INCLUSIVE SAFETY

Providing Tailor-Made PPE for Women

By Jarrett Milligan

Currently, the majority of personal protective equipment (PPE) for the construction industry is designed to fit men. Providing PPE that is tailor-made for women in the construction workforce is critical for ensuring their safety and providing an inclusive environment that promotes their well-being and success.

With direct input from workers, Skanska, a project development and construction company, has developed PPE for women that is now available industry-wide.

A safe project is founded on the basics: a culture that puts safety first; a clean, organized jobsite; workers who are properly trained in safety; a detailed plan in place to mitigate hazards; and properly fitting PPE. Creating a culture with safety as the bottom line requires a collaborative, inclusive environment based on transparency, trust and respect. Because of this, we must be mindful of the specific needs of individuals, which includes PPE that is designed and sized precisely for a workforce that is increasingly made up of women.

Although women make up 9.9% of those who work in the construction industry, the past decade has shown a steady increase (BLS, 2018). For example, the percentage of women classified as construction managers has grown from 5.9% in 2003 to 7.7% in 2018 (Seger, 2018). With construction work expected to grow by 3% this year and with nearly 2 million new jobs expected by 2021 (Zitzman, 2019), we know that women will help fill these critical roles.

Improving the Foundation of Safe Work

If properly fitting PPE is a foundation for safe work, then we are doing a disservice to many of our colleagues. PPE is traditionally designed and manufactured for men, who typically have a larger bone structure than women as well as wider hands, feet and facial features. Gloves are required on construction jobsites to protect workers from cuts, lacerations, abrasions, and chemical and thermal burns; however, such gloves are usually designed to fit long fingers and large palms. High-visibility vests with reflective materials ensure that workers are seen in all conditions throughout the day and night; yet, these vests are often made for tall and wide frames.

The size and design of such protective gear can create several concerns, chiefly safety. If gloves are too large, an individual's dexterity is reduced and the worker cannot properly grasp objects. Long, baggy vests are more likely to catch or snag on handrails, doors and equipment. Additionally, ill-fitting PPE does not function properly. This is a concern for women, who already face a long list of potential hazards on the jobsite, such as falls, trench and scaffold collapse, electric shock and repetitive motion injuries (OSHA, 2005). We also must consider how comfortably a person can work while wearing ill-fitting PPE or how that person feels wearing a vest that hangs down to the knees.

Redesigning PPE With Direct Input From Women

PPE, which is traditionally designed and manufactured for men, is based on outdated anthropometric data. Anthropometry, the science that defines a person's size, form and functional capacities, is critical to preventing occupational injuries and designing effective PPE. Much of the data used to develop PPE is based on studies of military personnel collected in the 1950s and 1970s. Not only is this data outdated, but the average construction or industrial worker is anthropometrically vastly different from military personnel as well as the average civilian population (NIOSH, 2018). With a growing diverse workforce, PPE to be used by women should be based on recent women's anthropometric data.

While PPE for women is available on the market, it is not easily found or widely ordered. PPE for women should be quickly accessible and available to the entire workforce, nationwide. To tackle this concern, Skanska teamed with Colony Hardware, a New York-based PPE vendor that recognized the gap in the industry regarding PPE for women. To start, Colony provided Skanska with samples of vests and gloves from multiple manufacturers.

To meet women's exact needs, gathering feedback from female employees was imperative. Women from Skanska jobsites and offices in New York, NY, Seattle, WA, and Boston, MA, tried on the vests and gloves, and provided feedback. This feedback included changes to the vest, which Skanska team members marked up and sent to Colony for revisions (Photo 1).

The resulting tailor-made vests combined what Skanska team members identified as the best designs of multiple options. Within 3 days, the manufacturer, Radians, delivered on the vision with a mock-up for one vest followed soon after by a second option, a tapered vest primarily constructed of a mesh material and adapted for warmer climates.

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The new vests are just the beginning and a one-of-a-kind solution to what women in the construction field want and need. This includes a large interior pocket, a front pocket for storage of pens and field books, and microphone straps. Like currently available vests, one vest is tapered, while the other is not tapered and features an adjustable elastic band that allows the wearer to tighten the vest around the waist. Both vests were adjusted along the length of the back and sides to improve fit.

Since the company launched the tailor-made PPE, women in Skanska's workforce have shared their thoughts. For them, this change was necessary, as it allows them to do their jobs better and more safely. They also feel more confident in the company's acknowledgment that women belong in this industry and are here to stay.

Safety Requires an Inclusive Environment

On any construction jobsite, a collaborative and inclusive environment is critical to safety, well-being and success. To attract and retain talent in an industry where labor needs exceed supply, we cannot allow barriers such as a lack of properly fitting PPE to exist. We must therefore keep the specific needs of individuals in mind, which includes protective equipment that is designed and sized specifically for women in the industry's growing workforce.

Construction workforces across the U.S. now have options for appropriate fitting PPE. Skanska's tailor-made safety vest is available to every woman in the U.S., no matter their location or company.

Construction workforces across the U.S. now have options for appropriately fitting PPE, including tailor-made vests and two types of gloves, one for touch screens and one for general use. These items are available to every woman in the U.S. construction industry, no matter their location or company. For safety to remain the bottom line on every jobsite, the industry must create and stand behind an inclusive environment in which all workers have what they need and can go home safely at the end of the day. **PSJ**

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Jarrett Milligan, CFSM, is an environmental, health and safety vice president for Skanska's (www.usa.skanska.com) Northeast Region, including New York, NY, Boston, MA, and Philadelphia, PA. Milligan has 13 years' construction industry experience. He holds a B.S. in Fire Science from New Jersey City University and served in the U.S. Navy for 6 years.