



Designation: ~~C1780—20~~ **C1780 – 23**

## Standard Practice for Installation Methods for Cement-based Adhered Masonry Veneer<sup>1</sup>

This standard is issued under the fixed designation C1780; the number immediately following the designation indicates the year of original adoption or, in the case of revision, the year of last revision. A number in parentheses indicates the year of last reapproval. A superscript epsilon ( $\epsilon$ ) indicates an editorial change since the last revision or reapproval.

### 1. Scope\*

1.1 This practice is intended to provide accepted procedures to designers and installers of cement-based adhered masonry veneer in residential and commercial construction. This information is meant to complement the specific installation instructions provided by manufacturers of cement-based adhered masonry veneers and recognized building codes, but is not meant to replace them. This practice does not address installation methods or techniques for all materials in the building envelope. This practice covers the installation of cement-based adhered masonry veneer units for application as adhered veneer to exterior and interior walls, columns, landscape structures and other structures suitable to receive adhered veneer. The units included in this practice are manufactured to meet the requirements of Specification ~~C1670/C1670M~~ or ~~C1877~~. This practice is limited to the installation of units. This practice does not cover all flashing or moisture management requirements. Refer to the applicable building code and project documents for additional flashing and moisture management requirements.

NOTE 1—The National Concrete Masonry Association (NCMA) publication *Installation Guide and Detailing Options for Compliance with ASTM C1780 for Adhered Manufactured Stone Veneer* provides generally accepted methods and details for installation and flashing for manufactured stone veneer.

NOTE 2—This standard was developed for the installation of cement-based adhered veneer units manufactured from wet-cast concrete or dry-cast concrete. Refer to Guide ~~C1242~~ for installation of adhered natural stone veneer.

1.2 The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

1.3 All workmanship and materials related to the installation of cement-based adhered masonry veneer units shall meet the requirements of the contract documents and building code having jurisdiction over the project.

1.4 The text of this standard references notes and footnotes that provide explanatory material. These notes and footnotes (excluding those in tables and figures) shall not be considered as requirements of the standard.

1.5 *This standard does not purport to address all of the safety concerns, if any, associated with its use. It is the responsibility of the user of this standard to establish appropriate safety, health, and environmental practices and determine the applicability of regulatory limitations prior to use. (Warning—Fresh hydraulic cementitious mixtures are caustic and may cause chemical burns to skin and tissue upon prolonged exposure.<sup>2</sup>)*

1.6 *This international standard was developed in accordance with internationally recognized principles on standardization established in the Decision on Principles for the Development of International Standards, Guides and Recommendations issued by the World Trade Organization Technical Barriers to Trade (TBT) Committee.*

<sup>1</sup> This practice is under the jurisdiction of ASTM Committee ~~C15~~ on Manufactured Masonry Units and is the direct responsibility of Subcommittee ~~C15.05~~ on Masonry Assemblies.

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<sup>2</sup> Annual Book of ASTM Standards. Vol 04.01. See the section on Safety Precautions in the Manual of Cement Testing.

\*A Summary of Changes section appears at the end of this standard

## 2. Referenced Documents

### 2.1 *ASTM Standards:*<sup>3</sup>

[C90 Specification for Loadbearing Concrete Masonry Units](#)  
[C270 Specification for Mortar for Unit Masonry](#)  
[C482 Test Method for Bond Strength of Ceramic Tile to Portland Cement Paste](#)  
[C847 Specification for Metal Lath](#)  
[C926 Specification for Application of Portland Cement-Based Plaster](#)  
[C932 Specification for Surface-Applied Bonding Compounds for Exterior Plastering](#)  
[C933 Specification for Welded Wire Lath](#)  
[C979/C979M Specification for Pigments for Integrally Colored Concrete](#)  
[C1032 Specification for Woven Wire Plaster Base](#)  
[C1059/C1059M Specification for Latex Agents for Bonding Fresh To Hardened Concrete](#)  
[C1063 Specification for Installation of Lathing and Furring to Receive Interior and Exterior Portland Cement-Based Plaster](#)  
[C1180 Terminology of Mortar and Grout for Unit Masonry](#)  
[C1232 Terminology for Masonry](#)  
[C1242 Guide for Selection, Design, and Installation of Dimension Stone Attachment Systems](#)  
[C1325 Specification for Fiber-Mat Reinforced Cementitious Backer Units](#)  
[C1384 Specification for Admixtures for Masonry Mortars](#)  
[C1670/C1670M Specification for Adhered Manufactured Stone Masonry Veneer Units](#)  
[C1714/C1714M Specification for Preblended Dry Mortar Mix for Unit Masonry](#)  
[C1788 Specification for Non Metallic Plaster Bases \(Lath\) Used With Portland Cement Based Plaster in Vertical Wall Applications](#)  
[C1861 Specification for Lathing and Furring Accessories, and Fasteners, for Interior and Exterior Portland Cement-Based Plaster](#)  
[C1877 Specification for Adhered Concrete Masonry Units](#)  
[D226 Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing](#)  
[E2556/E2556M Specification for Vapor Permeable Flexible Sheet Water-Resistive Barriers Intended for Mechanical Attachment](#)

### 2.2 *Other Standards:*

[TMS 402 Building Code Requirements for Masonry Structures](#)<sup>4</sup>  
[TMS 602 Specification for Masonry Structures](#)<sup>4</sup>  
[ICC ES AC 376 Acceptance Criteria for Reinforced Cementitious Sheets Used as Wall and Ceiling Sheathing and Floor Underlayment](#)<sup>5</sup>

### 2.3 *ANSI Standards:*<sup>6</sup>

[ANSI A118.1-2013.1 American National Standard Specifications for Dry-Set Cement Mortar](#)  
[ANSI A118.4-2013.1 American National Standard Specifications for Modified Dry-Set Cement Mortar](#)  
[ANSI A118.15-2012.1 American National Standard Specifications for Improved Modified Dry-Set Cement Mortar](#)

### 2.4 *ICRI International Concrete Repair Institute:*<sup>7</sup>

[No. 310.2–1997 Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings and Polymer Overlays \(formerly No. 03732\). Concrete Surface Profile Chips](#)

### 2.5 *National Concrete Masonry Association:*<sup>8</sup>

[Installation Guide and Detailing Options for Compliance with ASTM C1780 for Adhered Manufactured Stone Veneer](#)

## 3. Terminology

### 3.1 *Definitions of Terms Specific to This Standard:*

**3.1.1 cement-based adhered masonry veneer, *n***—the assembly of thin cement-based masonry units adhered to a backing with a cementitious mortar.

#### 3.1.1.1 *Discussion*—

Thin cement-based masonry units include those covered under Specifications [C1670/C1670M](#) and [C1877](#).

<sup>3</sup> For referenced ASTM standards, visit the ASTM website, [www.astm.org](http://www.astm.org), or contact ASTM Customer Service at [service@astm.org](mailto:service@astm.org). For *Annual Book of ASTM Standards* volume information, refer to the standard's Document Summary page on the ASTM website.

<sup>4</sup> Available from The Masonry Society (TMS), 105 South Sunset Street, Suite Q, Longmont, CO 80501, <http://www.masonrysociety.org>.

<sup>5</sup> Available from ICC Evaluation Service, 3060 Saturn Street, Suite 100 Brea, California 92821, <http://www.iccsafe.org>.

<sup>6</sup> Available from American National Standards Institute (ANSI), 25 W. 43rd St., 4th Floor, New York, NY 10036, <http://www.ansi.org>.

<sup>7</sup> Available from International Concrete Repair Institute (ICRI), 38800 Country Club Drive Farmington Hills, MI 48331, <http://www.icri.org>.

<sup>8</sup> Available from National Concrete Masonry Association (NCMA), 13750 Sunrise Valley Drive Herndon, VA 20171, <http://www.ncma.org>.