

CERTIFICATION OF ENROLLMENT
SECOND SUBSTITUTE HOUSE BILL 2022

Chapter 311, Laws of 2024

68th Legislature
2024 Regular Session

CONSTRUCTION CRANE SAFETY

EFFECTIVE DATE: January 1, 2025

Passed by the House March 5, 2024
Yeas 96 Nays 0

LAURIE JINKINS

**Speaker of the House of
Representatives**

Passed by the Senate February 23,
2024
Yeas 48 Nays 0

DENNY HECK

President of the Senate

Approved March 28, 2024 10:20 AM

JAY INSLEE

Governor of the State of Washington

CERTIFICATE

I, Bernard Dean, Chief Clerk of the House of Representatives of the State of Washington, do hereby certify that the attached is **SECOND SUBSTITUTE HOUSE BILL 2022** as passed by the House of Representatives and the Senate on the dates hereon set forth.

BERNARD DEAN

Chief Clerk

FILED

March 29, 2024

**Secretary of State
State of Washington**

SECOND SUBSTITUTE HOUSE BILL 2022

AS AMENDED BY THE SENATE

Passed Legislature - 2024 Regular Session

State of Washington 68th Legislature 2024 Regular Session

By House Appropriations (originally sponsored by Representatives Reed, Berry, Ryu, Ormsby, Reeves, and Santos)

READ FIRST TIME 02/05/24.

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; providing an effective date; and prescribing
5 penalties.

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

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

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

18 Sections 3 through 10 of this act apply to construction crane
19 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) "Prime contractor" means the person or entity that has
19 overall responsibility for the construction of the project, its
20 planning, quality, and completion and serves as the site supervisor.

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

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

26 (1) The department shall establish, by rule, a permit for the
27 performance of any work involving the operation, assembly,
28 disassembly, or reconfiguration of a tower crane, subject to the
29 requirements of subsection (2) of this section.

30 (2) The tower crane permit established by rule under subsection
31 (1) of this section must include the following provisions, at a
32 minimum:

33 (a) Require a complete application, subject to the requirements
34 of subsection (5) of this section;

35 (b) Require a safety conference prior to issuing the permit,
36 subject to the requirements of subsection (6) of this section;

37 (c) Require the department to issue or deny a permit, subject to
38 the requirements of subsections (7) and (8) of this section;

1 (d) Allow the department to suspend or revoke a permit, subject
2 to the requirements of subsection (9) of this section;

3 (e) Require the department to provide written notice of denials,
4 suspensions, or revocation of a permit specifying the reasons for the
5 denial, suspension, or revocation;

6 (f) Allow appeals of a denial, suspension, or revocation of a
7 permit, subject to the requirements of subsection (10) of this
8 section;

9 (g) Require advance notification to the department of any
10 assembly, disassembly, or reconfiguration of a tower crane and
11 require confirmation from the department to proceed;

12 (h) Allow the department to require additional information or
13 updated safety conferences before issuing a confirmation to proceed
14 under (g) of this subsection;

15 (i) Require the department to inspect permitted activities for
16 the tower crane once assembled, following any reconfiguration, or any
17 other permitted activities; and

18 (j) Require that if the department identifies deficiencies that
19 directly affect the structural integrity or safe operation of a tower
20 crane, the deficiencies be addressed immediately, and the tower crane
21 not be operated until the deficiencies are corrected.

22 (3) Beginning January 1, 2026, a prime contractor must obtain a
23 permit from the department, as established under this section, prior
24 to performing or allowing the performance of any work involving the
25 operation, assembly, disassembly, or reconfiguration of a tower
26 crane. An exemption from the permit requirement may be allowed by the
27 department for exceptions as determined by the department.

28 (4)(a) The prime contractor must possess a permit, as required
29 under subsection (3) of this section, at all times a tower crane is
30 present on a construction worksite.

31 (b) If the prime contractor's permit is suspended or revoked, the
32 tower crane may not be used in operations, nor can assembly,
33 disassembly, or reconfiguration take place until all deficiencies
34 have been addressed and the permit is reinstated by the department.

35 (5) The prime contractor must apply for a permit required under
36 subsection (3) of this section in a manner and form prescribed by the
37 department that must include, but is not limited to, the following:

38 (a) Name of the assembly/disassembly director;

39 (b) Beginning the later of January 1, 2027, or 12 months after
40 the date an assembly/disassembly director program is approved by a

1 nationally accredited organization recognized by the department, the
2 application must include a copy of the assembly/disassembly
3 director's national assembly/disassembly director certification; and

4 (c) Certification from the prime contractor that all assembly,
5 disassembly, and reconfigurations will be performed with a technical
6 representative of the distributor or manufacturer present to assure
7 that such processes and operations are performed in accordance with
8 manufacturer operation instructions and guidelines. The technical
9 representative must be knowledgeable of assembly, disassembly, and
10 reconfiguration procedures.

11 (6) (a) Prior to issuing a permit as required under subsection (3)
12 of this section, the department must complete a safety permit
13 conference, which may be conducted using remote videoconference
14 technology, to ensure all parties involved with the assembly,
15 disassembly, and reconfiguration of the tower crane are aware of the
16 requirements and responsibilities under the permit, including
17 manufacturer operation instructions and guidelines, and recommended
18 best practices. The department must establish the information and
19 materials required to be submitted prior to the safety conference,
20 the information and material required to be reviewed at the safety
21 conference, and the required attendees at the safety conference.

22 (b) During the safety conference, at a minimum the following
23 items must be evaluated:

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

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

32 (iii) The permit applicant's written job plan as required under
33 RCW 49.17.440; and

34 (iv) For each employee directly involved with the permitted work,
35 a review of their experience and qualifications, including a copy of
36 the crane operator's license.

37 (7) The department shall issue a permit under this section within
38 five working days of the initial project permit safety conference
39 under subsection (6) of this section, if the application materials
40 are complete and the materials presented by the prime contractor at

1 the safety conference are complete. If the application or safety
2 conference materials are not complete, the prime contractor must be
3 given a written list, before leaving the safety conference, of the
4 materials or information outstanding. The department shall then
5 either issue the permit within five working days of receiving the
6 outstanding materials or deny the permit in writing pursuant to the
7 requirements under this chapter and rules established by the
8 department. The department may issue conditional permits, including
9 when specific information is not yet available.

10 (8) The department must deny a permit if the permit applicant has
11 a record of safety and health violations which indicates that the
12 permit applicant may not be maintaining a safe worksite or operation.

13 (9) The department must suspend or revoke a permit if the permit
14 holder:

15 (a) Has failed to comply with applicable occupational health and
16 safety standards or regulations involving tower cranes;

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

20 (c) Fails to ensure that a technical representative of the
21 distributor or manufacturer of the tower crane who is knowledgeable
22 of assembly, disassembly, and reconfiguration procedures was present
23 during assembly, disassembly, or reconfiguration;

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

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

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

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

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

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

1 (d) The director or authorized representative shall preside at
2 the hearing, which must be open to employees or employees'
3 representatives.

4 (e) The applicant or permit holder shall notify the employees or
5 employees' representatives of such hearing a reasonable time prior to
6 the hearing, but in no case later than 24 hours prior to the hearing.
7 Proof of such notification by the applicant or permit holder must be
8 made at the hearing.

9 (f) The director or authorized representative shall issue a
10 decision within 10 business days of the hearing. The director's or
11 authorized representative's decision may affirm the order, reverse
12 the order, or reverse the order with conditions to mitigate any
13 deficiencies.

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

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

19 (1) The department shall establish, by rule, a crane
20 certification program for cranes used in construction. In
21 establishing rules, the department shall consult nationally
22 recognized crane standards.

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

25 (a) The department shall establish certification requirements for
26 crane inspectors, including an experience requirement, an education
27 requirement, a training requirement, and other necessary requirements
28 determined by the director;

29 (b) The department shall establish a process for certified crane
30 inspectors to issue temporary certificates of operation for a crane
31 and the department to issue a final certificate of operation for a
32 crane after a certified crane inspector determines that the crane
33 meets safety or health standards, including meeting or exceeding
34 national periodic inspection requirements recognized by the
35 department;

36 (c) Crane owners must ensure that cranes are inspected and load
37 proof tested by a certified crane inspector at least annually and
38 after any significant modification or significant repairs of
39 structural parts. If the use of weights for a unit proof load test is

1 not possible or reasonable, other recording test equipment may be
2 used. In adopting rules implementing this requirement, the department
3 may consider similar standards and practices used by the federal
4 government;

5 (d) Tower cranes and tower crane assembly parts must be inspected
6 by a certified crane inspector (~~both~~) prior to and following every
7 assembly (~~and following erection~~), disassembly, and reconfiguration
8 of a tower crane. Any issues identified throughout the procedure must
9 be tracked and corrected according to this chapter and applicable
10 department rule;

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

14 (f) A certified crane inspector must notify the department and
15 the crane owner if, after inspection, the certified crane inspector
16 finds that the crane does not meet safety or health standards. A
17 certified crane inspector shall not attest that a crane meets safety
18 or health standards until any deficiencies are corrected and the
19 correction is verified by the certified crane inspector; and

20 (g) Inspection reports including all information and
21 documentation obtained from a crane inspection shall be made
22 available or provided to the department by a certified crane
23 inspector upon request.

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

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

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

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

36 (1) The department of labor and industries shall adopt rules
37 necessary to implement (~~(RCW 49.17.400 through 49.17.430)~~) sections 3
38 through 7 of this act.

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

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

5 (b) Requirements that the prime contractors of construction
6 projects acknowledge all applicable safety orders, crane manufacturer
7 operation instructions and guidelines, written procedures from a
8 registered professional structural engineer, and recommended
9 practices prior to the assembly, disassembly, and reconfiguration of
10 a tower crane;

11 (c) Requirements that the prime contractor of the construction
12 project ensure that a qualified technical representative of the
13 distributor or manufacturer who is knowledgeable of assembly,
14 disassembly, and reconfiguration procedures will be present during
15 assembly, disassembly, and reconfiguration of a tower crane to assure
16 that such procedures are performed in accordance with manufacturer
17 operation instructions and guidelines;

18 (d) Requiring prime contractors of construction projects to
19 follow crane manufacturer operation instructions and guidelines or
20 alternate plans/instructions approved by a registered professional
21 engineer when assembling, disassembling, and reconfiguring a tower
22 crane;

23 (e) Requiring the presence of an assembly/disassembly director at
24 every tower crane assembly, disassembly, and reconfiguration to
25 directly oversee all work performed. The assembly/disassembly
26 director may not serve in any other capacity while directly
27 supervising a tower crane assembly, disassembly, or reconfiguration
28 procedure;

29 (f) Conducting programmed inspections of workplaces that contain
30 tower cranes;

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

33 (h) Establishing requirements for a written job plan that
34 addresses the requirements of the manufacturer's manual tailored to
35 the site conditions where the tower crane will be installed, as
36 appropriate for assembly, disassembly, and reconfiguration of a tower
37 crane;

38 (i) Establishing requirements that must be met to be considered a
39 competent and qualified assembly/disassembly director including,
40 beginning January 1, 2027, or 12 months after the date an applicable

1 certification program is approved by a nationally accredited
2 organization recognized by the department, certification from a
3 national organization recognized by the department;

4 (j) Establishing effective stop work procedures that ensure the
5 authority of any employee, including employees of contractors, to
6 refuse or delay the performance of a task related to a tower crane
7 that the employee believes could reasonably result in serious
8 physical harm or death. The rules must ensure that employees who
9 exercise stop work authority are protected from intimidation,
10 retaliation, or discrimination; and

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

13 (3) The department may set fees in rule to be charged for permits
14 issued under section 4 of this act in an amount sufficient to cover
15 the costs of administering section 4 of this act. Fees shall be
16 deposited in the industrial insurance trust funds.

17 NEW SECTION. Sec. 7. A new section is added to chapter 49.17
18 RCW to read as follows:

19 A tower crane manufacturer and distributor shall, without
20 exception, provide all relevant manufacturer operation instructions
21 and guidelines, including assembly, disassembly, and reconfiguration
22 instructions, for the safe use and maintenance of all of the
23 manufacturer's or distributor's tower cranes located in the state to
24 any person who requests access to such materials. The prescribed
25 information, format, and distribution channel must be determined by
26 the department. These materials must be written in the English
27 language with customary grammar and punctuation. Information must be
28 provided within a reasonable time frame, as determined by the
29 department.

30 NEW SECTION. Sec. 8. A new section is added to chapter 36.70B
31 RCW to read as follows:

32 (1) When a worksite contains a tower crane, the local government
33 in which the tower crane is located must, at a minimum, do the
34 following before any assembly, disassembly, or reconfiguration of the
35 tower crane:

36 (a) Align permit issuance for street closures with the definition
37 of assembly/disassembly work zone when a tower crane is being

1 assembled, disassembled, reconfigured, or otherwise not fully
2 stabilized and secure;

3 (b) Issue street closure permits with consideration for
4 sufficient time, as defined by the permit applicant, to safely
5 conduct assembly, disassembly, or reconfiguration; and

6 (c) Develop permitting procedures that provide notice to
7 residents and occupants in buildings within the assembly/disassembly
8 work zone in advance of any assembly, disassembly, or
9 reconfiguration.

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

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

15 The provisions of this act do not apply to cranes used on marine
16 vessels and at ports, terminals, and marine facilities for maritime
17 activities regulated by the department.

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

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

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

32 (3) Any employer who willfully and knowingly violates the
33 requirements of RCW 49.17.060, any safety or health standard
34 promulgated under this chapter, any existing rule or regulation
35 governing the safety or health conditions of employment and adopted
36 by the director, or any order issued granting a variance under RCW
37 49.17.080 or 49.17.090 and that violation caused death to any
38 employee shall, upon conviction be guilty of a gross misdemeanor and

1 be punished by a fine of not more than (~~one hundred thousand~~
2 ~~dollars~~) \$100,000 or by imprisonment for not more than six months or
3 by both; except, that if the conviction is for a violation committed
4 after a first conviction of such person, punishment shall be a fine
5 of not more than (~~two hundred thousand dollars~~) \$200,000 or by
6 imprisonment for not more than (~~three hundred sixty-four~~) 364 days,
7 or by both.

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

17 (5) Any employer who shall knowingly remove, displace, damage, or
18 destroy, or cause to be removed, displaced, damaged, or destroyed any
19 safety device or safeguard required to be present and maintained by
20 any safety or health standard, rule, or order promulgated pursuant to
21 this chapter, or pursuant to the authority vested in the director
22 under RCW 43.22.050 shall, upon conviction, be guilty of a
23 misdemeanor and be punished by a fine of not more than (~~one thousand~~
24 ~~dollars~~) \$1,000 or by imprisonment for not more than (~~ninety~~) 90
25 days, or by both.

26 (6) An employer is guilty of a misdemeanor if the employer: (a)
27 Allows any person to engage in the assembly, disassembly, or
28 reconfiguration of a tower crane without direct supervision by a
29 competent and qualified assembly/disassembly director as required
30 under this chapter and defined by the department; or (b) allows a
31 tower crane to be assembled, disassembled, or reconfigured not in
32 accordance with manufacturer operation instructions, manufacturer
33 guidelines, or written procedures from a registered professional
34 structural engineer.

35 (7) Whenever the director has reasonable cause to believe that
36 any provision of this section defining a crime has been violated by
37 an employer, the director shall cause a record of such alleged
38 violation to be prepared, a copy of which shall be referred to the
39 prosecuting attorney of the county wherein such alleged violation
40 occurred, and the prosecuting attorney of such county shall in

1 writing advise the director of the disposition he or she shall make
2 of the alleged violation.

3 NEW SECTION. **Sec. 11.** This act takes effect January 1, 2025.

Passed by the House March 5, 2024.

Passed by the Senate February 23, 2024.

Approved by the Governor March 28, 2024.

Filed in Office of Secretary of State March 29, 2024.

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