


**County of Los Alamos**

**Building Safety Division**

**Policy: Smoke Alarms Residential**

Effective Date: May 01, 2017

Approved By: Michael Arellano (May 01, 2017)

Revised:   
Elias Isaacson, CDD Director

10/27/2025  
Date

**Policy:** To clarify section R314 wireless smoke alarms. Physical interconnection of smoke alarms shall not be required where UL-listed wireless alarms are installed and all alarms sound upon activation of one alarm. Only the main smoke alarm has to receive primary power from the building wiring. This will apply to additions and remodels in one and two-family dwellings only. Wireless smoke alarms can be used in place of interconnected hard-wired. New home construction will have to be hardwired and interconnected.

**1. Purpose**

The purpose of this policy is to clarify the application of **Section R314 of the International Residential Code (IRC)** regarding the installation of smoke alarms in residential dwellings, specifically addressing the use of **wireless smoke alarm systems** in lieu of physically interconnected hardwired systems for additions and remodels.

This policy ensures consistent application of smoke alarm requirements while maintaining compliance with safety standards and allowing for modern wireless technologies where appropriate.

**2. Scope**

This policy applies to:

- **One- and two-family dwellings** are regulated under the International Residential Code (IRC).
- **Additions, remodels, and alterations** to existing residential structures where installing hardwired interconnections may be impractical or invasive.
- **New residential construction**, which remains subject to hardwired interconnection requirements.

This policy governs how **UL-listed wireless smoke alarms** may be used to meet interconnection requirements under IRC Section R314.

### 3. Eligibility

This policy applies to:

- **Licensed contractors** and **property owners** performing additions or remodels in existing one- or two-family dwellings.
- **Building inspectors** are responsible for verifying code compliance during inspection.
- **Projects** where installation of hardwired interconnections between smoke alarms is not feasible due to the nature of the work (e.g., existing finished walls or ceilings).

Wireless smoke alarms may be approved for use **only** if they meet all UL listing and interconnection performance standards.

### 4. Procedures

#### 4.1 Additions and Remodels

- When an **addition or remodel** is performed in an existing one- or two-family dwelling, **UL-listed wireless smoke alarms** may be installed instead of physically interconnected alarms.
- The system must be designed so that **activation of one alarm causes all alarms to sound**.
- Only the **main smoke alarm** must be **hardwired to the building's electrical system** and equipped with a **battery backup**.
- The remaining smoke alarms may be **wirelessly interconnected** and powered by batteries or other approved means.

#### 4.2 New Residential Construction

- In **newly constructed** one- and two-family dwellings, all required smoke alarms must be **hardwired and physically interconnected** per IRC Section R314.
- Wireless interconnection will **not be permitted** in new construction for the primary system.

#### 4.3 Installation and Inspection

- The **contractor or installer** must provide manufacturer documentation verifying that the wireless alarms are **UL-listed** and designed for **interconnection compatibility**.
- During inspection, the **Building Inspector** will test the system to confirm that all alarms sound simultaneously when one alarm is activated.
- The **main hardwired unit** must be verified for proper electrical connection to building wiring.

### 5. Requirements

To comply with this policy:

- Wireless smoke alarms must be **UL 217** certified and **interconnected** so that all devices sound when any one alarm is triggered.
- Only **one main smoke alarm** (typically near the main electrical panel or hallway) must be **hardwired** to the building's electrical system.
- Wireless smoke alarms must be installed in **locations required by IRC R314**, including each sleeping room, outside each sleeping area, and on each story of the dwelling.
- This policy applies only to **additions and remodels**; **new homes** must have **hardwired and physically interconnected** alarms.
- Smoke alarms must be **permanently installed** and **not removable plug-in devices**.

## 6. Enforcement

- **Building Inspectors** will verify compliance during the final inspection.
- If wireless alarms do not meet the interconnection or UL listing requirements, the inspection will be **failed**, and correction will be required before final approval.
- **Noncompliance** may result in:
  - **Re-inspection fees,**
  - **Delays in final approval or certificate of occupancy, and/or**
  - **Requirement to install hardwired interconnected smoke alarms.**
- The **Building Official** retains final authority to approve or deny wireless smoke alarm installations based on code compliance and safety verification.