Use of Positive Protection Devices for Work Zone Safety

April 20, 2026

Housekeeping

CPWR
THE CENTER FOR CONSTRUCTION
RESEARCH AND TRAINING

Today's webinar is being hosted by CPWR

It will be recorded and automatically shared via follow-up email.

The recording and slides will also be posted on cpwr.com/webinars.

Attendees are automatically muted! Please submit questions via chat or Q&A.

Spanish audio is available via simultaneous interpretation

Interpretación simultánea

THE CENTER FOR CONSTRUCTION RESEARCH AND TRAINING

WINDOWS - MAC (Navegador web/*Browser*)

1. En los controles del seminario web, haga clic en **Interpretación** 
2. Haga clic en el idioma que desee escuchar.
3. (Opcional) Para escuchar solo el idioma interpretado, haga clic en **Silenciar audio original**.

Nota: Hay que unirse al audio del seminario web a través de audio o VoIP de la computadora. No podrá escuchar la interpretación de idiomas si utiliza las funciones de audio de teléfono llamada directa o recibir llamada.

ANDROID - iOS (Aplicación móvil/*Mobile App*)

1. En los controles del seminario web, toque los puntos suspensivos 
2. Toque **Interpretación de idiomas.**
3. Toque el idioma que desee escuchar.
4. (Opcional) Toque el botón de alternancia **Silenciar audio original**.
5. Haga clic en **Finalizado**.

Nota: No podrá escuchar la interpretación de idiomas si utiliza las funciones de audio de teléfono llamada directa o recibir llamada.

What is the Struck-by Stand-Down?

- Began in 2020
- Aligns with National Work Zone Awareness Week, but focuses on construction
- Voluntary event for employers to talk directly to employees about safety
- Organized by the NORA Construction Sector Council Struck-by Work Group

Today's Panelists

Brad Sant, Esq.,
Senior Vice President, Safety and Education,
American Road & Transportation Builders Association (ARTBA)

Christina Bennett, PE,
Construction & Maintenance Engineer,
South Dakota Department of Transportation

Ryan Papariello, GSP,
Safety and Health Specialist,
Laborers Health and Safety Fund of North America (LHSFNA)

Laura Huizinga,
Senior Business Development Manager,
Lindsay Corporation

Positive Protection and FHWA Rulemaking

Bradley Sant

Senior Vice President, Safety and Education

Update to Subpart K – Positive Protection

Timeline

- Rule Issued November 1, 2024
- States Required to Update Policies by December 31, 2025
- Changes to Projects Implemented by December 31, 2026

What Changed?

- The regulations emphasize the use of positive protection devices to enhance safety.
- These devices are designed to contain or redirect vehicles, thereby reducing the risk of crashes in work zones.
- The use of these devices is encouraged on all highway projects, not just those receiving Federal aid.

When Is Positive Protection Required?

- Positive protection devices must be used in certain high-risk work zones, meaning areas with ***high anticipated operating speeds*** where workers have ***no means of escape from motorized traffic*** unless an ***engineering study*** determines otherwise.
- Such a study evaluates ***specific conditions***, including traffic speed, volume, and the nature of the work being performed.
- The study helps determine the most appropriate type and placement of positive protection devices
- This requirement aims to provide a physical barrier between the work space and traffic space.

Specific Considerations

- Work zones that provide workers no means of escape from motorized traffic (e.g., tunnels, bridges, etc.) Next to steep hill, barrier/sound wall, etc.
- Long duration work zones (e.g., two weeks or more) resulting in substantial worker exposure to motorized traffic
- Projects with high anticipated operating speeds (e.g., 45 mph or greater – up to agency to define), especially when combined with high traffic volumes
- Work operations that place workers close (e.g., within one lane width) to travel lanes open to traffic; and
- Roadside hazards, such as drop-offs or unfinished bridge decks, which will remain in place overnight or longer

Use of Positive Protection Devices for Work Zone Safety

LABORERS'
HEALTH & SAFETY FUND
OF NORTH AMERICA

LiUNA!

LABORERS' HEALTH & SAFETY FUND OF NORTH AMERICA

LECET
Laborer-Contractor Partnerships

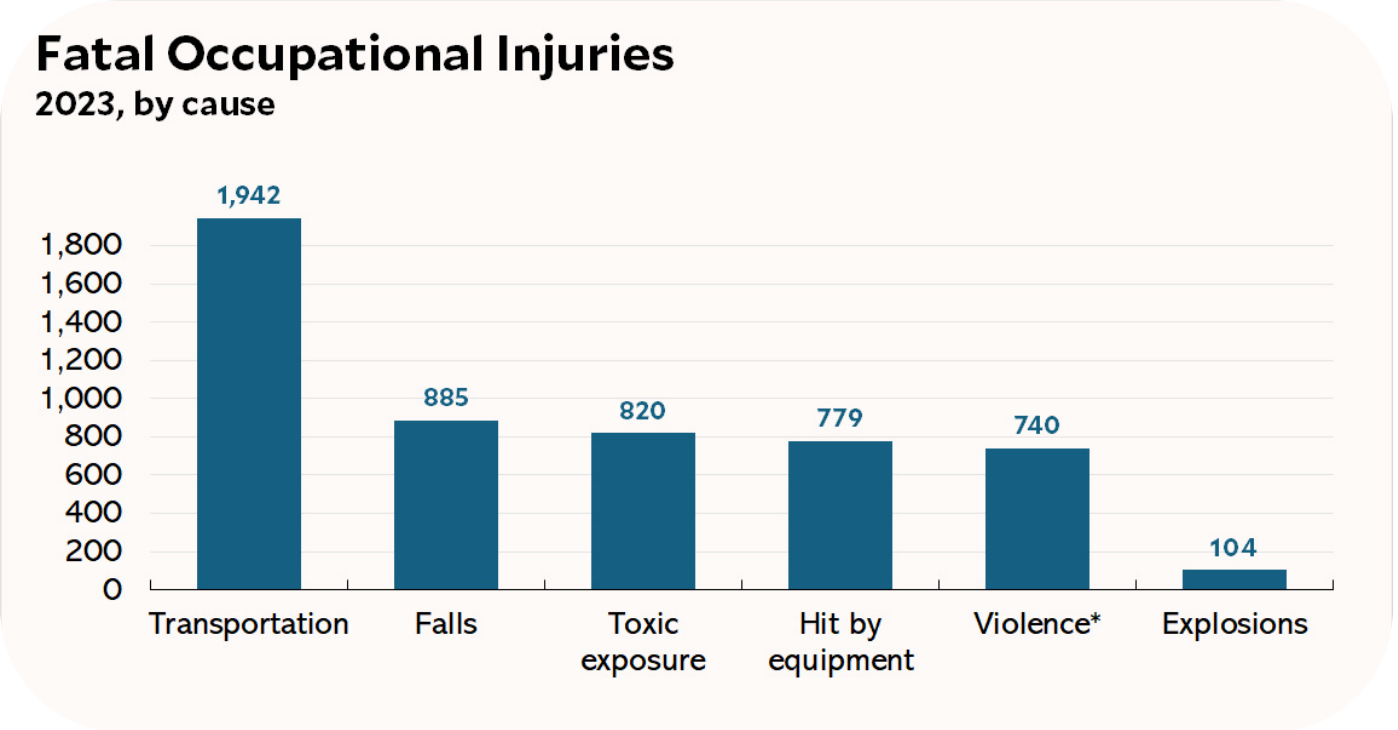
LIUNA TRAINING & EDUCATION FUND

EXCEL · PARTNER · PROTECT
LIUNA TRIFUNDS

LABORERS' HEALTH & SAFETY FUND OF NORTH AMERICA

Work Zone Injuries and Fatalities

- Work zones remain dangerous, and **driver inattention** and **speeding** are leading causes of fatalities.
- In 2023, there were 817 traffic crashes in work zones, resulting in 898 fatalities.
- Between 2013 and 2023, fatal work zone crashes increased by 52 percent.



LABORERS' HEALTH & SAFETY FUND OF NORTH AMERICA

Laborer Work Zone Fatality

- A construction flagger was killed in a work zone after a speeding driver entered a clearly marked “Safe Zone”.
- The driver struck the worker and fled the scene, later claiming they thought they hit an object on their way to get breakfast.
- The work zone had traffic controls and reduced speed limits, indicating safety measures were in place, but they were not enough.
- The incident led to serious criminal charges and widespread attention.

LABORERS' HEALTH & SAFETY FUND OF NORTH AMERICA

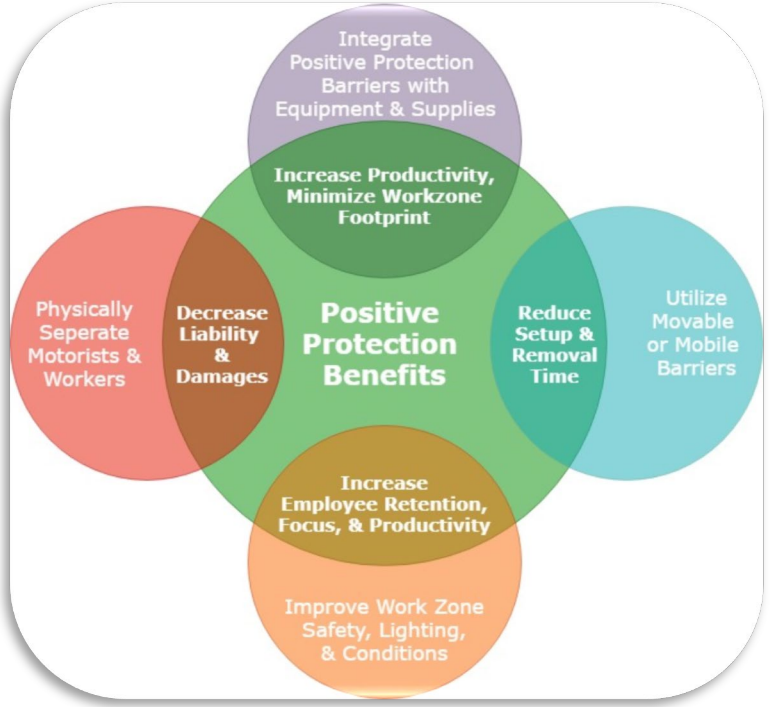
What is Positive Protection?

- Helps reduce the risk to workers and travelers with the use of devices that contain and redirect vehicles, reducing the risk of vehicle intrusion into the workspace.
- Some of the ways to provide positive protection are using various types of:
  - Barriers
  - Shadow vehicles with energy-absorbing attenuators
  - Vehicle Arresting Systems
  - Truck-Mounted Attenuators (TMA)

LABORERS' HEALTH & SAFETY FUND OF NORTH AMERICA

Positive Protection WORKS!

- Deploy them as much as possible
  - Spec it in
  - Sign Off/Carve Outs/Contingency Funds

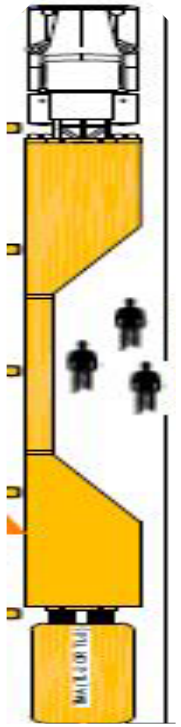


- Prevents intrusions
- Increases worker focus
- Reduces setup time
- Increases productivity
- Increases employee retention
- Decreases liability and damages
- Reduces risk and exposure to dangers of a live work zone

LABORERS' HEALTH & SAFETY FUND OF NORTH AMERICA

Safety on Both Sides

Traveling Public



Workers

LABORERS' HEALTH & SAFETY FUND OF NORTH AMERICA

When to Consider Positive Protection

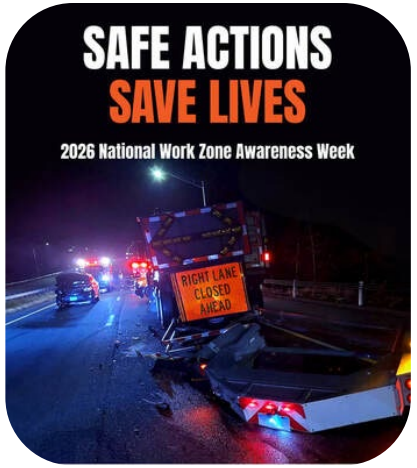
- While use must be decided on a case-by-case basis, several factors are key in determining the use of positive protection including:
  - Speed and Volume
  - Duration
  - Vehicle Mix
  - Type of Work
  - Geometrics
  - Access/Egress Limitations

Positive Protection is about Protecting People from Preventable Injury and Death

LABORERS' HEALTH & SAFETY FUND OF NORTH AMERICA

Work Zone Intrusion Prevention

- Increase the use of positive protection
  - Protects road workers and the traveling public
  - Gather data of how they improve work zones
- Federal OSHA/ACCSH
  - Work Zone Safety Work Group
- Federal Highway Administration
- State DOTs



LABORERS' HEALTH & SAFETY FUND OF NORTH AMERICA

Ryan R. Papariello, GSP
Safety & Health Specialist

Rpapariello@lhsfna.org

(202) 383-2816

LABORERS' HEALTH & SAFETY FUND OF NORTH AMERICA


Lemmon
Morristown
McIntosh
McLaughlin
Pollock
Herreid
Mound City
Artas
Eureka
Long Lake
Leola
Wetonka
Frederick
Hecla
Britton
Claremont
Westport
Veblen
New Effington
White Rock
Sisseton
Eden
Peever
Buffalo
Camp Crook
Bison
Isabel
Timber Lake
Mobridge
Selby
Ipswich
Aberdeen
Groton
Pierpont
Roslyn
Wilmot
Summit
Akaska
Warner
Webster
Hoven
Onaka
Cresbard
Verdon
Brentford
Lily
Milbank
Wallace
South Shore
Seneca
Gettysburg
Faulkton
Turton
Leabolt
Faith
Dupree
Eagle Butte
Ashton
Orient
Redfield
Doland
Clark
Watertown
Goodwin
Agar
Naples
Clear Lake
Castlewood
Onida
Tulare
Willow Lake
Hayti
Toronto
Newell
Fruitdale
Bryant
Spearfish
Sturgis
Lead
Deadwood
Blunt
Harrold
Miller
Broadland
Bancroft
Erwin
Badger
Bruce
Pierre
Fort Pierre
Wessington
Wolsey
Huron
Iroquois
De Smet
Arlington
Brookings
Virgil
Oldham
Nunda
Box Elder
Rapid City
Wasta
Wall
Philip
Midland
Carthage
Wessington Springs
Woonsocket
Roswell
Madison
Flandreau
Colman
Hill City
Cottonwood
Kadoka
Murdo
Draper
Presho
Reliance
Chamberlain
Letcher
Canova
Dell Rapids
Colton
Garretson
Hermosa
Custer
Interior
Belvidere
Kimball
White Lake
Plankinton
Mitchell
Alexandria
Spencer
Humboldt
Sioux Falls
Fairburn
Pringle
White River
Stickney
Wood
Witten
Dimock
Dolton
Tea
Hot Springs
Platte
Corsica
Armour
Parkston
Freeman
Parker
Lennox
Edgemont
Mission
Winner
Colome
Gregory
Geddes
Delmont
Tripp
Olivet
Davis
Canton
Oelrichs
Batesland
Martin
Saint Francis
Burke
Herrick
Bonesteel
Lake Andes
Scotland
Centerville
Irene
Pickstown
Avon
Lesterville
Tyndall
Alcester
Springfield
Yankton
Vermillion
Elk Point
85
12
281
83
212
14
90
29
385
16
18
183
81
© geology.com

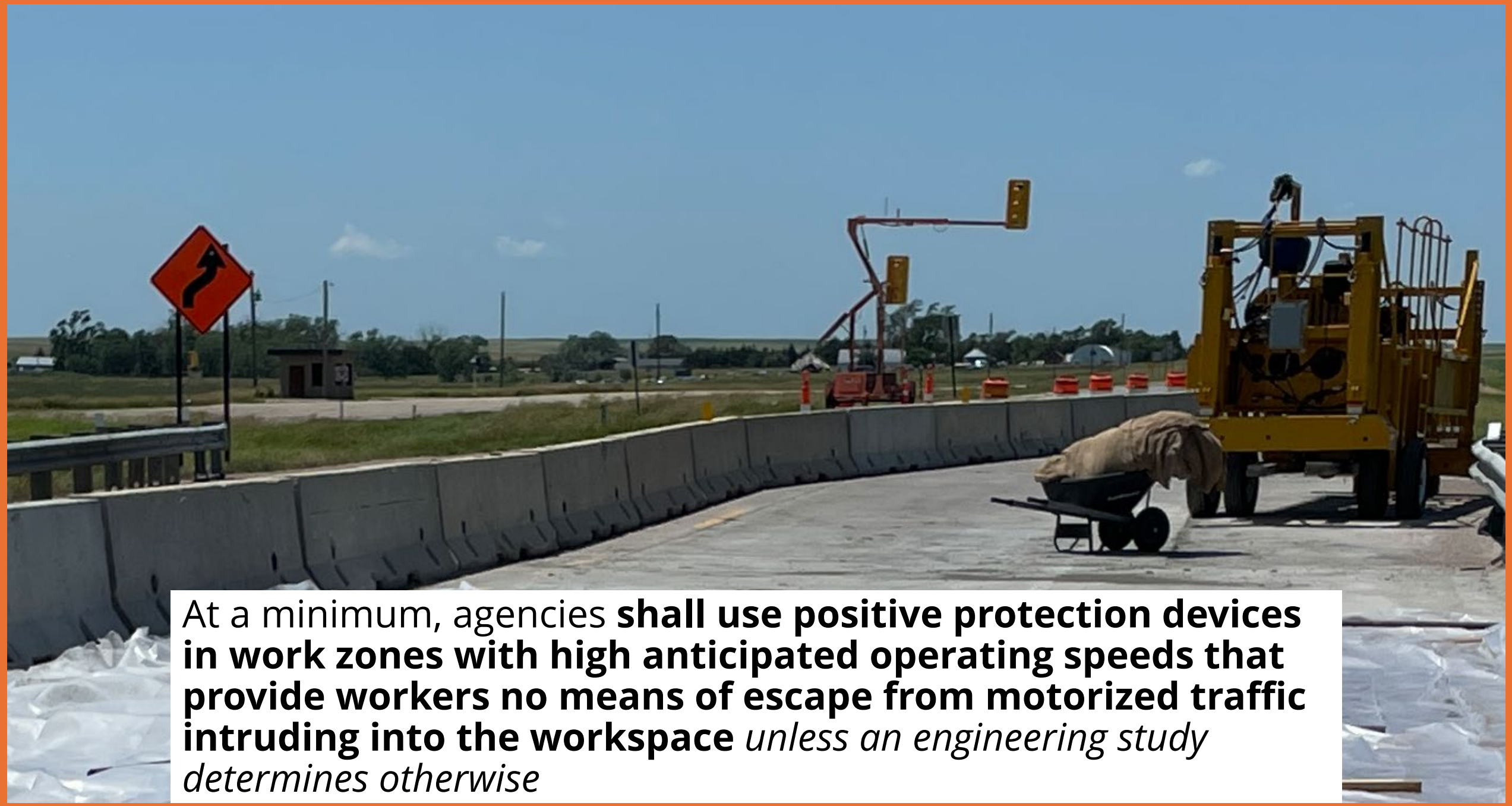

SouthDakota


INTERSTATE
90


INTERSTATE
29


SPEED
LIMIT
80

SD DOT



At a minimum, agencies **shall use positive protection devices in work zones with high anticipated operating speeds that provide workers no means of escape from motorized traffic intruding into the workspace** *unless an engineering study determines otherwise*

SDDOT Positive Protection Guidance

Working on updates to the positive protection guidance found in the **SDDOT Construction Manual Chapter 15 Work Zone Traffic Control** to:

- Clearly define positive protection and escape paths
- Establish a clear threshold for high anticipated operating speeds
- Emphasize engineering study with documentation
- Outline when and what positive protection is required for different situations

Working to clarify:

- Situations where TMAs may be the preferred form of positive protection - especially for short-duration, mobile work like bridge deck epoxy chip seals, where barrier installation may be impractical or increase risk
- Timeframe for engineering judgment of work zone requirements – potentially during project scoping

Added exposure control measures to the Construction Manual Chapter 15 Work Zone Traffic Control

(1) Full road closures;

(2) Ramp closures;

(3) Median crossovers;

(4) Full or partial detours or diversions;

(5) Protection of work zone setup and removal operations using rolling road blocks;

(6) Performing work at night or during off-peak periods when traffic volumes are lower;

(7) Accelerated construction techniques.

Work with your State DOT work zone, construction, and/or traffic staff to implement changes and discuss positive protection measures

Your local chapters as Associated General Contractors (AGC) or American Traffic Safety Services Association (ATSSA) are also great avenues – often collaborating with contractors, industry, and DOT.

Thank You

Christina Bennett, PE

Construction & Maintenance Engineer

South Dakota DOT (dot.sd.gov)

Christina.Bennett@state.sd.us

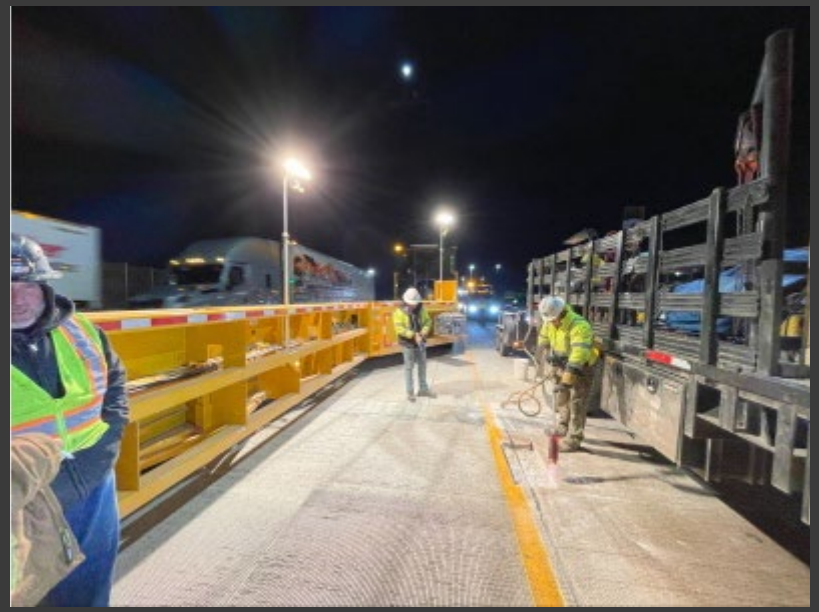

Steel Wall
Moveable Barrier
Construction Zones
Concrete Wall
Safety
Positive Protection
Barrier Wall
Truck Mounted Attenuator
Vehicle Arrest Systems
Mobile Barrier

Static Concrete or Steel Barrier

Road Closures

Moveable Barrier

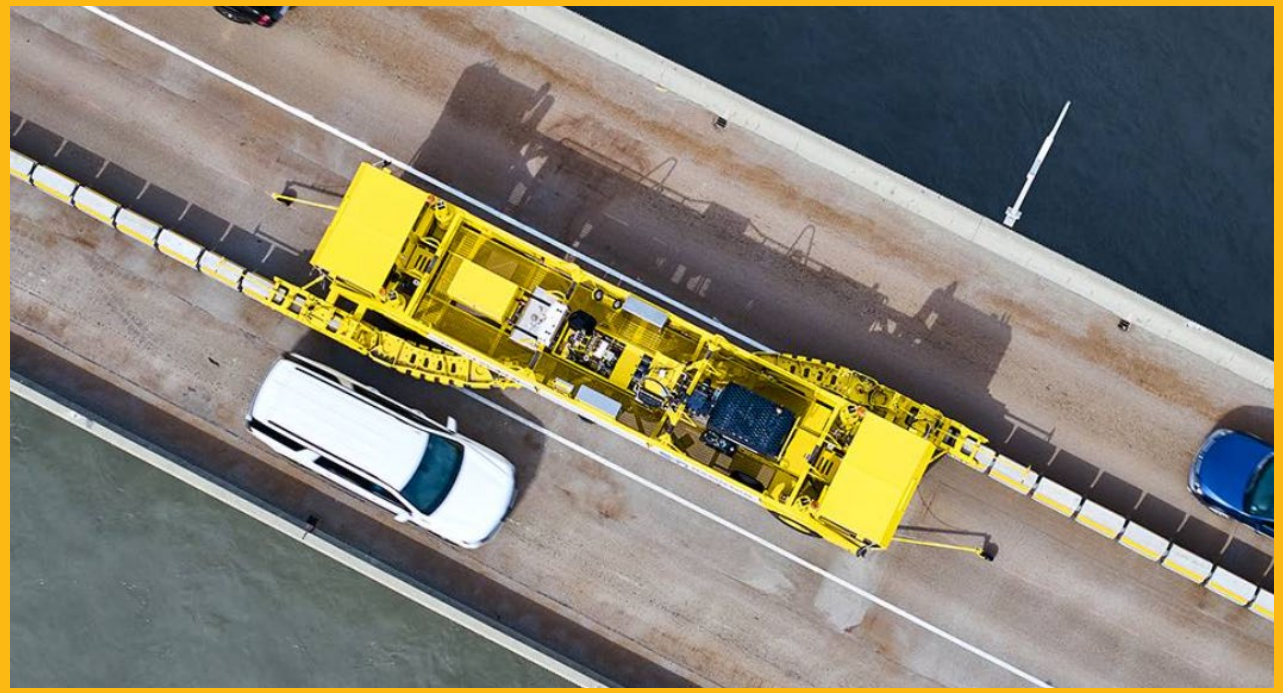
Mobile Barrier



Non-Barrier Options

+ Truck Mounted Attenuators
+ Detours/Diversions
+ Vehicle Arrest Systems

Thank You!



Laura Huizinga Barton

616-994-2389

Laura.Huizinga@lindsay.com

Connect with me on LinkedIn!