



E-Micromobility Battery Charging Cabinet Equipment and Installation Approval Guide

Date Issued: 4/10/2025

Equipment Review for Battery Charging Cabinets

FDNY Reviewing Unit: Technology Management (TM)

Anticipated Timeline: 10-12 weeks

COA Application Fee: \$625

Applicable Safety Standard: Underwriters Laboratory 1487 (UL 1487): Battery Containment Enclosures

Fire Code

The Fire Code Section **309.3** requires that “Battery packs and other removable storage batteries shall not be stacked or charged in an enclosed cabinet (unless the cabinet is specially designed and approved by the department for such purpose).”

Product Testing

The testing laboratory conducting the test must be a nationally recognized testing laboratory (NRTL), in accordance with UL Standard 1487, Battery Containment Enclosures.

- A list of NRTLs is maintained by the U.S. Department of Labor’s Occupational Safety and Health Administration (OSHA) and can be found on the **[OSHA website](#)**.
- **Fire Testing:** Prior to seeking FDNY approval, the manufacturer (“applicant”) must arrange to have the charging cabinet tested by a testing laboratory to demonstrate that a battery fire induced in a compartment during the test does not propagate to adjacent batteries in other compartments.
- **Weatherization Testing:** The report shall clearly indicate whether the product is designed for indoor or outdoor use, or both.

FDNY Application for Certificate of Approval (COA)

The applicant must complete and file online a **[TM-2 application](#)** for document review via the **[FDNY Business Portal](#)**. The application type for this application is the **Certificate of Approval**. The applicant must include any/all pertinent information, including:

- Whether the cabinet is intended and recommended for installation and use indoors, outdoors, or both. UL Standard 1487 test report shall indicate such information.
- Test report: Video footage of the testing process (send link or upload).
- Hazard Mitigation Analysis (HMA), prepared by a registered design professional.
- User manual and spec sheet of the product (photographs).

The applicant may request a meeting to discuss the product with the Technology Management team (within the Bureau of Fire Prevention) before such product is



submitted for testing and/or an application is filed with FDNY. Please direct requests to FDNY.BusinessSupport@fdny.nyc.gov.

Possible Outcomes of COA Application

The applicant may expect any of the following possible outcomes:

- 1) Letter of Deficiency (LOD) to be provided if:
 - Tech Management has any follow up questions
 - Tech Management requires additional information or documentation
 - Tech Management requests/requires that the HMA be revised
 - Tech Management denies the application
 - The applicant must address the LOD if the application is continued
 - **NOTE:** If a LOD is unresolved or documents are not provided within six months, the application will be deemed to have been abandoned. The applicant will be required to file a new application, resubmit all documents, and pay all required fees.
- 2) Certificate of Approval (COA) to be provided if:
 - Tech Management has no objection to the use of the equipment for the purposes described in the application, subject to various conditions, restrictions, or limitations specified in the COA (for example, conditions may be imposed regarding installation, operation, and maintenance of the equipment, energy capacity, clearances, signage, ventilation, minimum room size, etc.).



Requirements for Indoor Installation of Battery Charging Cabinets

Additional Agencies Involved: DOB

FDNY Inspection Unit: Special Inspections Unit (SIU)

Inspection Fee: \$210/Hr

Applicable Safety Standard: Underwriters Laboratory 1487 (UL 1487): Battery Containment Enclosures

Fire Code

Where a charging cabinet is approved for an indoor location, Fire Code Section **309.3.3** requires that it be installed in a suitable indoor room or area that:

- Has an adequate electrical supply and a sufficient number of electrical receptacles to allow the charging equipment for each powered mobility device to be directly connected to a receptacle
- Is separated by a fire barrier with a minimum one-hour fire resistance rating from areas where repairs or servicing is conducted
- Is provided with a portable fire extinguisher
- Provides additional protection where six or more devices are charged:
 - Must be a dedicated room or area kept secure from unauthorized entry
 - Must be separated by a fire barrier enclosing the entire space with a minimum one-hour fire resistance rating
 - Must be protected by a fire sprinkler system
 - Must be protected by one or more smoke detectors or smoke alarms.
 - In buildings equipped with a fire alarm system, the smoke detector shall be connected to such fire alarm system.

NOTE: Additional requirements are set forth in FC **309.3.3**.

Fire Code Section **309.3.3** prohibits:

- The use of extension cords and power strips
- Storage of combustible materials in the same space

Indoor Installation Approval

- The COA that Technology Management provides to each manufacturer is product-specific with stipulations that are required to be followed for the installation of these products.
- The end user and installer must consult the manufacturer's installation manual prior to installation of the equipment to ensure compliance.
- All indoor installation(s) must be reviewed and approved by the DOB, including all electrical work. See DOB's **Information for Property Owners** and the Electrical Permit Application section below.
- All indoor installations are subject to subsequent FDNY inspection.



Electrical Permit Application

Per NYC Electrical Code Administrative Provisions 27-3018.b, a permit is required for Electrical Work as defined by Section 27-3004. All electrical permits, filed under the ED16A application, must be submitted by licensed electrical contractors in **DOB NOW: Build**. Permits for electrical installations should include the following:

- The Electrical Contractor will supply description of the installation based on Electrical Code provisions (per above partial list of Electrical Code Articles)
- Upload FDNY LNO or COA for the cabinet
- Upload FDNY LNO for site survey inspection
- Upload the Revocable Consent from DOT, if applicable

NOTE: An electrical permit will trigger an inspection performed by the Electrical Unit.

NYC Electrical Code

Installation of electrical wiring and connection shall be by a licensed master electrician and must comply with the New York City Electrical Code.

Applicable Electrical Code provisions may include but not limited to:

- Art 110, Requirements for Electrical Installations
- Art 210, Branch circuits
- Art 215, Feeders
- Art 220, Branch-Circuit, feeders, and service calculations
- Art 225, Outside branch circuit and feeders
- Art 230, Service
- Art 240, Over current protection
- Art 250, Bonding and grounding
- Art 300, Wiring Methods
- Art 310, Conductors and general wiring
- Art 314, Outlet, Device, Pull, and Junction Boxes; Conduit Bodies; Fittings, and handhole Enclosure
- Art 342 Intermediate Metal Conduit Type IMC
- Art 344 Rigid Metal Conduit Type RMC
- Art 352 Rigid Polyvinyl Chloride Conduit Type PVC



Requirements for Outdoor Installation of Battery Charging Cabinets

Additional Agencies Involved: DOT, DOB

FDNY Reviewing Unit: District Office

FDNY Inspection Unit: District Office, Special Inspections Unit (SIU)

Application (Document/Inspection) Fee: \$420

Applicable Safety Standard: Underwriters Laboratory 1487 (UL 1487): Battery Containment Enclosures

Property Types

- Installation on Public Property: For battery charging cabinet installation on public property, see [**NYC DOT's Revocable Consent program and guide.**](#)
- Installation on Private Property: See the process below.

Installation Approval: Site Plan Submission & Site Survey Inspection

To obtain approval for installation, the FDNY requires a Site Survey Inspection prior to charging cabinet installation. To schedule a site survey inspection, the applicant must complete a [**Battery Charging Cabinet Site Survey Inspection**](#) via the [**FDNY Business Portal**](#). The application requires that the applicant submit the following:

1. The LNO or COA for the Battery Charging Cabinet
2. A detailed site plan, prepared and stamped by a NYS Registered Design Professional (Registered Architect or Professional Engineer)

Upon receipt and review of these documents, the District Office will schedule a Site Survey Inspection with the Applicant.

The site plan must depict a radius of 15 feet around the charging cabinet, and depict all adjacent structures and/or features as well as comply with the following clearances:

Safety and Egress

- 5 feet from a building and/or building opening
- 10 feet from any means of egress including exit or exit discharge (between the termination of the exit and a public way)
- 10 feet from a subway grate or entrance
- Not placed under awnings or overhead projections (such as balconies or decks)
- Does not block or hinder the use of basement doors, cellar doors and openings
- Does not block or hinder the use of any fire escape or drop ladder
- Does not block/placed where rooftop access areas are marked or designed for such use
- Fire Department Connections: Does not block access nor impede visibility from the street and provides a working space of 3 feet in width and depth as well as 78 inches above

Street and Infrastructure Clearances

- 10 feet maintained around the radius of hydrants
- Prohibited installation below elevated structures



- 10 feet from FDNY driveways (curb cuts)
- Does not cover or obscure utility shut-offs or hardware
- Depicts vehicle impact protection when adjacent to roadways/sidewalks/parking lots

Flammable/Combustible Clearances

- 15 feet from the storage of flammable/combustible liquids
- 15 feet from any hazardous material storage vent
- 15 feet from any storage of compressed gas (flammable, non-flammable, oxidizing)
- 10 feet from any storage of combustibles/combustible waste

Signage and Emergency Shut-Off

- An emergency power shut-off for the battery charging cabinet shall be provided at distance of not less than 10 feet from the cabinet in a conspicuous location readily accessible to emergency personnel. Such installation shall be in accordance with the NYC Electrical Code and labelled as such.

Possible Outcomes of Site Survey Inspection

The applicant may expect any of the following possible outcomes:

1. Letter of No Objection (LNO) for site installation: The Site Plan conforms to conditions in the field. FDNY has no objection to proceeding with the installation. The applicant may proceed with subsequent installation processes.
2. Letter of Deficiency (LOD) for site installation: The Site Plan does not conform to conditions in the field or field conditions do not satisfy installation requirements. FDNY objects to proceeding with the installation.

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- Art 210, Branch circuits



- Art 215, Feeders
- Art 220, Branch-Circuit, feeders, and service calculations
- Art 225, Outside branch circuit and feeders
- Art 230, Service
- Art 240, Over current protection
- Art 250, Bonding and grounding
- Art 300, Wiring Methods
- Art 310, Conductors and general wiring
- Art 314, Outlet, Device, Pull, and Junction Boxes; Conduit Bodies; Fittings, and handhole Enclosure
- Art 342 Intermediate Metal Conduit Type IMC
- Art 344 Rigid Metal Conduit Type RMC
- Art 352 Rigid Polyvinyl Chloride Conduit Type PVC

NYC Construction Code

Any encroachment into the public right-of-way that exceeds the limitation provided for in Chapter 32 of the New York City Building Code shall require the approval of the New York City Department of Transportation per BC 3201.9.



Guidance for Manufacturers Who Received a FDNY LNO for their Battery Charging Cabinet Prior to March 2025

This section only applies to the few manufacturers that have been issued a LNO for their battery charging cabinets from the FDNY prior to March 1st, 2025.

To Maintain an Existing Outdoor Installation or Proceed with a New Outdoor Installation

- Installation must meet every requirement of the LNO and FC 309.3
- Cabinet manufacturer must provide documentation verifying that the cabinet has a NEMA 3R rating or higher, ensuring that it's appropriately weatherized and safe for outdoor installation. This testing documentation must be completed by a nationally recognized testing laboratory (NRTL) or an Accepted Testing Laboratory and submitted to Technology Management.
- Property owner or manager must submit a request for a FDNY battery cabinet site survey inspection via the FDNY Business Portal by June 1, 2025.
 - The FDNY may take into account any extraordinary conditions upon inspection.
- Installation must be done by a NYS Licensed Master Electrician in accordance with the NYC Electrical Code.
- Property owner or manager must notify the FDNY Special Inspections Unit (SIU) following DOB installation and sign off.
- Outdoor installations may be subject to SIU inspection following installation. Property owner or manager must provide appropriate DOB documentation for battery cabinet installation during SIU inspection.

Impermissible Outdoor Installations that Require Cabinet Removal

- Cabinets with a current LNO that do not and cannot meet the specific requirements for installation of the LNO must be removed.
- Manufacturers that cannot provide documentation for outdoor use for a cabinet issued a LNO must be removed.

To Maintain an Existing Indoor Installation or Proceed with a New Indoor Installation

- Installation must meet every requirement of the LNO and FC 309.3.
- Property owner or manager must submit a request for a DOB Work Permit by June 1, 2025.
- Installation must be done by a NYS Licensed Master Electrician in accordance with the NYC Electrical Code.
- Property owner or manager must notify the FDNY Special Inspections Unit (SIU) following DOB installation and sign off.
- Indoor installations are subject to SIU inspection following installation. Property owner or manager must provide appropriate DOB documentation for battery cabinet installation during SIU inspection.



- **NOTE:** For the installation of more than one cabinet, an assessment of hazard must be completed by a NYS licensed engineering professional with explosion expertise.

More Information:

See the following resources for additional information on lithium-ion battery safety.

- [Lithium-Ion Battery Safety Information](#)
- [Be #FDNYSmart: Safety Tips for Lithium-Ion Batteries](#)