

ANSI/ASHRAE/ICC/USGBC/IES Addendum s to ANSI/ASHRAE/ICC/USGBC/IES Standard 189.1-2017

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 July 31, 2020; by the ASHRAE Board of Directors on August 10, 2020; by the International Code Council on July 24, 2020; by the U.S. Green Building Council and Illuminating Engineering Society on July 23, 2020; and by the American National Standards Institute on September 1, 2020.

These addenda were 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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- b. participation in the next review of the Standard,
- c. offering constructive criticism for improving the Standard, or
- d. permission to reprint portions of the Standard.

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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 objections on informative material are not offered the right to appeal at ASHRAE or ANSI.)

FOREWORD

Addendum s updates the outdoor light pollution requirements in Section 5. It removes the outdoor lighting requirements that are provided in ANSI/ASHRAE/IES Standard 90.1, because they are provided in Sections 7.4.6 of this standard. This further allows simplification of the section numbers.

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

Addendum s to Standard 189.1-2017

Modify Informative Table 4.2 (added previously by Addendum p and modified by Addenda q and r) as shown (I-P and SI).

Informative Table 4.2 Requirements Determined by the Jurisdiction

Section	Section Title or Description and Directives	Jurisdictional Requirement
<u>6.3.1.2.1(a)(3)</u>	<u>Irrigation System Design, Master Valve</u>	<input type="checkbox"/> No
<u>6.3.1.2.1(a)(4)</u>	<u>Irrigation System Design, Flow Sensors</u>	<input type="checkbox"/> No
<u>6.3.3</u>	<u>Special Water Features</u>	<input type="checkbox"/> No
<u>6.3.4.2</u>	<u>Consumption Data Collection</u>	<input type="checkbox"/> No
<u>6.3.4.3</u>	<u>Data Storage and Retrieval</u>	<input type="checkbox"/> No
<u>6.3.8</u>	<u>Dual Water Supply Plumbing</u>	<input type="checkbox"/> No
7.4.2.1	Building Envelope Requirements	<input type="checkbox"/> No
7.4.2.2	Single-Rafter Roof Insulation	<input type="checkbox"/> No
7.4.2.3	High Speed Doors	<input type="checkbox"/> No
7.4.2.6	Permanent Projections	<input type="checkbox"/> No
7.4.2.9	Orientation	<input type="checkbox"/> No
7.4.3.2	Ventilation Controls for Densely Occupied Spaces	<input type="checkbox"/> No
7.4.3.4	Economizers	<input type="checkbox"/> No
7.4.3.5	Zone Controls	<input type="checkbox"/> No
7.4.3.7	Exhaust Air Energy Recovery	<input type="checkbox"/> No
7.4.3.8	Kitchen Exhaust Systems	<input type="checkbox"/> No
7.4.4.2	Insulation for Spa Pools	<input type="checkbox"/> No
7.4.6.2	Occupancy Sensor Controls with Multilevel Switching or Dimming.	<input type="checkbox"/> No
7.4.6.3	Automatic Controls for Egress and Security Lighting	<input type="checkbox"/> No
7.4.7.2	Supermarket Heat Recovery	<input type="checkbox"/> No
7.4.7.4	Programmable Thermostats	<input type="checkbox"/> No
7.4.7.5	Refrigerated Display Cases	<input type="checkbox"/> No
8.3.1.3(b)	Ozone	<input type="checkbox"/> No
8.3.1.4.2	Exfiltration	<input type="checkbox"/> No
8.3.3.4	Interior Sound Reverberation	<input type="checkbox"/> No
8.4.1.3	Shading for Offices	<input type="checkbox"/> No

Add [JO] following the section number to indicate that Sections 6.3.1.2.1(a)(3) and 6.3.1.2.1(a)(4) are jurisdictional options. Modify the language of Section 6.3.1.2 and the exception to 6.3.1.2.3, and add a new item 3 under 6.3.1.2.1(d) as shown (I-P and SI).

6.3.1.2 Irrigation. ~~For golf courses and driving ranges, only municipally reclaimed water or alternate on-site sources of water shall be used to irrigate the landscape.~~ For other landscaped areas, not greater than one-third of *improved landscape* area is allowed to be irrigated with *potable water*. The area of dedicated athletic fields shall be excluded from the calculation of the *improved landscape* for schools, *residential* common areas, and public recreational facilities. All other irrigation shall be provided from alternate ~~on-site~~ sources of water. ~~or municipally reclaimed water.~~

Exception to 6.3.1.2: ~~Potable water is allowed to be temporarily used on such newly installed landscape for the *landscape establishment period*. The amount of *potable water* allowed to be applied to the newly planted areas during the *temporary landscape establishment period* shall not exceed 70% of ET_o for *turfgrass* and 55% of ET_o for other plantings. Where municipally reclaimed water is available at a water main within 200 ft (60 m) of the project site, such water shall be used instead of *potable water* during the *landscape establishment period*. After the *landscape establishment period* has expired, all irrigation water use shall comply with the requirements established elsewhere in this standard.~~

6.3.1.2.1 Irrigation System Design. The design of the irrigation system shall be performed by an accredited or certified irrigation professional and shall be in accordance with the following:

- a. Irrigation systems
 1. shall be based on *hydrozones*. *Turfgrass* areas shall be on their own *irrigation stations*.
 2. shall have backflow prevention in accordance with the plumbing code.
 3. [JO] shall have a master valve on municipally supplied water sources that allows pressurization of the irrigation mainline only when irrigation is scheduled.
 4. [JO] shall have a flow sensor and monitoring equipment that will shut off the control valve if the flow exceeds normal flow from an *irrigation station*.
 5. shall prevent piping from draining between irrigation events.
- b. Irrigation emission devices shall comply with ASABE/ICC 802, *Landscape Irrigation Sprinkler and Emitter Standard*.
- c. Irrigation sprinklers
 1. shall not spray water directly on buildings or *hardscape* area.
 2. shall have matched precipitation rate nozzles within an *irrigation station*.
 3. shall be prohibited on landscape areas having any dimension less than 4 ft (1220 mm)(1.2 m).
 4. shall have an application rate less than or equal to 0.75 in. (19 mm) per hour on slopes greater than 1 unit vertical in 4 units horizontal.
 5. shall be limited to use with *turfgrass* or *ground cover* areas with vegetation maintained at 8 in. (203200 mm) or less in height.
 6. where of the pop-up configuration, shall have a pop-up height of not less than 4 in (100 mm).
- d. Microirrigation zones
 1. shall be equipped with pressure regulators, filters, and flush assemblies.
 2. shall have indicators that allow confirmation of operation by visual inspection.
 3. drip emitters shall be of pressure compensating type.

[...]

6.3.1.2.3 Irrigation of Rainfall- ET_c Compatible Plants. The use of *potable water* or *reclaimed water* for irrigation of *adapted plants* is prohibited after the *landscape establishment period*. In-ground irrigation systems for *rainfall- ET_c compatible plants* using potable or off-site treated *reclaimed water* are prohibited. After the *landscape establishment period* of *adapted plants*, the irrigation system using *potable water* or *reclaimed water* shall be permanently disabled or removed from *site*.

Exception to 6.3.1.2.3: *Plants* deemed equivalent to *rainfall- ET_c compatible plants* by Section 6.3.1.1, Exception 3, shall be exempt from the requirements of Section 6.3.1.2.3 ~~6.3.1.3.~~

Add [JO] following the section number to indicate that Sections 6.3.3, 6.3.4.2, 6.3.4.3, and 6.3.8 are a jurisdictional option (I-P and SI).

6.3.3 [JO] Special Water Features.

[...]

6.3.4.2 [JO] Consumption Data Collection.

[...]

6.3.4.3 [JO] Data Storage and Retrieval.

[...]

6.3.8 [JO] Dual Water Supply Plumbing. ~~6.3.8.1~~ Where sufficient supply of *reclaimed water* or *alternate on-site sources of water* is available, or planned to be available, within five years of completed building construction, the water supply system within the building shall be installed to allow the supply of reclaimed or alternative water to all urinals and water closets.

Exceptions to 6.3.8.1:

1. Existing buildings under renovation, where the water supply to the urinals and water closets within the building is to remain intact, shall not be required to supply *nonpotable water* to urinals and water closets.
2. Urinals and water closets designed to operate without the use of water shall not be required to have alternate or reclaimed water supply to the fixture.

**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.

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.

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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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