

## A Bright Idea

Whenever RCMP members are working on the scene of an accident or in the midst of any kind of traffic, they don a yellow safety jacket for increased visibility. In the coming months, those yellow jackets will be much more visible at night with the enhancement of additional reflective material.



Front  
Before Retrofit

The RCMP has decided to adopt the new Canadian Standards Association standard, CAN/CSA Z96-02, for high visibility safety apparel. The addition of the designated retroreflective material pattern: “X” on the back, vertical stripes on the front, and 360 degree stripes around the waist and arms, dramatically improves visibility at night. “For the safety of our members, we feel it’s

the right way to go,” says Ellen d’Entremont, a technical writer and clothing designer with the RCMP. “At the time we made our decision, the CAN/CSA Z96-02 had not yet been adopted by federal regulators, but that didn’t slow us down in moving ahead. We feel strongly that this new standard greatly improves the chances of being seen.”



Front  
After Retrofit

The increased low light visibility that garments meeting the new CSA standard had to offer became apparent to RCMP clothing designers after participating in a nighttime demonstration showcasing the new reflective pattern. We saw the improvement with our own eyes,” d’Entremont says. The next step in going forward was to consult with David Lucas, Chair of the CSA Z96 Technical

# Working Together for Safety and Comfort

More than three years ago, officials with Saskatchewan Highways and Transportation started to notice that workers on highway projects across the province did not stand out. Concerned that the trend was compromising safety, they began a review of the garments that highway workers were wearing.

Following many months of work and consultations with 3M representatives, workers in the province today are wearing much improved, high-visibility safety apparel that feature 3M™ Scotchlite™ Reflective Material.

“It was back in 2000 when we first started researching the ANSI/ISEA 107-1999 (American National Standards Institute) standard,” recalls Doug Santha, an Occupational Health and Safety Consultant with the Saskatchewan Highways and Transportation.

“Then we got wind that CSA (Canadian Standards Association) was developing a similar standard, we decided to adopt it internally.”

The result of that decision was a move to include the new requirements of the CAN/CSA Z96-02 standard in all contracts Saskatchewan Highways put out to tender. As a result, highway workers working directly for the province and those working for companies under contract to the province will now wear this new high visibility safety apparel.

“There are about 900 field workers with the

province and probably another 1,000 or more working for private companies,” Santha says.

The process took a lot longer than Santha and his colleagues expected. “It took several months, and without the help of Ruth Cockwill, 3M Account Executive, I’m not sure we could have done this. She was very helpful with the new standard and new materials that are available.”

The first trial prototype of a new vest fell short of workers’ hopes and expectations. “The



**New and improved high-visibility safety apparel helps to make workers safer on Saskatchewan highways.**

original design was hot because it was made from a tightly woven fluorescent fabric,” says Kelly Mandzuk, a Safety Coordinator with Saskatchewan Highways. “The new version of the vests are more breathable and more comfortable, and we added extra coloured striping to provide

increased visibility.” Acceptance of the redesigned vest improved dramatically in a field test last year.

The predominant vest colour is a fluorescent yellow-green background with contrasting fluorescent orange-red bands on either side of the retroreflective silver stripes. The vests should now be visible in all environments, whether it is bright sunlight, dawn, dusk or darkness.

“The vest program has been so successful, that we’re now expanding into bib overalls and coveralls,” Santha says.

Making  
Visible  
Differences

# New Uniforms Made Visibly Different

New safety standards for high visibility work wear in Canada are prompting some companies to review their entire approach to uniforms. That, in turn, is creating an opportunity to make improvements in several areas, according to a technical apparel expert who works with dozens of organizations.

“With the new CAN/CSA Z96-02 standard, companies can either retrofit or redesign their work wear”, says Lisa Cook McGill, whose company, Crux Design Industries, helps companies design and implement work wear strategies.

“The new standard is here, but there are still companies out there issuing non-compliant apparel, and that is going to be costly for them, if as predicted, the standard becomes referenced by regulators.”

Instead, McGill has been urging her clients to assess their uniform requirements and protocol. She says there are fabrics and product designs that can be developed that cost less, are more comfortable to wear and offer much greater safety and visibility.

“The object is to come up with a high visibility, user friendly product,” she says. “That can save companies money and make their employees much happier because they will be safer and more comfortable.”

McGill has worked closely with 3M and a variety of manufacturers to incorporate 3M™ Scotchlite™ Reflective Material into uniform designs.

She says communicating with end users is the key to designing a successful uniform program. Employees are educated about the safety improvements of high-visibility apparel, and they offer feedback about what works and what doesn't with the existing designs.

The next step often is to create a prototype and

run a controlled trial in the workplace, asking several workers to evaluate the new design.

“If you're spending more than \$50,000 on a uniform program, you really should do a series of trials. It will save a lot of valuable time and money.”



**Lisa Cook McGill, Crux Design Industries, helps companies design and implement work wear strategies.**

From there, McGill uses the worker and field trial feedback to write a detailed specifications and then works with the manufacturers who will be making the garments.

One of her current clients is the Greater Toronto Airports Authority, which hired her to overhaul its entire uniform program. She made arrangements with several manufacturers to fulfill the needs of the GTAA. She wrote the Request for Proposal and awarded contracts to four suppliers. “I like to deal with companies that are experts in their field, so that often means working with several specialty manufacturers,” she says.

Projects can take several months or years, depending on their size and the type of organization she is working with.

## A Bright Idea continued...

Committee, on appropriate retrofit options that would meet the new CSA standard.

The anticipated end result will be a retrofit on approximately 3,000 jackets that are currently issued and in use across the country. Eventually, the new reflective pattern will be incorporated into the design of a new high visibility jacket, the colour

of which will meet the CSA standard for daytime requirements.

“The new jackets will be made from a brighter material, but we didn’t want to wait for those jackets to improve the nighttime retroreflective properties of the jackets in use right now,” d’Entremont says.

The retrofit will begin this spring and will take several months to complete.



Back  
Before Retrofit



Back  
After Retrofit

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- Innovative products backed by the technical strength and services of 3M.
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