or safety devices inoperative
- Failure to use personal protective equipment
- Repairing or adjusting machinery in motion or equipment that is under pressure or energized
- Horseplay

Documentation

Safety inspection checklists will be submitted to the Safety Manager/Coordinator in the following manner:

- Once the supervisor completes the checklist, a copy should be forwarded to the Project Manager. An additional copy will be forwarded to the Safety Manager/Coordinator to initiate follow-up assistance.
- The completed checklists will be discussed as part of the Safety Committee agenda.
- **CORRECTIVE ACTION AND FOLLOW-UP**
- Whenever possible, the supervisor will correct/abate unsafe methods and conditions immediately upon recognition.
- Each safety inspection checklist will be updated during the next scheduled tour. Items not corrected/abated will be repeated on the new checklist with asterisks indicated a repeat item and a notation of the date originally identified.
- Hazardous conditions or procedures detected during inspections for which no corrective action can be determined by the supervisor will be brought to the attention of the Safety Manager/Coordinator. The Safety Representative will consult with the supervisor, maintenance/engineering, immediate manager, Safety Committee and outside consultants, as appropriate, to determine suitable correctiveaction.
- Recommendations submitted by insurance company representatives and/or outside consultants will be handled in the same manner as the Safety Inspection Checklists.
- Safety Manager/Coordinator shall review inspection checklists and make recommendations for further training/education as necessary.

SAFETY RULES

All personnel on this project, including the employees of Contractor, will be required to comply with these rules. Contractor shall ensure and indicate that all its employees have read these rules and understood its contents.

The employee must sign a declaration, which shall then be retained by Contractor with the employee's personnel file.

In addition, Contractor shall comply with the following:

- Long or short sleeve shirts shall be worn at all times. All shirts shall be tucked in trousers at all times. All shirts shall be hemmed at neck, sleeve and tail. “Muscle Shirts” are prohibited.
- Long pants are required. “Shorts” are prohibited.

- A well-constructed boot/shoe that provides ankle protection with a substantial, flexible sole shall be worn. Exposure to hazard dictates whether or not a protective toe guard will be required. Sandals, tennis shoes, or any other street type shoes (even if equipped with ANSI toe protection), will not bepermitted.
- Loose fitting clothes or dangling jewelry shall not be worn around moving machinery, grinding operations, welding, or other hazardous operations.
- Hair, which could come in contact with, or be caught in machinery, shall be protected by a hardhat or hair net, asappropriate.
- Approved hard hats meeting specifications contained in the most current addition of the American National Standards Institute (ANSI), Z89.1 and/or Z89.2 are required. “Cowboy-type” hard hats are not allowed. Baseball caps and other soft headwear are not allowed under the Hard Hat suspension.
- All contractors’ means of ingress and egress shall be adequately marked and kept clear of stored material, debris and equipment.
- No firearms are allowed on the project.
- Practical jokes, horseplay, scuffling, wrestling and/or fighting are prohibited and may be grounds for immediate dismissal.
- Reflective vests or clothing shall be worn by all personnel exposed to equipment during the project work and excavation phases of the project or when deemed necessary by **Kasco, Inc**.
- Stilts may only be used where allowed by local regulation and then only where the floor is clean and free of debris and obstructions, there are no uncovered floor holes, where there are no pipe- stub-ups and all guardrails are raised to provide adequate fall protection.
- Drinking and/or possession of intoxicants on The Owner's property are forbidden. The use of narcotics, unless authorized by a physician, and the Project Manager/Superintendent notified, is forbidden. Violation(s) of the above will result in immediate dismissal.

SANITATION

HOUSEKEEPING

The project, work areas, and all premises occupied by **Kasco, Inc**. and Contractor's personnel will be maintained in a clean, healthy and sanitary condition.
Work areas, passageways and stairs, in and around buildings and structures, shall be kept clear of debris. Construction materials shall be stored in an orderly manner.
Storage areas and walkways on the project shall be maintained free of dangerous depressions, obstructions, and debris.
Construction equipment shall be stored or placed in an orderly manner.
Good housekeeping on the project is mandatory and every employee must do his part daily to minimize dust and to clean up his work area to keep the project clean for safety and efficiency.
Controls shall be observed which keep dirt from being tracked into areas outside the workspace.
Immediate cleanup is required when dust, dirt or debris may affect the Owner’s operations.
Eating within the construction project shall be confined to areas designated by **Kasco, Inc**. for such purposes. Employees shall properly dispose of all lunch refuse and drink containers in trash receptacles
Failure to maintain adequate housekeeping and to perform daily clean-up will result in the following actions:
Written Notice: Upon receipt, the contractor shall take immediate action to perform housekeeping and clean up.
If having been given sufficient notice, the contractor fails to clean up; the work will be performed by

others, and the errant contractor back charged for all related costs.
Daily and final clean up must be performed in accordance with contract documents.

FACILITIES

The locations of lunch areas and employee toilet facilities will be designated by **Kasco, Inc**. and approved by the Owner.

REFUSE AND GARBAGE

Each contractor will provide an adequate number of covered garbage containers.
The project will be cleaned and garbage and refuse will be collected at least daily and removed from the building.

POTABLE WATER

Each contractor shall provide potable water at the work site and test it at least weekly if delivery is from other than municipal supplies.
Sanitary facilities shall be provided for personal hygiene.

SIGNS, SIGNALS, BARRICADES AND LIGHTS (MOTOR VEHICLE EXPOSURE)

Signs, signals and barricades shall be visible at all times where a hazard exists and will be in compliance with ANSI D6.1 (most recent version), Uniform Manual of Traffic Control or regulations promulgated by the local authority.

SCAFFOLD

GENERAL REQUIREMENTS

Ladders shall be used for access to scaffold platforms. Scaffold rails or braces may only be used if specifically designed by the manufacturer as an access ladder.
Scaffold boards shall not be used for skids, ramps, runways, workbenches or any purpose other than scaffold decking.
The safe working load on a scaffold shall not be exceeded.
Brick, tile, block or similar material may not be stacked higher than 24 inches on a scaffold deck.
Employees should never rig from scaffold handrails or braces.
Workers shall not stand on any object to increase reach when on a scaffold including ladders, buckets, step stools etc.
Before starting work, the jobsite shall be surveyed and cleared of debris that would endanger secure footing for the scaffold or cause a rolling scaffold to tip over.
Where persons are required to work or pass under a scaffold, a screen of ½ inch wire mesh shall be installed between the Toe board and the guardrail to prevent objects from falling on those below.

SCAFFOLD PERMITS

Scaffold permits shall be completed and signed by the Competent Person for scaffolds before the scaffold may be used. The signed permit is valid for one day only and shall be prominently displayed where workers can review it before using the scaffold:
Any scaffold found to be defective, or in unsafe conditions, shall be removed from service and tagged

until returned to safe working conditions.
Scaffold permits shall be removed by the supervisor of the ground using the scaffold and shall be returned to the Competent Person for scaffolds at the end of the shift or job, whichever comes first.

EQUIPMENT REQUIREMENTS

All manufactured scaffold systems must be used in compliance with the manufacturer's specifications.
No alteration is permitted to any scaffold member by welding, burning, cutting, drilling or bending.
Unless specifically allowed by the manufacturer, parts and sections of patented metal scaffolding of different manufacturers are not to be interchanged.
When space permits, scaffold platforms must be equipped with standard 42 inch high, rigidly secured handrails, midrails and 4 inch toe boards. Furthermore, scaffold platforms shall be completely decked with cleated or secured safety plank or manufactured scaffold decking. Workers shall not work from a deck that is less than two planks wide.
Scaffolds shall be braced with diagonal as well as cross bracing.
Scaffold boards shall have cleats to prevent slippage on the scaffold framework and shall extend at least 6 inches but not more than 18 inches over the end supports. Boards shall be secured to the framework to prevent movement.
Wheeled scaffolds shall not have adjusting or leveling screws. Adjusting screws, where permitted, shall not have more than 12 inches of thread extended.

SECURING SCAFFOLDS

Scaffolds shall be erected level and plumb on a firm base.
Scaffolds that are three times (3x) higher that the smallest base dimension shall be secured to the building or other solid structure at the second lift and every other lift thereafter.
Running scaffolds shall be secured every 30 feet of horizontal run at the same height as the other attachments to the building or other solid structure.

ROLLING SCAFFOLDS

Rolling scaffolds shall be used only on smooth, level surfaces unless the wheels are contained in wooden or channel iron runners that are level and stabilized.
Overhead clearances shall be checked and properly dealt with before moving scaffolds.
Tools and materials shall be removed or secured on the deck before moving a rolling scaffold. Workers shall not ride a rolling scaffold while it is being moved.
The force needed to move a rolling scaffold should be applied as close to the base as practical.
The height of a rolling scaffold shall not exceed two times (2x) the smallest base dimension, including attached outriggers.

SCISSOR LIFTS

A fire extinguisher (Ansul A-5 or equivalent) shall be mounted and maintained in the inside of the work platform. Barricade tape shall be used around the lift base to keep workers at least three feet away from the scissors pinch points.
If the scissors must be raised for maintenance work on the mechanism, blocks shall be placed in the scissors mechanism to prevent the platform from falling.
Scissors lifts shall be completely lowered at the end of the work operation.

BOATSWAIN CHAIRS AND OTHER SUSPENDED SYSTEMS

Boatswain chairs and other suspended systems shall have a fall arrest system in place at all times as

well as an anchor tackle attached to a securely installed object.
These systems require seat boards that are at least 12”x24”x1”. First grade, 5/8 inch diameter fiber rope shall be used for the seat sling.
Swing stages, toothpicks, boatswain chairs, floats and needle beams must be accepted by the Project Manager and inspected by the Competent Person for scaffolds.
Tackle used for any suspended system shall employ only correctly sided ball bearings or bushed blocks and properly spliced, 5/8 inch diameter first-grade rope.

EMPLOYEE FALL PROTECTION

Wear properly tied-off safety harnesses on scaffold platforms that are not equipped with standard handrails and completed decking - except on suspended systems, 100% safety harness fall protection required.
Tie off harness to a building or other fixed structure or to a scaffold that is firmly attached to a fixed structure. Each person tying off when working from a scaffold shall have a personal lifeline.

TRAINING

Employees who erect, dismantle and/or use scaffolds shall be trained in the following:
Scaffold Permit System.
Design of the various types of scaffolds used, with attention to safety limitations, proper assembling and securing of each type of scaffold.
Nature of fall hazards.
Use of body harnesses, lanyards, lifelines and other fall protection available.
Safe use of ladders.
Where to find working load limit markings on ladders andscaffolds.
Employees shall be retrained is there is a change in equipment or deficiencies are observed in the employee’s scaffold related work habits.

RECORDS

The most recent of employee training records shall be maintained for the duration of employment.

STEEL ERECTION

ERECTION PLAN

An erection plan will be prepared by the steel erector’s qualified person and reviewed with the **Kasco, Inc**. Project Manager and/or **Kasco, Inc**. Project Superintendent prior to start of work. Refer to OSHA 1926, Subpart R, Appendix A.
The erection contractor’s qualified person shall approve all changes in the safety erection plan.
A copy of the erection plan shall be maintained at the project showing all approved changes with a copy provided to **Kasco, Inc**.
The implementation of the erection plan shall be under the supervision of a competent person. A safe means of access to the level being worked shall be maintained.
Climbing and sliding on columns or diagonals, is not allowed.
Containers, such as buckets or bags, shall be provided for storing or carrying bolts or rivets.
When bolts, driftpins, or rivet heads are being removed, a means shall be provided to prevent accidental displacement.
Tools shall be secured in such a manner to prevent their falling.

Fall protection provisions, such as lifeline attachments, dynamic fall restraints and other such devices shall be considered during shop drawing preparation, shall be incorporated in fabricated pieces, and shall have safety lines or devices attached prior to erection wherever possible.
A tag line shall be used to control all loads.
For the protection of other crafts on the project, signs shall be posted in the erection area by the erection contractor reading, "*Danger Men Working Overhead*" and only ironworkers allowed in this area. This will include shakeout areas, erection areas and the load travel path from the storage area to the erection area.
When loads are being hoisted, all personnel are to be prevented from walking under the load. No one shall be permitted to ride a load under any circumstances.
Crane personnel platforms will not be used for any purpose without the written approval of **Kasco, Inc**.
Material shall not be hoisted to a structure unless it is ready to be put into place and secured.
Bundles of metal decking or small material shall be so secured as to prevent their falling out from the rigging. Christmas treeing (multiple lifts) is not allowed unless exception approved by **Kasco, Inc**. Safety Representative and/or Project Manager.

FALL PROTECTION (SEE ELEVATED WORK - FALL PROTECTION)
All workers engaged in steel erection activities including connecting, bolting-up, decking, welding or any other activity that exposes them to a fall of 6 feet or greater shall be provided with and use fall protection.
This fall protection shall be either a personal fall arrest system consisting of a full-body harness, double, shock- absorbing lanyard, and anchorage or a safety net or a guardrail. Neither “Controlled Decking Zones” nor “Safety- monitor systems” are permitted. Metal deck is not considered a form of fall protection.
Fall protection requirements shall be rigorously enforced during steel erection with any observed violation cause for removal from the project.
Body belts are not permitted as part of a fall restraint system. Only full body harnesses will be used as part of a personal fall protection system.

PERIMETER PROTECTION
A guardrail system of a minimum of two (2) 3/8-inch diameter new wire rope cables shall be erected at approximately 42-inches from the floor deck and at the intermediate point immediately following the erection of beams and columns that are connected to provided adequate strength.
All sequence breaks will require a two (2)-cable assembly.
All connections will be with a minimum of two wire rope clamps.
Guardrails will not be used as a horizontal lifeline as part of a personal fall arrest system unless designed by a registered professional engineer and installed under the supervision of the steel erector’s competent person.
A minimum of three (3) wire rope clips shall be used at all connections. All connections will be loop-to-loop style. Turnbuckles will be installed at suitable intervals to maintain the tightness of the wire rope but in no instance less than one per perimeter side.

THIRD PARTY INSPECTIONS
In addition to visits and safety inspections by its own corporate or insurance representatives, Contractor is advised that authorized third parties may inspect the project once a month.

Among others so authorized are representatives of the Owner and/or its agent, insurance companies and OSHA. Upon their proper identification and clearance through security, they are entitled to access and courteous consideration.
Kasco, Inc. must be made aware of their presence upon arrival, and in any case as soon as possible, of the purpose and results of such visits which relate to safety.

TEMPORARY HEAT
No salamanders or open flame heaters are allowed.

TOOLBOX TRAINING
Instruction and training of employees is an OSHA requirement and, as such, will be required on this project. Examples of such required training to be provided by Contractor are:

- Newly employed, promoted and/or transferred personnel shall be verbally instructed in the safety practices required by their work assignments.
- All work assignments must include specific attention to safety.
- "Follow-up" monitoring is required in order to prevent accidents.
- OSHA requires that employees performing specific non-routine tasks or operating specific equipment be trained in its usage.
- Training of Contractor personnel is the responsibility of the Contractor. Conduct Toolbox safety meetings for all employees at least once a week.
- Maintain an attendance record by having employees sign the reverse side of the Toolbox Safety Meeting Report, or equivalent form.
- Complete the report and submit it to the **Kasco, Inc**. office within twenty-four (24) hours after each meeting.
- File all Toolbox meeting reports and summaries so that they are available for review at any time during project operations or for a period of five years following termination of the project.
- It is the responsibility of trade contractor supervision to explain the hazards involved in an assignment to all employees, either individually or in a group before they actually begin an assigned task.
- This task may only require a few words, but in many cases it will require the actual demonstration of how the project can be done safely and the pointing out of the hazards that may be or will be encountered in any task.

WELDING, CUTTING AND BURNING – HOT WORK

ELECTRIC ARC WELDING
A suitable, approved fire extinguisher shall be ready for instant use in any location where welding is done. Screens, shields, or other safeguards should be provided for the protection of men or materials, below or otherwise exposed to sparks, slab, falling objects, or the direct rays of the arc.
A dedicated fire watch shall be present at all welding operations and remain for at least 1 hour after the hot work has halted.
The welder shall wear approved eye and head protection.
Men assisting the welder shall also wear protective glasses, head protection and protective clothing.

Adequate exhaust ventilation shall be maintained at all welding and cutting work areas.
Electric welding equipment, including cables, shall meet the requirements of the National Electric Code. All arc welding and cutting cables shall be of the completely insulated flexible type capable of handling the maximum current requirements of the work.
Cables in need of repair shall not be used. The frames of all arc welding and cutting machines shall be grounded either through a third wire in the cable connecting the circuit connector or through a separate wire which is grounded at the source of the current.
All ground connections shall be inspected to insure that they are mechanically strong and electrically adequate for the required current.
Welding practices shall comply with all applicable regulations.

GAS WELDING OR CUTTING

When gas cylinders are stored, moved, or transported, the valve protection cap shall be in place. When cylinders are hoisted, they shall be secured in an approved cage or basket.
The valve cap shall never be used for hoisting.
All cylinders shall be stored, transported, and used in an upright position. If the cylinder is not equipped with a valve wheel, a key shall be kept on the valve stem while in use.
At the end of each work day or if work is suspended for a substantial period of time, compressed gas cylinder valves must be closed, regulators removed and properly stored.
Cylinders containing oxygen or acetylene or other fuel gas shall not be taken into confined spaces.
Cylinders containing oxygen or acetylene or other fuel gas shall be stored in designated areas outside the structure as approved by **Kasco, Inc**.
No one shall use a cylinder's contents for purposes other than those intended by the supplier.
All hose used for carrying acetylene, oxygen or other fuel gas shall be inspected at the beginning of each working shift.
Defective hose shall be removed from service.
Oxygen cylinders and fittings shall be kept away from oil and grease. Oxygen shall not be directed at oily surfaces, greasy clothes or hands.
Regulators, gauges, backflow check valves, and torches shall be kept in proper working order. An approved fire extinguisher shall be readily available.
Appropriate personal protective equipment, such as burning glasses, shields, and/or gloves shall be used. Adequate exhaust ventilation shall be maintained at all welding and cutting work areas.
Work permits shall be obtained daily, prior to any burning or cutting operations on the project.

WORK PERMIT PROCEDURES

GENERAL PROCEDURES

A copy of this section of the Safety Program will be issued to all Contractors, and will serve as notice by **Kasco, Inc**. that a work permit is necessary before starting any hot work or entering any confined spaces.
The work permit shall be obtained from **Kasco, Inc**. before starting each day's work.
The procedures for initiating a work permit are listed on the permit application appropriate to the type of work.

HOT WORK

Hot work is defined as a process or procedure, which could result in a fire if not properly controlled.

Common types of hot work are welding, burning, cutting, brazing, soldering.
Hot work will usually be permitted only during normal working hours.
Permits will be issued the day before work is to be accomplished, and the work area will be inspected to verify that adequate control has been established.
A copy of the permit will be available at the point of work**.**
An adequate number of fire extinguishers will be available within 50-feet of the point of work for which a permit is issued.
The Contractor will take the necessary precautions when welding or burning above walls to assure that protection is maintained on both sides of the wall and areas below are protected on multilevel buildings.

CONFINED SPACE

When work in confined spaces is scheduled, such as a caisson, boiler, deep excavations, etc., consideration must be given to two major known and recognized hazards:
The possibility of fire or explosion, flammable gases, fumes, vehicle fumes, vapors, or dusts.
The possibility of injury to the worker (or loss of consciousness) as a result of inhalation or absorption through the skin of toxic materials or from oxygendeficiency.
For work in a confined space, the responsibility for recognition and advance notification is the Contractor's.
The Project Superintendent and the Project Safety Representative will be notified and will evaluate the situation, issuing a work permit in those cases for which he considers it necessary.
The Contractor will be responsible for providing equipment and special instructions for the worker, such as ventilating units, respirators, safety belts and life lines, etc., and for conformance to all applicable OSHA standards. It is required that the "buddy system be used and that an observer will tend all workers in a confinedspace.
Rescue procedures should be agreed upon beforehand.

GUARDRAIL OPENING

The **Kasco, Inc**. Safety Representative, Project Manager or Project Superintendent may approve work, which requires the opening of guardrails or the removal of holes covers to be performed, in advance.
Particular attention shall be given to the alternate means of fall protection, which will be required to safely perform the work and protect other workers in the vicinity of the fall exposure.
Specific plans for providing alternate fall protection shall be described in the request for the work permit.

OFF-HOURS WORK

The Project Manager and/or Project Superintendent shall approve work, which is required to be performed outside normal working hours established at the project, in advance.
Any work occurring within the existing Owner facility shall be at the convenience of the Owner, and shall comply with all conditions imposed by the contract specifications and the work permit issued by the Project Manager or other persons identified by the Owner.

APPENDIX A – TABLE OF FINES

Violation	First Offense	Second Offense
Assured Grounding Program Violation	$200	$400
Clothing not adequate	$50	$100
Confined Space violation	$200 / removal	N/A
Electrical Cord defective	$100	$200
Electrical cords not protected on floor or not raised	$50	$100
Equipment violation	$50	$100
Eye Protection Missing	$50	$100
Failure to protect public	$50	$100
Fall Protection not present	$100	$200
Fire Extinguisher missing	$100	$200
Fire Watch missing	$100	$200
Food Consumption	$100	$200
Footwear not adequate	$50	$100
Gas Cylinders stored incorrectly/not identified	$50	$100
General Duty Violation	$100	$200
Guard Rail removal	$100	$200
Hard Hat Missing	$50	$100
Hearing Protection missing	$50	$100
Hot Work Permit missing	$100	$200
Housekeeping poor	$50	$100
Ladder defective	$100	$200
Ladder not secured	$50	$100
Lockout violation	$200	$400
Material storage improper	$50	$100
MSDS missing	$100	$200
Open Hole	$200	$400
Orientation not attended	$100	$200
Power Tool defective	$100	$200
Scaffold Violation	$100	$200
Smoking in non-designated area	$50	$100
Standing on top of Ladder	$100	$200
Tool Box Meeting not held	$100	$200
Traffic citation	$50	$100
Trench/Excavation Permit missing	$200	$400
Trenching violations	$200	$400
Uncertified Lifting Device	$100	$200
Urinating/Defecating in building	$200 /removal	N/A
Written HazCom Program missing	$100	$200

Kasco Construction

Silica Exposure Control Plan

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INTRODUCTION

PURPOSE

The purpose of the written exposure control plan is to protect the health and safety of Kasco Construction . employees who must perform tasks involving silica exposure and establish methods to be used to protect employees.

POLICY

The Silica Exposure Control Plan applies to all Kasco Construction Co. employees who are expected to perform tasks involving, or be exposed to, repairable crystalline silica. Kasco Construction. policy prohibits any tasks involving silica exposure to be performed without reviewing the Silica Exposure Control Plan.

RESPONSIBILITIES

SAFETY DIRECTOR

The Safety Director shall ensure supervisor(s) understand their responsibilities for the implementation of the Silica Exposure Control Plan. The Safety Director shall review and update the plan annually.

SUPERVISORS

Supervisors shall review the Silica Exposure Control Plan with all employees and ensure a copy of the plan is kept on each jobsite. Supervisors shall implement and ensure procedures are followed in accordance with the plan.

EMPLOYEES

Employees shall comply with the Silica Exposure Control Plan and any additional safety recommendations provided by the Safety Director and/or supervisors. Employees shall contact supervisors if equipment becomes defective, or alternate methods need to be taken.

SPECIFIED EXPOSURE CONTROL METHODS

For each employee working with materials containing crystalline silica and performing tasks using the equipment and machines as listed below.

STATIONARY MASONRY SAWS

Task(s): Cutting concrete block
Engineering Control(s): Integrated water delivery system, continuously fed to blade
Work Practice: Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.
Respiratory Protection: None needed

HANDHELD POWER SAWS

Task(s): Cutting concrete blocks and pipes
Engineering Control(s): Integrated water delivery system, continuously fed to blade
Work Practices: Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.
Respiratory Protection (Outdoors, less than 4 hours per shift): None needed
Respiratory Protection (Outdoors, more than 4 hours per shift): APF 10 Dust Mask
Respiratory Protection (Indoors or Enclosed Area): APF 10 Dust Mask

WALK-BEHIND SAWS

Task(s): Cutting concrete
slab

Engineering Control(s): Integrated water delivery system, continuously fed to blade
Work Practices: Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.
Respiratory Protection (Outdoors): None needed
Respiratory Protection (Indoors or Enclosed): APF 10 Dust Mask

HANDHELD DRILLS

Task(s): Drill holes in concrete
Engineering Control(s): Drill equipped with shroud or cowling with dust collection system.
Work Practices: Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide, at a minimum, the air flow recommended by the tool manufacturer, and have a filter with at least 99% efficiency and a filter cleaning mechanism. Use a HEPA-filtered vacuum when cleaning holes.
Respiratory Protection: None needed

JACKHAMMERS AND HANDHELD POWERED CHIPPING TOOLS

Task(s): Demolition, Cleaning/Finishing wall(s)
Engineering Control(s): Continuous stream or spray of water at point of impact, or tool equipped with shroud and dust collection system.
Work Practices: Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide, at a minimum, the air flow recommended by the tool manufacturer, and have a filter with at least 99% efficiency and a filter cleaning mechanism.
Respiratory Protection (Outdoors, less than 4 hours per shift): None needed
Respiratory Protection (Outdoors, more than 4 hours per shift): APF 10 Dust Mask
Respiratory Protection (Indoors or Enclosed Area): APF 10 Dust Mask

HANDHELD GRINDERS

Task(s): Finish wall(s)
Engineering Control(s): *When performing tasks outdoors only,* use grinder equipped with integrated water delivery system, continuously fed to blade. *When performing tasks indoors or outdoors,* use grinder equipped with shroud and dust collection system.
Work Practices: Operate and maintain tool in accordance with manufacturer's instruction to minimize dust emissions. Dust collector must provide, at a minimum, 25 cubic feet per minute (CFM) of air flow per inch of wheel diameter and have a filter with at least 99% efficiency and a cyclonic pre-separator or filter cleaning mechanism.
Respiratory Protection (Outdoors): None needed
Respiratory Protection (Indoors or Enclosed Area, less than 4 hours per shift): None needed
Respiratory Protection (Indoors or Enclosed Area, more than 4 hours per shift): APF 10 Dust Mask

WALK-BEHIND FLOOR GRINDERS

Task(s): Finish floors
Engineering Control(s): Use machine equipped with integrated water delivery system, continuously fed to cutting surface, or machine equipped with dust collection system recommended by manufacturer.
Work Practices: Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions. Dust collector must provide, at a minimum, air flow recommended by the manufacturer, and have at least 99% efficiency and a filter cleaning mechanism. When used indoors or in an enclosed area, use a HEPA-filtered vacuum to remove loose dust in between passes.
Respiratory Protection: None needed
Heavy Equipment
Task(s): Demolition

Engineering Control(s): Operate equipment from within an enclosed cab
Work Practices: When employees outside of the cab are engaged in the task, apply water and/or dust suppressants as necessary to minimize dust emissions.
Respiratory Protection: None needed

HEAVY EQUIPMENT

Task(s): Demolition (***NOT*** *involving excavating and/or grading)*
Engineering Control(s): When employees outside of the cab are engaged in the task, apply water and/or dust suppressants as necessary to minimize dust emissions.
Work Practices: Operate equipment from within an enclosed cab.
Respiratory Protection: None needed

HEAVY EQUIPMENT (EXCAVATING AND/OR GRADING)

Task(s): Excavating, Grading
Engineering Control(s): When employees outside of the cab are engaged in the task, apply water and/or dust suppressants as necessary to minimize dust emissions.
Work Practices: Operate equipment from within an enclosed cab.
Respiratory Protection: None needed

HOUSEKEEPING

While cleaning surfaces and/or equipment, dust containing silica shall be cleaned up using wet methods or HEPA equipped vacuum. Dry sweeping and use of compressed air are not allowed for removing dust and debris containing silica. Used vacuum bags shall be disposed of in a closed sealed container

RESTRICTED ACCESS

When necessary, access to work areas shall be restricted by means of signage, barricades, enclosures, or spotters.

EMERGENCY ACTION PLANS
PANDEMIC PREPAREDNESS

1.0 PANDEMIC PREPAREDNESS

1.1 PROCEDURES

1.2 COVID-19 (NOVEL CORONAVIRUS)

1.0 PANDEMIC PREPAREDNESS

1.1 PROCEDURES

a. A pandemic preparedness plan shall be developed and implemented by the Kasco Construction. Safety Director. Employees and subcontractors shall adhere to the pandemic preparedness plan. The plan shall include the following:
   - Hand washing facilities shall be made available to employees, and include:
     - Tissues
     - Hand soap
     - Hand sanitizer
     - Disinfectants
     - Disposable towels
     - No-Touch trash cans
   - Employees shall adhere to the "Work-At-Home, Stay-At-Home" policy if they become ill.
   - In the event a large percentage of employees become ill, work shall continue only if all tasks can be completed in a safe manner that abides by the rules set forth in this program.
   - Employees are encouraged to receive proper immunizations and vaccinations.

b. In the event of an outbreak, internal and external communication systems shall be implemented to include postings, memos, phone calls, etc.

c. In the event of an outbreak, meetings and/or large gatherings shall be limited and avoided, if possible.

d. A risk assessment for tasks being performed shall be completed to determine necessary PPE (i.e. sterile gloves, respirators, goggles, etc.).

e. The plan and emergency communications shall be tested in some manner (i.e. trial, table-top exercise, etc.).

f. Training
   - All employees shall be trained in illness prevention which includes:
     - Company policy and procedures
     - Steps to avoid the spread of illness
     - Proper hand washing and other hygienic methods (i.e. cough etiquette, care of proper PPE, maintain separation of at least 6 feet, etc.).
     - Periodic routine cleaning/disinfection of work surfaces (i.e. equipment and tools, lunch tables, door knobs, faucets, handrails, etc.).

1.2 COVID-19 (NOVEL CORONAVIRUS)

Information:

a. Coronavirus disease 2019 (COVID-19) is a respiratory illness that can spread from person to person. This is a new virus and new information is constantly being updated. There is currently no known vaccine.

b. COVID-19 is an airborne virus and is spread through respiratory droplets during close contact with an infected person. It is also possible to for a person to contract COVID-19 by touching a surface or object that has the virus on it and then touching his/her mouth, nose or eyes.

c. The risk of infection from the virus that causes COVID-19 is higher for people who are close contacts of someone known to have COVID-19 and for those who live in or have recently been in an area with ongoing spread of COVDI-19.
People with underlying health conditions such as asthma, diabetes, high blood pressure, heart disease, or lung disease, and older adults also have a higher risk of infection.
A person infected with COVID-19 may have mild to severe respiratory illness symptoms of :
   - Fever
   - Cough
   - Sore Throat
   - Runny Nose
   - Shortness of Breath/Difficulty Breathing (severe cases)

   Some people may develop a more serious illness such as pneumonia, multi-organ failure and in some cases death.

d. Not every infected person will show symptoms and it is possible to spread the virus.

Precautionary Action:

e. Preventative actions to help people protect themselves from COVID-19 and other respiratory illnesses include:
   - Keeping a safe distance (6 feet) from other people while in public spaces.
   - Avoid close contact with people who are sick.
   - Avoid touching eyes, nose and mouth with unwashed hands.
   - Wash hands often with soap and water for at least 20 seconds.
   - Use alcohol-based hand sanitizer that contains at least 60% alcohol if soap and water are not available.

f. If a person is sick, to keep from spreading COVID-19 and other respiratory illnesses:
   - Stay home when sick
   - Delay travel plans
   - Cover your cough or sneeze with a tissue, then throw the tissue in the trash.
   - Wear a facemask when around other people.
   - Clean and disinfect frequently touched objects and surfaces.

g. If a person has traveled from an affected area, there may be restrictions on movements for up to 2 weeks. If symptoms develop during that period, seek medical advice. Call primary care provider and tell them of any travel and symptoms. Do not go to an emergency room without contacting primary care provider first.

h. More information can be found on the Center for Disease Control website. (www.cdc.org) In Michigan, residents are encouraged to contact the COVID-19 Hotline 888-535-6136 (Open 7 days a week, 8am to 5pm). Or email COVID19@michigan.gov (Emails answered 7 days a week, 8am to 5pm).