



High-Visibility

GUIDE

Jurisdiction CAN

Framework Element Element 2: Risk Management

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PURPOSE

This Guide documents the selection and proper wearing of high-visibility safety apparel (HVSA) in Canada based on CSA Z96-22 requirements, ensuring worker compliance with TC Energy's *Personal Protection Equipment Standard (CAN-US-MEX)* (Item ID [003721958](#)).

SCOPE

This Guide applies to all TC Energy workers in Canada where CSA Z96-22 standards are adopted, providing risk-based guidance for selecting appropriate high-visibility garment classes (1, 2, or 3) based on traffic speed, vehicle separation, and lighting conditions.

This Guide does not apply to:

- Non-Canadian operations or jurisdictions not adopting CSA Z96-22 standards

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1 HIGH-VISIBILITY APPAREL REQUIREMENTS

1.1 CSA Z96 Classification System

Table 1-1 below outlines guidelines for the classes set by CSA and work-type examples applicable to TC Energy assets in Canada.

Table 1-1: CSA Z96 Classes and Work Type Selection

CSA Z96 Class	Work Type Examples	Required High-Visibility Apparel	High-Visibility Example	
Class 1	- Workers performing activities that permit their full and undivided attention to approaching traffic. - When there is ample separation between workers on foot and traffic or other mobile equipment. - When work backgrounds are not complex, allowing for optimal visibility. - When vehicles do not exceed 30 km/h. - When workers are doing tasks that divert their attention from approaching traffic.	Wear high-visibility apparel on the upper body.	 Level 1/2 Combined performance fluorescent and retroreflective stripes/bands.	 Class 1 Level FR – Requires wrist and ankle stripes to account for reduced reflective performance of some FR striping.
Class 2	- When vehicles or equipment are moving between 30-80 km/h. - Workers who require greater visibility under inclement weather conditions or low light. - When work backgrounds are complex. - When workers are performing tasks that divert attention from approaching vehicle traffic. - When work activities are in closer proximity to vehicles (in or near flowing vehicle traffic).	Wear high-visibility apparel on the upper body with appropriate background colour.	 Example of Class 2	 Example of Class 2 Bibs

CSA Z96 Class	Work Type Examples	Required High-Visibility Apparel	High-Visibility Example
Class 3	- Vehicle speeds exceeding 80 km/h. - Workers on foot and vehicle operators have high task loads that clearly place the worker in danger. - When the wearer must be conspicuous through the full range of body motions at a minimum of 390 m (1,280 ft). - Work activities taking place in low light or at nighttime.	Wear high-visibility apparel on the: - Upper body - Wrists - Ankles With appropriate background colour.	 Class 3 examples *CSA Z96-compliant arm and leg bands may be worn with Class 2 HVSA to achieve Class 3 performance.

Figure 1-1 is a simple illustration of the patterns and colours required to meet each class. **Please note that Level FR requires arm and leg bands.**

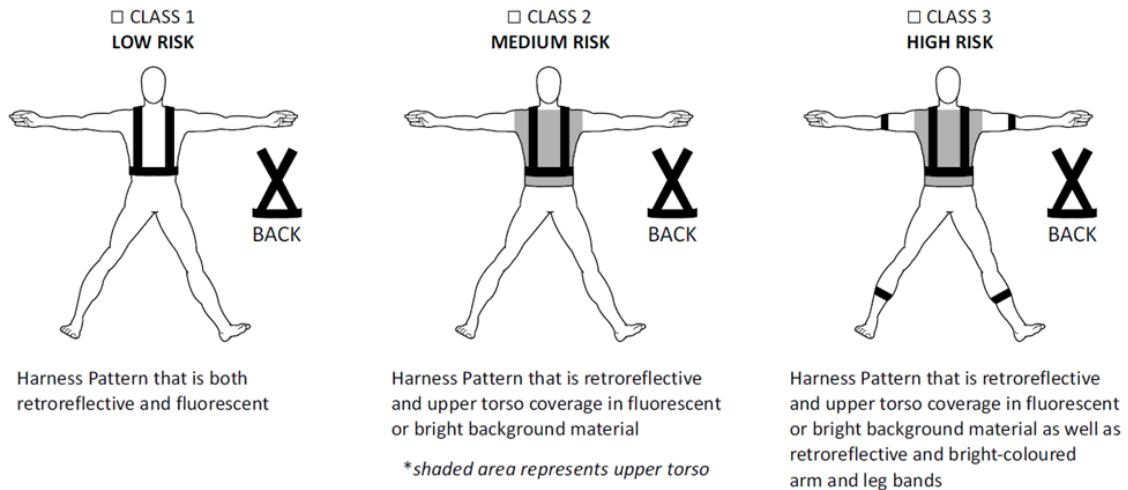


Figure 1-1: Visual Guide to HVSA Class Requirements

Figure 1-2 The flowchart below can be used as a reference aid to help you in your determination of which level of HVSA should be worn during your planned work activities.

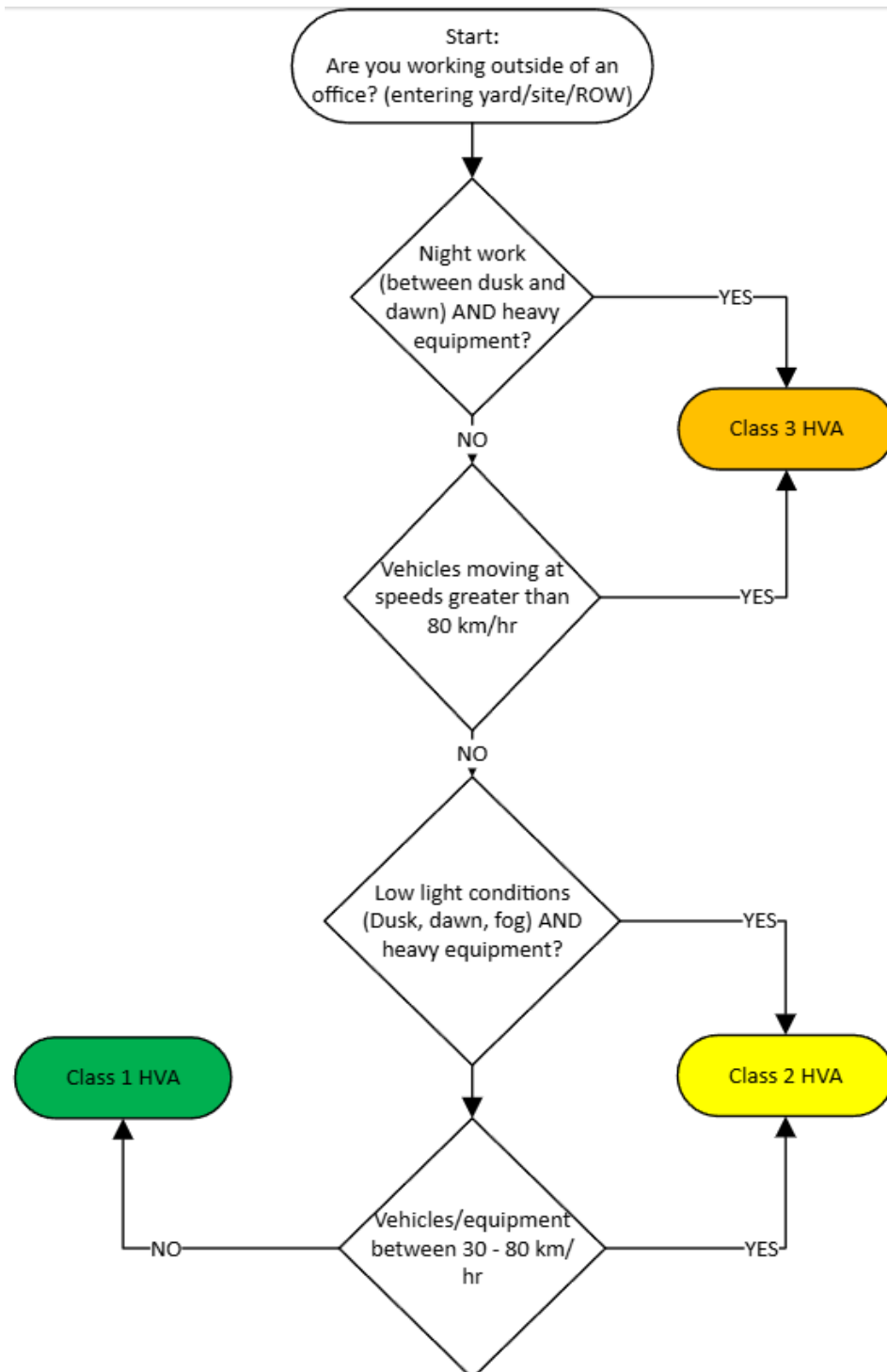


Figure 1-2: Visual Guide to HVSA Class Requirements

1.2 What Should I Wear? Common Scenarios

- Inside fenced facility/yard with ample separation; forklifts or vehicles ≤30 km/h; warehouses/shipping → Class 1
- Yard/ROW work with heavy equipment traffic; vehicles 30–80 km/h; limited separation; dawn/dusk/poor weather → Class 2
- Roadway/highway work >80 km/h; flagging/traffic control; night operations; no physical separation → Class 3

1.3 If Flame Resistant Clothing Is Required

- Wear garments that meet the flame-resistant requirements in the PPE Standard and are certified to CSA Z96 for the appropriate Class and Level (e.g., Class 1 Level FR).
- **Important:** *Level FR* is a specific designation within CSA Z96 for high-visibility apparel made from FR materials. All Level FR garments are flame-resistant, but not all flame-resistant CSA-compliant high-visibility garments are Level FR.
- Layering must maintain visibility — the FR high-visibility garment should always be the outermost layer.
- Because Level FR garments have reduced reflective performance, they must include wrist and ankle stripes.
- Flame-resistant high-visibility apparel is available in Level 1 or Level 2 and may be worn in the same configurations as non-FR HVSA.

1.4 Color and Striping at a Glance

For Classes 2 and 3, background colors are fluorescent yellow/green, fluorescent orange/red, or fluorescent red. Retroreflective material width is typically ≥50 mm, with standardized placement to ensure 360° visibility (front vertical bands, back ‘X’, and a waist level band; sleeves/legs for Class 3). Always verify the manufacturer’s certification label.

1.5 Labeling of HVSA

Garments that are compliant will have a label by the manufacturer stating that they are certified to CSA Z96. If the garment is certified, the label will include the following:

- a) name, trademark, or other means of identification of the HVSA manufacturer or authorized representative;
- b) designation of the product type (e.g., coverall, vest);
- c) commercial name or code;
- d) size designation;
- e) the designation CSA Z96:22;
- f) HVSA Class and level of retroreflective or combined-performance materials;
- g) indication of background material as “fluorescent” or “bright-coloured”; and
- h) an indication of FR performance, if applicable.

1.6 Combining HVSA

It is an acceptable practice under the Standard to combine CSA Z96-compliant arm and leg bands may be worn with Class 2 HVSA to achieve Class 3 performance. An example of this would be a Class 2 vest over Class 1 coveralls that have arm and leg bands (including Level FR).

1.7 Do's and Don'ts

- **Do:** choose the higher class if uncertain; keep garments clean and undamaged; replace when faded or damaged.
- **Don't:** add aftermarket stripes; cover hi-vis with noncompliant outer layers.

2 REFERENCES

2.1 Terms and Definitions

The following table provides definitions for key terms used within this document.

Table 2-1: Terms and Definitions

Term	Definition
Class	refers to the amount of high-visibility background material and the configuration of retroreflective striping on a garment. It indicates the level of body coverage required for different work environments and risk levels. Higher classes provide greater visibility by covering more of the body with fluorescent material and adding standardized reflective patterns. The Classes are Class 1, Class 2 and Class 3.
Level	refers to the performance of the retroreflective material used on the garment. It indicates how effectively the material reflects light back to its source under different conditions. Higher levels provide greater visibility at longer distances or in more challenging lighting environments, regardless of the garment's Class. The Levels are Level FR, Level 1 and Level 2.

2.2 External and Internal References

This document relies on a number of references to regulation, industry codes and standards, general industry guidance and internal references, as outlined in Table 2-2 and Table 3-3. Latest versions of all TC Energy controlled documents can be accessed from the [Controlled Document Library](#).

Table 2-2: External References

Organization	Title
CSA Z96:22	High-visibility safety apparel (current edition)

Table 2-3: Internal References

Title	Item ID
<i>Personal Protection Equipment Standard (CAN-US-MEX)</i>	003721958

3 DESCRIPTION OF CHANGE

Reviews and approvals have been captured on review and approval checklists and attached to the Controlled Document Library (CDL) Document Management of Change (DMOC) record.

Description of Change

Comprehensive update to the document. This edition was updated to reflect the requirements outlined in CSA Z96:22, additional guidance in HVSA selection, identification, certification and combination.