

Public Review Draft

Proposed Addendum ai to Standard 189.1-2023

Standard for the Design of High-Performance Green Buildings Except Low-Rise Residential Buildings

First Public Review (March 2026)
(Draft Shows Proposed Changes to Current Standard)

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Foreword

The existing definition of smart controller makes the term synonymous with a weather-based irrigation controller. With the adoption and incorporation of the WaterSense Specification for Soil Moisture-Based Irrigation Controllers – a type of smart controller – in Addendum aa, the definition of smart controller is edited to remove the reference to a weather-based irrigation controller.

Addendum aa adds a reference to the WaterSense Specification for Soil Moisture-Based Irrigation Controllers, clearly specifying that there are two types of smart controllers recognized by the standard. However, the second sentence of the current text allows any controller connected to a rain sensor to be used in lieu of a smart controller, which would result in significantly less water-saving potential. This addendum removes that sentence and requires that any controller used must be a smart controller.

[Note to Reviewers: This addendum makes proposed changes to the current standard. These changes are indicated in the text by underlining (for additions) and ~~strikethrough~~ (for deletions) except where the reviewer instructions specifically describe some other means of showing the changes. Only these changes to the current standard are open for review and comment at this time. Additional material is provided for context only and is not open for comment except as it relates to the proposed changes.]

Addendum ai to 189.1-2023

Modify Section 3 as follows:

smart controller (~~weather-based irrigation controller~~): a device that estimates or measures depletion of water from the soil moisture reservoir and operates an irrigation system to replenish water as needed while minimizing excess.

Modify Section 6.3.1.3 as follows:

6.3.1.3 Irrigation System Controls. Where any irrigation system for the project site uses an *automatic* controller, the system shall be controlled by a qualifying *smart controller* that uses *evapotranspiration (ET)* and weather data or soil moisture data to adjust irrigation schedules ~~and complies with the minimum requirements.~~ Alternatively, the system shall be controlled by an on-site rain or moisture sensor that automatically shuts off the system after a predetermined amount of rainfall or sensed moisture in the soil. Qualifying *smart controllers* shall be ~~labeled according to~~ comply with the requirements of the USEPA *WaterSense Specification for Weather-Based Irrigation Controllers* or tested in accordance with Irrigation Association *SWAT* Climatologically Based Controllers, 8th Testing Protocol. *Smart controllers* that use *ET* data shall provide the following irrigation amounts:

- a. *Irrigation adequacy*—80% minimum ETc
- b. *Irrigation excess*—not to exceed 10% of ETc

The following settings and schedule for the irrigation control system shall be posted on or adjacent to the controller:

- a. Precipitation rate of each *irrigation station*
- b. Plant factors for each *hydrozone*
- c. Soil type
- d. Rain sensor settings
- e. Soil moisture sensor settings, where installed
- f. Peak demand schedule, including run times, cycle starts, and soak times
- g. Maximum runtimes to prevent water runoff

Exception to 6.3.1.3: Temporary irrigation systems used exclusively for the *landscape establishment period*.

Note to reviewers: Addendum aa to 189.1-2023 is also proposing changes to Section 6.3.1.3. If addendum aa is published without changes, the changes proposed by this addendum will appear as follows. The language below is shown for information only and is not open for comment.

6.3.1.3 Irrigation System Controls. Where any irrigation system for the project site uses an *automatic* controller, the system shall be controlled by a qualifying *smart controller* that uses *evapotranspiration (ET)* and weather data or soil moisture data to adjust irrigation schedules ~~and complies with the minimum requirements.~~ Alternatively, the system shall be controlled by an on-site rain or moisture sensor that automatically shuts off the system after a predetermined amount of rainfall or sensed moisture in the soil. Qualifying *smart controllers* shall be ~~labeled according to~~ comply with the requirements of the USEPA *WaterSense Specification for Weather-Based Irrigation Controllers* or USEPA *WaterSense Specification for Soil Moisture -Based Irrigation Controllers*.

The following settings and schedule for the irrigation control system shall be posted on or adjacent to the controller:

- a. Precipitation rate of each *irrigation station*
- b. Plant factors for each *hydrozone*
- c. Soil type
- d. Rain sensor settings
- e. Soil moisture sensor settings, where installed
- f. Peak demand schedule, including run times, cycle starts, and soak times
- g. Maximum runtimes to prevent water runoff

Exception to 6.3.1.3: Temporary irrigation systems used exclusively for the *landscape establishment period*.