

Crane Safety Program

Guy's Construction
123 Main Street, Anytown, CA 90210

Ontology-Backed Safety Document

Effective Date: June 08, 2026

SAMPLE DOCUMENT - NOT FOR COMPLIANCE USE

1. PURPOSE AND SCOPE

This Crane Safety Program establishes the policies, procedures, and responsibilities for the safe operation, inspection, maintenance, and use of cranes and derricks at Guy's Construction worksites. This program applies to all employees involved in crane operations, rigging, signaling, and ground work.

Covered Equipment

Equipment covered under this program: ['mobile crane', 'boom truck']. All crane operations shall comply with applicable federal OSHA standards under 29 CFR 1926 Subpart CC and any California-specific requirements.

Regulatory Authority

- 1926.1426 (Free fall and controlled load lowering) except 1926.1426(a)(2)(i)
- safety glasses meeting ANSI Z87.1 when exposed to flying particles, molten metal, liquid chemicals, acids, gases, or light radiation

29 CFR 1926.102(a)

- free from probable contact with ground, grounded metal, metal laths, or other conductive materials

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2. ROLES AND RESPONSIBILITIES

Competent Person

A competent person shall be designated for all crane operations. Responsibilities include:

- Conduct pre-shift and periodic inspections per 29 CFR 1926.1412
- Determine ground conditions are adequate to support crane and load
- Identify and establish the work zone and hazard perimeter
- Approve lift plans and critical lift plans before operations begin
- Stop crane operations when unsafe conditions are identified

Qualified Rigger

All rigging operations shall be performed by a qualified rigger. Responsibilities include:

- Inspect all rigging equipment before each use
- Select appropriate rigging hardware for load weight and configuration
- Attach and detach loads safely per established lift plan
- Maintain rigging equipment inspection records

Signal Person

A qualified signal person shall be assigned whenever the operator does not have a clear view of the load path or load. Responsibilities include:

- Use only standard hand signals per 29 CFR 1926.1419 or pre-arranged signals
- Never give signals for a movement that would be unsafe
- Wear a distinguishing vest or clothing to be easily identified

Crane Operator

Crane operators shall be certified or qualified per 29 CFR 1926.1427. Responsibilities include:

- Conduct pre-operation inspections and complete inspection logs
- Know and comply with load chart limits at all times
- Refuse to make lifts that exceed rated capacity or that are unsafe
- Report defects or malfunctions immediately to the competent person

Regulatory requirements:

- 29 CFR 1926.1427: third-party certification by accredited testing organization (NCCCO, CIC, OSCP) or employer-audited certification; recer
- 29 CFR 1926.1427(c)(1)(i): written and practical test covering knowledge and skills per 1926.1427(j)
- 1926.1427(a): Training, Certification/Licensing, and Evaluation
- API 2D / 29 CFR 1926.1400: critical lift plan per API 2D when exceeding 75% of crane capacity or meeting other criteria; NCCCO operator certificati

3. OPERATOR CERTIFICATION AND QUALIFICATION

Per 29 CFR 1926.1427, crane operators must be certified by an accredited testing organization, qualified through an audited employer program, or hold a military operator credential. No person shall operate a crane without meeting one of these standards.

Certification Requirements

- NCCCO (National Commission for the Certification of Crane Operators) certification accepted
- Certification must be current and specific to the equipment type being operated
- Operators must be evaluated by a qualified evaluator before operating on company sites
- Certification records shall be maintained on file and available for inspection
- date(s) of current qualification
- in accordance with § 214.311 whenever the roadway worker makes a good faith determination that on-track safety provisions to be applied at the job location do not comply with the rules of the operating railroad
- Liquid temperature 150-200°F (65.55-93.33°C), 21-50 degrees below boiling point, Medium evaporation, Medium gassing

Operator Record Table

Operator Name	Cert Type	Cert #	Expiration	Equipment Type

4. INSPECTION REQUIREMENTS

Daily Pre-Shift Inspection

The operator shall perform a visual inspection before each shift. The following items must be checked:

- All control mechanisms for maladjustment or deterioration
- All safety devices including limit switches, horns, lights
- Crane structure for cracks, bends, or visible damage
- Wire ropes, chains, hooks, and rigging hardware
- Fluid levels - hydraulic oil, engine oil, coolant
- Tires (if mobile crane) - inflation and condition
- Outrigger pads and blocking materials
- Load charts posted and legible in the cab
- qualified person inspection before use

29 CFR 1926.1412(a)(1)

- critical lift plan per API 2D when exceeding 75% of crane capacity or meeting other criteria; NCCCO operator certification; rigging hardware inspection

API 2D / 29 CFR 1926.1400

- closer than the minimum approach distance under Table A to a power line

29 CFR 1926.1409(d)

- planning before beginning the operation

29 CFR 1926.1432(a)

Annual Inspection

A complete inspection by a qualified person shall be conducted at least annually, or after any occurrence that may have caused damage. Annual inspection records shall be retained for the life of the equipment.

- Structural components - boom, jib, mast, outriggers, base
- Mechanical components - brakes, clutches, drives, bearings
- Electrical systems - wiring, controls, limit switches
- Wire rope - per ASME B30.2 and manufacturer specifications
- Load handling devices - hooks, blocks, sheaves

5. LIFT PLANNING

Standard Lift Plan

A lift plan shall be prepared for all lifts. The plan shall include:

- Load weight (verified) and rigging weight
- Crane model, rated capacity, and configuration
- Boom length, radius, and operating angle
- Ground bearing pressure calculation
- Swing radius and exclusion zone dimensions
- Overhead obstructions and power line clearances
- Signal person assignment and communication method
- ensure that the requirements of this subpart are met

29 CFR 1926.1432(a)(2)

- they will neither lift nor continue to lift when they are loaded in excess of their rated capacity

29 CFR 1926.705(e)

- manually propelled elevating aerial platforms as covered by ANSI/SIA A92.3-1990
- multiplying the total reduction by the fractional share that each well's gas limit bears to the arithmetic sum of the aggregate gas limits of all wells in the field from which the first purchaser has been purchasing on its same pipeline system

Critical Lift Plan

A critical lift plan is required when:

- The load exceeds 75% of the crane's rated capacity at the configuration used
- Two or more cranes are used to lift the load (tandem lift)
- The lift involves personnel being hoisted
- The load is over energized power lines
- The lift is over occupied buildings or active roadways

Critical lift plans shall be approved by a qualified person and reviewed by all crew members before the lift.

API 2D / 29 CFR 1926.1400 - critical lift plan requirements

6. GROUND CONDITIONS AND SETUP

The competent person shall assess ground conditions before each lift. Cranes shall not be set up on ground that cannot support the crane and its load.

Ground Assessment Requirements

- Identify any underground utilities, voids, tanks, or weak subgrade
- Determine soil bearing capacity relative to outrigger pad loads
- Use outrigger pads or mats of adequate size to distribute load
- Set outriggers fully extended unless load charts show partial extension capacity
- Verify level setup - most cranes require within 1% of level
- Disclose all underground hazards to the crane operator and user per 1926.1402(c)(2)

Power Line Clearances

DANGER: Power line contact is the leading cause of crane fatalities. Minimum clearance distances MUST be maintained at all times.

Voltage (kV)	Minimum Clearance	Notes
Up to 50 kV	10 ft (3 m)	Default clearance - 29 CFR 1926.1408
50 to 200 kV	15 ft (4.6 m)	
200 to 350 kV	20 ft (6.1 m)	
350 to 500 kV	25 ft (7.6 m)	
Over 500 kV	35 ft (10.7 m)	
Unknown voltage	45 ft (13.7 m)	Contact utility before proceeding

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7. CALIFORNIA STATE REQUIREMENTS

STATE-SPECIFIC: California has additional requirements that supplement federal OSHA standards.

- released from the crane or hoisting apparatus until the person detaching the load has verified that the load has been secured or supported to prevent inadvertent movement
- special training in hazards including proper inspection/removal of hoisting slings/eye-hooks/rigging components, procedures for determining proper sling length, use of rated load charts/capacities, design and use of manufactured rigging assemblies, proper rigging techniques to maintain a distance...
- identifiable and distinguishable from all other conductors
- unattended with the load suspended
- Boarding shutdown valves (BSDV) and their actuators. For subsea wells, the BSDV is the surface equivalent of an SSV on a surface well
- a justification showing why the departure is necessary and appropriate
- only one lock is necessary for isolating the energy source
- an orderly shutdown to prevent exposing any employee to risks associated with hazardous energy
- additional operator training, certification, and inspection beyond federal Subpart CC

T8 CCR 1610.5

- date(s) of current qualification
- load reaching top or bottom landings without operator knowledge
- in accordance with § 214.311 whenever the roadway worker makes a good faith determination that on-track safety provisions to be applied at the job location do not comply with the rules of the operating railroad
- Liquid temperature 150-200°F (65.55-93.33°C), 21-50 degrees below boiling point, Medium evaporation, Medium gassing
- at least 1.25 times the maximum allowable operating pressure if installed in a Class 1 location

8. RECORDKEEPING

The following records shall be maintained and available for inspection:

Record	Retained By	Retention Period
Pre-shift inspection log	Operator / Safety File	Life of equipment
Annual inspection report	Safety File	Life of equipment
Operator certification	HR / Safety File	Duration of employment
Lift plans - standard	Project File	Duration of project
Critical lift plans	Project File	3 years minimum
Incident / near-miss reports	Safety File	5 years
Maintenance records	Equipment File	Life of equipment

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9. PROGRAM ACKNOWLEDGMENT

I have received, read, and understand the Guy's Construction Crane Safety Program. I agree to comply with all requirements set forth herein.

Employee Name (Print)	Signature	Date	Supervisor

Program Approval

Safety Director: _____ Date: _____

Site Superintendent: _____ Date: _____

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