



## ICC-ES Evaluation Report ESR-4167

Reissued December 2021

This report is subject to renewal December 2023.

**DIVISION: 13 00 00—SPECIAL CONSTRUCTION**  
**Section: 13 48 53—Manufactured Seismic Control Components**

### REPORT HOLDER:

**SAFE-T-PROOF DISASTER PREPAREDNESS CO., INC.**

### EVALUATION SUBJECT:

**SAFE-T-PROOF LABORATORY EQUIPMENT ANCHORAGE KIT STP-MP-203-09**

### 1.0 EVALUATION SCOPE

#### Compliance with the following codes:

2018 and 2015 *International Building Code*® (IBC)

For evaluation of compliance with codes adopted by the California Office of Statewide Health Planning and Development (OSHPD) and Division of State Architect (DSA), see the [ESR-4167 CBC Supplement](#).

For evaluation of compliance with codes adopted by Los Angeles Department of Building and Safety (LADBS), see the [ESR-4167 LABC Supplement](#).

#### Properties evaluated:

- Structural
- Durability

### 2.0 USES

The Safe-T-Proof Laboratory Equipment Anchorage Kit STP-MP-203-09 is used to restrain laboratory equipment from seismic forces by attachment to walls.

### 3.0 DESCRIPTION

#### 3.1 General:

The Safe-T-Proof Laboratory Equipment Anchorage Kit STP-MP-203-09 depicted in Figure 1 is an assembly consisting of steel brackets, acrylonitrile butadiene styrene (ABS) plastic fasteners (bases and sliding strap locks), nylon securing straps, adhesive pads and steel connector hardware used to resist seismic forces by attachment to wall studs inside of buildings. The STP-MP-203-09 is attached to the laboratory equipment to be seismically restrained and is also attached to the supporting wall structure. Four STP-

MP-203-09 assemblies are included in each kit for attaching to the sides of the laboratory equipment as depicted in Figure 2.

#### 3.2 Materials:

Each kit contains the following.

**3.2.1 Steel L-Bracket:** Four 7-inch (178 mm) long powder-coated <sup>3</sup>/<sub>16</sub>-inch (5 mm) thick Type 304 stainless steel or ASTM A36 zinc coated steel L-brackets with <sup>1</sup>/<sub>2</sub>-inch (12.7 mm) mounting holes in the short leg and a row of four holes side-by-side on the long leg with a 2-inch (51 mm) slot at the top of the leg of the L-bracket.

**3.2.2 Steel Back-Tip Bracket:** Four Type 304 stainless steel brackets with dimensions 2<sup>11</sup>/<sub>16</sub>-inch (68 mm) wide by 2-inch (51 mm) deep by 1<sup>1</sup>/<sub>16</sub>-inch (27 mm) tall with a 2-inch (51 mm) slot in the short leg of the bracket and <sup>1</sup>/<sub>2</sub>-inch (12.7 mm) mounting hole in the long leg of the bracket.

**3.2.3 Plastic Fastener (Bases and Sliding Strap Lock):** Four sets of <sup>5</sup>/<sub>16</sub>-inch thick (8 mm) fastening ABS thermoplastic bases and sliding strap locks conforming with Safe-T-Proof specifications as noted in the approved quality control documentation. The ABS plastic base and strap lock allow for removal of the nylon securing strap and repositioning or replacement of the laboratory equipment being seismically restrained.

**3.2.4 Nylon Securing Straps:** Four flat thermoplastic polyurethane nylon securing straps with round holes in a two-hole pattern conforming with Safe-T-Proof specifications as noted in the approved quality control documentation. Straps are 2 inches (51 mm) wide-by-18 inches (457 mm) long.

**3.2.5 Adhesive Pads:** Four double-sided acrylic foam adhesive tape pads used to adhere the ABS plastic bases to the laboratory equipment side surfaces. 5-inch (127 mm)-by-6-inch (152 mm)-by-0.062-inch (1.6 mm) thick in dimension conforming with Safe-T-Proof specifications as noted in the approved quality control documentation.

#### 3.2.6 Steel Connector Hardware:

**3.2.6.1 Phillips Pan Head (PPH) Machine Screws –** (16 each) No. 10-32-by-<sup>1</sup>/<sub>2</sub>-inch (13 mm) PPH machine screws complying with ASME B18.6.3 Type 1, 18-8 stainless steel, ASME B1.1 UNC and UNF Class 2 A thread with ASTM A380 finish.

**3.2.6.2** Fender Washers – (32 each) 0.688-inch (17 mm) diameter fender washers complying with Type 18-8 stainless steel with ASTM A380 finish.

**3.2.6.3** Insert Lock Nuts – (16 each) complying with ASME B18.16.6, 18-8 stainless steel with Rockwell Hardness of B95 to C35, Nylon 6/6 complying with current RoHS European Union Directive, ASME B1.1, UNC and UNF Class 2B thread with ASTM A380 finish.

#### 4.0 DESIGN AND INSTALLATION

##### 4.1 Design:

Design of the STP-MP-203-09 assembly must conform with the IBC, ASCE/SEI 7 Chapter 13 and this report. Seismic loading of the laboratory equipment to be restrained must be determined in accordance with ASCE/SEI 7 Equation 13.3-1. The allowable strength of the STP-MP-203-09 assembly must be the least of the following: (1) the design strength determined in accordance with this report taking into account the allowable seismic loads of the STP-MP-203-09 assemblies provided in Table 1 in load directions perpendicular and parallel to the supporting wall structure, or (2) the design strength of its end attachment and the design strength of the supporting structure, which are project specific and must be designed by the registered design professional.

##### 4.2 Installation:

Installation of the STP-MP-203-09 assemblies must follow Safe-T-Proof instructions. The dead load of nonstructural components must be supported independently of the STP-MP-203-09 assemblies. Laboratory equipment surfaces must be cleaned with isopropyl alcohol and allowed to dry before application the adhesive pads.

##### 4.3 Inspection:

Periodic special inspections as noted in Section 1704 and 1705 of the IBC for field fabrication must be conducted, including cleaning of the laboratory equipment surface prior to application of the adhesive pads and field cutting of nylon webbing in accordance with the Safe-T-Proof STP-MP-203-09 installation instructions.

#### 5.0 CONDITIONS OF USE

The Safe-T-Proof Laboratory Equipment Anchorage Kit STP-MP-203-09 described in this report complies with, or is a suitable alternative to what is specified in, those codes listed in Section 1.0 of this report, subject to the following conditions:

- 5.1** The STP-MP-203-09 assemblies are limited to resisting seismic forces of nonstructural components only. The registered design professional must consider other load requirements as set forth in the applicable codes.
- 5.2** The STP-MP-203-09 assemblies must be used in interior conditions only and must not be exposed to sunlight or UV radiation such as next to exterior windows.

**5.3** The following items are beyond the scope of this report:

- 5.3.1** Cold-formed steel strut channels, wall studs and screw fasteners for connection of the STP-MP-203-09 assemblies to the supporting wall structure.
- 5.3.2** Effects of reduced or elevated temperatures and fatigue performance of the STP-MP-203-09 assemblies; use with vibrating equipment; resistance to impact, shock or vertical earthquake induced forces; use in outdoor applications, corrosive environments and corrosion protection.
- 5.4** General Seismic Design Criteria: The seismic design must comply with Sections 13.1 and 13.2 of ASCE/SEI 7, with the exception of Section 13.2.2, which is not within the scope of this report.
- 5.5** Seismic Design Force: The structural design must comply with Section 13.3.1 of ASCE/SEI 7 for seismic design force requirements, including both horizontal and vertical (upward and downward) seismic force components. Vertical seismic force is outside the scope of this report and must be designed by the registered design professional.
- 5.6** Seismic Relative Displacement: The structural design must comply with Section 13.3.2 of ASCE/SEI 7 for seismic relative displacement.
- 5.7** Requirements for Attachments: The attachments defined in Section 5.3.1 must comply with Section 13.4 of ASCE/SEI 7. Consideration must be given to prying effects resulting from assembly geometry.
- 5.8** Requirements for Nonstructural Components: The architectural components must comply with Section 13.5 of ASCE/SEI 7. The mechanical and electrical components must comply with Section 13.6 of ASCE/SEI 7.

#### 6.0 EVIDENCE SUBMITTED

- 6.1** Quality control manual.
- 6.2** Report of static and cyclic / simulated seismic load tests.
- 6.3** Report of durability tests.

#### 7.0 IDENTIFICATION

- 7.1** The STP-MP-203-09 ABS plastic base is labeled with the report holder's name Safe-T-Proof. The Safe-T-Proof Laboratory Equipment Anchorage Kit STP-MP-203-09 packaging is labeled with the product nomenclature and ESR-4167.

- 7.2** The report holder's contact information is the following:

**SAFE-T-PROOF DISASTER PREPAREDNESS CO.,  
INC.**  
1207 WEST ISABEL STREET  
BURBANK, CALIFORNIA 91506  
(800) 377-8888  
[www.safe-t-proof.com](http://www.safe-t-proof.com)

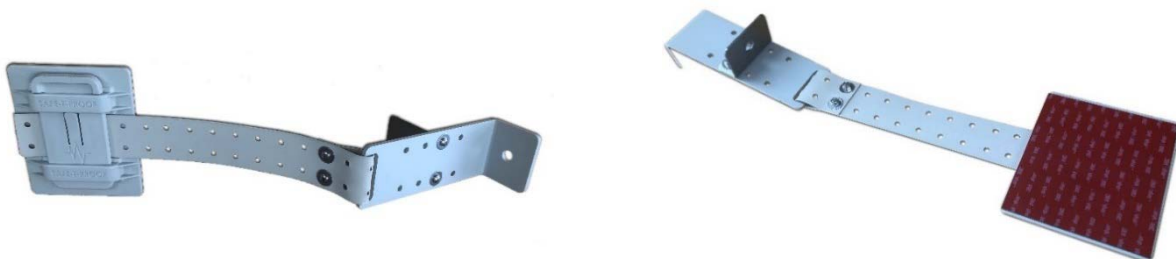


FIGURE 1—SAFE-T-PROOF LABORATORY EQUIPMENT ANCHORAGE KIT STP-MP-203-09

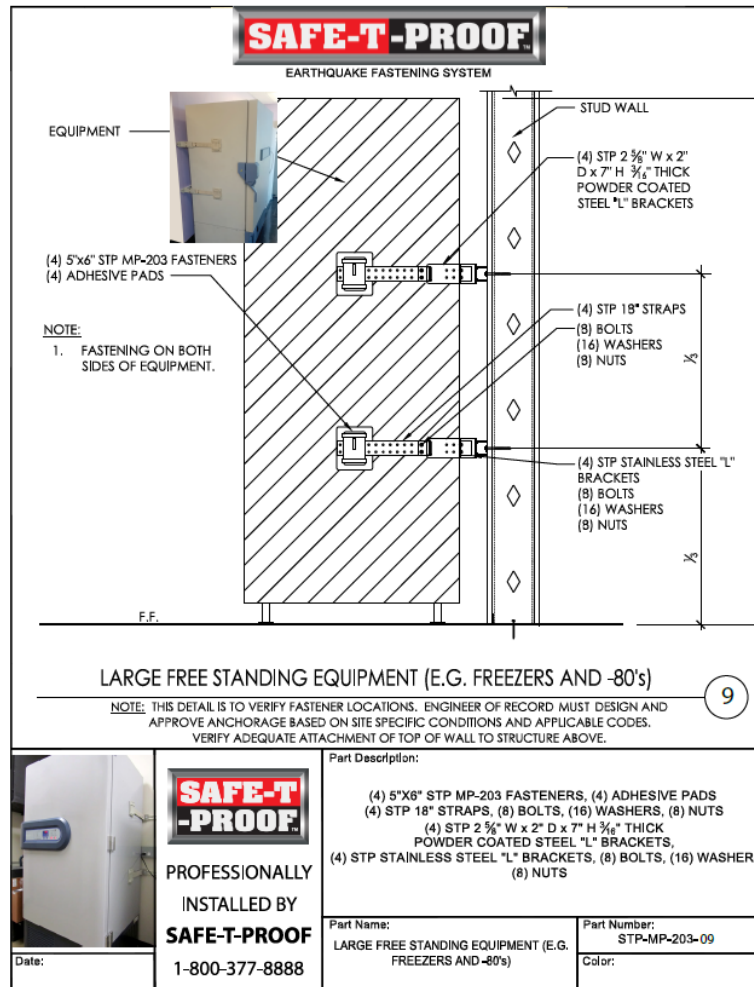


FIGURE 2—EXAMPLE STP-MP-203-09 INSTALLATION DETAIL

TABLE 1—ALLOWABLE SEISMIC LOADS (ASD) FOR SAFE-T-PROOF LABORATORY EQUIPMENT ANCHORAGE KIT STP-MP-203-09

Laboratory Equipment Surface	Allowable Seismic Load (lbf) <sup>1, 3</sup>	Displacement at Allowable Load (in.)	Stiffness (lbf/in.) <sup>2</sup>
Stainless steel	162	0.151	1073
Powder-coated steel	173	0.172	1004

For **SI**: 1 inch = 25.4 mm; 1 lbf = 4.4 N.

1. Allowable seismic loads are based on a safety factor of 5.
2. Stiffness determined at 40% of the ultimate test load.
3. Allowable seismic capacity of four STP-MP-203-09 assemblies must be determined by multiplying the tabulated allowable seismic load by four.

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**EVALUATION SUBJECT:**

**SAFE-T-PROOF LABORATORY EQUIPMENT ANCHORAGE KIT STP-MP-203-09**

**1.0 REPORT PURPOSE AND SCOPE****Purpose:**

The purpose of this evaluation report supplement is to indicate that Safe-T-Proof Laboratory Equipment Anchorage Kit STP-MP-203-09, described in ICC-ES evaluation report [ESR-4167](#), has also been evaluated for compliance with the code noted below as adopted by the Los Angeles Department of Building and Safety (LADBS).

**Applicable code edition:**

2020 *City of Los Angeles Building Code* (LABC)

**2.0 CONCLUSIONS**

The Safe-T-Proof Laboratory Equipment Anchorage Kit STP-MP-203-09, described in Sections 2.0 through 7.0 of the evaluation report [ESR-4167](#), complies with LABC Chapters 16 and 17, and is subject to the conditions of use described in this supplement.

**3.0 CONDITIONS OF USE**

The Safe-T-Proof Laboratory Equipment Anchorage Kit STP-MP-203-09 described in this evaluation report supplement must comply with all of the following conditions:

- All applicable sections in the evaluation report [ESR-4167](#) must be adhered to.
- The design, installation, conditions of use and identification of the Safe-T-Proof Laboratory Equipment Anchorage Kit STP-MP-203-09 is in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report [ESR-4167](#).
- The design, installation and inspection are in accordance with additional requirements of LABC Chapters 16 and 17, as applicable.

This supplement expires concurrently with the evaluation report, reissued December 2021.

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**SAFE-T-PROOF LABORATORY EQUIPMENT ANCHORAGE KIT STP-MP-203-09**

**1.0 REPORT PURPOSE AND SCOPE****Purpose:**

The purpose of this evaluation report supplement is to indicate that the Safe-T-Proof Laboratory Equipment Anchorage Kit STP-MP-203-09, described in ICC-ES evaluation report ESR-4167, has also been evaluated for compliance with the code noted below.

**Applicable code edition:**

2019 *California Building Code* (CBC)

For evaluation of applicable chapters adopted by the California Office of Statewide Health Planning and Development (OSHPD) and Division of the State Architect (DSA), see Sections 2.1 and 2.2 below.

**2.0 CONCLUSIONS**

The Safe-T-Proof Laboratory Equipment Anchorage Kit STP-MP-203-09, described in Sections 2.0 through 7.0 of the evaluation report ESR-4167, complies with CBC Chapter 16 and 17, provided the design and installation are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report, and the additional requirements of the CBC Sections 16 and 17, as applicable.

**2.1 OSHPD:**

The Safe-T-Proof Laboratory Equipment Anchorage Kit STP-MP-203-09, described in Sections 2.0 through 7.0 of the evaluation report ESR-4167, comply with CBC Chapters 16 and 17 and its amendments, and Chapters 16A and 17A, provided the design and installation are in accordance with the 2018 *International Building Code*® (IBC) provisions noted in the evaluation report, and the additional requirements in Sections 2.1.1 and 2.1.2 of this supplement:

**2.1.1 Conditions of Use:**

1. All loads applied shall be determined by a registered design professional and shall comply with applicable loads from CBC Chapter 16 and its amendments, and Chapter 16A. In addition, Section 13.1.4 of ASCE/SEI 7-16 shall be revised in accordance with CBC Section 1617A.1.18 [OSHPD 1 & 4].
2. Special Certification for Designated Seismic Systems as required by Section 13.2.2 of ASCE/SEI 7-16 is not within the scope of this supplement.

**2.1.2 Special Inspection Requirements:** Periodic special inspection is required, in accordance with Section 1705.1.1, or Section 1705A.1.1 of the CBC, as applicable. In addition, special inspection is required for special seismic certification for designated seismic systems in accordance with amended Sections 1705.12.4, 1705.13.3.1 [OSHPD 1R, 2, and 5] and Sections 1705A.12.4, 1705A.13.3.1 [OSHPD 1 & 4] of the CBC, as applicable. Statement of special inspections shall follow the additional requirements of Section 1704.3.2 [OSHPD 1R, 2 & 5] or Section 1704A.3.2 [OSHPD 1&4] of the CBC.

## 2.2 DSA:

The Safe-T-Proof Laboratory Equipment Anchorage Kit STP-MP-203-09, described in Sections 2.0 through 7.0 of the evaluation report ESR-4167, complies with CBC amended Sections in Chapter 16, and Chapters 16A and 17A, provided the design and installation are in accordance with the 2018 *International Building Code*<sup>®</sup> (IBC) provisions noted in the evaluation report, and the additional requirements in Sections 2.2.1 and 2.2.2 of this supplement:

### 2.2.1 Conditions of Use:

1. All loads applied shall be determined by the registered design professional and shall comply with applicable loads from CBC amended sections in Chapter 16 and Chapter 16A. In addition, Section 13.1.4 of ASCE/SEI 7-16 shall be revised in accordance with CBC Section 1617.11.15 [DSA-SS/CC] and Section 1617A.1.18 [DSA-SS], as applicable
2. Special Certification for Designated Seismic Systems as required by Section 13.2.2 of ASCE/SEI 7-16 is not within the scope of this supplement.

**2.2.2 Special Inspection Requirements:** Periodic special inspection is required, in accordance with Section 1705A.1.1 of the CBC. In addition, special inspection is required for special seismic certification for designated seismic system in accordance Section 1705A.12.4 [DSA-SS & DSA-SS/CC] of the CBC, as applicable. Statement of special inspections shall follow the additional requirements of Section 1704A.3.2 of the CBC [DSA-SS & DSA-SS/CC].

This supplement expires concurrently with the evaluation report, reissued December 2021.