

Protection

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UPDATE

News from the International Safety Equipment Association

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Protection Update

is the newsletter for the International Safety Equipment Association's road construction outreach program. It is intended for anyone who specifies, purchases or uses personal protective equipment, and those who regulate it. Protection Update is published every two months and distributed without charge, and also is available on ISEA's website — www.safetysite.org.

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ISEA

INTERNATIONAL
SAFETY EQUIPMENT
ASSOCIATION

Welcome to Protection Update

Hello and welcome to the premier issue of Protection Update, a newsletter about personal protective equipment (PPE) for the road construction industry. Our aim is to furnish you — who are responsible for the safety of road, bridge and tunnel workers — with the latest and best information about PPE. Our hope is that you will use this information to prevent injuries and save lives — and save your organizations money at the same time.



PHOTO MONTAGE BY FERRO-FERRO GRAPHIC COMMUNICATION

You all know that road construction work zones are dusty, noisy places with objects flying through the air and heavy equipment and construction materials moving around. There are holes that people can fall into and high places where work must be done. And if those challenges were not enough, tractor-trailers, motor homes and cars whiz by just a few feet from workers.

Unfortunately, it is not possible to engineer out all of the hazards in most road work zones, or to remove all workers from potentially hazardous situations. And when hazards do exist, the worker's essential protection is something that is worn or carried to keep the worker as safe and healthy as

possible. Member companies of the International Safety Equipment Association (ISEA) make PPE that provides this first line of defense for workers in hazardous environments, including road construction.

Because road work areas frequently are in the midst of moving traffic, we especially want to keep road construction stakeholders up to date on new products that increase worker visibility in any type of weather conditions and against any background, night or day. There is no good reason why a driver should not be able to tell the difference between a worker and a traffic cone.

This bi-monthly newsletter is one of the ways we will reach out to you with information on product innovations from ISEA ▶ 6

WHAT'S NEW IN SAFETY EQUIPMENT



(Editor's Note: Each issue of Protection Update will feature the latest innovations in a particular type of PPE)

Technology Drives Fall-Protection Innovations

ISEA's manufacturers of innovative fall-protection products are:

- Buckingham Manufacturing Co.
- Can-Sling/DBI Canada
- Dalloz Fall Protection
- DBI/SALA
- Elk River
- Gemtor
- Klein Tools
- MSA/Rose Manufacturing Co.
- North Safety Products
- Protecta International
- Sellstrom/RTC
- Sinco Sala.

New technology-driven products from ISEA members are making it easier for road, bridge and tunnel constructors to protect workers at elevated levels and comply with requirements for fall protection, which ranked second among all violations for which OSHA assessed penalties during the period October 1998 through September 1999.

These high-tech products include:

- An anchor that provides elevated workers with an anchorage point on especially large beams. The fixed-beam anchor will clamp to beams from 12 to 36 inches wide and is rated for 5,000 pounds in any orientation.
- Stretchable harnesses that increase comfort, productivity, safety and compliance. These harnesses are constructed of unique webbing, which includes a specially formulated elastomeric material that conforms to the shape of each worker to provide maximum user acceptance. The elasticity helps the harness stay in place all day while making work easier by stretching with every movement.
- Energy-absorbing lanyards that limit the arresting force to within OSHA requirements for "at feet" tie-off when a 220-pound test weight is allowed to free fall from 12 feet. These lanyards also may be used to limit the arresting force on workers weighing more than 310 pounds.

- A trolley that attaches to and follows the worker along horizontal I-beams for hands-free mobility and user safety. The trolley is specifically designed for use with self-retracting lifelines, and is lightweight and portable for greater user acceptance.

- Harnesses, lanyards and anchorage connector straps designed for personnel who must work in high-heat or chemical environments. The harness webbing is bright green to increase the visibility of the user, and also to allow for easier inspection of the harness.

- Lighter harnesses and lanyards that provide all-day comfort and greater user acceptance. The harnesses have quick-connect leg buckles and color-coded shoulder and thigh straps for easy donning. The lanyards have a deceleration distance of 42 inches or less, and they are available in various configurations, including a Y-lanyard that helps maintain continuous protection.

- A horizontal lifeline system specifically designed for pre-stressed concrete beams that attaches directly to the rebar. This portable system allows freedom of movement and protection for two workers per span up to four workers per system.

For more information, scan the Buyer's Guide "Fall Protection" listings on ISEA's website (www.safetysystem.org), or contact ISEA's Joe Walker, (703) 525-1695, jwalker@safetysystem.org. ●

PHOTO COURTESY DBI/SALA



Innovative fall protection from ISEA members gives workers, their families and their employers peace of mind.

OSHA Fines Bridge, Tunnel Contractors

Federal inspectors fined two Illinois construction companies \$227,500 in October for alleged safety violations at a bridge work site where three ironworkers fell to their deaths. And in August, they issued a \$63,000 penalty to contractors working on Boston's "Big Dig" project for "failure to ensure employees wore reflectorized or high-visibility protective gear when exposed to vehicular traffic."

In the Illinois case, the U.S. OSHA cited two contractors after inspections conducted prior to and just after the April 24 accident at the McClugage Bridge rehabilitation project in Peoria, according to the AP. The workers were helping resurface the bridge ▶ 5

Understanding the ANSI/ISEA Standard for 'High-Vis' Garments

ANSI/ISEA 107-1999 is the only standard for high-visibility, reflective garments that workers should wear whenever low visibility is a workplace hazard or when the workplace is near vehicles or equipment moving at any speed. Garments that meet this standard provide enhanced visibility day and night and in all light conditions, said ISEA Technical Director Janice Bradley.

The standard establishes three garment classes based on the required amounts of high-visibility material, as follows:

- **Class 1 garments** are for settings where vehicles do not exceed 25 mph and where background settings are not complex. These garments are for settings where there is ample separation of workers on foot from vehicle traffic.
- **Class 2 garments**, containing more reflective material, are for situations where vehicle speeds range from 25-50 mph and where greater conspicuity is needed due to inclement weather, presence of complex backgrounds, and work activities that are



'High-Vis' Garments meeting the ANSI/ISEA standard make it easy for drivers to tell the difference between workers and traffic cones or barrels, day or night.

PHOTO COURTESY SERVICES & MATERIALS

close to moving traffic.

- **Class 3 garments**, with the greatest amount of reflective material, are for use when traffic is greater than 50 mph and the wearer must be conspicuous through the full range of body motions at a minimum of 1,280 feet. ●

Your 'Guide' to the Latest in PPE

Safety equipment purchasers and users in the road construction industry will find pathways to detailed information on the latest and highest-quality products in ISEA's 2000-2001 Safety & Personal Protective Equipment Buyer's Guide.

The 28-page guide lists major safety equipment product categories (including protections for eye and face, hands, head and hearing; respiratory and fall-protection equipment; safety wearing apparel; emergency

eyewashes/showers) and highly specific sub-categories, all cross-referenced to contacts at the companies that make them. New to this year's edition of the Buyer's Guide is a listing of selected equipment standards to assist users with technical information and some OSHA compliance issues.

The booklet may be ordered without charge by contacting ISEA's Sabra Flaherty, (703) 525-1695 or sflaherty@saftequipment.org. A fully interactive online version of the Guide with links to manufacturers' websites, is updated regularly on ISEA's website, www.saftequipment.org. ●



BOTTOM-LINE BENEFIT

(Editor's Note: This is the first in a series of PPE cost-benefit profiles that will appear in Protection Update; look for future profiles on eye/face, hand, respiratory, hearing and fall protections and on high-visibility apparel.)

Head Protection Bottom-line Benefit in Road Construction

Road construction companies pay out nearly \$19 million more for head/neck injuries each year than it would cost them to equip all of their hazard-exposed workers with hard hats. That is the bottom line for road construction companies, according to figures compiled from the U.S. Occupational Safety and Health Administration (OSHA) and Bureau of Labor Statistics (BLS), the National Safety Council (NSC), American Road and Transportation Builders Association (ARTBA), and ISEA.

How so? Start with 574,000 hazard-exposed road construction workers in the private sector (ARTBA). Apply the 64.1% head-protection-usage rate among road construction workers (OSHA), meaning that 35.9% (206,000) are not using head protection. Multiply that number of workers by the cost to equip each one with an \$8 hard hat, giving a total cost of \$1.65 million to equip with hard hats all remaining road construction workers.

Now multiply the total number of 1998 private sector road construction head/neck injuries, which was 733 (BLS), by the \$28,000 cost per on-the-job injury (NSC), yielding a total cost for road construction head and neck injuries of \$20.5 million.

Subtract the cost of equipping all unprotected workers from that figure to derive the \$18.85 million more that road construction companies pay out for head/neck injuries.

"Wearing a hard hat will not protect against every potential blow to the head or neck, and we are not suggesting that it would," said ISEA President Dan Shipp. "What these figures do suggest is that road construction companies are spending a whole lot more to cover the costs of head and neck injuries each year than they would pay to equip their workers properly and make sure they are wearing their head protection." For details on the statistical basis of this cost-benefit analysis, contact ISEA's Joe Walker, (703) 525-1695 or jwalker@safetysafetyequipment.org. ●



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Road Work Zone Fatalities Increase 12% in 1999

The 868 road construction work zone fatalities counted by the National Highway Traffic Safety Administration (NHTSA) in 1999 represents an increase of more than 12 percent over 1998 and is the highest total since record-keeping began in 1984.

1998 recorded 772 work zone fatalities. Texas led all states with 132 fatalities in 1999, while California was second with 112 and Georgia third with 91, according to NHTSA's Fatality Analysis Reporting System (FARS) database. No state was fatality free, although Alaska and Montana each recorded only one.

"With more federal money going into highway construction and, therefore, more workers being exposed to potential harm, it will be a challenge to drive that number down in the coming years," said ISEA President Dan Shipp. "We hope that we can do our part to help reduce road work zone deaths and injuries by making sure that workers are protected inside the work zone and more visible from outside." ●

Make Emergency Eyewash/Shower Highly Accessible, Fluid Tepid

Emergency eyewash and shower flushing facilities are used to provide workers with immediate flushing fluid for the eyes and body in the event of a hazardous material spill or splash. These facilities should be located so that an injured person can reach them within 10 seconds – a timeframe that can be affected by such variables as the worker's level of impairment, adequate lighting, obstacles in the path of travel and train-



PHOTO COURTESY HAWS CORPORATION

ing, according to ISEA Technical Director Janice Comer Bradley.

"Without obstacles, 80 to 100 feet is a good rule of thumb for a distance that can be reached in 10 seconds," Ms. Bradley reported recently in a conference of the American Industrial Hygiene Association (AIHA).

"However, if a worker must go through a doorway or around machinery, equipment or other obstacles, the distance reachable in 10 seconds is significantly reduced."

She added that in all cases, "flushing fluids should be delivered at a tepid or lukewarm temperature (60-105 degrees F) to encourage workers to flush the affected area for 15 minutes." AIHA's *The Synergist* magazine carried a summary of Ms. Bradley's remarks; contact ISEA for reprints. ●

OSHA FINES

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when a suspended scaffold tore free and they plunged into the Illinois River. OSHA officials reported finding 14 "serious" violations, including problems related to scaffolding.

In related news, OSHA's Advisory Committee on Construction Safety and Health (ACCSH) recently endorsed a recommendation that would require those making deliveries to construction sites to wear fall-protection equipment if, in the course of making the delivery, the person is exposed to a potential fall of more than six feet.

OSHA levied the "Big Dig" fine following an investigation into the death of a worker who was hit by a truck. According to OSHA, the violations concerned inadequate safeguards for employees who were exposed to being struck by vehicular traffic while walking and working throughout the jobsite and accessing their work zones, and because

contractors failed to provide a workplace free of recognized hazards, such as moving vehicular traffic, OSHA said.

A Personal Fall Protection Equipment Use and Selection Guide and the latest ANSI/ISEA standard for high-visibility safety apparel are available through ISEA. The fall protection guide provides information to help construction companies assess fall hazards and how to mitigate them. ANSI/ISEA 107-1999 High-Visibility Safety Apparel provides guidance on the performance and use of high-visibility safety apparel. Garments that meet the standard provide user visibility in all light conditions, day or night.

Contact Cristine Fargo at ISEA, (703) 525-1695 or cfargo@safetysafetyequipment.org, for more information about the fall-protection guide and high-visibility standard. For details on OSHA's fall-protection recommendations concerning deliveries to construction sites, contact ISEA's Dan Glucksman, dglucksman@safetysafetyequipment.org. ●

OSHA Considering Construction Ergonomics Guidance

OSHA's Advisory Committee on Construction Safety and Health has indicated that it may publish a handbook or pamphlet listing common construction-related ergonomics injuries sometime within the next two years.

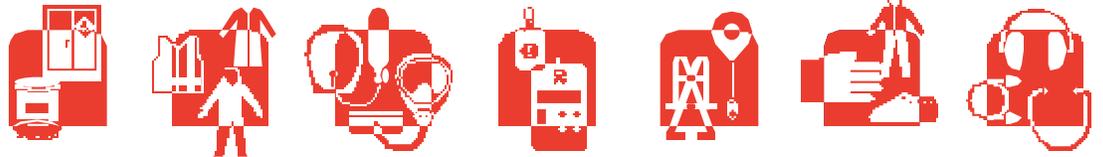
The construction industry generally has criticized the idea, contending that the publication would constitute an ergonomics regulation for the construction industry because OSHA inspectors would use it as a benchmark to measure "compliance." Contact ISEA's Dan Glucksman, dglucksman@safetysafetyequipment.org, for more information. ●

Visit ISEA, Members at the World of Concrete

Road constructors can obtain the latest information on safety equipment and standards when they visit ISEA and its members at the World of Concrete, Feb. 27 through March 2 at the Las Vegas Convention Center. Come visit ISEA's booth in the lobby for an update on the road construction outreach program and a list of all ISEA members who are exhibiting at the show. They will be delighted to show you the latest in high-quality products and technologies to create a safer road construction work zone.

Who is

ISEA?



The International Safety Equipment Association represents more than 80 companies that make hundreds of different types of equipment to protect people who are doing work. Members' products include hard hats, safety eyewear, hearing protectors, work gloves and shoes, respirators, fall-protection gear, high-visibility and protective apparel, first-aid kits, emergency eyewashes and showers, gas-detection instruments, and warning devices.

Since its founding in 1933, ISEA and its members have dedicated themselves to improving the quality of safety equipment. Key to this effort are safety equipment performance standards recognized by the American National Standards Institute (ANSI). Voluntary, consensus ANSI standards developed by ISEA help users select safety equipment that is designed to meet their needs and expectations. For an informative brochure, write to Joe Walker, ISEA, 1901 North Moore Street, Arlington, VA 22209, or email jwalker@safetysafetyequipment.org.



WELCOME

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members; government developments and other events that impact safety equipment users in road construction; reports where safety equipment has saved lives, prevented injuries or delivered bottom-line benefits; and training aids.

No employer wants to lose a worker to injury or illness. No worker wants to lose an arm, a leg, an eye or hearing. We hope that this newsletter will help you focus attention

on the hazards of the job, the right equipment, and a commitment on the part of everyone in your organization to make sure that PPE is used properly, with no exceptions. We welcome your feedback on and contributions to this newsletter at isea@safetysafetyequipment.org.

Yours truly,
Daniel K. Shipp
ISEA President

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How do YOU want your Protection Update?
Contact editor Joe Walker and we'll send the version that works best for you.