Table 11c. Summary of Protective Equipment Labeling

Clause	Title	Summary
4.4.4.2	Protective Eyewear	OD and wavelength marking required
4.4.2.3	Viewing Windows and Display Screens	OD, wavelength and exposure time marking recommended
4.4.2.4	Facility Windows	OD, wavelength and exposure time marking required
4.4.2.5	Protective Barrier	Threshold limit and exposure time marking required, see Appendix C2.4
4.4.2.6	Collecting Optics Filters	OD, wavelength and threshold limit marking required
NOTE 1—Signs and labels prepared in accordance with Z136.1-2007 (and prior editions) are considered to fulfill the requirement of the standard. NOTE 2—Labeling is only required when windows, filters or barriers are not sold as an integral part of the product. NOTE 3—See also Appendix D, Table D2 for additional applicable labeling information.		

ANSI Z535 Compliant Laser Area Warning Sign Formats

The ANSI Z535 series provides the specifications and requirements to establish uniformity of safety color coding, environmental / facility safety signs and communicating safety symbols. It also enables the design, application, use and placement of product safety signs, labels, safety tags and barricade tape. It includes the following standards:

- ANSI Z535.1-2006 – Safety color code
- ANSI Z535.2-2006 – Environmental and facility safety signs
- ANSI Z535.3-2006 – Criteria for safety symbols
- ANSI Z535.4-2006 – Product safety Signs and labels
- ANSI Z535.5-2006 – Safety tags and barricade tapes (for temporary hazards)
- ANSI Z535.6-2006 – Product safety information in product manuals, instructions and other collateral materials
- ANSI Z535-2006 – Color chart

NOTE—The ANSI Z535 series are American consensus standards published by National Electrical Manufacturers Association (NEMA), which is accredited by ANSI.

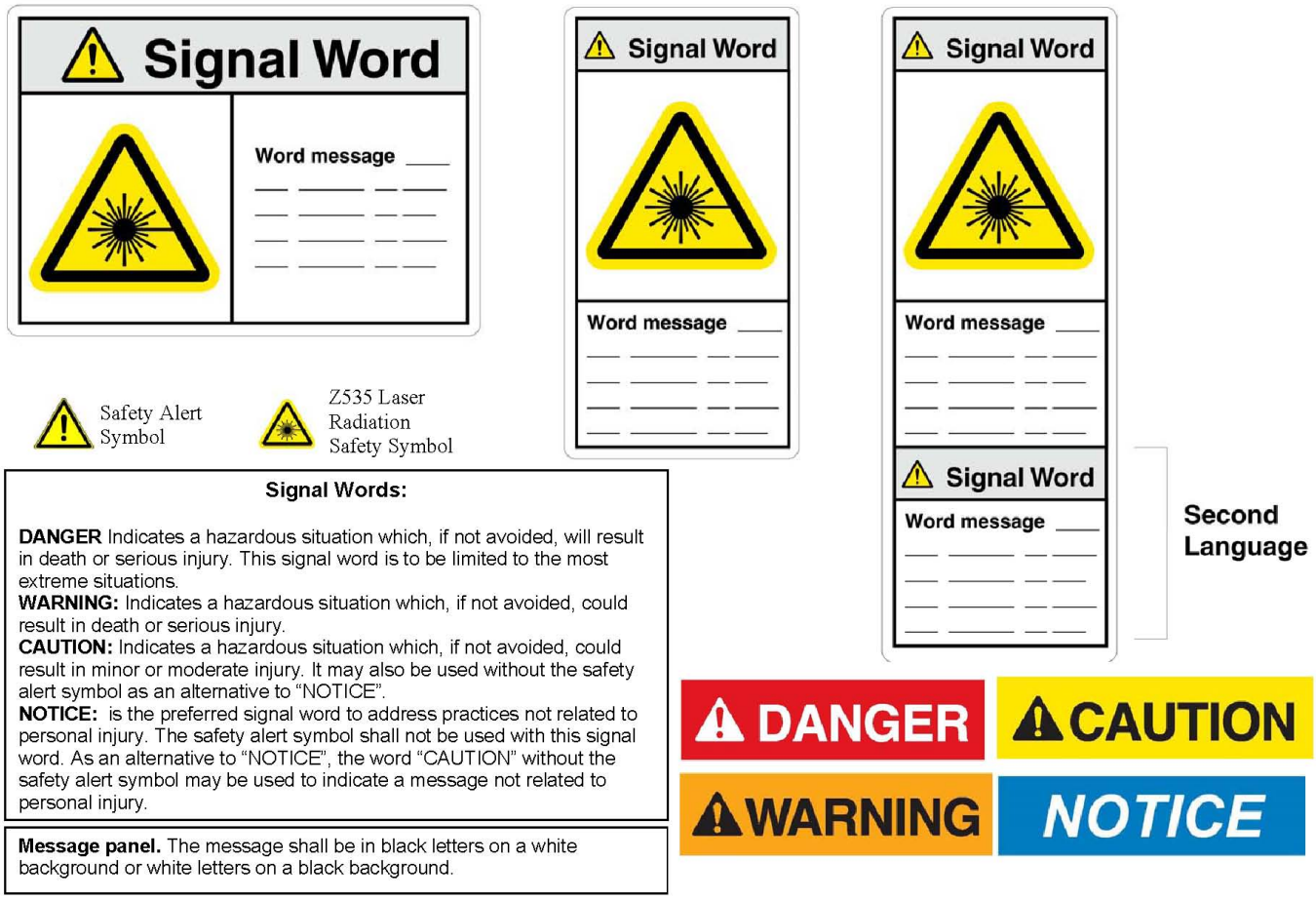

Figure 1a. ANSI Z535.2 Compliant Laser Area Warning Sign Formats

Figure 1b. Sample ANSI Z535.2 & ISO 3864-2 Compliant Class 2, Class 2M or Class 3R Laser Controlled Area Warning Sign

NOTE—Use "CAUTION" with the safety alert symbol to denote a potential hazardous situation, which, if not avoided, may result in minor or moderate injury.

Figure 1c. Sample ANSI Z535.2 & ISO 3864-2 Compliant Class 3B or Class 4 Laser Controlled Area Warning Sign

NOTE 1—Use "WARNING" with the safety alert symbol to denote a potentially hazardous situation which, if not avoided, could result in death or serious injury.

NOTE 2—The "WARNING" signal word is generally appropriate for Class 3B and most Class 4 laser operations. However, with some very high power Class 4 laser operation the signal word "DANGER" may be more appropriate. The decision on Class 4 signal word is made by the responsible LSO.

Figure 1d. Sample ANSI Z535.2 & ISO 3864-2 Compliant Class 4 Laser Controlled Area Warning Sign

NOTE 1—Use "DANGER" with the safety alert symbol to denote an imminently hazardous situation which, if not avoided, will result in death or serious injury.

NOTE 2—The "DANGER" signal word is generally for some very high power Class 4 laser operations. The decision on Class 4 signal word is made by the responsible LSO.

Figure 1e. Sample Warning Sign for Facility Policy, for example, Outside a Temporary Laser Controlled Area During Periods of Service

NOTE—Use "NOTICE" without the safety alert symbol, to advise of temporary or non-standard situations (such as laser servicing). Can be used in combination with other hazard signs to provide appropriate warning and safety information.

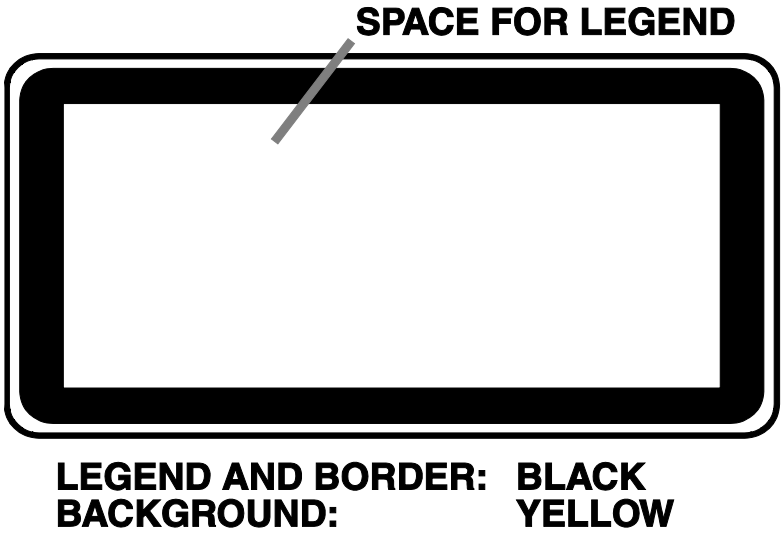

Figure 1f. IEC Warning Logo and Information Label

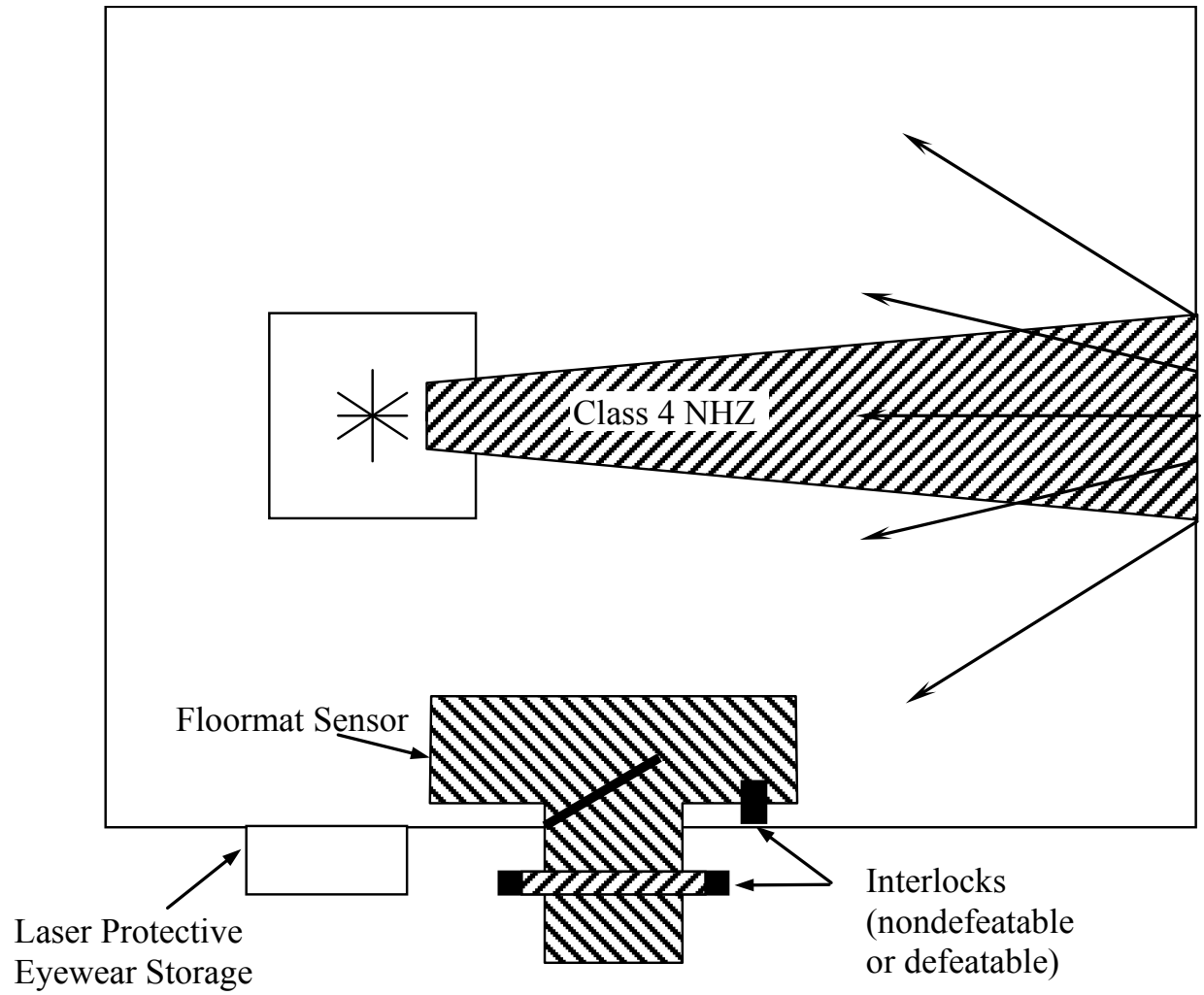

Figure 2a. Area/Entryway Safety Controls for Class 4 Lasers Utilizing Entryway Interlocks

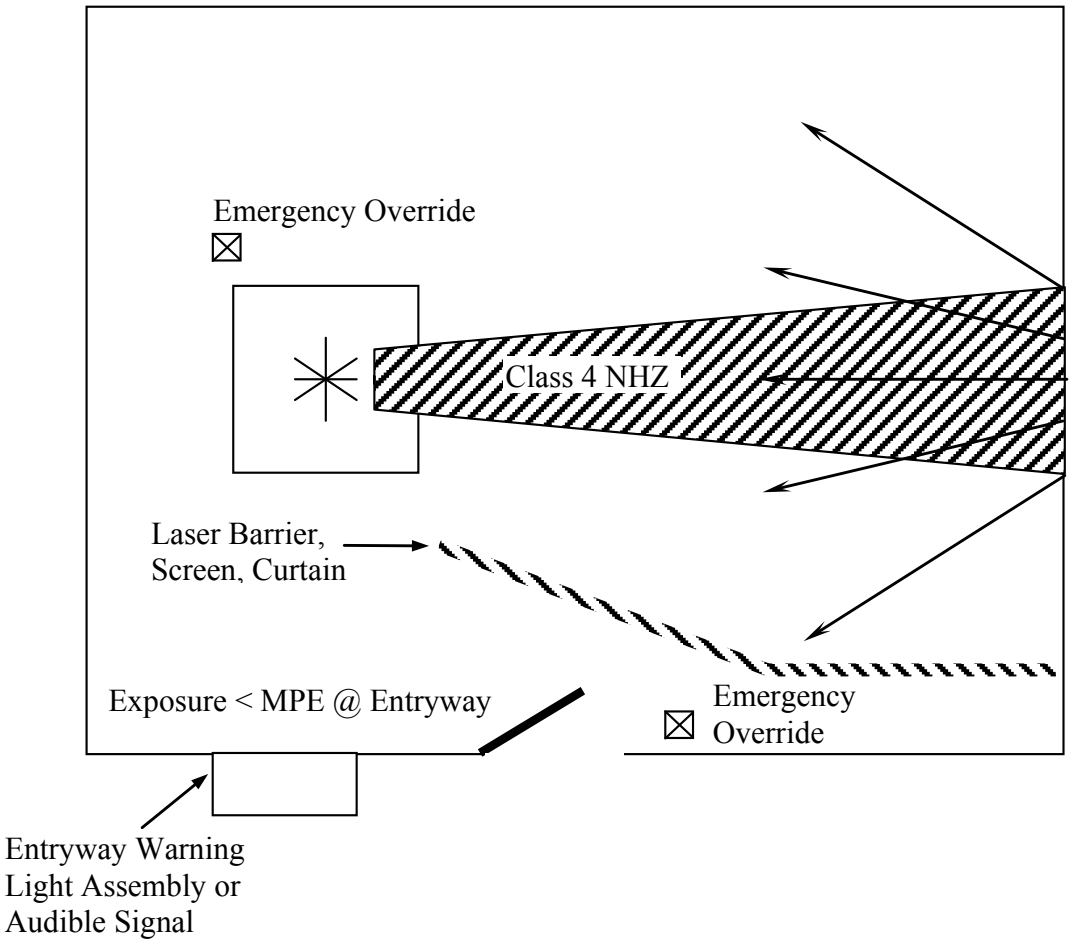

Figure 2b. Entryway Safety Controls for Class 4 Lasers without Entryway Interlocks

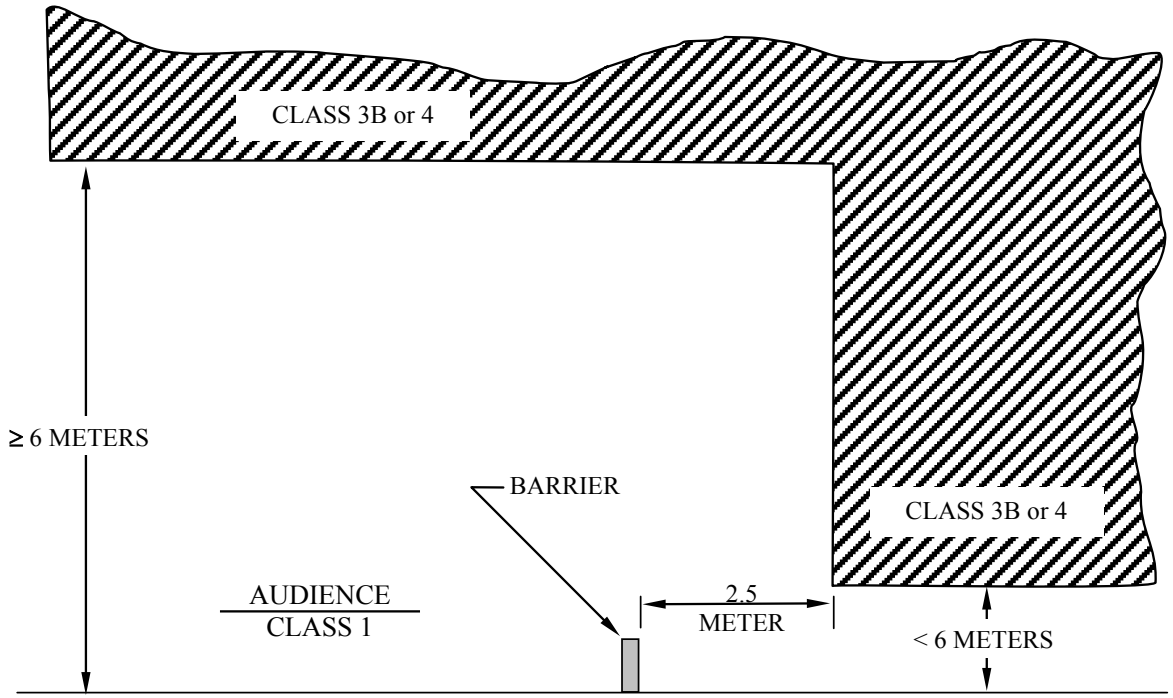

Figure 2c. Unsupervised Laser Installation for Demonstration Laser

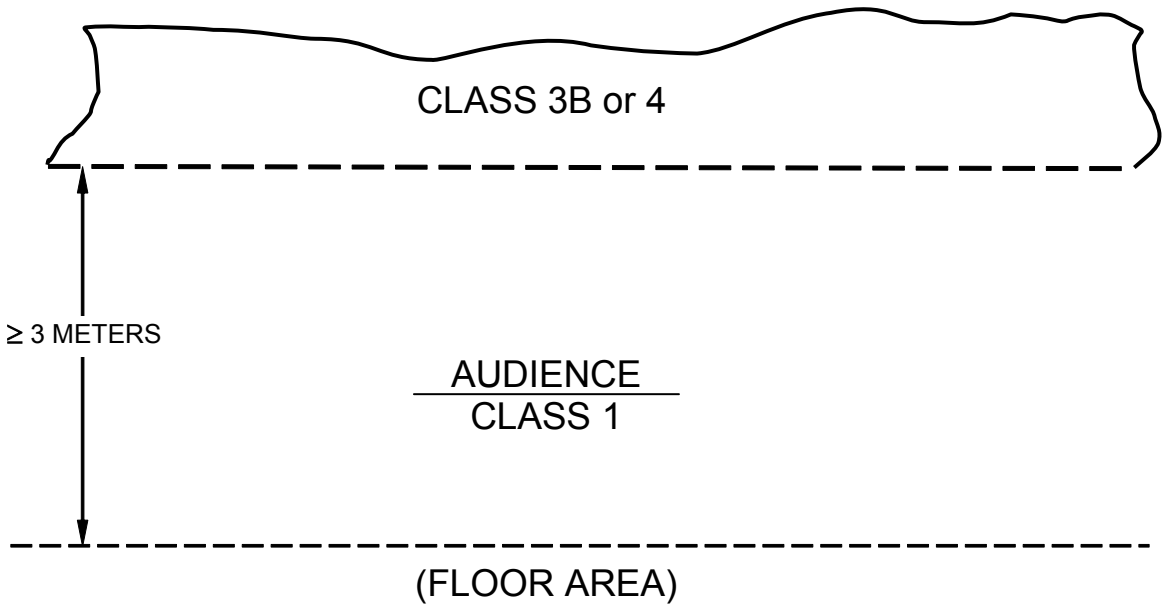

Figure 2d. Supervised Laser Installation for Demonstration Laser

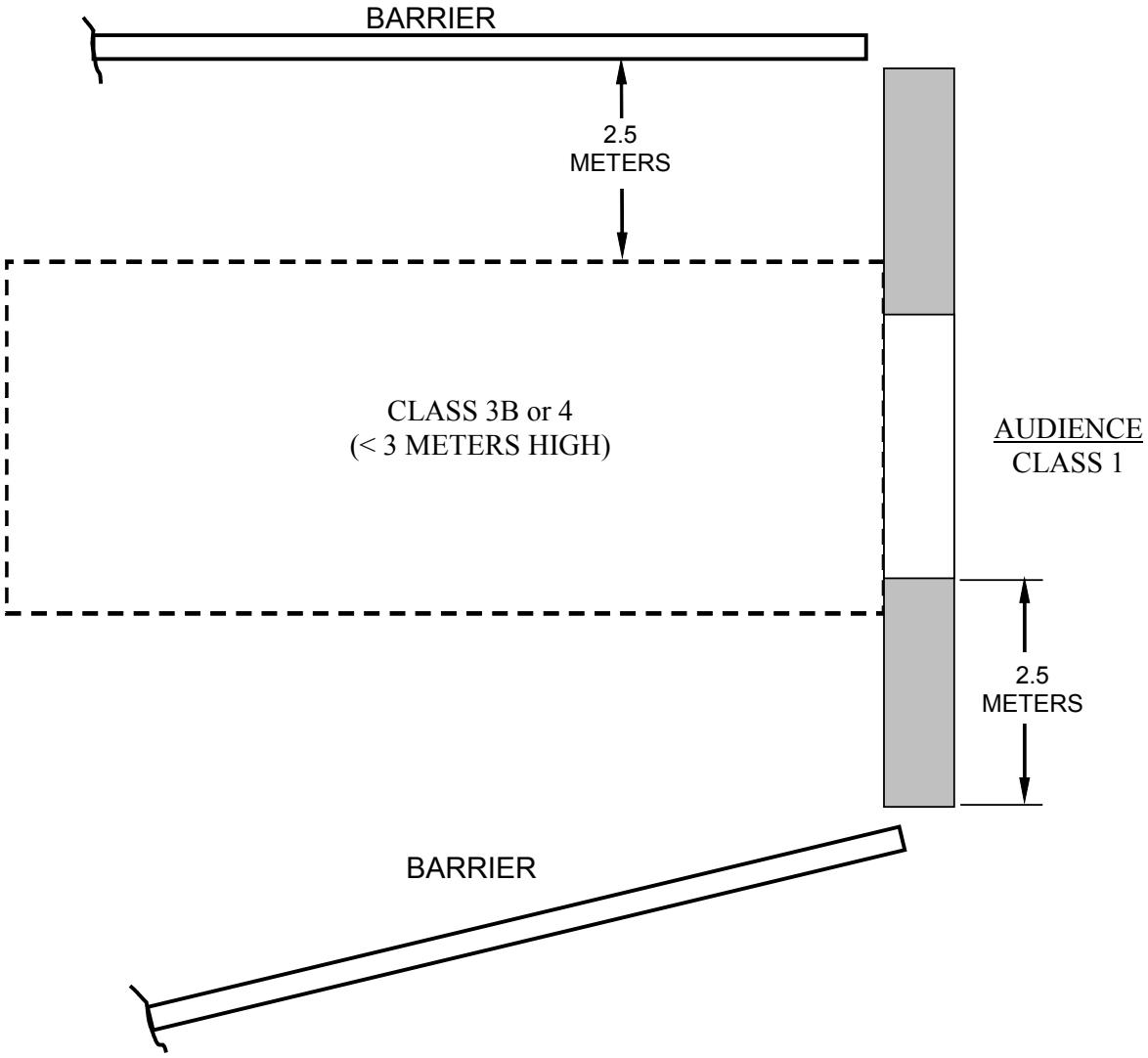

Figure 2e. Supervised Laser Installation for Demonstration Laser

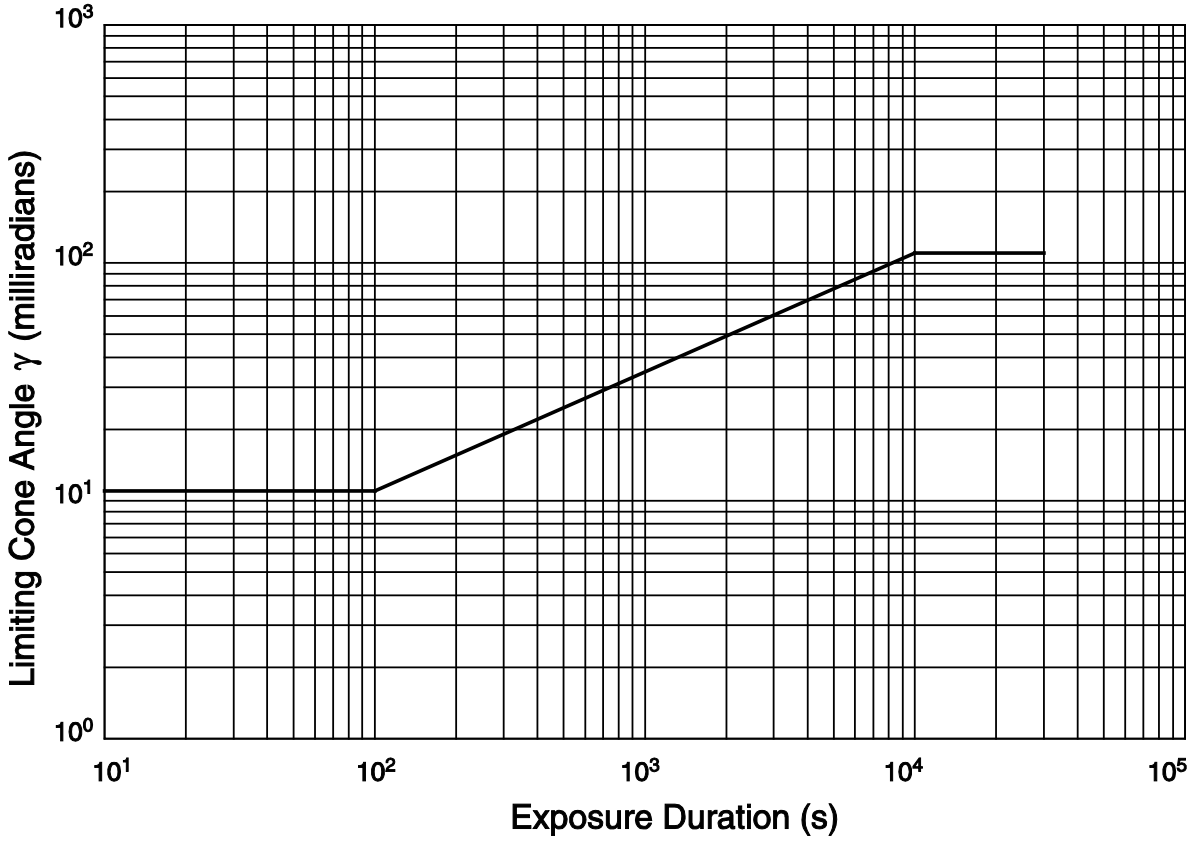

Figure 3. Limiting Cone Angle γ, Photochemical MPEs