Reference: 2011 DBCA Section R302.2 and 2009 IRC 302.2

Scope:

This policy applies to IRC Townhouses and establishes the provisions for opening protection, fire-resistance-rating of walls, fire-resistance-rating of soffits and the length of story/stories extending beyond the exterior walls of the floor below; based on fire separation distance.

Definitions:

Imaginary property line. A line extending from townhouse unit separation walls treated as an interior property line between townhouse units for the determination of the opening protection, exterior wall, and soffit rating.

Extending story. A story that extends beyond the exterior wall of the floor below.

Opening in exterior facing wall. The area beneath the floor framing of an extending story is considered an opening.

Fire separation distance. The distance measured from the extending story facing wall to the imaginary (or real) property line. The distance shall be measured at right angles from the face of the wall.

Policy:

The length of an extending story and the opening in exterior facing wall shall satisfy one of the following conditions defined by Case 1, Case 2, or Case 3, below. The length of the extending story shall be measured parallel to the imaginary property line from the exterior face of the floor below to the exterior face of the extending story.

Case 1. If the fire separation distance is less than three (3) feet, a fire-resistive rated one-hour wall assembly tested in accordance with ASTM E 119 or UL 263 for exposure from both sides, in the plane of and below the facing walls, shall extend down to a foundation and for the full length of the extending story. Additionally, the facing wall shall be of one-hour fire-resistive construction.

Case 2. If the fire separation distance is greater than or equal to three (3) feet and less than five (5) feet, the length of the extending story shall not be greater than one-third of the length of the first story unit separation wall. The soffit under the extending story shall be fire-resistance rated with not less than one layer of 5/8” Type X exterior gypsum sheathing, or equivalent. The facing wall shall be of one-hour fire-resistive construction. The opening in exterior wall beneath the extending story may be completely open beneath the soffit.
Case 3. If the fire separation distance is greater than or equal to 5 feet, the extending story facing wall is not required to be of fire-resistive construction, there is no limit on the length of the extending story beyond the exterior wall of the story below, and the opening beneath the extending story, facing the imaginary property line, may be unlimited.

Figures:

The four figures on pages 3 through 6 provide a visual guide to the language described in the Policy section above for Case 1, Case 2, and Case 3.
Subject: EXTENDING STORIES IN IRC TOWNHOUSES

Approved: Ed Kocman, P.E., Interim Building Official

Number: DBCA R302.2   Effective Date: October 14, 2015
CITY & COUNTY OF DENVER
COMMUNITY PLANNING & DEVELOPMENT
BUILDING PERMIT POLICY

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EXTENDING STORIES IN IRC TOWNHOUSES

SECTION A - A - CASE 1

\[ p \leq \frac{4}{3} \]

SECTION B - B - CASE 2

\[ L = \text{length of first story unit separation wall} \]
\[ p = \text{length of extending story} \]
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