

Crane Safety Program

Revised April 2024

Purpose

The Crane program is designed to provide direction to our employees while ensuring a safe workplace free from recognized hazards. This program identifies employee responsibilities to reduce risk of exposure to hazards associated with crane operations that fall under the scope of [WAC 296-45 Electric Power Generation, Transmission, and Distribution](#) and [WAC 296-155- Part L Cranes, Rigging, and Personnel Lifting](#)

Applicability

The Crane Safety Program applies to all District employees working under the scope and application of WAC 296-45 and WAC 296-155.

Note: District employees utilizing digger derricks under the scope of WAC 296-45 are exempt from crane certification requirements.

Responsibility and Communication

Management Responsibilities

- Implement this program within their scope of responsibility.
- Conduct workplace safety assessments.
- Ensure all operators, signal people, riggers, and lift directors are trained and qualified per [WAC 296-155-53300 Operator qualifications and certifications](#) .
- Ensure employees who operate, signal, rig and set-up cranes are trained on this program and the additional requirements of WAC 296-155 PART L

Worker Responsibilities

- Discuss the specific crane operations during the tailboard to include designating the rigger, signal person and lift director.
- Utilize stop work authority if site conditions change, such as high winds, changes in crane stability, encroachment to energized powerlines or lack of trained personnel to complete the task.
- Complete crane operator certifications as mandated by the WAC or training provider.
- Maintain a logbook of all crane operating hours, type, and tonnage.
- Notify safety and management when training or program deficiencies are identified.

Safety Department Responsibilities

- Program administration to include audit, inspection, and updates to ensure regulatory compliance.
- Assist Line training with the evaluation and selection of a qualified crane training / certification provider.
- Participate in risk assessments, program development and management implementation.

General Construction Crane Operation Responsibilities

Note: A single individual may perform one or more of the assignments below concurrently

Operator

- Responsible for the safe operation of the crane and activities that affect the movement of the crane and associated load.
- Coordinates load placement and rigging
- Understands the scope and application of WAC 296-155-53000
- Responsible to assign a spotter when working in proximity to energized equipment.
- Maintains a logbook of all crane operations.
- Exercises stop work when site conditions change that impact the safe operation of the crane or employees and when qualified riggers and signal people are unavailable.
- Completes critical lift documentation.
- Completes functional testing prior to any personnel lifts.

Lift Director

- Directly oversees the work being performed by the crane.
- Utilizing stop authority if any unsafe conditions are observed.
- Ensures that personnel involved in the crane operation understand their assigned duties, and the associated hazards.
- Ensuring that the applicable requirements of [WAC 296-155-547 Personnel lifting platforms \(attached and suspended\) Scope](#) through [WAC 296-155- 55405 Lifting personnel using a boatswain's chair](#) are met when lifting personnel.
- Monitoring the crane's proximity to energized equipment.

Rigger

- Responsible for securing, hooking, guiding, and unhooking loads to cranes.
- Trained on the ANSI B-30 rigging standards.
- Trained and knowledgeable in the selection, use and limitations of slings, below the hook lifting devices, rigging hardware and hitches.
- Trained and knowledgeable in load weight estimates, center of gravity, effect of angles on rigging components, knots, tag lines and basic hand signals.
- Demonstrates proficiency through a written test and basic proficiency testing every 5 years or when observed abilities warrant further training and testing.

Signal Person

- Responsible for directing the operator on the safe placement of the load.
- Responsible for providing direction to the operator to ensure they are not encroaching safe working distances to energized equipment.
- Qualification requirements:
 - Know and understand the type signals used (hand and radio)
 - Demonstrate competency in signals used.
 - Trained to have a basic understanding of crane operation to include stability, boom deflection, swinging loads, moment loading and safe approach distances to energized equipment.
 - Demonstrate proficiency through a written test and basic proficiency testing every 5-years or when observed abilities warrant further training and testing.

Training

Learning Central offers multiple trainings for various crane types as well as rigging safety training.

Key Definitions

Note: A full list of definitions related to WAC 296-155 PART L can be found under [WAC 296-155-52902 Definitions](#)

A/D director (assembly/disassembly). An individual who meets the requirements in this part for an A/D director, irrespective of the person's formal job title or whether the person is nonmanagement or management personnel.

Assembly/disassembly. The assembly and/or disassembly of components or attachments covered under this part. With regard to tower cranes, "erecting and climbing" replaces the term "assembly," and "dismantling" replaces the term "disassembly." Regardless of whether the crane is initially erected to its full height or is climbed in stages, the process of increasing height of the crane is an erection process.

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

Dedicated spotter (power lines). To be considered a dedicated spotter, the requirements of [WAC 296-155-53302 Signal person qualifications](#) must be met, and their sole responsibility is to watch the separation between the power line and the equipment, the load line and load (including rigging and lifting accessories) and ensure through communication with the operator that the applicable minimum approach distance is not breached.

Digger derrick. A multipurpose vehicle-mounted machine which is primarily designed to accommodate components that dig holes, set poles, and position materials and apparatus.

Ground crew. Those individuals who are involved in the personnel lift, other than the hoisting equipment operator and the platform occupants. These individuals include riggers, signal persons, and supervision.

Hoisting. The act of raising, lowering or otherwise moving a load in the air with equipment covered by this standard. As used in this standard, “hoisting” can be done by means other than wire rope/hoist drum equipment.

Load. The weight of the object being lifted or lowered, including the weight of the load attaching equipment such as the load block, ropes, slings, shackles, and any other auxiliary attachment.

Power lines. Electrical distribution and electrical transmission lines.

Qualified person. A person who, by possession of a recognized degree, certificate, or professional standing, or who by extensive knowledge, training, and experience, successfully demonstrated the ability to solve/resolve problems relating to the subject matter, the work, or the project.

Qualified rigger. A rigger who meets the requirements in [WAC 296-155-53306 Rigger qualifications](#) .

Qualified signal person. A signal person who meets the requirements in [WAC 296-155-53302 Signal person qualifications](#) .

Rated capacity. The maximum working load permitted by the manufacturer under specified working conditions. Such working conditions typically include a specific combination of factors such as equipment configuration, radii, boom length, and other parameters of use.

Working load. The external load applied to the hoisting equipment, including the personnel lifting platform, its contents, and the load attaching equipment, such as lowered load block, shackles, and slings.