



BUILDINGS
2023-008
BULLETIN
TECHNICAL

ISSUANCE DATE
August 15, 2023

ISSUER: Joseph Ackroyd, P.E., CFM
Assistant Commissioner
Technical Affairs & Code Development

PURPOSE: To clarify the use of guards and personal fall arrest systems to facilitate solar panel maintenance.

SUBJECT(S): Solar Photovoltaic, PV Panels, Guards, Guard Railings, Fall Arrest Systems, Solar Panel maintenance.

RELATED CODE SECTIONS & RESOURCES

BC 1015.2, BC 1015.6, BC 1604.8, BC Chapter 17, MC 304.11, OSHA 1910

I. BACKGROUND

Section 1015.6 of the New York City Building Code (BC) and section 304.11 of the New York City Mechanical Code (MC) require guard railings ('guards') to be provided where components of a mechanical system, mechanical equipment and mechanical devices requiring service are located within 10 feet of a roof edge or open side of a walking surface, and where such edge or open side is located more than 30 inches (762 mm) above the floor, roof or grade below.

This Bulletin clarifies when personal fall arrest systems can be used in lieu of guards for the sole purpose of solar panel maintenance. The intent of this Bulletin is not to waive the installation of guards required for other types of equipment or if required by other sections of the NYC Construction Codes or NYC Fire Code.

II. CLARIFICATION: GUARDS & FALL ARREST SYSTEMS

Solar photovoltaic (PV) panels are made up of many cells which convert sunlight into electrical direct current, or DC. Where PV panels, installed on building rooftops, require maintenance per manufacturer instructions, BC 1015.6 and MC 304.11 require that guards be installed to protect personnel during the maintenance of such systems.

A. Fall Arrest Systems

The United States Department of Labor Occupational and Safety Health Administration (OSHA) laws and regulations authorizes the use of fall arrest systems for maintenance work in OSHA 1910 Subpart D. Based on this, fall arrest systems may be used in lieu of guards during the servicing of solar panels by trained maintenance workers, provided:

1. The use of the proposed fall arrest system is authorized by the relevant OSHA standard, including but not limited to OSHA 1910.28.
2. The fall arrest system is installed and utilized in accordance with the relevant OSHA standard, including but not limited to OSHA 1910.29.
3. Maintenance work is limited to the servicing of solar panels by trained maintenance workers. Work cannot be for any other mechanical equipment or devices.

B. Anchorage

Where personal fall arrest systems are proposed for installation, the associated anchorage components of such systems must comply with the structural requirements in BC Section 1604.8. Anchorage locations shall be determined by a registered design professional and such anchorage locations must not interfere with FDNY operations, including but not limited to required roof access.

C. Training

Personnel required to service PV panels must be trained in site specific fall protection and in how to correctly and safely use the personal fall arrest systems.

III. FILING REQUIREMENTS

Applicants seeking to install anchorage as part of the personal fall arrest systems in lieu of guards must submit drawings clearly indicating that such personal fall arrest system is being used to satisfy BC 1015.6 requirements. At a minimum, a note shall be added to the submitted drawings to state:

“Anchorage is being installed as indicated on the rooftop drawing and is for the purpose of installing fall arrest systems to fulfil BC 1015.6 guard provisions. Such anchorage system is only part of the on-site fall protection program, which will meet all requirements in OSHA 1910 Subpart D and subsections thereof.”

IV. SPECIAL INSPECTIONS

Applicant shall clearly identify all applicable special inspections on the drawings depending on the type of anchorage (welding, bolting, post-installed anchors, etc.) being proposed.