



Port
of Seattle®



SAFETY AND HEALTH HANDBOOK

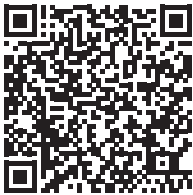
PORT OF SEATTLE CONSTRUCTION



UPDATED JULY 2022



RESOURCES



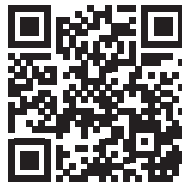
**CONSTRUCTION
SAFETY MANUAL**



**MARITIME
PROPERTIES MAP**



**SEA AIRPORT
TERMINAL MAP**



**SEA AIRPORT
INTERACTIVE MAP**



MISSION STATEMENT

The Port of Seattle is dedicated to the principle that a safe project is a successful project. The Port is committed to the safety of its employees, the surrounding community, and the environment.

The Port of Seattle's Commission adopted a Zero Injury Goal in 1996 (Resolution 3213). An excerpt from the Resolution is as follows:

NOW, THEREFORE, it is resolved by the Port Commission of the Port of Seattle that:

1. All Port of Seattle workplaces should be healthful and safe.
2. Establishing and maintaining healthful and safe workplaces will be an integral part of the Port's mission.
3. Every Port director, manager and supervisor is expected to recognize health and safety as good business, provide needed support and resources to health and safety programs and activities, and demonstrate by his/her own behavior, decisions and action as a strong commitment to health and safety.
4. Every Port employee is expected to demonstrate a positive attitude toward accident prevention, and follow safety and healthy work practices; and
5. Every Port employee is expected to make every effort to achieve the following health and safety goals:
 - No accidents or injuries at the workplace.
 - No workdays lost as a result of accidents or injuries.
 - No claims from accidents and injuries.
 - No safety or health-related regulatory citations or fines.

On the construction sites, we extend this to zero impacts from construction activities – zero injuries, zero damage to facilities, and zero impacts to traveling public or tenant operations.

Contractors shall make every effort to provide a safe and healthy work environment free of recognized hazards.

The effectiveness of this safety program depends on the combined efforts of the Port personnel, Contractors, and the Building Trades. To achieve this goal a Safety Committee has been established. This Committee will meet monthly to monitor projects and provide input on Safety and Health issues.

CULTURE OF CARE

The Port of Seattle is pleased to join the Association of General Contractors of Washington (AGC) in their Culture of Commit, Attract, Retain and Empower (CARE) Initiative and Resource Center. The values promoted by Culture of CARE, construction workforce diversity, retention and respectful relationships, align very well with priorities of our Port as directed by the Commission and practiced by our staff.

Culture of CARE responds to the needs to expand the construction workforce, to provide equitable opportunity and to ensure respect. Bringing together public agencies and construction companies in this initiative promotes consistency and synergy of our efforts.

This initiative meshes with Port measures such as priority hire, support of pre-apprenticeship programs, apprentice preferred entry and goals for employment of diverse apprentice populations on Port construction jobs. The Culture of CARE program supports diversity and inclusion by setting industry standards, providing best practices and delivering training and jobsite tools.

The Port values its longstanding partnership with the AGC and commends this initiative as an important step in diversifying the construction industry and making jobs and opportunity available to all.

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1. GENERAL SAFETY PRACTICES

- A. Immediately report unsafe equipment, hazardous conditions, and unsafe acts to your Foreman or Supervisor. Your company's management is responsible for maintaining safe and healthy conditions on the project.
- B. A Job Hazard Analysis (JHA) shall be completed for each construction activity and signed by the individuals performing that activity.
- C. Do not use compressed oxygen to blow dust or dirt from clothing, skin, or work surfaces. This may cause serious injury and/or create a serious fire hazard.
- D. Electrical cords, hoses, and leads must be protected or elevated. They must be kept clear of walkways and other locations where they may be exposed to damage or create tripping hazards.
- E. Obey all warning signs and safety tags (such as "Keep Out", "No Smoking", "Caution/Danger", "Hot Work", "Hole", etc.).
- F. Clothing, jewelry, and hair must not hang loose to the point where it can be caught in moving parts of machinery.
- G. Pants must be full-length. Cut-off shorts and other such apparel are not permitted.
- H. Tank tops, net shirts, cut-off shirts, or sleeveless shirts may not be worn.
- I. Keep the work area clean of debris and tools. Do not leave materials and scrap where they will be hazardous to others.
- J. Firearms are forbidden on Port projects.
- K. The possession and/or use of drugs and alcohol or being under their influence are prohibited while on the project.
- L. Fighting or horseplay will not be tolerated.
- M. Do not take shortcuts. Use provided ladders, ramps, stairways, and walkways. Never cross through a closed or barricaded area.
- N. Equipment will be shut off when lubricated, refueled, or adjusted.
- O. Only qualified, trained, personnel shall operate aerial lifts, forklifts, or motorized equipment and machinery.
- P. Access to the work area is controlled by the Contractor. Individuals other than responding Police & Fire or authorized Port Engineering Representatives must first contact the Engineer or Contractor's Management.

- Q. Contractor employees shall be subject to Disciplinary Action including removal from the project for violation of safety rules.
- R. Properly prepare physically and mentally for the workday by participating in stretching exercises.

2. FIRST AID & INJURY REPORTING

- A. To prevent further injury, never move an injured or seriously ill person. Emergency procedures shall be posted on the project (familiarize yourself with them). Employees not designated by their employer for first aid procedures shall not administer first aid.
- B. Report all work related injuries and illnesses immediately to your supervisor. The incident will be recorded. Should medical attention be needed, you will have a record of your injury.
- C. The Contractor shall immediately report to the Engineer and Port of Seattle Construction Safety all injuries or illnesses as well as near miss, property damage, and public and tenant impacts.

3. PERSONAL PROTECTIVE EQUIPMENT

- A. All employees, visitors, and vendors shall adhere to the following rules while on the project:
 - 1. Hard hats shall be worn at all times. Alterations shall not be made to the hat or its suspension.
 - 2. Safety glasses or eye protection shall be worn at all times.
 - 3. Face protection shall be utilized as required by the work activity taking place.
 - 4. Tight fitting welding goggles and/or face shields of the proper shade shall be utilized by those performing welding or flame cutting activities or when assisting.
 - 5. Gloves, appropriate to the task, shall be worn at all times. If use of gloves creates a greater hazard it shall be indicated on the JHA.
 - 6. Substantial footwear, made of leather or equally firm material, shall be worn.
 - 7. Employees engaged in the use of soil compacting equipment shall utilize metatarsal protection.
- B. Respiratory protection shall be worn in accordance with DOSH Standards when performing tasks that expose personnel to dust, gases, fumes, and vapors.

- C. 100% fall protection shall be utilized when working from unprotected elevations greater than four (4) feet in height. When fall arrest is required, a full body harness with lanyard shall be utilized. (See Fall Protection section of this handbook.)
- D. Hearing protection shall be worn in areas posted as high noise areas or when working around or using equipment identified by the Contractor as posing a high noise hazard. 100% hearing protection is required when on the Airfield Operations Area (AOA).
- E. Employees exposed to vehicle traffic or heavy equipment shall wear Class 2 reflective vests that meets or exceeds the ANSI/ISEA 107-2004 performance standard. In addition, 100% vest usage is required when on the Airfield Operations Area (AOA) and in the Airport Bagwell.

4. LIFTING PROCEDURES

- A. When lifting, here are some points to remember:
 - Keep your back straight.
 - Do not lean over.
 - Bend your knees.
 - Get down close to the load.
 - Lift gradually using your legs.
 - Do not jerk or twist.
 - Get help for bulky or heavy loads.
 - Whenever possible, try to use mechanical aids to reduce the amount of lifting that you are required to do.

5. LADDERS

- A. Manufactured ladders must be rated for extra heavy-duty work.
- B. Job-made ladders must be constructed such that they conform to established safety standards.
- C. Ladders used for access to a floor, platform or excavation must extend at least three (3) feet above the landing or trench.
- D. Ladders shall be inspected prior to each use and broken or damaged ladders shall be immediately removed from service and the work area.
- E. Do not splice short ladders together to make a longer ladder.
- F. All straight ladders must be tied off at the top and bottom or otherwise secured to prevent movement.

- G. Ladders must not be placed against or in front of movable objects.
- H. The areas around the top and base of ladders must be free of tripping hazards such as loose materials, trash, and electrical cords.
- I. Ladders that extend into passageways or doorways, where they could be struck by personnel, moving equipment or materials being handled, must be protected by barricades or guards.
- J. Employees must face the ladder at all times when ascending or descending.
- K. The base of the ladder must be set back a safe distance from the vertical (approximately one fourth) of the working length of the ladder.
- L. Be sure that your shoes are free of mud, grease, or other substances that could cause a slip or fall.
- M. Always move the ladder to avoid overreaching.
- N. Do not carry materials up or down the ladder. Use both hands to go up or down a ladder.
- O. Employees must never stand on the top two steps of or straddle a stepladder.
- P. Stepladders must be fully opened to permit the spreader to lock.
- Q. Metal ladders must not be used for electrical work or in areas where they could contact energized wiring.

6. FALL PROTECTION

- A. 100% fall protection shall be maintained. This includes, but not limited to, transitions between lifts and work areas, transitions between horizontal lifeline systems, climbing reinforcing steel, and work between warning lines and fall hazards.
- B. Walking working surfaces: Every open sided floor, platform, or surface four (4) feet or more above adjacent floor or ground level shall be guarded by a standard railing or the equivalent.
- C. Work other than on walking working surfaces: When workers are exposed to a hazard of falling from a location four (4) feet or more in height, the employer's competent fall protection person shall ensure that fall restraint, fall arrest systems or positioning device systems are provided, installed, and implemented.
- D. Anchorage points for fall arrest shall be installed to where free fall distance will be limited to a maximum of six (6) feet and such that the employee will not contact any lower level.

- E. A written Fall Protection Work Plan is mandatory for all contractors involved in work that exposes personnel to fall hazards of ten (10) feet or greater.
- F. Port of Seattle owned fall protection systems shall only be utilized when the Port has granted permission of use.
- G. The "Safety Monitor System" is not recognized as an acceptable means of fall protection on Port projects.

7. FLOOR/WALL OPENINGS AND STAIRWAYS

- A. Every open-sided floor or platform four (4) feet or more above the adjacent floor or ground level must have a guardrail system or other fall protection system in place prior to accessing.
- B. All floor openings and holes in slabs or decking must be secured when installed to prevent accidental displacement by wind, equipment, or employees. It must be capable of supporting four times the intended load, but never less than 200lbs and marked with the word "hole" or "cover" in a high visibility paint to provide warning of the hazard. Reference WAC 296-880-26005.
- C. When it is necessary to work inside the barricade area of or around a floor opening, you must utilize appropriate fall protection equipment.
- D. On stairways, for every twelve (12) feet of vertical rise, there must be a landing platform.
- E. Every flight of stairs having four or more risers or rising more than thirty inches must be equipped with a handrail system. The handrail is to be not less than thirty-six (36) inches from the upper surface.
- F. When warning lines are utilized for "control zones" at floor openings or at open-sided floors or platforms, they must be placed a minimum of fifteen (15) feet back from the edge.

8. SCAFFOLDING

- A. No scaffold shall be erected, altered, dismantled, or moved unless supervised and directed by a competent and qualified person.
- B. All scaffolds shall have a scaffold "use" tag as described in the Construction Safety & Health Manual attached at ALL access points of the scaffold.
- C. Top rail, mid-rails, and toe-boards must be installed on all open

sides of scaffolds at a height of six (6) feet or more. Guardrails, mid-rails, and toe-boards should be constructed with components furnished by the manufacturer. Where this is not possible, sound 2 x 4-inch lumber must be used for the guardrails.

- D. Scaffold planks must be at least two-inch (2) x ten-inch (10) full thickness lumber, plank grade, or the equivalent.
- E. Scaffold planks must extend over the end supports by at least six (6) inches but not more than twelve (12) inches.
- F. All scaffold platforms shall be fully planked or decked.
- G. All scaffold members must be visually inspected before each use. Damaged scaffold members that are cracked or damaged shall be removed from service immediately.
- H. Access ladders must be provided for each scaffold. Climbing the end frames is prohibited unless their design incorporates an approved ladder or equivalent safe means of access.
- I. Adequate mudsills or other rigid scaffold footing, capable of withstanding the maximum intended load, must be provided.
- J. Scaffolds must be secured to the structure at intervals that do not exceed thirty (30) feet horizontally and twenty-six (26) feet vertically.
- K. Outriggers, guying, tying, bracing, or other equivalent means must be provided for supported scaffolds with a height to least base dimension ratio of greater than 4 to 1.
- L. Barrels, boxes, kegs, and similar unstable objects must never be used as work platforms or to support scaffolds.
- M. Where persons are required to work or pass under a scaffold, a scaffold screen of 18 gauge, 1/2" wire mesh or equivalent protection is required between the toe-board and the top of guardrail.
- N. Overhead protection is required if employees working on scaffolds are exposed to overhead hazards.
- O. Stilts, used to facilitate overhead work, must have area delineated and only used on a smooth, level floor surface. The surface must be free of deformations that would create a trip hazard to include, but not limited to; pits, holes, and obstructions such as debris and other tripping or falling hazards. Ensure stilts are properly maintained and are not altered without written manufacturer's approval.

9. ROLLING SCAFFOLDS

- A. Rolling scaffolds shall only be used on level surfaces.
- B. The work platform must be planked tight for the full width of the scaffold.
- C. Caster brakes must be locked when the scaffold is not in motion.
- D. Get help when moving rolling scaffolds. The force used to move the scaffold must be applied as low to the base as practical.
- E. Secure or remove all loose materials and equipment before moving scaffold. Watch for holes and other hazards in/on the floor.
- F. Outriggers, guying, tying, bracing, or other equivalent means must be provided for supported scaffolds with a height to least base dimension ratio of greater than 4 to 1.
- G. Scaffolds two (2) or more frames high must be erected with a horizontal, diagonal cross brace on the bottom of the frame, no more than twenty-four (24) inches above the base of the bottom frame.

10. TWO-POINT SUSPENDED SCAFFOLDS

- A. Each employee working from a two-point suspended scaffold must be tied off to an independent lifeline. Ropes must be protected from burning or welding.
- B. Suspended scaffold platforms must not be more than thirty-six (36) inches wide unless designed by a qualified person.
- C. Wire ropes used to suspend scaffolds must have a safety factor six (6) times the maximum intended load.

11. EXCAVATION & TRENCHING

- A. Excavations or trenches four (4) or more feet deep must be shored, sloped, or benched. The same measures must be taken if excavations or trenches less than four (4) feet deep are determined by a competent person to have the potential for cave-in.
- B. Each excavation must be inspected by a competent person on a daily basis or after each rain, snow, freeze, etc. If evidence of cave-ins or slides is apparent, all work in the excavation must cease until necessary precautions have been taken to safeguard employees. Inspections shall be documented in writing.
- C. Materials must be placed two (2) feet or more away from the edge of the excavation. Precautions must be taken to prevent such materials from falling into the excavation.

- D. Where vehicles or equipment operate near excavations or trenches, the sides of the excavation must be shored or braced as necessary to withstand the force exerted by the superimposed load. Also, berms or barricades shall be provided and maintained that will divert or stop vehicles or equipment from driving into the excavation. Berm or barricade height shall be at least mid-axle of the largest equipment.
- E. Shoring materials that are found to be damaged or in disrepair must be removed from service.
- F. Excavations and trenches may be classified as “Confined Spaces” — permitted or non-permitted. Employees entering will be required to follow Confined Space Entry Procedures.
- G. Safe access must be provided into all excavations and trenches by means of ladders, stairs, or ramps.
- H. Trenches four (4) feet or more in depth must have ladders spaced so that employee’s lateral travel does not exceed twenty-five (25) feet. Such ladders must extend at least thirty-six (36) inches above grade level.
- I. Walkways, bridges, or ramps with standard guardrails must be provided where employees are required to cross over excavations or trenches four (4) feet or more in depth.
- J. Trenches or excavations with vertical drops that expose excavation employees to fall hazards over six (6) feet shall be guarded by warning lines, standard guard rails or personal fall protection systems.

12. EARTHWORK & HEAVY EQUIPMENT

- A. The operator is personally responsible for the safe operation and movement of equipment.
- B. In the course of the work shift, it shall be the operator’s responsibility to immediately report unsafe conditions that arise with the equipment or on the site.
- C. Smaller vehicles such as pick-up and maintenance trucks shall be equipped with strobe/beacon lights to enhance visibility around equipment.
- D. The use of seat belts is mandatory while operating equipment or riding in vehicles.
- E. All equipment and heavy-duty vehicles shall be equipped with a reverse signal alarm distinguishable from the surrounding noise level. If the surrounding noise level is so loud that reverse signal

alarms are not effective, then an observer must be used. *Note: Dump trucks require an audible alarm and an observer.*

- F. Equipment shall not be moved until the operator is sure that all individuals are clear of the equipment.
- G. Equipment shall operate within the specified guidelines of any energized power line per WAC 296-155-428 (1) (e).
- H. Berms or barricades shall be provided and maintained on roadways where drop-offs of sufficient grade or depth exists.

13. HOUSEKEEPING

- A. Scrap materials and rubbish should be removed on a daily basis.
- B. Trash containers should be located in all work areas.
- C. Light materials, styrofoam or packaging can become Foreign Object Debris (FOD) for airlines. Please secure or dispose of it properly!
- D. Tools and materials must be placed where they will not create hazards to others.
- E. All oily or combustible rags must be placed in approved metal containers.
- F. Spilled liquids can cause safety, health or environmental problems and should be cleaned up immediately.
- G. Remove all protruding nails, staples, screws, or other objects prior to handling to minimize puncture opportunities.
- H. Unobstructed access shall be maintained at all times to all exits, fire alarm boxes, fire extinguishing equipment, and any other emergency equipment.

14. ELECTRICAL SAFETY

- A. All tools and equipment including cord sets shall be inspected prior to use. Damaged tools and or cords shall be removed from service.
- B. All portable electric tools must be grounded (with the exception of Underwriters Laboratory approved double insulated tools).
- C. Temporary lighting must have guards over the bulbs. Broken and burned out lamps/bulbs must be replaced immediately. Do not attempt to remove broken bulbs until the circuit is de-energized.
- D. Circuit breaker switches shall be labeled as to what they control.
- E. Energized wiring junction boxes, circuit breaker panels and similar equipment must be covered and labeled.

- F. A Ground Fault Circuit Interrupter (GFCI) is required whenever plugging into any power source.
- G. Hazardous areas shall be barricaded, and appropriate warning signs posted.

15. TOOL SAFETY

A. POWDER-ACTUATED TOOLS

1. Only trained employees are permitted to use powder-actuated tools. Certification cards must be in the user's possession.
2. Follow all manufacturer instructions when using powder-actuated tools.
3. Unused or misfired loads must be properly disposed of.
4. Powder Actuated Tools require Port Construction Management notification and a Port of Seattle Fire Department Permit prior to use.

B. PNEUMATIC POWER TOOLS

1. Pneumatic power tools and hose sections shall be secured by threaded couplings or quick disconnect couplings. A 100-pound tensile strength safety chain or equivalent shall be used at each hose connection to prevent the tool or hose from becoming accidentally disconnected.
2. Safety clips or retainers shall be securely installed and maintained on pneumatic impact tools to prevent attachments from being accidentally expelled.
3. Compressed air shall not be used at the nozzle for cleaning purposes except when reduced to less than thirty (30) p.s.i. and then only with effective chip guarding and personal protective equipment.

C. FUEL POWERED TOOLS.

1. All fuel powered tools shall be turned off while being refueled, serviced, or maintained, and fuel shall be transported, handled, and stored properly.
2. When fuel powered tools are used in enclosed spaces, proper controls must be in place to prevent the accumulation of toxic gases.

- D. Appropriate PPE must be worn for the task and tool being used (chain saw – chaps, chop saw – face protection in addition to safety glasses and hearing protection)

- E. All tools and equipment including hoses, guards and wheels shall be inspected prior to use.

16. FIRE PREVENTION AND PROTECTION

- A. Contractors shall instruct all employees in the proper use and location of fire fighting equipment.
- B. In case of fire, assure the safety of all personnel and call 911.
- C. At least one 2A:10BC rated fire extinguisher shall be readily accessible to all welding and hot work areas.
- D. Portable fire extinguishers shall be inspected monthly and recorded on the inspection tag. Extinguishers shall be verified operational when performing Hot Work duties.
- E. All fuel storage areas shall have adequate fire protection equipment.
- F. All materials shall be stored, handled, and piled with due regard to fire characteristics.
- G. Flammable and combustible liquids or compressed gases shall not be stored in any enclosed building or below grade without written permission of the Fire Department.
- H. A one-day supply of flammable/combustible liquids, paints, etc., is allowed inside a building in approved containers only.
- I. Safety cans are to be used for the transferring of flammable or combustible liquids. Safety cans are defined as follows: An approved closed container of not more than 5 gallons capacity, having a spring-closing lid and spout cover, designed to relieve internal pressure, and equipped with an internal spark arrestor.
- J. Use approved solvents for cleaning and de-greasing. The use of gasoline or similar flammable products for this purpose is prohibited.
- K. The use of open fires is prohibited.
- L. Observe and obey all fire protection plans, hot work permits, no smoking, or other warning signs.

17. CONFINED SPACE ENTRY

- A. The Contractor shall develop a Confined Space Entry Program in accordance with DOSH and the Port of Seattle Confined Space Entry Program.
- B. All employees shall be trained in their duties prior to entering a confined space entry.

- C. The Contractor is responsible for air quality monitoring prior to and during entry.
- D. The Contractor shall post the permit and identify the Competent/Qualified Person responsible at each confined space operation.
- E. Retrieval equipment shall be utilized for permit-required confined space entries.
- F. Considerations for hot work permits, emergency rescue, and respirator protection should be taken.
- G. Before entry is made into any energized electrical cable vault or manhole, an infrared tester or equivalent shall be used to scan the cables and connectors.
- H. There is no minimum depth requirement for confined spaces.
- I. Safety harnesses are required for all confined space entries.

18. HOT WORK

- A. A Hot Work Permit is required prior to use of any open flame equipment, gas or arc welding and cutting, brazing, cad welding, or spark producing equipment usage.

The permit shall be requested from and issued by:

Aviation: Site Safety Representative/Fire Safety Supervisor.
(This is in addition to the Port of Seattle Fire Department Hot Work Permit which can be obtained from the Port of Seattle Fire Marshall at (206) 787-4653. The permit must be posted along with the permit conditions.

Maritime: Site Safety Representative/Fire Safety Supervisor.
(This is in addition to the Seattle Fire Department Hot Work Permit which can be obtained from the Seattle Fire Marshall at (206) 386-1450. The permit must be posted along with the permit conditions.

- B. All personnel involved in hot work will conduct an inspection prior to starting work and shall monitor conditions for the time allotted on the Hot Work Permit after completion of the work in the hot work area. The inspection is to ensure that flammables and combustibles are not present and that no possibility of fire exists.
- C. When engaged in hot work operations, required personal protective equipment shall be used.
- D. Combustible materials shall not be stored within thirty-five (35) feet of the hot work operations.

- E. When normal fire prevention or precautions are not sufficient, a crew member, other than the person doing the welding, shall act as the designated fire watch at all times the hot work operation is in progress as designated on the Hot Work Permit.
- F. The equipment, including hoses, gauges, leads, or cords being used shall be in good condition, inspected on a regular basis, and shall be immediately removed from service if found to be defective.
- G. Regulators shall be equipped with "flashback" protection devices, as well as back flow protection devices at both the torch and regulator hose attachment ends.

19. COMPRESSED GAS CYLINDER STORAGE

- A. Cylinders shall be kept away from ignition sources and other sources of heat.
- B. Empty cylinders shall have their valves closed, capped, tagged as empty and shall be stored separately from fully charged cylinders.
- C. Compressed gas cylinders shall be secured in an upright position at all times, including when hoisted.
- D. Acetylene and Oxygen cylinders shall be separated when not in use by twenty (20) feet or by a 1-hour rated firewall five (5) feet in height.
- E. A fire extinguisher of properly rated capacity and type shall be placed no closer than twenty-five (25) feet, but no farther than seventy-five (75) feet from compressed fuel gas storage places.
- F. Compressed gases shall not be stored in any enclosed building or below grade without written permission of the Fire Department.

20. CRANES & RIGGING

- A. Operators of power-operated equipment used in construction that can hoist, lower, and horizontally move a suspended load shall possess certification from the NCCCO.
- B. Accessible areas within the swing radius of all cranes must be barricaded to prevent employees, vehicles, or equipment from being struck by the counterweight.
- C. A fire extinguisher rated at least 5BC must be located in the cab of each crane.
- D. Safety latches are required on all crane and spreader cable hooks so equipped.
- E. Equipment shall operate within the specified guidelines of any en-

energized power line per WAC 296-155-53408.

- F. Loads must be guided and prevented from swinging by attaching a tag line of sufficient length.
- G. Loads must not be suspended on an unattended crane.
- H. When the operator's vision is obstructed, a designated employee shall observe clearance of the equipment and give timely warning for all operations.
- I. Personnel or motorized equipment shall not pass under suspended loads.
- J. The annual State Inspection, Examination Certificate and daily inspection forms shall be available on the cranes at all times.
- K. The use of a suspended work platform is prohibited under normal circumstances.
- L. Rigging shall be inspected prior to each use.
- M. Only qualified personnel shall rig loads or signal crane operator.
- N. All hoisting equipment will utilize pads under extended outriggers.
- O. All hoisting activities require a written "Pre-Lift Talk Plan" prior to commencing.
- P. A "Critical Pick" is defined as any lift exceeding 75% of the crane's rated capacity (this may vary depending on the manufacturer's specifications), any lift involving more than one crane, or any lift involving unusual or severe circumstances. Factors such as excessive weight, shape, or size, rigging, and weather or ground conditions, shall be considered before hoisting. Prior to such work beginning, the Contractor shall submit a written plan to the Engineer.

Q. For steel erection, multiple lift rigging shall consist of:

- A maximum of five members hoisted per lift.
- Rigged at least seven feet apart.
- Only beams and similar structural members are lifted and,
- Include other requirements of WAC 296-155-704(5).

21. WORKING AROUND CONVEYORS

- A. Baggage Handling Conveyor Systems start and stop without warning. Never use a conveyor system for access, as a work surface, or a work platform.
- B. Prior to working around conveyors employees shall receive conveyor orientation through the POS Construction Safety Department.

- C. A thirty-six (36) inch clear space shall be maintained at all times while working around operating conveyors. This includes working above, below and to the sides.
- D. Conveyors shall be shutdown, locked and tagged out prior to any work close enough in proximity for any tools, equipment, materials, or persons to come within thirty-six (36) inches to the side, above, or below it.
- E. Work over conveyors shall require the conveyor to be protected from incidental contact from tools, materials, or sparks by a fire-retardant barrier.
- F. Contact the POS Conveyor Shop for any assistance needed.

22. AERIAL LIFTS & ELEVATED WORK PLATFORMS

- A. Only authorized personnel shall operate any lifts.
- B. Equipment is to be inspected daily prior to use. Inspections are to be documented on the daily inspection sheet.
- C. Controls must be clearly marked as to function.
- D. Load limits shall not be exceeded. This includes personnel, tools, and materials.
- E. Lifts are not to be used as material lifts. Only the material that will be used in the performance of the task is to be in the lift.
- F. Standing on the toe boards, guard rails, buckets, boxes, or other items to gain height is not allowed.
- G. Full body harness with shock absorbing lanyards are to be worn at all times while in an articulating lift. Lanyards are to be secured to the manufacturer's provided tie off point. Scissor lifts do not typically require harness and lanyard fall protection. Follow the manufacturer's recommendations /safety practices
- H. Personnel shall not attach fall protection to a structure, pole, equipment, or other objects outside the basket unless exiting the basket to access a higher elevation. Utilizing a lift to access higher elevations must be covered in a Fall Protection Work Plan.
- I. Ground and floor surfaces must be examined prior to using the lift. The area above the lift is to be checked for obstructions and clearances.
- J. The swing radius of articulating lifts must be protected.
- K. Before lowering a lift, check around the base to make sure it is clear of materials and / or personnel.

23. WORKING OVER OR NEAR WATER

- A. Personnel shall wear a U.S. Coast Guard approved personal flotation device within 6' of any exposure to falling into water where the potential for drowning exists.
- B. Life rings with at least 90 feet of line shall be available and highly visible. At least one portable or permanent ladder that reaches from the top of the deck to the surface of the water shall be available in the work area.
- C. A skiff or other type of lifeboat should be available at all times. Location of this vessel should be clearly posted.
- D. Gangplanks with the proper handrail should be provided for accessing floating rigs and for crossing between barges and other crafts. Gangplanks should be a minimum of 18" and secured against displacement and surfaces should be non-slip material.
- E. For diving operations refer to WAC 296-37.
- F. Jacob's ladders shall be of the double or flat tread type.
- G. Decks and other working surfaces shall be maintained in a safe condition.

24. ENVIRONMENTAL AWARENESS

- A. All projects with ground disturbing activity must have a storm-water pollution prevention plan (SWPPP) covering erosion control, monitoring, spill prevention, and hazardous materials management. The SWPPP consists of Port of Seattle Specifications 01 57 13 Temporary Erosion and Sediment Control and 01 57 23 Pollution Prevention Planning.
- B. To ensure compliance with permit requirements, contract specifications require construction site BMPs to be inspected daily and within 24-hours after any storm event with greater than 0.5 inches of rain in 24-hours.
- C. Records must be kept of all inspections and available onsite.
- D. All stormwater runoff from the project site will be monitored for turbidity, pH, and visual sheen.
- E. The Port's Environmental Awareness Training is required for all contractor employees and Port personnel working on construction sites. This is applicable for all projects.
- F. At the airport, no discharge of construction stormwater to the Industrial Wastewater System is allowed without prior approval.
- G. Cover bare soil to protect from rain and Cover soil stockpiles when not in active use.
- H. No visible sediment is allowed to leave the project site onto paved surfaces.
- I. Minimize fugitive dust by keeping vehicle speeds low, lightly watering exposed surfaces, sweeping of surfaces.
- J. Concrete wash only into steel pans made for this purpose
- K. All chemicals and gas cans kept in secondary containment.
- L. Gas powered stationary equipment shall be kept in secondary containment and drip pans shall be placed under all mobile equipment unused for 4 hours or more.
- M. Fuel only in areas that don't drain to stormwater and over plastic, spill pads and/or secondary containment.
- N. Clean up all spills and notify Port Inspector or Engineer.
- O. Communicate locations of spill kits to all personnel.

AVIATION CONSTRUCTION

FREQUENTLY CALLED NUMBERS

POLICE, FIRE, & MEDICAL EMERGENCIES:

Dial 911 (Ask to be connected to The Port of Seattle/Sea-Tac Airport)

Dial 9 - 911 from a Port Phone (Landline)

SECURITY/SAFETY

POS Police Emergency(206) 787-5380

POS Police Non-Emergency(206) 787-3490

POS Fire Dept. Emergency.....(206) 787-5380

POS Fire Dept. Non-Emergency.....(206) 787-5327

POS Fire Dept. Permits.....(206) 787-4653

Airport Duty Manager(206) 787-4682

Conveyor Shop.(206) 787-4003

Report Airport Hazards.....(206) 787-7233

CONSTRUCTION SAFETY SERVICES

Manager Const. SafetyDesk (206) 787-7894

..... Mobile (206) 457-6756

Const. Safety Office..... Desk (206) 787-7812

.....Mobile (206) 348-1368

MARITIME CONSTRUCTION

FREQUENTLY CALLED NUMBERS

POLICE, FIRE, & MEDICAL EMERGENCIES:

Dial 911

Dial 9 -911 from a Port Phone (Landline)

SECURITY/SAFETY

POS Police Emergency.....(206) 787-5380

POS Police Non-Emergency (206) 787-3490

Seattle Police Emergency.....911

Seattle Police Non-Emergency (206) 625-5011

Seattle F.D. Emergency.....911

Seattle F. D. Non-Emergency.....(206) 386-1400

Seattle F. D. Permits.....(206) 386-1331

Maritime Maintenance(206) 787-3350

CONSTRUCTION SAFETY SERVICES

Manager Const. SafetyDesk (206) 787-7894

..... Mobile (206) 457-6756

Const. Safety Office..... Desk (206) 787-7812

.....Mobile (206) 348-1368

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