

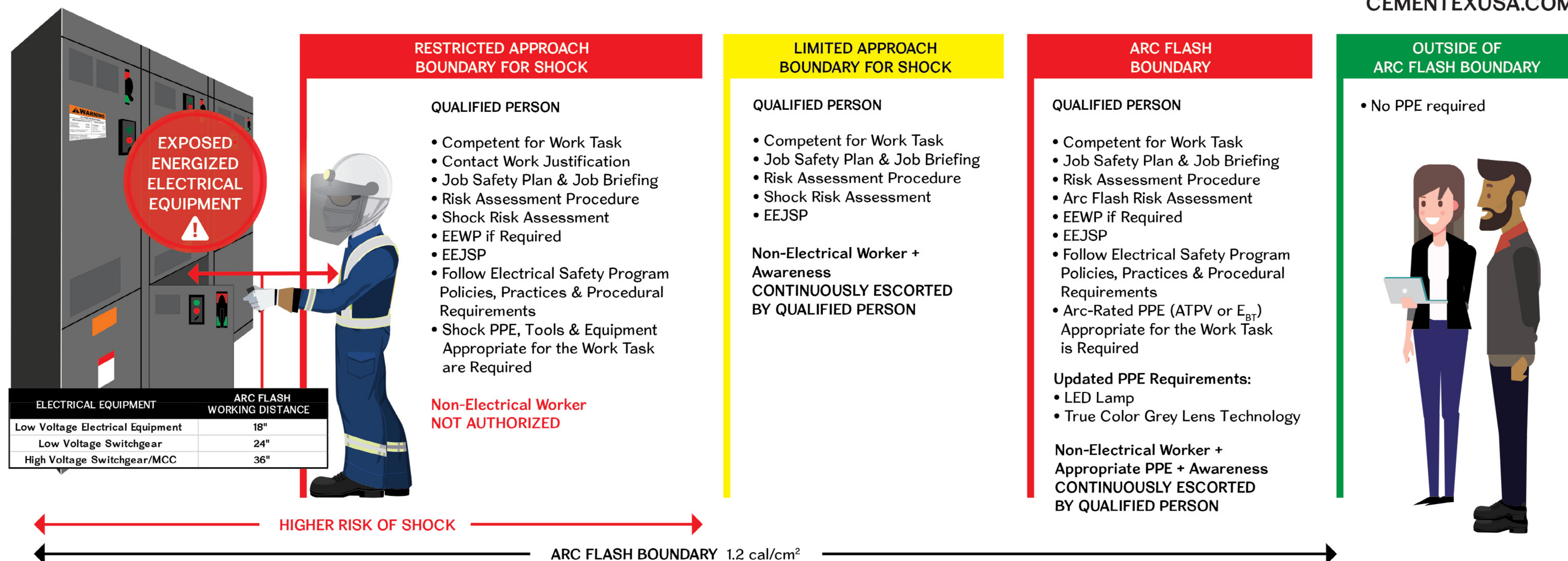
ARC FLASH AND SHOCK RISK ASSESSMENTS

BOUNDARIES GRAPHIC Additional Protective Measures—Based on NFPA 70E-2024

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The Safety Tool Specialists

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Arc-Rating Level # (cal/cm ² ATPV)	Arc Flash PPE Minimum Requirements
Level 1 8-12 cal/cm ²	Body: Everyday/task wear long sleeved shirt/pant or coverall (with storage bag). 100% natural fibre clothing to be worn underneath. Optional "Escape Strap" vest recommended be available for use. Head & Face: ANSI approved eyewear, clear lens. Arc-rated balaclava and arc-rated face shield (with storage bag) with true color grey lens, Class E hard hat and LED lamp. Hearing: Minimum ear canal insert ear plugs. Hands: Appropriate Class # of rubber insulating gloves with leather protectors (with storage bag sized to the Class #). Footwear: ANSI approved EH rated leather footwear. Note: Rubber insulating gloves with leather protectors provide arc flash protection for the hands. Where there is no shock hazard exposure heavy duty leather work gloves provide arc flash protection for the hands.
Level 2 Minimum 75, 100 or 140 cal/cm ²	Body: Arc flash suit: bib overalls, and jacket (with storage bag). 100% natural fibre clothing to be worn underneath. Optional "Escape Strap" recommended. Head & Face: ANSI approved eyewear, clear lens. Arc flash suit hood with true color grey lens, Class E hard hat, hood ventilation system and LED lamp. Hearing: Minimum ear canal insert ear plugs. Hands: Appropriate Class # of rubber insulating gloves with leather protectors (with storage bag sized to the Class #). Footwear: ANSI approved EH rated leather footwear. Note: Rubber insulating gloves with leather protectors provide arc flash protection for the hands. Where there is no shock hazard exposure heavy duty leather work gloves provide arc flash protection for the hands.

DETAILED ARC FLASH & SHOCK WARNING EQUIPMENT LABEL EXAMPLE

WARNING	
Arc Flash and Shock Hazard	
ARC FLASH PPE 56.1 cal/cm ² incident energy	SHOCK PROTECTION 480 VAC
Arc Flash Boundary Working Distance 144 inches 24 inches	RIG Class # 0 Limited Aprch. Boundary 42 inches Restricted Aprch. Boundary 12 inches (FOR EXPOSED ENERGIZED CONDUCTORS OR CIRCUIT PARTS)
Equipment: MCC #1 Building, SWGR #1 Protective Device: LOAD SIDE of FB-1 Report #: TWBESC-XXX-YYY-AHA-ZZZ Rev 1.0	Analysis By: TWBESC Date: 2021-01-30 Standard #: IEEE 1584-2018

NFPA 70E-24 Table 130.4(E)(a) Shock Protection Approach Boundaries to Exposed Energized Electrical Conductors or Circuit Parts for AC Systems

Nominal System Voltage Range - Phase to Phase	Limited Approach Boundary - Exposed Fixed Circuit Part	Restricted Approach Boundary (includes inadvertent movement adder)
≤ 30V	Not Specified	Not Specified
50V to 150V	1.0 m (3 ft. 6 in.)	Avoid Contact
151V to 750V	1.0 m (3 ft. 6 in.)	0.31 m (1 ft. 0 in.)
751V to 5kV	1.0 m (3 ft. 6 in.)	0.63 m (2 ft. 1 in.)
5.1kV to 15kV	1.5 m (5 ft. 0 in.)	0.65 m (2 ft. 2 in.)
15.1 kV to 36kV	1.8 m (6 ft. 0 in.)	0.77 m (2 ft. 7 in.)

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