

**Topic:** Benefits of High-Visibility Safety Apparel  
**Date:** June 26, 2020

**Introduction**

High-visibility safety apparel (HVSA) is clothing (e.g., vests or coveralls) that workers wear to improve how well others are able to "see" them (their visibility). Most often, high-visibility clothing is worn to alert vehicle or equipment operators of a worker's presence, especially in low light and dark conditions. HVSA allow workers to be seen by the operators of vehicles and equipment sooner and more readily; this enhances visibility and helps to reduce the risk of being struck on a work site.

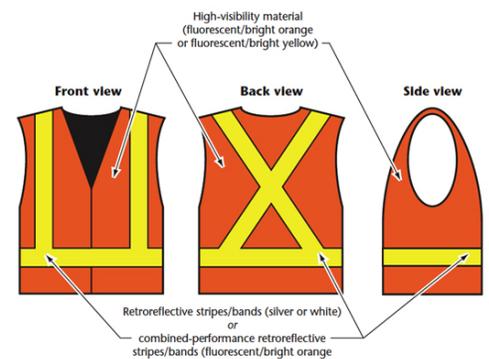
**Risks Associated with the Rail Corridor**

Classes of HVSA are defined in CSA Standard Z96-15: *High Visibility Safety Apparel*. Currently, Class 2 Level 2 HVSA (standard safety vest, pictured in Figure A) is required for workers within the rail corridor and on construction sites.

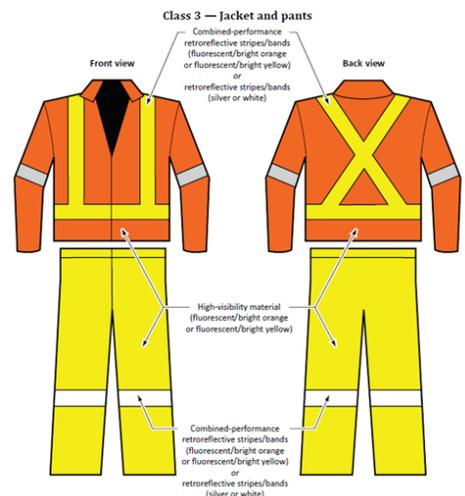
As defined in CSA Standard Z96-15, the recommended HVSA class used by workers increases with the associated risk of contact with equipment or vehicles when performing specific tasks. This is also considered as good practice.

Class 3 HVSA (pictured below in Figure B), should be considered in the following high-risk work conditions:

- 1) workers are exposed to significantly higher vehicle speeds > 80 km/h and/or reduced sight-distances;
- 2) the worker and vehicle operator have high task loads, clearly placing the worker in danger;
- 3) the wearer must be conspicuous through the full range of body motions at a minimum of 390 m, and must be identifiable as a person; or
- 4) work activities are taking place in low light or at night-time.



**Figure A:** Example of Class 2 HVSA.



**Figure B:** Example of CSA Class 3 HVSA.

In review of the above conditions, maintenance and construction work within the rail corridor meets the requirements for high risk of contact with equipment or vehicles under all four high risk work conditions. Aligning the HVSA worn by employees when working within the rail corridor with the risks of their environments is a prudent measure to prevent incidents and keep workers, train crew and passengers safe.

## **Research on HVSA**

Several studies have been performed on the effects of workers wearing various classes of HVSA and the ability of equipment or vehicle operators to see them. As a general trend, additional retroreflective striping, especially on the legs, has been shown to enhance night time visibility through vehicle operators being able to identify workers earlier upon approach.

Research has also indicated that the human eye responds best to large, contrasting, bright or moving objects. The current HVSA requirement of a Class 2 Level 2 vest does not maximize the amount of available bright or contrasting material worn by workers. Class 2 Level 2 vests have limited visibility when facing perpendicular (sideways) to an approaching vehicle, and in some cases the side striping may be fully covered. Enhancing the area, contrast, and brightness of the HVSA worn by workers within the rail corridor will assist in earlier detection by operators and a reduction in the risk of contact with vehicles and equipment.

## **Conclusion**

Safety is the highest priority in all work tasks at Metrolinx. **As of September 15, Class 3 Level 2 HVSA will be required for all workers within the rail corridor, as outlined in the Metrolinx Personal Protective Equipment (PPE) Standard. Where a "Constructor" is managing a construction project for Metrolinx as "Constructor" for the project, the policies and standards of the Constructor must meet or exceed this PPE Standard and the Constructor shall enforce same at the construction project.** Exceptions will be made for locomotive operators in the rail corridor and Transit Safety personnel in the event of an emergency, who may continue to use Class 2 Level 2 HVSA. Workers on construction sites and in industrial areas must continue to wear a minimum of Class 2 Level 2 HVSA as prescribed in the PPE Standard. This measure will address the elevated risks associated with working around moving vehicles and equipment including during low light and reduced visibility and sighting and creates a safer work environment for all.

Sincerely,

Martin Gallagher  
Chief Safety Officer