
SUBSTITUTE HOUSE BILL 2022

State of Washington

68th Legislature

2024 Regular Session

By House Labor & Workplace Standards (originally sponsored by Representatives Reed, Berry, Ryu, Ormsby, Reeves, and Santos)

1 AN ACT Relating to construction crane safety; amending RCW
2 49.17.400, 49.17.420, 49.17.440, and 49.17.190; adding new sections
3 to chapter 49.17 RCW; adding a new section to chapter 36.70B RCW;
4 creating a new section; and prescribing penalties.

5 BE IT ENACTED BY THE LEGISLATURE OF THE STATE OF WASHINGTON:

6 NEW SECTION. **Sec. 1.** The legislature finds that there is
7 significant opportunity to improve worker and public safety in tower
8 crane assembly, disassembly, and reconfiguration. The Seattle tower
9 crane incident on April 27, 2019, killing two members of the public,
10 Sarah Pantip Wong and Alan Jay Justad, and two iron workers, Travis
11 Daniel Corbet and Andrew W. Yoder, exposed weaknesses in construction
12 safety efforts. Requirements for permitting, street closures, and
13 penalties are created to ensure that assembly, disassembly, and
14 reconfiguration of tower cranes proceed safely.

15 NEW SECTION. **Sec. 2.** A new section is added to chapter 49.17
16 RCW to read as follows:

17 Sections 3 through 10 of this act apply to construction crane
18 safety.

1 **Sec. 3.** RCW 49.17.400 and 2007 c 27 s 2 are each amended to read
2 as follows:

3 The definitions in this section apply throughout ((RCW 49.17.400
4 ~~through 49.17.430~~)) this section and sections 4 through 7 of this act
5 unless the context clearly requires otherwise.

6 (1) "Apprentice operator or trainee" means a crane operator who
7 has not met requirements established by the department under RCW
8 49.17.430.

9 (2) "Attachments" includes, but is not limited to, crane-attached
10 or suspended hooks, magnets, grapples, clamshell buckets, orange peel
11 buckets, concrete buckets, drag lines, personnel platforms, augers,
12 or drills and pile-driving equipment.

13 (3) "Certified crane inspector" means a crane inspector who has
14 been certified by the department.

15 (4) "Construction" means all or any part of excavation,
16 construction, erection, alteration, repair, demolition, and
17 dismantling of buildings and other structures and all related
18 operations; the excavation, construction, alteration, and repair of
19 sewers, trenches, caissons, conduits, pipelines, roads, and all
20 related operations; the moving of buildings and other structures, and
21 the construction, alteration, repair, or removal of wharfs, docks,
22 bridges, culverts, trestles, piers, abutments, or any other related
23 construction, alteration, repair, or removal work. "Construction"
24 does not include manufacturing facilities or powerhouses.

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

39 (6) "Crane operator" means an individual engaged in the operation
40 of a crane.

1 (7) "Professional engineer" means a professional engineer as
2 defined in RCW 18.43.020.

3 (8) "Qualified crane operator" means a crane operator who meets
4 the requirements established by the department under RCW 49.17.430.

5 (9) "Safety or health standard" means a standard adopted under
6 this chapter.

7 (10) "Assembly, disassembly, and reconfiguration" means the
8 assembly, disassembly, or reconfiguration of cranes covered under
9 this section and sections 4 through 7 of this act.

10 (11) "Assembly/disassembly work zone" is applicable to tower
11 cranes and means the total area that the crane and/or components or
12 attachments could reach if the crane were to collapse. Height of the
13 crane, length of boom, attachments, and loads, shall all be
14 considered to calculate the area, which can shrink or grow as the
15 work progresses.

16 (12) "Crane owner" means the company or entity that has custodial
17 control of a crane by virtue of lease or ownership.

18 (13) "Crane user" means the person or entity that arranges the
19 crane's location on a worksite and controls its use.

20 (14) "Prime contractor" means the person or entity that has
21 overall responsibility for the construction of the project, its
22 planning, quality, and completion and serves as the site supervisor.

23 (15) "Reconfiguration" means adding or subtracting components
24 that alter the height, length, or capacity of a crane. The set-up of
25 a crane is not considered reconfiguration.

26 NEW SECTION. Sec. 4. A new section is added to chapter 49.17
27 RCW to read as follows:

28 (1) The prime contractor must obtain a permit from the department
29 prior to performing or allowing the performance of any work involving
30 the operation, assembly, disassembly, or reconfiguration of a tower
31 crane. An exemption from the permit requirement may be allowed by the
32 department for exceptions as determined by the department. For
33 example, exceptions may be allowed for self-erecting and mobile
34 cranes if determined by the department.

35 (2) (a) The prime contractor must possess an active and
36 unrestricted permit, as required under subsection (1) of this
37 section, at all times a tower crane is present on a construction
38 worksite.

1 (b) At no times may a tower crane be operated, assembled,
2 disassembled, or reconfigured without a valid permit. If the permit
3 is suspended or revoked, the tower crane may not be used in
4 operations, nor can assembly, disassembly, or reconfiguration take
5 place until all deficiencies have been addressed and the permit is
6 reinstated by the department.

7 (3) The prime contractor must apply for a permit required under
8 this section. The application must include information needed to
9 ensure safety and establish clear responsibility for the operations,
10 assembly, disassembly, and reconfiguration of a tower crane. The
11 application must include, but is not limited to, the following:

- 12 (a) Name and unified business identifier number;
- 13 (b) Project site address;
- 14 (c) Contact person's name and contact information for the overall
15 project safety;
- 16 (d) Name of the prime contractor;
- 17 (e) Name of the crane owner;
- 18 (f) Name of crane user(s) at the worksite;
- 19 (g) Contractor registration number of the prime contractor;
- 20 (h) Name of the assembly/disassembly director;
- 21 (i) Beginning January 1, 2027, a copy of the assembly/disassembly
22 director's national assembly/disassembly director certification from
23 an approved national accrediting organization;
- 24 (j) Project anticipated start and end dates;
- 25 (k) Crane manufacturer and crane model;
- 26 (l) An attestation from the prime contractor that the prime
27 contractor will comply with all applicable occupational safety and
28 health standards;
- 29 (m) An attestation from the prime contractor that the prime
30 contractor will comply with all manufacturer operation instructions
31 and guidelines for the subject crane and/or written procedures from a
32 registered professional structural engineer;
- 33 (n) Certification from the prime contractor that the prime
34 contractor will comply with all applicable requirements of this
35 chapter and all applicable safety standards and that the conditions,
36 practices, means, methods, operations, or processes used or proposed
37 to be used will be safe and healthful;
- 38 (o) Certification that the prime contractor will post at the
39 worksite the permit to operate, assemble, disassemble, and
40 reconfigure the tower crane, and the current crane certification;

1 (p) A written job plan as required under RCW 49.17.440; and

2 (q) Certification from the prime contractor that all assembly,
3 disassembly, and reconfigurations will be performed with a safety
4 representative for the tower crane distributor or manufacturer
5 present to assure that such processes and operations are performed in
6 accordance with manufacturer operation instructions and guidelines.

7 (4) Prior to issuing a permit, the department must complete a
8 safety permit conference to ensure all parties involved with the
9 assembly, disassembly, and reconfigurations of the tower crane are
10 aware of the requirements and responsibilities under the permit,
11 including manufacturer operation instructions and guidelines and
12 recommended best practices. The safety permit conference shall
13 require the presence of at least the following: Permit applicant,
14 assembly/disassembly director, safety representative for the tower
15 crane distributor or manufacturer, representatives of the employees
16 conducting the assembly, disassembly, or reconfiguration of the tower
17 crane and, if the project is a public works projects, representatives
18 of the governmental entity overseeing the project. During the safety
19 permit conference, at a minimum the following items must be
20 evaluated:

21 (a) The previous history of safety and health violations,
22 including those violations under other business identities during the
23 previous seven-year period for the permit applicant and all entities
24 required in the operation, assembly, disassembly, and reconfiguration
25 of the tower crane;

26 (b) The potential risks of the procedures, including those
27 addressed in the crane operating manual, as well as specific measures
28 to be taken by the permit applicant and all entities required in the
29 operation, assembly, disassembly, and reconfiguration of the tower
30 crane to minimize these risks;

31 (c) The written accident prevention programs of the permit
32 applicant and all entities involved in the operation, assembly,
33 disassembly, and reconfiguration of the tower crane;

34 (d) Applicable tower crane requirements under this chapter and
35 department rules and safety standards;

36 (e) The permit applicant's written job plan as required under RCW
37 49.17.440; and

38 (f) For each employee directly involved with the permitted work,
39 a written self-attestation of their experience and qualifications in
40 the assembly, disassembly, and reconfiguration of the tower crane

1 being assembled, disassembled, or reconfigured, including an attached
2 copy of the crane operator's license.

3 (5) (a) As a condition of a valid permit, the permit holder must
4 notify the department when there is a change to any crane user or the
5 crane assembly/disassembly director that is different from what was
6 listed in the original permit application.

7 (b) In addition, as a condition of a valid permit, the permit
8 holder must notify the department in advance of any assembly,
9 disassembly, or reconfiguration of the tower crane in a time
10 specified by the department and receive confirmation from the
11 department to proceed. The department may require additional
12 information or an update safety conference before issuing a
13 confirmation to proceed. The permit holder's notice must include, but
14 is not limited to:

15 (i) The type of work being performed, such as assembly,
16 disassembly, or reconfiguration of the tower crane; and

17 (ii) The names and contact numbers of all employers involved and
18 their role in performing the work.

19 (6) (a) As part of the permit process, the department shall
20 inspect permitted activities including but not limited to the tower
21 crane once assembled or reconfigured, and the department may inspect
22 permitted activities at any time.

23 (i) Deficiencies that directly affect the structural integrity of
24 a tower crane must be addressed immediately to ensure the health and
25 safety of worksite personnel and the public. The tower crane may not
26 be operated until deficiencies are corrected.

27 (ii) Deficiencies that directly affect the safe operation of a
28 tower crane must be corrected. The tower crane may not be operated
29 until deficiencies are corrected.

30 (b) A permit holder may not operate the tower crane once
31 assembled or reconfigured unless approved by the department following
32 the initial inspection required under this subsection.

33 (7) The department must deny a permit if:

34 (a) The application fails to include all required elements;

35 (b) The safety conference is not held in compliance with the
36 requirements under this chapter; or

37 (c) The permit applicant has a record of safety and health
38 violations which indicates that the permit applicant may not be
39 maintaining a safe worksite or operation.

1 (8) The department must suspend or revoke a permit if the permit
2 holder:

3 (a) Has failed to comply with any requirement of this chapter or
4 applicable occupational health and safety standard or regulation
5 involving tower cranes;

6 (b) Fails to notify the department in advance of the assembly,
7 disassembly, or reconfiguration of a fixed tower crane as required
8 under this section;

9 (c) Fails to ensure that a safety representative for the
10 distributor or manufacturer of the tower crane was present during
11 assembly, disassembly, or reconfiguration;

12 (d) Fails to immediately correct deficiencies directly affecting
13 the structural integrity of a tower crane;

14 (e) Fails to correct deficiencies directly affecting the safe
15 operation of a tower crane; or

16 (f) Has refused the department entry to a worksite that contains
17 activity for which a permit is required.

18 (9) The department will provide written notice of the denial,
19 suspension, or revocation of a permit to the applicant, specifying
20 the reasons for such denial, suspension, or revocation.

21 (10)(a) A denial, suspension, or revocation of a permit may be
22 appealed to department within 15 working days after the denial,
23 suspension, or revocation order is communicated.

24 (b) The department shall hold a hearing at such place designated
25 by the director or authorized representative for the convenience of
26 the attending parties within 2 working days of the applicant's or
27 suspended or revoked permit holder's appeal.

28 (c) The applicant or suspended or revoked permit holder has the
29 burden of establishing that it qualifies for a permit.

30 (d) The director or authorized representative shall preside at
31 the hearing, which must be open to employees or employees'
32 representatives.

33 (e) The applicant or permit holder shall notify the employees or
34 employees' representatives of such hearing a reasonable time prior to
35 the hearing, but in no case later than 24 hours prior to the hearing.
36 Proof of such notification by the applicant or permit holder must be
37 made at the hearing.

38 (f) The director or authorized representative shall issue a
39 decision within 10 business days of the hearing. The director's or
40 authorized representative's decision may affirm the order, reverse

1 the order, or reverse the order with conditions to mitigate any
2 deficiencies.

3 (g) The director's or authorized representative's decision is
4 subject to appeal to the board of industrial insurance appeal under
5 RCW 49.17.140.

6 **Sec. 5.** RCW 49.17.420 and 2007 c 27 s 4 are each amended to read
7 as follows:

8 (1) The department shall establish, by rule, a crane
9 certification program for cranes used in construction. In
10 establishing rules, the department shall consult nationally
11 recognized crane standards.

12 (2) The crane certification program must include, at a minimum,
13 the following:

14 (a) The department shall establish certification requirements for
15 crane inspectors, including an experience requirement, an education
16 requirement, a training requirement, and other necessary requirements
17 determined by the director;

18 (b) The department shall establish a process for certified crane
19 inspectors to issue temporary certificates of operation for a crane
20 and the department to issue a final certificate of operation for a
21 crane after a certified crane inspector determines that the crane
22 meets safety or health standards, including meeting or exceeding
23 national periodic inspection requirements recognized by the
24 department;

25 (c) Crane owners must ensure that cranes are inspected and load
26 proof tested by a certified crane inspector at least annually and
27 after any significant modification or significant repairs of
28 structural parts. If the use of weights for a unit proof load test is
29 not possible or reasonable, other recording test equipment may be
30 used. In adopting rules implementing this requirement, the department
31 may consider similar standards and practices used by the federal
32 government;

33 (d) Tower cranes and tower crane assembly parts must be inspected
34 by a certified crane inspector (~~both~~) prior to and following every
35 assembly ((and following erection)), disassembly, and reconfiguration
36 of a tower crane. Any issues identified throughout the procedure must
37 be tracked and corrected according to this chapter and applicable
38 department rule;

1 (e) Before installation of a nonstandard tower crane base, the
2 engineering design of the nonstandard base shall be reviewed and
3 acknowledged as acceptable by an independent professional engineer;

4 (f) A certified crane inspector must notify the department and
5 the crane owner if, after inspection, the certified crane inspector
6 finds that the crane does not meet safety or health standards. A
7 certified crane inspector shall not attest that a crane meets safety
8 or health standards until any deficiencies are corrected and the
9 correction is verified by the certified crane inspector; and

10 (g) Inspection reports including all information and
11 documentation obtained from a crane inspection shall be made
12 available or provided to the department by a certified crane
13 inspector upon request.

14 (3) Except as provided in RCW 49.17.410(2), any crane operated in
15 the state must have a valid temporary or final certificate of
16 operation issued by the certified crane inspector or department
17 posted in the operator's cab or station.

18 (4) Certificates of operation issued by the department under the
19 crane certification program established in this section are valid for
20 one year from the effective date of the temporary operating
21 certificate issued by the certified crane inspector.

22 (5) This section does not apply to maritime cranes regulated by
23 the department.

24 **Sec. 6.** RCW 49.17.440 and 2007 c 27 s 6 are each amended to read
25 as follows:

26 (1) The department of labor and industries shall adopt rules
27 necessary to implement ((RCW 49.17.400 through 49.17.430)) sections 3
28 through 7 of this act.

29 (2) The department shall adopt rules for tower crane assembly,
30 disassembly, and reconfiguration including, but not limited to:

31 (a) A process for determining when the department will be present
32 for the assembly, disassembly, and reconfiguration of a tower crane;

33 (b) Requirements that the prime contractors of construction
34 projects acknowledge all applicable safety orders, crane manufacturer
35 operation instructions and guidelines, and recommended practices
36 prior to the assembly, disassembly, and reconfiguration of a tower
37 crane;

38 (c) Requirements that the prime contractor of the construction
39 project ensure that a qualified safety representative of the

1 distributor or manufacturer will be present during assembly,
2 disassembly, and reconfiguration of a tower crane to assure that such
3 procedures are performed in accordance with manufacturer operation
4 instructions and guidelines;

5 (d) Requiring prime contractors of construction projects to
6 follow crane manufacturer operation instructions and guidelines or
7 alternate plans/instructions approved by a registered professional
8 engineer when assembling, disassembling, and reconfiguring a tower
9 crane;

10 (e) Requiring the presence of an assembly/disassembly director at
11 every tower crane assembly, disassembly, and reconfiguration to
12 directly oversee all work performed. The assembly/disassembly
13 director may not serve in any other capacity while directly
14 supervising a tower crane assembly, disassembly, or reconfiguration
15 procedure;

16 (f) Conducting programmed inspections of workplaces that contain
17 tower cranes;

18 (g) Establishing requirements for the maximum allowable wind
19 speed for tower crane assembly, disassembly, and reconfiguration;

20 (h) Establishing requirements for a written job plan that
21 addresses the requirements of the manufacturer's manual tailored to
22 the site conditions where the tower crane will be installed, as
23 appropriate for assembly, disassembly, and reconfiguration of a tower
24 crane;

25 (i) Establishing requirements that must be met to be considered a
26 competent and qualified assembly/disassembly director;

27 (j) Establishing effective stop work procedures that ensure the
28 authority of any employee, including employees of contractors, to
29 refuse or delay the performance of a task related to a tower crane
30 that the employee believes could reasonably result in serious
31 physical harm or death. The rules must ensure that employees who
32 exercise stop work authority are protected from intimidation,
33 retaliation, or discrimination; and

34 (k) Other rules necessary to implement sections 3 through 7 of
35 this act.

36 (3) The department may set fees in rule to be charged for permits
37 issued under section 4 of this act in an amount sufficient to cover
38 the costs of administering sections 3 through 10 of this act. Fees
39 shall be deposited in the industrial insurance trust funds.

1 NEW SECTION. **Sec. 7.** A new section is added to chapter 49.17
2 RCW to read as follows:

3 A tower crane manufacturer and distributor shall, without
4 exception, provide all relevant manufacturer operation instructions
5 and guidelines, including assembly, disassembly, and reconfiguration
6 instructions, for the safe use and maintenance of all of the
7 manufacturer's or distributor's tower cranes located in the state to
8 any person who requests access to such materials. The prescribed
9 information, format, and distribution channel must be determined by
10 the department. These materials must be written in the English
11 language with customary grammar and punctuation. Information must be
12 provided within a reasonable time frame, as determined by the
13 department.

14 NEW SECTION. **Sec. 8.** A new section is added to chapter 36.70B
15 RCW to read as follows:

16 (1) When a worksite contains a tower crane, the municipality in
17 which the tower crane is located must, at a minimum, do the following
18 before any assembly, disassembly, or reconfiguration of the tower
19 crane:

20 (a) Align permit issuance for street closures with the definition
21 of assembly/disassembly work zone when a tower crane is being
22 assembled, disassembled, reconfigured, or otherwise not fully
23 stabilized and secure;

24 (b) Issue permits in a timely manner allowing for sufficient time
25 to safely conduct assembly, disassembly, or reconfiguration; and

26 (c) Provide notice to residents and occupants in buildings within
27 the assembly/disassembly work zone in advance of any assembly,
28 disassembly, or reconfiguration.

29 (2) For purposes of this section, "assembly, disassembly, or
30 reconfiguration" and "assembly/disassembly work zone" have the same
31 meanings as those terms are defined in RCW 49.17.400.

32 NEW SECTION. **Sec. 9.** A new section is added to chapter 49.17
33 RCW to read as follows:

34 The provisions of this act do not apply to cranes used on marine
35 vessels and at ports, terminals, and marine facilities or in maritime
36 activities regulated by the department.

1 **Sec. 10.** RCW 49.17.190 and 2011 c 96 s 40 are each amended to
2 read as follows:

3 (1) Any person who gives advance notice of any inspection to be
4 conducted under the authority of this chapter, without the consent of
5 the director or his or her authorized representative, shall, upon
6 conviction be guilty of a gross misdemeanor and be punished by a fine
7 of not more than one thousand dollars or by imprisonment for not more
8 than six months, or by both.

9 (2) Whoever knowingly makes any false statement, representation,
10 or certification in any application, record, report, plan, or other
11 document filed or required to be maintained pursuant to this chapter
12 shall, upon conviction be guilty of a gross misdemeanor and be
13 punished by a fine of not more than ten thousand dollars, or by
14 imprisonment for not more than six months or by both.

15 (3) Any employer who willfully and knowingly violates the
16 requirements of RCW 49.17.060, any safety or health standard
17 promulgated under this chapter, any existing rule or regulation
18 governing the safety or health conditions of employment and adopted
19 by the director, or any order issued granting a variance under RCW
20 49.17.080 or 49.17.090 and that violation caused death to any
21 employee shall, upon conviction be guilty of a gross misdemeanor and
22 be punished by a fine of not more than (~~one hundred thousand~~
23 ~~dollars~~) \$100,000 or by imprisonment for not more than six months or
24 by both; except, that if the conviction is for a violation committed
25 after a first conviction of such person, punishment shall be a fine
26 of not more than (~~two hundred thousand dollars~~) \$200,000 or by
27 imprisonment for not more than (~~three hundred sixty-four~~) 364 days,
28 or by both.

29 (4) Any employer who has been issued an order immediately
30 restraining a condition, practice, method, process, or means in the
31 workplace, pursuant to RCW 49.17.130 or 49.17.170, and who
32 nevertheless continues such condition, practice, method, process, or
33 means, or who continues to use a machine or equipment or part thereof
34 to which a notice prohibiting such use has been attached, shall be
35 guilty of a gross misdemeanor, and upon conviction shall be punished
36 by a fine of not more than (~~ten thousand dollars~~) \$10,000 or by
37 imprisonment for not more than six months, or by both.

38 (5) Any employer who shall knowingly remove, displace, damage, or
39 destroy, or cause to be removed, displaced, damaged, or destroyed any
40 safety device or safeguard required to be present and maintained by

1 any safety or health standard, rule, or order promulgated pursuant to
2 this chapter, or pursuant to the authority vested in the director
3 under RCW 43.22.050 shall, upon conviction, be guilty of a
4 misdemeanor and be punished by a fine of not more than (~~one thousand~~
5 ~~dollars~~) \$1,000 or by imprisonment for not more than (~~ninety~~) 90
6 days, or by both.

7 (6) An employer is guilty of a misdemeanor if the employer: (a)
8 Allows any person to engage in the assembly, disassembly, or
9 reconfiguration of a tower crane without direct supervision by a
10 competent and qualified assembly/disassembly director as required
11 under this chapter and defined by the department; or (b) allows a
12 tower crane to be assembled, disassembled, or reconfigured not in
13 accordance with manufacturer operation instructions, manufacturer
14 guidelines, or written procedures from a registered professional
15 structural engineer.

16 (7) Whenever the director has reasonable cause to believe that
17 any provision of this section defining a crime has been violated by
18 an employer, the director shall cause a record of such alleged
19 violation to be prepared, a copy of which shall be referred to the
20 prosecuting attorney of the county wherein such alleged violation
21 occurred, and the prosecuting attorney of such county shall in
22 writing advise the director of the disposition he or she shall make
23 of the alleged violation.

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