ANSI/ASHRAE/ICC/USGBC/IES Addendum ae 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 February 1, 2020; by the ASHRAE Board of Directors on February 5, 2020; by the International Code Council on January 7, 2020; by the U.S. Green Building Council on January 9, 2020; by the Illuminating Engineering Society on January 24, 2020; and by the American National Standards Institute on February 6, 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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FOREWORD

This addendum adds a jurisdictional option to select the minimum percentage of construction and demolition waste to be diverted from landfills and incinerators. The ability to divert construction waste varies across the country based on local recycling markets. All waste diversion for this section will be tracked by weight to simplify calculations for tracking and to provide consistency.

This addendum introduces the concept of "deconstruction" to the waste diversion provisions. While not currently a common practice in construction or demolition, it is used widely in such demolition subsets as historic preservation and for voluntary green and sustainable projects. Including "deconstruction" in the standard makes it a legitimate option for diverting waste and removes barriers such as special permission to use it.

The addendum clarifies that the total waste provision is for new construction only. It increases the total waste threshold to a value that can be achieved by a majority of building projects based on analyses of over 3000 projects from a variety of sources identified by the committee. It provides an exception to the total waste provision for projects diverting a large percentage of construction waste.

Additional modifications were made to clean up language and coordinate like provisions for consistency. The informative note is also removed from 9.3.1.1, as it is more suitable for inclusion in the next user's manual.

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 ae to Standard 189.1-2017

Revise Section 9.3.1 as shown.

9.3.1 Construction and Demolition Waste Management

9.3.1.1 Diversion. A minimum of 50% of nonhazardous construction ~~and~~, demolition, or deconstruction waste material ~~generated prior to the issuance of the final certificate of occupancy~~ shall be diverted from disposal in landfills and incinerators ~~by~~ through reuse, recycling, repurposing and/or composting. Excavated soil and land-clearing debris shall not be included in the ~~waste diversion~~ calculation. *Alternative daily cover* and waste-to-energy incineration shall not be included as diverted material. All diversion calculations shall be based on ~~either~~ weight ~~or volume, but not both,~~ throughout the construction process.

~~***Informative Note:*** Reuse includes donation of materials to charitable organizations; salvage of existing materials onsite; reclamation of products by manufacturers; and return of packaging materials to the manufacturer, shipper, or other source for reuse as packaging in future shipments.~~

9.3.1.2 [JO] Total Waste. For new ~~*building projects* on *sites* with less than 5% existing buildings, structures, or *hardscape*~~, construction only, the total amount of construction waste generated prior to the issuance of the final certificate of occupancy on the project shall not exceed 20 lbs per ft^2 (100 kg per m^2)~~42 yd^3 or 12,000 lbs per 10,000 ft^2 (35 m^3 or 6000 kg per 1000 m^2~~) of new building floor area. This shall apply to all waste, whether diverted, landfilled, incinerated, or otherwise disposed of. Excavated soil, ~~and~~ land-clearing debris, and demolition debris shall not be included in the calculation. The amount of waste shall be tracked throughout the construction process in accordance with the construction waste management plan required in Section 9.3.1.3.

Exception to 9.3.1.2: Projects where the waste diversion in accordance with Section 9.3.1.1 is 75% or greater.

9.3.1.3 Construction and Demolition Waste Management Plan. Prior to ~~issuance of a demolition or building permit~~ the start of any construction, demolition, or deconstruction, a ~~pre-~~

construction and demolition waste management plan shall be ~~submitted~~ prepared and made available to the *owner* and *AHJ*. The plan shall

a. identify the construction and demolition waste materials expected to be diverted,
b. identify materials or building elements to be deconstructed,
~~b~~c. ~~determine~~ indicate whether construction and demolition waste materials are to be source-separated or comingled,
~~c~~d. identify service providers and designate destination facilities for construction and demolition waste materials generated at the job *site*, ~~and~~
~~d~~e. identify the average diversion rate for facilities that accept or process comingled construction and demolition materials. Separate average percentages shall be included for those materials collected by construction and demolition materials processing facilities that end up as *alternative daily cover* and incineration~~.~~,
f. specify a method for tracking, and
g. specify a reporting mechanism for disposition of waste using items (a) through (f).

Revise Section 10.3.1.10 as shown.

10.3.1.10 Construction and Demolition Waste Management

10.3.1.10.1 Collection. Specific area(s) on the construction *site* shall be designated for the collection of recyclable and reusable materials. Alternatively, off-site storage and sorting of materials shall be permitted. Diversion efforts shall be tracked throughout the construction process.

10.3.1.10.2 Documentation. Where requested by the *AHJ*, ~~Prior~~ prior to issuance of the final certificate of occupancy, a final construction waste management report documenting compliance with Section 9.3.1 shall be submitted to the ~~*owner*~~ and *AHJ*.

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.

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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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