

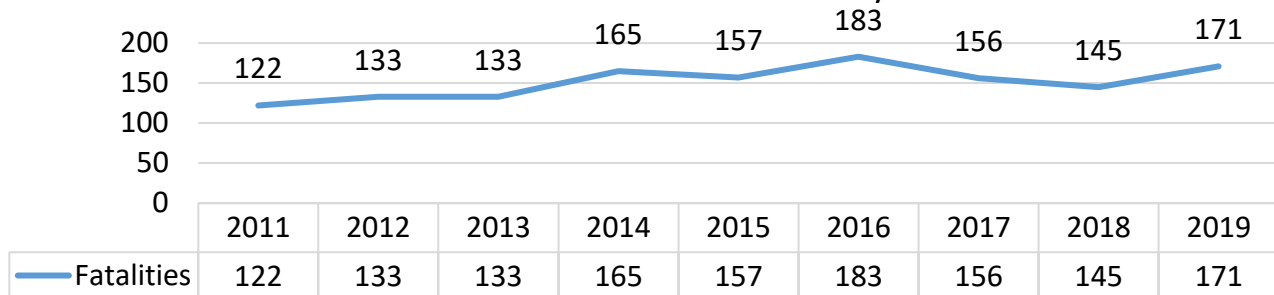
Ladder Safety Month 2021 (02/2021)

From FY 2009 through FY 2020 there have been approximately 26 ladder related fatalities reported to the Houston OSHA offices. **In FY 2020 we had three ladder related fatalities versus two previous fiscal year. There were 30 reported serious incidents in FY 20 versus 24 the previous fiscal year.** Ladders are important to help workers access elevated heights, however, they present a serious fall hazard when used incorrectly. By continuing to focus on ladder safety we can do even better this year.

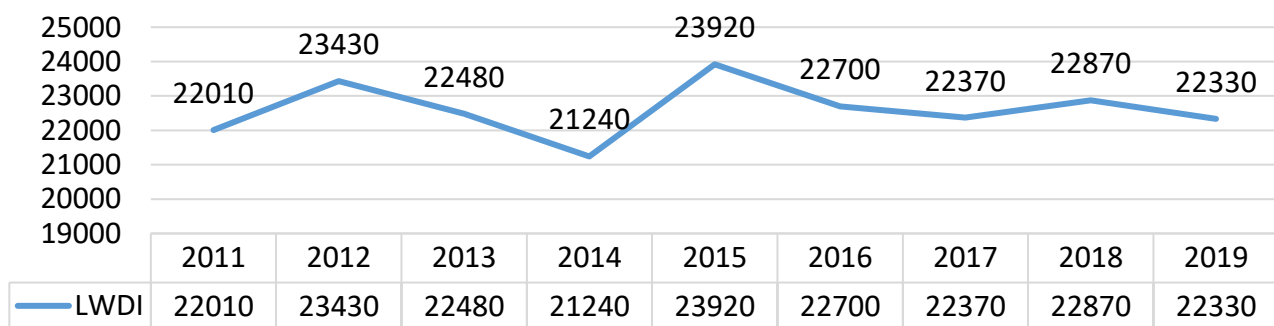


Bureau of Labor Statistics (BLS) National Ladder Related Incident Search*

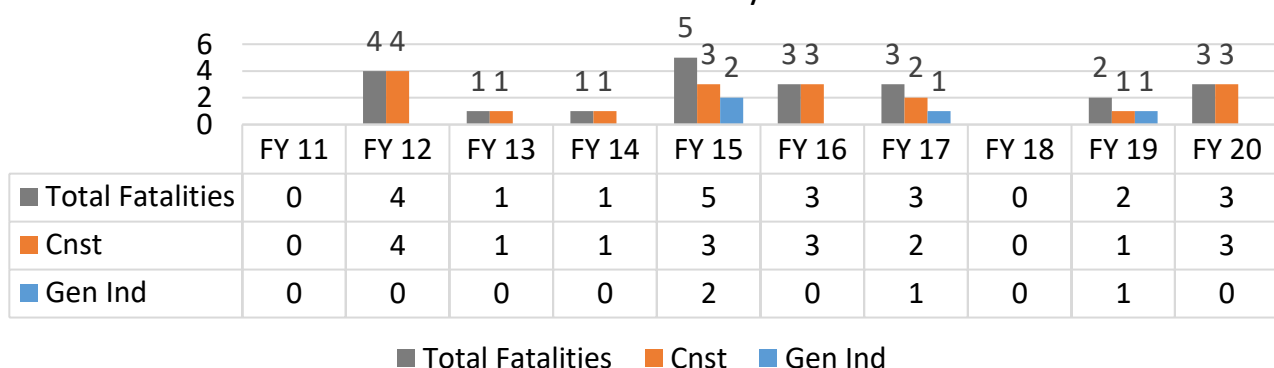
BLS Fatalities Ladders 74XXXX as Primary Source



BLS LWDI Cases Ladders 74XXXX as Primary Source



SE TX Ladder Related Fatality Incidents**



FY 20 SE TX Ladder Related Fatality Narratives

Construction (3/3)

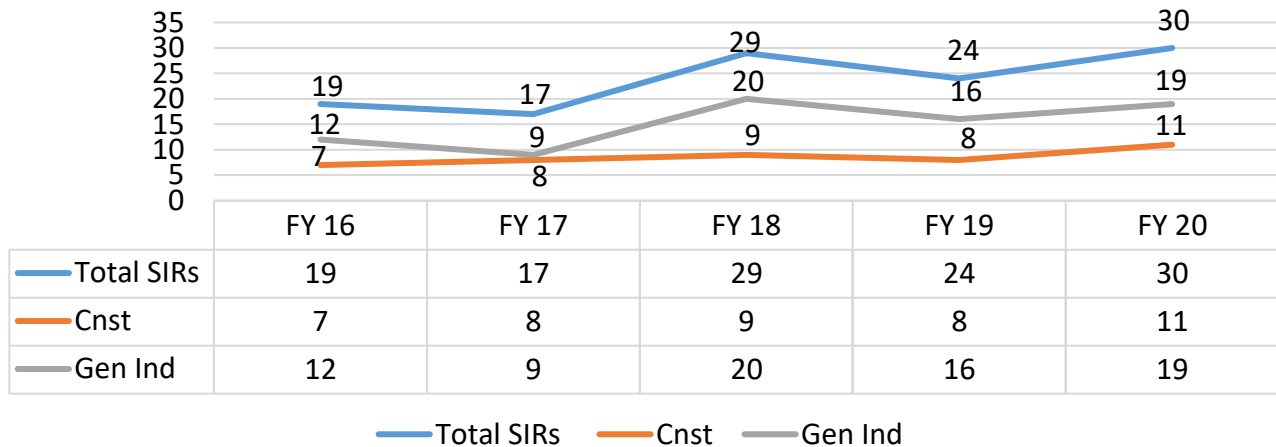
Fall lower level ladder

- A roofing contractor employee was ascending a 28' extension ladder and fell approximately 13' and was pronounced dead from blunt force trauma to the neck.
- Employee was re-switching lights and fell from the ladder and struck his head and died.

Fall lower level scaffolding

- Employee was working from second level of scaffold using a ladder to install siding. He fell backwards to the ground and later passed away.

SE TX Ladder Related SIR Incidents**



FY 20 SE TX Ladder Related Serious Incidents Report (SIR) Narratives

Construction (11/30)

Fall lower level ladder

- Employee climbed an extension ladder in an area that could not be tied off and without a spotter. He was installing metal panels when he fell off the ladder and sustained a broken right femur and a laceration on his head.
- Employee was using an air hose to blow off a tank when he fell from the ladder injuring his hip.
- Employee was four rungs up on an 8' A-frame ladder cutting sheetrock with a saw. The sheetrock was attached to an unenergized electrical terminal box. As he was cutting the sheet rock his elbow hit the terminal box and it threw him off balance and he fell to the floor dislocating his right wrist. A metal bracelet he was wearing at the time also cut into his wrist upon impact with the floor.
- An employee was descending a fixed ladder and lost his grip and fell about 10' to the lower level fracturing his right and left ankles.
- Employee fell off of ladder while trying to move a drive-thru canopy back into place injuring his head.
- Employee had finished a canopy at a high of about 7' ft. and was climbing down the ladder when he lost his balance and missed a rug. He broke his right arm, shoulder and ribs.
- Employee was installing "tiger claws" from a 12' A-frame ladder. He over reached (outside of the belt buckle within rails rule) and tried to hold onto a 2x4 on the floor joist beams he was working at. The board broke

away and he lost his balance, and he fell approximately 7-8 feet' off the ladder. He fractured both ankles, his hip, and femur upon impact with the concrete floor.

- Employee was cleaning from a fixed ladder and while coming down, her right index finger got caught on grill steel surface. She lost her balance and fell approximately 10-12' feet to the ground, resulting in partial amputation of right index finger.
- Employee was working on a garage door from an A-frame ladder and accidentally engaged a motion detector sensor, causing the door to start to come down. The door struck him in the head causing him to fall off of the ladder and hit his head on the ground.
- An employee fell off a ladder as he was descending down from a roof breaking his knee.
- Employee was working inside a home under construction installing gas lines from a portable ladder. A gust of wind opened the door and knocked him off of the ladder. He received a laceration above his right eye and was hospitalized.

General Industry (19/30)

Electric shock

- Employee was working from a 6' ladder on a light fixture. He made contact with a live wire and fell down breaking a rib on the left side.

Fall lower level ladder

- Employee was installing a brake part on a rail car being refurbished. It's thought that the brake piece released from the come-along and struck him. He fell off the 4' ladder to the cement, was knocked unconscious, and suffered head injuries.
- The employee was using a ladder to get boxes down from shelves and fell injuring their ankle.
- Employee was working with his supervisor fixing and troubleshooting a machine. They had to replace the belt so he used a ladder to climb on top of the belt that was 3.5'. The supervisor turned on the machine and the belt moved the ladder him to fall down to the ground injuring his lower right leg.
- Employee was coming down the ladder from the roof to get some tools and the ladder came up underneath him. He fell and fractured his ankle and five ribs along with bumps and bruises.
- Employee was climbing down a 24' fiberglass type 1A ladder to gather tools for the job to be performed. He took two steps down when the ladder became unstable and fell. He fractured his right ankle.
- The employee was climbing a ladder between platforms on the redi-mix plant. While climbing the ladder, he was holding a hose in one hand and slipped and fell about 10' to the platform below. He fractured his right knee and elbow.
- A skid was attached to a crane by a chain and the employee climbed the ladder to unhook the chain from the crane. He went up about 4'-5' up a 10' ladder and fell from the ladder suffering multiple vertebrae injuries and a fractured clavicle.
- The employee was climbing a ladder attached to a rail car to inspect a valve. He was on the fourth rung, slipped, and fell to the cement ground below breaking bones in his leg.
- An employee was tasked to remove a tarp covering a mechanical fabrication area due to an approaching storm. He was working from the 4th rung on an 8' ladder and lost his footing. He feared the ladder would fall on him so he pushed himself off the ladder and landed on his feet breaking his tibia/fibula.
- Employee was restocking 5 lb. bags from a 4' ladder and lost his footing and fell fracturing his lower left leg.
- Employee was stocking granola bars using a one step ladder and stepped backwards to get down. Her foot slipped and she fell on her right knee/leg breaking the tibia.
- Employee was coming down from a A-frame platform ladder when he inadvertently missed a step and he fell approximately 7'. He hit the ground injuring his right shoulder requiring surgery.

- Employee was repairing a potable water cabinet on a jet bridge from an A-frame ladder. The Jet bridge moved and knocked him 8' to the ground fracturing his left heel.
- Employee was descending an 8' fixed ladder when she lost her grip and fell about 3'-5' to the ground. She suffered a laceration and hematoma to her forehead and abrasions to her left cheek.
- Employee fell approximately 4' from a rolling ladder while operating a valve fracturing his left femur and dislocating the right elbow.
- Employee was climbing up a ladder, missed a step, and fell fracturing her pelvis.
- Employee was standing on a ladder installing a video surveillance camera. There was a sudden rain shower and he started climbing down. His foot slipped and he fell backwards landing on his left arm. He sustained injuries to left wrist and arm.

Fall lower level nonmoving vehicle

- Employee was stepping from the top of a cargo tank trailer to the top rung on ladder and fell about 12' to the ground. He fractured his right arm in multiple places requiring surgery.

FY 20 Most Frequently Cited Federal OSHA Ladders Construction 1926.1053

1926 Standard	Cited	Narrative
1926.1053(b)(1)	1,307	When portable ladders are used for access to an upper landing surface, the ladder side rails shall extend at least 3 feet (.9 m) above the upper landing surface to which the ladder is used to gain access; or, when such an extension is not possible because of the ladder's length, then the ladder shall be secured at its top to a rigid support that will not deflect, and a grasping device, such as a grabrail, shall be provided to assist employees in mounting and dismounting the ladder
1926.1053(b)(4)	291	Ladders shall be used only for the purpose for which they were designed.
1926.1053(b)(13)	203	The top or top step of a stepladder shall not be used as a step.
1926.1053(b)(16)	72	Portable ladders with structural defects, such as, but not limited to, broken or missing rungs, cleats, or steps, broken or split rails, corroded components, or other faulty or defective components, shall either be immediately marked in a manner that readily identifies them as defective, or be tagged with "Do Not Use" or similar language, and shall be withdrawn from service until repaired.
1926.1053(b)(5)	49	Non-self-supporting ladders shall be used at an angle such that the horizontal distance from the top support to the foot of the ladder is approximately one-quarter of the working length of the ladder (the distance along the ladder between the foot and the top support).
1926.1053(b)(22)	47	An employee shall not carry any object or load that could cause the employee to lose balance and fall.
1926.1053(b)(6)	43	Ladders shall be used only on stable and level surfaces unless secured to prevent accidental displacement.
1926.1053(b)(9)	24	The area around the top and bottom of ladders shall be kept clear.
1926.1053(b)(7)	21	Ladders shall not be used on slippery surfaces unless secured or provided with slip-resistant feet to prevent accidental displacement. Slip-resistant feet shall not be used as a substitute for care in placing, lashing, or holding a ladder that is used upon slippery surfaces including, but not limited to, flat metal or concrete surfaces that are constructed so they cannot be prevented from becoming slippery.
1926.1053(b)(15)	18	Ladders shall be inspected by a competent person for visible defects on a periodic basis and after any occurrence that could affect their safe use.

FY 20 Most Frequently Cited Federal OSHA Ladders General Industry 1910.23

1910 Standard	Cited	Narrative
1910.23(b)(10)	36	Any ladder with structural or other defects is immediately tagged "Dangerous: Do Not Use" or with similar language in accordance with § 1910.145 and removed from service until repaired in accordance with § 1910.22(d), or replaced;
1910.23(c)(11)	28	Portable ladders used to gain access to an upper landing surface have side rails that extend at least 3 feet (0.9 m) above the upper landing surface...
1910.23(b)(8)	27	Ladders are used only for the purposes for which they were designed;
1910.23(b)(9)	18	Ladders are inspected before initial use in each work shift, and more frequently as necessary, to identify any visible defects that could cause employee injury;
1910.23(c)(8)	13	The cap (if equipped) and top step of a stepladder are not used as steps;
1910.23(e)(1)	9	Mobile ladder stands and mobile ladder stand platforms general requirements
1910.23(c)(3)	7	Ladders are not loaded beyond the maximum intended load;
1910.23(d)(7)	6	Grab bars extend 42 inches (1.1 m) above the access level or landing platforms served by the ladder;
1910.23(c)(1)	6	Rungs and steps of portable metal ladders are corrugated, knurled, dimpled, coated with skid-resistant material, or otherwise treated to minimize the possibility of slipping;
1910.23(b)(13)	6	No employee carries any object or load that could cause the employee to lose balance and fall while climbing up or down the ladder.

Ladder Safety Resources***

OSHA FactSheets

- Ladder Safety QuickCard™
 - Ladder Safety: Falling Off Ladders Can Kill: Use Them Safely
 - Ladder Safety: Reducing Falls in Construction: Safe Use of Extension Ladders
 - Ladder Safety: Reducing Falls in Construction: Safe Use of Job-made Wooden Ladders
 - Ladder Safety: Reducing Falls in Construction: Safe Use of Stepladders
- <https://www.osha.gov/pls/publications/publication.AthruZ?pType=AthruZ#L>



OSHA Alliance Products

- Inspect Ladders Carefully!
 - Do's and Don'ts of Using a Ladder
 - Set Up and Use of a Ladder
 - Extension Ladder Safety English
 - Using a Stepladder Safely
- <https://www.osha.gov/alliances/products#Ladder>



NIOSH

- NIOSH Ladder Safety App
- <https://www.cdc.gov/niosh/topics/falls/mobileapp.html>
- A Guide to Training Site Supervisors
- <http://stopconstructionfalls.com/wp-content/uploads/2012/03/Preventing-Falls-from-Ladders-in-Construction-A-Guide-to-Training-Site-Supervisors.pdf>



American Ladder Institute's Ladder Safety Training

- Ladder safety training (registration required)
<https://www.laddersafetytraining.org/>



Texas OSHCON

- Ladder Safety - Take 5 for Safety
<http://www.tdi.texas.gov/wc/safety/videoresources/index.html>



Washington State Department of Labor and Industries (L&I)

- Ladder Safety Checklist
<https://lni.wa.gov/dA/726ab38ee5/F417-266-000.pdf>
- Ladder Safety Guide
<https://lni.wa.gov/dA/b673ea0f42/F417-268-000.pdf>
- Ladder Safety Presentation
<http://wisha-training.lni.wa.gov/Training/presentations/LaddersModule1.ppt>



Oregon OSHA

- Portable ladders: How to use them so they won't let you down
<http://osha.oregon.gov/Pages/topics/ladders.aspx>
- Portable Ladder Safety online course
<https://osha.oregon.gov/edu/courses/Pages/portable-ladder-safety-online-course.aspx>



*BLS Data was search using ladders as the primary source of injury

**Disclaimer: Fatalities, catastrophes, serious incident reports are generated using various sorting criteria. Houston specific data is edited to determine a count of fatalities/catastrophes or Serious Incident Reports (SIRs) under OSHA jurisdiction and may change over time as records are updated. Narratives are generally based on the first report of the incident and are rewritten and edited for brevity and/or readability and may not reflect the final results of an investigation. The incidents are a snap shot in time and may not be an exact count and are provided for accident prevention purposes, trending, and educational purposes and is not intended to be a statistical study or evaluation

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If you're interested in a presentation to your group or association, have questions on the materials, or would like to be notified of free workshops conducted periodically by the Houston North OSHA Office contact Jim Shelton, CAS, at shelton.james@dol.gov