BIE SAFETY ADVISOR

Safe workplaces are sound businesses.

Every workplace should have a safety and health program that includes **management leadership, worker participation, and a systematic approach to finding and fixing hazards.**

According to the U.S. Bureau of Labor Statistics, the rate of worker deaths and reported injuries in the United States has decreased by more than 60 percent in the past four decades since the Occupational Safety and Health (OSH) Act was passed. However, every year, more than 5,000 workers are killed on the job (a rate of 14 per day), and more than 3.6 million suffer a serious job-related injury or illness.

Safety and health programs help businesses:

- Prevent workplace injuries and illnesses
- Improve compliance with laws and regulations
- Reduce costs, including significant reductions in workers' compensation premiums
- Engage workers
- Enhance social responsibility goals
- Increase productivity and enhance overall business operations

When management leadership is sincere and is supported by actions, workers know that safety and health are important to business success. This means that the steps they take to improve safety and health will be valued by the business.

Top management demonstrates its commitment in many different ways, including:

- Developing and communicating a safety and health policy statement.
- Providing the resources needed to implement and operate the program.
- Factoring safety and health into operational planning and decisions.

- Recognizing or rewarding safety and health contributions and achievements.
- Leading by example, by practicing safe behaviors and making safety part of daily conversations.

Workers often know the most about potential hazards associated with their jobs. When they are involved in finding solutions, they feel invested in the program. To maximize participation, however, workers must feel free of any fear of retaliation or discrimination (e.g., for reporting an injury or hazardous conditions).

Workers can participate in many ways, including:

- Developing the initial program design.
- Reporting incidents (including near misses) so they can be investigated.
- Analyzing hazards associated with routine and non-routine jobs, tasks, and processes.
- Defining and documenting safe work practices.
- Conducting site inspections and incident investigations.
- Training current coworkers and new hires.
- Evaluating program performance and identifying ways to improve it.

Traditional approaches to finding and fixing workplace hazards are often reactive. Finding and fixing hazards using a proactive approach, before they cause injury or illness, is far more effective.

A systematic find and fix approach means:

- Involving workers, who often have the best understanding of the conditions that create hazards and insights into how they can be controlled.
- Reviewing all available information about hazards that might be present.
- Conducting inspections to identify new or emerging hazards.
- Investigating incidents to identify root causes and potential solutions.
- Evaluating options using the "hierarchy of controls."
- Considering how to protect workers during emergencies and non-routine activities.
- Checking that existing controls are intact and remain effective.

Monthly Toolbox Talk

Preventing Back Over Incidents on Construction Sites

A very real danger that exists on a construction site is one that is often overlooked. Everyone knows that falling from heights or injuries from machinery are common with this type of work. However, many may not know that backover accidents also cause numerous deaths each year on construction sites. A backover incident often occurs when a vehicle backs over a worker that is walking, standing or kneeling behind the vehicle.

The key to preventing backover accidents on construction sites is to ensure that drivers and pedestrians are more aware of the activities going on around them. Here are four ways to accomplish that:

1. **Develop a Traffic Control Plan**
   - Lay out worksites that minimize the need for vehicles to back up.
   - Separate moving vehicles and equipment from workers with physical barriers.
   - Put up signs and cones to show workers where to walk in high-traffic areas.
   - Ensure that contractors are aware of any changes in the flow of daily construction traffic at the site.
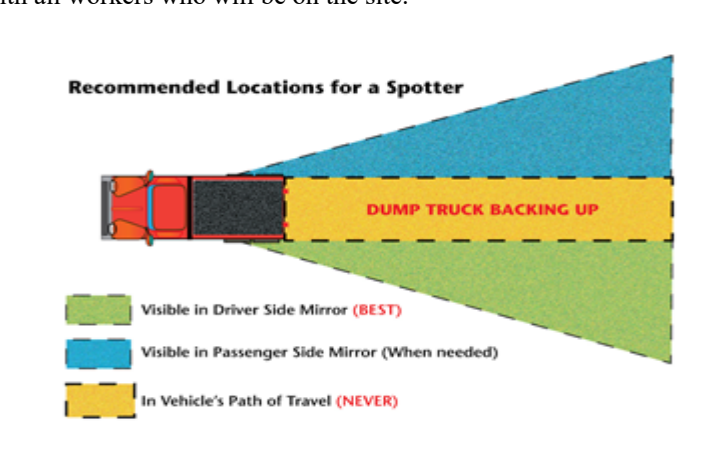2. **Conduct regular vehicle inspections**
   - Inspect vehicles at the beginning of each shift. Make sure that brakes, lights, horns, and backup alarms and cameras are working properly. Put defective vehicles out of service until they are repaired.
3. **Enhance workers' awareness of the work environment**
   - Consider installing equipment that can detect objects in the vehicle's path. Back-up cameras, proximity detection systems, and radio-frequency identification (RFID) tag-based systems (such as RFID tags worn by workers that send signals to drivers when the workers get too close) are examples.
   - Ensure that vehicles with restricted views to the rear use backup alarms or a spotter directs them when they are backing up. Always maintain contact (visually, verbally, or by hand signals) with a spotter when backing up a vehicle.
   - Ensure that workers know about the blind spots on any equipment they operate.
   - Ensure that vehicles' mirrors and windows are clean and that the mirrors are set properly.
   - Ensure that workers wear high-visibility garments — day and night.
   - Prohibit the use of personal cellphones and headphones in areas where they could distract workers from approaching vehicles.
4. **Keep workers informed**
   - At the start of each shift, review communications signals between equipment operators and spotters with all workers who will be on the site.

Recommended Locations for a Spotter

DUMP TRUCK BACKING UP

Visible in Driver Side Mirror (BEST)

Visible in Passenger Side Mirror (When needed)
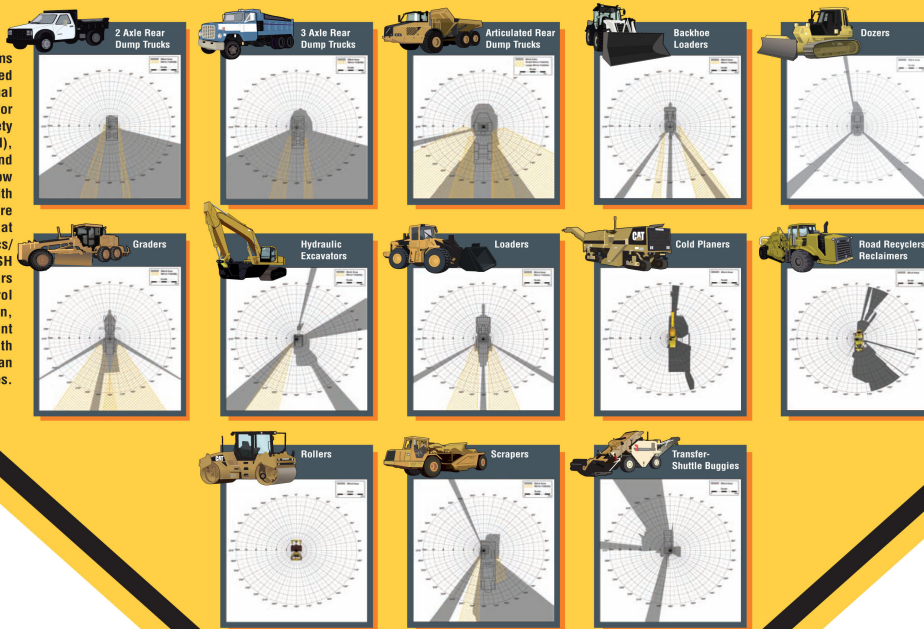
In Vehicle's Path of Travel (NEVER)

Know the Blind Spots

What the driver can't see can kill you. Each year hundreds of workers are injured or killed in construction vehicle accidents. Together we can change that.

Diagrams are provided by the National Institute for Occupational Safety and Health (NIOSH), Department of Health and Human Services (DHHS). Know the Blind Spots is adapted with permission from NIOSH. More detailed information can be found at www.cdc.gov/niosh/ topics/ highwayworkzones. NIOSH is part of the Centers for Disease Control and Prevention, Department of Health and Human Services.

The diagrams represented in this poster show the blind spots for objects at 1500 millimeters from the ground – or the approximate height of a construction worker as observed by the equipment operator. Shorter objects (such as traffic control devices or bent workers) will result in larger blind areas.

2 Axle Rear Dump Trucks

3 Axle Rear Dump Trucks

Articulated Rear Dump Trucks

Backhoe Loaders

Dozers

Graders

Hydraulic Excavators

Loaders

Cold Planers

Road Recyclers-Reclaimers

Rollers

Scrapers

Transfer-Shuttle Buggies

Any opinions, findings, and conclusions or recommendations expressed in this publication are those of the Author(s) and do not necessarily reflect the view of the Federal Highway Administration, The National Work Zone Safety Information Clearinghouse or the National Institute for Occupational Safety and Health.

The National Work Zone Safety Information Clearinghouse

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NIOSH

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