

New Logo & New Name ...

*BUT OUR CONTINUED ATTENTION TO GREAT SERVICE
AND BUILDING LASTING RELATIONSHIPS IS THE SAME*

With the passing of our founder, it has become necessary to make a few technical adjustments. Over the next few months **MJS Safety LLC** will be transitioning to a new company name –

MJS Legacy Safety Consulting Services LLC

All of the services provided to you through **MJS Safety LLC** will remain the same and be available to you through **MJS Legacy Safety Consulting Services LLC** with no interruption. We are committed to carrying on the legacy that Mike envisioned for both the company and our clients, and will continue to make ‘caring for our client’s needs’ our top priority.

The contact information for both Carrie Jordan and Jeremy Jordan will remain the same.

Please note a new shipping address as: 1026 N. 1st Street, Johnstown CO 80534.

There is no change to the mailing address as: P.O. Box 10, Johnstown CO 80534.

Our training facility and offices will not change: 1760 BROAD ST, UNIT H, MILLIKEN, CO 80543.

It has been our distinct pleasure to serve your business needs for the past 26 years under **MJS Safety**. We look forward to continuing a productive and successful business relationship with you under the **MJS Legacy Safety** brand for many years to come.

carriejordan@mjsafety.com — jeremyjordan@mjsafety.net

You’ve likely become ‘COVID weary’. It’s a topic we’ve had to think and hear about virtually every day for the past 18 months. It would be great if we could just move on from information about COVID-19 and never revisit it again. But that’s not realistic.....yet!

Here are some helpful Resource links that will provide the most current information and guidance for your workplace.

- [CDC – Centers for Disease Control](#) – Important info: [COVID-19 vaccine](#)
- [CDPHE – Colorado Department of Public Health and Environment](#)
- [WHO - World Health Organization](#)
- [OSHA Guidance](#)
- [DOL Resources](#)
- [Covid19.colorado.gov](https://covid19.colorado.gov)



COLORADO
Department of Revenue

Home page for State of Colorado/ Colorado Department of Revenue –
Division of Motor Vehicles - [link](#)

▶ [Training Summary/Class Schedule](#) • TRAINING CENTER - 1760 BROAD ST, UNIT H, MILLIKEN, CO 80543 • [read more...](#)

→ **Distance Learning & Video Conference classes:** *We are excited to announce that PEC will be allowing us to temporarily offer Safeland and the PEC H2S Clear courses via video conferencing until December 2021. We are also able to offer the 1st aid/ CPR classes with an online blended learning option, and remote skills verification – as well as our In-House H2S Awareness Course. Ask about other distance learning opportunities for more information.*

→ **Video Conference Courses Must Be Scheduled Separately and Are Available Upon Request.**

OSHA / CONSTRUCTION NEWS SUMMARY

▶ **Visit OSHA's [COVID-19 Frequently Asked Questions](#) page...** [read more...](#)

▶ **OSHA's Recordkeeping Requirements During the COVID-19 Pandemic**

OSHA has issued temporary enforcement guidance related to the COVID-19 pandemic for [Recording and Reporting Occupational Injuries and Illnesses](#) required under 29 CFR Part 1904. [read more...](#)

▶ **OSHA Calls on Industry to Combat Unique Killer of Construction Workers**

An industry task force encourages participation in the

Suicide Prevention Safety Stand-Down, Sept. 6-10

to raise awareness about the unique risks construction workers face. [read more...](#)

▶ **Lockout/Tagout Can Save Lives**

As safety professionals, we need to always consider the electrical issue as it relates to lockout/tagout. [read more...](#)



▶ **OSHA - Tank Cleaning Safety**

DOL initiative seeks to protect Midwest workers in tank cleaning industry from atmospheric, confined space hazards [read more...](#)



▶ **OSHA Issues Updated Guidance to Protect At-risk Workers from COVID-19**

[Updated guidance](#) recently by the **Occupational Safety and Health Administration** is intended to help employers protect at-risk workers from the coronavirus. [read more...](#)

▶ **OSHA Partners with National Institute for Occupational Safety and Health to Revise Handbook for Small Businesses**

The U.S. Department of Labor's **Occupational Safety and Health Administration** collaborated with the **National Institute for Occupational Safety and Health (NIOSH)** to revise a handbook on workplace safety and health information for small business employers. [read more...](#)



▶ **The 4 Most Common Construction Injuries (AND HOW TO PREVENT THEM)**

Despite an ever-increasing focus on safety in construction, the latest numbers aren't great. [read more...](#)

WOMEN IN CONSTRUCTION

▶ **How Mentors Helped Shape My Construction Career**

Jacki Valdez of Sunbelt Rentals shares how the combination of determination and the right mentorship support set her up for a fulfilling career in the industry. [read more...](#)

▶ **Construction Outreach**

Recently **OSHA** met with women in the construction industry to discuss their workplace safety and job opportunities. [read more...](#)

TRANSPORTATION NEWS SUMMARY

▶ **Reminder - Revised Federal Drug**

Testing Custody and Control Form Must be Used on August 30, 2021 [read more...](#)



► **Colorado State Patrol - Click It or Ticket**

The Colorado State Patrol is part of an ongoing national effort to make sure drivers and passengers buckle up and reduce traffic deaths and injuries on our highways. [read more...](#)



► **NIOSH Behind the Wheel at Work - NIOSH CENTER FOR MOTOR VEHICLE SAFETY**

Workers across all occupations and industries drive as part of their jobs – moving freight and passengers, making sales calls, traveling between construction sites, delivering food, making on-site repairs, providing home healthcare, and more. [read more...](#)

► **What Happens When FMCSA Comes to Audit Your Driver Logs?**

Federal Motor Carrier Compliance Investigations (what you might remember as a Compliance Review) are still ongoing even during the COVID-19 pandemic – albeit virtually. [read more...](#)

► **A Surge in Traffic Deaths Leads to the Creation of the Road to Zero Resolution**

Although there were less people out and about during quarantine, traffic deaths spiked by 7.2 percent last year. [read more...](#)



► Every year, CDOT embarks on hundreds of construction projects across the state, and that doesn't even include the numerous maintenance activities we conduct every day to keep our highways safe. [read more...](#)



► **Is a Vehicle Mileage Tax on the Horizon?**

Paying less at the pump, but more on your odometer, what does a vehicle miles traveled tax really entail? [read more...](#)



► **House to Vote on Infrastructure Bill by September 27th**

From fixing aging roadways and failing bridges to helping ease costly congestion, the investment in our nation's infrastructure will have profound impacts [read more...](#)

MSHA NEWS SUMMARY

► **Stay Out, Stay Alive**



Exploring or playing at active and abandoned mine sites is dangerous, potentially fatal [read more...](#)



► **MINE FATALITY** – On July 21, 2021, a miner received fatal injuries while adding a boom extension to a crane. The miner was working under the boom to remove the boom pins when he was struck by the boom. **Best Practices:** [read more...](#)

MONTHLY SAFETY & HEALTH TIP NEWS SUMMARY

► **Over Half of Workplace Electrical Fatalities are Attributed to Non-Electrical Occupations**

Absence of Voltage Testers can save lives by providing safety for everyone. [read more...](#)

MJS Legacy Safety OFFERS DRUG & ALCOHOL TESTING

to comply with DOT/FMCSA, PHMSA & Non-DOT requirements.

We offer an in-house drug testing consortium pool with customer service that cannot be beat.

We also provide assistance with 3rd party Drug Testing Compliance Auditing through NCMS, TPS Alert & Veriforce, as well as DISA account management.

“Training Spotlight”

(there will be a different course featured monthly)

FALL PROTECTION TRAINING COURSES

This class is designed to address the recognition of fall hazards in the workplace, protective measures available, and proper selection, use & care of Fall Protection Equipment in accordance with OSHA's Fall Protection standard as well as the ANSI Z359.1 requirements. Hands on practice with fall protection equipment use, selection and inspection and evaluation, and rescue planning is also covered in this course. The course can be conducted in a 4 hour Awareness of an 8 hour Competent Person session.

For all of our Course Offerings visit the [MJS Safety website](#)

► MJS Legacy Safety also offers custom classes to fit the needs of your company ◀

Schedule of classes September 2021: • TRAINING CENTER - 1760 BROAD ST, UNIT H, MILLIKEN, CO 80543

- *PEC Safeland Basic Orientation: **NEW 2021 SAFELAND:** Sept 9, 21, 30; 8 – 4:30;
This class available through video conference instructor led distance learning through 2021 - only upon request
- *First Aid/CPR/AED/BLOODBORNE PATHOGENS (We offer MEDIC FIRST AID): **In Person Classes:** Sept 12, 27; 8 – noon;
This class is also available for blended learning (online) with remote or in-person skills assessment
- *Hydrogen Sulfide Awareness [**ANSI Z390 -2017 Course**]: Sept 12, 27; 12:30 – 4:30;
This class available via Instructor Led video conference

[For any last minute schedule updates, go to www.mjssafety.com]

► NEED ANY OF THESE CLASSES IN SPANISH? CONTACT carriejordan@mjssafety.com TO SCHEDULE TODAY ◀

To sign up for one of these classes, or inquire about scheduling a different class
Call Carrie at 720-203-4948 or Jeremy at 720-203-6325

— FEATURED TRAINING PROGRAMS —

- Safeland Basic Orientation • Hydrogen Sulfide Awareness • First Aid/CPR
- OSHA 10 Hour for General Industry or Construction • Confined Space for Construction
- Competent Person for Excavations • HAZWOPER 8, 24 & 40 hr Courses

Order
First Aid
& other
Safety Supplies
www.mjssafety.com
Jeremy
720-203-6325
Carrie
720-203-4948

Unable to attend a class?

MJS Legacy Safety offers multiple
“ONLINE TRAINING COURSES”

including
OSHA Construction, General Industry, Environmental,
Hazardous Waste Public Safety, DOT,
Human Resource, and Storm Water & ISO
or you can

Need Help With

- ISNetwork
- PEC/Veriforce
- NCMS
- Avetta/BROWZ
- TPS ALERT

CALL US!!!

Schedule training at our Training Center in Milliken...or On-Site at your facility

SOURCES FOR THIS ISSUE INCLUDE:

OSHA
FMCSA
USDOL
ISHN
CDC
MSHA
DOT
OH&S online
North American Transportation Assoc.
EHS Daily Advisor
AbandonedMines.gov
Jacki Valdez, Sunbelt Rentals For Construction Pros.com
NIOSH
Suicide Prevention Resource Center
CDOT
Sciencing.com
Caterpillar Safety Servicing
Colorado State Patrol
NSC
NTA

► MJS Legacy Safety can help guide you through training requirements. Call us! ◀

Visit OSHA's [COVID-19 Frequently Asked Questions](#) page for current information

OSHA's Recordkeeping Requirements During the COVID-19 Pandemic

OSHA issued enforcement guidance related to the COVID-19 pandemic for [Recording and Reporting Occupational Injuries and Illnesses](#) required under *29 CFR Part 1904*.

For more information see the [Enforcement Memoranda](#) section of OSHA's [COVID-19 Safety and Health Topics](#) page.

OSHA Calls on Industry to Combat Unique Killer of Construction Workers

*An industry task force encourages participation in the
Suicide Prevention Safety Stand-Down, Sept. 6-10
to raise awareness about the unique risks construction workers face.*

Hazards often associated with workplace deaths in the U.S. construction industry – including falling, being struck-by or crushed by equipment or other objects, or suffering electrocution – are well known. But a recent study finds that another potential killer is taking lives in the industry at an alarming rate.

In 2020, the Centers for Disease Control and Prevention found that men working in construction have one of the highest suicide rates compared to other industries. Their rate of suicide is about four times higher than the general population.



While the CDC continues its research to understand the disparity, the U.S. Department of Labor's OSHA has formed a task force of industry partners, unions and educators to raise awareness of the types of stress that can push construction workers into depression and toward suicide. In addition to alerting stakeholders, the task force encourages industry employers to share and discuss available resources with their workers.

The task force is calling on industry to take part in a weeklong **Suicide Prevention Safety Stand-Down, Sept. 6-10**, to raise awareness about the unique challenges construction workers face. The stand-down will coincide with [National Suicide Prevention Month](#) in September.

“Work-related stress can have severe impacts on mental health and without proper support may lead to substance abuse and even suicide,” stated Acting Assistant Secretary of Labor for Occupational Safety and Health Jim Frederick. “Workers in construction face many work-related stressors that may increase their risk factors for suicide,

such as the uncertainty of seasonal work, demanding schedules and workplace injuries that are sometimes treated with opioids.”

The **Suicide Prevention Safety Stand-Down** started as a regional initiative in OSHA's Kansas City and St. Louis, Missouri, offices with these task force members: Builders Association, Associated General Contractors of Missouri, University of Kansas, University of Iowa, Washington University, American Foundation for Suicide Prevention, local unions and several employers. More than 5,000 people participated in the 2020 **Suicide Prevention Safety Stand-Down**, and OSHA encourages others to join the effort in 2021.

“Like many workplace fatalities, suicides can be prevented,” said OSHA Acting Regional Administrator Billie Kizer in Kansas City, Missouri. “We encourage employers to use all available resources, familiarize themselves with the problem and learn to recognize the warning signs of depression. We also urge workers to seek help if they feel overwhelmed or overcome by a loss of hope.”

View a [video on suicide prevention](#) that Acting Assistant Secretary Frederick recently shared with task force members. The Associated General Contractors of Missouri [suicide prevention page](#) also includes links to resources and other information for toolbox talks. [Review](#) these OSHA mental health and crisis resources.

Additional information on suicide prevention in the construction industry can be found at the following links:

- [Link \(1\)](#)
- [Link \(2\)](#)
- [How to talk about suicide with employees](#) and [how to get help](#)
- [The Construction Industry Alliance for Suicide Prevention](#)

Lockout/Tagout Can Save Lives

As safety professionals, we need to always consider the electrical issue as it relates to lockout/tagout.



In the **safety world**, one tends to **think** of **lockout/tagout** as an **electrical problem**. People dealing with **energized equipment** spend **significant amounts of time** working through the **de-energization process** to ensure that **electricians** and **quality control people** are kept **safe** from **bolts** of current **flowing** through **conductors** or components. As **safety professionals**, we need to **always consider the electrical issue** as it relates to **lockout/tagout**.

However, there are so many **other items** to consider when **talking** about the **unexpected release of stored energy** in the direction of **workers**. Some might call it a **“line of fire”** issue. A lot has been made of the **avalanche issue** from this past **winter season**. Snowpack on the side of a **mountain** has the **potential** for that unexpected release of **stored energy**. Millions of tons of **snow sliding off** the side of a **mountain** would surely have **dramatic impacts** on those in the way of the rushing **snow slide**. However, it isn't like one **could lockout/tagout** the side of a **mountain**, right? Actually, you can. The **ski patrol usually** does this through **proper signage** and **barricading**.

At work, there are many times where **stored energy** is found **near the worker**. Gravity, **chemical**, high pressure, **steam**, hydraulic, **mechanical**, etc. are all found on **worksites every day**. If we were **sitting** in a classroom, a **discussion** could be held where **examples** for each of the **items listed above** would be explored. **Stop** for a moment and **think** of the last time you **walked around your worksite** and **looked specifically** for those areas where **stored energy** might be **found**.

One such **example to discuss** would be the case of the **mechanic** who was **working** on a **cement truck**. The truck had a **mechanical problem** where the mechanic had to **climb under** the **rotating drum** to complete the fix. The mechanic placed a **“do not operate”** sign on the **steering wheel** of the vehicle, the **vehicle was turned off**, and the **key was removed**. However, somehow someone was able to **climb into the cab**, remove the **steering wheel sign** and place **another key** into the **ignition**, starting the vehicle. As the **vehicle started** the **drum began to rotate** and the **mechanic** was crushed between the **rotating drum** and the **frame**, a completely **preventable** and a **totally unnecessary loss** of life.

Another area where **stored energy** could occur on a **construction job site** would be in an **excavation**. A hole is **dug creating a trench** (*deeper than it is wide*) or **excavation** (*wider than it is deep*). The side walls have the potential of stored energy. With the **side walls weakened**, any **slight pressure** on the top of the **side wall** can create a **downward sheer force** causing the **side wall** to collapse into the hole. If there's a **worker in that area** without **proper protection**, **tragedy can occur**. We all know that **cave-in** is the **big issue here**. The tons of **dirt** or material **caving in around** the worker can bury an **employee**, but it is **easily preventable**.

What would be the **lockout/tagout** for this **scenario**? According to the **current standards**, there are plenty of **safeguards** in place for this. The **2,2,4,4,5,6** rule of thumb comes to mind.

- *The first 2 is placing spoil piles at least **two feet** from the edge of the hole. This helps keep the shear force placed on the non-reinforced side wall of the opening to a minimum.*

- *The second 2 is that when one is digging below a trench box more than **two feet**, the trench box must be lowered deeper into the hole.*
- *4, if the hole is **four feet** or greater, then oxygen monitoring must be completed to maintain the allowed concentration at 21.5 percent +/- 2 percent.*
- *Finally, 4, if the hole is more than **four feet**, the hole needs an egress no greater than 25 feet from the worker.*
- *If the trench is 50 feet long, how many egress points are needed? When the hole is greater than **five feet**, the hole side walls need to be either shored, sloped or benched.*
- *And of course, if the hole is **six feet** or greater, then fall protection must be used to prevent someone from falling into the hole.*

It is a **best practice** to **provide barricades** and **signage** around any **opening** in the ground to **protect not only** the worker, but the **general public** from falling into an **unguarded** and **unprotected area**. One more example of this **lock out/tag out system** would be around **swimming pools**. Whether they are commercial or **private**, they should be **fenced** and have **adequate signage** to warn away **curious wanderers**. In areas where **swimming pools** are very **popular**, it is **not uncommon** for the **local news** to highlight **unnecessary drownings** of individuals when these people find their way **into an unguarded pool**.

Within the **world of electricity**, the term **lockout/tagout** is **synonymous** with making sure there is **no stored** or **residual energy** in the **circuit**. Remember that **electricity flows** like **water** in a **pipe**. It is **controlled** by the confines of the **conductor** and its **insulation**. Should **someone become** part of that circuit and that person is **connected to ground**, then the **electricity** has an **opportunity to escape** the **circuit** and **go to ground**. Which, by the way, is its **only real purpose**.

Perhaps, **someday** we will be able to **communicate** with electricity (*science fiction, of course*) and when we ask what the **electrons' and protons' purpose in life** is, they will undoubtedly say **“to go to ground.”**

So, when someone makes contact with a circuit and are grounded, guess where the electricity will go? That is correct, to the ground through the person. By de-energizing the circuit and locking it out, the potential of a worker coming in contact with live electricity is minimal. A standard process would be to de-energize the circuit, lock it out/tag it out, dissipate any stored or residual energy and then verify isolation with live-dead-live testing with a voltmeter.

Most electricians know that a voltmeter is a quantity measuring device that measures the amounts of volts, amps and ohms within a circuit. When a system is unplugged or de-energized, there should be zero of all of those. Do not make the mistake of checking live-dead-live with a voltage detector. That is a quality measuring device. Is there energy in the item being tested, yes or no. The professionals in the electrical world call these devices "tic tracers" or "widow makers."

One other item to keep in mind with lockout/tagout is lock placement and removal. A person is only allowed to remove his/her lockout/tagout device, not anyone else's. Doing so places the other person in harm's way. In most companies interfering with someone else's lock is grounds for immediate termination.

In conclusion, to prevent the unexpected release of stored energy in the direction of the employee, a lockout/tagout device **MUST** be placed on systems where the stored energy is found. We all need to be reminded of the very serious and lethal ramifications should we not follow this simple rule.

OSHA - Tank Cleaning Safety

DOL initiative seeks to protect Midwest workers in tank cleaning industry from atmospheric, confined space hazards

CHICAGO – An Ohio worker tasked with cleaning a chemical tanker trailer collapsed upon entering the tank. Answering the employee's call for help, a nearby truck driver entered the tank. Both workers succumbed to fatal toxic fumes.

In Illinois, a worker opened the lid of a tanker trailer containing toluene and was found a short time later lying across the open dome and unresponsive. Rushed to a nearby hospital, he survived after being treated for respiratory failure and cardiac arrest.

The double fatality and serious injury are among the 23 worker deaths and 97 incidents that the U.S. Department of Labor's Occupational Safety and Health Administration's Chicago region has investigated in the transportation and tank cleaning industries since 2016. While investigating these tragedies, the most common violations OSHA found included failure to prevent the inhalation of harmful substances and to follow procedures for permit-required confined space requirements.

Reducing the risks tank cleaning workers face has led the Chicago regional office to establish a [Regional Emphasis Program](#). The program will focus on employers in industries typically engaged in tank cleaning activities, including trucking, rail and road transportation, remediation services, material recovery and waste management services.

"OSHA often finds employers who use transportation tanks fail to test atmospheric conditions inside the tankers, complete confined space entry permits and use adequate respiratory protection before allowing cleaning workers to enter," said OSHA's Acting Regional Administrator William Donovan in Chicago. "These companies can prevent injury, illness, or worse by implementing safety and health programs and training workers to identify hazardous conditions and use required protective measures to protect workers from harm."

The initial phase of this Regional Emphasis Program will include informational mailings to employers, professional associations, local safety councils, apprenticeship programs, local hospitals and occupational health clinics, as well as presentations by OSHA to industry organizations and stakeholders. Following its three-month outreach, the program empowers OSHA to schedule and inspect targeted industries in Illinois, Ohio and Wisconsin and those under federal jurisdiction in Indiana, Michigan and Minnesota.

Transportation tanks on trucks or railcars must be cleaned and inspected before refilling with the same or different commodity for transport. Workers who clean these tanks between uses face many serious and potentially deadly hazards caused by toxic fumes from chemicals, decaying crops, waste and other substances that can expose workers to suffocation, fires and explosions.

OSHA encourages industry employers to take steps to identify, reduce and eliminate hazards related to confined spaces and implement noise safety strategies during the Regional Emphasis Program's initial phase. The agency urges employers to use its free consultation services for advice on complying with OSHA standards.



August 13, 2021

OSHA Issues Updated Guidance to Protect At-risk Workers from COVID-19

[Updated guidance](#) recently by the [Occupational Safety and Health Administration](#) is intended to help employers **protect at-risk workers** from the **coronavirus**. Reflecting the **latest developments** in science and **data**, including the **Centers for Disease Control and Prevention's (CDC)** [updated COVID-19 guidance issued July 27](#), the **updated guidance** expands information on **appropriate measures** for **protecting employees** in **higher-risk workplaces** with **mixed-vaccination status workers**, particularly for **industries** where there is **often prolonged close contact** with other **workers** and/or **non-workers**.

OSHA's latest guidance recommends that **fully vaccinated workers** in areas of **substantial or high community transmission** wear **masks** in order to **protect unvaccinated workers**. It also **advises** that **fully vaccinated workers** who have had **close contact** with people with **COVID-19** wear **masks for up to 14 days** unless they have a **negative coronavirus test** at least three to **five days** after **contact**.

"**OSHA** continues to **emphasize vaccination** as the **optimal step** to **protect workers** and encourages **employers to engage** with **workers** and their **representatives** to implement **multi-layered approaches** to **protect unvaccinated** or otherwise **at-risk workers** from the **coronavirus**," a statement from the **U.S. Department of Labor** noted.

OSHA will continue its **enforcement efforts** to ensure **workers are protected** from the **coronavirus** while on the **job**, including through the [National Emphasis Program \(NEP\) on COVID](#). The **agency** launched the **NEP** on **March 12, 2021**, to focus on **companies** that put the **largest number of workers** at **serious risk** of contracting the **coronavirus**, and on **employers** that engage in **retaliation** against **employees** who complain about **unsafe or unhealthful conditions** or exercise **other rights** under the **Occupational Safety and Health Act**. adjusted the **targeted industries** to those **most at risk** for **COVID-19 exposure**, while still including **healthcare** and **non-healthcare sectors**.



ATTENTION SMALL BUSINESSES

OSHA Partners with National Institute for Occupational Safety and Health to Revise Handbook for Small Businesses

The U.S. Department of Labor's [Occupational Safety and Health Administration](#) collaborated with the [National Institute for Occupational Safety and Health \(NIOSH\)](#) to revise a handbook on workplace safety and health information for small business employers.

The [Small Business Safety and Health Handbook](#) highlights the benefits of implementing an effective safety and health program, provides self-inspection checklists for employers to identify workplace hazards and review important workplace safety and health resources for small businesses.

"The revised *Small Business Handbook* is a valuable tool to help employers identify where to take action to make their workplaces safer and more healthful for their employees," said Acting Assistant Secretary of Labor for Occupational Safety and Health Jim Frederick. "Safety has to be a continuous process that involves preventing injuries and illnesses, and saving lives."

The handbook includes self-inspection checklists for various work processes in general industry workplaces, such as fire protection, hazard communication, permit-required confined spaces, respiratory protection and walking-working surfaces. The checklists are not intended for construction or maritime industries.

"Small businesses face many unique challenges and providing a safe and healthy work environment shouldn't be one of them," said NIOSH Director John Howard, M.D. "The updated *Small Business Handbook* is an easy-to-use tool to help keep your most valuable asset – your employees – safe and healthy on the job."

A section of the handbook lists **OSHA** and **NIOSH** resources available to help employers recognize and correct safety and health hazards in their workplace, including the **OSHA On-Site Consultation Program**. The handbook also gives employers information on whistleblower protection laws, training through **OSHA's** education centers and professional occupational safety and health associations with local chapters that small businesses can join. Learn more about how **OSHA** is [helping small businesses](#).

The 4 Most Common Construction Injuries (AND HOW TO PREVENT THEM)

Despite an ever-increasing focus on safety in construction, the latest numbers aren't great. The U.S. Bureau of Labor Statistics reports that one out of every five worker deaths in private industry in 2019 was in construction — a total of 1,061 fatalities. More than 200,000 nonfatal injuries occurred the same year. What's causing these accidents? The Occupational Safety & Health Administration (OSHA) has narrowed it down to four main hazards and recommends these steps to help prevent them.



1. Falls. OSHA includes both falls from heights and slips and trips in this category. Most falls on construction sites are the result of uneven surfaces, improper mounting and dismounting from equipment, improper ladder use or from the lack of using fall protection equipment. Slips and trips are often caused by misplaced items or spills and leaks.

To prevent falls:

- Keep work areas clean, clear of clutter and well lit.
- Use three points of contact when mounting and dismounting from equipment.
- Make sure employees wear shoes with adequate traction.
- Follow safety regulations for ladders (and train employees on these rules).
- Use appropriate fall equipment — guardrails, personal fall arrest systems and safety nets.

2. Struck by an object. OSHA defines this type of injury as the impact between a person and an object or piece of equipment — being hit by a machine or falling materials, for example. The keys to avoiding struck-by injuries are clearly marking or blocking off vulnerable areas and wearing proper personal protective equipment (PPE).

You should also:

- Stack materials properly to avoid falling and sliding objects.
- Avoid close proximity to lifted or suspended loads.
- Train employees not to position themselves between fixed and moving objects.
- Secure materials and tools properly so they won't fall.
- Avoid driving in reverse if your view is obstructed.
- Verify a reverse signal (backup) alarm is installed and functioning properly on all mobile equipment.

3. Electrocution. Burns are the most common result of electrocution, but it can also lead to cardiac arrest and nerve damage. OSHA regulations focus on covering requirements, proper design and use of electrical equipment, and utilizing electrical protective devices and proper insulation.

Other advice:

- Use all required PPE.
- De-energize equipment and use proper lockout and tag-out procedures.
- Train employees to keep a safe distance from parts that are energized.

4. Caught in/between. These accidents occur when a worker is caught between two or more objects — if a vehicle traps a person against a wall, a body part is pulled into machinery or materials collapse on someone. Staying focused on your surroundings is the best way to prevent these injuries.

Also:

- Don't place yourself between heavy equipment and an immovable object.
- Don't put your hands or other body parts near moving objects.
- Don't wear long sleeves, jewelry or other items that can get caught on moving objects.
- Don't work in unprotected excavation areas or where water is accumulating.
- Don't get in the swing radius of a rotating object.

Preventing injuries caused by these hazards — as well as other accidents on the jobsite — starts with a culture that puts safety first.

MJS Legacy Safety can help!

[Check out our schedule of classes.](#)

We can also do an on-site safety assessment at your facility.

[Download](#) the **OSHA Quick Card** (pdf)

Top Four Construction Hazards

How Mentors Helped Shape My Construction Career

Jacki Valdez of Sunbelt Rentals shares how the combination of determination and the right mentorship support set her up for a fulfilling career in the industry.

"As a woman in this industry, I sat in the back of the room for a long time because I felt that was where I belonged," Valdez comments. "Now, I do whatever I can to sit in the front row."

When most people think of a male-dominated field, they likely think of the construction industry. While it's true that women only account for approximately 9.9% of the sector's workforce in the United States according to the Bureau of Labor Statistics, that didn't stop me.

As a woman in the construction industry, my aim was no different than in any other position in any other industry: I wanted to achieve success. Of course, reaching my goals wasn't easy. It required commitment, patience and a lot of hard work. Most importantly, it required putting myself out there, taking calculated risks and learning the ins and outs of the construction industry, the equipment and the technology.

Combining determination with the right mentorship support, I was able to set myself up for building a fulfilling, long-term career in construction.

Guidance at a Young Age

I entered the construction industry by accident. I was in culinary school and I needed a job to support myself. That's where I met my first mentor, Sabina Dahl. I worked alongside her as an assistant for a homebuilder. She taught me about the homebuilding process and how to help future homeowners get what they wanted out of the new construction home-buying experience, all within their budgets. She also showed me how their decisions could maximize resale.

Eventually, I would continue my construction career at the Dahl family business and work with her husband, Rick, who owned a construction equipment company that was later sold to Sunbelt Rentals. I admired seeing how Sabina used her skills to help Rick make decisions, negotiate and create a vision for the family business.

"I wouldn't have gotten to where I'm at today without the mentors who helped me navigate along the way and supported my career growth."

Even though I was determined to finish culinary school, I knew at the age of 18 that I wanted to be a part of the construction industry, due in part to Sabina and Rick's mentorship. I believe mentorship can bring value and insight to women who have an interest in building a career in construction. It can also help overcome apprehensions about taking on roles traditionally filled by men — and enable women to prosper.

Just like with any career, my start in the construction industry required me to work at entry-level positions and then work my way up to positions of progressive responsibility, like service manager, operations manager and eventually business development. Now, I'm a product manager in operational excellence at Sunbelt Rentals.

Shaping a Career

A healthy mentorship can guide success and help women grow, learn and thrive. They brought my attention to new job openings within the company and gave me varied responsibilities, all of which were instrumental in learning more about the business. I've been fortunate to always have a mentor who has been a leader — someone who:

- set the course by example
- could guide me to become independent and self-sufficient
- and gave me a seat at the table

While I've mostly had female mentors, men can and often do play an integral role in the mentorship relationship. I believe Rick created an environment where all employees could be successful. He gave everyone an opportunity that provided growth for the individual, the business and the customer. His guidance, combined with Sabina's, played a vital role in my career and the growth I've achieved.

While I don't necessarily consider myself a mentor, I definitely advocate for women on our team and help them see the value in themselves and drive them to achieve. In short, it's about empowerment.

Navigating Change

Developing a relationship with a mentor can happen in multiple ways, but the important part is to make it happen. A mentor may be within the company you work for and aligned with the same career path. Other times, it could be someone from outside your path who offers different insights and, potentially, opportunity for career growth.

"There are strong women in leadership positions throughout Sunbelt Rentals, which is encouraging to see," says Valdez. "I don't have to look very far to see women in all departments, in a variety of roles, and with different levels of leadership thriving."

It's not just the mentee who benefits from the relationship. There is value to companies, too. Having women grow their careers in the construction industry adds to efforts to improve diversity and inclusion, aids in employee retention and provides leadership experience for the mentor.

I would also encourage women who are considering going into the construction industry, or already in the industry, to look to associations and networking events to widen their opportunity to engage with others. As more companies develop diversity and inclusion programs, the occasions for women to come together and share their experiences have become more frequent.

Talking with supervisors or colleagues is also important to fostering relationships. Some social media channels, like LinkedIn and Facebook, have groups for women in construction to discuss their roles in the industry and to seek out new information. Likewise, colleges and certification classes are good spaces for networking.

Mentors shaped me to become the leader I am today. As a woman in this industry, I sat in the back of the room for a long time because I felt that was where I belonged. Now, I do whatever I can to sit in the front row. And women just like me who are willing to work and put in the time to learn from mentors can do so, too.

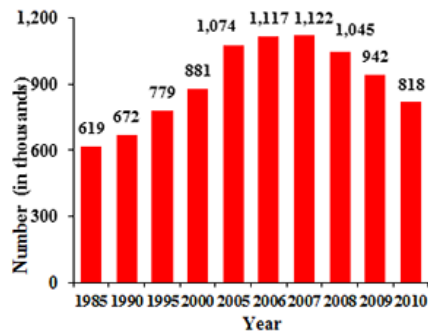
Construction Outreach

Recently **OSHA** met with women in the construction industry to discuss their workplace safety and job opportunities.

"While both men and women working in construction face many of the same risks, there are some unique issues that are of greater concern to women.

The number of women employed in the U.S. construction industry grew substantially, by **81.3%** from 1985 to 2007; however, due to a **loss of over 2.5 million construction jobs** from 2007 to 2010, there has been a **sharp decline** of women working. As illustrated below in **Table I**, and since its peak in **2007**, more than **300,000 women workers** left the **construction industry** by 2010. While only **9% of U.S. construction workers** are women, which is a **relatively small percentage** compared to **other industries** (see **Table II** below), there were **still over 800,000 women workers** employed in **construction** (i.e., managerial, professional, administrative, and production employees) in 2010. Of those, **approximately 200,000** were employed in **production occupations**, such as laborers, electricians, plumbers, etc.

Table I: Number of Women Workers in Construction, Selected Years, 1985-2010 (All types of employment)



[View Text Version](#)

Table II: Percentage of Women Workers, by Industry in 2010 (All types of employment)



[View Text Version](#)

In addition to the **primary safety and health** hazards faced by **all construction workers**, there are **safety and health issues specific to female construction workers**. These safety and **health hazards** in construction **create barriers to women** entering and remaining in this field.

How OSHA Can Help

Workers have a **right to a safe workplace**. The law **requires employers** to provide their **employees** with working conditions that are **free of known dangers**. **OSHA** provides **information**, training, and **assistance to workers** and employers.

If you think **your job is unsafe** or you **have questions**, contact **OSHA** at 1-800-321-OSHA (6742). **It's confidential**. We can help. For **other valuable worker protection** information, such as **Workers' Rights, Employer Responsibilities**, and other services **OSHA** may offer, visit [OSHA's Workers' page](#).

OSHA will **continue to conduct inspections** in response to **complaints** and/or referrals. **Workers may file a complaint** to have **OSHA inspect their workplace** if they believe that their **employer is not following the OSHA standards** if there is a **serious hazard**. Employees can **file a complaint** with **OSHA** by calling 1-800-321-OSHA (6742) or by **printing out the complaint form** and mailing or **faxing** the completed form to your **local OSHA area office**. Complaints that are **signed by an employee** are more likely to **result in an inspection**.

[Personal Protective Equipment](#)

Provides information about Personal Protective Equipment for women in construction.

[Sanitary Facilities at the Construction Site](#)

Provides information about access to sanitary facilities at construction sites.

[Additional Resources](#)

Provides additional resources for women in construction.

[10 Safety Tips for Women in Construction](#)

Reminder - Revised Federal Drug Testing Custody and Control Form Must be Used on August 30, 2021

U.S. Department of Transportation sent this bulletin at 08/24/2021 10:10 AM EDT

On August 17, 2020, the Office of Management and Budget (OMB) approved a revised Federal Drug Testing Custody and Control Form (CCF). In addition, OMB authorized the use of the old form through August 29, 2021. You can view the revised CCF [here](#).



- ▶ **As of August 30, 2021, DOT-regulated employers and their service agents [collectors, laboratories, Medical Review Officers (MRO)] must use the 'revised CCF'.** ◀

[Learn more](#) about what this means for DOT drug testing.

Colorado State Patrol Click It or Ticket



The Colorado State Patrol is part of an ongoing national effort to make sure drivers and passengers buckle up and reduce traffic deaths and injuries on our highways.

According to CDOT as of November 13, 2020 - **54% of vehicle fatalities** in 2020 have involved unbuckled occupants.

The CSP knows that we can reduce serious injuries and fatalities if motorists would use their seat belts and make sure their passengers are buckled up.

In 2020 there was a **rate of 86% compliance** (according to CDOT).

While the goal of the campaign is voluntary compliance, those who continue to violate seat belt laws will risk getting a ticket. If drivers are stopped for another offense and they are not buckled up, they will get a ticket. The enforcement also targets drivers with unbuckled children in the vehicle. Those drivers can be stopped and ticketed without another violation.

Colorado's child passenger safety law is a primary enforcement action. This means a driver does not have to be stopped for another driving offense before they can be ticketed for a violation of the child passenger safety laws. They can be pulled over for this reason alone.

The child passenger safety law clearly defines child safety seat and seat belt use from birth through age 15 as follows:

- ▶ The law requires infants to ride in a rear-facing child safety seat until they are at least one year old and weigh less than 20 pounds.
- ▶ The law requires children ages one to four years old that weigh at least 20 pounds up to 40 pounds to be restrained in a forward-facing or rear-facing child safety seat.
- ▶ The law requires that children who weigh over 40 pounds or who are at least four years old be properly restrained in a child booster seat or with a child safety belt-positioning device. Children must ride in booster seats until they are eight years old.
- ▶ A child who is at least eight years old must be properly restrained with a safety belt or child restraint system.

For more information on Child Passenger Safety visit: <https://www.codot.gov/safety/carseats/>

The seat belt law for adults requires the driver and front seat passengers to buckle up. The law is a secondary offense, meaning a driver must be stopped for another offense before receiving a ticket for a seat belt violation. The minimum fine is \$65.

The national Click It or Ticket Mobilization is conducted by the Air Bag & Seat Belt Safety Campaign of the National Safety Council in conjunction with NHTSA, state highway safety offices, law enforcement agencies and the National Transportation Safety Board.

Always buckle up.....it's the right thing to do!!



Workers across all occupations and industries drive as part of their jobs – moving freight and passengers, making sales calls, traveling between construction sites, delivering food, making on-site repairs, providing home healthcare, and more. The legal, scientific, and technological landscape of work-related motor vehicle safety (MVS) has changed significantly over the past few years. Laws and regulations have changed. Research gives us new evidence about the nature of risks and how best to manage them. Newer technologies give employers new ways to promote safer driving and prevent crashes.

It's time to take a fresh look at what employers can add to their toolbox of policies and interventions to protect their employees who drive for work. Everyone benefits when employers protect their workers from driving hazards, including workers' families and communities.

Who should take these actions?

Any business whose employees drive during work hours should have a program in place. Employee driving can look very different across businesses and industries. Workers may drive their company's fleet vehicle or their own personal vehicle; they may drive heavy trucks or passenger cars; they may drive as their primary work task (*taxi drivers*) or from worksite to worksite (*home healthcare professionals*). All these workers will benefit from a motor vehicle safety program!

10 Actions to Protect Drivers at Work when Implementing an MVS Program

Here are 10 actions considered to be the most important to take when implementing a motor vehicle safety program:

1. Create a culture of motor vehicle safety.
2. Develop policies and procedures.
3. Select, train, and periodically assess drivers.
4. Use in-vehicle monitoring systems (IVMS).
5. Reduce distracted driving.
6. Prevent fatigued driving.
7. Prevent impaired driving.
8. Ensure safe speeds.
9. Select and maintain safe vehicles.
10. Use data to drive program decisions.

[Read the full newsletter](#)


What Happens When FMCSA Comes to Audit Your Driver Logs?

Federal Motor Carrier Compliance Investigations (*what you might remember as a Compliance Review*) are **still ongoing** even during the **COVID-19 pandemic** – albeit virtually. And **even though electronic logging** devices have been **mandatory** for most fleets **since last December**, some companies **find they may run into some trouble during one of these safety audits.**

No matter what the **type** of investigation, **safety investigators** must **check the following** areas during a compliance **investigation**, using the acronym **CAIR** (pronounced “care”):

- **CDL**
- **Authority**
- **Insurance**
- **Red Flag Violations**

Recently added was the **Drug and Alcohol Clearinghouse**. In any **type of investigation**, the **investigator looks** at things such as **whether** the company is **registered** for the **clearinghouse** and if the **company** is doing the **full clearinghouse queries** before the **driver gets behind the wheel.**

There are 16 “red flag” violations, where if an  **investigator discovered** them during or **prior** to investigation, he or she is **supposed to investigate** what the **company did** in response – did they **fire the driver**, for instance. **Examples** include **operating a truck** without a **valid CDL**, driving **after being declared out of service**, or **operating while using** or in **possession of drugs.**

A Surge in Traffic Deaths Leads to the Creation of the Road to Zero Resolution



Although there were less people out and about during quarantine, traffic deaths spiked by 7.2 percent last year.

The [Road to Zero resolution](#) was created by U.S. Senators Edward J. Markey (D-Mass.), Richard Blumenthal (D-Conn.) and U.S. Representative Jan Schakowsky (IL-09) in support to eliminate traffic deaths. With traffic deaths on the rise, the resolution expresses a commitment to advancing policies to end roadway fatalities by 2050 and supports efforts to address transportation safety disparities and inequities.

“We must act to prevent crashes that tragically take far too many Americans’ lives each day,” said Senator Blumenthal. “By committing to enact proven, commonsense road safety policies, this resolution charts the course to reduce traffic deaths to zero by 2050. I am proud to pledge my support for this important lifesaving effort with Congresswoman Schakowsky and making our roads safer for every pedestrian, biker, and driver across the country.”

Studies show traffic incident risks have much higher pedestrian fatality deaths among older adults, people of color and people walking in low-income communities with fewer sidewalks, crosswalks and a lack of safe street design. A 2018 report from the RAND Corporation found that the U.S. can reach its goal of zero traffic deaths by 2050 through prioritizing safety and implementing proven policies and strategies.

“Our country is in the midst of an auto safety crisis, one that we have the power to stop in its tracks,” said Rep. Schakowsky. “Tens of thousands of lives are lost on our roadways each year. Enough is enough. We must commit to ending these unnecessary deaths and injuries by 2050. This resolution makes that commitment and calls on the Department of Transportation to use the tools at its disposal to prioritize transportation safety. All road users—drivers, passengers, pedestrians, and bicyclists—deserve to be safe on our nation’s roads.”

Americans drove less in 2020 due to the pandemic. However, recent reports from the National Highway Traffic Safety Administration (NHTSA) show that 38,680 people died in preventable car crashes last year. This was up to 7.2 percent, nearly 2,600 more than in 2019 which is the largest number of deaths since 2007.

The Senate resolution can be found [here](#). A similar version was introduced in the house. The resolution has been endorsed by the National Safety Council, Consumer Reports, Vision Zero Network and Families for Safe Streets.

SLOW FOR THE CONE ZONE



Every year, CDOT embarks on hundreds of construction projects across the state, and that doesn't even include the numerous maintenance activities we conduct every day to keep our highways safe.

With every construction zone comes equipment, workers, and daily changes in the road and alignment you may be traveling. As a result, it's critical you do your part to make the cone zones safe. Lower speed limits, flaggers and police enforcement are used to help keep work zones safe, but motorists still must drive responsibly to keep themselves and our workers safe.

Here are some work zone facts to put work zone safety into perspective:

Work Zone Facts

- Eighty-five percent of those killed in work zones are drivers and passengers.
- About 600 people die and more than 37,000 people are injured in work zone crashes nationwide.
- On average, in a typical five-day work week, seven motorists and one highway worker are killed nationwide.

Slow Down and Stay Alert!!

Is a Vehicle Mileage Tax on the Horizon?

Paying less at the pump, but more on your odometer, what does a vehicle miles traveled tax really entail?

Lawmakers in Washington have debated in great length about how to pay for the Infrastructure Investment and Jobs Act (IIJA) as well as making sure the Highway Trust Fund (HTF) remains solvent.

Currently, some funding for the HTF comes from a 18.4 cents per gallon on gasoline and 24.3 cents per gallon on diesel fuel, which has not been raised since 1993 and President Biden has said no to an increase. Other modes of funding, like a National Vehicle Miles Traveled (VMT) tax are critical because inconsistencies between tax revenues and highway expenditures will get worse as fuel efficiency improves and EV adoption grows.

One program officials are planning to pilot, is a national motor vehicle per-mile user fee, which is laid out in the current bipartisan bill that passed in the Senate.

States Leading the Charge

A VMT tax charges motorists based on their road usage measured in mileage through a telematics device to capture distance driven by a vehicle through GPS. Some states have already put this tax program into effect.

Oregon has operated their [OReGO program](#) since July 1, 2015. According to their 2017 Oregon Road Usage Charge Report, "Volunteers who enroll in the OReGO program self-install a mileage reporting device in their vehicle and are charged 1.5 cents per mile driven. Fuels tax paid at the pump is treated as a pre-payment of road charges and credited to volunteers' accounts. Volunteers can choose between GPS or non-GPS devices." In OR, more than 1,300 vehicles have enrolled in the program statewide and plan to make the program mandatory for all new vehicles starting in 2026.

Other states including California, Washington and Colorado have previously conducted pilots. However, in the text of the current IIJA, states could receive a grant to solicit volunteer participants that represent geographically diverse regions from all 50 States, including urban and rural areas. If the IIJA gets passed (still has to be approved by the House, then President Biden), the pilot program would receive \$10 billion dollars between 2022 and 2026.

Opportunities and Obstacles to VMT

Fuel consumption used to be a good representation for road use, however it isn't any more because of an increase of fuel-saving, eco-friendly modes of transportation.



With infrastructure funds dwindling, officials are looking at ways to replenish the HTF and other funding mechanisms to ensure America's highways, roads and bridges get the rehabilitation they desperately need.

Advantages to a vehicle miles traveled tax include:

- It would be fair across all vehicle types - From a funding perspective, it would be formed as a true user-fee instead of paying road taxes at the fuel pump, drivers would pay based on how much they drive
- This type of tax is better at targeting those who drive more frequently
- Greater fuel economy would have less effect on a VMT tax, consequently raising more revenue for infrastructure projects

AASHTO [sent a letter](#) to Congress in April, 2021 in support of a VMT implementation program.

"A national implementation program should work in cooperation with the public and private sector to address national implementation issues, such as standards for data collection, user equity, interoperability, administrative structure and costs, and public acceptance. Once these issues are resolved and recommendations for moving forward are made, a system must be tested in an interoperable, national setting."

The organization also provided an ideal testbed — The United States Postal Service.

Disadvantages to a program like this include:

- Privacy concerns about the potential tracking of movement and location of motorists by the government
- Installing some type of technology in all personal and commercial cars and trucks in the United States could cause administrative difficulties
- Rural drivers will have contrasting impacts which would cost them more as they tend to drive more than those in the urban areas

For the pilot program text in the bill, Transportation Secretary Pete Buttigieg will coordinate collection tools such as third-party onboard diagnostic devices, smartphone apps, telemetric data or any other methods considered appropriate. The bill does not provide provision for the privacy of the data or how to keep the information collected safe.

Infrastructure can't wait, technology and vehicles continue to evolve, there needs to be a relevant option to fill the funding void and a vehicle miles traveled tax might be a viable option. Conversations will continue in Washington as the bill continues to move through the legislative process.

House to Vote on Infrastructure Bill by September 27th

From fixing aging roadways and failing bridges to helping ease costly congestion, the investment in our nation's infrastructure will have profound impacts

It's truly unfortunate that the literal backbone of America, our infrastructure, has been neglected for so long. Infrastructure problems affecting communities across the country have been put on the back burner since before the Great Recession.

Our roads have suffered. The U.S. has been underfunding its roadway maintenance for years, which has resulted in a \$786 billion backlog of road and bridge capital needs. The bulk of the backlog (\$435 billion) is in repairing existing roads. The **American Society of Civil Engineers (ASCE)** said that over 40% of the roadways in the country are in critical need of repair.



Our bridges have suffered. According to the **American Road & transportation Builders Association (ARTBA)**, 1 in 3 bridges in the United States are currently structurally deficient. What that really means is that motorists are driving across bridges badly in need of repair 171.5 million times daily.

Our livelihood has suffered. Congestion due to inadequate infrastructure has added 37 minutes to what would otherwise have been a 30-minute trip in a typical American city. Traffic congestion on our major highways has led to nearly \$75 billion in operational costs and 1.2 billion hours of lost productivity.

These issues are decades in the making and have been holding our country back for far too long. Recently, the Senate voted to pass the **Infrastructure Investment and Jobs Act (IIJA)**. This legislation would fix our roads and structurally deficient bridges in need of repair, remove dangerous lead service water lines in countless communities, safeguard critical assets against increasingly severe weather trends, modernize aging transit fleets and much more.

What will the Funding Fix?

The historic bipartisan legislation includes \$550 billion in new spending programs to help rebuild our crumbling infrastructure, keep America competitive with growing powers, create new, good-paying jobs and combat climate change in the process.

The legislation will be paid for with pre-existing federal obligations and policy adjustments. These adjustments re-purpose federal money and reduce federal spending in some programs.

With any hope, the bill will make it to President Biden's desk in the next month and states could see money start flowing through existing federal channels as soon as October. Here are a few issues Americans face every day that will be addressed under this bill.

Three Issues Infrastructure Funding Will Address

► Safety

Making sure all Americans feel safe on our roads is a huge undertaking given the current state of repairs needed. The ASCE says that over 40% of our road system is now in poor or mediocre condition. Overall, our deteriorating roads are forcing the nation's motorists to spend nearly \$130 billion each year on extra vehicle repairs and operating costs.

The IIJA provides \$303.5 billion over five years for **Federal Highway** programs, a 35% increase from previous bills, which will help make a significant impact on the backlog of maintenance problems facing our crumbling roadways.

Roads aren't the only issue in need of some work. Our bridges are in bad shape. There are nearly 45,000 bridges in our country that need to be repaired and the estimated cost to repair or replace them, based on average price data from the **U.S. Department of Transportation**, would be \$41.8 billion. The cost of doing nothing to repair these bridges though would be even higher. As years go on, the likelihood of these bridges failing increases and with that the chance of catastrophe.

The proposed legislation in the bipartisan infrastructure bill includes \$40 billion in dedicated resources for bridge repair, replacement and rehabilitation, which is the single largest dedicated bridge investment since the construction of the interstate highway system

The bill also provides \$55 billion to upgrade water infrastructure and replace lead service lines throughout the country. The **Drinking Water and Wastewater Act** reauthorizes both the **Clean Water State Revolving Fund (SRF)** and the **Drinking Water State Revolving Fund** at \$43.4 billion and appropriates \$15 billion through the **Drinking Water State Revolving Fund** to replace lead service lines. Both the **Drinking Water and Clean Water State Revolving Funds** would each receive \$14.7 billion over 5 years.

► Congestion

Congestion on our roadways is a huge problem and one that this increase in infrastructure funding will hopefully fix. In 2019, congestion added 37 minutes to what would otherwise have been a 30-minute trip in a typical American city. Traffic congestion on our major highways has led to nearly \$75 billion in operational costs and 1.2 billion hours of lost productivity.

As the backlog of rehabilitation needs grows, motorists are forced to pay over \$1,000 every year in wasted time and fuel. Overall, our deteriorating roads are forcing the nation's motorists to spend nearly \$130 billion each year in extra vehicle repairs and operating costs.

Congested airports, increased trucking expenses and old stormwater conveyance systems create additional costs that get passed on to consumers. The delayed process of funding our infrastructure has imposed this hidden tax.

The bill would invest \$17 billion in port infrastructure and \$25 billion in airports to address repair and maintenance backlogs, reduce congestion and emissions near ports and airports, and drive electrification and other low-carbon technologies.

► Connectivity

Transit is a huge winner under this legislation with \$66 billion being allocated to passenger and freight rail. The program will also fund planning, design, demolition, and reconstruction of street grids, parks, or other infrastructure through \$1 billion of dedicated funding.

Connectivity doesn't just mean roads and bridges. If the last year has taught us anything, it's that staying connected is paramount to keeping our country moving. It also brought to light the lag in connectivity our country faces. According to the [White House Fact Sheet](#), more than 30 million Americans live in areas where there is no broadband infrastructure that provides minimally acceptable speeds – a particular problem in rural communities throughout the country. The deal makes a \$65 billion investment in broadband to help ensure Americans have access to reliable high-speed internet.

For far too long, Congress has agreed that infrastructure is an American priority but has let political gridlock get in the way of concrete action. It's time for lawmakers to put policy ahead of politics and get to work passing this bill.

Three Things the Infrastructure Plan Missed

The \$1.2 trillion bipartisan plan spends a little money in a lot of places, but misses key opportunities to make transformative change.

Our roads, bridges, airports, waterways and connected infrastructure will receive \$550 billion in new infrastructure spending over the next five years, giving each sector a much-needed boost.

But is it enough? Many say no.

The plan's passage through the Senate was a great compromise for our lawmakers in Washington and will be a huge win for the construction industry if passed by the House. It spreads some money over vast areas of the federal government, but in doing so doesn't invest anywhere in a truly meaningful way.

For example, the bill includes huge increases in rail, to the tune of \$66 billion, but not enough to install high-speed rail across the country. It increases investment in water (*at \$55 billion*) but that's not enough to fully upgrade all our out-dated systems.

The overall package includes \$40 billion in dedicated resources for bridge repair, replacement and rehabilitation, which is the single largest dedicated bridge investment since the construction of the interstate highway system **BUT** a recent estimate for the nation's backlog of bridge repair needs is \$125 billion, well over the funds allotted in this plan.

If you look at funding alone, there's just not enough. Here are a few other things the bill missed out on addressing.

► Highway Trust Fund issues not solved

Established in 1956, the **Highway Trust Fund (HTF)** uses the federally established gas tax to help fund our nation's roads, bridges and highways. Each time you fill up your gas tank, you are helping to pay for the roads you're using. In fact, roughly 51% of road and bridge projects in the United States are funded through the use of the HTF.

The issue with this driver funded program however, is that the current gas tax hasn't been raised since 1993 and the user fee has not been indexed for inflation. So, the federal government has borrowed to foot the bill. Add to that the fact that cars are increasing in fuel economy and consumers are leaning more toward hybrid vehicles, and we're talking big trouble for infrastructure funding.

There were high hopes that the bipartisan plan would fix the HTF solvency issue, but they failed to do so. It does include reauthorization of the HTF and a \$118 billion bailout from the Treasury's general fund to meet the needs of the nation's highways, bringing the grand total of transfers to the HTF to \$271.8 billion since 2008, according to Jeff Davis of the nonpartisan **Eno Center for Transportation**.

The bill does include a pilot program on a gas tax alternative that would charge users based on vehicle miles traveled. But for the most part, Congress has punted the user fee issue yet again when they had a real opportunity to create a long-term fix.

Keep in mind on the HTF, current funding for federal highway and public transportation programs expires September 30. House action on the Senate-passed infrastructure measure would enable a new, five-year reauthorization of current programs to be signed into law by the President by that day.

► **Workforce development is missing**

President Biden has been quoted as saying this bill will create millions of good union jobs all across the country in cities, small towns, rural and Tribal communities and has said that 90% of the jobs created will not require a college degree. In fact, the White House says 2 million jobs per year on average are projected to be added over the next decade as a result of this legislation.

The problem is, who will do the work? In the construction industry alone, second quarter data from the **U.S. Chamber of Commerce Commercial Construction** showed that 88% of contractors are having difficulty finding workers, forcing them to pull back on projects. Of those who reported difficulty finding skilled labor, 35% have turned down work because of skilled labor shortages. If we don't have the workers, how can we move these projects forward?

Earlier this year, President Biden proposed the **American Jobs Plan** which included \$100 billion to fund priorities like expanding registered apprenticeships and pre-apprenticeships, particularly for women and people of color, wraparound support for dislocated workers, sector-based training programs focused on target industries and job training for justice-involved individuals. Unfortunately, the bipartisan agreement left this funding out.

Without an investment in workforce development and policy, employers will struggle to find the qualified workers needed to fill infrastructure, clean energy and other in-demand jobs now and in the coming years.

An analysis by the **Georgetown University Center on Education and the Workforce** finds that in a \$1.2 trillion infrastructure plan, more than half of the jobs created will require some form of short-term training, and the remainder will require six months to two years of training. While many workers already have the skills to do these jobs, they may still lack the credentials to prove it— and employers and the workforce system lack the ability to identify these workers at scale. Millions more workers will need to develop their skills and the plan as it stands misses the opportunity to help.

► **Fix the old or build new?**

In March, **U.S. Secretary of Transportation** Pete Buttigieg emphasized a top priority for his national agenda: Fixing the country's "maintenance backlog."

The nation faces an enormous road repair backlog, to the tune of \$420 billion, yet the IIJA unfortunately does not include a "fix it first" provision. Despite attempts to include one via amendments, this bill misses an opportunity to prioritize highway maintenance and safety upgrades over expansion or adding new lane miles. A new bridge repair program (*Section 11118*) represents the sole source of funding dedicated to maintenance.

The bill's authorization for the main federal-aid highway programs would be \$52.5 billion in FY 2022, increased 2% each year until it reaches \$56.8 billion in FY 2026. These funds will go a long way to address the \$1.2 trillion, 10-year, funding gap that ASCE identified in the 2021 Report Card, but it's not enough.

A November 2019 report by the **Federal Highway Administration** says doing all highway work deemed as cost beneficial would cost nearly \$136 billion *per year*.

It's clear there is nowhere near enough money to clear the maintenance backlog, let alone build new roads. Yet the **National Association of City Transportation Officials** says that this bill allows for "unchecked highway expansion" instead of fixing what we already have.

With the bill now being debated in the House, there is an opportunity to strengthen the legislation to make it more complete for the industry and the country.

Stay Out, Stay Alive



Exploring or playing at active and abandoned mine sites is dangerous, potentially fatal



Water-filled quarries and pits hide rock ledges, old machinery and other hazards. The water can be deceptively deep and dangerously cold. Steep, slippery walls make exiting the water difficult. Hills of loose material can easily collapse on an unsuspecting biker or climber. Vertical shafts can be hundreds of feet deep and may be completely unprotected, or hidden by vegetation.

Even so, dozens of people are injured or killed while exploring or playing on mine property every year. The men and women employed in our nation's mines are trained to work in a safe manner. For trespassers, hazards are not always apparent.

For example:

- *Water-filled quarries can not only hide rock ledges but can also contain dangerous electric currents that become deadly under water.*
- *Abandoned mine shafts that may seem fun to explore can unexpectedly collapse.*

As students return to school while the weather is still warm and water seems inviting, it is more important than ever to remind people to stay out of abandoned or active mine sites like quarries and pits – and stay alive.

[Learn more](#) about abandoned mine and quarry accidents.
Please help raise awareness about this danger.

**Most importantly, remind people to
STAY OUT, STAY ALIVE!**

MINE FATALITY – On July 21, 2021, a miner received fatal injuries while adding a boom extension to a crane. The miner was working under the boom to remove the boom pins when he was struck by the boom.

Best Practices:

- **Never perform work under raised machinery or equipment** until such machinery or equipment has been securely braced in position, blocked and secured against motion. Be alert for hazards that may be created while the work is being performed.
- **Conduct repairs from a safe location per manufacturer's recommendations.** Verify the release of all stored energy before initiating repairs.
- **Use a lifting device compatible with the load being lifted** and ensure blocking material is competent, substantial, and adequate to support and stabilize the load. Always use the manufacturer's safety devices or features to secure components against motion, and secure assemblies that rotate to prevent movement.
- **Establish and discuss safe work procedures before starting any task.** Train miners in safe work procedures and hazard recognition. Monitor personnel routinely to ensure safe work procedures are being followed.



Make Sure Miners and Mine Operators are Trained in Best Practices

Over Half of Workplace Electrical Fatalities are Attributed to Non-Electrical Occupations

Absence of Voltage Testers can save lives by providing safety for everyone.



While investigating the recovery of **electrical burn victims**, researchers discovered a **distressing truth** about their data: the use of **safety equipment**, such as PPE and **insulated tools**, was alarmingly low.

In fact, every **electrical burn patient** in the study had failed to follow **all appropriate safety measures**, but the problem isn't limited to **electrical work**. ESFI (*Electrical Safety Foundation International*) reports that between **2011 and 2019**, 68 percent of workplace **electrical fatalities** were attributed to **non-electrical occupations**. Electrical hazards exist throughout the **workplace** and impact workers who **aren't trained electricians** or electrical contractors for a **number of logical reasons**.

A **machine operator** works on a machine that is **powered by electricity** and a mechanic does, too. They may be experts at their jobs, but they **aren't necessarily qualified** people ready to establish and **verify an electrically safe** working condition. **Facilities all over** the world right now are **reexamining how spaces** are cleaned, where cleaning crews need to go and **what they need to touch** to keep spaces clean or **disinfected**. Every facility is different, with **multiple work processes** operating independently or in **tandem**—some of them requiring **multiple steps** and continual repetition of vital, but still **repetitive, tasks**.

It's very common for people to **fail to verify aspects** of important situations. **Safety professionals**, however, can't simply **cite human nature** for cutting corners and call it a day. **Safety training** and protocols are **designed to empower** employees to take the time, **every time**, to protect themselves and others. Yet, **electrical shocks** and burns are still **occurring in an alarming number** of cases to workers who **weren't there to perform** electrical work but were carrying out other tasks. That's **one reason** so many safety experts want to **prioritize the prevention** of workplace injuries with **design practices**.

Processes and PPE can—and do—protect people, but **addressing risk** during the **design of a system** is a more effective way to **reduce risk** and mitigate **hazards workers face**.

Engineering for Safer Testing Outcomes

One issue **facilities are examining** is the risk of **human error** in the **mitigation of electrical incidents**. When establishing an **electrically safe work condition**, the traditional method of **verifying an absence of voltage** relies on a manual process with a **hand-held tester**. To perform that test safely, a **qualified person relies** on additional layers of **procedure**, expert knowledge and **proper use of equipment**, including PPE. **Each item** on that list is a place where a human may, **despite proper training and experience**, make a mistake.

If any step in the **process exposes a worker** to electrical hazards, then it isn't a **question of whether** that risk should be addressed, but how. The **Hierarchy of Controls provides** clear categories of **risk mitigation strategies** ranked in order of effectiveness. **PPE and administrative controls**, such as safety procedures, are at the bottom of the **inverted pyramid**. They are the **least prioritized** because although they **control the risk**—the hazard is still there. At the top of the **hierarchy** are design-related controls. These **controls alter** the process or **equipment** in a way that either **eliminates the hazard**, substitutes it for a **lesser hazard** or utilizes engineering controls to **reduce exposure to the hazard**.

For the **verification of an electrically safe** working condition, it is possible to replace the **hand-held testing process** with an engineered solution. A **voltage tester (AVT)** is a **permanently mounted tester** designed to **test for absence of voltage**, but unlike the **traditional hand-held tester**, the **AVT** completes the **test without exposure** to hazards.

Why Would an AVT Be Safer?

Hand-held voltage test instruments and **AVTs** both satisfy the requirements in **NFPA 70E** for testing for **absence of voltage**. Both methods test for **phase-to-phase** and **phase-to-ground voltage** at the point of work. Both the **hand-held tester** and the **AVT** confirm proper operation with a **known voltage source**. The main differences are in how the **steps in the testing process** are achieved:

**An AVT enables testing before doors, panels, or covers are removed, while a hand-held tester requires physical access to circuit parts during testing.*

**Engineered with layers of requirements for fail-safes, an AVT automates a safety procedure and provides a consistent process which is less susceptible to human performance errors that are typical with hand-held testers.*

**An AVT is permanently mounted and hardwired to the test point, the AVT produces reliable results, even in places that are difficult to test with hand-held testers. An AVT makes a more efficient process possible. While the hand-held testing process typically requires 10 to 20 minutes for a qualified person to complete properly, utilizing an AVT replaces it with a process that takes seconds and requires only the push of a button. In addition, the AVT can be integrated with other safety and controls, physically preventing access to an enclosure, control room or work area, until the absence of voltage has been confirmed. AVTs make it possible for both electrical and non-electrical workers to confirm absence of voltage without exposure to hazards.*

What's Wrong with Hand-Held Testing?

Voltage testing is critically important, and **no one tool or procedure** will ensure **electrical safety in every situation**. Hand-held testers, such as **digital multimeters**, will continue to be necessary, and **facilities cannot discount** the need for **vigilance and improvement** in all processes that require them. The **AVT** is designed to make one important, **frequently performed process** safer. The automated **process subtracts all-too-common** human factors from situations like:

**A process is interrupted, or a worker is distracted and accidentally skips a vital step.*

**A worker repeatedly performs the process several times a day and becomes complacent.*

**Time pressures or lack of negative consequences over time lead to improper or no PPE use.*

There's also one **crucial difference between** an **AVT** and manual testing that seems obvious but **can often go overlooked**: an **AVT** is built into the system to **test exactly** what it's **designed to test**. When using **hand-held testers**, the equipment tested may or **may not have been designed** with the need for **voltage testing in mind**, with each piece of equipment (or particular installation of it) posing **unique challenges** that an experienced person **must be aware of** and remember in order to **perform the test properly**. Some areas of concern and **technical issues** that testers should be **aware of include**:

Using the right tester. *There are many types and kinds of portable testers. Some may not be rated for the environment, meet the requirements for manually testing for absence of voltage, or may require a specific setting. In the case of the latter, making sure the setting is correct is absolutely vital. An AVT removes the setting error issue by being dedicated to the specific task. Lookalike equipment error. Many assets look identical and errors can happen in a facility or in the field when part of a process are performed on an adjacent or mislabeled piece of equipment. An AVT can help avoid these errors because it is installed on the equipment.*

Barriers to safety. *Barriers or guards are used in equipment to prevent accidental contact with energized parts. However, they can also prevent contact that is required for hand-held testers. When testing for absence of voltage be sure to consider if there are additional risks associated with removing a guard and whether good contact can be made through a barrier.*

Skipping the self-test. *Working environment difficulties can tempt workers to skip verifying the operation of a tester on a known voltage source (this also requires exposure to voltage). An AVT is designed with a built-in, known voltage source for self-testing.*

Safety versus safety. *Insulated busbars, finger-safe terminals or other safety options may make it difficult to assess where a proper contact can be made with a hand-held tester. If a worker mistakenly tests an insulated conductor, they may believe absence of voltage has been tested for, when it has not. Part of the AVT test sequence is confirmation that the AVT is in contact with a reliable test point.*

Reliable ground required. *Without a reliable ground reference point, a handheld tester can show zero volts even if voltage is present. An AVT must be installed with ground leads and will not indicate absence of voltage if the ground leads are not properly terminated.*

Advancing Options for Safety

As **technology continues to advance**, so do our options for ensuring **electrically safe working conditions** in all types of **facilities**. As businesses design **safety control measures** into a system or **work process**, they are also **realizing addition benefits** like operating efficiencies in addition to the **safety improvements** those control **measures provide**. For more information on using **AVTs** for a **more efficient**, engineered approach to safety, **reach out** to your **electrical infrastructure solution partner**.