



5TH NCCCO FOUNDATION Industry Forum

What's New at Federal OSHA? *Certification, Evaluation and More*

**Scott Ketcham, Director,
OSHA Directorate of Construction**

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5TH NCCCCO FOUNDATION Industry Forum

Construction Update

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**Director, Directorate of Construction
Occupational Safety and Health Administration**

Agenda

- Directorate of Construction
- Engineering incident investigation
- Focus Four
- Regulatory Update
- Inspection Statistics
- Crane Operator Qualification
- Opioids/Suicide in Construction
- Fall Stand Down
- COVID-19



- **OCS (Construction Services)**: Field enforcement assistance, Compliance Assistance, Interpretations, ACCSH
- **OCSG (Construction Standards and Guidance)**: Develop and promulgate Construction standards; Directives; Interpretations and other guidance products
- **OES (Engineering Services)**: Forensic engineering analysis, Structural and Geotechnical Assistance

Catastrophe Incident Investigations



- Bridges
- Cranes
- Communication Towers
- Excavation and Trenching
- Formwork and Scaffolds
- Industrial Buildings (Steel, Concrete, Masonry)
- Mast Climbing Platforms
- Parking Garages
- Trusses (Steel and Timber)
- Demolitions

2018: Investigation of the Collapse of a Lattice Boom Crawler Crane

- Construction of a new wastewater treatment facility
 - Two employees on a scaffold
 - Installing wooden roof trusses
 - Lattice boom crawler crane hoisting wooden roof trusses
- Crane boom hoist wire rope failed when lifting four half wooden roof trusses, resulting in the boom falling and striking two employees on scaffolding
- One employee was killed, another was injured



Boom Hoist Line



OSHA's Findings

- Incident was caused by the *failure of the boom hoist wire rope due to fatigue*, an extensive number of wires of the exterior stands of the wire rope had fractured
- Crane operator and the contractor's technicians *did not properly inspect the crane's boom hoist wire rope during the shift and monthly* inspections in accordance with the OSHA standard 1926.1413(a)(3)(ii)

OSHA's Findings Cont.

- The contractor **failed to document its monthly inspections** of the crane and its wire ropes in accordance with OSHA standards 26 CFR 1926.1412(e)(3) and 1926.1413(b)(4)
- Metallurgical examination of the failed wire rope indicated that the extent of breaks were due to ***extensive and numerous fatigue failures***, that could have been noticed during proper shift inspections

OSHA's Findings Cont.

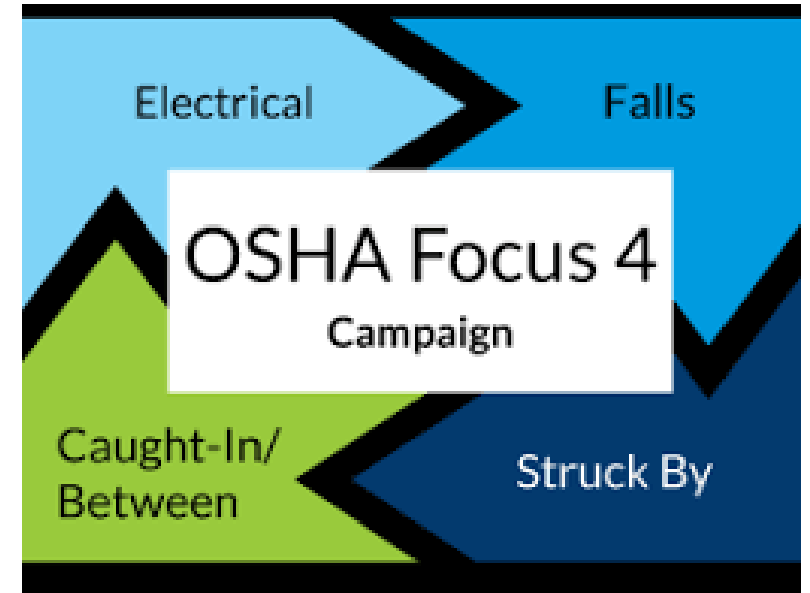
- Contractor **did not correct deficiencies** raised by the third-party inspector during the annual inspection a few months before the incident
- Contractor was **using slings and hooks that were damaged** that should have been pulled from service



Construction Focus Four

The actual breakdown of the causes of fatalities on construction sites in 2018 is as follows (numbers are a percentage of the 1,008 total construction-related fatalities that occurred in 2018):

- Falls: 338 (33.5%)
- Struck by object: 112 (11.1%)
- Electrocutions: 86 (8.5%)
- Caught in/between: 55 (5.5%)

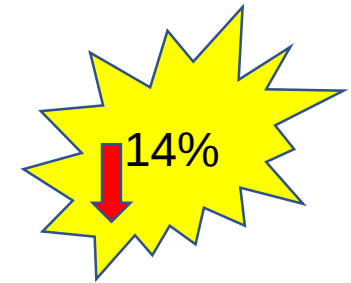


Construction Fatal Fall Incidents

Fatal Fall Incidents in Construction (323)

<u>Type of Construction</u>	<u>Number</u>	<u>Percent</u>
Roofing	77	23%
Residential Building	67	20%
Plumbing and HVAC	24	7%
Nonresidential Building	20	6%
Painting and Wall Covering	17	5%
Heavy and Civil Engineering	16	5%
Electrical	15	5%

Source: BLS 2018 CFOI Data



Construction Fatal Struck-by Incidents

Struck By Incidents in Construction (112)

	<u>Number</u>	<u>Percent</u>
Struck by falling object or equipment--other than powered vehicle (66)		
• Struck by object falling from vehicle or machinery--other than vehicle part	29	26%
Struck by powered vehicle--nontransport (26)		
• Struck by falling part of powered vehicle still attached	7	6%
• Struck by swinging part of powered vehicle	6	5%
• Struck or run over by rolling powered vehicle	5	4%

Source: BLS 2018 CFOI Data

Construction Fatal Electrocution Incidents

Electrocution Incidents in Construction (86)

	<u>Number</u>	<u>Percent</u>
Direct Exposure to electricity (49)		
• Greater than 220 volts	28	33%
• 220 volts or less	12	14%
Indirect exposure to electricity (37)		
• Greater than 220 volts	33	38%
• 220 volts or less	4	5%

Source: BLS 2018 CFOI Data

Construction Fatal Caught-in/Between Incidents

Caught in/Between Incidents in Construction (55)		
	<u>Number</u>	<u>Percent</u>
Struck, caught, or crushed in collapsing structure, equipment, or material (35)		
• Struck, caught, or crushed in other collapsing structure or equipment	19	35%
• Excavation or trenching cave-in	14	25%
Caught in or compressed by equipment or objects (20)		
• Caught in running equipment or machinery	11	20%
Source: BLS 2018 CFOI Data		

Construction Regulatory Activities

- Tech Corrections - Issued in February
- Railroad Cranes - Final Rule in effect
- Crane Amendments - NPRM Clearance
- Communication Towers - NPRM
- Welding in Confined Spaces - NPRM
- PPE in Construction - NPRM
- Powered Industrial Trucks - NPRM (ACCSH)
- Hazard Communication - NPRM



Directives

- New Excavation Directive
- New Small Unmanned Aerial System (Drone) Directive
- Updating of Crane Directive for Operator Certification



Construction Inspection Data

Top 10 Violations in Construction (OIS 10/16/20)

1) 1926.501 - Fall Protection	6) 1926.20 - General S&H Provisions
2) 1926.451 - Scaffolding	7) 1926.100 - Head Protection
3) 1926.1053 - Ladders	8) 1926.651 - Excavation Requirements
4) 1926.503 - Fall Protection Training	9) 1910.1200 - Hazard Communication
5) 1926.102 - Eye & Face Protection	10) 1926.502 - Fall Protection Systems Criteria & Practices

Construction Inspection Data Cont.

Top 10 Violations in Construction FY20 Data (OIS 10/16/20)

Standard	Total Violations	Serious Violations	Willful Violations	Repeat Violations
1926.501 - Fall Protection	5454	4317	150	850
1926.451 - Scaffolding	2549	2355	11	118
1926.1053 - Ladders	2138	1912	11	109
1926.503 - Fall Protection Training	1626	1156	9	87
1926.102 - Eye & Face Protection	1374	1209	8	115
1926.20 - General S & H Provisions	897	730	5	65
1926.100 - Head Protection	785	699	1	50
1926.651 - Excavation Requirements	703	564	7	34
1910.1200 - Hazard Communication	662	463	0	21
1926.502 - Fall Protection Systems Criteria & Practices	650	562	0	12

Crane Inspection Data

Top 10 Crane Violations FY20 Data (OIS 10/16/20)

Standard	Total Violations	Serious Violations	Willful Violations	Repeat Violations
1926.1412 - Inspections	354	197	0	7
1926.1428 - Signal person qualifications	167	111	0	3
1926.1408 - Power line safety	150	127	0	0
1926.1425 - Keeping clear of the load	142	118	0	0
1926.1417 - Operation	123	82	0	2
1926.1404 - Assembly/Disassembly	85	69	1	2
1926.1427 - Operator Qualification & Certification	84	61	2	0
1926.1431 - Hoisting personnel	73	63	0	0
1926.1413 - Wire rope-inspection	71	45	0	0
1926.1430 - Training	58	50	0	1

Crane Fatalities 2014 - 2018

Year	Totals	Construction
2014	19	14
2015	24	11
2016	32	18
2017	16	8
2018	23	8
Totals	114	59
SOURCE : BLS CFOI Data		

Crane Fatalities 2014 - 2018

Contact with objects and equipment (67) – All Industries

	<u>Number</u>	<u>Percent</u>
Struck by object or equipment	44	66%
• Struck by powered vehicle - nontransport	22	
Caught in or compressed by equipment or objects	6	9%
• Caught in running equipment or machinery	3	
Source: BLS CFOI Data		

Crane Fatalities 2014 - 2018

Construction Fatal Crane Incidents (59)

<u>Type of Crane</u>	<u>Number</u>	<u>Percent</u>
Truck mounted	21	36%
Other mobile cranes	15	24%

Source: BLS CFOI Data

Crane Operator Qualification & Certification



Background

Subpart CC - Cranes and Derricks in Construction

- Required certification by type and capacity and retained employer duty

Post-Rulemaking Concerns

- Industry stakeholders said certification by capacity unnecessary and employer should play role in operator competency
- OSHA reached out to industry to gather information

Operator Qualification Rulemaking

- Proposed rule published May 18, 2018
- Final Rule published November 9, 2018

General Requirements

- Employers must ensure operators are trained, certified/licensed, & evaluated
- Any operator not certified/licensed & evaluated is an operator-in-training
- Operators of derricks, sideboom cranes, & equipment less than 2000 lbs. are excluded
- US military employees with qualifications from the military meet these requirements

Photo: Susan Harwood Training Grants



Operator Training

- Employers must provide training to operators-in-training to ensure they have the skills, knowledge, and ability to recognize and avert risk
- Trainer must be an employee or agent of the operator-in-training's employer
- Operators-in-training must be continuously monitored
- Operators must be retrained when the operators performance or knowledge indicates it is necessary

Photo: Eastern Kentucky University



Operator Certification & Licensing

- Employer must ensure that each operator is certified or licensed
- Some jurisdictions require operators to be licensed by a state or local government entity
- Certification/licensing must be provided at no cost to employees
- Testing entities can provide both training and testing

Certification by Accredited Testing Organization

- For OSHA to consider an accredited testing organization certification to be valid, the organization must certain criteria
- If there is no certification available for a type of equipment, the operator must be certified on the most similar equipment
- A certification issued by an accredited testing organization is valid for 5-years

Audited Employer Program

- Employers certifying their own employees must certain requirements for:
 - Testing
 - Timing of audit
 - Requalification
 - Deficiencies
- Audited-program certificates are valid 5-years



Evaluation

- Employers must evaluate an operator to ensure their continued ability to recognize and avert risk necessary to operate the equipment safely
- Evaluations must meet OSHA criteria
- Employer may allow the operator to operate other equipment of the same type that the employer can demonstrate does not require substantially different skills, knowledge, or ability to recognize & avert risk
- Operators employed prior to December 10, 2018, the employer may rely on its previous assessments of the operator instead of conducting a new evaluation

Crane Directive Update and OSHA Outreach

- Amends the existing Cranes and Derricks Directive, CPL 02-01-057
- This directive does not create any new obligations on employers
- Provides OSHA enforcement personnel with guidance on conducting inspections and policy on citing violations of the standard
- Updated Small Entity Compliance Guide for the Final Rule for Cranes and Derricks in Construction
 - Will provide concise statement of crane operator training, certification, and evaluation requirements
 - Will answer frequently asked questions on certification testing and payment for certification

Telecommunication Tower Fatalities

- Total of **8** fatalities in 2019
- **2** fatalities in 2020 to date
- January 10, 2019 in Caputa, SD
 - 23-year-old employee climbed a 190' self-supporting tower to perform night work
 - Limited visibility and inadequate lighting
 - No safety plan for hazards encountered during night work
 - Employee fell while descending at the 180' level
 - Inadequate anchorage through use of an oversized carabiner hooked over a step bolt allowing it to slip off the end
 - Inadequate lighting & failure to provide and ensure fall protection use



Telecommunication Tower Standard Development

- Closely reviewing existing consensus standards
- Full list of potential topics which include fall protection, safe work practices, hoisting, rigging, and structural requirements for consideration can be found in SBAR panel documents (<https://www.osha.gov/doc/comtowersbrefa.html>)
- OSHA will continue to conduct research and reach out to stakeholders as the process continues

Construction Worker Suicides

- Suicide Rates by Major Occupational Group — 17 States, 2012 and 2015
 - From 2000 to 2016, the U.S. suicide rate among working aged (16–64 years) adults increased 34% from 12.9 per 100,000 population to 17.3
 - 2012 and 2015, **largest percentage of male suicides** (15%–16% of decedents) occurred among **Construction** and Extraction group
 - **Highest male suicide rate** (43.6 [2012] & 53.2 [2015] per 100,000)
- 102 workplace suicides in the private construction industry 2013-2017
 - 13 Construction managers
 - 21 First-line supervisor
 - 46 Construction trades workers
 - 40 Self-employed
 - 62 Wage and salary workers
 - 36 Building construction
 - 5 Heavy and civil engineering construction
 - 55 Specialty trade contractors

Source: NIOSH

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- Highest male suicide rate (43.6 [2012] & 53.2 [2015] per 100,000)

102 Workplace Suicides in the Private Construction Industry 2013-2017

- 13 Construction Managers, 21 First-line Supervisors, 5 Heavy & Civil Engineering Construction, 46 Construction Trades Workers, 55 Specialty Trade Contractors, 40 Self-employed, 62 Wage and Salary Workers, and 36 Building Construction Workers

- Construction industry has one of the highest injury rates when compared to other industries
- Commonly prescribed to construction workers to treat the pain caused by these occupational injuries
- Overdose deaths occurred on the job increased by over 30% between 2015 and 2016
- OSHA supports NIOSH, and other stakeholders in sharing ideas



Get help now.

If you're having trouble coping with work-related stress, talk with someone who can help.

- Call 1-800-273-8255
- Para español 1-888-628-9454
- Online chat suicidepreventionlifeline.org/chat

National Safety **Stand-Down**

To Prevent Falls in Construction

SEPTEMBER 14 – 18, 2020



- National Fall Stand-Down was a huge success with thousands of companies – large and small – participating across the U.S. and internationally
- Over 2,500 certificates issued reaching nearly 400,000 workers
- Certs still available

#StandDown4Safety

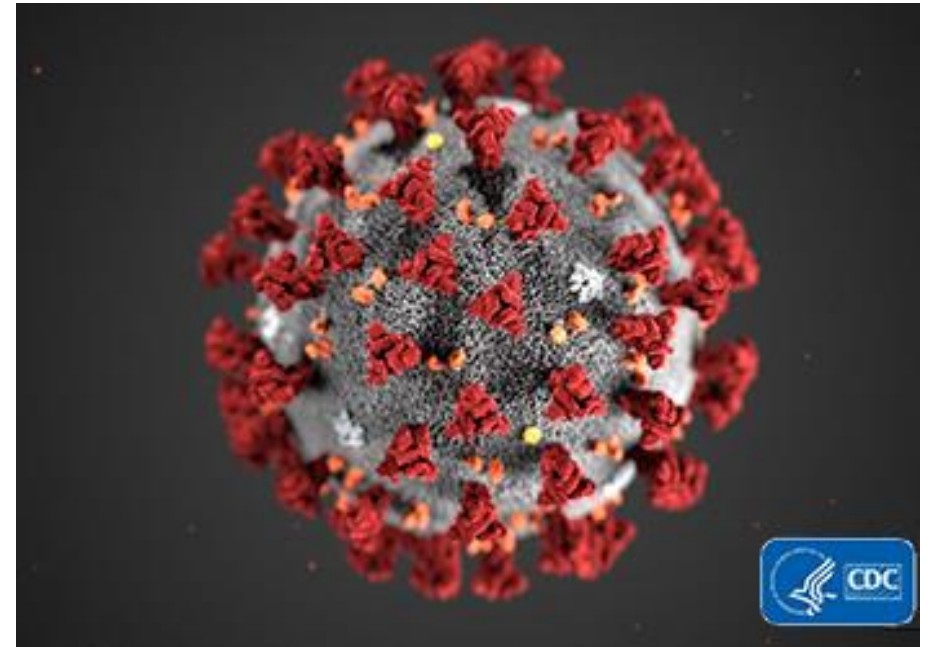
Virtual/Small Group Stand-Downs

- COVID-19 Pandemic caused us to change the way we held the stand-downs from years past
- OSHA encouraged employers to promote fall safety while holding stand-downs virtually or while employing social distancing practices among small groups



Protecting Workers from Risk of Exposure to COVID-19

- OSHA is coordinating closely with CDC, including NIOSH, and other federal agencies to monitor the ongoing pandemic
- **OSHA's message is clear:** Employers should have a plan for protecting workers and preventing further spread of disease while maintaining the employer's day-to-day functions



Occupational Exposure Risks

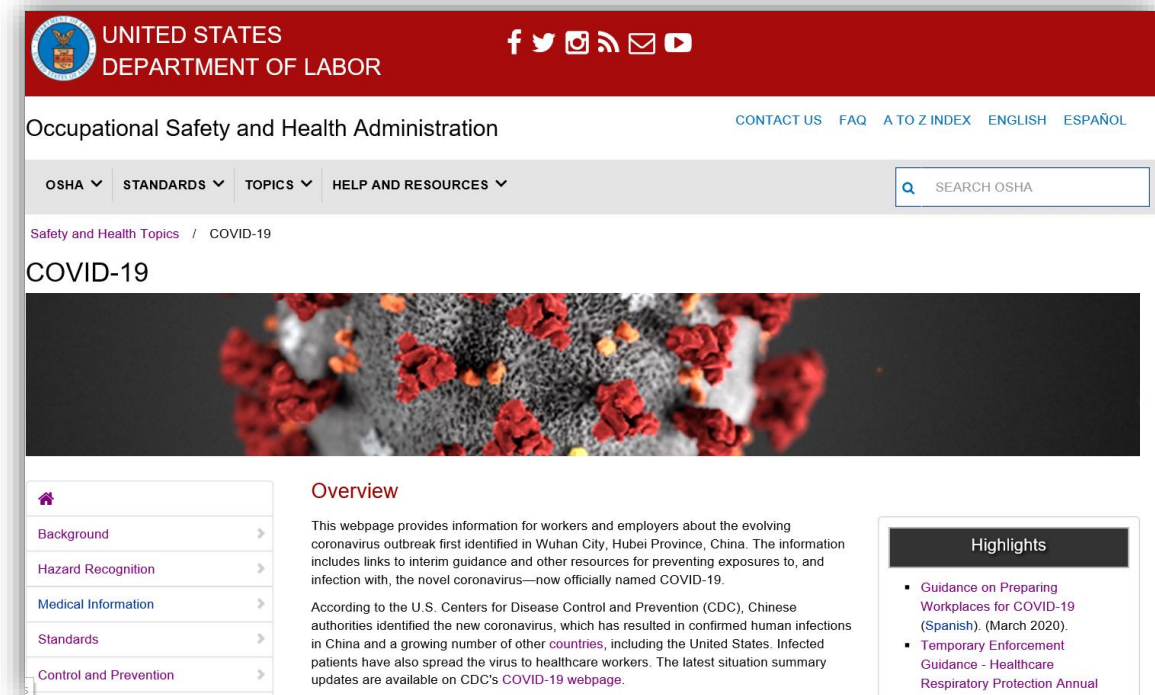
- Risk of exposure in many workplaces likely reflects the risk to the general public in the community where the workplace is located
- Risk increases when workers have frequent, close contact with the general public or other coworkers



Photo: Turner Construction Company

OSHA Guidance

- OSHA developed a variety of guidance materials for workers and employers on how to stay healthy during the pandemic
- [OSHA.gov/coronavirus](https://www.osha.gov/coronavirus) includes information on implementing the hierarchy of controls when workers have specific exposure risks



OSHA Guidance Cont.

- Helps employers comply with OSHA standards
- Based on anticipated hazards & risks, incorporates standards, contact, and airborne precautions, and use of face/eye protection.
- Should be adapted based on an employer's hazard assessment and workers' tasks.

Clockwise from L: public domain; WikimediaCommons;
CDC/Kimberly Smith & Christine Ford



OSHA Guidance Cont.

For all workers, regardless of specific exposure risks:

- Practice good and frequent hand hygiene
- Follow good cough/sneeze etiquette
- Avoid touching the eyes, nose, or mouth with unwashed hands
- Avoid close contact with people who are sick



Photo: U.S. Department of Defense

OSHA Alerts

OSHA has developed alerts for:

- Stockroom and Loading Dock Workers
- Nursing Home and Long Term Care Facility Workers
- Retail Pharmacies
- Rideshare, Taxi, and Car Service Workers
- Dental Practitioners
- Restaurants & Beverage Vendors offering Takeout
- Construction Workers
- Package Delivery Workers
- Retail Workers
- Other risk and infection prevention topics

www.osha.gov/coronavirus



OSHA Posters

- Nine Steps to Reducing Worker Exposure to COVID-19 in Meat, Poultry, and Pork Processing and Packaging Facilities Poster (available in 18 languages)
- Seven Steps to Correctly Wear a Respirator at Work (available in 15 languages)
- Ten Steps All Workplaces Can Take to Reduce Risk of Exposure to Coronavirus Poster (available in 13 languages)



OSHA Frequently Asked Questions (FAQs) include:

- General Information
- Cleaning and Disinfection
- Cloth Face Coverings
- Employer Requirements
- Healthcare
- Personal Protective Equipment
- Restrooms and Handwashing Facilities
- Retaliation
- Return to Work
- Testing for COVID-19
- Training
- Worker Protection Concerns
- Industry-Specific
 - Construction
 - Health Care

Staying Safe During COVID-19

Remember to:

- Stay home if sick
- Wash hands with soap and water or alcohol-based hand rubs containing at least 60% alcohol
- Wear a face covering
- Continue social distancing
- Avoid sharing equipment and tools

Continual Updates

- Visit OSHA's website to sign up to receive OSHA information:
 - QuickTakes biweekly newsletter **(287,000+ subscribers)**
 - Tip of the Day **(33,700+ subscribers)**
 - www.osha.gov/contactus
- Follow OSHA on social media
 - Twitter: @OSHA_DOL **(21,500+ followers)**
 - Facebook: Follow the Department of Labor page

Questions?



www.osha.gov

DOC: 202-693-2020

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THANK YOU FOR YOUR ATTENTION

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