

# ACCIDENT PREVENTION PLAN



**Northwest**  
**CONSTRUCTION, INC.**

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## COMPANY VISION AND GOALS

Northwest Construction, Inc. (herein referred to as “The Company”) recognizes that safety and accident prevention is essential to our success and morale of business. We are dedicated to providing all leadership and tools to assure a safe and healthy work site. We will never compromise safety for production and schedule. All employees from ownership to field laborer must be empowered to recognize and correct any and all safety issues and potential hazardous situations.

The object of this safety manual is to develop safety awareness among all Company employees. The scope of our work brings all of us into contact with many hazards and multiple opportunities for personal injuries. We require all employees to conduct their operations in a safe and efficient manner.

This manual is meant as a guideline to insure all workers have the knowledge, training and resources available to perform their work in accordance with the state and/or OSHA safety standards. We expect and require all employees to understand and follow the state and OSHA safety standards as it applies to their work. The State and OSHA safety standards are available at the main office or their respective websites for your review, understanding and implementation.

We are confident that much will be accomplished in preventing and/or reducing injuries to personnel and damage to equipment and property by this safety undertaking. The Company believes that accident prevention is a function of management. All levels of management are responsible for and shall be held accountable for the control of accidents.

Our employees’ health and welfare is of paramount concern and we are committed to providing a safe and healthful work environment for all employees. The Company’s goal is to instill an attitude within each employee to think safe, work safe and be considerate of peers in the workplace. Accidents most often lead to personal suffering and damaging effects on one’s home life and loved ones, as well as disruptions, delays and added expense for all concerned.

The Company intends to hire and retain employees who will harness The Company’s role in all of our safety programs and policies. We request each person’s support in practicing safe thinking, safe work practices, the use of personal protective equipment, using good judgment, helping other’s awareness and reporting for work each day unimpaired by drugs or alcohol.

Our goal is to provide a safe work environment for all employees and the benefit of their families. Your health and wellbeing is your personal reward for practicing safe work habits and healthful activities. Be alert! Be safe!

*Gregg Ferullo*

Gregg Ferullo, President

## **CODE OF SAFE PRACTICES**

The object of this safety manual is to develop safety awareness among all Company employees. The scope of our work brings all of us into contact with many hazards and multiple opportunities for personal injuries. We require all employees to conduct their operations carefully.

We are confident that much will be accomplished in preventing and/or reducing injuries to personnel and damage to equipment and property by this safety undertaking.

The Company believes that the personal safety and health of our employees is of primary importance. This policy is based on a sincere desire to eliminate personal injuries and to prevent damage to equipment and property. Compliance with all safety rules is considered a condition of employment.

Our policy is to accomplish work in the safest possible manner. Safety shall never be sacrificed for production. Field Supervisors are held accountable for the safety performance of employees under their direction. The ultimate success of this safety program will depend upon your full cooperation and observance of all safety rules.

### **GENERAL SAFE WORK PRACTICE RULES**

1. Hardhats, pants, work boots and high visibility shirts or vests are required 100% of the time on all Company projects.
2. Ensure the proper Personal Protective Equipment is worn and maintained at all times.
3. All employees shall follow safe procedures and operations, and report all unsafe conditions or practices immediately to their Supervisor.
4. Supervisors are instructed to take such action as is necessary to enforce these rules.
5. Always ask your Supervisor if you do not know how, or are in doubt as to the safest way of doing your job.
6. Help the new or inexperienced employee(s) by pointing out potential hazards.
7. Wear clothes in good repair, suited to the job. No loose clothing or jewelry.
8. Pile and un-pile material carefully.

9. Use proper lifting techniques. Bend knees and keep your back erect. Get help or use mechanized assistance for heavy loads and whenever possible.
10. Ensure effective means of communication for every task when working with other personnel to avoid situations that may cause injury.
11. Do not drop or throw anything from a height until you have checked or secured the area below you.
12. Warn personnel working above, below or to the side of you.
13. No "horseplay" or "rough-housing" while at work. To do so may lead to injury and result in discharge.
14. Make sure ladders are in good condition, used in strict accordance with the manufactures specifications and are firmly placed and secured from movement. Ensure both hands are free of obstructions when going up and down ladders.
15. Do not ride loads or get beneath loads that are being carried by equipment.
16. Obey all warning signs, barriers, caution tape and danger tape.
17. You will not knowingly be permitted to work while your ability or alertness is impaired by fatigue, illness, prescription medication or other causes.
18. The use of intoxicating liquors or drugs during work hours will not be tolerated. You will not be permitted to work if you are reasonably believed to be under the influence of intoxicating liquor or drugs.
19. All employees shall be given frequent accident prevention instruction on policies and procedures. Toolbox meetings will be held weekly.
20. Employees shall not enter any confined spaces such as manholes, underground vaults, chambers, tanks, silos, or equivalent, without proper documented training and determination that it is safe to enter that space.
21. Employees shall be instructed to ensure that all guards and other protective devices are present and properly adjusted, and shall report all deficiencies promptly to the Foreman or Superintendent.
22. Crowding or pushing when boarding or leaving any vehicle or other conveyance shall be prohibited.

23. Workers shall not handle or tamper with any electrical equipment, machinery, air or water lines in a manner not within the scope of their duties and have received the appropriate training.
24. Employees shall practice proper hygiene, such as thoroughly cleansing after handling any hazardous substances, and always prior to eating, drinking or smoking. Special instructions from authorized sources shall always be followed.
25. Gasoline shall not be used for cleaning purposes and shall be stored properly.
26. No burning, welding, or other source of ignition shall be applied to any enclosed tank or vessel, or confined space until authority for the work is obtained from the Project Superintendent who will determine that no possibility of explosion exists.
27. All employees shall ensure personal accountability for all actions during work hours.

## ROLES, RESPONSIBILITY AND ACCOUNTABILITY

All Company personnel must understand their responsibilities with regards to health and safety. With the responsibilities defined, management, supervision, subcontractors and workers will be held accountable for their health and safety performance.

- Management includes Executive, Project Director, Project Manager, Project Engineer, and the Safety Director.
- First-line Supervision includes General Superintendents, Superintendents, Field Engineers, General Foremen and Foremen.

Subject	Project Management	First-Line Supervision	Worker	Project Safety Representative
	Will Ensure That:	Will Ensure That:	Will:	Will:
<b>Safety &amp; Health Management Program:</b>	The SHMP is understood, implemented and strictly complied with, and that Government Contracting Services, Subcontractors, vendors, or third party individuals working or having business with any division are in conformance to the SHMP.	The SHMP is fully understood, implemented in work planning and communicated to workers. Each division shall be compliant with the SHMP.	Understand the contents of the SHMP and follow the established rules and procedures.	Understand the contents of the SHMP and follow the established rules and procedures.
<b>Work Practices:</b>	First-line supervision is communicating safe work practices to workers.	All work tasks are properly communicated to workers and complied with.	Follow all safe work practices as communicated to them by their Supervisor.	Ensure project is compliant with safe work practices and federal, state, local, and Company regulations, rules and procedures.
<b>Site-Specific Safety Rules:</b>	The site-specific safety rules and procedures are implemented and enforced.	The site-specific safety rules and procedures are understood and implemented.	Understand and follow the site-specific safety rules and procedures.	Assess project conformance to site-specific safety rules and procedures.
<b>Orientation:</b>	Resources are available to conduct a proper orientation They participate in orientation process	They participate in orientation process and provide trainees with site tour before reporting to work assignment	Attend orientation prior to beginning work. Understand and follow the site-specific safety rules and procedures.	Support project management and first line supervision in the development and administration of the orientation



<b>Training:</b>	Resources are available to implement safety and health training.  Training programs are developed and implemented.	They receive a project-specific Supervisor safety orientation prior to start of work.  All workers under their direction are properly trained in hazard recognition and safe work practices.	Attend required project safety and health training.  Understand and follow the work practices and guidelines discussed during the training.	Ensure that project management, first-line supervision and workers have received proper health and safety training.  Assist division supervision in training workers on hazard recognition and safe work practices.
<b>Safety Planning:</b>	Pre-qualification system is being properly utilized for contractor selection. All first-line supervision identifies, evaluates, and controls the work site hazards, and provides resources to implement controls.	All hazards are identified, evaluated and controlled and addressed in Daily Pre-Task Planning. Institute a daily assessment program to identify, evaluate and correct work site hazards.	Understand the hazards of the work and follow the safe work practices and controls developed for those hazards.	Assist in evaluating hazards and determining methods of eliminating or reducing the hazard.
<b>Incidents:</b>	All incidents are investigated properly and thoroughly.	They conduct a thorough and proper incident investigation and develop solutions to prevent similar occurrences.	Cooperate and participate in the incident investigation and contribute ideas and solutions.	Assist first-line supervision in investigating incidents.  Maintain monthly incident statistics.

## **SAFETY REGULATIONS**

The Company, its divisions and all subcontractors shall comply with all applicable government regulations, specific client rules and regulations, and this Safety and Health Management Program. For specific safety, health and environmental information please refer to that Site Specific Safety Plan. Each project develops and maintains a safety plan specific to their scope of work. Project safety plans are developed to work in conjunction with this corporate Safety and Health Program along with State and Federal safety standards. If any of these standards, requirements, rules, policy or procedures conflict, you must speak to your Supervisor or The Company Safety Director.

### **NOTIFICATION OF UNSAFE HAZARDOUS CONDITIONS**

Each and every worker has the right and responsibility to notify appropriate management or supervision of any unsafe or hazardous conditions or behaviors that may be present without fear of retribution.

Management or Supervision shall take immediate action to mitigate any and all hazardous conditions or actions brought to their attention.

## **HOUSEKEEPING**

1. Always store materials in a safe manner. Tie down or support piles/material when necessary to prevent falling, rolling or shifting.
2. Shavings, dust, scraps, oil or grease should not be allowed to accumulate.
3. All work areas shall be cleaned daily as work progresses.
4. Garbage/ debris piles must be removed and properly disposed of as soon as possible to prevent safety and fire hazards.
5. Return all tools, supplies, materials and equipment to their proper storage area after completion of work.
6. Welding rod, nuts, bolts, nails, screws, round stock shall be kept in proper containers and not piled on floors, or decks.
7. Plan all burning and welding operations carefully and remove all combustible or flammable material from the area before starting the job. Keep an adequate number of portable fire extinguishers adjacent to hot work operations.
8. Portable fire extinguishers will be inspected monthly and certified annually. Those inspections shall be documented on the attached tags.
9. Remove or bend down exposed nails in lumber or other material.
10. Trash containers shall be placed at appropriate locations for disposal of all rubbish trash and debris, which shall be removed from the work area daily.
11. Immediately remove all loose materials from walkways, ramps, platforms, etc.
12. Do not block aisles, traffic lanes, fire exits, gangways, or stairs.
13. Avoid shortcuts - use ramps, stairs, walkways, ladders, etc.
14. Get assistance when lifting heavy, bulky or awkward material to avoid back strain or potential damage to material.
15. Keep all tools, materials, and extension cords away from the edges of scaffolding, platforms, shaft openings, and off walkways and ramps.

16. Do not use tools with split, broken or loose handles, and burred or mushroomed heads. Keep cutting tools sharp.
17. All electrical power tools (unless double insulated), extension cords and equipment shall be properly grounded and insulated. Immediately remove and replace all damaged cords.
18. Clean up liquid spills immediately. Ensure SDS guidelines are followed.
19. The operation or maintenance of temporary heating equipment shall create no fire hazard. The use of solid fuel salamanders shall be prohibited.
20. Parking lots, change rooms, lunchrooms, and the work site are all part of your work area. You are responsible for your conduct and performance at all times.

## **ENFORCEMENT PROCEDURES**

It is imperative that our employees and subcontractors alike follow all state and federal OSHA safety regulations, as well as Company policies. Failure to follow these policies and regulations can result in employee communication, retraining, and disciplinary actions, up to and including, termination.

The following guidelines shall be strictly adhered to:

**First Violation** - Verbal Warning: Discussion about work performance or behavior and why the behavior was in violation. This is still documented, but is not considered a "written warning".

**Second Violation** - Written Warning: Notification in writing of work or behavioral deficiencies. The employee receives a copy and a copy placed in his/her personnel file.

**Third Violation** - Suspension or termination: The employee is removed from the payroll for a specified number of days. This would be viewed as an action taken for improper work conduct and the number of days of suspension should be measured against the severity of the offense. The term of suspension is defined by the corrective violation, repetition of unsafe acts or display of disregard for their and/or a fellow employees safety. Gross violation(s) will be defined as life threatening situations or severe property and/or personal damage.

**\* NOTE \***

**ANY EMPLOYEE CAN BE TERMINATED AT ANY TIME FOR A GROSS SAFETY VIOLATION THAT ENDANGERS THEIR OWN HEALTH OR WELL BEING OR THAT OF A FELLOW WORKER.**

## **EMPLOYEE CONCERNS & COMMUNICATION**

It is the intent of the Company to have all employees involved in safety, health and environmental excellence. Employees are encouraged and required to report all incidents, near misses, observation or situations, which they believe or perceive, could cause injury illness or property damage.

Concerns may be reported in the following ways:

1. To an immediate job Superintendent/Foreman
2. In weekly safety meetings
3. To a Company Manager or Safety Representative

The Superintendent/Foreman is responsible to respond to the employee with resolution of the concern in a timely fashion.

## **SAFETY MEETINGS**

Accident prevention depends on good communication throughout all levels of our organization. In order to achieve and maintain consistent safe working conditions, it is a requirement to hold weekly jobsite meetings where safety, production and quality will be discussed. Each job Superintendent/Foreman is responsible for running these weekly meetings, but we need all employees' participation to keep our jobsites safe and productive.

## **PURPOSE**

The purpose of weekly safety meetings is to educate crew members, as well as detect and eliminate unsafe conditions and work procedures.

## **PROCEDURES**

Weekly meetings are a Company and state requirement and must take place on every project, regardless of our role as a general contractor or subcontractor. It is also acceptable to attend a general contractor's weekly safety meeting to supplement this requirement.

## **DOCUMENTATION**

It is the Superintendent or Foreman's responsibility to always use the designated weekly safety meeting attendance roster. This gives us the continuity that we need in recording safety related discussions that have occurred on the job. Topics should be project specific and should be documented on the meeting attendance roster. A copy of the attendance roster must be retained at the jobsite for every week through the duration of the project.

## **PRE-PLANNING**

You can do this task easily and quickly. First, develop and understand the weekly safety topic and important safety reminders that will be discussed. Since each job is unique, take the time to write your comments in the topic space provided on the weekly safety meeting Form. Follow all additional directions located on this form.

It is optimal to conduct your meeting at the same time each week. Ensure that everyone is aware of the meeting in advance and all attendees participate and sign the meeting form.

## **TRAINING, EDUCATION & ORIENTATION**

The Company intends to hire and retain employees who will take an active role in all of our safety programs and policies. We ask, and expect, each person's support in practicing safe thinking and safe work practices. To achieve these goals, we have dedicated ourselves to train our employees in all aspects of their jobs in order for them to perform their tasks in a safe and healthful manner. Accordingly, we have implemented the following training programs:

For new hires and rehired employees, the designated person will give a complete safety orientation of The Company safety policies, OSHA & DOSH regulations and all project specific safety requirements. The appropriate orientation documents will be completed and signed by each employee. The signed forms will become a part of the employee's file.

1. All employees shall be specifically instructed in the following:
  - a. What work they are expected to perform.
  - b. How to perform work and how to perform work safely.
  - c. What personal protective equipment (P.P.E.) is required.
  - d. Safety hazards relevant to the project and to their work areas.
  - e. Any specialized training (e.g., Confined Spaces, Fall Protection, etc.).
2. Whenever an employee is required to wear a respirator, hearing protection, or use other special protective equipment to complete his/her job assignment, then specialized training and documentation is required. The competent person will supervise the training and documentation. This documentation will be kept in the employee's file.
3. Attendance of scheduled weekly safety meetings is mandatory. This weekly meeting shall allow employees to ask questions, offer suggestions and voice concerns regarding safety on the project and associated specific work tasks.

## **MANAGEMENT**

In addition to the above requirements, management personnel must:

1. Attend regular safety meetings that are sponsored by the safety department in which various safety, health, environmental and insurance topics are discussed.
2. Superintendents and Foremen must have valid First-aid/CPR cards.
3. Company personnel must maintain all applicable safety training requirements set forth by The Company and Washington Administrative Code (WAC).

## **SUPERVISOR ORIENTATION**

All Supervisors shall receive specific training to gain knowledge of the work to be performed, review the permits, forms, and procedures required by the Company's safety plan. This will insure the specific information necessary to adequately coordinate their work and prepare their crews is understood.

## **EMPLOYEE NEW HIRE ORIENTATION**

Every worker shall attend an environmental, health and safety orientation. The orientation will provide general health and safety information and specific work rules and procedures. Orientation topics shall include but are not limited to: injury free work environment, crisis

management, emergency response, general safety procedures, sexual harassment, fall protection, heat stress, blood borne pathogens, site specific procedures, reporting procedures, drug policies, worker compensation filing information, and disciplinary policy and grounds for immediate dismissal.

## **SANITATION, LIGHTING AND POTABLE WATER**

### **TOILETS**

1. There shall be the appropriate amount of portable toilets to accommodate the number of employees on site per Washington Administrative Code (WAC).
2. The toilets will be cleaned at least weekly, or more often if conditions warrant.

### **DRINKING WATER**

1. Sufficient amounts of drinking water shall be provided at each project location.
2. Employees shall have the opportunity to drink at least one quart of water per hour.
3. Employees are encouraged to frequently consume water or other acceptable beverages to ensure personal hydration.
4. Employees are responsible for monitoring their own personal factors for heat-related illness including consumption of water or other acceptable beverages to ensure hydration.
5. Disposable cups will be provided for each employee.
6. Trash receptacles will be available for cup disposal.
7. Employees shall be trained in proper identification and response to employee overexposure to heat related illness.

Outdoor Temperature Action Levels

All other clothing	89°
Double-layer woven clothes including coveralls, jackets and sweatshirts	77°
Non-breathing clothes including vapor barrier clothing or PPE such as chemical resistant suits	52°

## **LIGHTING**

1. The overall site lighting is the responsibility of The Company, or the general contractor and shall be used in strict accordance with the manufactures specifications.
2. Specific work task lighting is the responsibility of the individual subcontractors.
3. Lights shall be protected from damage by cages or other means.
4. Light strings shall be elevated and hung from non-conductive materials.

## **WORKPLACE VIOLENCE PREVENTION**

The Company is committed to preventing workplace violence and to maintaining a safe work environment. Given the increasing violence of society in general, we have adopted the following guidelines to deal with intimidation, harassment, or other threats of (or actual) violence that may occur during business hours or on its premises. The Company encourages employees to bring their disputes or differences with other employees to the attention of their Supervisor or the Human Resources Manager before the situation escalates into potential violence. The Company is eager to assist in the resolution of employee disputes, and will not discipline employees for raising such concerns.

All employees, including Supervisors and temporary employees, should be treated with courtesy and respect at all times. Employees are expected to refrain from fighting, horseplay, or other conduct that may be dangerous to others. Weapons of any type are not allowed on the jobsite.

Conduct that threatens, intimidates, or coerces another employee, a customer, or a member of the public at any time, will not be tolerated. This includes all acts of harassment, including harassment that is based on an individual's sex, race, age, sexual preference, or any characteristic protected by federal, state, or local law.

All threats of (or actual) violence, both direct and indirect, should be reported as soon as possible to your immediate Supervisor or any other member of management. This includes threats by employees, as well as threats by customers, vendors, solicitors, or other members of the public. When reporting a threat of violence, you should be as specific and detailed as possible.



All suspicious individuals or activities should also be reported as soon as possible to a Supervisor. Do not place yourself in danger. If you see or hear a commotion or disturbance near you workstation, do not try to intercede or see what is happening.

The Company will promptly and thoroughly investigate all reports or threats of violence and of suspicious individuals or activities. The identity of the individual making a report will be protected as much as is practical. In order to maintain workplace safety and the integrity of its investigation, The Company may suspend employees, either with or without pay, pending investigation.

Anyone determined to be responsible for threats of (or actual) violence or other conduct that is in violation of these guidelines will be subject to prompt disciplinary action up to and including termination of employment.

## **EMERGENCY ACTION PLAN**

### **PURPOSE**

Construction is a very aggressive and fluid industry. There are many different activities being performed by numerous personnel at any given time on a typical project. No one knows when or if a medical, environmental or other unforeseen emergency is going to occur.

The purpose of the emergency action plan is to establish an organized effort to protect personnel from injury and minimize property damage in the case of emergency. Facility layouts and emergency numbers for your work area can be found posted on the bulletin board at the jobsite.

It is the responsibility of each project to develop and implement a site-specific emergency response and evacuation plan. The plan should include postings for all proper emergency procedures. Telephone numbers shall be clearly posted in place so that emergency response personnel can be notified, rapidly enter the site and have immediate access to all project locations and personnel.

In the event of an emergency, the Project Superintendent or his designated representative shall immediately have control of the accident site.

In the event of an accident/injury or another emergency that would require emergency response equipment to be dispatched to the main gate, the following procedures will be immediately put into operation:

1. Contact your Supervisor immediately and give all pertinent information (i.e., type of injury, fire, etc.) and specific location.
2. Your Supervisor will contact EMS and relay the information.
3. The Company Superintendent or his designated representative will secure the accident site.
  - a. For all life-threatening situations, The Company personnel shall immediately call 911 and shall relay all pertinent information.
  - b. For non-emergencies, the designated hospital/clinic will be contacted.
4. A Company Supervisor with a radio will be dispatched to the street access gate to meet and lead the rescue equipment to the accident site.
5. If needed, a forklift will clear a path from the project access point to the accident site.
6. Other Company personnel will be stationed along the access route to keep the route open, and if needed, assist the emergency equipment. If needed, a basket stretcher with a four-point lifting harness will be brought to the accident site.
7. If the particular situation should require additional equipment/materials, these will be brought to the accident site.

## **PROJECT EVACUATION PLAN**

In the event of fire, explosion, earthquake or other emergencies that would require the evacuation of all personnel from the building or project area, the following procedures shall be put into operation:

1. If necessary, supervision will notify all personnel as to the nature of the emergency and to start evacuating the area. Otherwise, personnel in the building/area shall start evacuating immediately. Proceed to the designated assembling point, contact your Supervisor and give all pertinent information.
2. Your Supervisor will contact the appropriate personnel and relay the information. If required, office personnel shall immediately begin to implement the "Project Emergency Response Plan".
3. Once assembled, each Supervisor shall conduct a head count of the employees in their respective crews. This count shall be documented and immediately relayed to the Project Superintendent.

4. Your Supervisor will inform you of any changes to this plan.

### **RESPONSIBILITIES: Safety Representative**

1. Ensure that all employees are familiar with reporting procedures, emergency exits, and staging areas wherever they are working.
2. Maintain familiarity with the shutdown procedures for all equipment.
3. Know the location and use of all safety equipment.
4. Keep employees from re-entering an evacuated area until emergency crews have evaluated the area.
5. Assure only those individuals trained in first aid/CPR assist with injured.

### **EMPLOYEES**

Follow procedures in this written plan.

If you are involved in the incident or were in the area of the emergency, inform safety department of any other hazards associated with the area, or any other information that would be helpful.

Assist safety department with any requests that might improve the emergency situation.

***DO NOT RE-ENTER EVACUATED AREAS UNTIL EMERGENCY PERSONNEL AND/OR COMPANY OFFICIALS HAVE EVALUATED IT.***

### **EARTHQUAKE**

Accurate predictions of the exact time and place of earthquakes are not yet possible. It can be assumed that earthquakes will continue to occur most of the time in areas where they have been relatively common in the past. Earthquakes range in intensity and length, and are known to be a reoccurring natural disaster. Most injuries and deaths are a result from falling objects, not the shaking itself. The following outlines steps to take prior to and during an earthquake:

1. If inside, establish sturdy furniture, worktables, or doorways, which will be used in the case of earthquakes. If these are not available, move into a corner and protect the head and neck in any way possible.
2. Stay inside if already there.
3. Stay near the center of the building, away from glass windows, skylights, and doors.
4. Do not run through or near rooms where there is danger of falling debris.
5. If outside, stay in the open, away from buildings and utility wires.
6. Place head between bent knees whenever possible.
7. Maintain this position until reasonably sure the earthquake is over.
8. Remove incapacitated employees to the outside staging area.
9. Move to the outside staging area.
10. Report accounted for to the Foreman.
11. Remain at outside staging area until it is deemed safe by Company officials to re- enter.

### **DO NOT LEAVE THE STAGING AREA UNDER ANY CIRCUMSTANCE**

When the shaking ceases, employees should exit the building by the stairs, never the elevators. Competent officials should check utilities. If water pipes are damaged or electrical wires have shorted, turn them off at the primary control point. If gas leakage is detected, shut off the main valve, open windows, and keep the building cleared until utility officials deem it is safe.

### **FLOODS**

Except in the case of flash floods from thunderstorms, dam failure, etc., the onset of most floods is a relatively slow process. Below are a few suggestions to minimize damage:

1. Use sandbags or similar barriers for shallow flooding conditions.
2. Move records and equipment off of the ground to safe location. In multi-story buildings items can be moved to an upper level.

3. Pumps can be used to remove water from localized areas.

## **BOMB THREAT**

Experience shows that over 95% of all written or telephoned bomb threats are hoaxes. However, below outlines steps for appropriate actions to be taken.

The employees receiving the phone call should get as much information about the group or person making the threat, and the size and location of the bomb:

1. Immediately report threat to management or safety department.
2. Safety department or management should call 911 and report all details about the threat.
3. Follow instructions from officials about evacuation.
4. Explain nature of business and ask them to assess which processes and machinery should be shut down.
5. If evacuation is suggested, report accounted for to the safety department at the outside staging area.
6. If public and/or Company officials determine a different staging area is required, report to this staging area.
7. If a suspicious looking object is found and considered to possibly be a bomb, call 911 and evacuate the area.

## **MOB/RIOTS**

In the case of mobs or riot activity, all employees that are at the jobsite remain locked in until officials arrive. Under no circumstance will employees talk to the media or attempt to intervene during the unlawful demonstrations.

## **THEFT/UNAUTHORIZED ENTRY**

Upon the discovery or theft or any suspicion of unauthorized entry or suspicious behavior at or near the project, the employee who discovered the security issue shall report immediately to their Supervisor. If the employee witnessed the break of security, they are expected to cooperate during the investigation. The General Superintendent, main office, local police department, and Safety Manager shall be immediately notified.

## **MEDICAL AND FIRST AID PROCEDURES**

### **BASIC FIRST AID PROCEDURES**

1. Injured employees shall receive immediate and proper medical attention.
2. The injured employee's immediate Supervisor shall be notified.
3. All first-aid injuries must be communicated to project management. No entry is made on the OSHA 300 Log form unless the incident later becomes a "medical clinic" case.
4. Daily follow-up on the injured employee is required to ensure proper healing of the injury.

### **INJURIES THAT REQUIRE MEDICAL TREATMENT**

1. An employee injured while at work will be provided with immediate medical treatment.
2. After notifying the corporate office, the Superintendent, or his designee, shall drive the injured employee, if necessary, to the designated medical clinic. The Company representative may stay with the employee at the clinic.
3. Once an employee's injury has been diagnosed, and if the treating physician places physical restrictions upon the employee, our representative shall immediately talk to the treating physician to inform them that The Company has modified duty available.

4. Project-specific modified duty tasks shall be made by the Return to Work Coordinator.
5. Employees with restrictions that prohibit them from returning to their pre-injury position will be assigned a modified duty position that is compatible with their medical restrictions. Whenever practical, this position will be designed to facilitate a "work hardening" experience for the employee so that they can return to full productivity as soon as possible.
6. The injured employee's performance must be monitored so that the employee does not exceed the restrictions defined by the treating physician.
7. The employee will remain assigned to the modified duty position until they bring a "RELEASED FOR FULL DUTY" form signed by their attending physician. A copy of the release must be sent to the safety department.

## **SERIOUS INJURIES/FATALIES REPORTING**

NWC will report to Washington Labor & Industries (L&I) the death or in-patient hospitalization of any worker (within 8 hours) and any non-hospitalized amputation or loss of eye (within 24 hours) due to an on-the-job injury by calling 1-800-423-7233. Any workplace fatality or in-patient hospitalization of any employee will be reported within 8 hours.

### **What to report**

When reporting an incident, the following information will be given to the Department.

- Name and phone number of the best person to contact
- The name of the establishment/business
- The location/address where it happened
- The date and time it happened
- The names and number of employees harmed
- A brief description of the incident

## **Preserve the scene**

In the event of a serious incident equipment may be moved as necessary to assist a victim or prevent further harm, but the scene of a work-related incident must be preserved until L&I has investigated. This includes not moving machinery, tools, or personal protective equipment involved in the incident.

## **ACCIDENT/INCIDENT INVESTIGATION**

After the required notifications have been completed, the investigation should begin as soon as possible. Each occupational injury or illness requiring professional medical attention will be investigated by the Foreman or the Safety Representative. The purpose of any accident investigation is to identify all possible contributing causes so future incidents can be prevented. Investigations concentrate on obtaining facts, and are not to find fault.

## **WHO SHOULD MAKE THE INVESTIGATION**

The project team is charged with this responsibility. The Supervisor is responsible to lead the investigation.

All accidents, whether our own employees, subcontractor employees or members of the public require immediate phone notification to the home office.

All employees are to report injuries and near misses to their Supervisor IMMEDIATELY.

The designated Company report must be completed for all accidents/incidents on the job, including subcontractors, and must be received by the corporate office within 24 hours of occurrence.

If one or more Company employee(s) are injured and require admittance to the hospital as an in-patient, the Superintendent must notify the main office immediately. The Safety department will then make all of the applicable notifications to OSHA.

## **WHEN SHOULD THE INVESTIGATION BE MADE**

An investigation should be made immediately after the accident. Facts must be gathered while the accident is fresh in the minds of those involved. The investigation process begins with the employee's report of the incident to the Superintendent.

If possible, every employee who is involved in or witnessed the incident should be questioned. It is a good idea to interview each individual separately, to avoid distorted or elaborated facts. Everyone need not be sent away; a courteous explanation that each person will be interviewed



separately, to allow everyone an opportunity to relate how he saw what happened, will usually be accepted without offense.

## **QUESTIONS TO BE ANSWERED**

The Supervisor's investigation report must be complete and describe the investigation findings in detail. All relevant questions about the accident should be answered, and the corrective actions aimed at future prevention should be listed.

## **EMPLOYEE PROCEDURES**

1. Ensure the employee has received proper medical attention.
2. Inform the employee that they will be drug tested per The Company policy.
3. Notify a Supervisor and they will notify the home office.
4. Investigate the accident thoroughly, including interviewing the injured employee and witnesses. Take photographs.
5. Complete the appropriate Company reports.

## **VISITORS AND PUBLIC PROCEDURES**

1. Ensure the person has received proper medical attention.
2. Notify main office.
3. Investigate the accident thoroughly, including interviewing the injured person and witnesses. Take photographs.
4. Complete the applicable Company reports.

## **CONDUCTING THE INVESTIGATION**

The Foreman will discuss the accident with the injured employee.

Discuss the accident with witnesses who may have seen the accident.

The Foreman should determine whether there is reasonable suspicion of substance abuse being a contributing factor to the incident. If so, refer to Substance Abuse Testing Procedure section. The report of Injury or Illness shall be completed for each incident involving medical attention.

## **WITNESSES**

All witnesses to the accident shall be interviewed with written statements taken. Witnesses shall be interviewed separately and in private surroundings. The information obtained during these interviews must be limited to direct knowledge of witness observations. Opinions do not represent factual findings. Each individual interviewed should be requested to sign and date the statement of his/her recorded sequence of events that led up to and include the accident. Record name, address, and phone number of the witness.

Upon conclusion of the interview, review the statement with the witness and attempt to clear up possible discrepancies. The statement should then be dated, signed and witnessed by a third party.

## **ACCIDENTS INVOLVING EQUIPMENT**

If a worker is involved in an injury that is related to a piece of equipment with which there is a suspected dangerous function or malfunction the equipment should be removed from service immediately and tagged "out of service". The equipment must be preserved in its service company or supplier under the principles of product liability. The equipment may also need repairs and inspections before the equipment is returned to service. In such cases, the Safety Department must be notified immediately for specific directions.

## **SUMMARY**

All accidents should be investigated as soon after the accident as possible. The accident area(s) should be isolated and numerous photographs shall be taken. All people involved should be interviewed and the site thoroughly examined to identify all facts related to the incident. Once the facts have been put together, a report must be submitted to the main office.

## **RETURN TO WORK POLICY**

### **POLICY**

It is the policy of The Company to return employees suffering occupational injuries or illnesses to their regular duty jobs as quickly as our needs and their condition warrants. Employees who remain off work for long periods of time frequently experience slow healing, a loss of self-esteem and other related physical and emotional side effects. Lost workdays also break up work teams and adversely affect our workers' compensation costs, both of which make us less competitive in our industry.

All injured employees shall be assigned modified duty jobs/tasks with the concurrence of their treating physicians and in accordance with all applicable laws and regulations. The Company will make every effort to provide meaningful work. We want to provide productive and necessary work that is consistent with good medical care and which does not put the injured employee, The Company, fellow employees, or the public at risk.

The Company will use preferred medical providers, and the Superintendent shall inform these providers, in advance, of The Company's RTW program and goals.

## **RETURN TO WORK COORDINATOR**

The Safety Manager is the Return-To-Work Coordinator. The duties include:

1. Effectively communicate this program to all Company employees.
2. To act as liaison between workers' compensation claims personnel, medical providers, employees and the Superintendent for the purpose of implementing this program.
3. Assist in the development of RTW job descriptions and task lists.
4. Ensure that all Company projects follow the policies and procedures described in this program and the Washington Administrative Code (WAC).

## **EMPLOYEE INJURY AND RETURN-TO-WORK- PROCEDURES**

If the treating physician releases the employee to full-time regular duties, the employee must give their Supervisor a signed release from the physician before they can return to work.

Places physical restrictions upon the employee:

1. The Superintendent shall immediately inform the physician that The Company has modified duty available and the injured employee will be assigned a modified duty position that is compatible with their medical restrictions.

2. Whenever practical, the position will be designed to facilitate a "work hardening" experience so the employee can return to full productivity as soon as possible.
3. The employee's performance shall be monitored to ensure they do not exceed the restrictions defined by the treating physician.
4. Employees will remain assigned to the modified duty position:
5. Until their attending physician says they can return to their pre-injury position and
6. The employee gives their Supervisor a "RELEASED FOR FULL DUTY" form
7. signed by their physician. A copy of the release must be sent to the Safety Manager.

## **MODIFIED DUTY CRITERIA**

Job modifications involve analyzing the workplace in terms of its tasks, equipment, and physical demands, and modifying them to fit a particular worker with a specific injury. Modified duty tasks are not permanent positions; however, they should be designed so that the employee feels like a productive worker. Modified duty tasks are only temporary positions.

A project-specific list of modified duty tasks shall be made by the project management team, with assistance from the Return to Work Coordinator. Some modified job duties may include: Flagger/Traffic Control (Flagger Training Certification Required)

- General clean-up
- Install/maintain project signage
- Project safety coordinator
- Equipment/material inventory and organization
- Office and clerical support
- Equipment maintenance

## **REUTRNING EMPLOYEES TO MODIFIED DUTY**

The first day back on the job is very important to the employee. At the Superintendent's discretion, the employee could start regular duties on a Wednesday or Thursday. This would give them a short first week with the weekend to recuperate.

The employee's Supervisor can facilitate a smooth transition to modified duty by:

1. Showing concern for the returning worker without being patronizing.
2. Explain adjustments and modifications in workload, and the temporary nature of the arrangement.

3. Communicate with fellow employees so that they understand the RTW program and its objective.

## **TRAINING**

First-aid/CPR Certification:

- Is required at minimum for the Project Superintendent and Foreman
- The certification card must be with them at all times.

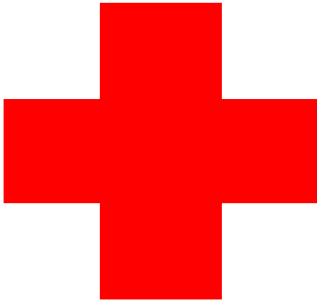
During project mobilization, an adequate number of properly furnished First Aid Kits will be located in the project office. The kit(s) must adequately supply the TOTAL NUMBER OF PROJECT PERSONNEL. The kit(s) are obtained from the Company yard or a local safety supply company.

The project team is responsible to assure that the first aid kit is adequately stocked and maintained.

Phone numbers for emergency response personnel shall be posted near each first aid kit and on the project bulletin board.

A first aid kit shall be maintained in each company vehicle. The project first aid kit is located in the main office trailer for the treatment of individual injuries or illnesses. Smaller first aid kits may be located in gang boxes and company vehicles.

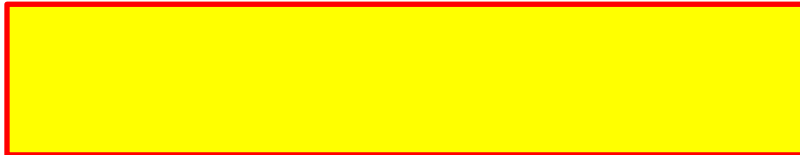
# EMERGENCY CONTACT LIST



(Post this Document at Job Site)

In case of Emergency call **911**

Project Site Address



Northwest Construction, Inc. <i>Main Office Location</i> 2353 130 <sup>th</sup> Ave NE, Ste100 Bellevue, WA 98005  Phone: 425.453.8380 Fax: 425.453.8408		
Safety Manager	Joe Davidson	C: 206-793-6335
Project Manager		C:
Personnel listed above shall be notified in case of an emergency.		
Other Agencies		
Washington Poison Center		(800)222.1222
Washington State Dept. of Labor & Industries		1-800-4BE-SAFE (ONLY for fatality or hospitalization)

## Emergency Hospital Map & Information

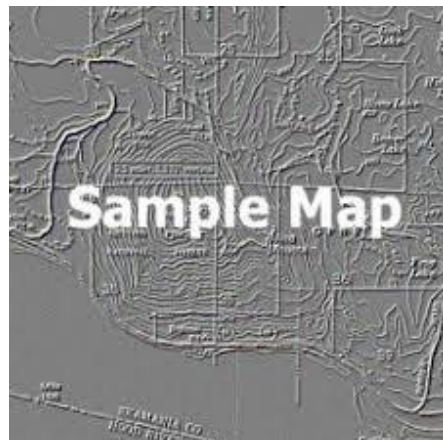
In case of emergency call **911**

[Nearest Emergency](#)



Non-Emergency Hospital Map & Information

[Nearest Non-Emergency Care](#)



## **BLOODBORNE PATHOGEN PROGRAM**

### **GENERAL**

First aid rendered by first aid cardholders is considered by Labor and Industries to be a "Good Samaritan" act, rather than a job duty. As a result, the full extent of the bloodborne pathogen standard is not applicable to the construction industry at this time.

Any employee who has an exposure incident in the process of providing first aid on the job site will be given a post-exposure evaluation as detailed below.

This exposure plan is established to protect occupationally exposed employees from hazards of blood borne pathogens, in particular HIV and Hepatitis B Viruses. These procedures will be reviewed and updated in accordance with the regulations.

## **DEFINITIONS**

1. Blood – Human blood, human blood components, and products made from human blood.
2. Blood Borne Pathogens – Pathogenic microorganisms that are present in human blood and can cause disease in humans. These pathogens include, but are not limited to Hepatitis A,B,C Viruses and Human Immunodeficiency Virus (HIV)
3. Contaminated – The presence or the reasonably anticipated presence of blood or other potentially infectious materials on an item or surface.
4. Decontamination – Use of physical or chemical means to remove, inactivate, or destroy blood borne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use or disposal.
5. Exposure Incident – A contact with the eye, mouth, mucous membranes, non-intact skin, blood or other potentially infectious materials.

## **RECORDKEEPING**

1. An accurate medical record for each employee with occupational exposure will be kept in a confidential file in accordance with all applicable federal and state laws.
2. Records will be kept for all employees who have received bloodborne pathogen training.

## **EXPOSURE CONTROL**

1. All employees must use proper personal protective equipment to prevent contact with blood or other potentially infectious materials.
2. Every jobsite shall have at least one of the following hand washing facilities:



- a. Running water and soap
  - b. Antiseptic hand cleanser
  - c. Towelette
3. Employees who have had contact with blood or other potentially infectious materials must wash their hands and all other contaminated areas immediately.
4. Disposable latex gloves shall be worn when employees could be expected to have contact with potentially infectious materials.
5. Mouthpieces should be used while performing rescue breathing/CPR.
6. All contaminated material, equipment and clothing shall be:
  - a. Immediately decontaminated with a disinfectant if possible. If not,
  - b. Collected, sealed and labeled in appropriate containers. These shall be placed in a secure area until they are properly disposed of.

## **POST EXPOSURE EVALUATION AND FOLLOW UP**

1. After the incident, the exposed employee will be provided a confidential medical evaluation including:
2. Documentation of the route of exposure, and the circumstances of the exposure incident.
3. Blood testing and post-exposure treatment.
4. Counseling.
5. Identification and documentation of the source individual.
6. Source individual's blood will be tested for HBV/HIV infection as soon as feasible after exposure.
7. The exposed individual will be advised of source individual's test results and informed of applicable laws and regulations concerning disclosure of the identity and infectious status of the source individual.

## **TRAINING**

1. All at-risk employees will receive initial training and an annual refresher course, which include the following:
2. Review of OSHA's and this exposure control plan.
3. An overview of the epidemiology and symptoms of basic bloodborne diseases.
4. The modes of transmission of bloodborne pathogens.
5. The use and limitation of appropriate work practices and personal protective equipment that will prevent or reduce exposure.
6. The procedures to follow if an exposure incident occurs, including the method of reporting the incident and the medical follow-up that will be made available.

## **HEPATITIS OVERVIEW**

Hepatitis is a disorder in which a virus causes inflammation of the liver. Hepatitis varies in severity from a self-limited condition with total recovery to a life-threatening or life-long disease. The three most common types of hepatitis infections are hepatitis A, B or C.

Most people who get hepatitis B or C have no recognizable signs or symptoms. Although treatment is available for the chronic stages of HBV and HCV, they are not treatable in the acute phase and can lead to serious, permanent liver damage or cancer. The only way these viruses can be positively identified is through blood tests or screenings.

**THE HEPATITIS A VIRUS (HAV)** is considered the least threatening since it generally does not lead to liver damage and 99% of those infected fully recover within a few weeks or months. Feces-contaminated water and food are the major sources of infection, but infected people can also transmit the virus. Those occupations at risk for being infected or passing on the infection include the food industry, day care, health care, international travelers, and sewage workers. There are vaccines that can protect against HAV.

**THE HEPATITIS B VIRUS (HBV)** is a serious viral disease that attacks the liver. It is transmitted by contact with infected blood and body fluids. Although it is treatable, those who are exposed to blood in their work or those who live with an infected individual should be vaccinated against HBV.

**THE HEPATITIS C VIRUS (HCV)** is the most common chronic blood borne infection and leading cause of liver transplants in the U.S. It too is transmitted by contact with infected blood and body fluids and can be treated early, but there is no vaccine to protect against it. Workers who may come in contact with blood or body fluids should be taught the health risks and how to prevent blood borne infections, including standard barrier precautions and engineering controls to prevent exposure to blood.

## **HEPATITIS B VACCINATION**

An employee that has been exposed, or have been determined to be potentially exposed to a bloodborne pathogen, shall be offered a Hepatitis B Vaccine at no cost. As a result of the nature

of your occupational duties at The Company, there is a substantial risk of your directly contacting blood or other body fluid which have been determined as likely to transmit the Hepatitis B virus. Therefore, in accordance with OSHA regulations, you are being offered, free of charge, the Hepatitis B vaccination. The vaccine will be administered during working hours and free of charge to you by The Company through a contracted medical provider.

I accept the Hepatitis B vaccine:

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Employee Name Print	Signature	Date
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If the employee chooses to decline the hepatitis B vaccination, they are required to complete the following documentation. If an employee initially declines, then decides to obtain the vaccine, the employer is still responsible to pay for the vaccine.

### **DECLINATION OF HEPATITIS B VACCINATION**

Employees who decline to accept hepatitis B vaccination offered by the employer are required to sign the following statement of declination, as indicated in the WAC 296-62- 08050, Appendix A.

I understand that due to my occupational exposure to blood or other potentially infectious materials I may be at risk of acquiring hepatitis B virus (HBV) infection. I have been given the opportunity to be vaccinated with hepatitis B vaccine, at no charge to myself. However, I decline hepatitis B vaccination at this time. I understand that by declining this vaccine, I continue to be at risk of acquiring hepatitis B, a serious disease. If in the future I continue to have occupational exposure to blood or other potentially infectious materials and I want to be vaccinated with hepatitis B vaccine, I can receive the vaccination series at no charge to me.

Have you had the Hepatitis B vaccine series (3 shots)? Yes      Year      No

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Employee Name Print	Signature	Date
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# INFECTIOUS DISEASE EMERGENCY RESPONSE PLAN

## BACKGROUND AND GENERAL INFORMATION

The Northwest Construction, Inc. (NWC) Infection Disease Emergency Plan provides general guidance for preparedness, response and communication for public health emergencies. It is critical that we are prepared for potential events to protect Northwest Construction employees, their families and the general population.

A pandemic is a global disease outbreak. An influenza pandemic occurs when a new influenza virus emerges for which there is little or no immunity in the human population, begins to cause serious illness and then spreads easily person-to-person worldwide. A worldwide influenza pandemic could have a major effect on the global economy, including travel, trade, tourism, food, consumption and eventually, investment and financial markets. Planning for pandemic influenza by business and industry is essential to minimize a pandemic's impact. As with any catastrophe, having a contingency plan is essential. In the event of an influenza pandemic, employers will play a key role in protecting employees' health and safety as well as in limiting the impact on the economy and society. Employers will likely experience employee absences, changes in patterns of commerce and interrupted supply and delivery schedules. Proper planning will allow employers in the public and private sectors to better protect their employees and lessen the impact of a pandemic on society and the economy.

Unlike natural disasters or terrorist events, an influenza pandemic will be widespread, affecting multiple areas of the United States and other countries at the same time. A pandemic will also be an extended event, with multiple waves of outbreaks in the same geographic area; each outbreak could last from 6 to 8 weeks. Waves of outbreaks may occur over a year or more. Your workplace will likely experience:

- **Absenteeism** - A pandemic could affect as many as 40 percent of the workforce during periods of peak influenza illness. Employees could be absent because they are sick, must care for sick family members or for children if schools or day care centers are closed, are afraid to come to work, or the employer might not be notified that the employee has died.
- **Change in patterns of commerce** - During a pandemic, consumer demand for items related to infection control is likely to increase dramatically, while consumer interest in other goods may decline. Consumers may also change the ways in which they shop as a result of the pandemic. Consumers may try to shop at off-peak hours to reduce contact with other people, show increased interest in home delivery services, or prefer other options, such as drive-through service, to reduce person-to-person contact.
- **Interrupted supply/delivery** - Shipments of items from those geographic areas severely affected by the pandemic may be delayed or cancelled.

Influenza is thought to be primarily spread through large droplets (droplet transmission) that directly contact the nose, mouth or eyes. These droplets are produced when infected people cough, sneeze or talk, sending the relatively large infectious droplets and very small sprays (aerosols) into the nearby air and into contact with other people. Large droplets can only travel a limited range; therefore, people should limit close contact (within 6 feet) with others when possible. To a lesser degree, human influenza is spread by touching objects contaminated with influenza viruses and then transferring the infected material from the hands to the nose, mouth or eyes. Influenza may also be spread by very small infectious particles (aerosols) traveling in the air. The contribution of each route of exposure to influenza transmission is uncertain at this time and may vary based upon the characteristics of the influenza strain.

## **PURPOSE**

The overriding purpose of this plan is to ensure that NWC does all that is possible to educate employees about an infectious disease and both employees and management together take the steps necessary to prevent the spread and reduce the risk of exposure or contraction of an infectious disease and ensure the health and safety of employees and the continuity of business operations.

## **SCOPE**

Only together can we prevent and mitigate the spread and impact of an outbreak or pandemic. This plan and the procedural steps within the plan apply to all NWC employees as outlined.

## **SOURCE DOCUMENTS/EVALUATION TOOLS**

1. H:/COMPANY/SAFETY/POLICIES/INFECTIOUS DISEASE RESPONSE PROTOCOL.DOXC – Handling Coronavirus Symptoms, Exposure & Diagnosis
2. H:Company/IT\_Network\_Administration/IT Procedures/KNOWLEDGE BASE

## **ASSOCIATED PROCEDURAL STEPS**

1. Primary Prevention for All Employees – Stopping infectious diseases before they occur:
  - a. Wash hands regularly
  - b. Stay up to date on vaccinations
  - c. Receive regular medical examinations
  - d. Maintain a healthy diet
  - e. Exercise regularly
  - f. Get an adequate amount of sleep
  - g. Maintain proper hygiene
  - h. Drink plenty of water
  - i. Find healthy ways to reduce stress
  - j. Stay away from people that are ill

2. Secondary Prevention for All Employees– Keep Infectious diseases from spreading
  - a. Seek medical attention as necessary and stay home if you are sick
  - b. Comply with your medical regimen as advised by your doctor
  - c. Reduce spread of disease to others by staying away
  - d. Drink plenty of water
  - e. Maintain a healthy diet
  - f. Get an adequate amount of sleep
  
3. Further Prevention Guidelines
  - a. Regular cleaning of equipment, work surfaces and tools with focus on cleaning before a change to a new driver. If possible, employees shall try to avoid equipment sharing.
  - b. All job shacks should be closed and not utilized.
  - c. Employees on job sites operating equipment or driving heavy trucks shall wear gloves while operating/driving
  - d. Employees wash their hands frequently with soap and water or with hand sanitizer if there is no soap or water available. Employees should avoid touching their noses, mouths, and eyes.
  - e. Employees are to cover their coughs and sneezes with a tissue, or to cough and sneeze into their upper sleeves if tissues are not available. All employees should wash their hands or use a hand sanitizer after they cough, sneeze or blow their noses.
  - f. The company provides tissues and trash receptacles, and a place to wash or disinfect their hands, employees shall use them
  - g. Social Distancing practices are to be implemented on every job site and within every office building. Employees avoid
    - i. close contact with their coworkers and customers (maintain separation of at least 6 feet)
    - ii. shaking hands and always wash their hands after contact with others
    - iii. using other employees' phones, desks, offices, tools or equipment.
  - h. Employees wear gloves and wash their hands upon removal of the gloves to prevent contamination during the removal process; keep gloves, coats, etc. in their company truck or personal vehicle as applicable
  - i. Establish and adhere to a cleaning plan and safety efforts for jobsites, offices, shops and equipment as directed by field supervisors and NWC Safety Manager to include:
    - i. Regular cleaning of equipment, work surfaces and tools with focus on cleaning before a change to a new driver. If possible, try to avoid equipment sharing.
    - ii. The company obtains and provides sanitary wipes, etc. In times of scarcity, supervisors shall conservatively issue these on an as needed basis; supervisors will issue cleaning supplies to clean all equipment at

the end of each shift; cleanings supplies will be kept and maintained by jobsite supervisors

- iii. All job shacks shall be closed and not utilized until further notice. Field supervisors post a sign closing jobsite trailers to all but NWC employees
  - j. Minimize situations where groups of people are crowded together. Use e-mail, phones and text messages to communicate with each other. When meetings are necessary, i.e. pre-task planning meetings, avoid close contact by keeping a separation of at least 6 feet, where possible, and assure that there is proper ventilation in the meeting room.
  - k. Reduce or eliminate unnecessary social interactions
  - l. Evaluate all situations that permit or require employees, customers, and visitors to enter the workplace and restrict or eliminate during an influenza pandemic. This may include:
    - i. Implementing staggered shifts or alternative work schedules
    - ii. Working-from-home and other remote work options.
    - iii. Designate and communicate alternate locations for groups of employees or individual employees as appropriate.
  - m. Employees focus on healthy lifestyles, including good nutrition, exercise, and smoking cessation. A person's overall health impacts their body's immune system and can affect their ability to fight off, or recover from, an infectious disease.
4. Infectious Disease Response Protocol – NWC has an established response protocol developed initially for the handling of Coronavirus symptoms, exposure and diagnosis.
- a. This document shall be updated by Human Resources in response to apply to any new threat or pandemic virus utilizing recommendations from the Center for Disease Control, the World Health Organization or other reliable sources of medical treatment and response information.
  - b. Employees and supervisors are responsibility for fulfilling all assigned responsibilities outlined in the response protocol
5. Business Continuity Plan – The NWC Business Continuity Plan activation is a scenario-driven process that allows flexible, scalable response to all hazards/threats that might disrupt operations. Business Continuity Plan activation will not be required for all emergencies or disruptions.
- a. Activation - The Process for activating the continuity plan has three basic steps
    - i. The CEO is aware of or is notified, that a disruption to normal operations is anticipated or has occurred.
    - ii. The CEO evaluates the situation along with its potential, anticipated, or known effects on company operations and decides whether to activate the Business Continuity Plan.
    - iii. The CEO initiates the process to inform all company leadership and employees of the situation and the actions they should take



- b. Activation – The Method
    - i. The plan may be activated by a government decree at the local, state or federal level
    - ii. The CEO may initiate activation of the Business Continuity Plan based on an emergency or threat directed at the company
  - c. Activation – The Questions to determine the tailoring of the plan to a current situation is normally based on projected or actual impact. These questions will assist determination:
    - i. Do office events need to be altered or cancelled?
    - ii. Does social distancing need to be implemented?
    - iii. Do enhanced cleaning procedures, such as extra wipe down of surfaces need to be implemented?
    - iv. What activities can be deferred without serious damage?
    - v. When do we implement an altered work schedule?
    - vi. Will the establishment of a Continuity Task Force assist in promoting the success of the Business Continuity Plan?
  - d. Succession Plan - In the event the CEO is rendered incapable or unavailable to fulfill their duties, successors have been identified to ensure there is no lapse in decision-making authority.
    - i. The order of succession is
      1. President
      2. Vice President, Construction Operations
      3. Director of Operations
      4. Director of Human Resources and Support Services
      5. Safety Manager
    - ii. The Director of Human Resources ensures that orders of succession are up-to-date and when changes occur, they are communicated. When the primary holder of one of these positions, or their acting successor, becomes unreachable or incapable of performing their duties, the HR Director will notify the next successor in line and inform other internal and external stakeholders of the substitution.
    - iii. Successor training will be conducted on an as-needed basis
6. Human Resources Considerations – Employee health & safety and business continuity are key considerations during a “continuity event”. Human Resources staff works closely with company leadership and where implemented the Continuity Task Force to coordinate all HR activities with a key focus on the following items:
- a. Reductions or Increases in Staffing
  - b. Work schedules and leave/time off
  - c. Employee Assistance Program Resources; arrangement, communication & usage
  - d. Impact on employees with disabilities

- e. Impact on employee pay and benefits
  - f. Individual Employee Issues, i.e. catastrophic disaster victims or other special concern
7. Communications - NWC has multiple, resilient communication systems, located at the main Bellevue Office and alternate locations to support the needs of the organization during a hazard or threat. These support communication and telework or virtual office work for many professional and administrative staff employees as well as field operations management and supervisors. These included communications equipment for use by employees and management during a pandemic, when the limiting factor may be loss of manpower rather than loss of facility or equipment.
- a. Communication Methods - Our diverse forms of communication can support social distancing efforts. These include the following:
    - i. Telecommunications including main corporate phone system and company provided cell phones
    - ii. Digital communications, i.e. texts through cell phones and email through employee cell phones, laptops or iPads
  - b. Continuity Event Communications - Once NWC has moved into continuity operations it will work to ensure that all employees remain aware of the current status of the workplace, including recovery measures and instructions for stopping, continuing or altering operations.
    - i. NWC will work through field operations supervisors and other management employees to remain aware of the current health and personal recovery status of employees and to provide assistance to utilize the available workforce efficiently
    - ii. Steps will be made daily to monitor current situations through reliable information sources including the Center for Disease Control, the World Health Organization or other local, state and federal agencies. The CEO will evaluate all information relating to the following:
      - 1. Health and safety of NWC employees
      - 2. Ability to execute essential functions
      - 3. Changes in threat advisories
      - 4. Intelligence reports
      - 5. Potential or actual effects on communications systems, information systems, office facilities, and other essential equipment
      - 6. Impact on business operations and financial position
      - 7. Expected duration of the emergency
    - iii. Based on the current situation analysis, NWC leadership or the Continuity Task Force will determine and provide situation update communications to all employees or specific groups of employees via email or text at least weekly, but generally more frequently as needed. The Director of Human Resources will be the primary source of ensuring communication to all company employees

- iv. Contact information – Human Resources works with IT to ensure that the MS Outlook Address Book is up-to-date and includes all of the business contact information for NWC leadership and employees. Human Resources works with Payroll to ensure that employee personal emails or cell phone numbers are available for direct communication.
  - v. NWC Leadership or an established Continuity Task Force will establish and implement a communication plan to provide operational updates to clients, customers and other external stakeholders
  - vi. Human Resources will establish a plan and direct implementation of any necessary communication with emergency contacts, family members or “next of kin” for employees should a need arise and be identified
8. Alternate Meeting Location & Telework – In the event of a threat preventing the use of the Bellevue Corporate Office, the NWC leadership team shall oversee the continued implementation of the Business Continuity Plan by:
- a. Assembling utilizing the following in order of preference:
    - i. Phone Conference through NWC Verizon Conference Call number
    - ii. Remote Meeting using JoinMe or other similar online technology
    - iii. Actual gathering at the Bothell office
  - b. Although much can be done remotely, IT in conjunction with NWC leadership will work to finalize a logistical plan including support services and infrastructure systems including any necessary steps associated with the NWC IT Disaster Recovery Plan. Details on these infrastructure systems are available on the company shared driver at H:Company/IT\_Network\_Administration/IT Procedures/KNOWLEDGE BASE
  - c. The majority of NWC Professional and Administrative staff have telecommuting capability sufficient to cover the basic duties of their positions. With the implementation of the Business Continuity Plan and direction from the NWC Leadership Team, all team members will
    - i. Coordinate with their manager by email, text, or telephone to verify their continued and ongoing ability to telework from their location
    - ii. Report to their manager their ability to access essential records needed to perform their functions or obstacles they are facing
  - d. A review by IT as a part of the Disaster Recovery Plan to employ emergency/back-up power capability in the corporate offices with both company and Building Management provided sources

## **RESPONSIBILITIES**

1. CEO: Responsible for evaluating current situations, making the determination of the need to implement the Business Continuity Plan and taking the necessary steps to activate the plan. Also leads the NWC Leadership team in all responsibilities outlined in the Plan unless designated to a Chair of a Continuity Task Force

2. NWC Leadership: Responsibility for proactively identifying business and staff needs and working together with support positions and groups to ensure full implementation of the Business Continuity Plan
3. Director of Human Resources: Responsible for the support of CEO and NWC Leadership in the implementation of the Business Continuity Plan with specific focus on employee communications and identification and coordination of employee resources and information
4. Safety Manager: Work with NWC Leadership and Field Operations supervisors to establish and adhere to cleaning plans and safety efforts for jobsites, offices, shops and equipment and monitor adherence to these plans and directed efforts
5. Field Supervisors: Conscientiously implement established cleaning plans and safety efforts for jobsites and equipment and monitor adherence by all employees to these plans and directed efforts
6. Employees: Support all Primary, Secondary and further Prevention efforts to fulfill the purpose and ensure the success of the NWC Plan

## **ASBESTOS POLICY**

### **APPLICATION**

The asbestos standard applies to every employer engaged in construction work where worker exposures to asbestos could occur. Construction work includes alteration, maintenance, renovation, remodeling and repair, including painting and decorating. At no time will any Company employees be involved in an asbestos survey and/or abatement work. All abatement work will be awarded to a licensed contractor. Should any Company project employee accidentally expose and/or suspect a material may contain asbestos, they must stop work in that area and inform their Supervisor immediately to receive further instruction.

### **ASBESTOS SURVEY**

OSHA regulations require that the property Owner conduct a good faith Asbestos Survey before any demolition, remodeling or other similar tasks are performed. This survey consists of sampling all materials that are going to be disturbed, removed and/or demolished. The sampling must ONLY be performed by an accredited AHERA Building Inspector.

### **PERMISSIBLE EXPOSURE LIMIT**

The current PEL for asbestos is 0.1 fibers per cubic centimeter of air. Abatement contractors must ensure that all workers are protected if they will be exposed to the PEL.

## **COMMUNICATION OF HAZARDS**

Owners must identify the presence, location, and quantity of ACM and/or PACM before work begins and must notify several parties, including prospective contractors whose employees may be expected to work in or adjacent to areas containing ACM and/or PACM. Project Supervisors must review all current OSHA standard(s) to ensure all applicable personnel will be notified.

## **SUMMARY**

It is the policy of The Company to avoid all contact with asbestos and asbestos related materials. When a suspected asbestos bearing material is encountered on any project, stop work immediately and contact your Supervisor for further instruction. Specialized training is required and will be provided for those employees who may work around asbestos containing material.

## **CONCRETE & MASONRY CONSTRUCTION**

All equipment and materials used in concrete construction and masonry work shall meet the applicable requirements as prescribed in the WAC 296-155.

1. Troweling machines must have a "dead man" switch.
2. Eyewash must be available during pours.
3. Water will be available to wash concrete off skin to prevent concrete burns.
4. Employees must wear rubber gloves and boots while pouring concrete.
5. When using bull floats, inspect the area to ensure there is no energized equipment or power lines nearby that the handles could touch.
6. Employees working more than (4) four feet above any adjacent working surface, placing reinforcing steel shall be provided with fall protection such as a safety harness or equivalent device.
7. Riding of concrete buckets is not permitted.
8. Pre-fabricated forms and form making material will be stacked neatly at all times. When stripping concrete forms, all material will be immediately removed and stacked in an

orderly manner. Forming material or debris will not block walkways and aisles. Subcontractor will remove rebar, tie-wire and other debris from the work area daily.

9. Equip buckets with a discharge device that an employee can operate without being exposed to the load. Equip buckets with safety devices to prevent premature or accidental dumping, and ensure that the release is self-closing.
10. Follow safe rigging practices when handling concrete buckets.
11. Concrete buggy handles must not extend beyond the wheels on either side of the buggy.
12. Rotating-type, powered concrete trowels shall be equipped with dead-man controls that automatically shut down the equipment when the Operator's hands are removed from the controls.

## **PERSONAL PROTECTIVE EQUIPMENT**

1. Wear appropriate eye protection when pouring concrete.
2. Wear rubber boots when walking in fresh concrete mix.
3. Wear gloves and long sleeve shirts to protect skin from concrete burns.
4. Approved and proper fitting ear protection shall be used when exposed to noise levels above allowed levels.
5. Approved respiratory protection shall be used when exposed to cement silica dust above the threshold limit value (TLV).
6. Finishers shall wear kneepads and impervious gloves when hand-finishing concrete.

## **CONCRETE PUMPING**

1. All pump trucks must have inspection records that include annual non-destructive testing of the boom.
2. All guards must be kept in place on all pumps, compressors, mixers, and all power must be locked out and potentially hazardous energy must be released prior to a work being done.
3. Because the average pressure in the line is between 1,000 - 3,000 psi, you must watch for air in the line. This causes "air burps" which cause the hose to whip around very violently, usually with no warning. Hoses and/or pipes used to carry concrete under

pressure shall be secured one to the other with an adequate length of at least 1/4 inch diameter chain or cable to prevent whipping in the event of an accidental separation of joints. All system safety pins shall be in place during pumping operations.

4. Never straddle the pipe or hose. Never clear a clogged line by increasing pump pressure
5. Check housekeeping around area the pumper will be using. Clean if necessary.
6. Always use safety wires or straps between pipe\hose sections.
7. While pumping concrete a double ended hose must not be used as a whip hose.
8. Velocity reducers must not be placed on the whip hose.
9. 5'x 5' x 1.5" steel plates will be placed under outriggers of concrete pump.
10. A transition cover or back end cover must be used on the concrete pump.
11. Inspect ground conditions around pumper locations before trucks arrive. Remember to consider cement trucks as well. The ground must be able to sustain all weights from these machines. A typical ten-yard mixer has 45,000 lbs. on the rear axles and 10,500 lbs. on the front axle.
12. Ensure outriggers are fully extended and mats are adequate for weight and ground conditions.
13. Visibly Inspect pipes, hoses and couplings for cracks, warpage, holes or any other signs of defective material.
14. Check for overhead obstructions. Remember to stay a minimum of 20 feet from power lines. If the boom comes in contact with power lines, electricity will flow from the pumper through the cement to the cement truck. The pump Operator should remain in the same position. If the Operator needs leave the area, shuffle away with feet close together. Don't step down with one foot on the truck and the other foot on the ground.
15. The hand signals for pump trucks are different than for cranes. Ensure that the person who is responsible for signaling the Pump Operator has been trained to use the proper signals.

## **SACKING AND PATCHING**

1. Respirators will be worn while sacking, patching and grinding.

2. Eye and face protection will be worn while grinding.
3. Forced air vents will be provided for grinding, sacking and patching operations in enclosed areas.

## **REINFORCING STEEL**

1. All protruding reinforcing steel, onto and into which employees could fall, shall be properly guarded with approved rebar caps to eliminate the hazard of impalement.
2. Wire mesh rolls shall be secured at each end to prevent dangerous recoiling action.
3. Reinforcing steel for walls, piers, columns, and similar vertical structures shall be guyed and supported to prevent overturning and to prevent collapse.

## **MASONRY**

A limited access zone shall be established whenever a masonry wall is being constructed. The limited access zone shall conform to the following:

- Shall be established prior to the start of construction of the wall;
- Shall be equal to the height of the wall to be constructed plus four feet, and shall run the entire length of the wall;
- Shall be established on the side of the wall that is not scaffolded;
- Shall be restricted to entry by Company employees engaged in constructing the wall; no other employees shall be permitted to enter the zone;
- Shall remain in place until the wall is adequately supported to prevent overturning and to prevent collapse, unless the height of the wall is over eight feet, in which case, the limited access zone shall remain in place until the requirements of subsection 7 of this section have been met.

All masonry walls over eight feet in height shall be adequately braced to prevent overturning and to prevent collapse unless the wall is adequately supported so that it will not overturn or collapse. The bracing shall remain in place until permanent supporting elements of the structure are in place.



## **CONFINED OR ENCLOSED SPACES**

When working in a confined space, or partially enclosed area, all applicable procedures under the “Confined Space” section in this manual must be followed.

### **FIRST-AID PROCEDURES**

1. If concrete comes in contact with the skin immediately wash off with soap and water and seek professional medical attention at the first sign of burning.
2. If concrete comes in contact with the eyes, flush with fresh water immediately, and seek immediate professional medical attention.

## **CONFINED SPACE ENTRY**

### **PURPOSE**

To assure that all feasible precautions and required safeguards are met to prevent exposures to toxic gases, oxygen deficiency, flammable atmospheres, and accidents related to entering confined spaces.

### **POLICY**

Before any employee enters a confined space they shall be trained in confined space entry procedures, conducting pre and continual atmospheric testing, and recognition, evaluation and control of suspected or known hazards associated within a confined space.

### **DEFINITIONS**

#### **Confined Space:**

Any space having a limited means of egress, which is subject to the accumulation of toxic or flammable contaminants or an oxygen deficient atmosphere. Confined spaces include but are not limited to: storage tanks, process vessels, bins, boilers, ventilation or exhaust duct, sewers, underground utility vaults, tunnels, pipelines, and open top spaces more than four feet in depth, such as pits, tubes, vaults, or vessels.

#### **Oxygen Deficient Atmosphere:**

An atmosphere that contains less than 19.5% oxygen by volume.

**Toxic Atmosphere:**

An atmosphere that has contained liquids, vapors, gases or solids of toxic, corrosive, or irritants nature (or if the confined space has been fumigated). Greater than TLV level of specific toxic substance.

**Flammable (explosive) Atmosphere:**

An Atmosphere that has contained flammable liquids, vapors or gases greater than 10% of the LEL.

**Qualified Person:**

A qualified person is one who, by reason of training or experience, is familiar with the operation being performed.

**TLV:**

Threshold Limit Value of toxic, corrosive or irritant contaminants.

**LFL:**

Lower Flammable Limits (may also be seen as LEL or Lower Explosive Limit) of flammable liquids, gases and volatile solids.

**Entry Permit:**

Document placed at the opening to a confined space outlining location, equipment monitor readings, person entering, stand by person, times and date of operation, and type of work going on in the confined space.

**Standby Person:**

A person that is trained in the procedures of confined space entry, and assigned to remain on the outside of the confined space and to be in communication with those working inside.

**PPM:**

Parts per million of a substance.

**PROCEDURE**

1. Pre-Entry:
  - a. The supervisor in charge of the job shall review the procedures for entering a confined space with each member entering a confined space and any problems shall be referred to the Safety Supervisor.
  - b. Supervisor shall secure entry permit and fill out the top portion at the safety office.
  - c. Supervisor shall secure an atmosphere monitor from the safety office.

- d. All pre-work procedures shall be completed before work commences within the confined space. Pre-work procedures include but are not limited to:
    - i. Proper ventilation
    - ii. Stand-by person
    - iii. Adequate lighting/emergency lighting.
    - iv. Life line
    - v. Communications
    - vi. Personal protective equipment
    - vii. Fire extinguisher
    - viii. Lockout/Tag-out of equipment
  - e. After all pre-work procedures have been completed the supervisor shall do atmospheric testing of the confined space. Atmospheric testing shall be done with one of the following monitors: National Dragger Model 180 oxygen monitor, or a Gas Tech Ox 80 or Ox 82 monitor. Atmospheric testing results shall be recorded on the permit and the Supervisor will sign the permit.
  - f. All persons entering the confined space and the stand-by person shall sign in on the permit.
  - g. The permit shall be hung at the opening of the confined space.
2. Working in Confined Space:
- a. When initial monitoring is completed the monitor shall stay with the employees working in the confined space. The monitor shall be kept in close proximity of employee, so the alarm can be heard.
  - b. Work may commence at this time.
  - c. If the alarm is activated, monitor malfunction, ventilation discontinues or lighting, everyone shall evacuate the confined space until the problem is solved.
3. Completion of Work:
- a. After completion of work or end of the workday, all persons working in the confined space and stand-by person shall sign out on the permit.
  - b. All monitors and permit shall be returned to the safety office.
4. Training Procedures:
- a. Attendant shall be trained in the following areas:
    - i. Permit system
    - ii. Testing and monitoring

- iii. Set up of proper ventilation
  - iv. Set up of adequate lighting
  - v. Proper use of lifeline
  - vi. Determining proper type of communications system to be used.
  - vii. Correct use of fire extinguisher
  - viii. Lockout/Tag-out procedures
  - ix. Emergency procedures
5. Person entering confined space:
- a. Use of personal protective equipment
  - b. Set up and use of proper ventilation
  - c. Permit system
  - d. Testing and monitoring
  - e. Set up of adequate lighting
  - f. Proper use of lifelines
  - g. Determining proper type of communications system to be used
  - h. Lockout/Tag-out procedures
  - i. Emergency procedures
  - j. Hazards associated within a confined space.

## **CRANES AND RIGGING**

### **PURPOSE**

The Company has developed these written guidelines for safe crane operation practices. These guidelines are drawn from WAC 296-155 and are not all encompassing. If there are any questions, concerns or comments, please consult WAC 296-155 for the full details or a Company Supervisor to verify Company procedures.

### **GENERAL REQUIREMENTS**

1. All cranes must maintain a minimum clearance of 20 feet from any power line.
2. All cranes must be set on solid ground. The use of mats, outrigger pad plates, or other devices is required on other than firm ground as recommended by manufacturer.
3. Cranes must not be modified without manufacturer's approval.
4. All cranes must have load charts visible from the Operator's seat.

5. No one will ride on a crane hook ball or load.
6. Only qualified Operators shall operate cranes.
7. All cranes shall have annual inspections. A copy of the current inspection must be kept with the Operator's manual on the crane. Cranes that do not pass inspection will not be permitted to operate.
8. The Operator shall comply with the manufacturer's specifications and limitations on the operation of any crane. Rated load capacities, warning, and other instructions shall be legible and conspicuously posted on all cranes. No modifications shall be made to a crane without written approval from the manufacturer.
9. Cranes with outriggers shall make lifts with outriggers down. When conditions require outrigger pads they shall always be used. The pads shall be constructed of hardwood and sized to extend past the outrigger feet. The crane shall be standing on a firm uniform supporting surface with outriggers fully extended and tires raised free of supporting surface.
10. The weights of all loads must be known or a load indication device must be used.
11. All cranes equipped with outriggers shall be marked indicating full extension, and telescoping boom cranes shall have marking on the boom indicating the length of boom that is extended.
12. Crane Operator's shall be in visual or radio contact with the Signaller before and during every lift. If visual or radio contact is interrupted for any reason, the Operator shall stop the lift until full contact is restored. The Operator shall be responsible for the equipment and the load during the lift.
13. A suspended load shall never be left unattended. Personnel shall not stand or pass under suspended loads. Personnel shall not be permitted to ride the hook or the load.
14. Employees shall not get on or off a crane while it is in motion. Adjustments, repairs, or lubrication shall not be permitted on moving equipment unless is required by manufacturer's recommendations.
15. Tag lines shall be used on all loads. Use as many as necessary to adequately control the load.
16. The Foremen shall ensure that the competent Operator is fit for duty. The Foreman shall ensure that the area is checked for any unusual conditions and take action as needed to ensure a safe lift.

17. The Signaller shall assist the Operator and monitor for any interference such as power lines and obstructions within the swing of the counterweight. The Signaller shall be in full view of the Operator or in direct radio contact.
18. When a job requires that a crane or a load come within 20' of an overhead power line, a written plan shall be prepared and reviewed by the Project Manager or the Safety Representative. All power lines shall be de-energized or grounded whenever possible.

## **AREAS OF RESPONSIBILITY**

While organizational structure of various construction activities may differ, the following are areas of responsibility for crane operations. A single individual may perform on or more of these responsibilities concurrently.

1. CRANE OWNER – Has custodial control of a crane by virtue of lease or ownership. In some situations, the Crane Owner and the Crane User may be the same person or entity.
  - a. Provide a certified crane that meets the specific job requirements defined by the Crane User.
  - b. Provide a crane and all necessary components specified by the manufacturer that meets the Crane User's requested configuration and capacity.
  - c. Provide all applicable load/capacity chart(s) and diagrams
  - d. Provide additional technical information when requested by the Crane User.
  - e. Provide field assembly, disassembly, operation, and maintenance information.
  - f. Establish inspection, testing, and maintenance program.
  - g. Using qualified personnel for maintenance, inspection, repair, transport, dis/assembly, etc.
2. CRANE USER – Arranges the crane's presence on a work site and controls its use there.
  - a. Comply with regulations and manufacturer information.
  - b. Using qualified people, such as Supervisors for crane activities.
  - c. Ensuring the crane is in proper operating condition prior to initial use at work site.
    - Verifying that the Crane Owner has provided crane certification.
    - Verifying that crane inspections have been performed.
  - d. Verifying the crane has the necessary lifting capacity to perform the proposed lifting operations in the planned configuration.
  - e. Using certified Operators, qualified Riggers, qualified Signallers and a competent and/or qualified person for inspections, maintenance, repair, transport, assembly and disassembly.
  - f. Ensuring the Operator is made aware of adjustments or repairs that have not yet been completed.

- g. Ensure all personnel involved are aware of their responsibilities, assigned duties, and the associated hazards.
  - h. Ensure the inspection, testing and maintenance programs specified by the Crane Owner are followed.
3. SITE SUPERVISION – Exercises supervisory control over the work site on which a crane is being used and over the work that is being performed on that site.
- a. Ensuring the crane is certified prior to initial site usage.
  - b. Determining if additional regulations are applicable to crane operations.
  - c. Ensuring that a qualified person is designated as the Lift Director.
  - d. Ensuring that crane operations are coordinated with other jobsite activities that will be affected by or will affect the lifts.
  - e. Ensuring the area for the crane is prepared:
    - Access roads
    - Sufficient room for assembly/disassembly
    - Operating area that is suitable for the crane with respect to levelness, surface conditions, support capability, proximity to power lines, excavations, etc.
    - Traffic control is in place to restrict unauthorized access to the crane's working area.
  - f. Ensuring that conditions which may adversely affect crane operations are addressed, such as:
    - Poor soil conditions;
    - Wind velocity or gusting winds;
    - Heavy rain;
    - Fog;
    - Extreme cold;
    - Artificial lighting.
  - g. Allowing crane operation near electric power lines only when the requirements the power line section of this policy have been met.
  - h. Permitting special lifting operations and/or critical lifts only when equipment and procedures required by regulation, the crane manufacturer, or a qualified person are employed such as:
    - Multiple crane lifts
    - Multiple load line lifts
    - Lifting personnel
    - Pick and carry operations
    - Mobile/articulating cranes operating on barges i. Ensuring the crane is inspected and maintained.
    - Ensuring Crane Operators are certified.
    - Ensuring the rigging crew is supervised by a qualified person.

- Ensuring that work involving the assembly and disassembly of a crane is supervised by an assembly/disassembly director.
- Ensuring crane maintenance is performed by a designee.

4. LIFT DIRECTOR – Directly oversees the work being performed by a crane and the associated rigging crew.
  - a. Being present at the job site during lifting operations and overseeing the lifting operations.
  - b. Ensuring the area needed for crane operations has been prepared before operations commence.
  - c. Ensuring necessary traffic controls are in place to restrict unauthorized access to the crane’s work area.
  - d. Ensuring personnel involved understand their responsibilities, assigned duties, and associated hazards.
  - e. Addressing safety concerns and deciding if it is necessary to overrule those concerns and directs crane operations to continue. In all cases, the manufacturer’s criteria for safe operation and the requirements of this chapter and any other applicable safety and health standards must be adhered to.
  - f. Appointing the Signalperson(s), ensuring they are qualified, and conveying that information to the Crane Operator.
  - g. Ensuring compliance when working near power lines or lifting personnel.
  - h. Ensuring the load is properly rigged by a qualified Rigger.
  - i. Ensuring precautions are implemented in special lifting operations and/or critical lifts.
  - j. Informing the Crane Operator of the weight of loads to be lifted, as well as the lifting, moving, and placing locations for these loads.
  - k. Obtaining the Crane Operator’s verification that this weight does not exceed the crane’s rated capacity.
  
5. CRANE OPERATOR – Works directly with approved project personnel.
  - a. Reviewing requirements for the crane with the Lift Director before operations.
  - b. Knowing what types of site conditions could adversely affect the operation of the crane and consulting with the Lift Director concerning the possible presence of those conditions.
  - c. Understanding and applying the information contained in the crane manufacturer’s operating manual
  - d. Understanding the crane functions and limitations as well as its particular operating characteristics
  - e. Using the crane’s load/capacity chart(s) and diagrams and applying all notes and warnings related to the charts to confirm the correct crane configuration to suit the load, site, and lift conditions.



- f. Refusing to operate the crane when any portions of the load or crane would enter the prohibited zone of energized power lines except as defined in the power line section of this policy.
- g. Performing daily inspection as specified by the Crane Owner, Crane Manufacturer, applicable regulations and industry standards.
- h. Promptly reporting the need for any adjustments or repairs to the appropriate person.
- i. Following applicable lockout/tagout procedures.
- j. Not operating the crane when physically or mentally unfit.
- k. Ensuring that all controls are in the off or neutral position and that all personnel are in the clear before energizing the crane or starting the engine.
- l. Not engaging in any practice that will divert their attention while actually operating the crane controls.
- m. Testing the crane function controls that will be used and operating the crane only if these function controls respond properly.
- n. Operating the crane's functions, under normal operating conditions, in a smooth and controlled manner.
- o. Knowing and following the procedures specified by the manufacturer or approved by a qualified person, for assembly, operation, disassembly, setting up, and reeving the crane.
- p. Knowing how to travel the crane.
- q. Observing each outrigger during extension, setting, and retraction or using a signal person to observe each outrigger during extension, setting, or retraction.
- r. Ensuring that the load and rigging weight(s) have been provided.
- s. Calculating or determining the net capacity for all configurations that will be used and verifying, using the load/capacity chart(s), that the crane has sufficient net capacity for the proposed lift.
- t. Considering all factors known that might affect the crane capacity and informing the lift director of the need to make appropriate adjustments.
- u. Knowing the standard and special signals and responding to such signals from the person who is directing the lift or a qualified signal person.

## **CRANE CREW MEMBER REQUIREMENTS**

1. Crane Operator
  - a. NCCCO certification or equivalent
    - Written exam by crane type.
    - Practical exam by crane type.
    - Maximum of 5 year qualification period.
  - b. Experience
    - Number of hours of crane related experience equal to or greater than the amounts identified in "Table 3" under WAC 296-155-53300. Documented through declaration or log.

- Number of hours of actual crane operating experience equal to or greater than the amounts identified in “Table 3” under WAC 296-155-53300. Documented through declaration or log.
  - c. Successfully passing a substance abuse test.
- 2. Signal Person
  - a. A qualified Signalperson is required whenever:
    - The point of operation is not in full view of the Operator.
    - View of direction of travel is obstructed.
    - Site specific safety concerns where the Operator, Lift Director, or Rigger determines it is necessary.
  - b. Third party qualified evaluator or employer’s qualified evaluator.
  - c. Oral or written test and a practical test is required by signal type.
  - d. Maximum of 5 year qualification period.
  - e. Documentation must be available at job site and denote qualified signal types.
- 3. Rigger
  - a. A qualified Rigger is required whenever workers are within the fall zone, hooking, unhooking, or guiding a load, or doing performing the initial connection of a load to a component or structure.
  - b. Third party qualified evaluator or employer’s qualified evaluator.
  - c. Written test and practical test is required by rigging type
  - d. Maximum of 5 year qualification period.
  - e. Documentation must be available at job site and denote qualified rigging types.
- 4. Assembly/Disassembly Director
  - a. Competent and qualified person.
- 5. Crane repair, inspection, and maintenance employees
  - a. Maintenance and repair personnel must meet the definition of a qualified person with respect to the crane/derrick and maintenance/repair tasks performed.
  - b. Allowed to operate the crane / derrick only where:
    - Operation is limited to those functions necessary to perform maintenance, inspect or verify the performance of the crane/derrick.
    - The personnel operate the crane/derrick under the direct supervision of a certified Operator.

## **CRANE INSPECTION AND CERTIFICATION**

1. Crane Inspection Requirements
  - a. Post – Assembly
    - Performed by qualified person (Assembly/Disassembly Director)
    - Inspection form must be kept on crane while on site
  - b. Shift

- Performed by competent person (Crane Operator) c. Monthly
  - Performed by competent person
  - Inspection forms must be kept for at least three months. d. Annual
  - Performed by accredited crane certifier
  - Documentation must be kept on crane.
- b. Repaired or Adjusted
- Performed by qualified person
2. Modified
- Performed by accredited crane certifier
  - Documentation must be kept on crane.
- a. Cranes not in regular use (idle for 3 months or more)
- Qualified person
3. Crane Certification (WAC 296-155-53144 through 296-155-53214)
- a. Must be performed by an accredited crane certifier
- Temporary certificate of operation is issued by the crane certifier and valid until crane certification is received from DOSH.
- b. The accredited crane certifier will review the monthly and annual inspection documentation.
- c. The accredited crane certifier will perform a visual an inspection of the crane.
- d. The accredited crane certifier will observe operational tests of the crane. e.
- Proof Load Tests:
- Includes a proof load test on all hoist lines and needs to be at least 100% but not to exceed 110% as configured.
- e. If the crane is to be utilized in an “on rubber” configuration, a free rated load test is also required.
- f. If any of the following occur, the crane is decertified and must be inspected by an accredited crane certifier and DOSH’s crane certification section needs to be notified:
- Contact with an energized power line
  - Any overload other than proof load testing or one that has been approved in writing in advance by the crane manufacturer or RPE
  - Any significant modifications or significant repairs of a load sustaining/bearing part that affects the safe operations of the crane/derrick.
  - Any deficiency that affects the safe operation of the crane or derrick that has been identified by a qualified person.
- g. Tower Cranes additional certification items (WAC 296-155-53206)
- Parts must be inspected by an accredited crane certifier prior to assembly, following erection of the tower crane, after each climbing operation, or reconfiguring the boom, jib, or counter-jib before placing the crane in service.

- The accredited crane certifier must verify a registered Professional Structural Engineer has certified that the crane foundations/structural supports and underlying soil are adequate support.
- Nonstandard tower crane bases must be reviewed and acknowledged as acceptable by an independent registered Professional Structural Engineer.

## **SAFETY DEVICES AND OPERATOR AIDS**

1. Safety Devices
  - a. In the event safety devices are not properly functioning, operation must not begin.
  - b. In the event a device stops working properly during operation, the Operator must safely stop operations.
  - c. Alternative measures are not permitted to be used:
  - d. Safety Devices:
    - Crane level indicator (can be either built in or available on the crane)
    - Boom stops (except for derricks and hydraulic booms)
    - Jib stops (if a jib is attached – except for derricks)
    - Cranes with foot pedal brakes must have locks (except for portal cranes and floating cranes)
    - Hydraulic outrigger jacks and hydraulic stabilizer jacks must have an integral holding device/check valve
    - Horn (must be either built in or a portable horn available to the Operator)
2. In the event operational aids are inoperative or malfunctioning, the crane and/or device manufacturer’s recommendations for continued operations or shutdown of the crane must be followed until the problems are corrected. Without such recommendations and any prohibitions from the manufacturer against further operation, the following requirements apply:
  - a. Recalibration or repair of the operational aid must be accomplished as soon as is reasonably possible, as determined by a qualified person.
  - b. Temporary alternative measures must be in force and effect.

## **ASSEMBLY / DISASSEMBLY**

Assembly/disassembly must be directed by a qualified and competent Assembly/Disassembly Director.

3. Assembly/disassembly must comply with all applicable manufacturer prohibitions and either manufacturer assembly/disassembly procedures or employer procedures developed by a qualified person.

4. The Assembly/Disassembly Director must visually inspect the components and attachments to ensure that they meet manufacturer's recommendations.
5. A pre-assembly/disassembly safety meeting will be held by the Assembly/Disassembly Director and shall include all crew members.
  - a. The safety meeting shall address the crew members tasks, hazards associated with their tasks, and hazardous positions/locations that need to be avoided.
  - b. The "Crane Assembly/Disassembly Safety Log" shall be completed and turned in.
  - c. In the event any crew member takes on a different task or new personnel are added, the safety shall be reconvened.
  - d. The Assembly/Disassembly Director shall perform a post assembly inspection, document the results of the inspection on the "Post Assembly Inspection" form, and put the inspection record in the crane.

## **POWER LINE SAFETY**

1. Identify work zone which is either:
  - a. Marked lifting area and counterweight tail swing boundaries and prohibit operation past boundaries; or
  - b. 360 degrees from crane's center of rotation to the crane's maximum working radius.
2. Determine if any part of the equipment, load (including rigging) or load line could get closer than 20' (<350KV) or 50' (>350KV) to a power line.
  - a. If outside of these limitations, crane operations are allowed.
  - b. If inside of these limitations:
    - i. Option 1 – De-energize and ground the power line.
    - ii. Option 2 – Maintain a 20' clearance.
    - iii. Option 3 – Ask Utility for voltage and use "Table A".
    - iv. Option 2 or 3 require Encroachment Prevention Measures:
      - ✓ Planning Meeting
      - ✓ Non-conductive tag lines (if used)
      - ✓ Elevated warning lines, barricade or line of signs.
      - ✓ Plus (Choose 1) – Spotter, proximity alarm, warning device, or range limiter.
  - c. If inside limitations established by "Table 4":
    - i. Must demonstrate and document that staying outside of the zone is infeasible.
    - ii. Must demonstrate and document that it is infeasible to de-energize and ground.
      - All of the following items are required as a minimum:
        - ✓ Power line Owner sets minimum approach distance.

- ✓ Planning meeting / Pre-lift meeting
- ✓ Dedicated spotter
- ✓ Elevated warning line or barricade
- ✓ Insulating link / device
- ✓ Non-conductive rigging
- ✓ Range limiter (if equipped)
- ✓ Non-conductive tag line (if used)
- ✓ Barricades – 10' from equipment
- ✓ Limit access to essential workers
- ✓ Properly ground crane

## **MAINTENANCE AND STORAGE**

Failures of a previously damaged boom or jib or a worn out cable are caused by conditions obvious to someone who looks for those conditions. Proper maintenance can often prevent accidents from obvious and not-so-obvious conditions.

Along with physical abuse and normal wear, weather is a serious threat to a safely maintained crane or derrick. Rain, snow, sleet, flooding and condensation can result in rust of major and minor structural components as well as mechanical parts. Blowing dust can initiate wear that might ultimately result in failure. It is important to minimize these problems by maintaining an adequate coat of paint and lubrication, storing inside if possible, covering mechanical parts when not in use, keeping doors and windows shut when not in service, parking to avoid flooding, etc.

In all cases, the manufacturer's service and maintenance recommendations are to be followed. We are not to alter any crane or derrick without prior approval of the manufacturer or a competent Engineer. Boom and jib repairs may only be made following the manufacturer's procedure, using proper materials and employing qualified workers.

Boom and jib support pendants must be kept lubricated with cable dressing to prevent rusting in the interior of the cable, with particular emphasis at the sockets. Operating cables should be lubricated when the crane or derrick is out of operation.

When handling at the job site and particularly when storing, land all parts on blocking sufficient to avoid contact with the ground.

## **RIGGING**

1. Tag lines will be used on freely spinning or moving loads.
2. All rigging is to be inspected prior to use. Damaged rigging will not be used and shall be immediately removed from service.

3. Only trained, qualified persons will be allowed to rig. The Company will designate that individual for each jobsite.

## **INSPECTION**

1. All cranes shall be inspected prior to use by the contractor according to the ANSI standards and manufacturer's recommendations.
2. Any unsafe conditions, disclosed by this inspection as determined by the authorized inspector, shall be corrected before operation of the inspected machine is resumed.
3. Adjustments shall be maintained to assure correct functioning of components. The following are examples:
  - All functional operation mechanism
  - Safety devices
  - Control systems
  - Power plants
4. Repairs or replacements shall be provided promptly as needed for safe operation. The following are examples:
  - All critical parts of functional operating mechanisms that are cracked, broken, corroded, bent or excessively worn.
  - All critical parts of the crane structure that are cracked, bent, broken or excessively corroded.
  - All replacement parts are preferably to be furnished by original equipment manufacturer and shall have at least the original safety factor.

## **ELECTRICAL & POWER LINE SAFETY**

### **GENERAL**

Electrical work may involve other safety hazards that are not directly addressed by this program. These hazards may include, but are not limited to:

- Lockout/Tagout
- Personal Protective Equipment

Please refer to these various sections if required.

Ground Fault Circuit Interrupters (GFCI) are required for non-permanent wiring of a structure or on a construction project. It is the policy of The Company to ensure that all cord sets and receptacles not a part of the permanent wiring of buildings or structures, and all electrical equipment and tools used in connection with processes of construction or alterations are used through a GFCI.

## **WORKING ON OR NEAR EXPOSED DEENERGIZED PARTS**

1. Only qualified persons are allowed to work on electric parts or equipment that has not been de-energized using approved lockout/tagout procedures (See Lockout/Tagout Section).
2. In work areas where the exact location of underground electric power is unknown, workers will hand dig to expose the electrical lines.
3. When employees work on exposed de-energized parts or near enough to them to expose the employee to an electrical hazard, then the following safety-related work practices will be followed.
4. Any conductors or parts of electric equipment that have not been properly locked or tagged will be treated as energized even if these systems have been de-energized.
5. If the potential exists for an employee to contact parts of fixed electric equipment or circuits that have been de-energized, they will vacate the area and return to that job after the work has been completed.

## **ILLUMINATION**

1. Individuals may not enter spaces containing exposed energized parts unless illumination is provided that enables the persons to perform the work safely.
2. Individuals may not perform tasks near exposed energized parts where there is lack of illumination or an obstruction that hinders observation of work to be performed.
3. Employees shall not reach blindly into areas that may contain energized parts.

## **PORTABLE LADDERS**

All portable ladders that have the potential for contact with exposed energized parts shall be nonconductive in design. Ensure adequate clearance to energized lines.



## **HOUSEKEEPING**

1. Housekeeping duties shall not be performed close enough for contact with live parts to occur unless adequate safeguards, such as insulating equipment or barriers, are provided.
2. Electrically conductive cleaning materials, including conductive solids such as steel wool, metalized cloth, and silicon carbide, as well as conductive liquid solutions, will not be used near energized parts unless procedures are followed which prevent electrical contact.

## **CORD-AND-PLUG CONNECTED EQUIPMENT**

### Handling

- Portable equipment shall not be handled in a manner that will cause damage.
- Flexible electric cords connected to equipment shall not be used for raising or lowering equipment.
- Flexible cords may not be fastened with staples or otherwise hung in a manner that could damage the outer jacket or insulation.

### Visual Inspection

Portable cord-and-plug connected equipment and extension cords shall be visually inspected for external defects prior to each use. They should be inspected for:

- Loose parts
- Deformed and missing pins
- Damage to the outer jacket or insulation

When defects or evidence of damage are detected, which might expose an employee to injury, the defective item shall be removed from service. Individuals should not use the defective equipment until it has been repaired and tested.

Prior to connecting an attachment to a receptacle, assure the plug and receptacle contacts mate properly.

## **GROUNDING-TYPE EQUIPMENT**

1. Flexible cords used with grounding-type equipment must contain an equipment-grounding conductor.
2. Attachment plugs and receptacles may not be connected or altered in a manner that prevents proper continuity of the ground at the point where plugs are attached to receptacles.
3. Plugs and receptacle may not be altered to allow the grounding pole to be inserted into current connector slots.
4. Adapters that interrupt the continuity of the equipment grounding connection may not be used.

## **CONDUCTIVE WORK LOCATIONS**

All portable electrical equipment and flexible cords used in highly conductive work locations, such as those with water or other conductive liquids present, or in places where employees are likely to contact water or conductive liquids, shall be approved for use in those locations.

## **CONNECTING ATTACHMENT PLUGS**

1. Hands must not be wet when plugging and unplugging flexible cords and cord-and- plug connected equipment if energized equipment is involved.
2. If cord connectors are wet from being immersed in water or the condition of the connection could provide a conducting path to individual's hands, the energized plug and receptacle connections may be handled only with insulating protective equipment.
3. Locking-type connectors shall be properly secured after connection.

## **FLAMMABLE OR IGNITABLE MATERIALS**

Where flammable materials are present only occasionally, electric equipment cable of igniting the flammable materials may not be used unless appropriate measures are taken to prevent hazardous conditions from developing.

## PERSONAL PROTECTIVE EQUIPMENT

1. Personal protective equipment shall be provided for areas where there are potential electrical hazards, and shall be appropriate for the parts of the body to be protected and the work being performed.
2. Equipment shall be maintained in a safe, reliable condition and be periodically inspected by the employee or tested as required.
3. Where the insulating capability of protective equipment is subject to damage during use, an outer covering of leather or other appropriate material shall protect the
4. insulating material.

## WORKING AROUND UNDERGROUND OR OVERHEAD HIGH VOLTAGE

Prior to the assembly/erection of any work around underground or overhead high voltage, it must be determined if any part of the equipment, load line, or load (including rigging and lifting accessories) could get in the direction or area of assembly within proximity of a power line. The Superintendent shall contact the power company or Owner to determine the exact voltage of the lines within close proximity to work operation prior the commencement of any work activities. This information shall be documented and kept in the project file.

Minimum clearance distances are located on the following table. In the event this clearance must be encroached, the line will be de-energized prior to the planned encroachment. Contact the Safety Director to discuss variance options.

### MINIMUM SAFE APPROACH DISTANCES

<b>Voltage (nominal kV, alternating current)</b>	<b>Minimum clearance distance (feet)</b>
<b>Up to 50</b>	<b>10</b>
<b>Over 50 to 200</b>	<b>15</b>
<b>Over 200 to 350</b>	<b>20</b>
<b>Over 350 to 500</b>	<b>25</b>
<b>Over 500 to 750</b>	<b>35</b>
<b>Over 750 to 1000</b>	<b>45</b>
<b>Over 1000</b>	<b>(as established by the power line Owner/Operator or registered professional Engineer who is a qualified person with respect to electrical power transmission distribution)</b>

## **ALERTING TECHNIQUES**

1. Safety signs, symbols or accident prevention tags, where necessary to warn site personnel about electrical hazards that may cause injury.
2. Barricades, in conjunction with safety signs, where necessary to prevent or limit access to work areas that expose employees to uninsulated energized conductors or circuit parts shall also be utilized.
3. An attendant shall be stationed, as needed, to warn and protect site personnel, where signs and barricades do not provide sufficient warning and protection.

## **EMERGENCY PROCEDURES**

In the event equipment comes into contact with energized lines, Operators shall stay in the cab of the equipment until the power is shut off. If evacuation of the equipment or surrounding area is necessary, site personnel or Operator, shall shuffle their feet closely on the ground, ensuring continuous contact with both feet, until a safe distance of 100 feet from the energized source has been achieved. Never touch the energized equipment and the ground at the same time.

## **ELEVATED WORK PLATFORMS**

### **ARTICULATING BOOMS**

Operators of all articulating boom type equipment must be trained. The Operator must be able to provide proof of current training. Personnel cannot operate these lifts without providing properly documented proof of training and display safe operation of the equipment.

### **FALL PROTECTION**

1. All personnel in the basket must wear and use an approved full body harness at all times. The lanyard must be attached to the approved anchorage point inside the basket.
2. Personnel must be trained in all appropriate aspects of fall protection. Employees must wear fall protection equipment supplied by The Company.

## GENERAL OPERATION

1. Always read and operate the lift according to the owner's manuals. You will find the boom capacity and configuration information in the owner's manual.
2. An inspection must be performed before use according to manufacturer's requirements. This includes at a minimum: loose pins, tires, extended axles, power track damage, control operation, gates, structural components and fluid levels.
3. Ground conditions must be relatively level and not be at the edge of open ditches or other excavations. Those areas shall be delineated or guarded.
4. Make sure control levers are clearly marked.
5. The data plate must be legible on the basket, including the Maximum Capacity/Weight information.
6. Start cold engines on low throttle with moderate use of choke.
7. Before elevating boom, make sure all safety chains and gates are closed.
8. Check equipment swing clearances. Barricade and/or delineate the swing radius if operating in a congested area.
9. Before swinging the boom, raise lower boom to clear carrier obstructions.
10. When elevating the platform to the work position, be aware that if the boom is at a low angle or is fully extended, the capacity of the lift is reduced.
11. Never add weight to an extended lift.
12. Listen for unusual mechanical sounds. Most strange sounds indicate service is needed or structural failure is occurring. Check the tilt alarm.
13. When working in tight areas, slow control functions by switching to low range. If machine movement is jerky, have the hydraulic control valves reset by a mechanic.
14. If machine begins to tip forward, quickly reduce the boom length. If machine tips forward due to a ditch caving in, quickly reduce the boom length and swing away from the ditch while reducing boom angle.
15. If machine begins to tip backward, quickly reduce the boom angle.

16. Do not operate within ten (10') of power lines. Must verify power (kV0).
17. If machine engine won't run, use the emergency power drive to return to ground.
18. If power completely fails, call for an authorized person to use valves at the machine base to lower and retract the boom.
19. Turn engine to low power when stationary to reduce noise and increase fuel economy.
20. Never override the "dead man" foot pedal or other safety features.
21. Turn off master switch whenever you leave the lift unattended.

## **EXCAVATION, TRENCHING & SITE CLEARING**

### **EXCAVATION**

All excavations and trenches four or more feet in depth (except in solid rock), require shoring, sloping or a method of protection. When planning, you should consider at a minimum: underground obstruction, soils classification, depth of cut and type of trench/excavation wall protection to be use, personal protective equipment, potential breathing contaminants, location of excavating equipment, and storage of spoil and inspection methods.

In order to determine what type of system to use, the soil must be classified as Type A, B or C, as defined.

#### **Type A**

Cohesive soils with an unconfined compressive strength of 1.5 tons per square foot (tsf) (144 kPa) or greater. Examples of cohesive soils are clay, silty clay, sandy clay, clay loam and, in some cases, silty clay loam and sandy clay loam. Cemented soils such as caliche and hardpan are also considered Type A. No soil is Type A if:

1. The soil is fissured; or
2. The soil is subject to vibration from heavy traffic, pile driving, or similar effects; or
3. The soil has been previously disturbed; or
4. The soil is part of a sloped, layered system where the layers dip into the excavation on a slope of 4 horizontal to 1 vertical (4H.1V) or greater; or

- The material is subject to other factors that would require it to be classified as a less stable material.

**Type B**

- Cohesive soil with an unconfined compressive strength greater than 0.5 (tsf) less than 1.5 (tsf); or
- Granular cohesion less soils including: Angular gravel (similar to crushed rock), silt, silt loam, sandy loam and, in some cases, silty clay loam and sandy clay loam; or
- Previously disturbed soils, except those which would otherwise be classed as Type C soil; or
- Soil that meets the unconfined compressive strength or cementation requirements for Type A, but is fissured or subject to vibration; or
- Dry rock that is not stable; or
- Material that is part of a sloped, layered system where the layers dip into the excavation on a slope less steep than 4 horizontal to 1 vertical (4H.1V), but only if the material would otherwise be classified as Type B.

**Type C**

- Cohesive soil with an unconfined compressive strength of 0.5 (tsf) or less; or
- Granular soils including gravel, sand, and a loamy sand; or
- Submerged soil or soil from which water is freely seeping; or
- Submerged rock that is not stable; or
- Material in a sloped, layered system where the layers dip into the excavation or a slope of 4 horizontal to 1 vertical (4H.1V) or steeper.

<b>SOIL TYPE</b>	<b>UNCONFINED COMPRESSED STRENGTH</b>	<b>MAXIMUM ALLOWABLE SLOPES (H:V) FOR EXCAVATIONS LESS THAN 20 FEET DEEP(1)</b>
<b>STABLE ROCK</b>	<b>NA</b>	<b>VERTICAL (90o)</b>
<b>TYPE A</b>	<b>1.5 TON/SQ FT</b>	<b>¾:1 (53o)</b>
<b>TYPE B</b>	<b>0.5 – 1.5 TONS/SQ FT</b>	<b>1:1 (45o)</b>
<b>TYPE C</b>	<b>0.5 TONS/SQ FT OR LESS</b>	<b>1½:1 (34o)</b>

## GENERAL

1. There must be a competent person on-site overseeing all excavating, trenching, and shoring activities.

**Definition of Competent Person:** *One who can identify existing or predictable hazards in the surroundings that are unsanitary, hazardous, or dangerous to employees. Also has authorization or authority by the nature of their position to take prompt corrective measures to eliminate these hazards.*

2. A competent person familiar with soil must determine soil classifications. In most cases, a soils report has been issued for the project and the soil will already be classified.
3. The minimum slope for Class A soil is 3/4H to 1V; for Class B, 1H to 1V; and for Class C, 1.5H to 1V.
4. The use of shoring also is dependent upon the type of soil. Refer to the excavation requirements in the WAC-155 construction safety standards.
5. Employees are not permitted inside shields when being installed, removed, or moved vertically.
6. Trench box needs manufacturer's tabulated data kept at jobsite. Assigned number on trench box must be clearly visible and match the tabulated data. No modification shall be made without the manufacturer's approval. Stacking of trench boxes is only allowed if approved by the manufacturer. Employees shall not go out of trench boxes into unprotected areas.
7. All Excavations/Trenches MUST:
  - a. Be initially inspected and approved for entering by a competent person regardless of depth.
  - b. Have the soil classified by a competent person as either Type "A", "B", or "C" based upon one visual and one manual test if depth equals or exceeds state or federal requirements.
  - c. The competent person shall perform a documented daily inspections if depth equals or exceeds State or Federal requirements and after every rainstorm or other hazardous occurrence.
  - d. Be sloped, benched or have a shoring system to protect employees if depth equals or exceeds state or federal requirements.



- e. Be delineated and/or barricaded as determined necessary. When the depth of the trench is 10 feet or greater, delineation shall be erected a minimum setback of 10 feet, from the top edge of the excavation, or equal to the depth of the trench up to a maximum of 15 feet. Whenever possible, warning lines shall be erected back 15 feet.
  - f. Ensure that the protective system or method being used has been designed by a licensed Professional Engineer, when used at a depth that equals or exceeds (20) twenty feet.
  - g. "Special Note" when in doubt about soil conditions, shoring methods, or other hazardous conditions, call on a registered Professional Soils Engineer to support your decisions and methods.
  - h. Have barricades, stop logs, or signals used when mobile equipment is operated nearby. Keep material and equipment from falling into the trench.
8. All underground utilities, i.e. sewer, water, telephone, fuel, optic cables and electricity lines must be located and the utility companies advised of work before actual excavation begins.
9. If there is evidence of a situation that could result in a possible cave-in, indications of failure of protective systems, hazardous atmospheres, or other hazardous conditions, employees shall be removed from the area until the cause has been determined and the situation has been corrected.
10. Water will not be allowed to accumulate in the trench. Dewatering systems must adequately protect excavations with accumulated water. Special support or shield systems may also be required.
11. Materials, superimposed loads, including spoils piles, shall remain at least (2) two feet from the edge of the excavation.
12. There must be a top person for all trenches over four feet in depth.
13. There must be a means of access/egress within 25 feet laterally of the employees (ladder, stairway or ramp). Equipment is not considered to be access/egress and shall not be used for raising or lowering personnel.

## **SITE CLEARING & CHAIN SAW USE**

1. All tools and equipment will be in good repair. Every employee operating a power saw (chain saw) must wear proper leg protection, a hard hat, eye, face and hearing protection.
2. Clearing crews shall not be placed immediately below other crews working on hillsides where there is a possible danger of skidding or rolling trees, moving earth or rock. Utilized proper fall protection equipment as necessary. All other employees must remain at least two tree heights away from any falling operations.
3. Use and maintain chain saws in strict accordance with the manufactures specifications and Company policy. Ensure proper PPE is utilized when using chain saws. Proper PPE use includes; properly rated chaps, hearing protection, boots, hardhat, safety glasses and face shield.
4. No tree shall be felled toward and within range of traveled roads or railroads in use, unless a flagger or spotter is placed on or near such road or railroad to warn all approaching persons or to stop vehicles.
5. Be cautious and evaluate the work area as site clearing proceeds, to identify any unforeseen hazards such as steep slopes, bio hazards, projection hazards, loose overhead limbs, unstable ground or any other potential hazards. Plan accordingly to execute work operations safely.

## **FALL PROTECTION**

### **POLICIES**

1. Falls are one of the leading causes of occupational fatalities in the workplace. The Company is committed to protecting its workers from this type of hazard by following these company practices, policies, and procedures.
2. All applicable employees will be familiar with the site-specific fall protection plans policies, methods, and equipment that will be used on each project.
3. Employees must use one or more fall protection systems when exposed to heights that meet or exceed OSHA and The Company safety regulations.
4. The Company employees will be issued approved fall protection equipment and will be instructed in how to use, inspect, store and maintain that equipment.

5. Before commencing work on a new project, the Project Team may be required to complete a written fall protection work plan. The written plan and documentation of employee training will be maintained at the jobsite until project completion.
6. If an employee falls in a harness/lanyard system, the equipment must be destroyed immediately and the anchorage point shall be inspected by a competent person before it is used again.
7. The jobsite Superintendent and Foreman are to continuously monitor/inspect the jobsite for possible fall hazards and to enforce fall protection policies. Employees will be disciplined, up to and including termination, for failure to follow the specifications set forth in the project site specific fall protection work plan.
8. Fall protection equipment is made to protect you from harm or even death. The employee who uses the fall protection equipment is responsible for its care, storage, and return at end of the project.

NOTE: Subcontractors for The Company whose scope of work puts them under state or federal fall protection regulations are required to submit their written, site-specific fall protection plan before commencing work. This plan must, at a minimum, meet applicable state/federal/ Company fall protection regulations.

## DEFINITIONS

**Fall Restraint** -- Equipment used to keep a person from reaching the fall hazard.

- Guardrails.
- Harness/Approved equivalent means of attachment to anchor point.
- Warning line system and safety monitor.

**Fall Arrest** – A fall protection system that will arrest a fall from an elevation. Listed below are a few types of equipment used to protect a person from falling or from striking a lower object.

- Full body harness/lanyard/self-retracting lifeline
- Safety nets
- Catch platforms

**Anchorage Point** -- The anchorage point 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.

## **PLANNING**

A site specific fall protection work plan shall be completed when employees will be exposed to heights of 10 feet or more. The purpose of a fall protection work plan is to review the operations that require employees to be in areas that have fall hazards greater than 10 feet.

Planning requires first to Identify, then determine the type of fall protection methods that will be used for each operation, and ensure employees are trained in those methods, including the use and inspection of equipment.

## **FALL PROTECTION REQUIREMENTS**

Fall protection may be required at any height. Approved fall protection equipment or devices shall be used by all employees working where there may be a potential of falling at any height. At a minimum, fall protection is required under the following conditions:

1. Working on a walking/working surface or platform - 4 feet
2. Form work or reinforcing steel - 4 feet
3. Telescopic, articulating, or rotating type aerial lifts - At all times
4. Working from a crane-suspended work platform - At all times
5. Raising or lowering into a confined space - At all times
6. Engaged in excavation & trenching operations – is required at 10ft or greater for persons not directly involved in the excavation process and for employees on protective systems or any other structure in the excavation.

## **GUARDRAILS SYSTEMS**

Guardrail systems shall be constructed to meet the following:

1. Top height of rail 42 in +/- 3 in
2. Midrail height 21 in +/- 3 in (must split the difference)

3. There shall be no opening in the guardrail system that allows for more than 19 inches.
4. Guardrail systems shall be capable of withstanding without failure, a force of at least 200 pounds applied in any outward or downward direction at any point along the top rail.
5. Midrails shall be capable of withstanding 150 pounds applied in the same fashion as mentioned above.

#### **Wood rails**

1. Posts or stanchions shall be spaced not more than 8 feet apart.
2. All splices shall develop full strength.
3. All rails shall be smooth and not overhang posts on the end.
4. Never tie off fall protection equipment to a wood rail or post.

#### **Wire rope rails**

1. Posts shall not be spaced more than 8 feet apart.
2. Wire rope that is spliced must have "eye to eye" splices, not overlap splices. Each splice must have the proper number of wire rope clips and be installed per the manufacturer's recommendations.
3. All ends of wire rope must be taped or wired to prevent "poke" type injuries.
4. Do not tie off to a wire rope rail unless it has been designed as part of a fall arrest system.
5. Wire rope railings must be stretched tight and shall be between 39" & 45" at all heights.
6. All wire rope railings must have flagging placed on the top rail every 6 feet.

#### **Other types of rails:**

1. Other types of rails are acceptable provided the posts are properly spaced and they will support a 200-pound load.

## **FALL ARREST**

2. Personal fall arrest systems shall be designed to limit maximum arresting force on an employee to 1,800 pounds (only body harness is allowed). The system shall be rigged such that an employee can neither fall more than 6 feet, nor contact any lower level. The maximum deceleration distance an employee travels shall be limited to 3.5 feet and have sufficient strength to withstand twice the potential impact energy of an employee free falling a distance of 6 feet.
3. Personal fall arrest systems include, but are not limited to full body harness and shock absorbing lanyards.
4. Personal fall arrest systems and components which have been subjected to impact loading shall be immediately removed from service.
5. Personal fall arrest systems shall be inspected for wear or damage prior to each use.
6. Personal fall arrest systems shall not be attached to guardrail systems, nor shall they be attached to hoists, unless specified.
7. The attachment point of the body harness shall be located in the center of the wearer's back near shoulder level, or above the wearer's head.
8. D-rings and snaphooks shall have a minimum tensile strength of 5,000 pounds.
9. Only locking type snaphooks will be used.
10. Lanyards and vertical lifelines shall have a minimum breaking strength of 5,000 pounds.
11. Self-retracting lifelines and lanyards, which automatically limit free fall distance to 2 feet or less, shall be capable of sustaining a minimum tensile load of 3,000 pounds.
12. Snaphooks shall not be connected to loops made in webbing type lanyards, or connected to each other.
13. Horizontal lifelines shall have a tensile strength capable of supporting a fall impact load of at least 5,000 pounds per employee using the lifeline.
14. As part of a complete personal fall arrest system which maintains a safety factor of at least two, and under the supervision of a qualified person.

## **FALL RESTRAINT**

1. A fall restraint should always be your first choice when designing a fall protection system. A fall restraint system never allows an individual to reach the fall hazard.
2. A full body harness must be worn.
3. The anchorage point must be able to support a minimum of 4 times the intended weight (body weight plus tools).
4. The restraint lines must have a tensile strength of 5,000 pounds.
5. Guardrails are considered fall restraint.

## **CATCH PLATFORMS**

Catch platforms must be placed less than 4 feet below the fall hazard, and must be equipped with standard guardrails and toeboards. They shall be as wide as the fall distance, i.e., for a 4 foot fall, the platform must be 4 feet wide, however, the minimum width for a catch platform is always 45 inches. It is recommended that the maximum fall distance is always less than 2 feet.

## **HOLE COVERS**

1. Covers for holes in floors, roofs, and other walking/working surfaces shall meet the following requirements:
2. Covers located in roadways and vehicular aisles shall be capable of supporting at least twice the maximum load of the largest vehicle expected to cross over the cover. All other covers shall be capable of supporting at least 1,000 pounds.
3. The cover shall be marked with "Hole" or "Cover" in legible writing and shall be secured against displacement.

## **WARNING LINE SYSTEMS**

The following is applicable to the warning line system:

1. Warning lines shall be erected around all sides of an area that presents a fall hazard.
2. Warning lines shall also be used to delineate or protect the swing radius of mechanized equipment when practical.

3. The warning line shall be erected not less than 15 feet from the fall edge.
4. Warning lines shall consist of ropes, wires, or chains (with a tensile strength of 500 pounds) and supporting stands (stanchions).
5. The lowest point is no less than 36 inches from the walking/working surface and its highest point is no more than 45 inches.
6. The warning line system shall be able to withstand, without tipping, 16 pounds of force in any direction.
7. Employees who are not directly involved or are not designated personnel in the excavation operation, shall not be allowed in the area between an excavation edge and a warning line called controlled access zone.

## **CONTROLLED ACCESS ZONES & SAFETY MONITOR USE**

The use of Safety Monitors or Employees working within 15' of a leading edge without fall protection is **not** allowed.

## **FALLING OBJECTS PROTECTION**

When an employee is exposed to falling objects, hardhats are required in addition to one of the following measures:

1. Erect toeboards, screens, or guardrail systems to prevent objects from falling from higher levels.
2. Toeboards shall be erected along the edge of the overhead walking/working surface for a distance sufficient to protect employees below.
3. Toeboards shall be capable of withstanding a force of at least 50 pounds applied in any downward or outward direction at any point along the toeboard.
4. Toeboards shall be a minimum of 3 1/2 inches in vertical height and shall not have more than 1/4 inch clearance above the walking/working surface. They shall be solid with no opening over 1 inch in dimension.
5. Erect a canopy structure and keep potential fall objects far enough from the edge of the higher level so that those objects would not go over the edge if they were accidentally displaced.



## **TRAINING**

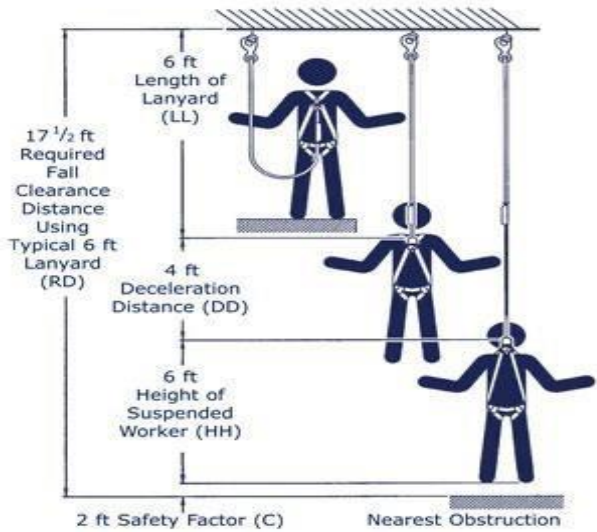
Each employee must be trained in the recognition of fall protection hazards and the methods used to protect them from falls. They must be specifically trained in fall protection used for their operation.

### **TRAINING TOPICS**

1. Identifying all fall hazards in the work area.
2. Description of the method of fall arrest or fall restraint systems that will be provided.
3. Description of the correct procedures for the assembly, maintenance, inspection, and disassembly of the protection system to be used.
4. Description of the correct procedures for the handling, storage, and securing of tools and materials.
5. Description of the method of providing overhead protection for workers who may be in, or pass through the area below the work site.
6. Description of the procedures for prompt, safe removal of injured workers working at upper levels.

### **RETRAINING MAY BE NECESSARY**

1. Different types of fall protection systems or equipment to be used render previous training obsolete.
2. Changes in the workplace conditions render previous training obsolete.
3. Inadequacies in an employee's knowledge or use of fall protection systems or equipment indicate that the employee has not retained the required understanding or skill.



## FIRE PROTECTION & PREVENTION

Fire prevention is of special importance during construction. There are considerably more hazards present during construction than will be present in the completed facility. Constant attention to the fundamentals of fire prevention is vital.

1. Fire extinguishers will be supplied at the jobsite according to the hazard present:
  - Class A - Ordinary combustibles: wood, coal, paper.
  - Class B - Flammable liquids: petroleum products, solvents.
  - Class C - Electrical: fuse boxes, computers.
2. A fire extinguisher, rated not less than 20 lbs. ABC, shall be provided for each 3,000 square feet of combustible building area.
3. Travel distance from any point of the protected area to the nearest fire extinguisher shall not exceed a horizontal distance of 100 feet.
4. One or more fire extinguisher, rated not less than 20 lbs. ABC, shall be provided on each floor in multi-story buildings. At least one fire extinguisher shall be located adjacent to a stairway.
5. Portable fire extinguishers shall be inspected monthly and properly maintained.

## **HOUSEKEEPING**

1. Avoid accumulation of flammable rubbish and waste materials.
2. Remove trash from inside buildings and away from buildings whenever the accumulation of materials is sufficient to constitute a fire hazard.
3. Under no circumstances is wood sawdust or shavings to be used as an absorbent for spilled flammable liquids or petroleum lubricants.
4. Burning of rubbish is prohibited.
5. Store oily rags in approved, covered metal containers.
6. No open fires.
7. Fire drills shall be held when necessary.

## **GASOLINE POWERED EQUIPMENT**

1. All gasoline-powered equipment will be refueled outside and well away from structures, with engines shut off. Gasoline powered equipment is not allowed on building roofs.
2. Gasoline powered equipment such as air compressors, hoists, pumps, etc. will be located so that exhausts are well away from combustible material.
3. All fuel cans on site must be approved "safety cans" with self-closing, pressure relief valves.
4. No more than 25 gallons of a flammable liquid shall be stored inside any building.
5. Gasoline or other flammable liquids will not be used for cleaning.
6. Electrical or air driven equipment instead of gasoline powered equipment will be used underground, under buildings, in tunnels or on building roofs.
7. Plastic fuel can use is strictly prohibited per Company and state regulations.

## **HEATING DEVICES**

1. Open flame devices, sources of heat, and spark-producing equipment will not be used in areas around flammable materials.

2. All open flame devices and furnaces used in construction work will have an attendant unless equipped with combustion safety controls.
3. All empty propane, acetylene, oxygen and butane tanks will be identified, stored and secured in an upright position in an approved area.

## **WELDING**

1. All welding operations will have an approved fire extinguisher at the site, maintained in a state of readiness for instant use. A hot work permit may need to be completed prior to the commencement of any welding work. Check with your Supervisor.
2. No welding or open flame devices will be operated within 50' of any spray painting or use of any substance that produces flammable vapors.
3. All combustible materials that cannot be moved a safe distance from welding operations will be covered with approved, non-combustible (non-asbestos) blankets or non-combustible rigid barriers for protection from sparks.

## **FLAMMABLE LIQUIDS**

1. All flammable liquids, chemical fuels, resins, lubricants and solvents will be segregated, labeled and stored in safety cans or approved containers, in an approved location. Non-compatible materials will not be stored in the same area.
2. Flammable liquid containers will be kept covered at all times when not in use.
3. Flammable liquids will not be stored in the work area except in a quantity needed to accomplish the job.
4. Flammable paint or solvent rags and any material subject to spontaneous combustion will be disposed of in covered metal containers.

## **ELECTRICAL EQUIPMENT**

1. Use of frayed and worn extension cords is not permitted.
2. Overloading of extension cords and electrical receptacles is not permitted.

3. Temporary wiring will be protected from mechanical damage by cranes, shovels, trucks and other equipment.
4. All electrical equipment used in hazardous environments will be approved and/or listed for use in the environment (e.g., explosion proof).

## **ACCESS AND EGRESS**

1. Access to buildings will be maintained at all times, day or night, for fire apparatus or ambulance. A bridge will be provided, where necessary, over ditches, openings in earth, piles or storage areas.
2. Exit routes for personnel will be maintained at all times.

## **EMERGENCY TELEPHONE NUMBERS**

The local facility's emergency telephone number will be prominently displayed on the construction site and near the telephone.



## **FORKLIFT SAFETY**

### **GENERAL**

1. Forklifts shall be operated in strict accordance to the manufactures specifications and Washington Administrative Code (WAC).
2. Only qualified authorized personnel will operate forklifts.

3. Seat belts must be worn at all times when forklift is in use.
4. Forks must be spread as far apart as possible and the load checked for stability before being moved.
5. Look in the direction of travel before and during moving. Be especially cautious of overhead obstructions.
6. Back down grades when carrying a load.
7. Passengers may ride a forklift only if a seat and seat belt are provided.
8. Forks will never be used as an elevator or a work platform.
9. Forks will be lowered completely prior to leaving the machine.

## **OPERATOR TRAINING**

Each Operator must demonstrate knowledge of the forklift prior to operation. The Company will designate one individual to administer the training to all individuals that will operate the forklift. The assigned individual shall have the knowledge, training, and the experience and have the ability to evaluate a student's competence with the forklift. At a minimum, an Operator evaluation shall occur every 3 years.

The initial training consists of a combination of:

- Formalized instruction
- Practical training
- Evaluation of the Operators performance

## **RECORDKEEPING**

Each individual who successfully passes the forklift training will sign and date a training form that will be kept on file in the safety department.

## **HAZARD COMMUNICATION**

### **INTRODUCTION**

Northwest Construction has developed a hazard communication program fully compliant with the Global Harmonization Standard (GHS) to enhance our employees' health and safety. We

intend to provide information about chemical hazards and the control of hazards via our comprehensive hazard communication program, which includes container labeling, Safety Data Sheets (SDS) and employee training.

Project management will ensure that all hazardous chemical intended for use at each of our job sites are identified. This involves a review of the container labels and Safety Data Sheets to determine which products are hazardous and need to be included on our program.

The following program outlines how we will accomplish this plan:

## **1. CONTAINER LABELING:**

- a. It is the policy of this company that no container of hazardous chemicals will be released for use until the following label information is verified:
- b. Containers are clearly labeled with a harmonized signal word, pictogram, and hazard statement for each hazard class and category. Precautionary statements must also be provided.
- c. The name and address of the manufacturers are listed.
- d. To further ensure that employees are aware of the chemical hazards of materials used in their work areas is our policy to label all secondary containers. Secondary containers will be labeled with an extra copy of the original manufacturer's label.
- e. This responsibility has been assigned to foremen, project superintendent, project manager, and the company safety coordinator. The responsibility will be assigned as follows:
  - i. Foremen
    1. No chemicals or hazardous materials will be received onsite without proper labels. Our onsite foreman is responsible to ensure this happens.
  - ii. Project Superintendent
    1. Shall check all chemicals or hazardous materials on his/her job site and be sure they are properly marked, have the appropriate SDS sheets and an inventory list of all chemicals posted at job site. Foremen and Superintendents shall request SDS sheets on all chemicals or hazardous materials he/she orders for the job, and will assist.

## **2. SAFETY DATA SHEETS (SDS)**

- a. Safety Data Sheets (MSDS) are informational bulletins supplied by chemical manufacturers or distributors. Copies of SDS's for all hazardous chemicals to which employees may be exposed are kept in all job offices or superintendents company vehicle.
- b. The SDS's will be available at the job site for the employee's use and review, unless our employees must travel between workplaces during a work shift, then the SDS's will be kept at our central office location. In this situation, the SDS's information will be available to the employees immediately by telephone or radio in the event of an emergency. (NOTE: This would apply when employees' work is carried out at more than one geographical location).
- c. SDS's are available to all employees for review. If SDS's are not available or new chemicals in use do not have SDS's, please immediately contact the company Safety Manager.

### **3. EMPLOYEE TRAINING AND INFORMATION**

- a. Employees are to attend a health and safety orientation for initial Hazard Communication Training. New employees are to be oriented prior to starting work.

The training will be on the following:

- An overview of the hazard Communication requirements.
- Location and availability of our written hazard program and Safety Data Sheets.
- Physical and health effects of the hazardous chemicals.
- Methods and observation techniques used to determine the presence or release of hazardous chemicals in the work area.
- How to lessen or prevent exposure to these hazardous chemical through usage of controlling work practices and personal protective equipment.
- Steps the company has taken to lessen or prevent exposure to these chemicals.
- Emergency procedures to follow if our employees are exposed to these chemicals.
- How to read labels and review SDS's to obtain appropriate hazard information.

NOTE: It is critically important that all of our employees understand the training. If you have any additional questions, please contact the Safety Manager.

- b. When new chemicals are introduced, the job superintendent will review the above items as they are related to the new material in your work area safety



meeting, and make sure the chemical/hazardous material is properly marked and an SDS is on site.

#### **4. HAZARDOUS NON-ROUTINE TASKS**

- a. Periodically, employees are required to handle chemicals for hazardous non-routine tasks. Prior to starting work on such projects, each affected employee will be given information by their supervisor about hazards to which they may be exposed during such an activity.
- b. This information will include:
  - Specific chemical hazards
  - Safety measures which, must be utilized.
  - Measures the company has taken to lessen the hazards, including ventilation, respirators, presence of another employee and emergency procedures.

#### **5. INFORMING OTHER CONTRACTORS**

- a. To ensure that other contractor's employees have access to the SDS's for the hazardous chemicals or products used at multi-employer job sites, it is the responsibility of the project manager/superintendent to provide the contractors the following information:
  - i. The name and location of the hazardous chemicals to which they may be exposed while on the jobsite. Any recommendations or appropriate protective measure to be taken by the other contractor's employees.

NOTE: The specific methods a construction employer uses to inform other contractors at the same jobsite, is not prescribed by the rules. It is important that the prime and subcontractors arrange specific procedures to inform one another about their hazard communications programs. The methods should be designed to fit the type of jobsite operations being conducted

Northwest Construction requires that this policy be addressed at construction meetings, meetings, and weekly job meetings or at any time the coordination of safety is needed between the different parties involved in the job..

#### **6. PROGRAM EFFECTIVENESS**

- a. If anyone has questions about this plan, please contact the company Safety Coordinator.  
Our plan will be monitored by the Safety Manager to ensure that the policies are carried out and that the plan is effective. When necessary, the program will be changed to correct any program deficiencies.

## **LADDER & STAIRWAY SAFETY.**

A safe means of access to all work areas and ladder safety training shall be provided to all employees. These access ways shall consist of ladders, stairways, man lifts, and other approved methods of access, and shall not be blocked by materials or debris. All ladders shall be used in strict accordance with the manufactures safe use guidelines.

### **GENERAL**

1. Inspect before use for physical defects.
2. Ladders are not to be painted except for identification purposes.
3. Do not use ladders for skid, braces, workbenches, or any purpose other than climbing.
4. When you are ascending or descending a ladder, do not carry objects that will prevent you from grasping the ladder with both hands.
5. Always face the ladder when ascending or descending.
6. If you must place a ladder over a doorway, barricade the door to prevent its use and post a warning sign.
7. Only one (1) person is allowed on a ladder at any time.
8. Always keep both feet on the ladder rungs. Do not step laterally from a ladder onto another object.
9. The area around the top and base of ladders must be free of tripping hazards.
10. Do not jump from a ladder when descending.
11. All joints between steps, rungs and slide rails shall be tight.
12. Safety feet shall be in good working order and in place.
13. Rungs shall be free of grease and/or oil.
14. Broken or damaged ladders are not to be used. It is your responsibility to place a "Do Not Use" tag on any broken or damaged ladder and to inform your Supervisor.
15. Wooden ladders are not to be painted with an opaque finish.

16. Metal ladders are not to be used for electrical work or in areas where they could contact energized wiring.

## **EXTENSION LADDERS**

1. All straight or extension ladders must be at least three (3) feet beyond the supporting object when used as an access to an elevated work area.
2. The base of the ladder must be set back a safe distance from the vertical - approximately 1/4 of the working length of the ladder.
3. After raising the extension portion of a two or more stage ladder to the desired height, check to insure that the safety dogs or latches are engaged.
4. All extensions or straight ladders must be secured or tied off at the top.

## **STEPLADDERS**

1. Stepladders must be fully opened with the spreader locked.
2. Do not stand on the top step of the ladder or the top of the ladder.
3. Do not 'walk' the ladder if effort to reposition at any time.

## **JOB-MADE LADDERS**

1. Job-made ladders shall be fabricated in compliance with appropriate ANSI and DOSH standards. Utilized the specifications set forth in the WAC or contact your Supervisor for further instruction with fabricating a job-made ladder.
2. The general rules apply to the use of manufactured ladders, also apply to the use of job-made ladders but may vary. Review the requirements set forth in the WAC to ensure proper construction of all job built ladders.

## **STAIRWAYS**

1. A stairway or ladder shall be provided at all personnel points of access where there is a break in elevation of 18 inches or more, and no ramp, runway, sloped embankment, or personnel hoist is provided.

2. Stairs are to be installed between 30 deg. and 50 deg. from horizontal.
3. Stairways with four or more risers or rising more than 30 inches, whichever is less, will have at least one handrail and one stair rail system along each unprotected side.
4. Be sure all handrails are free of sharp edges or nails and can support a minimum of 200 lbs.
5. Keep the stairway free of tools and/or other debris at all times.
6. A building having one or more points of access between levels, must keep at least one point of access clear at all times.
7. Ladderway floor openings or platforms must be guarded by standard railings with standard toe boards on all exposed sides, except at an entrance opening, with the passage through the railing either provided with a swinging gate or offset so that a person cannot walk directly into the opening.
8. Riser height and tread depth must be uniform and full.
9. Stairs must be in place before upper level stud walls go up.

## **STAIRRAILS & HANDRAILS**

The following requirements apply to all stairways as indicated:

1. Stairways having four or more risers or rising more than 30 inches whichever is less, shall be equipped with:
  - a. At least one handrail; and
  - b. One stair rail system along each unprotected side or edge.
2. Winding and spiral stairways shall be equipped with a handrail offset sufficiently to prevent walking on those portions of the stairways where the tread width is less than 6 inches.
3. The height of stair rails shall be as follows:
  - a. Stair rails installed after the effective date of this standard, shall be not less than 36 inches from the upper surface of the stair rail system to the surface of the tread, in line with the face of the riser at the forward edge of the tread.

## **WORKING WITH LASERS**

LASER is an acronym which stands for Light Amplification by Stimulated Emission of Radiation. The laser produces an intense, highly directional beam of light. The most common cause of laser-induced tissue damage is thermal in nature, where the tissue proteins are denatured due to the temperature rise following absorption of laser energy.

The human body is vulnerable to the output of certain lasers, and under certain circumstances, exposure can result in damage to the eye and skin. Research relating to injury thresholds of the eye and skin has been carried out in order to understand the biological hazards of laser radiation. It is now widely accepted that the human eye is almost always more vulnerable to injury than human skin.

### **GENERAL**

Only qualified and trained personnel for each class of laser shall be assigned to install, adjust and operate laser equipment.

1. Personnel shall wear proper eye protection where there is a potential of exposure to laser light greater than .005 watts.
2. Lasers shall be located and targeted at levels above the employees' sight, when possible.
3. Beam shutters or caps shall be utilized, or the laser turned off, when laser transmission is not actually required.
4. When the laser is left unattended for a substantial period of time, such as during lunch, overnight, or at changes of shifts, the laser shall be turned off.
5. Signs warning all personnel of laser hazards shall be posted in the area(s) where
6. lasers are being used.

### **LEAD POLICY**

It is the policy of The Company to avoid all contact with lead and lead related materials. When a suspected lead bearing material is encountered on any new construction or remodel project, stop work immediately and contact the general contractor or the Owner's Representative, identifying the material suspected.

It should be noted that in accordance with WAC, a "good faith survey" is required on all construction, renovation, maintenance, repair and demolition projects. Prior to involvement with any project, whether it is new construction, renovation or even a minor repair, the Owner's Representative should verify that the "good faith survey" has been completed. Questions about lead should be directed to your Supervisor.

## **GENERAL**

Lead is a highly toxic metal that's found in many common materials including old paints and primers, industrial paints and primers, car batteries, bullets, and electronics. Materials containing lead are often encountered during construction, maintenance, and manufacturing activities.

When lead is inhaled or ingested, it can poison the body causing serious damage to the blood-forming system, nervous, urinary, and reproductive systems.

## **DEFINITIONS**

1. Action Level – employee exposure, without the use of respirators, to an airborne lead concentration of a TWA = 30 ug/m<sup>3</sup> as measured over an 8 hr. time weighted average.
2. Permissible Exposure Limit (PEL) – 50 ug/m<sup>3</sup> as measured over an 8 hr. time weighted average.
3. Competent Person – one who is capable of identifying existing and predictable lead hazards, has authorization to take prompt corrective measures to eliminate them and has the experience and training relevant to lead hazards.

An initial exposure assessment that meets state and federal variance requirements shall be conducted for all employees that may be exposed to or work with lead.

## **JOB SITE PERSONNEL AWARENESS TRAINING**

In the event that lead is anticipated to be encountered during any construction activities, training will be provided to those employees per WAC specifications.

## **LOCKOUT / TAGOUT**

### **GENERAL**

This procedure establishes the minimum requirements for the lockout of energy isolating devices whenever maintenance or servicing is done on machines or equipment. It shall be used to ensure that the machine or equipment is stopped, isolated from all potentially hazardous energy sources and locked out before employees perform any servicing or maintenance where the unexpected energizing or start-up of the machine or equipment or release of stored energy could cause injury.

## **POLICY**

All employees are required to comply with the restrictions and limitations imposed upon them during the use of lockout. The authorized employees are required to perform the lockout in accordance with this procedure. All employees, upon observing a machine or piece of equipment which is lock out to perform servicing or maintenance shall not attempt to start, energize or use that machine or equipment.

## **DEFINITIONS**

**Qualified Person** - A person who is trained in lockout/tagout procedures, fully familiar with and authorized to operate all controls for the equipment or system involved.

Authorized Employee - A person who locks-out or tags- out machines or equipment.

**Affected Employee** - An employee who's required to operate, use, or be in the area where a machine or equipment could be locked or tagged out for service or maintenance.

**Lock-Out Device** - A device that utilizes a positive means such as a lock, key type, to hold an energy isolating device in a safe position and prevents the energizing of a machine or equipment. Included are blank flanges and bolted slip blinds.

## **TRAINING**

Specific annual training is required for each type of employee who is affected by this policy. Training records shall be maintained at the office. Untrained personnel are not allowed to perform LOTO.

## **APPLICATION**

These procedures are required for all activities in which the unexpected release or transmission of energy or a material could cause injury to employees or damage to equipment. This policy

applies to energy sources such as electrical, mechanical, hydraulic, pneumatic, chemical, radiation, thermal, compressed air, energy stored in springs, and potential energy from suspended parts (gravity).

1. Before beginning work on the machine or equipment notify all affected employees that servicing or maintenance is required and that the machine or equipment must be shut down and locked out to perform the servicing or maintenance.
2. Before de-energizing any equipment, machinery, or electrical equipment and applying a lockout/tagout procedure, written permission will be obtained from an authorized Owner/Client Representative specifying the date, inclusive items of lockout and specific equipment to be locked out.
3. An authorized signature and phone number are required prior to commencing the lockout/tagout procedure.

## **LOCKS**

All persons having the need to enter a locked out area or system will be issued as many locks as necessary to perform the expected tasks of the job. Locks will be identified with the individual's lock number and name. One key will be issued with each lock. The remaining keys will be forwarded to the Superintendent.

## **IDENTIFICATION OF LOCK-OUT POINTS**

A qualified person, Operator, or Supervisor who understands how to effectively control the equipment/process through application of hazard isolating devices will identify lock out points.

## **PLACEMENT OF LOCKS**

The Owner/Client must be notified and have given approval to lockout the system or equipment before attaching the locks to the isolating devices. A stop button or electrical interlock must never be used as a substitute for lockout/tagout.

It is the responsibility of each person working with the Lockout area to place his/her own lock on all lockout points. Use of another person's lock (i.e. working in the area under the security of another person's lock) is STRICTLY FORBIDDEN! During construction and prior to check out of



the system, the Supervisor in charge of the installation of equipment may attach a single lockout device.

When more than one employee is required to Lockout the same system or equipment, one lock with a tag identifying all employees on the crew shall be use. The crew Foreman shall sign the tag and be responsible for accounting for all crewmembers prior to removing locks and re-energizing the system. Crewmembers entering the area shall initial the lockout tag and prior to removing the tag shall re-initial the lockout tag.

If a job extends over a change in shifts, the person coming on the job shall put his/her lock on all the lockout points and the person leaving shall remove his/her locks.

## **REMOVAL OF LOCKS/RESTORING EQUIPMENT TO SERVICE**

When the servicing or maintenance is completed and the machine or equipment is ready to return to normal operating conditions, the following steps shall be taken:

1. Check the machine or equipment and the immediate area around the machine or equipment to ensure that nonessential items have been removed and the machine or equipment components are operationally intact.
2. Check the work area to ensure that all employees have been safely positioned or removed from the area.
3. Verify that the controls are in neutral.
4. Remove the lockout devices and re-energize the machine or equipment. The removal of some forms of blocking may require re-energizing of the machine before safe removal.
5. Notify affected employees that the servicing or maintenance is completed and the machine is ready for use.
6. If an employee who has finished a job leaves the work site without removing his/her lock, a Supervisor or, in his/her absence, the Project Superintendent may remove the lock using the following steps in the order shown:
  7. Determine whether the employee whose lock remains on the equipment has left the work site by checking his/her time card. If the employee has not left the site, he/she will be called back to complete the job and/or remove the lock.

8. If the employee has left the site, a reasonable attempt to reach him/her will be made to verify why the lock was not removed. The employee will be requested to return to the work site to remove his/her lock.
9. If the employee cannot be reached, a reasonable attempt to contact his/her Supervisor will be made to verify why the lock was not removed.
10. If the Supervisor cannot be contacted or does not know if the employee has finished the job, the equipment or system must be thoroughly inspected and determined to be safe for operation. An authorized Owner/Client representative must verify this. The lock may then be removed and the equipment or systems tested for operation. If the test is normal, the equipment will be turned over to regular operation.
11. The locks removed by a Supervisor will be retained and sent to the Superintendent, along with a brief report explaining why the removal was necessary, the time removed, and by whom.
12. If the equipment or system is of such a size that the Operator cannot see all potential hazard points, personnel shall be stationed at the points of access which are not visible to assure that no one enters an exposed area during start up.

## **ALTERNATIVE METHODS**

An alternative method of Lockout as provided by the state safety standards has been approved by the State Department of Labor and Industries. The lock-box method is available for use in specific applications. Requests to implement this method must be submitted to the Safety Representative for review by an authorized Owner/Client Representative. The Safety Representative must grant approval of each specific application and an authorized Company representative in writing before it is put into effect. The Safety Representative will maintain a list of approved "lock-box" application, which will be forwarded to departments and the Project Superintendent.

## **LOCK-BOX METHOD**

This alternative procedure is intended for situations that may involve numerous Lockout points, may involve a large number of employees, will take more than two shifts or may occur routinely.

1. Required lockout points for the job in question will be established by the qualified department Supervisor and listed on the Lockout list. A list of the lockout points will be

posted at the work site and on the lock box so that employees may physically verify the placement of department lock.

2. A qualified Supervisor and a qualified Operator will deactivate equipment, place locks and sign the list of lockout points, verifying that each and every lock is in place and that the key have been placed in the lock box.
3. The qualified Supervisor will then place his/her personal lock on the box.
4. Any employee on the job where the lock-box procedure is in use may opt to place his/her lock on the lock-box.
5. After lockout and prior to commencement of work, one or more of the following actions must be taken with the assistance of the qualified Operators and the lockout list signed verifying the startup attempt:
6. Operate the equipment/process controls (push buttons, switches, etc.) to verify that energy isolation has been accomplished. Controls must be deactivated or returned to the neutral mode after the test.
7. Check the equipment /process controls visually and/or by using test instrument.
8. All other aspects of the lockout procedure must be met.

## **MOTORIZED EQUIPMENT**

### **INTRODUCTION**

There are many types of mobile construction equipment in use by contractors today and all of them have the capacity to cause serious injury or death. We have congested construction sites, and there are many instances where foot traffic and mobile machines are working in the same area at the same time.

### **GENERAL REQUIREMENTS**

1. Only qualified individuals shall operate vehicles and mobile equipment. All Company personnel assigned a vehicle must:
  - a. Have a legal driver's license.
  - b. Not have any alcohol related citations.
  - c. Not have any reckless driving citations.

- d. Has received training on The Company's vehicle operating policies.
2. Do not ride in motorized vehicles or equipment unless a proper seat and seat belt is provided for and used by each rider. Riding in the bed of pick-up trucks is not allowed at any time!
3. Only authorized Company employees are allowed to operate Company vehicles. Other personnel must get written permission from the General Superintendent.
4. All drivers of Company vehicles/trailers shall ensure that they are being operated in strict accordance with state and federal highway safety standards. Contact your Supervisor with any questions regarding the current standards.
5. Never mount or dismount any vehicle or equipment:
  - a. While it is still in motion.
  - b. Without first shutting down the engine, setting the parking brake and securing the load.
6. It is the Operator's responsibility to maintain their vehicles in top condition, clean inside and out. Each Operator is responsible for the safe operation of his/her vehicle. Noted defects shall be reported for prompt repair.
7. Preventative maintenance shall be regularly scheduled for all vehicles to ensure their safe operating condition. All vehicles will be serviced and maintained every 3,000- 5,000 miles and/or according to manufacturer's specifications.
8. All service and maintenance performed on vehicles will be documented, with a copy of the work order sent to The Company's main office.
9. All major maintenance/service must be approved through the office and be performed by qualified personnel. If the vehicle is under factory warranty, it should be worked on by authorized factory dealers. Only in an emergency are you to use gas station repair. All major repairs should have two (2) or more estimates.
10. When bad visibility and other weather related conditions exist, allow more space to adjust for conditions.
11. When passing into oncoming traffic, allow sufficient room. Only execute this move if the pass is absolutely necessary.
12. Vehicles and mobile equipment shall not be operated at speeds greater than are reasonable and safe. The Operator must have the equipment under control at all times.

13. Trucks shall never be loaded beyond their rated capacities or in a manner that will obscure the driver's vision. All loads shall be securely fastened to prevent shifting or loss of material.
14. No vehicle shall be stopped, parked, or left on any road or in any location in such a manner as to endanger personnel or property. Vehicles shall not be left unattended unless the brakes have been set securely and the gears engaged.
15. Motor vehicles shall be fueled only by approved methods. Smoking or open flames are not permitted when fueling the vehicle.
16. All mobile construction equipment shall be equipped with a back-up alarm (exception: motor vehicles).
17. All occupants of motor vehicles shall wear seat belts.
18. All equipment shall be shut down during fueling.
19. All stationary fuel and oil storage tanks shall conform to fire department rules and regulations.
20. Coordinate the construction schedule among the various trades working around mobile equipment.
21. All project personnel must wear orange safety vests/shirts when heavy equipment is on site.
22. Seatbelts must be worn according to manufacture and OSHA requirements.
23. Establish and delineate adequate lay-down areas.
24. Establish controlled entry points onto the site and restrict entry of all non-essential personnel onto project property.
25. All equipment must be in safe working order and have back-up alarms.

## **EMPLOYEE TRAINING AND ORIENTATION**

1. All employees who are at risk must be orientated, such as:
  - a. Avoiding moving equipment.
  - b. Making eye contact with Equipment Operators.
  - c. The types and quantities of equipment on site.

- d. Understanding all signs, markers and flags.
  - e. Being alert to changing job conditions and to your particular situation.
  - f. Understanding and following all project safety rules.
2. Safety meetings need to be held as often as project conditions mandate. Circumstances change daily and weekly meetings may not be adequate.
  3. Remember that small machines have small blind spots; large machines have large blind spots. The taller and wider the machine, the bigger the blind spot.

## PRECONSTRUCTION

The project team will conduct a pre-construction work site analysis to identify all location(s) and types of hazards associated with heavy equipment could exist, including:

• Office, tool, storage, and break trailers	• Mechanical failure	• Fugitive Dust
• Access points	• Schedule	• Noise
• Haul roads	• Fencing & barricades	• Pedestrians
• Lay down / Storage areas	• Blind spot operations (i.e.: backing in to intersections, etc.)	• Other types of vehicles
• Excavations	• Fueling areas	• Steep or uneven terrain
• Above and underground utilities	• Weather conditions	• Time of day

## EQUIPMENT MAINTENANCE

1. All machines must be inspected daily before use by a competent person.
2. Back-up alarms, horn, lights, and mirrors must be in good working order.
3. Cab glass not cracked or broken.
4. Clean all windows and mirrors.
5. All deficiencies must be repaired immediately. Red tag equipment if necessary.

6. All equipment must be suspended, blocked or cribbed as necessary to prevent falling or shifting during maintenance or repair operations.
7. A hazardous response kit must be close to the maintenance operation in the event of an unplanned oil spill or other substance.
8. The equipment manufacturer must approve all shop-manufactured devices/attachments in writing before it is allowed to be used.

## **EQUIPMENT OPERATOR RESPONSIBILITIES**

1. Review manufacturer's operation manual for each specific type of equipment.
2. Operators must be qualified to operate the specific type of equipment by training or experience.
3. Conduct all required pre-use equipment inspections.
4. Wear seat belt and hard hat.
5. Know where ALL the equipment' blind spots are located. The most dangerous maneuver is backing up. Use a spotter if a blind spots exists.
6. Maintain safe operating speeds and keep the machine under control at all times.
7. Stop frequently at night to conduct walk around inspection of the machine.
8. STOP the machine immediately when signaled to do so or when waved at violently.
9. Be aware of other machines in your operating area.
10. Beware of hazards, such as underground utilities, excavations, overhead obstructions, and power lines.
11. Allow no riders on the machine unless it is specifically designed to do so.
12. Inform Supervisor of:
  - a. Abnormal and/or new jobsite conditions.
  - b. Defective equipment.
  - c. Alterations you made to the machine.
  - d. Any unsafe conditions or personnel.

- e. Needing a signalman when moving in or out of a building or structure.

## **HAULING OF MATERIALS AND EQUIPMENT**

1. Each Operator is responsible for the stability and security of his/her load. All materials must be properly and thoroughly secured to prevent movement.
2. Long loads extending (4) feet or more past bed of vehicle must e flagged.
3. Do not overload your vehicle.

## **TRAFFIC CONTROL AND FLAGGING**

### **GENERAL REQUIREMENTS**

1. Job site workers with specific traffic control responsibilities must be trained in traffic control techniques, device usage, and placement.
2. All highway work zone traffic control plans, procedures and devices must, at a minimum, meet the manual on uniform traffic control devices.
3. Signs and symbols required for accident prevention shall be visible at all times when work is being performed, and shall be removed or covered promptly when the hazards no longer exist.
4. Construction areas shall be posted with legible traffic signs at points of entry and all points of potential traffic hazards.
5. At times it may be required to contact the state, county or city for special constructed barricades, signage and other instructions.

### **FLAGGERS**

1. When operations are such that signs, signals and barricades do not provide the necessary protection on or adjacent to a highway or street, flagging personnel and other appropriate traffic controls shall be provided.



2. Flagging personnel are required to have training by an authorized person or agency. They MUST have in their personal possession a valid training certification card. All cards/training must be renewed every three years.
3. Flaggers shall not be assigned other duties while engaged in flagging activities.
4. Flaggers shall not use devices (for example, cell phones, pagers, radio headphone) that may distract their vision, hearing, or attention. Devices such as two-way radios used for communications between flaggers to direct traffic or ensure flagger safety are acceptable.
5. Flaggers shall receive appropriate breaks from flagging so they can remain attentive and alert. For the purpose of this rule, "appropriate break" means a rest period of at least 10 minutes, on the employer's time, for each 4 hours of working time.
  - a. Rest periods must be scheduled as near as possible to the midpoint of the work period.
  - b. A flagger must not be allowed to work more than three hours without a rest period.
  - c. Scheduled rest periods are not required where the nature of the work allows a flagger to take intermittent rest periods equivalent to 10 minutes for each 4 hours worked.
6. During darkness hours, flagger's stations shall be illuminated sufficiently so that oncoming traffic can see them easily.
7. Flagging personnel shall stand on the shoulder of the road next to the lane of traffic being controlled, NEVER on the road itself unless they are behind barricades.
8. All flaggers must wear a high visibility safety garment designed according to Class 2 specifications in ANSI/ISEA 107-1999, American national standard for high-visibility safety apparel. Specifically, a garment containing at least 775 square inches of background material and 201 square inches of reflective material that encircles the torso and is placed to provide 360 degrees visibility around the flagger. The acceptable high visibility colors are fluorescent yellow-green, fluorescent orange-red or fluorescent red.
  - a. The acceptable high visibility colors for hard hats are white, yellow, yellow-green, orange or red.
  - b. When snow or fog limits visibility, a flagger must wear pants of any high visibility color other than white.

9. When it is not possible to position flaggers so they are not exposed to traffic or equipment approaching them from behind, methods must be implemented to ensure that flaggers have adequate warning of such traffic approaching from behind. The following examples of methods that may be used to adequately warn flaggers:
  - a. Mount a mirror on the flagger's hardhat.
  - b. Use a motion detector with an audible warning.
  - c. Use a spotter.
  - d. Use "jersey" barriers.
10. Hand signaling by flaggers shall be by use of sign paddles at least 18 inches in diameter, and in periods of darkness, the paddles must be reflective, with 6 inch letters.
11. Flaggers shall be provided with and shall wear a high visibility outer garment while flagging, and a high visibility hard hat. Areas where flaggers stand at night must be illuminated.
12. Flaggers should be far enough ahead of the place where work is being conducted so motorists can slow down and stop safely.
13. Flaggers should always face the traffic that is being controlled, but they should also be in position to see what is going on at the worksite. They should have direct and continuous communication with the worksite by use of a two-way radio, telephone, or similar communication device.
14. All flaggers must have a valid flagging card. A valid card is one that is less than 3 years old.

## **TRAFFIC CONTROL PLAN**

When flaggers are used on a job that will last more than one day, a current site specific traffic control plan must be developed and kept on site at all times. The purpose of this plan is to help move traffic through or around the construction zone in a way that protects the safety of the traveling public, pedestrians and workers. The plan must include, but is not limited to, such items as the following when they are appropriate:

1. Sign use, sequencing and placement

2. Application and removal of pavement markings
3. Construction
4. Scheduling
5. Methods and devices for delineation and channelization
6. Placement and maintenance of devices
7. Placement of flaggers
8. Roadway lighting
9. Traffic regulations

## **ORIENTATION**

The flagger must receive an orientation that familiarizes them with the job site each time they are assigned to a new project or when job site conditions change significantly. The orientation must include, but is not limited to:

1. The flagger's role and location on the job site.
2. Site specific traffic control plan.
3. Methods to be used to warn them of unseen traffic.
4. Motor vehicle and equipment in operation at the site.
5. Job site traffic patterns.
6. Communications/signals to be used between flaggers and equipment operators.
7. On-foot escape route.
8. Other hazards specific to the job site.

## **PEDESTRIAN TRAFFIC**

Employees on foot who may be exposed to on-site vehicular traffic shall wear highly visible colored garments such as vests, jackets, or shirts. Typical colors are orange, strong yellow-green or fluorescent versions of these. During rainy weather, employees may wear orange,

strong yellow-green or yellow rainwear. When exposed to public vehicular traffic, employees shall wear reflective clothing, with reflective material added to the clothing meeting the definition of ANSI Class 2 apparel.

## **PERSONAL PROTECTIVE EQUIPMENT (PPE)**

The Company's employees shall be provided and are required to use the appropriate PPE whenever they could be exposed to safety and/or health hazards that they may encounter in a manner capable of causing injury or impairment to them through absorption, inhalation or physical contact. The hazards could originate from the environment, chemicals, radiological hazards, or mechanical irritants.

All employees must use the protective equipment needed for the job at hand. All PPE must be utilized as recommended or required by the manufacturer of the tool, equipment or product being used. Any employee who willfully refuses to use protective equipment designed to protect him or her or willfully damages such equipment shall be subject to disciplinary action.

All personal protective equipment must be used, properly designed and sufficiently constructed to provide the protection for which it is intended. All equipment must meet the appropriate ANSI/NIOSH/OSHA standards and regulations.

### **GENERAL REQUIREMENTS**

1. Hard hats are required in all areas throughout the length of the project.
2. It is each employee's responsibility to:
  - a. Maintain, inspect and store their PPE in a sanitary and reliable condition.
  - b. Immediately notify their Supervisor if their PPE is defective. No malfunctioning or broken PPE shall be used at any time.
3. The following PPE requirements must be followed by all employees:
  - a. ANSI rated Z87 eye protection with side shields must be worn at all times. Eye injuries can be prevented with proper eye protection.
  - b. Shirts with a minimum of 3" sleeves must be worn at all times.
  - c. Durable and undamaged work pants are required. No shorts.

- d. Sturdy work boots are required at all times.
  - e. Hearing protection is required according to The Company's hearing protection program.
  - f. Wear suitable gloves whenever the possibility of hand injuries exists. Be aware of pinch points, sharp edges, splinters and hot or cold material.
  - g. When required by OSHA, a certified harness, lanyard, anchorage point and other appropriate fall protection equipment must be used.
  - h. When exposed to public vehicular traffic personnel must wear ANSI rated Class 2 high visibility garments.
  - i. During daylight hours when duties are performed in close proximity to moving vehicles, employers must make sure that employees wear a high-visibility safety vest, shirt, or jacket that is fluorescent yellow-green, fluorescent orange-red or fluorescent red in color. This garment must always be worn as an outer garment.
4. Operable machine guards for saws, grinders, etc., must be used, maintained and inspected according to OSHA regulations and the manufacturer's requirements.
    - a. For welding and acetylene torching operations:
      - b. A welding hood is required to be worn for all welding operations, regardless of the length of weld.
      - c. Wear cutting goggles with the appropriate shaded lens when operating a cutting torch.
  5. Erect flash screens around welding and torching jobs whenever other workers are exposed

## **HEAD PROTECTION**

1. Hard hats shall be worn at all times in the construction area. This is to protect against possible head injury from impact, falling objects or electrical shock.
2. All head protection will reflect compliance ANSI Z89.1, "Safety Requirements for Industrial Head Protection".
3. Helmets for high voltage electrical shock protection will comply with ANSI Z89.2.

## **EYE AND FACE PROTECTION**

1. Safety glasses shall be worn at all times in the construction area when cutting, grinding, chipping or jackhammering is taking place. Other eye and face protective equipment will be utilized whenever it has been determined that a physical, chemical or radiation hazard exists.

2. All eye and face protection equipment will meet the standards of ANSI Z87.1.
3. Prescription glasses do not normally meet the ANSI standard.
4. When flying particles present a hazard to the face as well as to the eyes, a full-face shield is required.
5. Welding and cutting activities require the use of shaded lenses to suit the radiation generated.
6. Personnel in the immediate area will wear flash glasses when flash burn potential exists (welders or helpers working side by side).

## **FOOT PROTECTION**

1. Substantial footwear, made of leather or equally firm material, will be worn at all time in the construction area. This is to protect from injury to feet due to falling or moving objects, burning, cutting, abrasives, penetration, etc.
2. Canvas type tennis or running shoes are prohibited.
3. Open toe or heel sandals are prohibited.
4. Soles and heels will be of a material that will not create a slip or hazard.

## **CHAIN SAW SAFETY**

Use and maintain chain saws in strict accordance with the manufacture's specifications and company policy. Ensure proper PPE is utilized when using chain saws.

Proper chain saw PPE includes: properly rated chaps, adequate hearing protection, boots, hardhat, safety glasses and face shield.

## **RESPIRATORY PROTECTION PROGRAM**

### **GENERAL**

The Respiratory Program Administrator (RPA) for The Company is the Safety Director. This program is used in conjunction with the hazard communication section of this manual. Each jobsite shall review the Safety Data Sheet (SDS) of each air contaminant where respiratory protection may be required. Air sampling may be conducted to define personal exposures associated with potentially hazardous operations and continued air sampling shall be conducted if conditions change. Documentation of all air sampling shall be maintained at the jobsite, and available to all employees.

## **RESPIRATOR SELECTION**

The Supervisor or RPA is responsible to:

1. Identify and evaluate the respiratory hazard(s) in the workplace.
2. Assure the evaluation reasonably estimates employee exposures to respirator hazard(s) and identifies the contaminants' chemical state and physical form.
3. Where the Supervisor cannot identify or reasonably estimate the employee exposure, the atmosphere will be considered IDLH until further testing is accomplished by qualified personnel.
4. Select and provide the appropriate respirators.
5. Provide a respirator that is adequate to protect the health of the employee and ensure compliance with all other regulatory requirements for routine, non-routine, and reasonable foreseeable emergency and rescue situations.

## **IDLH ATMOSPHERES**

1. A full-face pressure demand SCBA or a combination full face piece pressure demand supplied-air respirator (SAR) with auxiliary self-contained air supply will be supplied.
2. Escape respirators will be NIOSH certified for escape from that atmosphere.
3. Oxygen-deficient atmospheres must be considered IDLH.
4. Standby employees are required.
5. Visual, voice, or signal line communication is required.
6. Emergency plan must be established.

7. Standby personnel must be equipped with a SCBA or supplied-air respirator,
8. retrieval equipment or equivalent means.

## **MEDICAL EVALUATIONS**

Each respirator wearer is required to complete a medical evaluation. Evaluations are issued with the Site Specific Safety Plan, and also found in the last pages of this section. Upon completion of the evaluation, the wearer must place in supplied self-addressed stamped envelope to be reviewed by the specified Physician or Other License Health Care Professional (PLHCP). The PLHCP will provide follow-up medical evaluation for any employee who gives a positive response to any questions of the questionnaire. Under no circumstance will any other employee of The Company, including the RPA, review a medical questionnaire. The PLHCP currently has a copy of this respiratory protection program.

THE RPA will provide the PLHCP the following information:

- Type and weight of the respirator.
- Duration and frequency of respirator use.
- Expected physical work effort.
- Additional PPE worn.
- Temperature and humidity extremes.

The PLHCP will provide a written recommendation regarding the employee's ability to use the respirator including:

- Any limitations.
- The need for any follow-up medical evaluations.
- A statement that he/she has provided the employee with a copy of the PLHCP's written recommendation.

## **FIT TESTING**

Fit testing must be administered using WISHA-accepted quantitative or qualitative protocol. Fit testing will be completed:

1. Prior to the initial use of the respirator, and for each respirator type.
2. Annually thereafter If any physical conditions change with the employee.



## **USE OF RESPIRATORS**

1. Facial hair that breaks the seal of a respirator is not permitted.
2. Respirators shall be NIOSH approved.
3. If it has been determined that respiratory protection is required, employees SHALL be required to wear them.
4. Employees shall be trained in the cleaning, inspection, and maintenance of respirators.
5. A user seal check shall be performed by all employees each time they put on a respirator.

Employees shall leave the respirator use area:

- To wash their faces and respirator face pieces as necessary.
- If they detect vapor or gas breakthrough, leakage, or a change in breathing resistance.
- To replace the filter or cartridge.
- If they experience severe discomfort, or experience dizziness, nausea, weakness, breathing difficulty, coughing, sneezing, vomiting, fever, or chills.

## **VOLUNTARY USE OF RESPIRATORS**

If it has been determined that no hazardous atmosphere exists, and the employee still chooses to wear a respirator, s/he can do as long as the respirator use will not in itself create a hazard in itself. A medical evaluation is still required, and it is the employee's responsibility to clean store, and maintain the respirator properly.

## **MAINTENANCE AND CARE**

1. Respirators that are supplied must be clean sanitary, and in good working order.
2. Assure respirators are cleaned and disinfected as established in the training.
3. Respirators must be stored in a sealed, plastic bag.
4. Respirators shall be inspected prior to each use.

## **TRAINING**

Training is mandatory for all respirator wearers and shall be provided prior to use, annually, or when changes at the jobsite occur. Employees must have the ability to demonstrate knowledge of maintenance, use, and care of respirators. Emergency situations will be addressed in the training.

## **RECORDKEEPING**

The following items are kept in The Company's main office by the RPA:

1. Proof of medical evaluations
2. Fit testing
3. Respirator program
4. Training records

## **SCAFFOLDING**

Scaffolding is a very important tool in the construction industry. Good judgment is imperative in the placement selection and grade of materials utilized in erecting scaffolding. Specific requirements on scaffolding are detailed in ANSI paragraphs and illustrations will aid in the selection and use of scaffolding. It is imperative that all scaffolding be used in strict accordance with manufactures specifications and the DOSH.

## **USER TRAINING**

The Company shall have each employee who performs work while on a scaffold trained by a person qualified in the subject matter to recognize the hazards associated with the type of scaffold being used and to understand the procedures to control or minimize those hazards. The training shall include the following areas, as applicable:

1. The nature of any electrical hazards, fall hazards and falling object hazards in the work area.
2. The correct procedure for dealing with electrical hazards and for erecting, maintaining, and disassembling the fall protection systems and falling object protection systems being used.
3. The proper use of the scaffold, and the proper handling of materials on the scaffold.
4. The maximum intended load and the load-carrying capacities of the scaffolds used.

5. Any other pertinent requirements from the manufacture or state and federal code.

## **ERECTOR TRAINING**

Each employee who is involved in erecting, disassembling, moving, operating, repairing, maintaining, or inspecting a scaffold shall be trained by a competent person to recognize any hazards associated with the work in question. The training shall include the following topics, as applicable:

1. The nature of scaffold hazards.
2. The correct procedures for erecting, disassembling, moving, operating, repairing, inspecting, and maintaining the type of scaffold in use.
3. The design criteria, maximum intended load-carrying capacity and intended use of the scaffold.

## **RETRAINING**

Retraining is required in the following situations:

1. Where changes at the jobsite present a hazard about which an employee has not been previously trained.
2. Where inadequacies in an affected employee's work involving scaffolds indicated that the employee has not retained the required proficiency.
3. If the employee lacks the skill or understanding needed for safe work involving the erection, use or dismantling of scaffolds.

## **GENERAL**

1. The footing of scaffolding must be sound and rigid, capable of supporting the weight. Unstable objects such as bricks or blocks shall not be used in the support.
2. Only competent persons shall erect, dismantle or move a scaffold.
3. Scaffolds and components shall be able to support at least four times the intended load.
4. Guardrails shall be 2" x 4" (or equivalent), 42" high with supports not to exceed 8'. Toeboards shall be 4" high.

5. Any components of a scaffold damaged or weakened from any cause shall be immediately repaired or replaced.
6. The maximum span for 2" x 12" planks shall be 8'.
7. All planking or platforms shall be overlapped a minimum of 12" and secured from movement.
8. An access ladder or other safe access shall be provided.
9. Scaffold planks extend over their end support at least 6' but not more than 12".
10. The legs or uprights of scaffolds shall be plumb and rigidly braced to prevent swaying.
11. Overhead protection shall be provided for men on a scaffold exposed to overhead hazards.
12. Wire or wire rope used for scaffold suspensions shall be capable of supporting six times the intended load,
13. Shore or lean-to scaffolds shall not be used.
14. Any elevated work presents a potential fall hazard therefore; it is essential that precautionary measures be thorough.
15. All working platforms must be capable of sustaining a minimum working load of 75 psf and have a safety factor of 4 to 1.
16. Post shall be plumb and scaffold platforms shall be level.
17. A stationary scaffold shall be secured to the building or a fixed structure vertically every 25 ft., starting at the base of the third section, and horizontally every 30 ft. This rule shall also apply to rolling scaffolds at their working stations. Outriggers may be used in lieu of tying off, or scaffolds may be clamped together so that the height does not exceed three times the smallest hose dimension without additional stabilization.
18. For the protection of those persons who are required to work or walk under scaffolding, a barricade or screen guard of No. 18 gage 1/2-in. wire mesh or equivalent shall be provided between the toeboard and handrail.
19. All workers shall tie off with a safety belt when there is no handrail, when there is open 18-in. in the working platform and when on suspended working platforms.

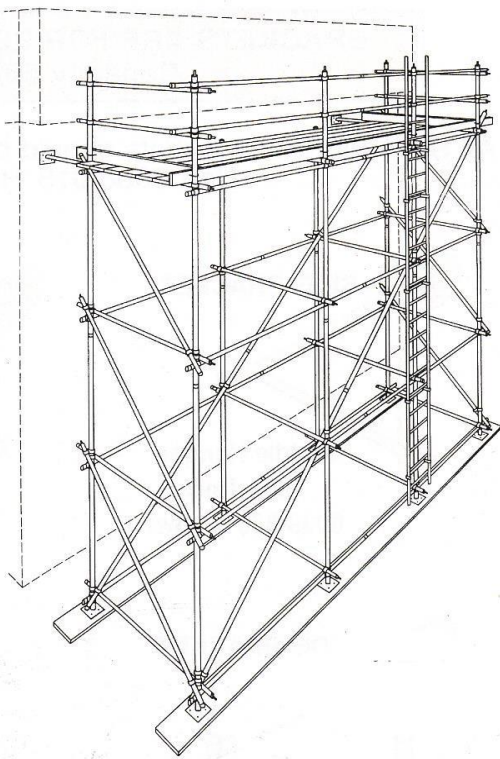
20. Swinging stages, floats, and Boatswain's chairs shall be tested before using.
21. Scaffold erection crews shall inspect all components for defects as the erection proceeds; any components found to be defective shall be set aside and tagged for repair or disposal.
22. Daily inspections shall be performed under the direction of competent supervision responsible for the work being performed. All defects shall be corrected at once.

## **SCAFFOLD ASSEMBLY AND DISASSEMBLY**

1. Keep both hands empty for secure handholds when moving about on scaffolds.
2. Pockets, pouches, and tool belts are to be used to carry the necessary tools for the work.
3. Scaffold members shall be hoisted or lowered with a hand line or passed from hand to hand. Throwing items up to co-workers or dropping them is not permitted.
4. Constant fall prevention measures shall be maintained. Provisions shall be established for using a safety belt and working on firm scaffold decks.
5. When scaffold ties to fixed structures or outriggers are to be used, they shall be made as soon as is prudently possible.
6. Attention to the coordination of this activity with surrounding operations and environment shall be given prior consideration.

## **ACCESSING SCAFFOLDS**

1. Do not carry objects in hands, but keep both hands empty for climbing handholds.
2. Step only on secured ladder or access rungs.
3. Do not use the toeboard as a handhold.
4. Pay attention to each step and handhold; most falls occur near the top of the ladder or near the bottom.
5. Inspection, attention, and stability are three keys to scaffold safety.



## **SIGNS, SIGNALS & BARRICADES**

### **GENERAL**

It is our responsibility to ensure safe and secure access and egress for all personnel on our projects, including visitors and pedestrians. Therefore, it's imperative we install proper signage, barricades, lighting and/or delineation in order to protect all project personnel.

1. All walking surface hazards must meet the current OSHA and/or UBC requirements.
2. All walking areas that could cause slip, trip and fall injuries must be repaired, barricaded or have applicable warning signs.
3. Loose floor covering(s) must be secured by glue, tape or similar material to prevent trips.
4. Any defective ground conditions that are to be used as public walkways must be repaired to as close to original condition as possible.

## **SAFETY SIGNAGE**

Signs, signals and barricades required for accident prevention shall be visible at all times when work is being performed, and shall be removed or covered promptly when the hazards no longer exist. They shall be in the appropriate language for the work force.

Use the following as guidelines:

1. Post "Danger" signs or tape at immediate, life threatening hazards.
2. Post "Caution" signs at areas warning against potential hazards and for unsafe areas and practices.
3. Post "Safety Instruction" signs and/or The Company safety banners as necessary, including signs requiring all personnel to wear hard hats and safety glasses.
4. Post "Construction Area – No Admittance", "NO TRESPASSING" or equivalent, around entire project perimeter and at all points of access onto the project. More signage is better than less.
5. Post "All Visitors Must Report to Office", or equivalent, at all points of project access.
6. Accident prevention tags shall be used as a temporary means of warning employees of an existing hazard, such as defective tools, equipment, etc.
7. Construction areas shall be posted with legible traffic signs at points far enough from the hazard to give the drivers proper warning.
8. All traffic control signs or devices used for protection of construction workers shall conform to ANSI D6.1-1988, manual on uniform.
9. Traffic control devices for streets and highways, as amended by Washington State Department of Transportation (WSDOT).
10. When operations are such that signs, signals and barricades do not provide the necessary protection on or adjacent to a highway or street, flaggers or other appropriate traffic controls shall be provided.

## **RESPIRABLE CRYSTALLINE SILICA PROGRAM**

### **PURPOSE**

This Respirable Crystalline Silica Program was developed to prevent employee exposure to hazardous levels of Respirable Crystalline Silica that could result through construction activities or nearby construction activities occurring on worksites. Respirable Crystalline Silica exposure

at hazardous levels can lead to lung cancer, silicosis, chronic obstructive pulmonary disease, and kidney disease. It is intended to meet the requirements of the Respirable Crystalline Silica Construction Standard (Chapter 296-840 WAC) established by the Labor And Industries (L&I).

All work involving chipping, cutting, drilling, grinding, or similar activities on materials containing Crystalline Silica can lead to the release of respirable-sized particles of Crystalline Silica (i.e. Respirable Crystalline Silica). Crystalline Silica is a basic component of soil, sand, granite and many other minerals. Quartz is the most common form of Crystalline Silica. Many materials found on constructions sites include Crystalline Silica; including but not limited to – cement, concrete, asphalt, pre-formed structures (inlets, pipe, etc.) and others. Consequently, this program has been developed to address and control these potential exposures to prevent our employees from experiencing the effects of occupational illnesses related to Respirable Crystalline Silica exposure.

## **SCOPE**

This Respirable Crystalline Silica Program applies to all employees who have the potential to be exposed to Respirable Crystalline Silica when covered by the L&I Standard. The L&I Respirable Crystalline Silica Construction Standard applies to all occupational exposures to Respirable Crystalline Silica in construction work, except where employee exposure will remain below 25 micrograms of Respirable Crystalline Silica per cubic meter of air (25 µg/m<sup>3</sup>) as an 8-hour time-weighted average (TWA) under any foreseeable conditions.

## **RESPONSIBILITIES**

Northwest Construction firmly believes protecting the health and safety of our employees is everyone's responsibility. This responsibility begins with upper management providing the necessary support to properly implement this program. However, all levels of the organization assume some level of responsibility for this program including the following positions.

### **Safety Department**

- Conduct job site assessments for Silica containing materials and perform employee Respirable Crystalline Silica hazard assessments in order to determine if an employee's exposure will be above 25 µg/m<sup>3</sup> as an 8-hour TWA under any foreseeable conditions
- Select and implement into the project's ECP the appropriate control measures in accordance with the Construction Tasks identified in OSHA's Construction Standard Table 1;



and potentially including (but not limited to) - a written Exposure Control Plan (ECP), exposure monitoring, Hazard Communication training, medical surveillance, housekeeping and others.

NOTE: OSHA's Construction Standard Table 1 is a list of 18 common construction tasks along with acceptable exposure control methods and work practices that limit exposure for those tasks.

- Ensure that the materials, tools, equipment, personal protective equipment (PPE), and other resources (such as worker training) required to fully implement and maintain this Respirable Crystalline Silica Program are in place and readily available if needed.
- Ensure that Project Managers, Competent Persons, and employees are educated in the hazards of Silica exposure and trained to work safely with Silica in accordance with L&I's Respirable Crystalline Silica Construction Standard and L&I's Hazard Communication Standard. Managers and Competent Persons may receive more advanced training than other employees.
- Maintain written records of training (for example, proper use of respirators), ECPs, inspections (for equipment, PPE, and work methods/practices), medical surveillance (under lock and key), respirator medical clearances (under lock and key) and fit-test results.
- Conduct an annual review (or more often if conditions change) of the effectiveness of this program and any active project ECP's that extend beyond a year. This includes a review of available dust control technologies to ensure these are selected and used when practical.
- Coordinate work with other employers and contractors to ensure a safe work environment relative to Silica exposure.

### **Project Superintendent**

- Ensure all applicable elements of this Respirable Crystalline Silica Program are implemented on the project including the selection of a Competent Person.
- Assist the Safety Department in conduct job site assessments for Silica containing materials and perform employee Respirable Crystalline Silica hazard assessments in order to determine if an ECP, exposure monitoring, and medical surveillance is necessary.
- Assist in the selection and implementation of the appropriate control measures in accordance with the Construction Tasks identified in OSHA's Construction Standard Table 1; and potentially including (but not limited to) - a written Exposure Control Plan (ECP), exposure monitoring, Hazard Communication training, medical surveillance, housekeeping and others.

- Ensure that employees using respirators have been properly trained, medically cleared, and fit-tested in accordance with the company's Respiratory Protection Program. This process will be documented.
- Ensure that work is conducted in a manner that minimizes and adequately controls the risk to workers and others. This includes ensuring that workers use appropriate engineering controls, work practices, and wear the necessary PPE.
- Where there is risk of exposure to Silica dust, verify employees are properly trained on the applicable contents of this program, the project-specific ECP, and the applicable L&I Standards (such as Hazard Communication). Ensure employees are provided appropriate PPE when conducting such work.

### **Competent Person (foreman)**

- Make frequent and regular inspections of job sites, materials, and equipment to implement the written ECP.
- Identify existing and foreseeable Respirable Crystalline Silica hazards in the workplace and take prompt corrective measures to eliminate or minimize them.
- Notify the Superintendent and the Safety Department of any deficiencies identified during inspections in order to coordinate and facilitate prompt corrective action.
- Assist the Superintendent and Safety Department in conducting job site assessments for Silica containing materials and perform employee Respirable Crystalline Silica hazard assessments in order to determine if an ECP, exposure monitoring, and medical surveillance is necessary.

### **Employees:**

- Follow recognized work procedures (such as the Construction Tasks identified in L&I's Construction Standard Table 1) as established in the project's ECP and this program.
- Use the assigned PPE in an effective and safe manner.
- Participate in Respirable Crystalline Silica exposure monitoring and the medical surveillance program.
- Report any unsafe conditions or acts to the Site Manager and/or Competent Person.
- Report any exposure incidents or any signs or symptoms of Silica illness.

## DEFINITIONS

If a definition is not listed in this section, please contact your supervisor. If your supervisor is unaware of what the term means, please contact the Competent Person or your Safety Department.

- Action Level means a concentration of airborne Respirable Crystalline Silica of 25  $\mu\text{g}/\text{m}^3$ , calculated as an 8-hour TWA.
- Competent Person means an individual who is capable of identifying existing and foreseeable Respirable Crystalline Silica hazards in the workplace and who has authorization to take prompt corrective measures to eliminate or minimize them.
- Employee Exposure means the exposure to airborne Respirable Crystalline Silica that would occur if the employee were not using a respirator.
- High-Efficiency Particulate Air (HEPA) Filter means a filter that is at least 99.97 percent efficient in removing monodispersed particles of 0.3 micrometers in diameter.
- Objective Data means information, such as air monitoring data from industry-wide surveys or calculations based on the composition of a substance, demonstrating employee exposure to Respirable Crystalline Silica associated with a particular product or material or a specific process, task, or activity. The data must reflect workplace conditions closely resembling or with a higher exposure potential than the processes, types of material, control methods, work practices, and environmental conditions in the employer's current operations.
- Permissible Exposure Limit (PEL) means the employer shall ensure that no employee is exposed to an airborne concentration of Respirable Crystalline Silica in excess of 50  $\mu\text{g}/\text{m}^3$ , calculated as an 8-hour TWA.
- Physician or Other Licensed Health Care Professional (PLHCP) means an individual whose legally permitted scope of practice (i.e., license, registration, or certification) allows him or her to independently provide or be delegated the responsibility to provide some or all of the particular health care services required by the Medical Surveillance Section of the L&I Respirable Crystalline Silica Standard.
- Respirable Crystalline Silica means Quartz, Cristobalite, and/or Tridymite contained in airborne particles that are determined to be respirable by a sampling device designed to meet the characteristics for respirable-particle size-selective samplers specified in the International Organization for Standardization (ISO) 7708:1995: Air Quality-Particle Size Fraction Definitions for Health-Related Sampling.

- Specialist means an American Board Certified Specialist in Pulmonary Disease or an American Board Certified Specialist in Occupational Medicine.

## REQUIREMENTS

### Specified Exposure Control Methods

When possible and applicable, Northwest Construction will conduct activities with potential Silica exposure to be consistent with L&I's Construction Standard Table 1. Supervisors will ensure each employee under their supervision and engaged in a task identified on L&I's Construction Standard Table 1 have fully and properly implemented the engineering controls, work practices, and respiratory protection specified for the task on Table 1 (unless NWC has assessed and limited the exposure of the employee to Respirable Crystalline Silica in accordance with the Alternative Exposure Control Methods Section of this program).

Onsite tasks where silica may be present:

- Mixing Grout- Utility crews onsite will be mixing grout and applying this material to the inside of manhole and catch basin structures. The laborers assigned to mixing grout must be trained and authorized by the NWC foreman. The following procedures will be followed while mixing bags of grout.
  - o Place the cleaned out wheel borrow at needed location. Ensure it is on a level, firm surface. The front of the wheelbarrow should be raised up by placing bricks under front tire. Mud gloves are worn from this point on to prevent the risk of chemical burns as well.
  - o One bag of grout should then be placed on the tub ramp on the front end of the wheel barrow. Using a sharp razor make a cut the length of the bag from bottom of the bag facing toward the tub. Slowly remove the bag to minimize disturbance of the dry material. If an additional bag is needed, repeat the process.
  - o Prior to adding water, use your hand to push the dry material toward the front of wheelbarrow leaving a mixing area at rear of tub (handle end)
  - o Add water to the rear of the wheelbarrow (away from the dry grout).
  - o Start mixing by pulling the bottom of staged grout into water and start stirring/mixing by hand. By introducing small amounts of dry material to the water, no visible dust should be present. As you start to mix the material, the batch will be very wet. Continue mixing by adding more grout your slowly thickening your batch. Roll the wet mix over the dry grout that was just added. Once the desired thickness is reached, remove the batch into a bucket and apply the grout to the intended surface.
  - o When grouting is complete, rinse gloves and clean out wheelbarrow.
- Treating Soil with Portland Cement-Small Area Application- Based on soil conditions that may be present onsite, employees may be required to treat unsuitable soil with Portland cement. It is imperative that the following administrative controls are strictly followed to control the risk of the inhalation hazard to silica.

- o The area to be treated must be fully delineated with danger tape. A danger tape sign must be completed and attached to the tape as well. This tape must be placed at least 25' of the treatment area on all sides.
- o The foreman shall determine the wind direction and ensure that no people are working downwind from the treatment area.
- o Before attaching the rigging and picking the super sack with the excavator, thoroughly inspect the bag with tears, rips or signs of damage. Rigging must be thoroughly inspected as well prior to picking the bag.
- o Attach the rigging to the picking loops of the super sack and ensure that the hooks are fully closed and locked into place.
- o Ensure that all people are clear of the work area and then the bag can be picked and brought to the position of the treatment. The excavator should be positioned on the upwind side of the bag. All windows and doors must be fully closed and the air circulating inside the cab.
- o Lower the bag to the ground and carefully drag the bag onto it's side exposing the flap on the bottom.
- o Once the bag is in place, a laborer can then approach the bag and un-tie the strings on the flap then carefully open the chute. After doing so the laborer should immediately back away from the bag and walk outside the danger taped area. The laborer should also stand on the upwind side of this operation during application of the Portland Cement.
- o Once all employees are clear of the area. The operator shall apply the dry material to the soil by dragging the bag to evenly coat the area. It is not allowed for operators to raise the bag off the ground to apply this material.
- o When the dry material is even distributed in the treatment area, the operator will remove the rigging and the bag from the excavator and attach the bucket.
- o Using the bucket the operator can then excavate full buckets of wet soil and place directly on top of the dry cement and mix thoroughly. If performing this activity properly, no visible dust clouds should be present.
- Treating Soil with Portland Cement-Large Area Application (Spreader truck and Rotary Mill)- In the past we have used a subcontractor for treating large areas with Portland Cement. We have recently purchased a spreader truck and rotary mill for this activity. On Friday, February 24, 2021, we will be using this equipment to treat unsuitable soils for the first time. We will also have an industrial hygienist onsite conducting silica exposure monitoring. Until the monitoring results are received we must assume that exposure levels are above the PEL for the spreader driver, the operator of rotary mill, and the bull dozer operator. The following controls will be utilized until the exposure monitoring results are received.
  - o The area to be treated must be fully delineated with danger tape. A danger tape sign must be completed and attached to the tape as well. This tape must be placed at least 25' of the edges of the treatment area on all sides.
  - o The foreman shall determine the wind direction and ensure that no people are working downwind from the treatment area.
  - o All three employees required for this operation will be currently trained on the NWC Silica training as well as familiar with the JHA for this activity.

- o The employees will be fit tested in Half Mask Air-Purifying respirators with P100 filters prior to the start of application. These employees will be required to wear this respiratory protection at all times while performing this activity until monitoring results are received.
- o The operators will be instructed to operate in a smooth and slow manner to limit the amount of airborne dust. The placement chute must be in place at all times as well.
- Select Demolition- Concrete debris may be discovered during mass excavation onsite. Large debris will need to be broken into smaller pieces so they can be loaded into trucks for export.
  - o In the event large pieces of concrete debris are encountered, this material will be broken up using a breaker attachment for an excavator.
  - o Once the excavator is fitted with the breaker, the work area must be cleared of all personnel to prevent struck by injuries. A skirt must be attached to the breaker and all windows must be closed on the excavator before breaking.
  - o Once the breaking starts, water shall be applied to the point-of –operation by water hose or other acceptable methods approved by the NWC foreman.
- Cutting Concrete- We will be using a concrete cutting subcontractor to cut select portions of asphalt roadways, existing sidewalks, curbs and core drill penetrations through structures and walls. Our concrete subcontractors are required to use water at all times to control respirable dust. Dry cutting is strictly prohibited.

For Questions regarding this program or determining control methods, please notify Joe Davidson for assistance.

The task(s) being performed by NWC identified on OSHA’s Construction Standard Table 1 is/are:

Table 1: Specified Exposure Control Methods When Working With Materials Containing Crystalline Silica

Construction Task or Equipment Operation		Engineering and Work Practice Control Methods	Required Respiratory Protection	
			≤ 4 hours/shift	>4 hours/shift
1	Stationary masonry saws	<ul style="list-style-type: none"> <li>• Use saw equipped with integrated water delivery system that</li> </ul>	None	None

Construction Task or Equipment Operation		Engineering and Work Practice Control Methods	Required Respiratory Protection	
			≤ 4 hours/shift	>4 hours/shift
		<p>continuously feeds water to the blade.</p> <ul style="list-style-type: none"> <li>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</li> </ul>		
<b>2a</b>	Handheld power saws (any blade diameter) when used outdoors	<ul style="list-style-type: none"> <li>Use saw equipped with integrated water delivery system that continuously feeds water to the blade.</li> <li>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</li> </ul>	None	N95 (or Greater Efficiency) Filtering Facepiece or Half Mask
<b>2b</b>	Handheld power saws (any blade diameter) when used indoors or in an enclosed area	<ul style="list-style-type: none"> <li>Use saw equipped with integrated water delivery system that continuously feeds water to the blade.</li> <li>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</li> </ul>	N95 (or Greater Efficiency) Filtering Facepiece or Half Mask	N95 (or Greater Efficiency) Filtering Facepiece or Half Mask
<b>3</b>	Handheld power saws for cutting fiber-cement board (with blade diameter of 8 inches or less) for tasks performed outdoors only	<ul style="list-style-type: none"> <li>Use saw equipped with commercially available dust collection system.</li> <li>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</li> <li>Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency.</li> </ul>	None	None
<b>4a</b>	Walk-behind saws when used outdoors	<ul style="list-style-type: none"> <li>Use saw equipped with integrated water delivery system that continuously feeds water to the blade.</li> </ul>	None	None

Construction Task or Equipment Operation		Engineering and Work Practice Control Methods	Required Respiratory Protection	
			≤ 4 hours/shift	>4 hours/shift
		<ul style="list-style-type: none"> <li>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</li> </ul>		
4b	Walk-behind saws when used indoors or in an enclosed area	<ul style="list-style-type: none"> <li>Use saw equipped with integrated water delivery system that continuously feeds water to the blade.</li> <li>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</li> </ul>	N95 (or Greater Efficiency) Filtering Facepiece or Half Mask	N95 (or Greater Efficiency) Filtering Facepiece or Half Mask
5	Drivable saws for tasks performed outdoors only	<ul style="list-style-type: none"> <li>Use saw equipped with integrated water delivery system that continuously feeds water to the blade.</li> <li>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</li> </ul>	None	None
6	Rig-mounted core saws or drills	<ul style="list-style-type: none"> <li>Use tool equipped with integrated water delivery system that supplies water to cutting surface.</li> <li>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</li> </ul>	None	None
7	Handheld and stand-mounted drills (including impact and rotary hammer drills)	<ul style="list-style-type: none"> <li>Use drill equipped with commercially available shroud or cowling with dust collection system.</li> <li>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</li> <li>Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater</li> </ul>	None	None



Construction Task or Equipment Operation		Engineering and Work Practice Control Methods	Required Respiratory Protection	
			≤ 4 hours/shift	>4 hours/shift
		efficiency and a filter-cleaning mechanism. <ul style="list-style-type: none"> <li>• Use a HEPA-filtered vacuum when cleaning holes.</li> </ul>		
<b>8</b>	Dowel drilling rigs for concrete for tasks performed outdoors only	<ul style="list-style-type: none"> <li>• Use shroud around drill bit with a dust collection system.</li> <li>• Dust collector must have a filter with 99% or greater efficiency and a filter cleaning mechanism.</li> <li>• Use a HEPA-filtered vacuum when cleaning holes.</li> </ul>	N95 (or Greater Efficiency) Filtering Facepiece or Half Mask	N95 (or Greater Efficiency) Filtering Facepiece or Half Mask
<b>9a</b>	Vehicle-mounted drilling rigs for rock and concrete	<ul style="list-style-type: none"> <li>• Use dust collection system with close capture hood or shroud around drill bit with a low-flow water spray to wet the dust at the discharge point from the dust collector.</li> </ul>	None	None
<b>9b</b>	Vehicle-mounted drilling rigs for rock and concrete	<ul style="list-style-type: none"> <li>• Operate from within an enclosed cab and use water for dust suppression on drill bit.</li> </ul>	None	None
<b>10a</b>	Jackhammers and handheld powered chipping tools when used outdoors	<ul style="list-style-type: none"> <li>• Use tool with water delivery system that supplies a continuous stream or spray of water at the point of impact.</li> </ul>	None	N95 (or Greater Efficiency) Filtering Facepiece or Half Mask
<b>10b</b>	Jackhammers and handheld powered chipping tools when used indoors or in an enclosed area	<ul style="list-style-type: none"> <li>• Use tool with water delivery system that supplies a continuous stream or spray of water at the point of impact.</li> </ul>	N95 (or Greater Efficiency) Filtering Facepiece or Half Mask	N95 (or Greater Efficiency) Filtering Facepiece or Half Mask

Construction Task or Equipment Operation		Engineering and Work Practice Control Methods	Required Respiratory Protection	
			≤ 4 hours/shift	>4 hours/shift
<b>10c</b>	Jackhammers and handheld powered chipping tools when used outdoors	<ul style="list-style-type: none"> <li>Use tool equipped with commercially available shroud and dust collection system.</li> <li>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</li> <li>Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism.</li> </ul>	None	N95 (or Greater Efficiency) Filtering Facepiece or Half Mask
<b>10d</b>	Jackhammers and handheld powered chipping tools when used indoors or in an enclosed area	<ul style="list-style-type: none"> <li>Use tool equipped with commercially available shroud and dust collection system.</li> <li>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</li> <li>Dust collector must provide the air flow recommended by the tool manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism.</li> </ul>	N95 (or Greater Efficiency) Filtering Facepiece or Half Mask	N95 (or Greater Efficiency) Filtering Facepiece or Half Mask
<b>11</b>	Handheld grinders for mortar removal (i.e., tuckpointing)	<ul style="list-style-type: none"> <li>Use grinder equipped with commercially available shroud and dust collection system.</li> <li>Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</li> <li>Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a</li> </ul>	N95 (or Greater Efficiency) Filtering Facepiece or Half Mask	Powered Air-Purifying Respirator (PAPR) with P100 Filters

Construction Task or Equipment Operation		Engineering and Work Practice Control Methods	Required Respiratory Protection	
			≤ 4 hours/shift	>4 hours/shift
		cyclonic pre-separator or filter-cleaning mechanism.		
<b>12a</b>	Handheld grinders for uses other than mortar removal for tasks performed outdoors only	<ul style="list-style-type: none"> <li>• Use grinder equipped with integrated water delivery system that continuously feeds water to the grinding surface.</li> <li>• Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</li> </ul>	None	None
<b>12b</b>	Handheld grinders for uses other than mortar removal when used outdoors	<ul style="list-style-type: none"> <li>• Use grinder equipped with commercially available shroud and dust collection system.</li> <li>• Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</li> <li>• Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism.</li> </ul>	None	None
<b>12c</b>	Handheld grinders for uses other than mortar removal when used indoors or in an enclosed area	<ul style="list-style-type: none"> <li>• Use grinder equipped with commercially available shroud and dust collection system.</li> <li>• Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</li> <li>• Dust collector must provide 25 cubic feet per minute (cfm) or greater of airflow per inch of wheel</li> </ul>	None	N95 (or Greater Efficiency) Filtering Facepiece or Half Mask

Construction Task or Equipment Operation		Engineering and Work Practice Control Methods	Required Respiratory Protection	
			≤ 4 hours/shift	>4 hours/shift
		diameter and have a filter with 99% or greater efficiency and a cyclonic pre-separator or filter-cleaning mechanism.		
<b>13a</b>	Walk-behind milling machines and floor grinders	<ul style="list-style-type: none"> <li>• Use machine equipped with integrated water delivery system that continuously feeds water to the cutting surface.</li> <li>• Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</li> </ul>	None	None
<b>13b</b>	Walk-behind milling machines and floor grinders	<ul style="list-style-type: none"> <li>• Use machine equipped with dust collection system recommended by the manufacturer.</li> <li>• Operate and maintain tool in accordance with manufacturer's instructions to minimize dust emissions.</li> <li>• Dust collector must provide the air flow recommended by the manufacturer, or greater, and have a filter with 99% or greater efficiency and a filter-cleaning mechanism.</li> <li>• When used indoors or in an enclosed area, use a HEPA-filtered vacuum to remove loose dust in between passes.</li> </ul>	None	None
<b>14</b>	Small drivable milling machines (less than half-lane)	<ul style="list-style-type: none"> <li>• Use a machine equipped with supplemental water sprays designed to suppress dust.</li> <li>• Water must be combined with a surfactant.</li> <li>• Operate and maintain machine to minimize dust emissions.</li> </ul>	None	None
<b>15a</b>	Large drivable milling machines (half-lane and	<ul style="list-style-type: none"> <li>• Use machine equipped with exhaust ventilation on drum</li> </ul>	None	None

Construction Task or Equipment Operation		Engineering and Work Practice Control Methods	Required Respiratory Protection	
			≤ 4 hours/shift	>4 hours/shift
	larger) for cuts of any depth on asphalt only	<p>enclosure and supplemental water sprays designed to suppress dust.</p> <ul style="list-style-type: none"> <li>• Operate and maintain machine to minimize dust emissions.</li> </ul>		
<b>15b</b>	Large drivable milling machines (half-lane and larger) for cuts of four inches in depth or less on any substrate	<ul style="list-style-type: none"> <li>• Use machine equipped with exhaust ventilation on drum enclosure and supplemental water sprays designed to suppress dust.</li> <li>• Operate and maintain machine to minimize dust emissions.</li> </ul>	None	None
<b>15c</b>	Large drivable milling machines (half-lane and larger) for cuts of four inches in depth or less on any substrate	<ul style="list-style-type: none"> <li>• Use a machine equipped with supplemental water spray designed to suppress dust.</li> <li>• Water must be combined with a surfactant.</li> <li>• Operate and maintain machine to minimize dust emissions.</li> </ul>	None	None
<b>16</b>	Crushing machines	<ul style="list-style-type: none"> <li>• Use equipment designed to deliver water spray or mist for dust suppression at crusher and other points where dust is generated (e.g., hoppers, conveyers, sieves/sizing or vibrating components, and discharge points).</li> <li>• Operate and maintain machine in accordance with manufacturer's instructions to minimize dust emissions.</li> <li>• Use a ventilated booth that provides fresh, climate-controlled air to the operator, or a remote control station.</li> </ul>	None	None
<b>17a</b>	Heavy equipment and utility vehicles used to abrade or	<ul style="list-style-type: none"> <li>• Operate equipment from within an enclosed cab.</li> </ul>	None	None

Construction Task or Equipment Operation		Engineering and Work Practice Control Methods	Required Respiratory Protection	
			≤ 4 hours/shift	>4 hours/shift
	fracture silica-containing materials (e.g., hoe-ramming, rock ripping) or used during demolition activities involving silica-containing materials			
<b>17b</b>	Heavy equipment and utility vehicles used to abrade or fracture silica-containing materials (e.g., hoe-ramming, rock ripping) or used during demolition activities involving silica-containing materials	<ul style="list-style-type: none"> <li>When employees outside of the cab are engaged in the task, apply water and/or dust suppressants as necessary to minimize dust emissions.</li> </ul>	None	None
<b>18a</b>	Heavy equipment and utility vehicles for tasks such as grading and excavating but not including demolishing, abrading, or fracturing silica-containing materials	<ul style="list-style-type: none"> <li>Apply water and/or dust suppressants as necessary to minimize dust emissions.</li> </ul>	None	None

Construction Task or Equipment Operation		Engineering and Work Practice Control Methods	Required Respiratory Protection	
			≤ 4 hours/shift	>4 hours/shift
<b>18b</b>	Heavy equipment and utility vehicles for tasks such as grading and excavating but not including demolishing, abrading, or fracturing silica-containing materials	<ul style="list-style-type: none"> <li>When the equipment operator is the only employee engaged in the task, operate equipment from within an enclosed cab.</li> </ul>	None	None

When implementing the control measures specified in Table 1, Northwest Construction shall:

- For tasks performed indoors or in enclosed areas, provide a means of exhaust as needed to minimize the accumulation of visible airborne dust;
- For tasks performed using wet methods, apply water at flow rates sufficient to minimize release of visible dust;
- For measures implemented that include an enclosed cab or booth, ensure that the enclosed cab or booth:
  - Is maintained as free as practicable from settled dust;
  - Has door seals and closing mechanisms that work properly;
  - Has gaskets and seals that are in good condition and working properly;
  - Is under positive pressure maintained through continuous delivery of fresh air;
  - Has intake air that is filtered through a filter that is 95% efficient in the 0.3-10.0 µm range (e.g., MERV-16 or better); and
  - Has heating and cooling capabilities.
- Where an employee performs more than one task included on OSHA’s Construction Standard Table 1 during the course of a shift, and the total duration of all tasks

combined is more than four hours, the required respiratory protection for each task is the respiratory protection specified for more than four hours per shift. If the total duration of all tasks on Table 1 combined is less than four hours, the required respiratory protection for each task is the respiratory protection specified for less than four hours per shift.

## **Alternative Exposure Control Methods**

Alternative Exposure Control Methods apply for tasks not listed in OSHA's Construction Standard Table 1, or where Northwest Construction cannot not fully and properly implement the engineering controls, work practices, and respiratory protection described in Table 1.

First, Northwest Construction will assess the exposure of each employee who is or may reasonably be expected to be exposed to Respirable Crystalline Silica at or above the Action Level in accordance with either the Performance Option or the Scheduled Monitoring Option.

- **Performance Option** – Northwest Construction will assess the 8-hour TWA exposure for each employee on the basis of any combination of air monitoring data or objective data sufficient to accurately characterize employee exposures to Respirable Crystalline Silica.
- **Scheduled Monitoring Option:**
  - Northwest Construction will perform initial monitoring to assess the 8-hour TWA exposure for each employee on the basis of one or more personal breathing zone air samples that reflect the exposures of employees on each shift, for each job classification, and in each work area. Where several employees perform the same tasks on the same shift and in the same work area, Northwest Construction will plan to monitor a representative fraction of these employees. When using representative monitoring, Northwest Construction will sample the employee(s) who are expected to have the highest exposure to Respirable Crystalline Silica.
  - If initial monitoring indicates that employee exposures are below the Action Level, Northwest Construction will probably discontinue monitoring for those employees whose exposures are represented by such monitoring.
  - Where the most recent exposure monitoring indicates that employee exposures are at or above the Action Level but at or below the PEL, Northwest Construction will repeat such monitoring within six months of the most recent monitoring.
  - Where the most recent exposure monitoring indicates that employee exposures are above the PEL, Northwest Construction will repeat such monitoring within three months of the most recent monitoring.



- Where the most recent (non-initial) exposure monitoring indicates that employee exposures are below the Action Level, Northwest Construction will repeat such monitoring within six months of the most recent monitoring until two consecutive measurements, taken seven or more days apart, are below the Action Level, at which time Northwest Construction will probably discontinue monitoring for those employees whose exposures are represented by such monitoring, except when a reassessment is required. Northwest Construction will reassess exposures whenever a change in the production, process, control equipment, personnel, or work practices may reasonably be expected to result in new or additional exposures at or above the Action Level, or when Northwest Construction has any reason to believe that new or additional exposures at or above the Action Level have occurred.

Northwest Construction will ensure that all Respirable Crystalline Silica samples taken to satisfy the monitoring requirements of this program and L&I are collected by a qualified individual (i.e. a Certified Industrial Hygienist) and the samples are evaluated by a qualified laboratory (i.e. accredited to ANS/ISO/IEC Standard 17025:2005 with respect to Crystalline Silica analyses by a body that is compliant with ISO/IEC Standard 17011:2004 for implementation of quality assessment programs).

Within five working days after completing an exposure assessment, Northwest Construction will individually notify each affected employee in writing of the results of that assessment or post the results in an appropriate location accessible to all affected employees.

Whenever an exposure assessment indicates that employee exposure is above the PEL, Northwest Construction will describe in the written notification the corrective action being taken to reduce employee exposure to or below the PEL.

Where air monitoring is performed, Northwest Construction will provide affected employees or their designated representatives an opportunity to observe any monitoring of employee exposure to Respirable Crystalline Silica. When observation of monitoring requires entry into an area where the use of protective clothing or equipment is required for any workplace hazard, Northwest Construction will provide the observer with protective clothing and equipment at no cost and shall ensure that the observer uses such clothing and equipment.

Once air monitoring has been performed, Northwest Construction will determine its method of compliance based on the monitoring data and the hierarchy of controls. Northwest Construction will use engineering and work practice controls to reduce and maintain employee exposure to Respirable Crystalline Silica to or below the PEL, unless Northwest Construction can demonstrate that such controls are not feasible. Wherever such feasible engineering and work practice controls are not sufficient to reduce employee exposure to or below the PEL, Northwest Construction will nonetheless use them to reduce employee exposure to the lowest feasible level and shall supplement them with the use of respiratory protection.

In addition to the requirements of this program, Northwest Construction will comply with other programs and L&I standards (such as Chapter 296-818 WAC [Ventilation]), when applicable where abrasive blasting is conducted using Crystalline Silica-containing blasting agents, or where abrasive blasting is conducted on substrates that contain Crystalline Silica.

## **Control Methods**

Northwest Construction will provide control methods that are either consistent with Table 1 or otherwise minimize worker exposures to Silica. These exposure control methods can include engineering controls, work practices, and respiratory protection.

## **Respiratory Protection**

Where respiratory protection is required by this program, Northwest Construction will provide each employee an appropriate respirator that complies with the requirements of the company's Respiratory Protection Program and the L&I Respiratory Protection Standard (Chapter 296-842 WAC).

Respiratory protection is required where specified by the OSHA Construction Standard Table 1, for tasks not listed in Table 1, or where the company has not fully and properly implemented the engineering controls, work practices, and respiratory protection described in Table 1. Situations requiring respiratory protection include:

- Where exposures exceed the PEL during periods necessary to install or implement feasible engineering and work practice controls;
- Where exposures exceed the PEL during tasks, such as certain maintenance and repair tasks, for which engineering and work practice controls are not feasible; and
- During tasks for which an employer has implemented all feasible engineering and work practice controls and such controls are not sufficient to reduce exposures to or below the PEL.

## **Housekeeping**

Northwest Construction does not allow dry sweeping or dry brushing where such activity could contribute to employee exposure to Respirable Crystalline Silica unless wet sweeping, HEPA-filtered vacuuming, or other methods that minimize the likelihood of exposure are not feasible.

Northwest Construction does not allow compressed air to be used to clean clothing or surfaces where such activity could contribute to employee exposure to Respirable Crystalline Silica unless:

- The compressed air is used in conjunction with a ventilation system that effectively captures the dust cloud created by the compressed air; or
- No alternative method is feasible.

## **Written Exposure Control Plan**

When employee exposure on a construction project is expected to be at or above the Action Level, a Written Exposure Control Plan (ECP) will be established and implemented. This ECP will contain at least the following elements:

- A description of the tasks in the workplace that involve exposure to Respirable Crystalline Silica;
- A description of the engineering controls, work practices, and respiratory protection used to limit employee exposure to Respirable Crystalline Silica for each task;
- A description of the housekeeping measures used to limit employee exposure to Respirable Crystalline Silica; and
- A description of the procedures used to restrict access to work areas, when necessary, to minimize the number of employees exposed to Respirable Crystalline Silica and their level of exposure, including exposures generated by other employers or sole proprietors.

The written ECP will designate a Competent Person to make frequent and regular inspections of job sites, materials, and equipment to ensure the ECP is implemented.

The written ECP will be reviewed at least annually to evaluate the effectiveness of it and update it as necessary. Having said this, ECP's are project specific and most project durations do not exceed a year. The written ECP will be readily available for examination and copying, upon request, to each employee covered by this program and/or ECP, their designated representatives, and L&I.

## **Medical Surveillance**

Medical surveillance will be made available for each employee who will be required to use a respirator for 30 or more days per year due to their Respirable Crystalline Silica exposure.

Medical surveillance (i.e. medical examinations and procedures) will be performed by a PLHCP and provided at no cost to the employee at a reasonable time and place.

Northwest Construction will make available an initial (baseline) medical examination within 30 days after initial assignment, unless the employee has received a medical examination that meets the requirements of the L&I Respirable Crystalline Silica Construction Standard within the last three years. The examination shall consist of:

- A medical and work history, with emphasis on past, present, and anticipated exposure to Respirable Crystalline Silica, dust, and other agents affecting the respiratory system in addition to any history of respiratory system dysfunction, including signs and symptoms of respiratory disease (e.g., shortness of breath, cough, wheezing), history of tuberculosis, and smoking status and history;
- A physical examination with special emphasis on the respiratory system;
- A chest X-ray (a single postero-anterior radiographic projection or radiograph of the chest at full inspiration recorded on either film [no less than 14 x 17 inches and no more than 16 x 17 inches] or digital radiography systems) interpreted and classified according to the International Labour Office (ILO) International Classification of Radiographs of Pneumoconiosis by a NIOSH-certified B Reader;
- A pulmonary function test to include forced vital capacity (FVC) and forced expiratory volume in one second (FEV1) and FEV1/FVC ratio, administered by a spirometry technician with a current certificate from a NIOSH-approved spirometry course;
- Testing for latent tuberculosis infection; and
- Any other tests deemed appropriate by the PLHCP.

Northwest Construction will make available medical examinations that include the aforementioned procedures (except testing for latent tuberculosis infection) at least every three years. If recommended by the PLHCP, periodic examinations can be more frequently than every three years.

Northwest Construction will ensure that the examining PLHCP has a copy of the L&I Respirable Crystalline Silica Construction Standard, this program, and the following information:

- A description of the employee's former, current, and anticipated duties as they relate to the employee's occupational exposure to Respirable Crystalline Silica;
- The employee's former, current, and anticipated levels of occupational exposure to Respirable Crystalline Silica;

- A description of any personal protective equipment (PPE) used or to be used by the employee, including when and for how long the employee has used or will use that equipment; and
- Information from records of employment-related medical examinations previously provided to the employee and currently within the control of Company Name.

Northwest Construction will ensure that the PLHCP explains to the employee the results of the medical examination and provides each employee with a written medical report within 30 days of each medical examination performed. The written report shall contain:

- A statement indicating the results of the medical examination, including any medical condition(s) that would place the employee at increased risk of material impairment to health from exposure to Respirable Crystalline Silica and any medical conditions that require further evaluation or treatment;
- Any recommended limitations on the employee's use of respirators;
- Any recommended limitations on the employee's exposure to Respirable Crystalline Silica; and;
- A statement that the employee should be examined by a Specialist if the chest X-ray is classified as 1/0 or higher by the B Reader, or if referral to a Specialist is otherwise deemed appropriate by the PLHCP.

Northwest Construction will also obtain a written medical opinion from the PLHCP within 30 days of the medical examination. The written opinion shall contain only the following in order to protect the employee's privacy:

- The date of the examination;
- A statement that the examination has met the requirements of the L&I Respirable Crystalline Silica Construction Standard; and
- Any recommended limitations on the employee's use of respirators.

If the employee provides written authorization, the written opinion shall also contain either or both of the following:

- Any recommended limitations on the employee's exposure to Respirable Crystalline Silica; and/or

- A statement that the employee should be examined by a Specialist if the chest X-ray is classified as 1/0 or higher by the B Reader, or if referral to a Specialist is otherwise deemed appropriate by the PLHCP.

If the PLHCP's written medical opinion indicates that an employee should be examined by a Specialist, Northwest Construction will make available a medical examination by a Specialist within 30 days after receiving the PLHCP's written opinion. Northwest Construction will ensure that the examining Specialist is provided with all of the information that the employer is obligated to provide to the PLHCP.

Northwest Construction will ensure that the Specialist explains to the employee the results of the medical examination and provides each employee with a written medical report within 30 days of the examination. The written report will contain:

- A statement indicating the results of the medical examination, including any medical condition(s) that would place the employee at increased risk of material impairment to health from exposure to Respirable Crystalline Silica and any medical conditions that require further evaluation or treatment;
- Any recommended limitations on the employee's use of respirators; and
- Any recommended limitations on the employee's exposure to respirable crystalline Silica.

In addition, Northwest Construction will obtain a written opinion from the Specialist within 30 days of the medical examination. The written opinion shall contain the following:

- The date of the examination;
- Any recommended limitations on the employee's use of respirators; and
- If the employee provides written authorization, the written opinion shall also contain any recommended limitations on the employee's exposure to Respirable Crystalline Silica.

## **Hazard Communication**

Northwest Construction will include Respirable Crystalline Silica in the company's Hazard Communication Program established to comply with the L&I Hazard Communication Standard (WAC 296-901-140).

Northwest Construction will ensure that each employee has access to labels on containers of Crystalline Silica and those containers respective Safety Data Sheets (SDS's).

All employees will be trained in accordance with the provisions of the L&I Hazard Communication Standard and the Training Section of this program. This training will cover concerns relating to cancer, lung effects, immune system effects, and kidney effects.

Northwest Construction will ensure that each employee with the potential to be exposed at or above the Action Level for Respirable Crystalline Silica can demonstrate knowledge and understanding of at least the following:

- The health hazards associated with exposure to Respirable Crystalline Silica;
- Specific tasks in the workplace that could result in exposure to Respirable Crystalline Silica;
- Specific measures Northwest Construction has implemented to protect employees from exposure to Respirable Crystalline Silica, including engineering controls, work practices, and respirators to be used;
- The contents of the L&I Respirable Crystalline Silica Construction Standard;
- The identity of the Competent Person designated by Northwest Construction; and
- The purpose and a description of the company's Medical Surveillance Program.

Northwest Construction will make a copy of the L&I Respirable Crystalline Silica Construction Standard readily available without cost to any employee who requests it.

## **Recordkeeping**

Northwest Construction will make and maintain an accurate record of all exposure measurements taken to assess employee exposure to Respirable Crystalline Silica. This record will include at least the following information:

- The date of measurement for each sample taken;
- The task monitored;
- Sampling and analytical methods used;
- Number, duration, and results of samples taken;

- Identity of the laboratory that performed the analysis;
- Type of personal protective equipment (PPE), such as respirators, worn by the employees monitored; and
- Name, social security number, and job classification of all employees represented by the monitoring, indicating which employees were actually monitored.

Northwest Construction will ensure that exposure records are maintained and made available in accordance with Chapter 296-802 WAC. Exposure records will be kept for at least 30 years.

The employer shall make and maintain an accurate record of all objective data relied upon to comply with the requirements of the L&I Respirable Crystalline Silica Construction Standard. This record shall include at least the following information:

- The Crystalline Silica-containing material in question;
- The source of the objective data;
- The testing protocol and results of testing;
- A description of the process, task, or activity on which the objective data were based; and
- Other data relevant to the process, task, activity, material, or exposures on which the objective data were based.

Northwest Construction will ensure that objective data are maintained and made available in accordance with Chapter 296-802 WAC. Objective data records will be kept for at least 30 years.

Northwest Construction will make and maintain an accurate record for each employee enrolled in the Medical Surveillance portion of this program. The record shall include the following information about the employee:

- Name and social security number;
- A copy of the PLHCPs' and/or Specialists' written medical opinions; and
- A copy of the information provided to the PLHCPs and Specialists.

Northwest Construction will ensure that medical records are maintained and made available in accordance with Chapter 296-802 WAC. Medical records will be kept under lock and key for at



least the duration of employment plus 30 years. It is necessary to keep these records for extended periods because Silica-related diseases such as cancer often cannot be detected until several decades after exposure. However, if an employee works for an employer for less than one year, the employer does not have to keep the medical records after employment ends, as long as the employer gives those records to the employee.

## **PROGRAM EVALUATION**

This program will be reviewed and evaluated on an annual basis by the Safety Department unless changes to operations, the L&I Respirable Crystalline Silica Construction Standard (Chapter 296-840 WAC), or another applicable L&I Standard require an immediate re-validation of this program.

## **SUBCONTRACTOR REQUIREMENTS**

### **GENERAL**

It is the strict policy of our Company that no subcontractor is allowed to start work without submitting to us all appropriate insurance, bond and safety documents. This requirement is necessary to protect our Company against possible litigation arising from personal injuries, property loss and OSHA citations. This prerequisite covers all first, second, (etc.) tier subcontractors under contract to us; regardless of their scope of work, contract dollar amount or schedule constraints.

The minimum required subcontractor safety documents are:

- a. Site Specific Safety Plan per OSHA regulations and The Company's policies.
- b. Hazard communication program and SDSs. A copy of all appropriate Material safety data sheets to the jobsite trailer, as well as have them available to your own crews.
- c. Substance Abuse Policy.
- d. On-site Safety Coordinator.
- e. On-site competent person(s) or designated Safety Representative.
- f. On-site CPR/First-aid certified person(s).

- g. Signed page from The Company project specific orientation manual [from all on-site employees].
  - h. Authorized Heavy Equipment Operators.
  - i. Certified Aerial Lift and Forklift Operators.
  - j. Site-specific fall protection plan.
  - k. Other as may be required by Owner.
1. Other required documents are:
- a. Certificate of insurance
  - b. Performance and payment bonds
  - c. Pre-Con/Award Meeting:
    - Their Project Manager, Project Superintendent/Foremen and their designated on-site Safety Coordinator must attend this meeting.
    - All documentation submitted shall be reviewed. They must correct any deficiencies in their site safety plan and/or other documentation before they are allowed to start work.
  - d. A complete Incident report must be submitted to our Project Superintendent within 24 hours for EVERY incident that they are involved in.
2. Each subcontractor shall:
- a. Either attend The Company meeting or conduct your own. If you choose to hold your own, your Safety Representative is required to attend each Company safety meeting.
  - b. Provide injury, illness, property damage, and near miss reports as needed.
  - c. Verbally report any injury to the Company Safety Representative immediately following the injury.

## **SUBCONTRACTOR REPRESENTATIVE**

All subcontractors will designate a responsible individual at the jobsite who will assume direction of and responsibility for their safety activity and can take immediate action on safety problems. In addition, they will:

- a. Be properly represented at all safety meetings.

- b. Assume responsibility for the availability and use of hard hats and other personal protective devices.
- c. Assume responsibility for the prompt completion and routing of all accident and claim reports, with a copy given promptly to The Company.

## **HAND & POWER TOOL SAFETY**

### **GENERAL**

All hand tools, power tools and similar equipment, shall be used and maintained in strict accordance with the manufactures use guidelines. Supervisors and employees are responsible for the inspection and repair of tools under their control.

1. Inspect tools daily to insure they are in proper working order. Damaged or defective tools must be returned to the tool room immediately.
2. Keep cords and hoses out of the way to avoid tripping hazards.
3. Power saws, grinders, and other power tools must have proper guards in place at all times.
4. Electrically powered tools will be grounded at all times, or double insulated.
5. Air hose connections must be secured to prevent accidental separation.
6. Switches or levers requiring constant pressure for tool operation are not to be tampered with to make the tool operate without constant hand or finger pressure.
7. Only properly trained and authorized employees are to use explosive actuated tools.
8. Fuel powered tools are to be shut down while being refueled.
9. Smoking is prohibited during refueling operations.
10. Fuel powered tools are not to be used inside a building or enclosed area without adequate ventilation or vented exhaust.
11. Never force tools beyond their rated capacity or use them as pry bars.

12. Never use a tool until you are trained in its proper use.

## **COMPRESSED AIR TOOLS**

1. When momentarily out of use the gun should be laid in a position so the tool cannot fly out if the pressure is accidentally released.
2. When disconnecting a compressed air tool from the airline, first shut off the pressure and then operate the tool to exhaust the pressure remaining in the hose.
3. Compressed air hose or guns shall not be pointed at the body of any person.

## **ABRASIVE/GRINDING WHEELS**

1. All abrasive wheels shall be used only on machines provided with safety guards.
2. Always use protective eye gear, even for grinders equipped with side shields.
3. Keep the work rest adjusted properly – clamped securely and within 1/8 inch of the wheel periphery. Adjust the work rest only with the wheel stopped.
4. Closely inspect all wheels prior to mounting. Use the 'ring test', which is to tap gently with a light, nonmetallic implement (such as the handle of a screwdriver). Those wheels that sound cracked should be taken out of service.
5. Check the spindle speed of the machine and assure that it does not exceed the maximum operating speed marked on the wheel.
6. Assure that all contact surfaces of wheels, blotters, and flanges are flat and free of foreign matter.
7. Hold the work in position with a guide when slot grinding.
8. For bench and pedestal grinders, the maximum angular of a wheel should not exceed 90 degrees. Exposure should begin at an angle of not more than 65 degrees above the horizontal plane of the spindle. Maximum angular exposures allowed by the guard will differ for other types of grinders.
9. All portable electrical tools must be grounded (except those that meet Underwriter's Laboratory criteria for double-insulated tools).

10. All electric cords must be covered or elevated to protect them from damage.

## **PNEUMATIC**

1. An approved safety check valve must be installed at the manifold outlet to each supply line for hand held pneumatic tools.
2. All pneumatic hose connections must be fastened securely.
3. Safety clops or retainers must be installed on all pneumatic tools to prevent the accidental expulsion of the tool from the barrel.
4. When not in use, pneumatic tools must be disconnected from the air supply at the tool.

## **FUEL POWERED**

1. All fuel-powered tools must be shut down while being refueled.
2. Smoking is prohibited during refueling operations.

## **TABLE SAW**

1. Guard the blade on crosscut and ripsaws covering the saw at all times at least to the depth of the teeth.
2. Use a spreader that is slightly thicker than the saw disk and slightly thinner than the saw set or kerf on circular ripsaws except when grooving toeing, or rabbeting.
3. A pusher stick shall be provided and used.

## **CHOP SAW OR POWER MITER**

1. Enclose the rear of saw when access is possible.
2. Provide spark guard to rear and around stationary chop saw.
3. If saw is portable, ensure sparks present no fire danger when saw is in use.
4. Enclose both sides of a chop saw's blade so that at least the upper half of the blade and the arbor ends are completely covered.

5. The blade guard device must automatically adjust itself as the depth of the cut increases.
6. The direction of the saw blade rotation shall be conspicuously marked on the saw hood.
7. Maintain a level structural cutting bed to prevent blade pinch.

## **RADIAL ARM SAW**

1. Enclose both sides of the blades so that at least the upper half of the blade and the arbor ends are completely covered.
2. Limit chains or other positive stops shall be used to keep the saw from moving beyond the front edge of the table.
3. An effective device shall be provided to return the saw automatically to the back of the table when it is released at any point of its travel.
4. The direction of the saw blade rotation shall be conspicuously marked on the saw.
5. A permanent sign not less than 1-1/2 X 3/4 inch reading "Danger- Do No Rip or Plow from This End" shall be posted and visible on both sides of the rear of the guard at about the level of the arbor.

## **WELDING, CUTTING & HOT WORK**

### **WELDING AND CUTTING SAFE PRACTICES**

1. The Project Supervisor and Safety Director shall be notified before any/all hot work is permitted on:
  - Previously used empty containers
  - Confined space
2. All arc welding and cutting operations shall be shielded by noncombustible or flameproof screens which will protect employees and other persons working in the vicinity from the direct rays of the arc.

3. Where welding or cutting operations are being performed in areas where it is possible for molten slag to contact other employees, those employees shall be protected from being burned by providing overhead protection, barricading the impact area, or other effective means.
4. All welding equipment shall be inspected by a competent person daily before use.
5. When electrode holders are left unattended, the electrodes shall be removed and the holders protected so that they cannot make electrical contact with employees or conducting objects.
6. Hot electrode holders shall not be dipped in water; to do so may expose the arc welder or cutter to electric shock.

## **HOSES**

1. All hoses shall be inspected daily before use. Defective hose shall be removed from service.
2. Hose couplings shall have screw type fittings
3. Boxes used for the storage of gas hose shall be ventilated.
4. Hoses, cables, and other equipment shall be kept clear of passageways, ladders and stairs.

## **TORCHES**

1. Clogged torch tip openings shall be cleaned with suitable cleaning wires, drills, or other devices designed for such purpose.
2. Torches in use shall be inspected at the beginning of each working shift for leaking shutoff valves, hose couplings, and tip connections. Defective torches shall not be used.
3. Torches shall be lighted by friction lighters or other approved devices, and not by matches or from hot work.

## **PERSONAL PROTECTIVE EQUIPMENT FOR WELDING AND CUTTING**

1. Employees exposed to the hazards created by welding, cutting, or brazing operations shall be suitably protected so that the skin is covered completely to prevent burns and other damage by ultraviolet rays. Specific PPE required for any welding operation will vary with the size, nature and location of the work to be performed.
2. Welding helmets and hand shields shall be free of leaks and openings, and free of highly reflective surfaces.
3. All Welders shall wear flameproof gauntlet gloves.
4. Flameproof aprons or jackets made of leather, or other suitable material should also be worn as protection against radiated heat and sparks.
5. Employees performing any type of welding, cutting, or brazing shall be wear suitable eye protective equipment. Consult the safety department for specific eye protection when planning these types of operations.

## **GAS WELDING AND CUTTING**

1. Unless cylinders are firmly secured on a special carrier, regulators will be removed and valve protection caps put in place before cylinders are moved.
2. Oxygen cylinders shall be stored separately from fuel gas cylinders or combustible materials (especially oil or grease), a minimum distance of 20', or by a non- combustible barrier at least 5' high having a fire resistance rating of at least one-half hour.
3. All hoses in use carrying acetylene, oxygen, natural or manufactured fuel gas or any gas or substance which may ignite or enter into combustion or be in any way harmful to employees, will be inspected at the beginning of each shift. Defective hoses will be removed from service.
4. Light torches with friction lighters or other approved devices, not matches or from hot work.
5. Oxygen cylinders and fittings will be kept away from oil or grease. Cylinders, cylinder caps, valves, couplings, regulators and hoses will be kept free from oil or greasy substances and will not be handled with oily hands or gloves.

## **ARC WELDING AND CUTTING**

1. When the arc welding or cutting machine is to be moved or when not in use, the power supply switch to the equipment will be open.



2. Any faulty or defective equipment will be reported to the Supervisor.
3. Whenever practical, all arc welding and cutting operations will be shielded by non-combustible or flameproof screens which will protect employees and other persons
4. working in the vicinity from the direct rays of the arc.

## **TRANSPORTING, MOVING, AND STORING COMPRESSED GAS CYLINDERS**

1. Valve protection caps shall be in place and secured at all times when cylinders are in storage or being moved.
2. When cylinders are hoisted, they shall be secured on a cradle, sling board, or pallet.
3. Cylinders shall be moved by tilting and rolling them on their bottom edges. They shall not be intentionally dropped, struck, or permitted to strike each other violently.
4. When cylinders are transported by powered vehicles, they shall be secured in a vertical position.
5. Valve protection caps shall not be used for lifting cylinders from one vertical position to another.
6. Unless cylinders are firmly secured on a special carrier intended for this purpose, regulators shall be removed and valve protection caps put in place before cylinders are moved.
7. A suitable cylinder truck, chain, or other steadying device shall be used to keep cylinders from being knocked over while in use.
8. When a job is finished, when cylinders are empty or when cylinders are moved at any time, the cylinder valve shall be closed.
9. Cylinders shall not be used as rollers or supports.
10. No person other than the gas supplier shall attempt to mix gases in a cylinder. No one except the Owner of the cylinder or person authorized by the Owner shall refill a cylinder.
11. No damaged or defective cylinder shall be used.

12. Compressed gas cylinders shall be secured in an upright position at all times except, if necessary, for short periods of time while cylinders are actually being hoisted or carried.
13. Oxygen cylinders in storage shall be separated from fuel-gas cylinders or combustible materials a minimum distance of 20 feet or by a noncombustible barrier at least 5 feet high having a fire-resistance rating of at least one-half hour. 14. Inspect cylinders, regulators, gauges, hoses, and other equipment daily before use.
14. Keep your work area clear of all flammable and combustible materials.
15. Remove all empty propane, acetylene, oxygen, and butane gas cylinders from buildings.

## **PLACING CYLINDERS**

1. Cylinders shall be placed in a location where open flame, hot metal, sparks, hot slag, or other sources of artificial flame will not reach them. When this is impractical, fire resistant shields shall be provided.
2. Cylinders shall be placed where they cannot become part of an electrical circuit. Electrodes shall not be struck against a cylinder to strike an arc.
3. Gas cylinders shall not be taken into confined spaces.

## **USE OF FUEL GAS**

All employees who use cutting torches shall be trained in the safe use of fuel gas, as follows:

1. Before a regulator to a cylinder valve is connected, the valve shall be opened slightly and closed immediately. This action is generally termed "cracking" and is intended to clear the valve of dust or dirt that might otherwise enter the regulator.
2. The cylinder valve shall always be opened slowly to prevent damage to the regulator. If a special wrench is required, it shall be left on the stem of the valve while the cylinder is in use so that the gas flow can be shut off quickly in case of an emergency.
3. Oxygen cylinders and fittings shall be kept away from oil or grease. Cylinders, cylinder caps and valves, couplings, regulators, hose, and apparatus shall be kept free from oil or greasy substances and shall not be handled with oily hands or gloves. Oxygen shall not be directed at oily surfaces or greasy clothes. This practice could result in spontaneous combustion.
4. Before a regulator is removed from a cylinder valve, the cylinder valve shall always be closed and the gas released from the regulator.

5. If there is a leak around the valve stem, the valve shall be closed and the gland nut tightened. If this action does not stop the leak, notify your Supervisor immediately. If the leak originates elsewhere on the cylinder, notify other employees not to use it and notify your Supervisor immediately.
6. Do not use oxygen as a substitute for atmospheric air.
7. Adjust the screw on the regulator before you open up the cylinder valve.
8. Do not stand in front of the regulator before opening the cylinder valve.
9. Do not use acetylene at pressures higher than 15 pounds per square inch.
10. Light the acetylene before opening the oxygen valve on the torch.

## **REGULATORS AND GAUGES**

1. Oxygen and fuel gas pressure regulators shall be inspected daily before use.
2. Before the regulator is removed from the cylinder valve, the cylinder valve must be
3. closed and gas released from the regulator and gas lines.

## **HOT WORK**

A "hot work" operation is defined as any task or equipment that produces sparks, flame, slag or other heated material in sufficient quantities as to possibly ignite a fire.

1. A Company hot work permit may be required for all hot work operations. Consult your Supervisor for direction.
2. The Project Superintendent shall coordinate, review and approve all Company hot work permits when deemed necessary.
3. No hot work or open flame devices may operate within 100 feet of any area where flammable liquids are being used.
4. At a minimum, 5lb # A B C rated fire extinguisher must be present within 20 feet from each hot work operation.

5. When combustibles are in proximity to the hot work operations, a fire watch shall maintain inspection of the work area for a minimum of 30 minutes.

## **SHOP AREA SAFETY STANDARDS**

*The rules located in this section are applicable to all employees working in shop activities and are in addition to The Company's general safety rules.*

### **GENERAL**

1. Dirty or oily rags, coveralls, and paper or other trash will be put in proper containers.
2. Oil tubs will be emptied when you are through draining oil; spills will be cleaned up immediately.
3. Junk parts and other scrap metal will be put in iron containers.
4. All Company tools will be cleaned and returned to their storage area at the end of each shift.
5. All small parts will be put away when not in use. Workbenches, tables and other work areas will be kept clean.
6. Air hoses, welding hoses, leads, and light cords will be hung up when not in actual use.
7. All compressed gas cylinders, i.e. oxygen, acetylene, and propane, will be shut off when not in use and lines bled.
8. All hoists and jacks will be kept clean and in good repair.
9. Tools that are badly worn or appear for any other reason to be unsafe will not be used under any circumstances. When tools are found in this condition, notify your Foreman and remove the tool from service.
10. When welding in areas where other employees might be working, place welding shields to eliminate employee exposure to welding flash.
11. Removal of ground prongs on extension cords or hand-held power tools is strictly forbidden. Alteration or rendering inoperable any piece of safety equipment will be considered grounds for disciplinary action up to and including dismissal.

12. All personal injuries, regardless of the severity, will be reported immediately to the Supervisor or Foreman. If medical attention is needed beyond first aid, an injured worker packet can be picked up from your Supervisor or at the main office.
13. While performing repair or maintenance work in the field, mechanics are required to wear safety vests or other high visibility garments. During hours of darkness, safety vests with reflective material must be worn. Hard hats must be worn when the potential for flying or falling objects exists.

## **HEARING CONSERVATION**

### **PURPOSE**

To provide a hearing conservation and noise abatement program for all Company employees. Excessive noise will cause permanent hearing loss when individuals are exposed to hazardous noise levels. It is recognized that measures must be taken to reduce noise exposure.

The constant noise created by heavy equipment and power tools erodes hearing. Exposure to a sudden, intense noise, like an explosion or siren can cause immediate damage and pain, ranging from a ringing in the ears (tinnitus) up to and including hearing loss. Loss of hearing can and does occur without any noticeable ear pain.

The DOSH permissible noise exposure limit is measured in decibels dBA (a measure of sound) and is defined as a time-weighted average (TWA) over 8 hours. Employees are not always aware that they are risking permanent and irreversible hearing damage. The process is often gradual, and may not be apparent until later in life. Noise induced hearing loss can occur on the job, at home, and in your vehicle. It is preventable but once acquired, hearing loss is permanent and cannot be repaired.

### **HEARING PROTECTION DEVICES**

Different types of hearing protection equipment have been made available. Earmuffs and/or earplugs are the most common and will come with a noise reduction rating that indicates how many decibels they will absorb. Earplugs are molded inserts that should be inserted into the ear canal, while pulling up slightly with the opposite hand extended over the head to give a proper lift to the ear canal.

At least two of the following HPD's shall be provided to all affected employees at no cost to them and will be located at every Company jobsite office. All employees will be allowed to select their choice of hearing protection in the size that fits them correctly and comfortably.

The Project Superintendent is responsible to distribute the applicable HPD and to ensure the employees are trained in the use and are worn by all affected employees.

1. Foam inserts
2. Ear caps
3. Plastic flanged inserts
4. Foam pods

The Company has evaluated the hearing protector attenuation for the specific noise environments in which the protectors will be used and has determined which hearing protectors are acceptable and safe for use in each environment. Each type of HPD will have a minimum NRR of 22.

Should the employee request a protector which has not been evaluated, the safety department will gather the necessary information and make a determination as to the acceptability of the protector for that work environment. If the protector is not suitable for the work environment and/or does not provide appropriate attenuation it will not be used by the employee.

The adequacy of hearing protector attenuation shall be re-evaluated whenever employee noise exposure increases to the extent that the hearing protectors may no longer provide adequate attenuation. The Company shall provide more effective hearing protectors where necessary.

## **AUDIOMETRIC TESTING**

The audiogram is required according to the WAC. This code states the employer shall establish and maintain a mandatory audiometric testing program as provided in the section to all employees whose exposures equal or exceed an 8-hour time-weighted average of 85dBA. Audiometric recommended testing shall be performed when a new employee is hired as well as annually.

This testing is provided at no cost to the employee and will be performed by a Certified Occupational Hearing Conservationist. The testing is done to monitor the effectiveness of the hearing conservation program. The tests will be referred to a qualified professional whenever there is a standard threshold shift of 10 dB or more at the 2000, 3000, and 4000 Hz in either ear.

## NOISE MONITORING

The Company has performed extensive sound level monitoring of its projects and equipment to identify areas which may potentially cause employee exposure to injurious levels of noise. This information was obtained during normal work processes. Whenever such monitoring was conducted, the employees in the area were instructed as to what the process involved and were able to observe the tests.

The Company recommends the use of HPD's in the following locations, job duties or when using the following equipment:

Equipment	Noise Level (Db.)	HP Requirements
All Power Tools / Equip	90 – 115	100% (when operating or within arm's length)
Operating Heavy Equip	95	100%
Operating Forklift	90	100%
Placing Concrete	92	100%
Air compressor	100	100% within 15 ft.
Generators	95	100% within 15 ft.
Welders / Pumps	90	100% within 15 ft.
Ambient noise	75 – 90	Project Specific

## TRAINING

Training will be provided to all employees exposed to noise above an 8-hour average of 85 dBa and at least annually after that. Training will cover the following topics:

1. The effects of noise on hearing, including both occupational and non-occupational exposures.
2. Noise controls used on our projects / workplace.
3. The purpose of hearing protectors and the advantage, disadvantages and the attenuation of various types of HPD's.
4. Instructions about selecting, fitting, using, and caring for HPD's.
5. The purpose of audiometric testing and how it is done.
6. Employee access to records.
7. Update information provided in the training program to be consistent with changes in controls, hearing protectors and work processes.

## HEAT STRESS MANAGEMENT

This program was developed to protect employee's hazards posed by working in hot environments. Northwest Construction is committed to preventing heat related illnesses that can occur to employees working outdoors by:

1. **Identifying, evaluating, and controlling potential exposure to extreme temperature, humidity, and other environmental factors.**
2. **Providing employees drinking water.**
3. **Providing adequate shade for employees.**
4. **Providing supervisor and employee training.**
5. **Establishing heat-related emergency procedures.**

This program applies when employees are exposed to outdoor heat at or above the following temperature and clothing action levels:

Type of clothing	Work in direct sun
<u>All other clothing</u>	80° F
<u>Nonbreathable clothing including vapor barrier clothing or PPE such as chemical resistance suits</u>	52° F

Outdoor Work includes any employee assigned to work in the outdoor environment on a regular basis. This program does not apply to incidental exposure which exists when an employee is not required to perform a work activity outdoors for more than fifteen (15) minutes in any sixty (60) minute period.

Note: It is possible outdoor heat related illness may result at temperatures below the action levels when employees have not acclimatized to sudden and significant increases in temperature and humidity. Employees should monitor for signs and symptoms of outdoor heat related illness when there is a significant and sudden increase in temperature.

### Responsibilities

Superintendents and/or Foremen are responsible for implementing this program as part of their Site-Specific Safety Plan as well as daily pre-task plans. Supervisors are also responsible for encouraging employees to frequently consume water or other acceptable beverages to ensure hydration. Employees are responsible for monitoring their own personal factors for heat related illness including consumption of water or other acceptable beverages to ensure hydration. Employees are also required to immediately notify their supervisor if they have symptoms of heat related illness or observe others exhibiting symptoms.



## Evaluating and Controlling Outdoor Heat Stress Factors

In addition to outdoor temperature, supervisors should evaluate other potential heat stress factors. These factors include:

1. Radiant heat (i.e.: reflection of heat from asphalt, rocks, soil, or work in direct sunlight).
2. Air movement (i.e.: wind blowing and temperature above 95<sup>o</sup> F).
3. Conductive heat (i.e.: operating excavator, dozer or loader).
4. Workload activity and duration (i.e.: digging with a shovel, mixing grout, performing erosion control activities).
5. Personal protective equipment (i.e.: respirators, chemical resistant suits / gloves required on HAZWOPER sites, leathers and gloves for welding).

Supervisors must follow these rules when outdoor temperatures reach or exceed 80 degrees Fahrenheit.

1. Ensure that all employees working onsite are trained on the contents of this policy as well as any other site-specific measures to prevent heat related illnesses.
2. **Drinking Water-** Ensure a sufficient quantity of potable drinking water is provided and made accessible to employees. Drinking water supplies shall not be stored in direct sunlight, inside vehicle cabs or in any other location where it could reach an unsafe temperature of the drinking water. ***One quart of suitably chilled water per employee per hour shall be made available and made easily accessible.***
3. **Shade-** Each jobsite must provide and maintain one or more areas with shade at all times. Examples of adequate shade include pop up shelters, job offices, wooded areas, shade trees or inside a climate-controlled area. Please note: shaded areas too close to an adjacent heat source such as machinery, storage containers or a concrete structure is not allowed due to radiant heat and poor ventilation. The shade must:
  - be located as close as practicable to the areas where employees are working.
  - The amount of shade present is at least large enough to accommodate the number of employees on a meal or rest period, so that they can sit in a normal posture fully in the shade.
4. **Cool Downs and Mandatory cool down Rest Breaks-** Northwest Construction will ensure that employees are instructed to and allowed to take preventive cool down rests as needed to prevent overheating. mandatory cool-down rest periods will be taken as required in Table 2 below. The mandatory cool-down rest period may be provided concurrently with any meal or rest period required and must be paid unless taken during a meal period.
5. **Communication-** Ensure that effective communication by voice, observation, or electronic means is maintained so that employees at the work site and their supervisor can contact each other when necessary. Cellular phone calls or text messaging will be used for this purpose only if reception in the area is reliable.

6. **Observations-** Supervisors shall observe employees for signs and symptoms of heat-related illness by implementing one or more of the following: (a) Regular communication with employees working alone such as by radio or cellular phone; or (b) A mandatory buddy system; or (c) Other effective means of observation
  
7. **Acclimation:** For 14 days, employees must be closely monitored for signs and symptoms of heat-related illness any time they have been newly assigned to a role that is at or above the triggers in Table 1, have been absent from work for more that 7 days and returning to a role at or above Table 1 triggers, or during a heat wave. The appropriate options for observation are:
  - Regular communication with employees working alone (radio or cellular phone)
  - Mandatory buddy system
  - Other effective means of observation

High Heat Procedures

When temperatures exceed 90 degrees Fahrenheit, unless engineering or administrative controls (such as air-conditioning or scheduling work at cooler times of the day) are used to lower employee exposure below 90-degree Fahrenheit. Ensure that employees take at minimum the mandatory cool-down rest periods in Table 2. The cool-down rest periods must be provided in the shade or using other equally or more effective means to reduce body temperature. The mandatory cool-down rest period may be provided concurrently with any meal or rest period required under the requirements paid unless taken during a meal period.

Table 2

Air Temperature	Mandatory cool-down rest periods
At or above 90° F	10 minutes/2 hours
At or above 100° F	15 minutes/1 hour

*Note: Employers may also consider implementing additional protective rest periods per NIOSH or ACGIH methods:*

Additional Measures to be Considered:

1. When noise ordinances and/or jobsite hours will allow, consider starting the work shift early (when daylight begins) and ending the shift early to avoid working during the hottest part of the day.
2. Removing personal protective equipment such as respirators, chemical resistant clothing and gloves, and welding leathers during breaks. Note: If breaks cannot be

taken in a safe environment or otherwise not allowed due to site requirements hard hats, safety glasses, and vests must be worn during these breaks.

3. Evaluate tasks needed to be accomplished for the day and try shifting the most labor-intensive tasks or tasks requiring additional PPE to the earlier part of the shift. If this is not possible should consider rotating employees performing labor-intensive tasks to allow an opportunity for a cool-down break.
4. Speak with all NWC employees first thing daily to ensure everyone is hydrated at the start of shift and then monitor throughout the day.
5. Supervisors are to immediately and appropriately respond to any employee reporting or showing signs of a heat-related illness.

#### Extreme Heat Conditions ( $\geq 100^{\circ}$ F):

When weather forecasts indicate that temperatures could be at or above  $100^{\circ}$  F a company communication will be sent to all supervisors as a reminder about the rules listed in this document and encourage the proper planning for employees required to work in extreme heat. Based on the expected duration of the extreme heat, Northwest Construction management may issue additional emergency protocols above and beyond this policy.

#### Procedures for Responding to a Heat-Related Illness

Supervisors will respond to heat-related illness in a quick and safe manner. The table below outlines the potential types of heat-related illnesses, signs and symptoms and specific first aid and emergency procedures. The information should be present at all work sites where outdoor work activities are conducted.

Employees experiencing signs and symptoms of a heat-related illness are to cease work and report their condition to their supervisor. Employees showing signs or demonstrating symptoms of heat-related illness are to be relieved from duty and provided sufficient means to reduce body temperature. Employees experiencing sunburn, heat rash or heat cramps will be monitored to determine whether medical attention is necessary. Emergency medical services will be called (911) when employees experience signs and symptoms of heat exhaustion or heat stroke.

Heat-Related Illness First Aid and Emergency Response Procedures		
Heat-Related Illness	Signs and Symptoms	First Aid and Emergency Response Procedures
Sunburn	<input type="checkbox"/> <b>Red, hot skin</b> <input type="checkbox"/> <b>Possibly blisters</b>	<input type="checkbox"/> <b>Move to shade, loosen clothes</b> <input type="checkbox"/> <b>Apply cool compress or water to burn</b> <input type="checkbox"/> <b>Get medical evaluation if severe</b>
Heat Rash	<input type="checkbox"/> <b>Red, itchy skin</b> <input type="checkbox"/> <b>Bumpy skin</b> <input type="checkbox"/> <b>Skin infection</b>	<input type="checkbox"/> <b>Apply cool water or compress to rash</b> <input type="checkbox"/> <b>Keep affected area dry</b>
Heat Cramps	<input type="checkbox"/> <b>Muscle cramps or spasms</b> <input type="checkbox"/> <b>Grasping the affected area</b>	<input type="checkbox"/> <b>Drink water to hydrate body</b> <input type="checkbox"/> <b>Rest in a cool, shaded area</b> <input type="checkbox"/> <b>Massage affected muscles</b> <input type="checkbox"/> <b>Get medical attention in cramps persist</b>
Heat Exhaustion	<input type="checkbox"/> <b>High pulse rate</b> <input type="checkbox"/> <b>Extreme sweating</b> <input type="checkbox"/> <b>Pale face</b> <input type="checkbox"/> <b>Insecure gait</b> <input type="checkbox"/> <b>Headache</b> <input type="checkbox"/> <b>Clammy and moist skin</b> <input type="checkbox"/> <b>Weakness</b> <input type="checkbox"/> <b>Fatigue</b> <input type="checkbox"/> <b>Dizziness</b>	<input type="checkbox"/> <b>CALL 911*</b> <input type="checkbox"/> <b>Provide EMS with directions to worksite</b> <input type="checkbox"/> <b>Move to shade and loosen clothing</b> <input type="checkbox"/> <b>Start rapid cooling with fan, water mister or ice packs</b> <input type="checkbox"/> <b>Lay flat and elevate feet</b> <input type="checkbox"/> <b>Drink small amounts of water to hydrate and cool body</b>
Heat Stroke	<input type="checkbox"/> <b>Any of the above, but more severe</b> <input type="checkbox"/> <b>Hot, dry skin (25-50% of cases)</b> <input type="checkbox"/> <b>Altered mental status with confusion and agitation</b> <input type="checkbox"/> <b>Can progress to loss of consciousness and seizures</b>	<input type="checkbox"/> <b>CALL 911*</b> <input type="checkbox"/> <b>Provide EMS with directions to worksite</b> <input type="checkbox"/> <b>Immediately remove from work area</b> <input type="checkbox"/> <b>Start rapid cooling with fan, water mister or ice packs</b> <input type="checkbox"/> <b>Lay flat and elevate feet</b> <input type="checkbox"/> <b>If conscious give sips of water</b> <input type="checkbox"/> <b>Monitor airway and breathing, administer CPR if needed</b>

## Training

### Supervisor Training

Supervisors working in outdoor environments with heat exposure at or above the action levels will receive training in the following topics:

1. **The content and procedures contained in this program**
2. **Procedures listed in this program the supervisor will follow if an employee shows signs and symptoms consistent with possible heat-related illness**
3. **Specific procedures, if necessary, describing how to move or transport employees and students to a place where they can be reached by emergency medical services**

## Employee Training

Employees and who may be exposed to outdoor heat at or above the action levels are to be trained on the following topics:

- 1. Environmental factors that might contribute to the risk of heat-related illness (temperature, humidity, radiant heat, air movement, conductive heat sources, workload activity and duration, and personal protective equipment)**
- 2. Personal factors that may increase susceptibility to heat-related illness (age, degree acclimatization, medical conditions, drinking water, consuming alcohol, caffeine use, nicotine use and use of medications that affect the body's response to heat)**
- 3. The importance of removing heat retaining personal protective equipment, such as non-breathable chemical resistant clothing during breaks.**
- 4. The importance of frequent drinking of small quantities of water.**
- 5. The importance of acclimatization.**
- 6. The different types and common signs and symptoms of heat-related illnesses.**
- 7. The procedures for immediately reporting signs and symptoms of heat-related illness in themselves, co-workers or students to their supervisor or person in charge.**

## Refresher Training

Supervisors and employees covered by this program are to receive annual refresher training and documented. WAC Chapter 296-305-05004 provides much of the relevant information for annual review.

## Wildfire Smoke Safety

### Purpose & Scope

As part of our ongoing efforts to provide a safe and healthful work environment for all Northwest Construction employees, the policy is designed to control illnesses and injuries related to the occupational exposure to Particulate matter (PM2) found commonly in wildfire smoke. This Policy applies to jobsites where it is reasonably anticipated that employees may be exposed to wildfire smoke during the course of the workday. This policy meets and exceeds the rules set forth in WAC 296-820 Wildfire Smoke.

### Policy

In accordance with the Wildfire Smoke Rule, Northwest Construction will comply with following:

- Determine PM 2.5 levels at worksites by checking one of the listed web-based sources or directly measuring PM2.5 at their worksite. Supervisors will be using the *EPA Air Now* application on their company-issued smart phone or tablet. If the use of these devices is not available, government approved internet websites

will be used to determine Air Quality. For example, the AirNow.gov website [Fire and Smoke Map \(airnow.gov\)](https://www.airnow.gov)

- Provide hazard communication training to employees when the level of PM 2.5 is at or above 69 and at least annually thereafter.
- Providing to all field employees who may be exposed to PM 2.5 with an Air Quality Index level of 69 (AQI 69) or above on the hazards of wildfire smoke and the procedures regarding our plan for ensuring workers are protected from wildfire smoke.
- Northwest Construction will monitor and allow for the medical care for employees who display symptoms of illness related to wildfire smoke.
- Established requirements for implementation of engineering and administrative controls whenever PM2.5 reaches AQI of 101.
- Maintain a supply of N95 Masks and encourage the use of respiratory protection for exposed employees to use on a voluntary basis whenever PM 2.5 has an AQI of 101 to 300.
- When smoke conditions on a jobsite range between an AQI of 301 – 499, N95 masks will be distributed to all employees and their use encouraged.
- **When jobsite wildfire smoke levels exceed an AQI of 500, no exposed NWC employee will be allowed to work unless they have been trained, fitted in a half mask respirator with a P100 cartridge.**

**This policy does not apply to the following:**

- Employee(s) working in enclosed buildings or structures in which windows, doors, bays, and other exterior openings are kept closed, except when it is necessary to open doors to enter and exit.
- Employee(s) working in vehicles in which the air is filtered by a cabin air filter and windows, doors, and other openings are kept closed except when it is necessary to open doors to enter or exit.

Responsibilities

Superintendents and Foremen are responsible for communicating the following to employees that may be exposed to wildfire smoke during the performance of their duties.

- Foremen and Superintendents are responsible for checking the Air Quality for PM2.5 before each shift and periodically thereafter using the EPA Air Now

application on their NWC issued smart phone or tablet or by means of approved governmental websites.

- The Safety Director will be sending communication to affected supervisors via email or verbally as appropriate regarding the forecast where PM2 levels could be at or above the action level of AQI reading of 69 as well as real time communications when hazardous levels are reached. Once air Quality Levels reach AQI levels of 101, 301 and 500, additional communications to all affected jobsites will be sent to inform supervisors of the standard.
- Foremen will communicate information to employees about the protective measures available to reduce their wildfire smoke exposure during the daily pre-task plan discussion; remind employees to report any symptoms to their supervisor immediately and encourage the use of respiratory protection.
- Foremen will have a sufficient stock of N95 masks to any employee who chooses to voluntarily wear protection when AQI levels are between 101 and 300. Foremen will encourage the use of respiratory protection for all employees.
- Foremen will notify the crew when air quality levels increase above 301, Distribute N95 masks, and monitor the crew for symptoms of exposure.
- Employee training will be documented using the HSCC Field Safety Application.

Affected employees who are performing work outside are responsible for:

- Communicating worsening air quality to their supervisor or manager; and
- Immediately report adverse symptoms to their supervisor/manager that may be a result of the wildfire smoke, such as difficulty breathing and/or chest pain.
- See medical attention or call 911 for themselves or co-workers, if necessary.

### Engineering Controls

Northwest Construction shall reduce employee exposure to air quality conditions above a current AQI of 101 PM2.5 or higher through the appropriate control method. Truck drivers and operators on select types of equipment can be permitted to continue working. When levels are above 500, operators and drivers must keep windows and doors closed with a functioning air conditioning system on.

For many of our employees working outside of an enclosed cab there are not feasible engineering controls to control the hazard when PM2.5 levels reach an AQI of 500.

### Administrative Controls

When concentrations of PM 2.5 are 101 or greater on the AQI, supervisors shall evaluate the tasks the employees perform. Job rotations and employee rest breaks must be considered and implemented whenever feasible.

When AQI levels reach or exceed 500, a decision will be made to suspend all outdoor work activities until the levels drop.

#### Personal Protective Equipment (PPE)

As mentioned above, the voluntary use of N95 masks will be available to employees who choose to wear them. Those employees will be given instruction on how to keep respirators cleaned, stored, maintained, and replaced so that they do not present a health hazard to users. Employees will also be given instruction on how to get the most protection from a respirator. Once levels reach 500, no employee shall work outside unless they are currently trained and fit-tested for a half mask APR with P100 cartridges.

#### Sensitive Groups

Some employees, because of preexisting health conditions, may experience health effects when the AQI is 69 or lower. Those employees will be encouraged to wear N95 respirators in a voluntary use. They will also be encouraged to stop work if they do not feel comfortable or safe doing so. There will be no employee discipline for employees who feel that their health is at risk during these events.

#### Employee Training

Northwest Construction will provide employees with annual training, in the form of a tool box talk, on the health and safety relating to wildfire smoke. The training shall contain the following information:

- The health effects and symptoms of wildfire smoke exposure and sensitive groups.
- The importance of informing NWC when experiencing symptoms of wildfire smoke exposure.
- Right of Medical Attention without reprisal.
- Method used to obtain the current Air Quality Index (AQI) for PM2.5 and employee notification.
- Response and protection plan for employees from wildfire smoke.
- Exposure symptom response
- The importance, limitations, and benefits of using an N95 mask when exposed to wildfire smoke
- How to properly put on, use, and maintain the respirator
- Supervisor training will include:
  - The procedures for the implementation of the requirements
  - Procedures for responding to symptoms of wildfire smoke exposure.
  - Procedures for moving and/or transporting employees who need medical attention.



# **SUBSTANCE ABUSE POLICY**

## **PURPOSE**

The Company is committed to the goal of protecting the safety, health, and wellbeing of its employees and all people who come into contact with our workplace, job-sites and property, and/or use our equipment and services.

Additionally, The Company is committed to the goal of creating and maintaining a productive and efficient working environment in which all employees have an opportunity to thrive and be successful.

Recognizing that drug and alcohol use/abuse pose a direct and significant threat to these goals, The Company is committed to providing a drug and alcohol-free work environment for all its employees.

This policy is in accordance with Chapter 440-26 Washington Administrative Code (WAC).

## **DRUG POLICY**

The following rules represent The Company's policy concerning illegal drug use and alcohol use. This policy is effective immediately and will be enforced uniformly with respect to all Company employees. Any changes, modifications, or exceptions to this policy are at the sole discretion of The Company President.

**Section 1.** Prohibited Substances: Employees are prohibited from reporting to duty, performing Company services or entering Company property or job site under the influence of illegal drugs or alcohol. A drug is defined as any substance that may affect mental or motor function including but not limited to illegal drugs, controlled substances, designer drugs, synthetic drugs and look-alike drugs. Alcohol is defined as any beverage or substance containing alcohol.

**Section 2.** Employees are prohibited from being under the influence of any prescription drugs or medications, which could, in any way, adversely affect the employee's alertness, reaction, coordination, response, or safety during working hours.

**Section 3.** Employees are prohibited from the use, possession, manufacturing, distribution, or sale of illegal drugs on Company property or while performing Company business. Such action will be reported to appropriate law enforcement officials.

**Section 4.** Any person other than the one for whom it is prescribed will bring no prescription drugs on Company premises. Such drugs will be used only in the manner, combination, and quantity prescribed.

**Section 5.** Employees are prohibited from the use, possession, or sale of alcoholic beverages while on duty or on Company property.

**Section 6.** Legal Drugs: The use of drugs, which are lawfully obtained and properly used, shall be permitted provided their use does not interfere with the individual's proper and safe work performance.

**Section 7.** The Company will be responsible for all costs incurred for testing done at our request.

**Section 8.** The Company will provide training to Supervisors in issues of substance abuse and to maintain a level of ongoing training to enable Supervisors to recognize behavior and conditions indicating potential substance abuse.

## **PROCEDURES FOR SCREENING**

**Section 1.** Employees will be tested within the first day of employment. If the test results are positive, the employee will be subject to immediate termination. (Note: Every effort will be made to schedule testing for the first day.) The employee will not be eligible for re-testing or rehire.

**Section 2.** The Company, at its discretion, may test employees prior to the start of new jobs.

**Section 3.** The Company, at its discretion, may test all employees on an annual basis.

**Section 4.** Random testing will be conducted under the following conditions: On-site testing will be implemented in accordance with Part 6, Section 1 procedures.

The Company, at its discretion, may perform periodic random testing of all employees to a maximum of 50% of employees being tested annually. The Company, at its discretion, may select random job sites for testing. A lottery method of employee selection for testing may be implemented so that all employees have an equal opportunity of being tested.

Employees selected must immediately submit to drug and alcohol testing as required by The Company, failure to submit to testing in a timely manner or refusal to submit to testing will be grounds for termination.

If any employee tests positive, he/she will be terminated. See Part 7 "Rehire Conditions", an employee who has been terminated as a result of failing his or her drug test described in this section. See "Agreement for Continuation of Employment".

Employees that comply with the Federal DOT Random Drug and Alcohol Testing requirements may be exempt from the random drug-testing portion of this policy, Part 3 Section 4.

## **PROBABLE SUSPICION OR ACCIDENT INVOLVEMENT**

**Section 1.** Probable suspicion means suspicion based on specific personal observations that a Company representative can describe concerning the appearance, behavior, speech or breath odor of the employee. Probable suspicion must be documented at or near the time of the observation. Observation must be witnessed by two (2) individuals, one of who must be a Supervisor that actually observed the employee's behavior.

Any employee, who is involved in an accident or sustains an injury requiring medical treatment and/or time-loss, may be required to submit to a drug and alcohol testing. Being involved in an accident that causes property damage or an unsafe job related activity that poses a danger to the employee or others may be sufficient to establish probable suspicion.

**Section 2.** Employees must report to the testing facility the use of medically authorized drugs and any over-the-counter drugs taken prior to testing.

**Section 3.** An employee consenting to the testing will be transported to the hospital or laboratory by Management. After testing is completed, the employee will be transported back to his/her residence.

**Section 4.** If the test results are negative, the employee will immediately be reinstated in his/her previous position, with full back pay based on the regular work schedule, and no further action will be taken.

**Section 5.** Should the test results be positive, the employee will be terminated without pay except for actual time worked on the day that the test was conducted. Employees have the right to obtain test results from the testing facility.

**Section 6.** If any employee tests positive, he/she will be terminated. See Part 7 "Rehire Conditions", an employee who has been terminated as a result of failing his or her drug test described in this section. See "Agreement for Continuation of Employment".

## **CONSENT AND TRANSPORTATION PROCEDURES**

**Section 1.** The Company shall inform an employee that a reasonable suspicion or post- accident testing document has been completed and that they must submit to a drug/alcohol test. The Company shall also inform an employee that has been involved in an industrial accident that requires them to submit to a drug/alcohol test.

**Section 2.** The employee shall be provided copies of reasonable suspicion or post- accident testing document and/or a copy of the accident report indicating employee involvement in the reportable on-the-job accident as per Part 4, Section 1. Because of the observation or report of the employee's behavior, it is necessary to verify the employee's physical capability at that point in time. The employee will be asked whether he/she is aware of any medical condition which may cause the behavior or if he/she has been taking any prescription or non- prescription medication which may affect safe and/or efficient job performance.

**Section 3.** A Clinic Consent Form will be completed and read to the employee prior to obtaining the employee's signature authorizing the test and release of positive or negative test results. No changes are to be made on the consent form. Both the observing witnesses shall complete the reasonable suspicion or post-accident testing document. In completing the reasonable suspicion or post-accident testing document, the witnesses shall be as accurate and detailed as possible, recording their observations of the employee's behavior, which led to their decision to require an exam/test. The witnesses shall state what they actually observed, but refrain from making statements about possible causes of the behavior or making judgmental conclusions.

1. If the employee refuses to promptly take the exam/test or sign a consent form:
2. It shall be understood that the request to sign the form and take the exam/test is a direct order.
3. If there is a misunderstanding, the order shall be explained again.
4. A second direct order to sign the consent form and take the exam/test will be provided.
5. It shall be understood that failure to comply with the order constitutes insubordination resulting in termination.
6. If the employee continues to refuse, he/she will be terminated.

**Section 4.** The Company shall arrange for transportation and accompany the employee to the exam/test site. The Company will notify the employee's union that the employee is being transported for an exam/test, and shall transport the employee to the exam/test site. At the conclusion of the exam/test, The Company shall transport the employee in accordance with Part 4, Section 3.

## **TESTING PROCEDURAL SAFEGUARDS**

**Section 1.** The Company will select the laboratory and sampling procedures. Test procedures will meet the DHSS guidelines for testing, chain of custody, will provide quality control procedures, and assure the maximum in confidentiality.

**Section 2.** In the event of positive test results, the employee may request, within ten (10) days, a sample of his/her urine specimen from the medical facility for the purpose of re-testing at a qualified drug-testing laboratory. Chain of custody for this sample shall be maintained between The Company and the employee's designated qualified laboratory. Re-testing shall be performed at the employee's expense. In the event of conflicting results, The Company may require a third test. Should the results of this test be positive, the employee will be terminated. In the event of negative test results on the re-tests, The Company shall pay for the re-tests and any lost wages as per Part 4, Section 4.

**Section 3.** Any urine samples that are determined to be chemically altered shall be considered positive and the employee is subject to immediate termination without the opportunity for a "Continuation of Work Agreement". If a urine sample cannot be analyzed because of dilution, a re-test will be required. A second diluted sample shall be considered positive. A positive test or refusal to submit a re-test will be grounds for termination.

**Section 4.** Any employee who successfully challenges a positive result shall be reimbursed for the costs associated with challenging the test.

**Section 5.** The Company reserves the right to require additional safeguards that serve the best interest of the employee or the Drug and Alcohol Program.

## **REHIRE CONDITIONS**

Should an employee be terminated as a result of a positive test or refusal to submit to a test, and be eligible for rehire, he/she shall be treated as a new hire. Rehire status, as a result of a termination shall result in the loss of all accrued seniority, employment status and other benefits. Eligibility for rehire is not a guarantee of employment. All eligible rehires shall sign an "Agreement for Continuation of Employment"

## **VOLUNTARY ADMITTANCE**

Should an employee voluntarily admit to a substance abuse problem, the employee may not be terminated. The employee may be suspended without pay until a Substance Abuse Counselor has made an evaluation. Should this evaluation require participation in a rehabilitation program, the employee will be permitted to return to work only if employee signs an "Agreement for Continuation of Employment."

## **Agreement for Continuation of Employment**

As part of the employee's commitment to remain free of alcohol and drug use, it is understood that the employee's continuation of employment by The Company is based upon and constrained by the following terms and conditions:

The employee must submit to evaluation of potential alcohol or drug problems by an authorized Substance Abuse Professional (SAP).

1. The employee must agree to participate in all rehabilitation treatment recommended by the SAP performing the evaluation.
2. The employee must authorize the SAP to provide a copy of the rehabilitation treatment recommendations to The Company.
3. A SAP must agree to closely monitor the employee's attendance at all required sessions. The SAP will notify The Company of the employee's failure to satisfactorily attend treatment sessions. Failure of the employee to adhere to the program for treatment will lead to termination of employment.
4. In the event the employee is absent from work during the period of rehabilitation treatment, he/she may be subject to alcohol or drug testing.
5. During the period of the rehabilitation treatment as prescribed by the SAP, The Company will randomly test the employee for alcohol and drug use. Such random tests will not exceed eight random tests during a twelve month period. However, such random tests are in addition to any drug and alcohol testing that may be in accordance with The Company drug and alcohol policy such as, company-wide random testing, pre-employment testing or probable suspicion. It will be considered a voluntary quit without an option for rehire if an employee refuses to submit to testing or if the employee tests positive for drugs or alcohol during this period.
6. It is understood that this agreement is a onetime offer. Failure to adhere to this agreement will be considered a voluntary quit without the option for rehire.

This Agreement is voluntarily entered in by the employee and in consideration for continuation of employment; the above conditions are hereby agreed to.

\_\_\_\_\_  
Employee (Print Name)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Employee Signature

\_\_\_\_\_  
Supervisor (Print Name)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Supervisor Signature