



DATE: July 6, 2023  
TO: Contractors, Owner, and Developers  
FROM: Ryan Mumma, Inspection Services Manager, Building Division, Development Services  
SUBJECT: Concrete Placement in Cold and Hot Weather Conditions

Pursuant to IBC Chapter 19 (Concrete) and IRC Section R404 (Foundation and Retaining Walls), structural concrete shall be designed, constructed, and placed in accordance with the requirements of the applicable code sections, chapters, and ACI 318—Sections 26.5.4 and 26.5.5. This will require verification by the inspector prior to the approval to place concrete.

## COLD WEATHER

- Adequate equipment shall be provided for heating concrete materials and protecting concrete during freezing or near-freezing weather.
- Frozen materials or materials containing ice shall not be used.
- Forms, fillers, and ground with which concrete is to come in contact shall be free from frost and ice.
- Concrete materials and production methods shall be selected so that the concrete temperature at delivery complies with the specified temperature limits.
- It is recommended that an RFI or job specification be issued showing compliance per ACI 306R.1, 4.1-Planning: *The general contractor, construction manager, concrete contractor, concrete supplier, specific materials suppliers, testing laboratory representative, and owner or architect/engineer should meet in a preconstruction conference to define what cold weather concreting methods will be used.*

## ACI R26.5.4 Concreting in Cold Weather Commentary

*Detailed recommendations for cold weather concreting are given in ACI 306R. Specification requirements for concreting in cold weather are provided in ACI 301 and ACI 306.1. If both ACI 301 and ACI 306.1 are referenced in construction documents, the governing requirements should be identified.*

(See the next page for Hot Weather)

## HOT WEATHER

- Concrete materials and production methods shall be selected so that the concrete temperature at delivery complies with the specified temperature limits.
- Handling, placing, protection, and curing procedures shall limit concrete temperatures or water evaporation that could reduce strength, serviceability, and durability of the member or structure.
- R26.5.5.1(a) ACI 301 and ACI 305.1 limit the maximum concrete temperature to 95°F at the time of placement.
- It is recommended that an RFI or job specification be issued showing compliance per ACI 305R, 3.3-Practices for hot weather concreting: *Developing a comprehensive plan and procedures for use in hot weather concreting conditions include the following practices and measures used to reduce or avoid the potential problems of hot weather concreting as discussed in detail in Chapters 4, 5, and 6.*

### ACI 318 R26.5.5 Concreting in Hot Weather Commentary

*Detailed recommendations for hot weather concreting are given in ACI 305R. This guide identifies the hot weather factors that affect concrete properties and construction practices and recommends measures to eliminate or minimize undesirable effects. Specifications requirements for concreting in hot weather are provided in ACI 301 and ACI 305.1.*