



## Secondary (Overflow) Drainage Provisions in the 2015 IBC and IRC – 15-2017

**TITLE:** Secondary (Overflow) Drainage Provisions Revised in the 2015 International Building Code and the 2015 International Residential Code

**DESIGNATION:** RCI-TA-015-2017

**OBJECTIVE:** To raise awareness of potentially unsafe conditions that may result due to exceptions regarding roof drainage within the 2015 IBC and 2015 IRC, if the primary drainage system becomes compromised.

### A. BACKGROUND

Only a limited number of jurisdictions have adopted the 2015 International Building Code (IBC) and/or 2015 International Residential Code (IRC) as of January 2017. However, for those jurisdictions that have done so, without state or local modification to Chapter 1511.1, exception 2 (IBC) and/or Chapter R908.1, exception 2 (IRC), the result may be the creation of potentially unsafe conditions if the primary drainage system becomes compromised.

### B. CODE PROVISIONS

#### International Building Code

During the 2015 code development process, a proposal was submitted to provide an exception to the reroofing requirements contained in Section 1511, Reroofing, of the IBC. The proposal was accepted. Section 1511.1 of the IBC reads as follows:

#### **1511.1 General.**

Materials and methods of application used for recovering or replacing an existing roof covering shall comply with the requirements of Chapter 15.

#### **Exceptions:**

1. Roof replacement or roof recover of existing low-slope roof coverings shall not be required to meet the minimum design slope requirement of one-quarter unit vertical in 12 units horizontal (2-percent slope) in Section 1507 for roofs that provide positive roof drainage.

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### DISCLAIMER

This Technical Advisory is intended to serve only as a general resource and to identify potential issues for consideration by industry professionals. Each person using this Technical Advisory is solely responsible for the evaluation of the Technical Advisory in light of the unique circumstances of any particular situation, must independently determine the applicability of such information, and assumes all risks in connection with the use of such information. The materials contained in this Technical Advisory do not supersede any code, rule, regulation, or legislation and are not intended to represent the standard of care in any jurisdiction.

2. Recovering or replacing an existing roof covering shall not be required to meet the requirement for secondary (emergency overflow) drains or scuppers in Section 1503.4 for roofs that provide for positive roof drainage. For the purposes of this exception, existing secondary drainage or scupper systems required in accordance with this code shall not be removed unless they are replaced by secondary drains or scuppers designed and installed in accordance with Section 1503.4. [Underline emphasis added by RCI TAC Committee.]

#### International Residential Code

During the 2015 code development process, a proposal was submitted to provide an exception to the reroofing requirements contained in Section R908.1, Reroofing, of the IRC. The proposal was accepted. Section R908.1 of the IRC reads as follows:

##### **R908.1 General.**

Materials and methods of application used for re-covering or replacing an existing roof covering shall comply with the requirements of Chapter 9.

##### **Exceptions:**

1. Reroofing shall not be required to meet the minimum design slope requirement of one-quarter unit vertical in 12 units horizontal (2-percent slope) in Section R905 for roofs that provide positive roof drainage.
2. For roofs that provide positive drainage, re-covering or replacing an existing roof covering shall not require the secondary (emergency overflow) drains or scuppers of Section R903.4.1 to be added to an existing roof. [Underline emphasis added by RCI TAC Committee.]

## C. DISCUSSION

- These exceptions allow for recovery or replacement of the existing roof covering on existing buildings without installing a secondary drainage system, if the roof provides positive drainage. Also, if the building has an existing secondary drainage installed prior to the start of work, that system may not be removed unless a new secondary drainage system is designed and installed in accordance with Section 1503.4 of the IBC.
- Neither of these exceptions requires analysis to determine adequacy to facilitate evacuation of the design stormwater on reroof or re-cover projects—whether or not existing secondary drainage provisions exist.

## D. A CALL TO ACTION

- The issue of adequate drainage, including overflow or emergency drainage, should be properly considered in roof re-cover and replacement projects. If the primary drainage system becomes compromised, the structure may be overloaded with water that cannot be evacuated from the roof, and could potentially collapse. Without attention to this important aspect of replacing an existing roof, there is a potential for tragedy. The 2015 IBC and IRC have been published and allow these exceptions. RCI members and registrants should still consider providing secondary drainage systems, regardless of any exceptions allowed by the building code. Where the 2015 IBC and/or 2015 IRC are not yet adopted by the state or local jurisdiction, the code council in that state or jurisdiction should be notified to inform them of the risk these exceptions represent.