



October 15th
2:00 PM ET

October 31st
2:00 PM ET

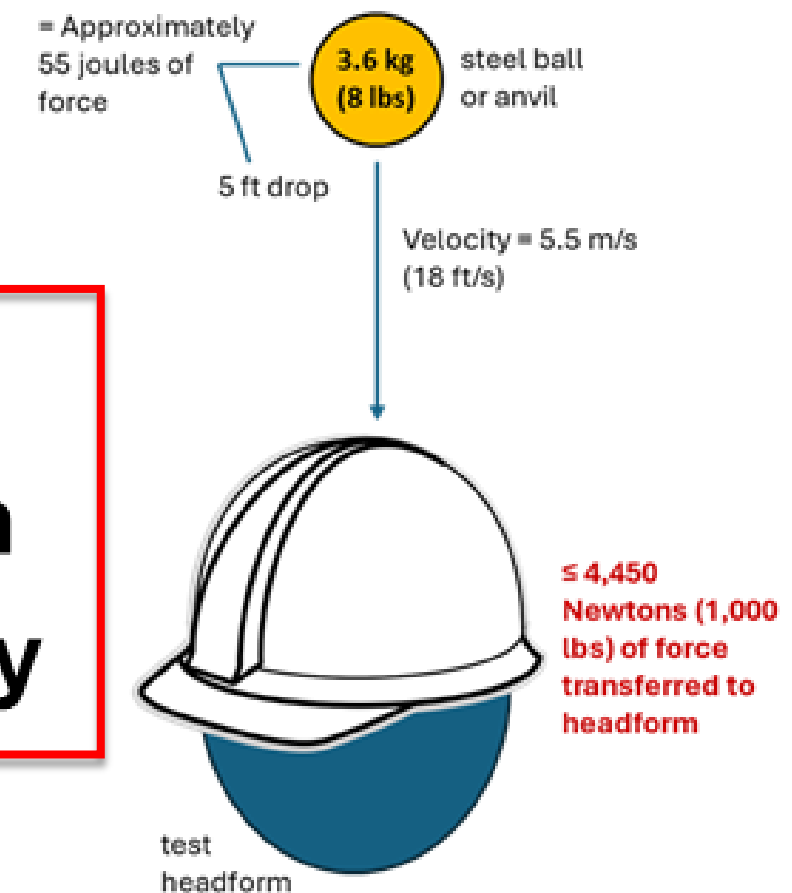
The NIOSH-NORA Construction Sector Council Struck-By Work Group Presents a Two-Part Series on Head Protection in the Construction Industry...

Head Protection in the Construction Industry – The Basics

Selection and Practical Use of Head Protection in the Construction Industry

Visit cpwr.com/webinars for more info

Figure 1: TYPE I & TYPE II FORCE TRANSMISSION TESTING




Housekeeping

- Today's webinar 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 panelist questions via the Q&A box.
- Spanish audio is available via simultaneous interpretation

Simultaneous Interpretation

WINDOWS / MAC / BROWSER

1. In your meeting/webinar controls, click **Interpretation** .
2. Click the language that you would like to hear.
3. (Optional) To hear the interpreted language only, click **Mute Original Audio**.

Notes:

- You must join the meeting audio through your computer audio/VoIP. You cannot listen to language interpretation if you use the [dial-in](#) or [call me](#) phone audio features.

ANDROID / IOS (MOBILE APP)

1. In your meeting controls, tap the ellipses **...**.
2. Tap **Language Interpretation**.
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Notes:

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Selection and Practical Use of Head Protection in the Construction Industry

October 31, 2024

Panelists:

- Alanna Klein, Director, Risk Control, CNA Insurance
- Brian A. Rizzo, CSP, Director, Office of Construction Services, Directorate of Construction, OSHA
- Andrew Valentine, CHST, LEED AP, Area Safety Director, Gilbane Building Company
- Paul Ziegler, Vice President of Safety, Allan Myers
- O'Brien Mills, Vice President of Safety, Aldridge Electric
- Kenneth G. Seal, Apprenticeship Training Representative, International Finishing Trades Institute
- Chris Trahan Cain, CIH, Executive Director, CPWR – The Center for Construction Research and Training (CPWR)

OSHA Safety Helmet Program

Pilot to Issuance

Brian A. Rizzo, CSP

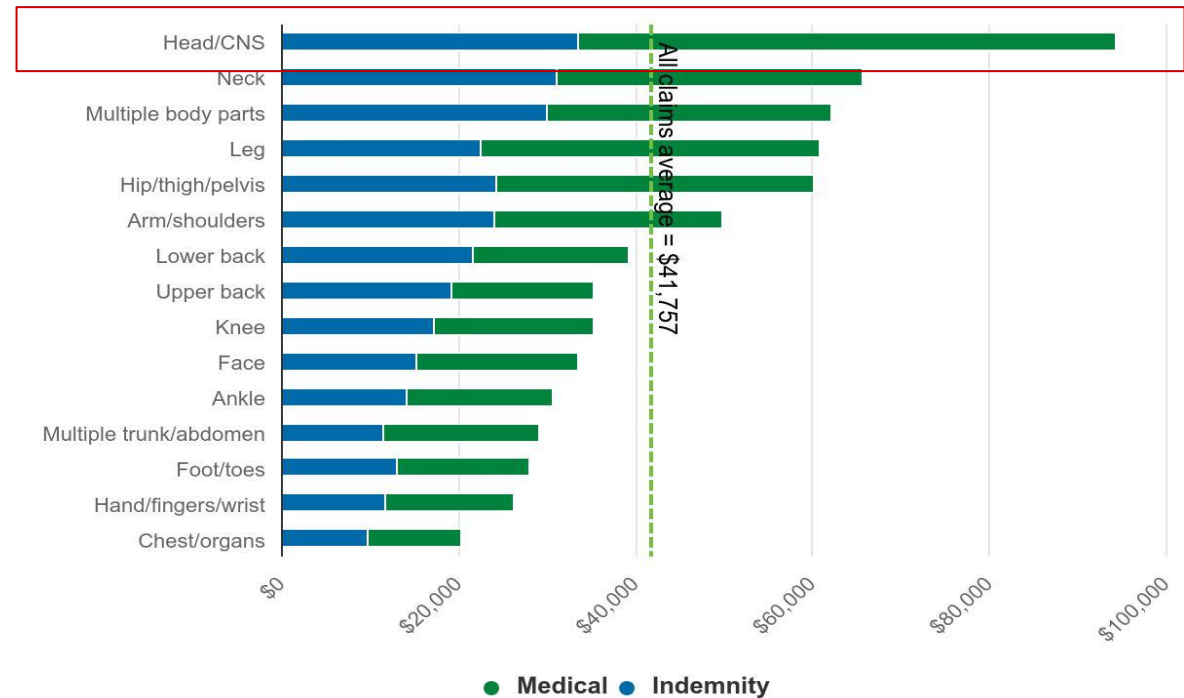
Office of Construction Services

October 31, 2024

Worker Head Injuries

- Per BLS in 2020, **head injuries accounted for 5.8%** of nonfatal occupational injuries involving days away from work.
 - 46.9% were due to contact with an object or equipment.
 - **20.5% were due to slips, trips, and falls.**
- Head/central nervous system claims average **\$93,942 per claim** filed in 2019 and 2020.

Workers' compensation costs by part of body, 2020-2021



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Graph source: National Council on Compensation Insurance (2022)

Head Injury-Related Severe Injury Reports, 2015 – November 2022

- **5,050 severe injuries to the head/neck/brain reported**
 - 1,870 (37%) due to falling to a lower level
 - 1,035 (20%) due to falls on the same level
 - 785 (16%) were struck-by incidents (machines, metal pipes, hoses, jacks, trees, crowbars, etc.)
 - Foundation, Structure, and Building Exterior Contractors (NAICS 238100) had the most head-related SIRs reported (n=281, 5%), followed by Building Equipment Contractors (NAICS 238200) (n=227, 4%)

OSHA Pilot and Parameters

Pilot Goals:

- Evaluate staff experiences and preferences with safety helmets.
- Ensure future head protection is compatible with other safety technology.
- Ensure head protection is consistent with Field SHMS Manual policies for Personal Protective Equipment.

Purchase Considerations:

- Buy America Act requirements
- OSHA Field SHMS Manual requirements
- Other considerations:
 - Availability of Inventory (Supply chain issues)
 - Recommendations from OSHA users

Safety Helmet Pilot Timeline

Fall '22: R6 HS initiated pilot and wrote project plan

Oct '22: Four Safety Helmet brands selected and ordered

Dec '22: First safety helmets out for testing

May '23: Final analysis of safety helmets and presentation of results

Fall '22: DOC & NO saw multiple offices interested and sought to expand pilot with different perspectives and climates, and recruited R1 (BT, SF), R6 (HN), DOC, and DTSEM

Nov '22: Hard hat survey completed

Feb- Apr '23: Second safety helmets out for testing

Fall '23: Field Issuance

- **BT** = Braintree Area Office
- **DOC** = Directorate of Construction
- **DTSEM** = Directorate of Technical Support and Emergency Management
- **HN** = Houston North Area Office
- **HS** = Houston South Area Office
- **NO** = National Office
- **R1** = Region 1
- **R6** = Region 6
- **SF** = Springfield Area Office

Transition to Helmets

- OSHA Leadership committed to transition to superior head protection for field staff.
- Promotes *Safety as a Core Value* implementing the best practice for head protection for OSHA staff by issuing Type II, Class G helmets.
- Raise awareness of safety helmets internally and externally.
 - Enhancing inventory management of head protection.
 - Safety and Health Information Bulletin (SHIB) on safety helmets drafted.
 - Update to OSHA Field SHMS Manual: Chapter 8 – Personal Protective Equipment, to include safety helmets.

Safety and Health Information Bulletin (SHIB)

- SHIB Published in 2024
- Provides info on:
 - choosing PPE for head protection.
 - instructions for properly inspecting and storing head protection.
 - making the right decision on selection and use.

The SHIB is not a standard or regulation, and it creates no new legal obligations. The Bulletin is advisory in nature.



U.S. Department of Labor
Occupational Safety and Health Administration
Directorate of Technical Support and Emergency Management

Head Protection: Safety Helmets in the Workplace

Safety and Health Information Bulletin

SHIB 3-6-2024

Introduction

OSHA regulates head protection for general industry, construction, and maritime and requires employers to ensure affected workers wear appropriate head protection. This Safety and Health Information Bulletin (SHIB) provides information for employers and employees when selecting PPE for head protection. This SHIB also provides instructions for properly inspecting and storing head protection. With a thorough understanding of the benefits and capabilities of head protection options, employers and workers can make informed decisions on selection and use.

Background

Proper head protection is crucial in work environments with falling objects, struck-by, overhead electrical hazards, and risks from slips, trips, and falls. Both scientific understanding of head injuries and head protection technology continues to advance. Modern head protection, whether it's a safety helmet or a hard hat, varies in styles and levels of protection, allowing employers and workers to choose head protection appropriate for the job. OSHA's head protection standards state that there can be compliance through ANSI Z89.1-2009, 2003, and 1997: published by the International Safety Equipment Association (ISEA). The range of products available today allows employers and employees to select the right type of head protection for the job, comply with the requirements of all OSHA standards (general industry, construction, maritime), and obtain optimum head protection.



Figure 1- Example of a safety helmet.



www.osha.gov

A group of six construction workers are gathered on a construction site, looking at a tablet held by one of the workers. They are all wearing white hard hats and high-visibility safety vests. The background shows a brick building under construction. The text "Andrew Valentine" and "Gilbane Building Company" is overlaid in white on the image.

Andrew Valentine
Gilbane Building Company

Gilbane Helmet Implementation:



Approved Helmets:

The following safety helmets with an integrated four-point chinstrap are compliant with Gilbane's helmet requirements because they meet ANSI Z89 (Type I or Type II), EN12492 performance standards 4.2.1.2 (front energy absorption), 4.2.1.3 (side energy absorption), 4.2.1.4 (rear energy absorption), 4.2.3 (retention system strength), and 4.2.4 (retention system effectiveness) and we have the conforming specifications on file.

- Kask Zenith/ Zenith Hi Viz/ Zenith Air/ Zenith Air Hi Viz/ Zenith FR/ Zenith FR Hi Viz/ Zenith Combo
- KASK Zenith X/ Zenith X Hi Viz/ Zenith X Air/ Zenith X Air Hi Viz/ Zenith X FR/ Zenith X FR Hi Viz/ Zenith X Combo
- KASK Superplasma HD/ Superplasma HD Hi Viz
- Ergodyne Skullerz 8974/ 8974LED/ 8974-MIPS/ 8974V Class C
- Ergodyne Skullerz 8975/ 8975LED/ 8975-MIPS/ 8975V Class E
- JSP/PIP EVO 6151 Ascend (vented & unvented, short brim)
- JSP/PIP EVO 6161 Ascend (vented & non-vented, full brim)
- JSP/PIP EVO Vistalens Ascend (vented & non-vented, integrated face shield)
- JSP/PIP EVO Vistashield Ascend (vented & non-vented, integrated face shield)
- Klein Tools Helmet Models 60145, 60146, 60147, 60148, 60149, 60150, 60515, 60516, 60517, 60525, 60526, 60564, 60565
- Milwaukee 48-73-1300 (Vented, no brim)
- Milwaukee 48-73-1301 (Unvented, no brim)
- Milwaukee 48-73-1320 (Vented, brim)
- Milwaukee 48-73-1321 (Unvented, brim)
- MSA V-Gard H1 Global Trivent
- Petzl Vertex/ Vertex Hi-Viz/ Vertex Vent/ Vertex Vent Hi-Viz
- Petzl Strato/ Strato Hi-Viz/ Strato Vent/ Strato Vent Hi-Viz
- PIP 280-HP1491RM Traverse
- Studson SHK-1 Class E Non-Vented
- Studson SHK-1 Class C Vented
- Studson SHK-1 Class C Full Brim
- WaveCel T2+ MAX

Testimonials:





Jason

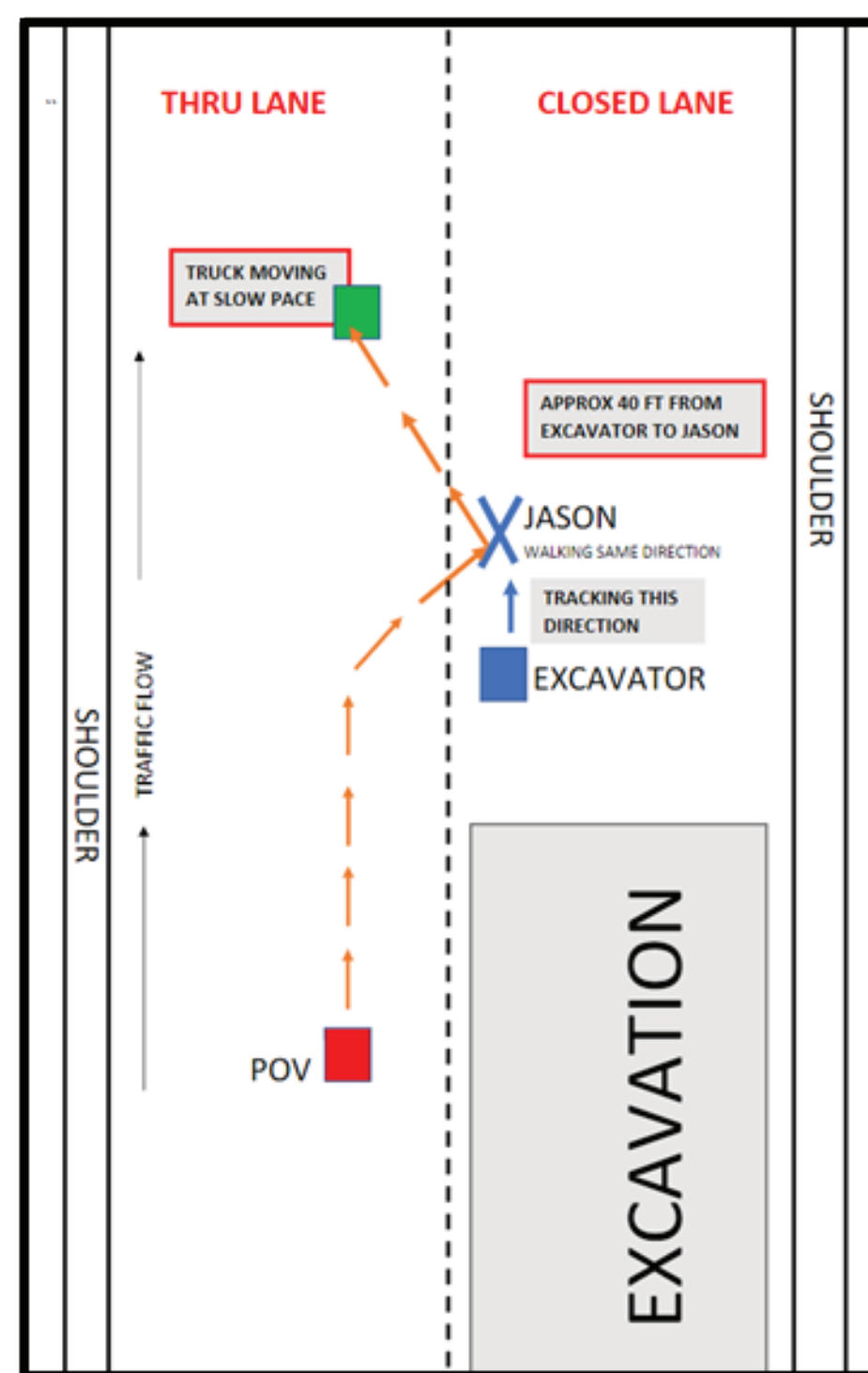
A POV was traveling at approximately 65 mph on I-85 in VA, swerved into the right lane closure and struck Jason from behind. The POV made contact with Jason, his back and head struck the windshield of the car and then he landed on the ground striking his head on the blacktop surface. The POV proceeded approximately another 100' swerving back into the open lane and striking a dump truck. The result was multiple injuries; internal, head, and fractures to his body from the shoulders to his legs.

Earlier in the day, another Superintendent on the project saw Jason and noticed his chin strap was not buckled.

“Yo!, “Buckle Up”

Two words that saved his life.

The operator of the excavator witnessed the incident and was able to call 911 within seconds. EMS arrived and when they saw Jason and started to work on him, one of the EMS looked up at our operator and said, “thank god he has this helmet and it stayed on his head, it saved his life.”

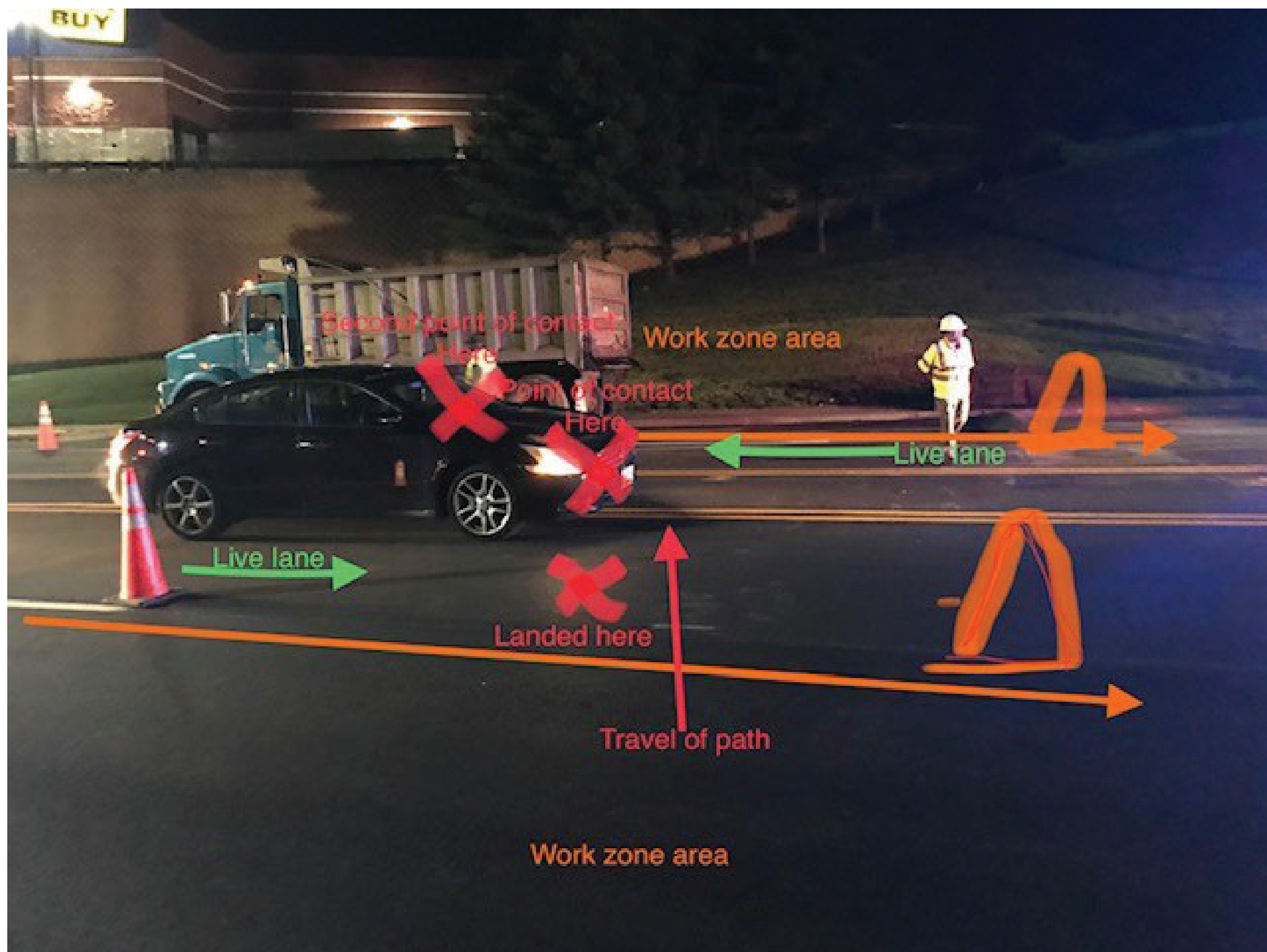


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Jerry

Jerry stepped out of the work zone into a live lane of traffic and walked into the path of an oncoming vehicle and was struck. Jerry does not recall whether he was still on the phone or had just hung-up as he stepped into live traffic. His phone was found on the roadway with a cracked screen. Jerry was struck on the left side of the body hitting the hood and windshield of car and then landing on the ground. His helmet took multiple impacts from the vehicle and the ground.



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Stevenson

Stevenson was bending over to pick up materials when he was struck in the head by a section of wooden form work from the pier. The back of the helmet was contacted by the edge of the plywood. No one was working above. The form was not properly stabilized from the previous day's work. He was transferred offsite via ambulance to the hospital where he was discharged later that day. The only injury sustained was a sore neck.



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“Safety is valued over all else at Aldridge, and that mentality starts with ownership. You cannot put a price on the added protection that the helmet gives so our employees go home safely each night. So, cost was never a factor.”

O'Brien Mills
Vice President of Safety
Aldridge Electric





CHALLENGE #1

SUBCONTRACTOR INTEGRATION

- Demonstrating the Value of Safety
- Open Communication & Education
- Leading by Example
- Accountability & Consistency





CHALLENGE #2

ADDRESSING RESISTANCE

Testing the Helmet's Limits

Linemen initially expressed doubts, testing the helmets themselves to find potential failures in real-world conditions.

FR Strap Concerns

A major concern was the non-flame-resistant chin strap, posing risks in energized environments.



TESTIMONIAL

“We have had 5 incidents since transitioning to the helmet in 2018. These incidents mainly pertain to the head by either line of fire (LOF) or slip/trip events. All 5 employees **walked away** from the incidents and only one received stitches to close a laceration. In the post-incident interview, all five employees stated that **if they were wearing a regular hard hat, they would be dead.**”



This statement says it all.”





ALDRIDGE

Building and Strengthening America's Infrastructure

THANK YOU

CONTACT US

Interested in learning more from O'Brien?



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