ANSI/ASHRAE/ICC/USGBC/IES Addendum af to
ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1-2020

Standard for the Design of High-Performance Green Buildings

Except Low-Rise Residential Buildings

The Complete Technical Content of the International Green Construction Code®

Approved by the ASHRAE Standards Committee on April 24, 2023; by the International Code Council on April 21, 2023; by U.S. Green Building Council on May 17, 2023; by the Illuminating Engineering Society on May 29, 2023; and by the American National Standards Institute on May 31, 2023.

This addendum was approved by a Standing Standard Project Committee (SSPC) for which the Standards Committee has established a documented program for regular publication of addenda or revisions, including procedures for timely, documented, consensus action on requests for change to any part of the standard. Instructions for how to submit a change can be found on the ASHRAE® website (www.ashrae.org/continuous-maintenance).

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ASHRAE obtains consensus through participation of its national and international members, associated societies, and public review.

ASHRAE Standards are prepared by a Project Committee appointed specifically for the purpose of writing the Standard. The Project Committee Chair and Vice-Chair must be members of ASHRAE; while other committee members may or may not be ASHRAE members, all must be technically qualified in the subject area of the Standard. Every effort is made to balance the concerned interests on all Project Committees.

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(This foreword is not part of this standard. It is merely informative and does not contain requirements necessary for conformance to the standard. It has not been processed according to the ANSI requirements for a standard and may contain material that has not been subject to public review or a consensus process. Unresolved objectors on informative material are not offered the right to appeal at ASHRAE or ANSI.)

FOREWORD

Motor vehicle manufacturers have announced plans to dramatically shift production of new vehicles from internal combustion to fully electric over the next few years. Some have plans to be producing only EVs by 2030 or 2035. Based on this, the number of electric vehicles on the road and the need for EV charging stations, particularly in residential settings, can be expected to rapidly increase within the next 10 to 15 years.

Addendum af requires provision of minimal conduit and electrical distribution space today to allow conversion of parking spaces without the need for excavation as demand for charging equipment increases. It does not require any increase in the number of charging spaces or parking spaces with wiring installed (EV-ready spaces), only conduit to allow wire to be pulled as needed in the future. For parking garages, it does not require conduit to each parking space, only conduit through walls and other obstructions, such that wiring to future surface-mounted conduit can be provided easily.

Note that Sections 5.3.7.3.1 and 5.3.7.1.2 both include a sentence about rounding up to find the required number of spaces. This addendum deletes these sentences as they are not needed. Rounding down would mean that the number of spaces is less than the required percentage.

Note: In this addendum, changes to the current standard are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) unless the instructions specifically mention some other means of indicating the changes.

Addendum af to Standard 189.1-2020

Modify Section 3 as shown.

EV capable space: a designated parking space to which raceways extend from a building that has the electrical distribution equipment capacity necessary for the future conversion of the parking space to an *EV ready* space.

Modify Section 5.3.7.3 as shown. (Note: This addendum reflects changes previously made by approved Addendum q to Standard 189.1-2020, which can be downloaded online at www.ashrae.org/technical-resources/standards-and-guidelines/standards-addenda.)

5.3.7.3 Electric Vehicle Charging Facilities

~~**Exception to 5.3.7.3:** Parking spaces designated for other than passenger vehicles are permitted to be excluded from the total number of on-site parking spaces.~~

[. . .]

5.3.7.3.1 IBC Occupancy Group A, B, E, F, I, M, and S Buildings. Where ~~20~~ four or more on-site vehicle parking spaces are provided for International Building Code (IBC) Occupancy Group A, B, E, F, I, M, and S buildings, not less than 4% of the total number of parking spaces or not less than 8% of designated employee only parking spaces shall be *EV ready spaces or EVSE spaces*. ~~The required number of *EV ready spaces or EVSE spaces* shall be rounded up to the next highest whole number.~~ Not less than 30% of the total number of parking spaces shall be *EV capable spaces, EV ready spaces, or EVSE spaces.*

Exception to 5.3.7.3.1: Parking spaces designated for other than passenger vehicles shall be excluded from the total number of on-site parking spaces.

5.3.7.3.2 IBC Occupancy Group R-1, R-2, and R-4 Buildings. Where ~~10~~ four or more on-site vehicle parking spaces are provided for IBC Occupancy Group R-1, R-2, and R-4 buildings, not less than 20% of the total number of parking spaces shall be *EV ready spaces or EVSE spaces*. ~~The required number of *EV ready spaces or EVSE spaces* shall be rounded up to the next highest whole numb~~er. Not less than 75% of the total number of parking spaces shall be *EV capable spaces, EV ready spaces,* or *EVSE spaces.*

POLICY STATEMENT DEFINING ASHRAE'S CONCERN FOR THE ENVIRONMENTAL IMPACT OF ITS ACTIVITIES

ASHRAE is concerned with the impact of its members' activities on both the indoor and outdoor environment. ASHRAE's members will strive to minimize any possible deleterious effect on the indoor and outdoor environment of the systems and components in their responsibility while maximizing the beneficial effects these systems provide, consistent with accepted Standards and the practical state of the art.

ASHRAE's short-range goal is to ensure that the systems and components within its scope do not impact the indoor and outdoor environment to a greater extent than specified by the Standards and Guidelines as established by itself and other responsible bodies.

As an ongoing goal, ASHRAE will, through its Standards Committee and extensive Technical Committee structure, continue to generate up-to-date Standards and Guidelines where appropriate and adopt, recommend, and promote those new and revised Standards developed by other responsible organizations.

Through its *Handbook*, appropriate chapters will contain up-to-date Standards and design considerations as the material is systematically revised.

ASHRAE will take the lead with respect to dissemination of environmental information of its primary interest and will seek out and disseminate information from other responsible organizations that is pertinent, as guides to updating Standards and Guidelines.

The effects of the design and selection of equipment and systems will be considered within the scope of the system's intended use and expected misuse. The disposal of hazardous materials, if any, will also be considered.

ASHRAE's primary concern for environmental impact will be at the site where equipment within ASHRAE's scope operates. However, energy source selection and the possible environmental impact due to the energy source and energy transportation will be considered where possible. Recommendations concerning energy source selection should be made by its members.

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Standard 189.1 and the International Green Construction Code

Standard 189.1 serves as the complete technical content of the International Green Construction Code® (IgCC). The IgCC creates a regulatory framework for new and existing buildings, establishing minimum green requirements for buildings and complementing voluntary rating systems. For more information, visit www.iccsafe.org.

About ASHRAE

Founded in 1894, ASHRAE is a global professional society committed to serve humanity by advancing the arts and sciences of heating, ventilation, air conditioning, refrigeration, and their allied fields.

As an industry leader in research, standards writing, publishing, certification, and continuing education, ASHRAE and its members are dedicated to promoting a healthy and sustainable built environment for all, through strategic partnerships with organizations in the HVAC&R community and across related industries.

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