

Protection

SPRING 2002

UPDATE

News from the International Safety Equipment Association

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Protection Update

is the newsletter for the ISEA Partnership for Worker Protection program. It is intended for anyone who specifies, purchases or uses personal protective equipment, and those who regulate it. *Protection Update* is published and distributed without charge, and also is available on ISEA's website www.safetysiteequipment.org.

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Construction Writers Association

ISEA

INTERNATIONAL
SAFETY EQUIPMENT
ASSOCIATION

Safer and Brighter In Chicago

By Kathleen Concannon

City of Chicago

And

Ken Myers, Ph.D.

Head Lites Corp.

Mayor Richard M. Daley has long been a champion of on-the-job safety, especially for the thousands of Chicago employees whose work takes them into and around city traffic. His commissioner of streets and sanitation, Al Sanchez, shares that concern and adopted the philosophy that *safer and brighter* go together. With that in mind, Sanchez directed his new safety director, Kathleen Concannon, to investigate the safety garment industry and find the brightest examples available and ultimately introduce them to the workforce.

With thousands of employees, there could be a temptation to choose low-end, one-size-fits-all safety vests from the most convenient sources. In contrast, Concannon decided to look for garments that were lighter, cooler and had less tendency to snag on machinery and equipment. At the same time, the city wanted to ensure that the new garments complied with the ANSI/ISEA 107-1999 standard for high-visibility garments.

Chicago representatives pored through personal protective equipment (PPE) literature and visited trade shows to identify high-visibility garments that would meet their needs and stay within budget. They investigated a range of alternatives, keeping fore-



Chicago street laborers are "safer and brighter" wearing their new high-visibility protective apparel.

most in mind the mayor's mandate — "safer and brighter" employees.

Some results: Hand cleaning laborers — Chicago's "work zones of one" — are in charge of sweeping and cleaning curbs, sidewalks and expressway embankments. These workers report that in addition to feeling safer, they feel connected because they can now see each other in their familiar bright vests, even from a distance. The city's "safer and brighter" workers — from electricians to graffiti blasters — also report a new sense of public recognition for the work that they do. And with their new visible identity, tourists routinely ask them for directions. As one employee put it, "We are becoming ambassadors of good will for our city."

When Chicago decided to introduce the new garments, a key challenge was engaging employees to help achieve the highest **▶ 5**

ISEA Brochure Gives 'High-Viz' Guidance

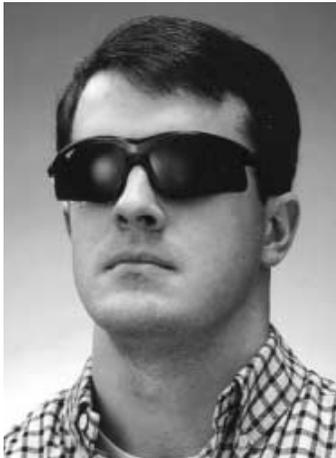


Many safety officers who visited the International Safety Equipment Association (ISEA) exhibit at the Conexpo-Con/Agg show expressed interest in learning about the latest garments that meet the American National Standard for High-Visibility Safety Apparel, ANSI/ISEA 107-1999.

They went home better equipped to protect their workers who operate in limited-visibility situations with ISEA's booklet *Products to Keep You Visible Day or Night - In Any Light*. **▶ 7**

NEW PROTECTION FOR ROAD CONSTRUCTORS

American Allsafe Visio™



For the Head, Face and Eyes¹...

From **American Allsafe Company** include:

- Visio™ spectacles, a sleek, lightweight safety spectacle that has wrap-around protection. The one-piece polycarbonate front has adjustable temples to provide a comfortable fit for anyone, and an 8 base lens curve for unobstructed peripheral vision, the company says.
- Quickslide™ ratchet alternative hardhat suspension, which solves a variety of customer needs. No matter what the hat size, the Quickslide changes quickly and easily to provide the right fit and a cost-effective alternative to the ratchet.

For more information, call 800-231-1332, or fax 800-730-5001, or visit www.americansallsafe.com.

AOSafety X.SPORT™



From **AOSafety** is X.SPORT™ safety eye-wear, which features a 7.5 base lens, and sports styled spatula temples that provide better fit and comfort for all-day wear, the company says. X.SPORT is available in three different temple/frame colors – blue, black and silver – with three different lens shades – clear, gray and indoor/outdoor mirror. All models have DX™ anti-fog hard coat that helps prevent fogging, scratching, static and chemical attack. For more information, call 317-692-6527, or fax: 317-692-6604, or visit www.aearo.com.



H.L. Bouton Shark Hunter Springer™

From **H.L. Bouton Company** is the 6600 Springer™, one of three safety spectacles in the Shark Hunter Series. The new model features a unique spring hinge hidden in the temple to provide comfort and more importantly additional safety as the spectacle fits snugly to the wearer's head, the company says. The new spectacle is available in either black or pewter frame with clear, gray, amber, true-view or mirror lenses. For more information, call 800-426-1881, or fax: 508-295-3521, or visit www.hlbouton.com.

From **Hornell, Inc.**, includes:

- Speedglas® 9000Xi auto-darkening welding lens, which was developed for the latest TIG inverter welding technology, Hornell says.

The new 9000Xi lens has been tested and proven effective across a wide range of new inverter machines.

- Speedglas® FlexView auto-darkening welding lens that flips up for weld preparation in very low-light conditions. The FlexView has a clear polycarbonate lens underneath the welding lens. The user lifts up the spring-mounted Speedglas lens assembly for weld preparation.

For more information, call 800-628-9218, or fax: 330-425-4576, or visit www.hornell.com.



From **Jackson Products** is the NexGen EQC welding helmet filter, featuring

advanced user controls and function. The NexGen is the first and only auto-darkening filter on the market that uses both digital and analog controls with an advanced LCD display telling mode of operation, welding shade, and sensitivity adjustment, according to the company. For additional information, call 800-253-7281 or visit www.jackson-products.com.

From **Mine Safety Appliances Co.** is the V-Gard® Advance™ hardhat, which has six cooling vents in the crown for improved air circulation and comfort. The helmet also has a "rain gutter," and lateral contours above the ear offer easy integration of hearing protection. The hat is available with four- or six-point ratchet suspensions, and meets or exceeds requirements for a Type I helmet. For more information, call 800-MSA-2222 or visit www.MSAnet.com.



¹All lenses mentioned in *Protection Update* meet the ANSI Z87.1-1989 standard for industrial eye and face protection.



Sellstrom
HotShots®

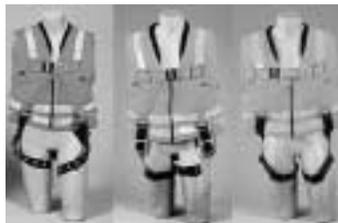
From **Sellstrom Manufacturing Co.** are HotShots™ safety spectacles. The matte finish gives the durable plastic frame a smooth coating that is ideal for high-temperature areas, the company says. Soft, pliable tips relieve pressure from the temples. The eye-wear is available in clear or smoke lenses. For more information, call 800-323-7402, or fax: 847-358-8564, or visit www.sellstrom.com.

Against Falls...

From **Sellstrom Manufacturing Co.** include:

- 8250-NOMX4 and 8250-NOMX6 accessories, which allow a user to provide added protection to his/her lanyard by simply snapping the protective cover on top of almost any lanyard, Sellstrom says.
- 9260-BP accessory enables the user to walk longer spans of a horizontal lifeline without having to disconnect from the system.

For more information, call 800-323-7402, or fax: 847-358-8564, or visit www.fallprotection.com.



From **DBI/SALA** is the Delta No-Tangle™ work vest with built-in fall-protection harness. The

vest is constructed from high-visibility fabric and reflective tape, meeting the Class 1 and 2 requirements of ANSI/ISEA 107-1999, and it meets or exceeds OSHA and ANSI fall-arrest requirements, including ANSI Z359.1, according to the company. For more information, call 800-328-6146, or fax: 651-388-5065, or visit www.salagroup.com.

From **Daloz Fall Protection** includes:

- Miller® DeltaForce™ temporary horizontal lifeline systems designed for I-beam and concrete applications. Originally designed for I-beam applications, the new

systems are adaptable to concrete installations by attaching to rebar or specified single-flared coil inserts.

- Miller MightyLite 175-foot sealed self-retracting lifeline that provides workers freedom of movement while arresting falls within two feet or less.
- Use of DuPont Teflon® HT fabric protector for free on the webbing of select Miller® brand products. Teflon HT is an invisible finish that repels water/oil, grease, dirt and concrete dust that could erode and degrade webbing, causing frayed threads that result in removal from service, according to Dalloz.

For more information, call 800-873-5242, or fax 800-892-4078, or visit www.bacou-dalloz.com.

For Hearing and Breathing...

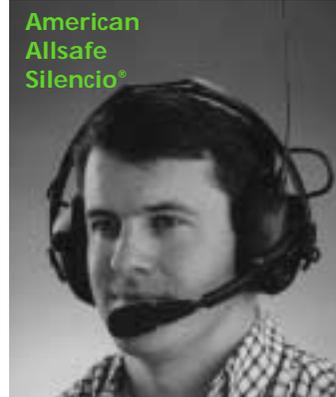
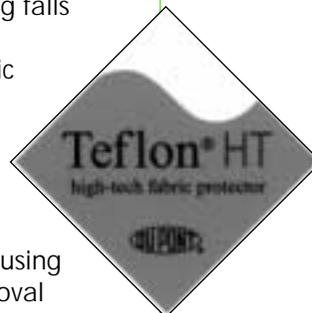
From **American Allsafe Company** is Silencio® by Hellberg Safety wireless two-way communication and hearing protection for medium- to high-noise environments, the company says. This set features a built-in, two-way radio that transmits up to two miles clearly. When a call comes in, automatic muting occurs. For more information, call 800-231-1332, or fax: 800-730-5001, or visit www.americanallsafe.com.

From **Hornell, Inc.**, includes:

- Speedglas® Fresh-air® II supplied air 9000 respiratory system, which is appropriate for many welding applications that generate high levels of particle fumes and gases, Hornell says. Its adjustable airflow also is well suited for welders with strenuous applications, or those working in warm environments.
- Speedglas® individual supplied-air purification and regulation system, which is designed for welders requiring supplied-air respiratory protection.

The compact, single-user system connects to stan-

Speedglas® individual supplied-air purification and regulation system



NEW PROTECTION CONTINUED

Hardhat Sticker Do's and Don'ts

Several *Protection Update* readers have asked for guidance on the use of stickers or tape on hardhats. Here is a response from James K. Byrnes, product line manager for ISEA member Mine Safety Appliances Co. (MSA), one of the world's leading hardhat manufacturers:

"Generally, hardhats should not be altered or modified in any way. However, it is usually permissible to use pressure-sensitive stickers or tape with self-adhesive backing as long as they are not closer than 1/2-inch from the edge of the helmet.

"According to MSA's testing, such stickers or tape more than 1/2-inch from the helmet's edge will not affect the burn-through (i.e. dielectric classification) or the structure of a helmet. However, because it is impossible for us to test all pressure-sensitive adhesives, caution should still be taken when making use of stickers and tape. Also, be sure that when these are applied that you are not covering any damage on the helmet."

Protection Update thanks MSA and Mr. Byrnes for this guidance.

dard "shop" compressed air sources that are free of carbon monoxide and are not oxygen-deficient.

For more information, call 800-628-9218, or fax: 330-425-4576, or visit www.hornell.com.

From **Jackson Products, Inc.** is the Shadowaire II powered air-purifying respirator for welding operations. The new respirator was developed with a 40-percent lighter battery and a redesigned blower unit that provides airflow of eight cubic feet per minute, exceeding the NIOSH standard. Advanced helmet design provides more headroom and comfort for the welder, increasing the likelihood that it will be worn continuously on the job, the company says. For more information, call 800-253-7281 or visit www.jacksonproducts.com.



Jackson Products Shadowaire II



3M AirMate™ 2000

From **3M Company** is the AirMate™ 2000 self-contained breathing apparatus. This SCBA is designed for workers who require respiratory protection in environments that are immediately dangerous to life and health (IDLH), the company says. A built-in speaking diaphragm allows clear communication with co-workers. For more information, call 800-328-1667 or visit www.3M.com/occsafety.

From **Mine Safety Appliances Co.** is the Advantage® 3000 full-face respirator, which is light-weight, durable, comfortable, versatile and easy to don. It comes in three face-piece sizes, two nose cup sizes and has a deep chin cup to fit a wide range of faces, the company says. For more information, call 800-MSA-2222 or visit www.MSAnet.com.



Moldex-Metric M Series earmuffs

From **Moldex-Metric** is M Series earmuffs, featuring an iridescent color and sleek, curvy shape for a look that workers will want to wear, the company says. SoftCoat™ covering on the cups helps to muffle transmitted noise. For more information, call 800-421-0668, or fax: 310-837-9563, or visit www.moldex.com.

For the Hands and Body...

From **ERB Industries** is a high-visibility vest that the company says meets the ANSI/ISEA 107-1999 standard requirements for Class II garments. The vest is made with 100 percent polyester knit, and has been independently tested to withstand 50 washing. For more information call 800-800-6522, or fax: 800-232-9372, or visit www.e-ERB.com.



ERB high-viz vest

From **Marigold Industrial** are three new gauntlet-style premium-quality Nitrotough™ gloves. Designed to provide protection from many physical and chemical hazards, the gloves are available in 12-, 14- and 24-inch lengths and two sizes for fit and to cover a wide range of applications. For more information, call 888-566-3468 or visit www.marigoldindustrial.com. ●



Marigold Nitrotough® gloves

New ISEA Brochure Helps Safety Officers Make the Case for Personal Protective Equipment

The International Safety Equipment Association (ISEA) has introduced a new brochure to help safety officers make the cost-benefit case with senior management for preventing on-the-job injuries through personal protective equipment (PPE).

“Personal Protective Equipment: An Investment in Your Workers’ and Company’s Future is for those with direct responsibility to keep workers out of harm’s way who are having difficulty making the PPE cost-benefit case with the person in the ‘corner office,’” said ISEA President Dan Shipp. “This tri-fold pocket brochure gives the facts and figures to support your case.”



The brochure explains how PPE can reduce injury frequency and lessen both injury severity and the number of days missed when injuries do occur. It also reviews the direct and indirect costs associated with workplace injuries that can be prevented or mitigated through proper PPE. And it provides a simple formula to calculate the true effect of even a minor workplace injury on a company’s bottom line, and to contrast that with the cost of PPE.

Individual copies of the brochure are available without charge by writing to *Personal*

Protective Equipment: An Investment in Your Workers’ and Company’s Future, ISEA Partnership for Worker Protection, 1901 N. Moore Street, Suite 808, Arlington, VA 22209. Or, you may email your request to jwalker@safetysafetyequipment.org. The brochure also may be found on ISEA’s website – www.safetysafetyequipment.org. ●

CHICAGO

from cover

rate of compliance. City officials recognized that workers who understood the reason for the mayor’s mandate and the necessity for PPE would be more likely to don the garments. The city put its 4,000-plus Street & Sanitation operational workers through small-group training sessions, followed by distribution of their new high-visibility garments.

The training included discussions about near-accident experiences and the role of enhanced visibility garments in helping workers get home safe. At the end, each employee signed a ‘personal contract’ with the department acknowledging the importance of these garments to their safety, as well as to the safety of other crewmembers and the public.

This interactive safety implementation process has had several very positive outcomes in addition to “safer and brighter” workers.

Employees routinely give supervisors feedback about their enhanced-visibility garments, share personal safety-related anecdotes, and ask about further safety educational programs. They also seem to have an increased sense that Commissioner Sanchez cares about their safety and health, as well productivity. And compliance is outstanding. ●

ABOUT THE AUTHORS

Kathleen Concannon is director of safety & operations support for the City of Chicago’s Department of Streets & Sanitation. Her most recent assignment placed her as project leader of a major city safety initiative, “safety improvement as change.” She may be contacted at (312) 744-6639 or kconcannon@cityofchicago.org

Dr. Ken Myers is Vice President and staff scientist with Head Lites Corporation, St. Paul, MN. The ISEA member company designs and manufactures enhanced visibility apparel and weapons of mass destruction response garments. Dr. Myers may be contacted at (800) 777-5630 or kmyers@sirentel.net.

Protection Update Seeks Stories About Life- and Cost-saving Safety Programs

Protection Update is seeking story ideas from construction industry readers giving concrete (pardon the pun) examples about how their safety programs incorporating personal protective equipment have prevented injuries, saved lives and saved their companies’ money. If you have a story to tell, contact Editor Joe Walker at 703-525-1695 or jwalker@safetysafetyequipment.org. If you send an email, please provide your telephone number. *Protection Update* will prepare the stories for future newsletter issues based upon your experiences.

(Editor's Note: More information on eye and face protection from North Safety may be found at www.northsafety.com, and on warning devices from Seton Identification Products at www.seton.com.)

Answers to Your Eye Safety Questions

Thousands of people are blinded each year from work-related eye injuries and, according to the U.S. Bureau of Labor Statistics (BLS), 1,000 eye injuries occur in American workplaces every day. Many of these injuries could be prevented with use of the eye and face protection and signage to caution workers when they should wear their protective equipment. For workers in heavy construction, that means virtually all of the time. Here are some commonly asked questions about eye safety and answers (courtesy of eye protection manufacturer North Safety and warning device manufacturer Seton Identification Products) that should enhance your safety programs:

Q: What contributes to eye injuries at work?

A: Not wearing eye protection or wearing the wrong kind of eye protection. BLS reports that nearly three out of every five workers injured were not wearing eye protection at the time of the accident. About 40 percent of injured workers were wearing some form of eye protection when the accident occurred. These workers were most likely to be wearing protective eyeglasses with no side shields.

Q: Are there other measures besides eye and face protection that can be taken to prevent eye injuries?

A: Yes. Signage to remind workers to wear their eye protection is very important. "Caution: Eye Protection Required" signs are an economical way to help boost compliance on the jobsite.

Q: What causes eye injuries?

A: BLS found that almost 70 percent of the

accidents studied resulted from flying or falling objects or sparks striking the eye. Injured workers estimated that nearly three-fifths of the objects were smaller than a pinhead. Most were said to be traveling faster than a hand-thrown object when the accident occurred. Contact with chemicals caused one-fifth of the injuries. Other causes were objects swinging from a fixed or attached position, like tree limbs, ropes, chains or tools that were pulled into the eye while the worker was using them.

Q: How do I determine what type of protective eyewear to use?

A: ISEA member companies offer a wide variety of options. First, determine what the present and potential eye and face hazards are, and then consult the selection chart in ANSI Z87.1 or CSA Z94.3 for the hazard(s) and recommended product. Then select the appropriate protector that fits and feels right to the wearer in terms of both comfort and style.

Q: How do I determine what safety glass lens type I should use?

A: ISEA members offer a variety of safety spectacle lens options, including clear, amber, vermilion, smoke, green, brown, gray or mirror. Amber is particularly good for low-light applications where contrast enhancement is required. For indoor applications where contrast enhancement may be required, vermilion reduces glare from fluorescent and halogen lighting without compromising color perception. Smoke, green, brown, gray and mirror are well suited for outdoor applications where sunlight and glare cause eyestrain or fatigue, but not where infrared protection is required.

Q: Do I need eye protection when I wear a faceshield or welding helmet,



or when I wear a full facepiece respirator?

A: It is mandatory that either safety spectacles or goggles be worn when wearing a faceshield or welding helmet. Faceshields and welding helmets are not worn close to the face and frequently they are moved up during use. Additional eye protection is not required when wearing full facepiece respirators because they are designed to provide the required impact and penetration protection.

Q: Some sunglasses look just like safety glasses; can I use them in place

of safety glasses?

A: No. Safety glasses must pass rigorous tests for impact and penetration. Sunglasses have only a minimal requirement.

Q: When I put my safety glasses on, they seem to make me dizzy; are the optics poor?

A: No, the optical requirements for safety glasses are quite stringent. However, it is not uncommon for individuals who normally do not wear glasses to feel uncomfortable when they first wear safety glasses. It may take as long as a day to get used to them. ●

HIGH-VIZ GUIDE

from cover

The booklet describes the three conspicuous classes of garments under the standard and common tasks for which they are suitable, and answers the most commonly asked questions about the standard.

A separate section lists the various types of high-visibility products (vests, accessories, coveralls/jumpsuits, fall-protection harnesses, headwear, jackets/outerwear,

pants, and traffic safety products/warning devices), and refers the reader to a list of ISEA member companies that make them.

Individual copies of the booklet may be ordered without charge by writing to *Products to Keep You Visible Day or Night – In Any Light*, ISEA, 1901 N. Moore St., Suite 808, Arlington, VA 22209, or by sending an email with the booklet title in the subject line to sflaherty@safteyequipment.org. The guide also is posted on ISEA's website, www.safteyequipment.org/visible.htm. ●

PHOTO BY JOE WALKER, ISEA



Thanks for Visiting ISEA, Members at Conexpo-Con/Agg

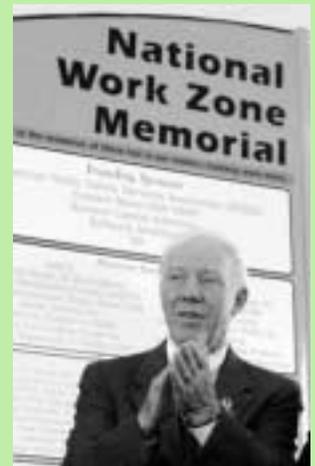
Thanks are extended to the thousands of safety-conscious people who visited the exhibits of the International Safety Equipment Association (ISEA) and its members at Conexpo-Con/Agg in Las Vegas.

"We had a terrific experience talking about the importance of personal safety with hundreds of people visiting our booth and directing them to our members' exhibits," said Joe Walker, ISEA marketing communications advisor. "I sensed both from personal experience and from speaking with our exhibiting members a very strong and growing emphasis on protecting workers in the heavy construction industry. At the same time, I observed some product demonstrations where both demonstrators and spectators who should have been

wearing PPE were not. We hope to work with show organizers to rectify this situation."

ISEA members exhibiting at Conexpo-Con/Agg were American Allsafe Co., Bacou-Daloz/Miller Fall Protection, Bullard, Direct Safety Co., Elk River Inc., ERB Safety, Hornell, Inc., Howard Leight, Jackson Products, Inc., Mine Safety Appliances Co., North Safety Products, Sellstrom Manufacturing Co., Services & Materials Co. and Uvex Safety. ●

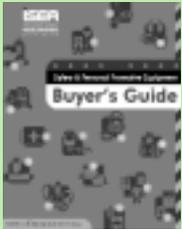
Memorial Honors Fallen Road Workers



Cong. James Oberstar (Minn.), ranking Democrat on the House Transportation and Infrastructure Committee, applauds during the April 9 dedication of the National Work Zone Memorial. The roving memorial bears the names of more than 700 workers killed in highway construction work zones. For more information about the memorial, visit the American Traffic Safety Services Association website — www.atssa.com. ●

WHAT'S NEW IN CONSTRUCTION SAFETY

New Protective Equipment Buyer's Guide is Available



An updated edition of the *Safety & Personal Protective Equipment Buyer's Guide* now is avail-

able from the International Safety Equipment Association (ISEA). The widely used resource provides comprehensive lists of all types of personal protective equipment (PPE), with references to contact information that allows those responsible for worker safety to obtain detailed information from manufacturers. The guide covers eye, face, fall, hand, head, hearing and respiratory protection, high-visibility apparel and products, protective apparel, instruments, first aid equipment, flammables storage and handling equipment, and warning devices. To obtain your free copy of the updated guide, send an email to pubs@safetysafetyequipment.org, or write to *Buyer's Guide*, ISEA, 1901 N. Moore St., Suite 808, Arlington, VA 22209, or you may access the guide at www.safetysafetyequipment.org. ●

Preventing falls, particularly at construction sites across the Southeast, is the goal of a new **U.S. Occupational Safety and Health Administration (OSHA) special emphasis program**. Nine compliance assistance specialists, operating independently of OSHA's enforcement efforts, will be available to help employers and employees in the Southeast recognize and prevent fall hazards. The program covers Alabama, Florida, Georgia and Mississippi.

The American Society of Safety Engineers (ASSE) is advising construction safety professionals to become familiar with the **2002 National Electrical Code (NEC)**. According to ASSE, electrical discrepancies are one of the most numerous problems encountered in industry and construction.

To purchase a copy of the NEC, contact National Fire Protection Association customer service at 800-334-3555, or visit www.nfpa.org/catalog.



OSHA has unveiled a new Spanish web page to help non-English-speaking employers and workers. The web page initially provides an overview of OSHA and its mission, how to file complaints electronically in Spanish, worker and employer rights and responsibilities, and a list of resources for employers and workers. Visit www.osha.gov.

Also, OSHA and the Hispanic Contractors of America, Inc. have signed an **agreement to promote safe and healthful working conditions for Hispanic construction workers** through effective safety and health training and increased access to safety and health resources in Spanish. According to the U.S. Bureau of Labor Statistics, in 2000 the fatality rate for Hispanic employees climbed by 11 percent while deaths for all other groups declined. ●

OSHA Construction Citations Recap

Recent penalties proposed by the U.S. Occupational Safety and Health Administration for construction companies' failure to protect their workers properly from potential hazards include:

- Pasadena Tank Corp., Houston, \$258,000 for alleged failure to protect workers from fall hazards, resulting in the death of a worker at a Houston construction site.
- Lunda Construction Co., Black River Falls, Wis., \$250,000 for allegedly exposing workers to unsafe levels of lead at a viaduct project in Milwaukee.
- Nesa, Inc., Tri-State Scaffolding & Equipment Supplies, Inc., and New Millennium Restoration & Contracting Corp., \$159,350 for alleged scaffolding violations, and failure to require personal protective equipment before an accident claimed five lives at a New York City building renovation.
- Olshan Foundation Repair Co., Houston, \$148,500 for alleged violations after an employee was electrocuted during a tunnel excavation in Houston.
- Multiple Concrete Enterprises, Inc. Ogden, Utah, \$100,100 for alleged failure to protect workers from hazards resulting in a double fatality at a Malad, Idaho, highway work zone.
- Emerson Construction, Inc., Topeka, Kan., \$85,500 for alleged failure to protect employees from the hazards of working in confined spaces, leading to a triple fatality as the workers were checking a new sanitary sewer-manhole.
- Zenone, Inc., Franklin, Mass., \$62,000 for alleged failure to supply cave-in protection for its workers during a Dorchester, Mass., water/sewer line installation. ●

WORK SITE SAFETY AROUND THE NATION

Liberty Mutual Identifies Leading Injury Causes

Overexertion, falls, being struck by an object, and highway accidents – all of which are common to heavy construction and can be prevented or mitigated through personal protective equipment (PPE) — are among the top 10 causes of workplace injuries and illnesses, according to the first annual Liberty Mutual Workplace Safety Index.

Liberty Mutual Group, a leading provider of workers' compensation insurance, identified the leading causes of workplace injuries and illness and associated direct costs using its own claims data and findings from the U.S. Bureau of Labor Statistics and the National Academy of Social Insurance. The company estimates that the total economic burden of workplace injuries and illnesses ranges between \$125 and \$155 billion a year, including nearly \$40 billion in wage and medical payments. The Safety Index highlights leading causes and also gives guidelines to help reduce them.

"There is a clear link between workplace safety and a company's performance," said Gary Gregg, executive vice president of Liberty Mutual's Commercial Markets, which provides commercial insurance coverage to large and medium-size companies. More details are available at www.libertymutual.com.

Railroad Administration Addresses Fall Protection for Bridge Workers

The Federal Railroad Administration (FRA) is updating its regulations for fall protection, head protection and other forms of personal protective equipment (PPE). In particular, FRA is prohibiting the use of body belts as components of personal fall-arrest systems, and will now require modern harness-style systems. Also, the FRA is clarifying bridge workers as "employees" to ensure that the new safety standards cover all who perform bridge work. The proposed rule exempts those conducting bridge inspections as long as they have been properly trained.

The update also clarifies that contractors shall provide, and bridge workers shall use, appropriate PPE where there is exposure to hazardous conditions. For more information,

contact ISEA's Dan Glucksman, dglucksman@safetysystem.org.

BLS Points to Respirator Training Gap

A U.S. Bureau of Labor Statistics report released in March points to gaps in respirator training. The report indicates that 40 percent of employers who provide respirators do not provide respirator usage training for their employees. Of those 40 percent, 32 percent say that workers rely on the manufacturer's warnings, and nine percent of employers surveyed said that training is not required because it is not needed. Only 23.5 percent of employers say they rely on air sampling of their work sites. The BLS survey determined that less than 10 percent of private construction industry establishments and employees were using respirators. For more information, contact ISEA's Dan Glucksman, dglucksman@safetysystem.org.

OSHA Plans to Publish Hearing Loss Rulemaking Notice in June

The U.S. Occupational Safety and Health Administration intends to publish in June 2002 its long-delayed Advance Notice of Proposed Rulemaking (ANPRM) on hearing loss prevention in construction workers.

The ANPRM will launch a series of stakeholder meetings on the extent of noise-induced hearing loss among workers in the industry, current practice to reduce loss, and additional approaches that could be used to prevent such loss in the future, OSHA says, noting that the use of personal protective equipment to reduce exposures to noise is low in the construction industry.

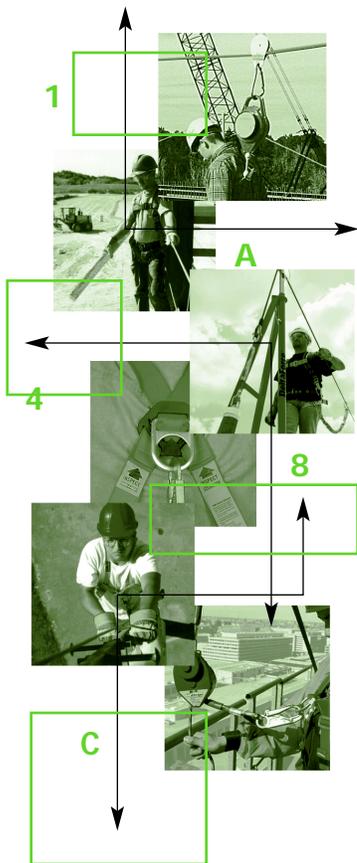
FHWA Publishes New Edition of Highway Statistics

The Federal Highway Administration (FHWA) has released its new edition of *Highway Statistics*, its annual publication that contains a wide range of information on the nation's roads and highway users. The report is available on the agency's website – www.fhwa.gov — or by writing to the Office of Highway Policy Information, FHWA, Room 3306, 400 7th Street, S.W., Washington, DC 20590. ●

Texas Supreme Court Rules Against Contractor in Subcontractor Case

The Texas Supreme Court has upheld a \$12.5 million damage award in an 11-year-old construction accident — a ruling that may intensify pressure on general contractors to improve jobsite safety for workers employed by subcontractors, according to the *Dallas Morning News* (12/31/01). The justices unanimously upheld a lower court verdict that found a Lubbock, Texas, construction company grossly negligent in the death of a subcontractor's employee who fell 10 stories while working at Methodist Hospital in Lubbock. The contractor had argued unsuccessfully that it was not liable for the death because it did not have control over the subcontractor employees' use of fall-protection equipment. ●

(Editor's Note: The following article is excerpted from the article "Working Without a Safety Net?: Building Your Fall Protection Program" by Laurie Casey from the April 2001 issue of *Construction & Engineering Safety Magazine* (cesmag.com). ©2002 by Douglas Publications Inc., Richmond, VA. All rights reserved.)



Building a Better Fall-protection Program

Falls are not the most prevalent accidents in the construction industry, but when they do happen they can be catastrophic. According to a 1997 OSHA study, falls accounted for nearly 33 percent of workplace fatalities in the industry. Falling to a lower level on a construction site is the leading cause of death, outpacing electrocution and highway accidents.

Dealing with the repercussions of a fatal fall is a tragic, emotionally exhausting and expensive endeavor. But accidents do happen — workers may momentarily lose their balance or lose concentration. It is up to your company to make sure there is a dependable safety net.

A single flaw in your fall-protection program can be the difference between a fatal fall and a near miss. But what factors determine the difference between a successful fall protection program and an unsuccessful one? Two companies with excellent safety records — Fru-Con Construction Corp., St. Louis, and LPR Construction Co., Loveland, CO — have agreed to share their 100 percent fall protection programs. Their strategies may help strengthen your program.

Fru-Con Construction Corp.

In 2000, Fru-Con Construction Corp. was named a national safety award recipient by the Associated General Contractors of America for having the second best safety record among large U.S. general contractors. The St. Louis-based firm works on energy and process facilities, industrial and manufacturing complexes, heavy civil work, commercial buildings, educational and healthcare facilities, and environmental projects. Fru-Con's lost-time injury rate is 0.5 and their recordable injury rate is 1.7, according to Elbe Watkins, corporate safety director, who has been with the company for 25 years.

Watkins admits that maintaining a safe

work environment often tasks his creativity. "I'll use anything I can to make people act safely," he said, which may require strong disciplinary measures or possibly dismissing workers who ignore safety practices.

The company has an extensive written fall-protection plan, which in some cases is more stringent than OSHA requirements. The plan takes a two-phase approach: prevention and protection. Primary prevention measures, such as scaffolds, guardrails and other engineering controls, limit exposure hazards. The plan calls for systems that are equipped with standard guardrails, safe means of access, and complete working/walking surfaces that are free of floor openings.

The company implements secondary protection measures when hazards cannot be removed. These include horizontal lifelines and harnesses. In addition, Fru-Con exclusively uses shock-absorbing safety lanyards that have double locking hooks.

When workers are engaged in structural steel work, Fru-Con installs fall arresters on the project. These securely fasten over the flange of an "I" or "H" beam. The fall arresters roll along with workers as they move.

"Workers sometimes take fall protection off because they can't reach something, or it inhibits their ability to work," said Watkins. "The workers' usual objection is that they cannot move out of the way of a swinging steel beam when the wind blows or the crane moves."

But the use of fall arresters allows his people to maintain 100 percent fall protection, even during connection of steel, said Watkins.

Fru-Con's written fall protection plan is one component in their safety strategy, which also includes benchmarking, record keeping and measurement, employee communication, and employee motivation.

"I want to emphasize the role of company owners in getting the right things done," said

A single flaw in your fall-protection program can be the difference between a fatal fall and a near miss.

Watkins, whose corporate safety department reports directly to the company's president. "My words are his words and vice versa."

An internal network of safety managers trains workers, leads discussion groups, shares ideas and motivates each other to improve the company's safety programs. In addition, Fru-Con has implemented a behavior-based component to their program, which asks workers to observe and evaluate other employees' safety behaviors on the job.

LPR Construction

LPR Construction is the only subcontractor in the United States with the prestigious Voluntary Protection Program (VPP) status for the OSHA Mobile Work Site program. Their insurance claims are consistently below \$20,000 a year. LPR is a steel erector specializing in structural steel, architectural steel, joists and deck construction. It has completed projects across the country, focusing on sports arenas and convention centers and construction/industrial projects.

Like Fru-Con, LPR has a written 100 percent fall-protection plan. It details preventive measures, equipment, and post-fall recovery. Since 1990, 26 of LPR's workers have fallen, and all of them were able to return to work, according to Ed Valencia, the company's director of safety, training and quality. Falls inevitably happen, but the difference between life and death is attributed to the security measures taken.

Employee motivation is important to the program's success. To that end, LPR has created a profit-sharing program that is attached to worker safety. About 30 percent of the company's profits go into a bonus pot. During routine inspections, if Valencia finds one worker not tied off properly, the worker is "fined" \$750 out of the bonus pot, meaning everyone on the site gets less bonus money at the end of each quarter. As a result, peer pressure to use fall-protection equipment

properly has become a major motivating factor at the company.

In Valencia's view, there are three keys to any successful safety program:

1. Management commitment
2. Training
3. Good planning to achieve the fine balancing act of safety and profitability.

LPR's management team does "whatever it takes for the safety program," according to Valencia. Once a month, (a senior manager) visits the workers in the air who are tied-off properly to thank them for their efforts.

The second component in LPR's strategy is constant and persistent reminders about safety. Valencia estimates that each employee receives about 60 hours of safety training annually. At weekly safety meetings, Valencia reviews safety topics ranging from anchorages to weather conditions. Every morning, each crew conducts a pre-task meeting where they assess all the hazards they will be facing to make sure they have adequate safety equipment and tools to do the job. In addition, as at Fru-Con, LRP has a behavioral safety program. At least twice a week, two or three employees observe others' work and note any concerns or issues.

Finally, Valencia stresses the need for adequate pre-planning before you implement any safety measures. "You need good pre-planning to make the program work and to make sure you make money on it," said Valencia.

Some companies try to buy the safety equipment before they analyze their business, he said. But then they discover that the investment would greatly reduce profitability. The key is to do your research and identify your company's safety needs before you make the investment, advised Valencia. In the end, the costliest choice is to do nothing about fall protection. "Go through your accident reports and add up the costs, even from one injury from a fall," said Valencia. "Add that up and see how many (fall-protection) systems you can put into place." ●

(For additional information, contact Betty Hintch, editor of *Construction & Engineering Safety Magazine*, 847-483-9406 or bhintch@douglaspublications.com.)

OSHA Issues Fall Protection Compliance Directive

The U.S. Occupational Safety and Health Administration (OSHA) has issued a compliance directive for enforcing the new steel erection standard, which became effective January 18, 2002. The new guidance, which assists compliance officers in enforcing the new standard, also can be informative to those governed by the standard. It can be found at www.osha.gov.

SAFETY EQUIPMENT Works for You

(Editor's Note: *Protection Update* welcomes contributions from readers for our regular Safety Equipment Works for You feature. Email your examples of where PPE has saved workers lives or prevented injuries to Editor Joe Walker, jwalker@safetysafetyequipment.org, or mail them to the Editor, *Protection Update*, 1901 N. Moore Street, Suite 808, Arlington, VA 22209. Photographs of workers involved are welcome.)

PPE Gives Workers a Second Chance at Life



Jerald was working on an Ohio bridge project, throwing lumber from pan decking to the ground 25 feet below when a nail sticking out of the one of the pieces of wood caught his glove. Jerald lost his balance and fell from the decking. Fortunately, he was wearing his harness, and his lanyard was tied to a secure anchor point. Jerald was caught three feet below the decking. Three co-workers used a ladder to help him down, uninjured. "The proper use of fall protection saved him from a serious injury and possibly saved his life," said Mark Potnick of the Ohio Contractors Association, who reported the story.



Ray was working under a conveyor belt that was carrying loose rock to a crusher. The machinery stopped abruptly, and a rock weighing approximately 40 pounds slipped off the belt. Ray was hit on the head by the falling rock. His hardhat was cracked by the impact of the rock, but Ray was saved from a serious head injury. (Skullgard® helmet from Mine Safety Appliances Co., www.msanet.com)



Floyd was walking on a catwalk at a southern Virginia peanut warehouse when he fell and disappeared into tons of peanuts. He remained trapped for more than an hour until rescuers dug him out and flew him by helicopter to the hospital. A dust mask Floyd was carrying when he fell probably saved his life. He was able to don it while buried in the peanuts, and he survived with only minor trauma. Firefighters said that there had been five similar incidents in the area, all of which ended in fatalities, according to *The Washington Post*.



As a hunter education instructor, James understands the importance of eye protection. He has three pairs of safety glasses, each with a different lens type for different applications. James' glasses have protected him while hunting, on the shooting range and around the home. He has impressed on his hunter education students the importance of wearing protective eyewear. (Commandos® safety glasses by ERB Industries, www.e-erb.com)

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Protection Update is also available on the National Work Zone Safety Information Clearinghouse website at wzsafety.tamu.edu